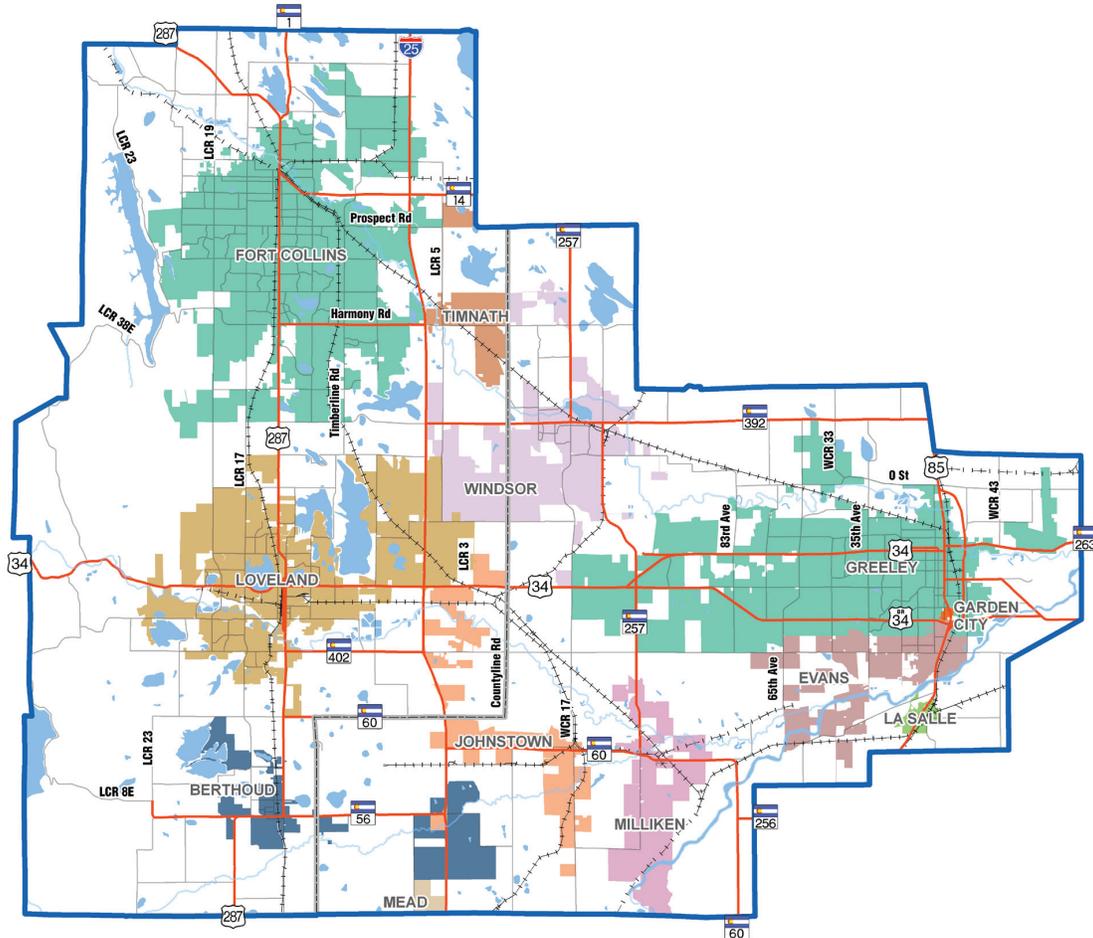




The North Front Range 2035 Regional Transportation Plan

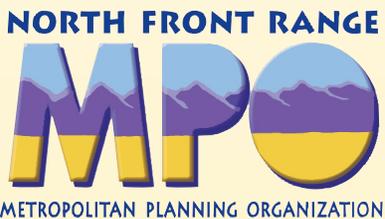
September 2007



Prepared by:
North Front Range Metropolitan Planning Organization

With Assistance From:
Felsburg Holt & Ullevig

Envisioning Transportation Solutions for
Colorado's North Front Range



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Draft

Regional Transportation Plan

*The North Front Range
2035 Regional
Transportation Plan*



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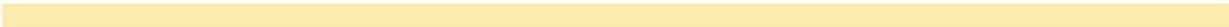




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PREFACE

The North Front Range Metropolitan Planning Organization (NFRMPO) is a federally-designated transportation planning organization and state-designated air quality planning agency. Federal transportation funding to a region's governments requires the organization of an MPO whenever an urbanizing area reaches a population of 50,000 or more. There are two urbanized areas in the North Front Range – Fort Collins / Loveland / Berthoud and Greeley / Evans / Garden City / LaSalle.

The NFRMPO is comprised of 15 member governments (Larimer County, Weld County, Fort Collins, Greeley, Loveland, Windsor, Berthoud, Evans, Johnstown, Milliken, Eaton, La Salle, Severance, Garden City and Timnath), covering 600 square miles and working on behalf of over 350,000 northern Colorado residents. Membership is also held on the MPO Planning Council by the Colorado Transportation Commission and the Colorado Air Quality Control Commission.

The MPO's objective is to provide the information, tools and public input needed for improving the regional transportation system's performance in the North Front Range. The MPO engages in cooperative decision-making through working relationships and financial partnerships among the member governments, the Colorado Transportation Commission, the Colorado Department of Transportation, the Federal Highway Administration, the Federal Transit Administration and the Colorado Air Quality Control Commission.

Background

Eight out of ten people in the United States reside in 385 federally-defined metropolitan areas. These metropolitan areas produce more than 85 percent of the nation's economic output. They also generate 84 percent of America's jobs. Unfortunately, these crucial economic engines of the nation also have some of the worst urban problems:

- ▶ Growing congestion as regional economies expand in low-density growth patterns.
- ▶ Increasing dependency on the car in order to accommodate sprawl.
- ▶ Growing regional mismatch between the location of jobs and the residences of workers (known in the region as "drive to qualify").
- ▶ Americans are now spending more on transportation than ever before; sprawling metropolitan communities require families to drive longer and more often to satisfy their daily needs.

Brookings Institution Report "TEA-21 Reauthorization: Getting Transportation Right for Metropolitan America"

The growing mismatch between the location of jobs and worker residences is also reflected in the 2001 North Front Range Household Survey. This research indicates that 17% of Fort Collins' workforce is employed outside the city, while 30% of Greeley's workforce leaves for employment outside the city and 45% of Loveland's workforce leaves Loveland every workday. That figure climbs to over 90% for many of the smaller communities in the North Front Range. The "regionalization" of the housing market has begun in earnest as many families "drive to



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qualify” by purchasing homes in communities such as Evans, Berthoud, Eaton, Severance, Ault, Johnstown, Windsor, etc.

These new residents then take to the highways each workday, driving an average of 18 miles each way for employment. Only about 6% of these workers drive to Denver. Another 6% drive to the Longmont-Boulder area. So the majority of North Front Range residents crisscross the region each workday for their jobs, and many do so for shopping and medical services as well. A metropolitan planning organization is the appropriate agency for addressing these kinds of issues since it is truly regional in scope and formation.

Strategic Action Plan

In March 2004, the MPO Planning Council has adopted a Long-Range Strategic Action Plan (included in **Appendix A**) to guide the functions and activities of the NFRMPO. This process was initiated so that the locally-elected officials of this region, sitting as members of the MPO Planning Council, have a clear frame of reference for the direction they want their organization to take in the future.

The cities and towns of the North Front Range are all growing together; the resulting growth patterns increase this region’s dependency on the private automobile. Regional perspectives have become more necessary in the provision of transportation improvements and services. The 2001 Household Travel Survey showed the interconnection of this region’s cities and towns. North Front Range residents travel back and forth across the North Front Range to get to jobs, medical appointments, shopping and recreation. This region has come to fully realize how “connected” individual jurisdictions are to one another.

Visioning in the North Front Range

As part of the Long-Range Strategic Action Plan, a new initiative entitled “Visioning in the North Front Range” has been advanced. MPOs have historically ignored, or perhaps misunderstood, the fundamental connections between land use, housing and transportation (*Brookings Institution Report “TEA-21 Reauthorization: Getting Transportation Right for Metropolitan America*). Transportation providers have usually been placed in a position where they merely react to facility demands created by land use decision-making. This has been particularly true for state departments of transportation (DOTs) as they “react” to incremental local land use decisions by increasing capacities of highways and major arterials through purchases of residential front yards or through the process of buying out adjacent homeowners and businesses altogether.

States and local governments that cooperate and collaborate on such issues can avoid these incredibly expensive “fixes.” This is where MPOs can be most effective – in building collaborative “bridges” between localities and DOTs. It is very difficult to create collaborative relationships on a one-by-one basis, but on a regional basis it has been shown to work quite well – where governmental entities are willing.

Nationwide, transportation advocates have begun to realize that it is impossible to “build our way out of congestion” through road and highway improvements alone. A combination of solutions is necessary. MPOs are multi-modal planning organizations working at the local level



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and are, therefore, in the best position to use transportation planning in tandem with land use, housing, workforce, and economic development policies.

This is where the MPO Planning Council can truly make a difference – by promoting “visioning” in which alternative future states of the region are investigated, analyzed and quantified for best quality of life. The Council members then become ambassadors to the rest of the elected and appointed officials of the North Front Range regarding facts, trends and understandings gained from the “Visioning in the North Front Range” process.

North Front Range Transportation Funding

The Colorado Transportation Commission needs \$2.3 billion a year to keep up with the costs of maintenance and congestion. This year they only have \$1 billion, which is expected to decrease over time. Forty percent of the state’s future federal funds have already been mortgaged for TRANS-funded projects. The fuel user fee, or so-called “gas tax,” has not been raised in Colorado for fifteen years. Since 1957, the gas tax has lost over 800% of its purchasing power. It has been estimated that state legislatures across the country would have to immediately raise the gas tax 11 cents per gallon to re-capture the purchasing power of 1957. The Colorado legislature has shown no inclination to do this.

Governor Ritter recently appointed a **COLORADO TRANSPORTATION FINANCE AND IMPLEMENTATION PANEL** to explore funding and implementation options for Colorado’s transportation system. The panel kicked off its work on April 5, 2007, when nearly 600 people gathered for the “Bridges to the 21st Century” statewide transportation summit. The panel then held its first official meeting on April 19, 2007. It will continue meeting throughout the year before reporting back to Gov. Ritter at the end of 2007. The North Front Range will meet with the blue-ribbon panel on September 25, 2007 to emphasize this region’s needs.

Until new federal or state funding appears, Regional Transportation Authorities (RTA), local and municipal improvement districts, and other locally-created revenue generators will be necessary to make needed transportation improvements in the North Front Range, as well as in the rest of the state. This region will have to have incredibly sound transportation data to develop the necessary consensus among cooperating groups with competing needs trying to decide on what to do, how to do it, and who pays what part. The NFRMPO pursued an RTA ballot initiative for November, 2007 which has failed.

Outlook

There have been many changes at the North Front Range Metropolitan Planning Organization (MPO) since the 2030 Regional Transportation Plan was completed. Federal and state transportation funding has continued to dwindle, leaving this region with a gap in funding until 2025 for state highways following the 2008 funding of four-lane improvements to US 34 Business from SH 257 to 71st Avenue in Greeley. The emphasis by the Transportation Commission is simply on preserving what they can of the state highway system, with capacity expansions only on TRANS-funded 7th Pot Strategic Projects yet to be completed.



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Still, with limited funding streams come other opportunities, as in greater partnering among entities, financial and planning facilitations, and a keener look at the relationship between land use decisions and transportation infrastructure needs. Finally, tough times bring communities together to help solve problems jointly. This is an important time for the MPO to put its best foot forward to help facilitate regional solutions to what used to be called local problems.

-Cliff Davidson
NFRMPO Executive Director



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I. INTRODUCTION

A. Project 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), and most recently with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The Colorado Department of Transportation (CDOT) has divided the state into fifteen transportation planning regions (TPRs), each of which is required to prepare a Regional Transportation Plan (RTP). These RTPs are then used as the basis for the formulation of Colorado's Long Range Statewide Transportation Plan.

The North Front Range (NFR), with a planning area as shown on **Figure 1**, is one of the fifteen TPRs. It is surrounded on four sides by the Upper Front Range TPR. The NFR region includes the more populous portions of Larimer and Weld Counties. There are thirteen incorporated communities within the TPR, including the cities of Fort Collins, Greeley, Evans, and Loveland and the Towns of Berthoud, Eaton, Garden City, Johnstown, LaSalle, Milliken, Severance, Timnath, and Windsor, and the two counties of Weld and Larimer. It should be noted that Eaton and Severance became members of the MPO in July 2007. This did not give these communities an opportunity to participate in the RTP process and they are essentially not included except for any projects that were a prior commitment.

The North Front Range Transportation and Air Quality Planning Council, also known as the North Front Range Metropolitan Planning Organization (NFRMPO), is responsible for long range regional transportation planning in the region. The NFRMPO completed and adopted the North Front Range 2030 Regional Transportation Plan in October 2004. The NFRMPO has undertaken this current effort to update and refine the 2030 RTP, expanding the time horizon to the year 2035. The 2035 Plan will also be compliant with SAFETEA-LU. With two air quality maintenance areas, Greeley and Fort Collins, the MPO is required to update its long range plan every four years.

This planning process was conducted under the direction of the MPO Planning Council, which is comprised of a representative from each of the two counties, from each of the eleven communities in the region, from the Colorado Transportation Commission, and from the Colorado Air Quality Control Commission. A Technical Advisory Committee (TAC) made up of representatives from the jurisdictions within the region, CDOT, and the Colorado Air Pollution Control Division assists the Council, as does a Transit Advisory Group (TAG), made up of representatives from transit providers across the region. This Plan was developed by MPO staff, with technical input from the TAC and TAG, which make recommendations to the Council.

Plans completed after July 2007 are required to be compliant with SAFETEA-LU. The 2035 Plan incorporates a number of changes that are required in the SAFETEA-LU guidance. Some of these changes include working more closely with environmental resource agencies, incorporating National Environmental Policy Act (NEPA) language into the Plan as appropriate, and presenting a financial plan that discusses how the Plan will be implemented.



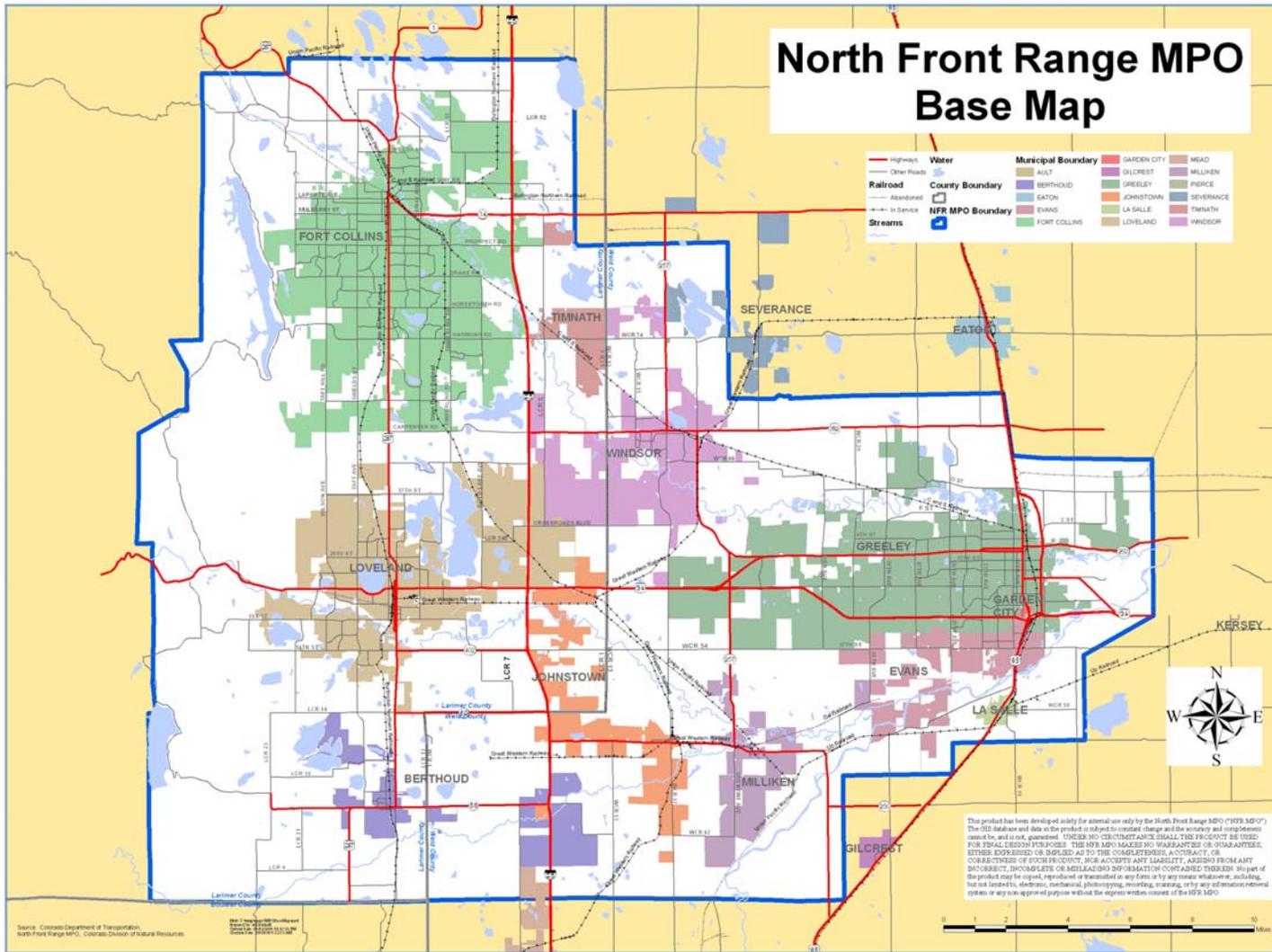
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Figure 1. North Front Range Planning Area





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B. Planning Process

The long range planning process is guided by the Federal transportation legislation, SAFETEA-LU. This document contains eight planning factors that are part of a continuous, cooperative, and comprehensive 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 ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users;
4. Increase the accessibility and mobility of people and 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."

The NFRMPO's 2035 planning effort includes consideration of these planning factors. Changes to the planning process include use of Strategic Transportation Environmental and Planning Process for Urbanizing Places (STEP UP) to coordinate with environmental resource agencies. This is a pilot project being conducted in the NFR to establish process and procedures for environmental resource agency involvement in the planning process.

This plan is a corridor based plan. No specific projects are listed, except those which were analyzed during the determination of conformity with air quality regulations. The vision plan and the fiscally constrained plan are at the corridor level giving greater flexibility in project selection which now occurs at the Transportation Improvement Program (TIP) level. The TIP, in turn, is the project list that must be included in the Statewide Transportation Improvement Program (STIP) developed by the Colorado Department of Transportation.

System testing, using the travel demand model, has been performed on selected transportation improvements obtained from both the public and local government expertise. The results of the system testing have been used in the development of the Corridor visions, goals, and strategies.



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C. Values, Vision, Goals And Objectives

The following value statement, visions, goals, and objectives were developed by the MPO Planning Council to guide the regional transportation planning process.

VALUE STATEMENT

Recognizing the unique character of the region, we will provide an environmentally, socially and economically sensitive multi-modal transportation system, for all users, that protects and enhances the region's quality of life.

Vision

- ▶ **Vision A:** Assure that residents have adequate access to the process of transportation and air quality planning and project selection.
- ▶ **Vision B:** Foster a transportation system that will effectively address the current and future needs of the region within fiscal constraints.
- ▶ **Vision C:** Encourage local governments to work together as a council to develop a balanced approach to meeting transportation needs.

Goals

- ▶ **Goal 1:** Ensure residents are given the opportunity to participate in the transportation planning process, their issues and concerns are considered during funding decisions, and that no population is disproportionately burdened by adverse impacts of transportation investments.
- ▶ **Goal 2:** To provide a safe, balanced, environmentally sensitive, transportation system that can move people, goods and information quickly and efficiently.
- ▶ **Goal 3:** To provide a well-connected multi-modal system.
- ▶ **Goal 4:** To identify funding needs and to explore and support all potential approaches to fulfill those needs.
- ▶ **Goal 5:** To foster regional coordination, cooperation and transportation system continuity.



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Objectives

- ▶ **Objective 1-1:** Include a public involvement component based on the current North Front Range MPO Public Involvement Plan.
Measurement: A full public involvement process is carried out and documented in the RTP.
- ▶ **Objective 1-2:** Show the benefits and burdens on the Environmental Justice community.
Measurement: Environmental justice areas are identified (low income, minority, etc.) and analysis is performed and documented in the RTP on the benefits and burdens to populations.
- ▶ **Objective 2-1:** Fully integrate the Transit Element into the 2035 RTP.
Measurement: Transit is included in the RTP document with short and long term elements and all necessary requirements.
- ▶ **Objective 2-2:** Fully develop the Congestion Management System plan (CMS) and begin implementation to reduce congestion.
Measurement: The CMS framework will be completed to meet federal requirements. The results will be used in the development of strategies to address congestion in the corridor visioning and implementation. Start implementation strategies in FY 08.
- ▶ **Objective 2-3:** Consider safety in the development of corridor visions
Measurement: Accident information will be reviewed on all corridors and be specifically discussed in the corridor visions.
- ▶ **Objective 2-4:** Use the Strategic Transportation, Environmental and Planning Process for Urbanizing Places (STEP UP) to identify environmental issues.
Measurement: The implementation of STEP UP will be used and fully documented in the RTP.
- ▶ **Objective 2-5:** Run an air quality conformity test on each RTP and TIP.
Measurement: A completed positive conformity determination and attendant documentation in the RTP.
- ▶ **Objective 3-1:** Develop a plan that shows all modes of transportation and identifies the gaps and connections.
Measurement: All modes of travel are considered and analyzed for continuity with a full discussion recorded in the RTP.
- ▶ **Objective 3-2:** Identify implementation strategies in the 2035 RTP that will assist member agencies, the MPO and CDOT move toward the goal.
Measurement: Listing of strategies for member governments, MPO, and CDOT.



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- ▶ **Objective 4-1:** Include in the RTP a funding implementation plan
Measurement: An implementation section of the RTP will include how projects move from the Plan to the TIP and potential funding options for the various transportation solutions.
- ▶ **Objective 4-2:** Produce an impact fee report every RTP cycle.
Measurement: An impact fee report is completed and presented to Council.
- ▶ **Objective 4-3:** Develop funding need scenarios for short and long term horizons in the implementation plan.
Measurement: Funding scenarios in the implementation chapter of the RTP.
- ▶ **Objective 5-1:** Inform and educate special interest groups, general citizens, media, elected officials, staff and any other stakeholders about the benefits of regional cooperation and system continuity.
Measurement: The public involvement process for the RTP will be inclusive enough to cover the groups identified and present and the benefits. This will be documented in the public involvement section of the RTP.
- ▶ **Objective 5-2:** Develop a vision for every corridor identified in the Regionally Significant Corridors Report, which describes the desired future of transportation within the corridor.
Measurement: Top tiered corridors will develop a corridor vision that has enough detail and information to be consistent with NEPA requirements. All other corridors will have a vision but not to this level of detail.
- ▶ **Objective 5-3:** Review and integrate local Comprehensive Land Use Plan information into regional transportation plans.
Measurement: The land use allocation model developed by the MPO will work with land use planners from across the region and the State Demographer's office to incorporate the comprehensive land use plans into the modeling effort.

These objectives are specific to the 2035 Regional Transportation Plan; each objective has been incorporated into the planning process as documented herein.



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D. Other Studies

Subsequent to the adoption of the 2030 Regional Transportation Plan, there have been a number of regional transportation planning efforts in the region which have had an influence on the development of the RTP update. Numerous transportation studies have been, or are being, prepared by individual counties, cities and towns within the NFR. All of these plans serve as input for this plan. Brief descriptions of the regional plans follow.

Economic and Demographic Forecast for the North Front Range Modeling Area & Its Sub-Regions projected data to the year 2035. The information developed in this report is the basis for input to the Land Use Allocation model which then distributes the data geographically. The Allocation model supplies the transportation analysis zone (TAZ) level information to the Travel Demand Model. The forecast was brought down to a sub area level consisting generally of Fort Collins, Greeley, Loveland, and the remaining areas in the North Front Range region. Data by employment code was also developed to assist in the analysis of freight movement in the region.

An update of the Regionally Significant Corridors was completed for use in the 2035 RTP. The study process included defining regional significance using specified criteria, corridor grouping, and corridor tiering. The top tiered corridors (I-25, US 34, and US 287) are the focus of the Congestion Management System and receive more in depth discussion in the Corridor Visions section of the Plan.

The North I-25 Environmental Impact Statement is a planning study that was started in the fall of 2003. This work will analyze potential environmental impacts and prepare the environmental decision document required under the National Environmental Policy Act (NEPA). The study will address roadway widening, roadway upgrades, new roadway alignments, interchange modifications and transit alternatives between the Denver Metropolitan Area and Northern Colorado. A Draft Environmental Impact Statement for public review is expected in early 2008.

The Strategic Transportation, Environmental and Planning Process for Urbanizing Places (STEP UP), a pilot study using the North Front Range as the model, was initiated by the Federal Highway Administration (FHWA). The Colorado Department of Transportation (CDOT) received a \$250,000 grant from the FHWA to determine how to incorporate environmental issues at an early stage in development of a Regional Transportation Plan. This project identifies, develops, and tests tools to achieve environmental goals during the transportation planning process by coordinating land use, transportation, and environmental planning on a regional level. This project also developed a methodology for cumulative impact analysis. The pilot results have been incorporated into the 2035 Plan.

CDOT has completed several studies and has others in progress. These include Environmental Assessments on US 34 Business in the Greeley area, US 287 in north Fort Collins, SH 402 from Interstate 25 to Larimer County Road 13, and US 34 between Interstate 25 and Larimer County Road 3. All of these studies will result in an environmental decision document required by NEPA before any construction can be undertaken.

CDOT is also working on Environmental Overview Studies (EOS) and Access Management Plans for three roadways. These are US 287 from 29th Street in Loveland to Harmony Road in



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Fort Collins, SH 392 from US 287 to east of Windsor, and SH 60 from Interstate 25 to Two Rivers Parkway. The EOS documents involve a transportation planning and design process that includes a strong environmental component. The studies are not required or recognized by the NEPA process; however, they will serve as a basis for future studies and right of way plans, and they serve to identify early on in the planning process any environmental issues of concern.

The Interchange Improvement Plan for SH 392 and Interstate 25 being developed by Fort Collins and Windsor, with support from the MPO. Key elements of this effort are a financing plan to address the need to rebuild the interchange, along with integration of land use, transportation, and open lands alternatives for the areas around the Interchange.

There is a passenger rail study that is being conducted by Rocky Mountain Rail Authority (RMRA). RMRA is an intergovernmental authority that was created for the purpose of conducting a study of the feasibility of developing a high speed rail passenger service along the I-25 and I-70 corridors. The two corridors that will be examined will be Interstate 25 from New Mexico into Wyoming and Interstate 70 from Denver International Airport to the Utah border. The study will look at the I-25 corridor broadly and generally within the existing rail corridor, and examine I-70 generally within the existing I-70 corridor, where there is no existing rail corridor east of Vail. Spur lines may be examined in a limited fashion for the purposes of examining potential ridership demand along a single, broad, feasible path for each spur corridor.

E. Summary of Public Participation Process

The principal public involvement goal of this RTP was to give people in the North Front Range the opportunity to learn about and to participate in the transportation planning process. This goal was achieved in two phases: 1) public input prior to system testing and plan development and 2) public review and comment on the DRAFT RTP, including a final 30-day public comment period.. During both phases, the NFRMPO Public Involvement Plan processes were followed.

Phase 1: Gain upfront public input to consider when developing the 2035 RTP

Several different activities occurred during this phase.

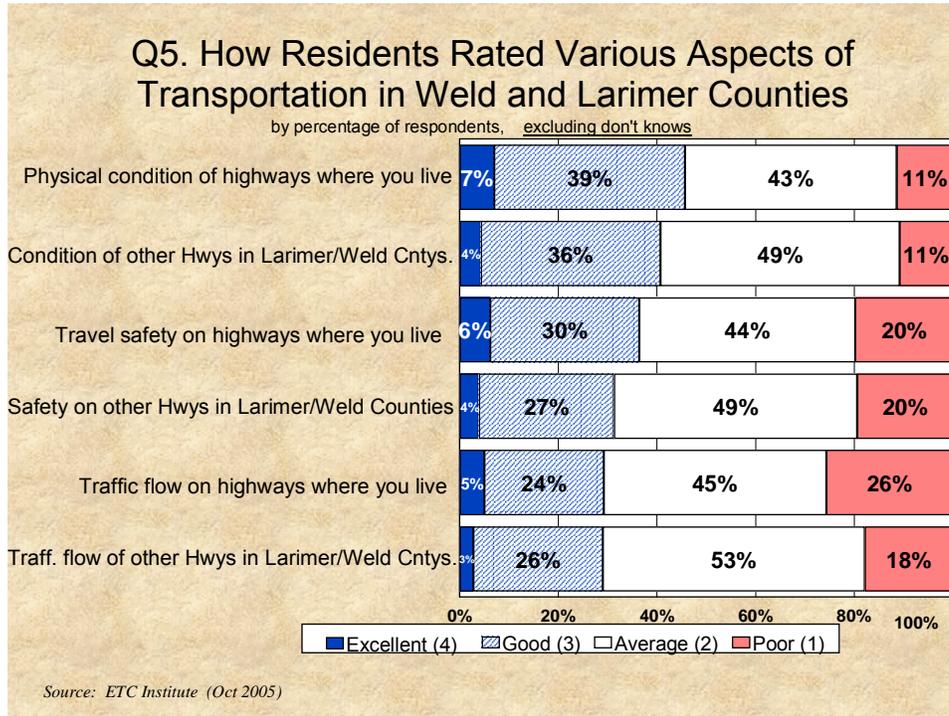
Statistically Valid Regional Survey

In September 2005, residents throughout the region were surveyed to learn their opinions and attitudes towards transportation needs in general. Through this statistically valid survey of over 1,350 households, information about transportation priorities was identified. Below are some of the questions and their responses, which are most relevant to the RTP.

- ▶ Rating of various aspects of transportation in Weld and Larimer Counties: Participants were asked to rate the transportation system in Larimer and Weld Counties; only 23% gave the system a “good” or “excellent” rating, 48% considered it “average” and to 28% it is “poor”. Next, all participants were asked their level of satisfaction with the components within the transportation system (see chart below). More than 50% of the responses fell into the “average” or “poor” categories for each of the components.



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- ▶ Rating the most congested corridors in the region: Residents were asked to rate the traffic flow on 15 major corridors in the region. The corridors that residents thought were most congested based on the percentage of residents who rated the corridor as “very congested” or “congested” are:

I-25 between US 36 (Denver) and Highway 14 (85%)
 US 287 from US 40 (Denver) to Highway 14 (80%)
 Prospect Road from US 287 to LCR 5 (67%)
 US 34 from Loveland to US 85 (64%)
 Highway 14 from US 287 to I-25 (60%)

- ▶ Rating the most unsafe corridors in the region: Residents were asked to rate travel safety on 15 major corridors in the region. The corridors that residents thought were the most unsafe to travel based on the percentage of residents who rated the corridors as “very unsafe” or “unsafe” are:

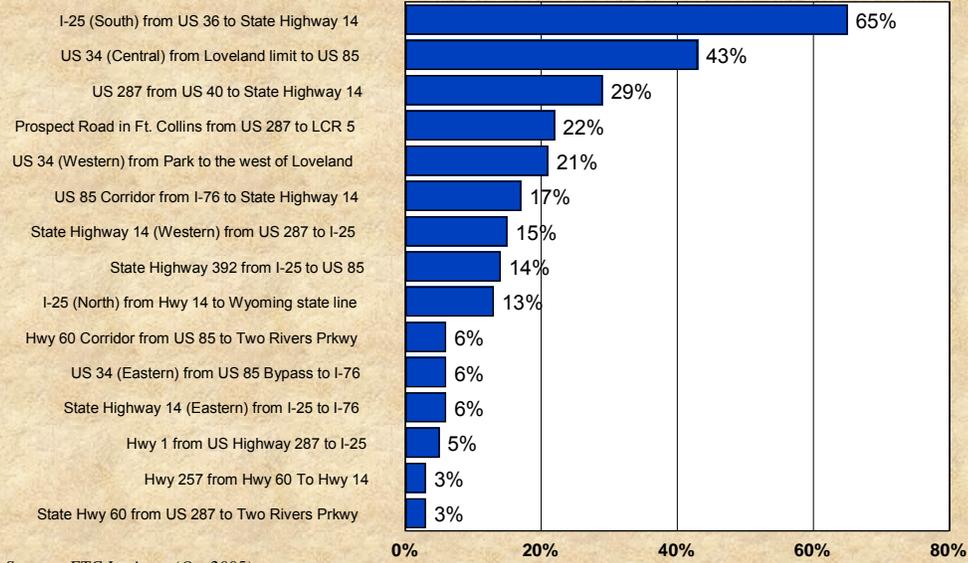
I-25 between US 36 (Denver) and Highway 14 (76%)
 US 287 from US 40 (Denver) to Highway 14 (54%)
 US 34 from Loveland to US 85 (47%)
 US 85 from I-76 (Denver) to Highway 14 (46%)
 Prospect Road from US 287 to LCR 5 (46%)



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Q12. Corridors that Residents Thought Should Receive the Highest Overall Priority for Improvements

by percentage of respondents who selected the item as one of their top three choices

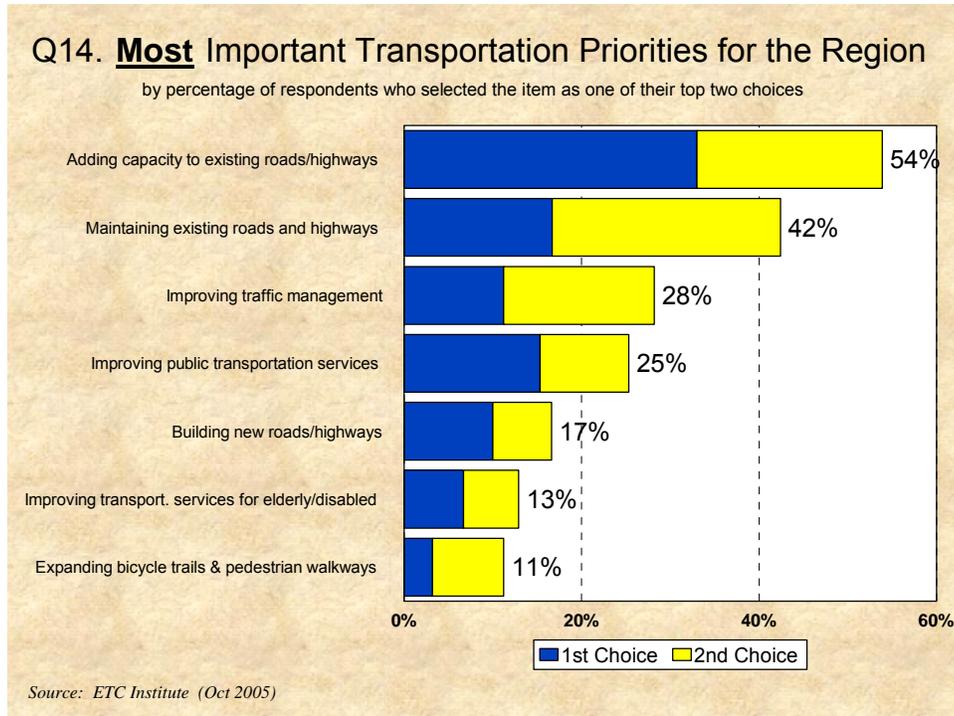


Source: ETC Institute (Oct 2005)

- ▶ Rating the region's top overall priorities for improvement: Residents were asked which corridors they thought should receive the highest priority for improvement over the next 20 years. The corridors that residents thought should receive the highest overall priority for improvement based on the top choices that were made by those surveyed are shown on the previous chart.
- ▶ Rating of top transportation priorities for the region: Residents were asked to identify the transportation issues they thought should be the top priorities for the region. These issues are shown in the chart below.



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This survey was done by ETC Institute of Olathe, Kansas. The full report was presented to the North Front Range Transportation and Air Quality Planning Council in October, 2005.

Regional Presentations

Forty-two regional presentations were made to elected officials, boards and commissions, and community groups and organizations from early July through early October 2006. The groups represented a wide range of interests, ages, backgrounds, physical abilities and economic levels. The Spanish speaking population was also involved through the use of a translator.

The presentations consisted of a PowerPoint presentation followed by a time for questions and comments. The PowerPoint presentation provided background information, explained how the plan would be developed and showed all the various ways people could provide input.

Other Outreach

The following closing slide from the presentations shows the wide variety of ways made available for people to stay informed and provide comments.



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2035 Regional Transportation Plan

What YOU can do

- Get the Newsletter
- Come to the Charrettes
- E-mail us
- Leave a Phone message
- Share your ideas today

The graphic includes several illustrations: a person running with a sign that says 'BIG NEWS', a table with a chair (representing a charrette), a telephone, and a computer monitor with an email icon.

In addition a special section within the NFRMPO website was created, which gave the public a complete overview of the RTP process. It included sections on the schedule, frequently asked questions, past newsletters, and other relevant handouts and materials.

From the presentations and other outreach, 12 pages of questions, suggestions and comments were compiled. A complete list can be found in **Appendix B**.

Charrettes

A series of four charrettes (hands on workshops) were held to let people actually work together to design a regional transportation system. These were held from late September through mid October, 2006. There was a charrette held in each of the larger communities (Fort Collins, Greeley, and Loveland) on different Saturdays, and a charrette at the Larimer County Fairgrounds for technical staff during the workday.

At each charrette participants were divided into table groups of 4-6 people, provided with a large regional map and 40 pieces representing transportation improvements each costing about fifty



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million dollars. The tables used these pieces to cooperatively build a 2035 transportation system and prioritize the top 20 improvements.

Based on the evaluations, the participants liked the charrettes and the results were helpful in identifying the combinations of improvements for system testing.

Phase 2: Participation Related to the Draft Plan and 30-Day Public Comment Period

During Phase 2 of public involvement, information about the draft plan was taken out into the community. This was followed by a 30-day final comment period when the full draft plan was available on the web site and at the MPO office. During the outreach into the community, the basics of the plan were displayed at four open houses and presentations were made to several smaller groups. For the open houses, boards showing background information, the tiers, expected funding, and types of improvements were displayed with staff members explaining the information and answering questions. Sheets were available to leave written comments.

For the presentations, the board information was made into handouts and the basic plan was explained. The smaller groups included a chamber of commerce, a disability service provider, seniors, low-income residents at a housing authority project, and two Spanish-speaking groups that each required a translator. (The board material was translated into Spanish for the handouts to the Spanish-speaking groups.)

The handouts, in both English and Spanish were added to the website along with a brief explanation so additional people could view the draft content and understand the basics of the plan.

At the open houses and presentations, and during the final 30-day public comment period, people had the opportunity to give additional comments. The 1-800 number and e-mail access were available throughout Phase 2. Two newsletters were also sent to explain the plan and options for final comments.

Although most of the comments were collected during Phase 1, some additional comments were added during Phase 2.

The public comments throughout the entire process can be categorized into three areas:

- a) Questions and comments about the NFRMPO as well as the process for developing the RTP and the statewide plan.
- b) General comments about transportation improvements in the region. Comments covered a wide variety of needs including things like congestion related road widening and intersection improvements, the need for transit services within the region and to Denver and additional bicycle and pedestrian features.
- c) The third area of comments was directed more to the local governments. These were typically comments about specific needs within the communities.

A complete explanation of the public outreach efforts and a list of the comments are included in **Appendix B**.



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II. EXISTING TRANSPORTATION SYSTEM

Inventorizing the existing transportation systems within the region is an integral step in the planning process, as it is used to identify areas in need of improvement over the thirty year planning period. A variety of documents and plans were researched to develop an accurate, up-to-date database of existing transportation facilities and services. CDOT currently maintains a Geographic Information System (GIS) Transportation Planning Data Set, and the MPO also develops regional data for use in the planning process. Together, these two sources are the basis for much of the information presented in this section, along with data from the land use allocation and the travel demand models.

A. Regionally Significant Corridors

The concept of Regionally Significant Corridors (RSC) has been used in previous regional plans in order to focus the limited transportation dollars on corridors that are of most importance to the region. Since this 2035 RTP is a corridor-based plan, the Regionally Significant Corridors serve to set the stage for the overall plan. In keeping with SAFETEA-LU requirements, multiple modes of travel are incorporated in the RSCs.

Identification and grouping of the individual corridors was done as a part of the 2030 RTP and therefore the current document serves as an update to the prior RSC document. The tiering of the grouped corridors is a new component of the RSC process. It serves to identify the top priorities for the region, and to focus the congestion management system and the public involvement on the top tiered corridors. The tiering process is described in detail in **Chapter VII** of this document.

The Technical Advisory Committee (TAC) assisted MPO staff with the development of the Regionally Significant Corridors Report. This report defines 'regionally significant' (RS) corridors 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.

There are three criteria which have been used to identify regionally significant corridors. They are presented below in rank order.

1. 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 plans. Since this is required by CDOT, and most state highways are regional in nature, this was established as the first criteria.

2. Functional Classification

- Roadways must have a functional classification of arterial or higher, as defined by the appropriate member government



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- The higher the functional classification, the greater the likelihood that trips are longer and the roadway connects more than one community

3. Connectivity

- The corridor must go through, or plan to go through, more than one governmental jurisdiction and connect activity centers

Recognizing that the definition criteria above are predominantly geared toward roadways, the railroad and trail corridors were identified using alternative resources from *Colorado Front Range Trail Corridor Plan*, developed by the Colorado State Parks and *Eastern Colorado Mobility Study*, developed by CDOT.

Figure 2 shows the 2035 Regionally Significant Corridors. These corridors were then grouped into similar travel sheds. There are 12 grouped RSCs in the region, most of which include more than one roadway, trail and/or railroad line. **Table 1** describes the grouped corridors.

Table 1. Definitions of Grouped Corridors

Corridor Name/Component	Description
Corridor 1 – US 287	
Burlington Northern Santa Fe (BNSF) and Mason Trail corridor	Approximately parallels US 287 to Vine Dr in Fort Collins, turns E to parallel I-25 (freight & potential passenger rail)
US 287	Southern MPO boundary to northern MPO boundary, includes Berthoud Bypass
LCR 19	US 34 on the south to US 287 on the north
LCR 17	SH 56 on the south to SH 14 on north
Corridor 2 – SH 1	
SH 1	US 287 on the south to Wellington on the north
Corridor 3 – I-25	
I-25	Southern MPO boundary to northern MPO boundary
Timberline/LCR 9e/WCR 7	Southern MPO boundary to Vine Dr on the north, follows WCR 7 to LCR 9e (road approximate) to Timberline
LCR 5	US 34 on the south to SH 14 on the north
LCR 3	Southern MPO boundary to Crossroads Blvd on the north
WCR 13	Southern MPO boundary to SH 14 on the north
Corridor 4 – SH 257	
WCR 17	Southern MPO boundary to Crossroads extension on the north
SH 257	SH 60 on the south to SH 14 on the north, includes offset in Windsor
Corridor 5 – Two Rivers Parkway	
Two River Parkway/83rd Ave	Southern MPO boundary to northern MPO boundary, approximately WCR 27
65th Ave (Greeley)	54 th Street on the south to SH 392 on the north
35th Ave (Greeley)	US 85 on the south to O Street on the north



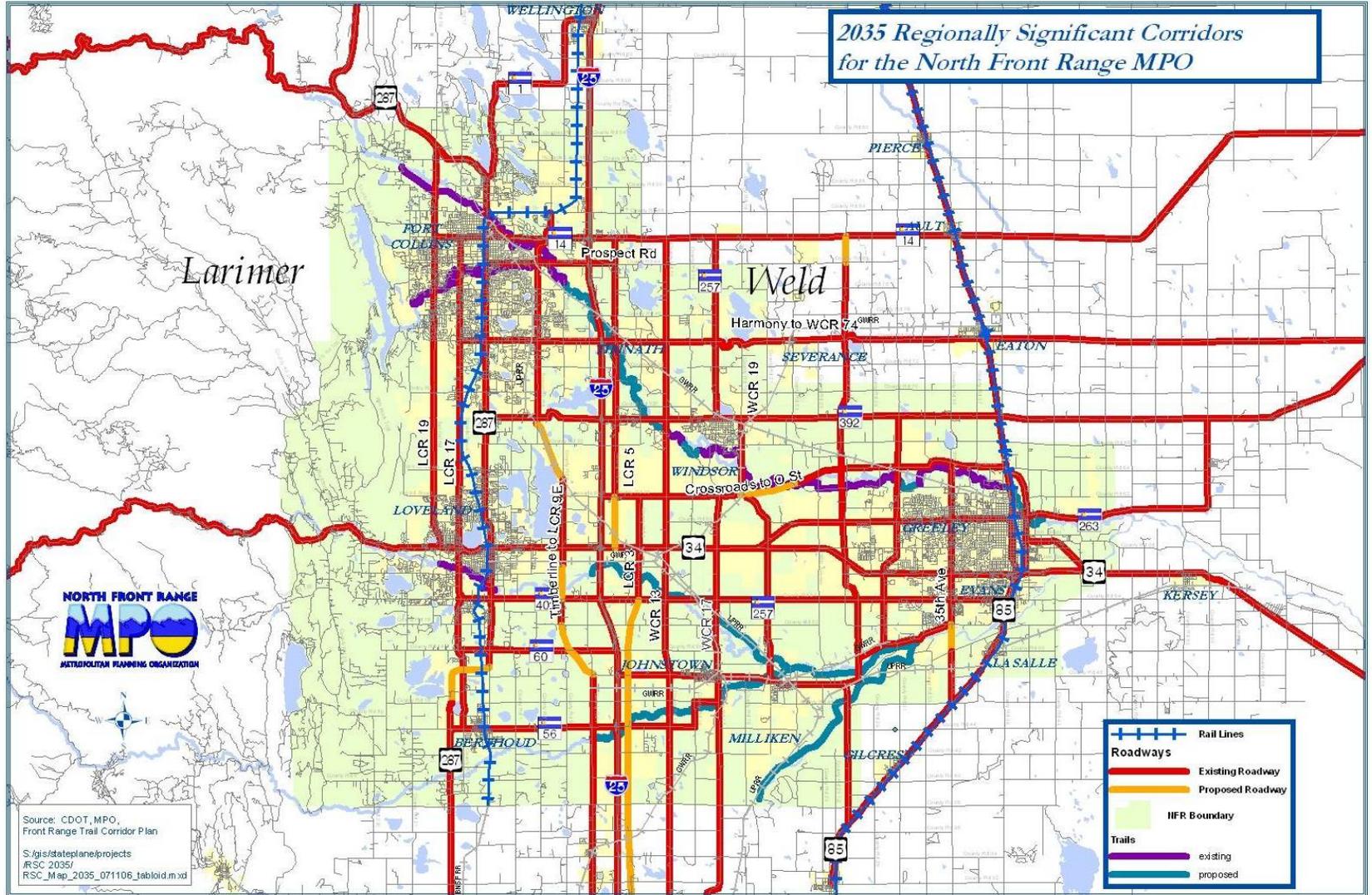
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Corridor Name/Component	Description
Corridor 6 – US 85	
US 85	WCR 48 on the south to north of WCR 70
US 85 Business	US 34 to US 85
Union Pacific Railroad (UPRR)	Approximately parallels US 85 through MPO
Corridor 7 – SH 14	
Poudre River Trail	Northwest corner of MPO boundary to junction with South Platte
SH 14	Eastern MPO boundary to LCR 19 on the west
Corridor 8 – Prospect Road	
Spring Creek Trail	Poudre River on the east to Horsetooth Reservoir on the west
Prospect Road (Ft Collins)	LCR 5 on the east to US 287 on the west
Corridor 9 – SH 392	
Harmony Rd/WCR 74 (Ft Collins/Weld Co.)	WCR 21 to LCR 17
SH 392	US 85 on the east to US 287 on the west
Poudre River Trail	SH 257 on the east to SH 392 on the west (through Windsor)
Corridor 10 – US 34	
Big Thompson Trail	US 287 on the east to US 34 on the west (through Loveland)
Crossroads/O St	US 85 on the east to I-25 on the west
US 34	Eastern MPO boundary to western MPO boundary
US 34 Business	Eastern MPO boundary to US 34 on the west
SH 402	US 85 on the east to LCR 17 on the west
Corridor 11 – SH 60/SH 56	
SH 60	Two Rivers Parkway on the east to LCR 17 on the west
SH 56	WCR 17 on the east to US 287 on the west
Corridor 12 – Rural River Trails	
River Trail Corridors	Various river trail corridors that include Big Thompson, Little Thompson, Cache la Poudre, and South Platte. This corridor is the portions of the river trails, either existing or planned, but is outside of a municipal boundary.



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Figure 2. Regionally Significant Corridors





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B. Roadway System

The roadway system is currently the principal transportation component within the North Front Range MPO. Not only does it provide a network for vehicular traffic, such as cars and trucks, but it also provides infrastructure for bicycle use and transit service.

Functional Classification

The roadway network is comprised of a hierarchy of roadways defined by their functional classification and how they serve the mobility and access needs of the users. As mobility increases on a roadway, access decreases; and conversely, as access increases, mobility decreases.

The functional classification described below is based on the North Front Range travel demand model. The functional classification of each roadway reflects its role in the system of streets and highways. Functional classification has specific implications with regard to the administration of federal aid highway programs. Transportation planning agencies use functional class as a means to identify corridor preservation, access management, and roadway design requirements.

- ▶ **Freeway:** A divided, restricted access facility with no direct land access and no at-grade crossings or intersections. Freeways are intended to provide the highest degree of mobility serving higher traffic volumes and longer-length trips. Freeways can have four, six, or possibly more travel lanes. All interstate facilities are freeways. I-25 is the only freeway facility in the North Front Range.
- ▶ **Freeway Ramp:** Provide connections between freeways, expressways, and other roadway facilities. Freeway to freeway movements are also handled using freeway ramps or in some cases a collector/distributor system. Generally, expressways only have ramps where access management techniques have been employed and/or grade separations occur.
- ▶ **Expressway:** These facilities permit traffic flow through urban areas and between major activity centers. They are similar to freeways but can include some at-grade intersections at cross streets. Access may be either full or partial control with very limited direct land access. Expressways are intended to provide higher levels of mobility rather than local property access. They typically have either four or six travel lanes. State and U.S. highways are often designated as expressways. Expressways have a tendency to evolve over time into the higher-type freeway classification or into major arterials as rural lands are developed and local land access is provided.
- ▶ **Major Arterial:** Major arterials permit traffic flow through urban areas and between major destinations. They are of great importance in the transportation system since they provide local land access by connecting major traffic generators, such as central business districts and universities, to other major activity centers. Containing up to six travel lanes, major arterials carry a high proportion of the total urban travel on relatively low roadway mileage. In urban areas, a grid pattern of arterials is often recommended with one-mile spacing for major arterials. They typically receive priority in traffic signal systems, have turn bays at intersections, medians or center turn lanes, and sometimes



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contain grade separations and other higher classification-type design features. State and U.S. highways are often designated as major arterials.

- ▶ **Frontage Road:** Frontage roads serve several different functions, depending on their application. They run parallel to and in close proximity to a higher classification facility and can be used in conjunction with both freeways and arterial streets. With freeways, their primary function is to collect and distribute traffic between local streets and freeway interchanges. They often provide access to local land uses along freeways. When accompanying arterials, they can be used to control access to the arterial, to function as a street facility serving adjoining property, and to maintain circulation of traffic on each side of the arterial. Frontage roads can be constructed in one-way and two-way configurations. Frontage road systems can have one or two travel lanes in each direction.
- ▶ **Minor Arterial:** Minor arterials collect and distribute traffic from major arterials, freeways, and expressways to streets of lower classification and, in some cases, allow traffic to directly access properties. They serve secondary traffic generators such as community business centers, neighborhood shopping centers, multifamily residential areas, and traffic between neighborhoods. Access to land use activities is generally permitted, but should be consolidated, shared, or limited to larger-scale users. Minor arterial street spacing is often recommended to be at half-mile intervals.
- ▶ **Collector Street:** Collectors provide for land access and traffic circulation within and between residential neighborhoods and commercial and industrial areas. They distribute traffic movements from these areas to the arterial streets. Collectors do not typically accommodate long through trips and are not continuous for long distances. In areas where arterial streets are adequately spaced, collector streets should penetrate but not necessarily completely traverse through residential areas. Individual access from residential lots should be discouraged, particularly where bicycle lanes or routes are provided. The cross-section of a collector street may vary widely depending on the scale and density of adjacent land uses and the character of the local area. Left turn lanes should be considered on collector streets adjacent to nonresidential development. Collector streets should generally be limited to two lanes, but sometimes have four-lane sections.
- ▶ **Local Roadway:** The primary function of local roads is to provide access to adjacent land uses, in both urban and rural areas.

Table 2 summarizes the classification and the associated lane miles of roads within the North Front Range, and **Table 3** summarizes the same information for Regionally Significant Corridors.



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Table 2. Lane Miles by Functional Classification in the North Front Range Region

Functional Class	NFR Lane Miles
Freeway	113
Expressway	180
Major Arterial	565
Minor Arterial	624
Collector	1,135
Ramps	14
Frontage Road	69
Total	2,700

Source: North Front Range 2005 Base Year Regional Travel Model, MPO boundary

Table 3. Lane Miles by Functional Classification for Regionally Significant Corridors

Functional Class	RSC Lane Miles
Freeway	113
Expressway	180
Major Arterial	418
Minor Arterial	258
Collector	78
Ramps	0
Frontage Road	0
Total	1,048

Source: North Front Range 2005 Base Year Regional Travel Model, MPO boundary

Existing Daily Traffic Volumes

Figure 3 presents the existing (2005) daily traffic volumes on major roadways in the North Front Range. This grouping is an equal interval representation of the traffic volumes.

Roadway Surface Condition

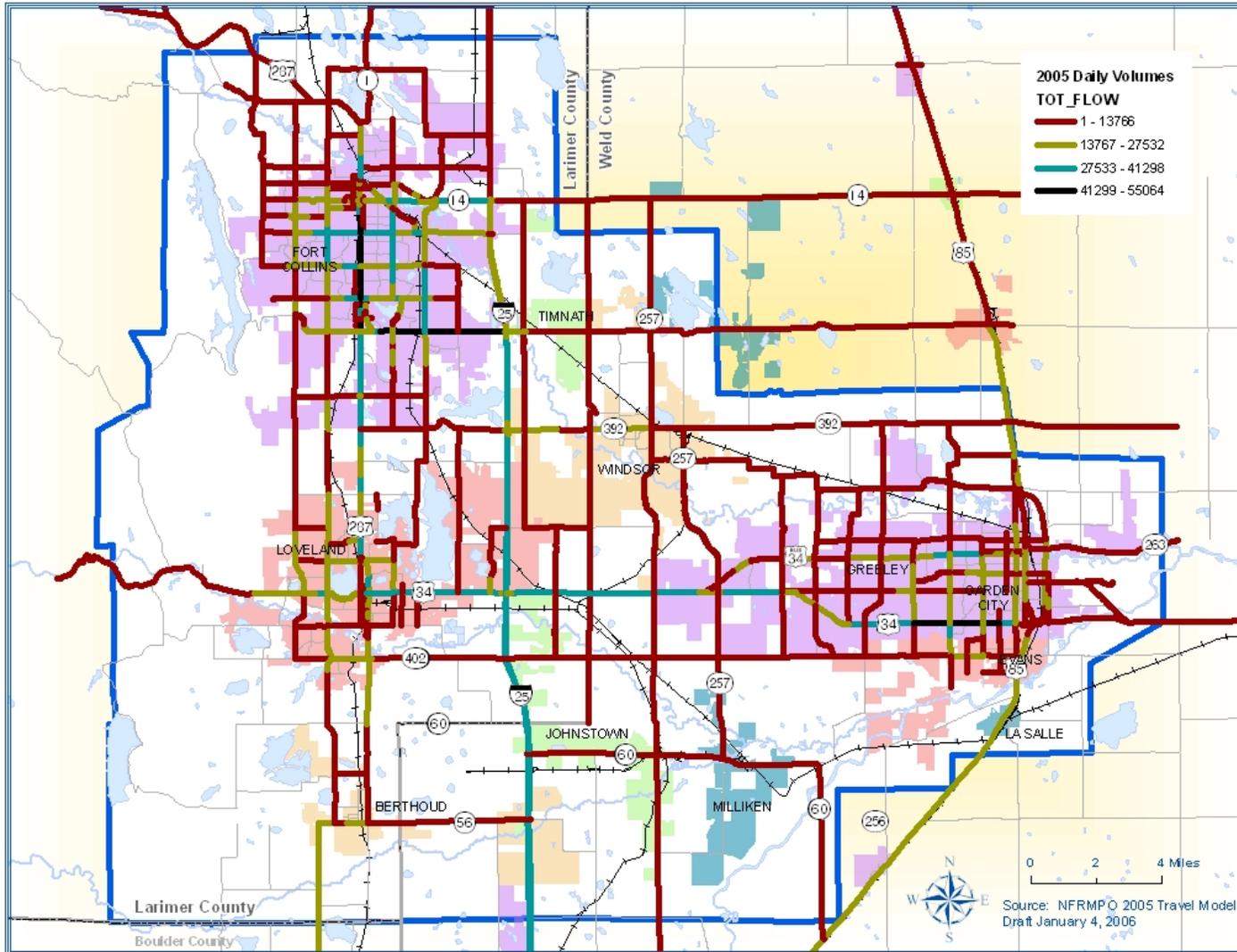
CDOT monitors roadway conditions on the State Highway system on a yearly basis. Roadways are given a rank based on the roughness and rutting of the roadway, as well as the amount of cracking and patching. A “good” surface condition corresponds to a remaining service life greater than 11 years, a “fair” surface condition corresponds to a remaining service life between 6 and 11 years, and a “poor” surface condition corresponds to a remaining service life less than six years. Roadway conditions are illustrated in **Figure 4**.

Table 4 shows a comparison between the conditions of the State Highways in the North Front Range, with the state as a whole. In general, the NFR facilities are in worse condition than the state as a whole. **Table 4** also shows a comparison between the 2000 and 2005 surface conditions. The statewide average percentages have remained relatively unchanged since 2000. The NFRMPO has seen a shift in the percentage of highways with a ‘good’ rating decline by 8% since 2000.



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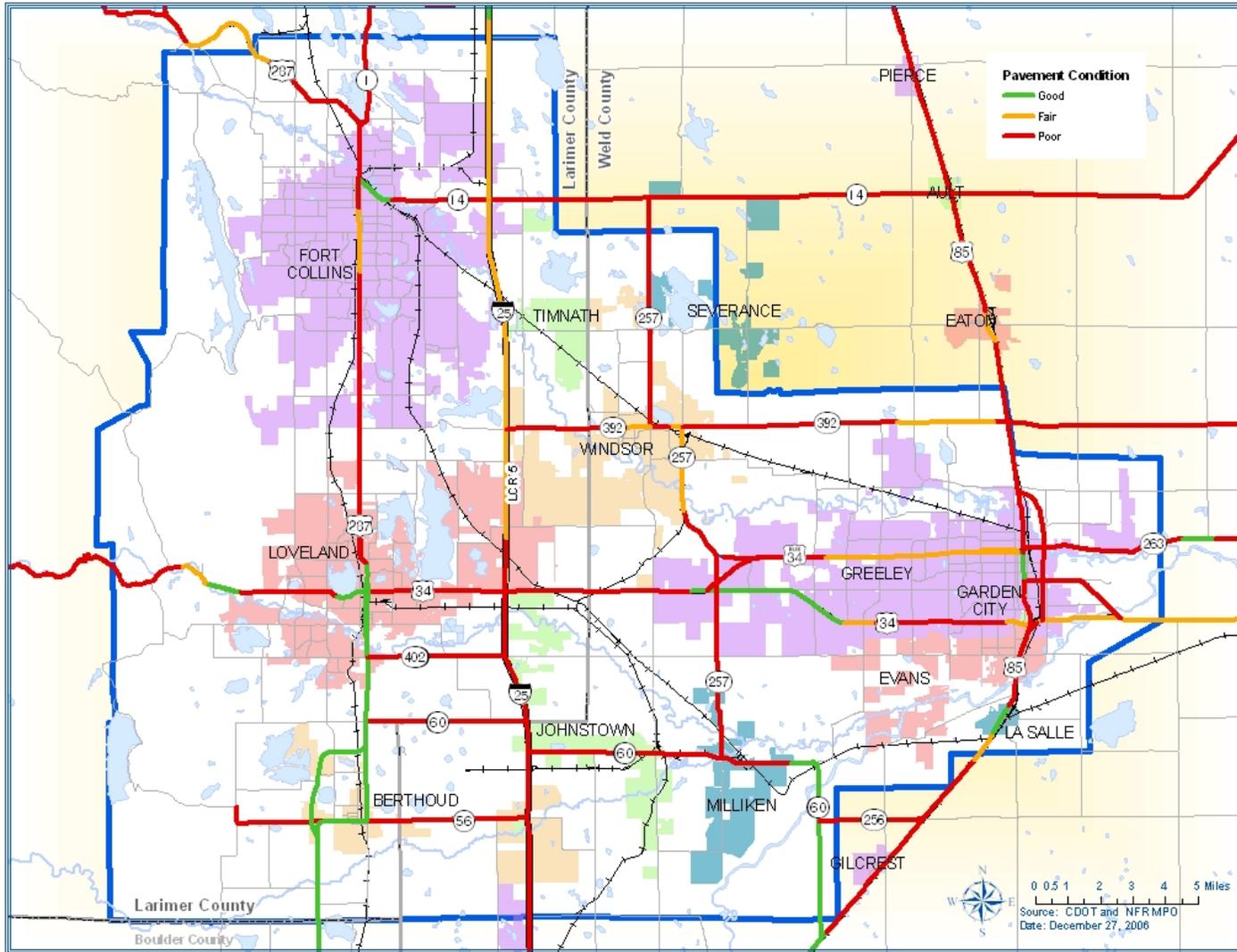
Figure 3. 2005 Average Daily Traffic Volumes





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Figure 4. Roadway Surface Conditions





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As the proportion of highways with good ratings declines, the proportion of highways in the fair and poor category increase. The most notable difference is in the poor category in comparing the NFRMPO and the entire State. The NFRMPO has highways in poor condition at a level 22% higher than the statewide total.

Table 4. Roadway Surface Conditions of State Highways

	Surface Condition					
	2000			2005		
	Good	Fair	Poor	Good	Fair	Poor
North Front Range	23%	15%	62%	15%	20%	65%
Statewide	34%	21%	45%	35%	22%	43%

Source: CDOT's 2035 Transportation Planning Data Set

Special Roadway Corridors

The following section describes roadway corridors which have special designations, serve a special purpose, or can be characterized by the nature of their use.

National Highway System

The National Highway System (NHS) includes the Interstate highway system as well as a portion of the urban and rural major arterial system. There are approximately 100 miles within the North Front Range MPO on the National Highway System, as shown on **Figure 5**.

Scenic and Historic

The State of Colorado has identified over 2,000 miles of roadway as Scenic Byways. The Cache La Poudre - North Park (SH 14 and US 287) is the only Scenic Byway in the North Front Range. Only a few miles of this byway are within the northern part of the North Front Range.

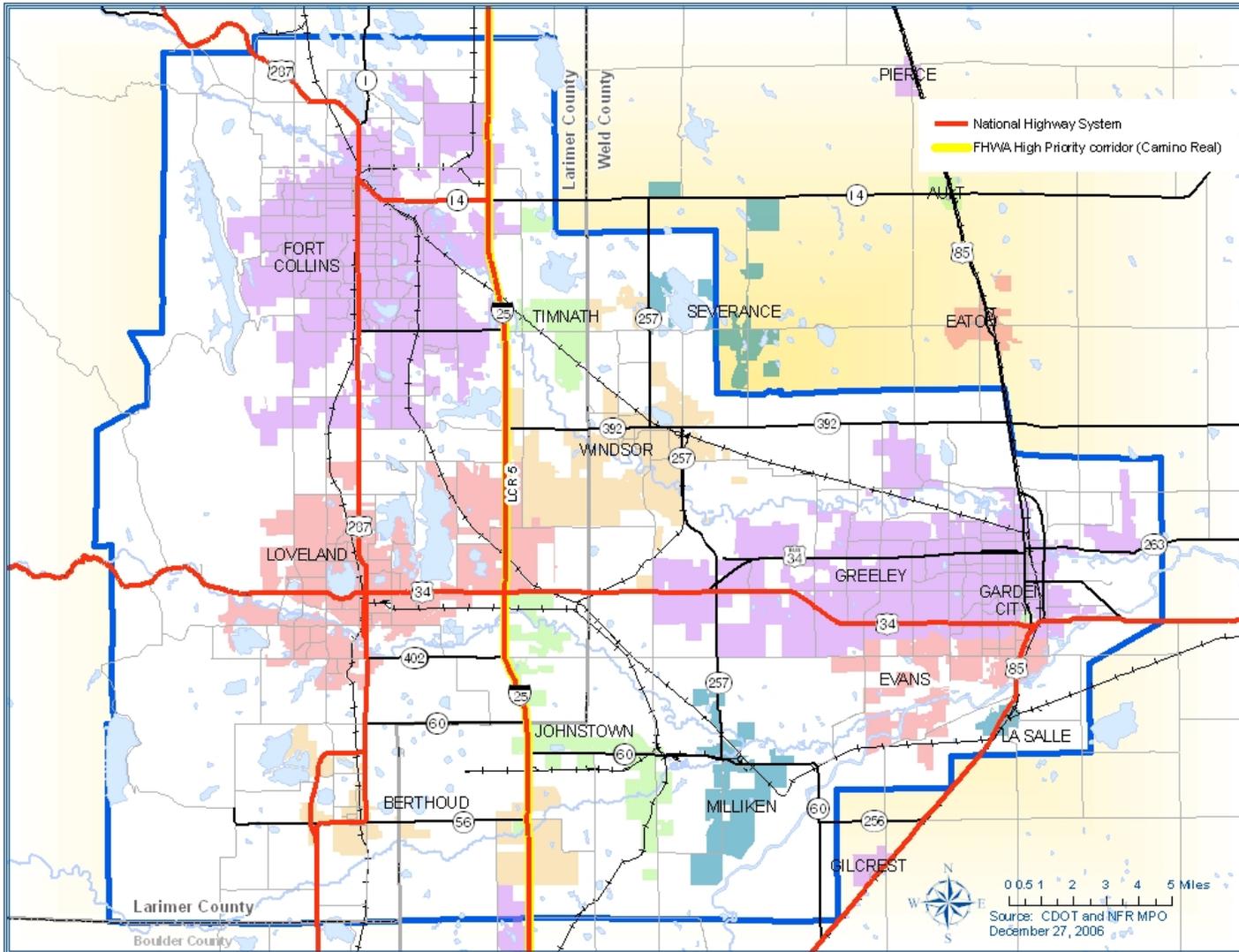
Hazardous and Nuclear Materials

The transportation of hazardous and nuclear materials is limited to designated roadways. **Figure 6** illustrates the roadways in the North Front Range which are designated by the State of Colorado for transport of hazardous and nuclear materials. As shown, nuclear materials are restricted to I-25. Hazardous materials can be transported on I-25, US 85, on SH 14, and on US 34 east of I-25.



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Figure 5. National Highway System





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Bridge Conditions

Bridges comprise an important element of the roadway network, as inadequate bridges can cause various capacity and safety problems on roadways. CDOT regularly inspects and evaluates all bridges on and off the State Highway system and gives them a sufficiency rating so that structurally deficient and functionally obsolete bridges are identified. The definitions used by the Federal Highway Administration for these categories are as follows:

- ▶ **Structurally Deficient:** Those bridges which are in advanced stages of deterioration, or are in marginal condition, but still function at a minimum level. Also included in this category are bridges which do not have desired load carrying capacities.
- ▶ **Functionally Obsolete:** Those bridges which have acceptable load carrying capacity, but impose unacceptable physical restrictions (narrow width, restricted vertical clearance, limited sight distances, speed reducing curves, or insufficient waterway adequacy).

There are 183 bridges on the State Highway system and 264 off the State Highway system totaling 447 bridges in the North Front Range. Of these, 79 have documented inadequacies. Bridges with a sufficiency rating of 50 or lower which are classified as Functionally Obsolete or Structurally Deficient are eligible to receive federal funds for replacement of those structures. Those structures with a rating less than between 50 and 80 which are classified as Functionally Obsolete or Structurally Deficient are eligible for rehabilitation funds with a possibility of replacement on a case by case basis. Bridge funding is administered by CDOT. **Table 5** presents the bridges in the NFR with documented deficiencies in 2007 and **Figure 7** depicts the bridge locations.

Table 5. Bridges with Deficiencies

Bridge Structure No.	Location	Facility	Bridge Condition	Rating
LR42-0.0-9	Fossil Creek Res. Inlet	County Road 42	Functionally Obsolete	16.8
WEL027.0-066.0A	New Cache La Poudre Cana	County Road 27	Structurally Deficient	22.9
LR3-0.2-50	Larimer & Weld Canal	County Road 3	Structurally Deficient	23.5
LR38-0.3-125	Cache La Poudre River	County Road 38	Structurally Deficient	30.4
FCSHLD-0.4-DRK	Larimer Co Canal No 2	S. Shields Street	Structurally Deficient	33.1
LR18-0.4-23E	Handy Ditch	County Road 18	Structurally Deficient	36.6
B-16-D	Cache La Poudre River	SH 14 ML	Structurally Deficient	37.3
FCMTCL-0.1-HTH	Larimer Co. Canal No. 2	Mitchell Street	Functionally Obsolete	39
LR11C-0.7-24E	Boyd/Horseshoe Canal	County Road 11C	Functionally Obsolete	39
LR15A-0.4-4E	Little Thompson River	County Road 15A	Structurally Deficient	39
FCBRYN-0.2-MULB	Larimer Co. Canal No. 2	Bryan Street	Functionally Obsolete	45.2
LR29-0.6-20	Home Supply Ditch	County Road 29	Structurally Deficient	47.4
LR52-1.2-125	Larimer & Weld Canal	County Road 52	Structurally Deficient	47.6
LR50-0.2-17	Larimer & Weld Canal	County Road 50	Functionally Obsolete	48.8
LASALLE-001	Union Ditch	Main Street	Structurally Deficient	49.2
LR38E-1.0-25E	Charles Hansen Feed Cana	County Road 38E	Functionally Obsolete	51.7
WEL021.0-068.0A	New Cache La Poudre Cana	County Road 21	Structurally Deficient	53.6



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Bridge Structure No.	Location	Facility	Bridge Condition	Rating
C-18-N	Latham Canal	US 85 ML NBND	Structurally Deficient	56.2
LR54G-0.5-52E	Terry Lake Inlet Canal	County Road 54G	Functionally Obsolete	58.6
LOV150WASHTN AV	Greeley Loveland Canal	Washington Ave.	Structurally Deficient	60
C-16-AB	Louden Canal	US 287 ML AR	Functionally Obsolete	60.1
C-16-W	Barnes Inlet Canal	US 34 ML WBND	Functionally Obsolete	60.6
C-18-BH	UP RR	US 34 EB	Functionally Obsolete	62
B-16-EX	I 25 ML	SH 14 ML WBND	Structurally Deficient	62.4
FCLINC-0.0-WLLW	Cache La Poudre River	Lincoln Avenue	Functionally Obsolete	63.8
LOV850MADISONAV	Greeley Loveland Canal	N. Madison Ave.	Functionally Obsolete	64.7
WEL052.0-013.0A	Hillsborough Ditch	County Road 52	Structurally Deficient	64.7
LR11H-0.3-S402	Big Thompson River	County Road 11H	Functionally Obsolete	65.2
B-16-AM	I 25 ML	Prospect Road	Functionally Obsolete	66
B-16-FJ	Windsor Res, Canal Sr	I-25 Service Road	Functionally Obsolete	66.9
LR46E-1.1-13	Dry Creek	Lincoln Avenue	Functionally Obsolete	67
LR31D-0.0-22H-A	Handy Ditch	County Road 31D	Functionally Obsolete	70.9
C-16-AI	Draw	US 34 ML	Functionally Obsolete	71.1
C-17-ER	I 25 ML	SH 392 ML	Functionally Obsolete	72.3
C-16-AG	Home Supply Ditch	US 34 ML	Functionally Obsolete	73.4
C-17-CZ	Draw	SH 257 ML	Functionally Obsolete	73.7
B-16-AL	Larimer Co Canal	SH 1 ML	Functionally Obsolete	74
C-17-EL	Draw	I 25 ML	Functionally Obsolete	75.2
LR19E-0.5-20	Big Thompson River	County Road 19E	Functionally Obsolete	75.7
B-16-EW	I 25 ML	SH 14 ML EBND	Functionally Obsolete	75.8
C-16-AH	Handy Ditch	US 34 ML	Functionally Obsolete	75.8
C-17-EG	I 25 ML	US 34 ML WBND	Functionally Obsolete	75.8
C-17-EH	I 25 ML	US 34 ML EBND	Functionally Obsolete	75.8
FCSHLD-0.1-HLPD	Spring Creek	Shields Street	Functionally Obsolete	75.9
LR40-0.2-9	Fossil Creek Res. Inlet	County Road 40	Functionally Obsolete	75.9
LOV1050TAFT AV	Big Barnes Ditch	Taft Avenue	Functionally Obsolete	76.1
FCELIZ-0.1-BRYN	Larimer Co. Canal No. 2	Elizabeth Street	Functionally Obsolete	76.2
C-18-BZ	Sand Creek	SH 263 ML	Structurally Deficient	76.3
FCVINE-W.5-SUMV	Lake Canal	East Vine Drive	Functionally Obsolete	76.4
LR17-0.5-48	Cache La Poudre River	County Road 17	Functionally Obsolete	76.5
FCTMB-0.1-PRST	Spring Creek	Timberline Road	Functionally Obsolete	76.8
C-17-EK	I 25 ML	County Road 20E	Functionally Obsolete	76.9
FCTRT-0.0-JFK	Larimer Co. Canal No. 2	Troutman Way	Functionally Obsolete	76.9
C-17-G	Draw	I-25 Service Road	Structurally Deficient	77
LR14-0.8-23	Home Supply Ditch	County Road 14	Functionally Obsolete	77
B-17-BC	RR SPUR	I 25 ML NBND	Functionally Obsolete	77.2
LR13E-0.3-24E	Love/Horse Shoe Canal	County Road 13E	Functionally Obsolete	77.3
FCMULB-0.1-OVLD	Pleas. Valley Lake Canal	Mulberry Street	Functionally Obsolete	77.7
LR27-0.1-32C	Buckhorn Creek	County Road 27	Functionally Obsolete	77.7
FCCRST-0.1-BRYN	Larimer Co. Canal No. 2	Crestmore Court	Functionally Obsolete	78
FCLAPT-0.1-TFTH	New Mercer Canal	LaPorte Avenue	Functionally Obsolete	78



The North Front Range 2035 Regional Transportation Plan

Envisioning Transportation Solutions for Colorado's North Front Range



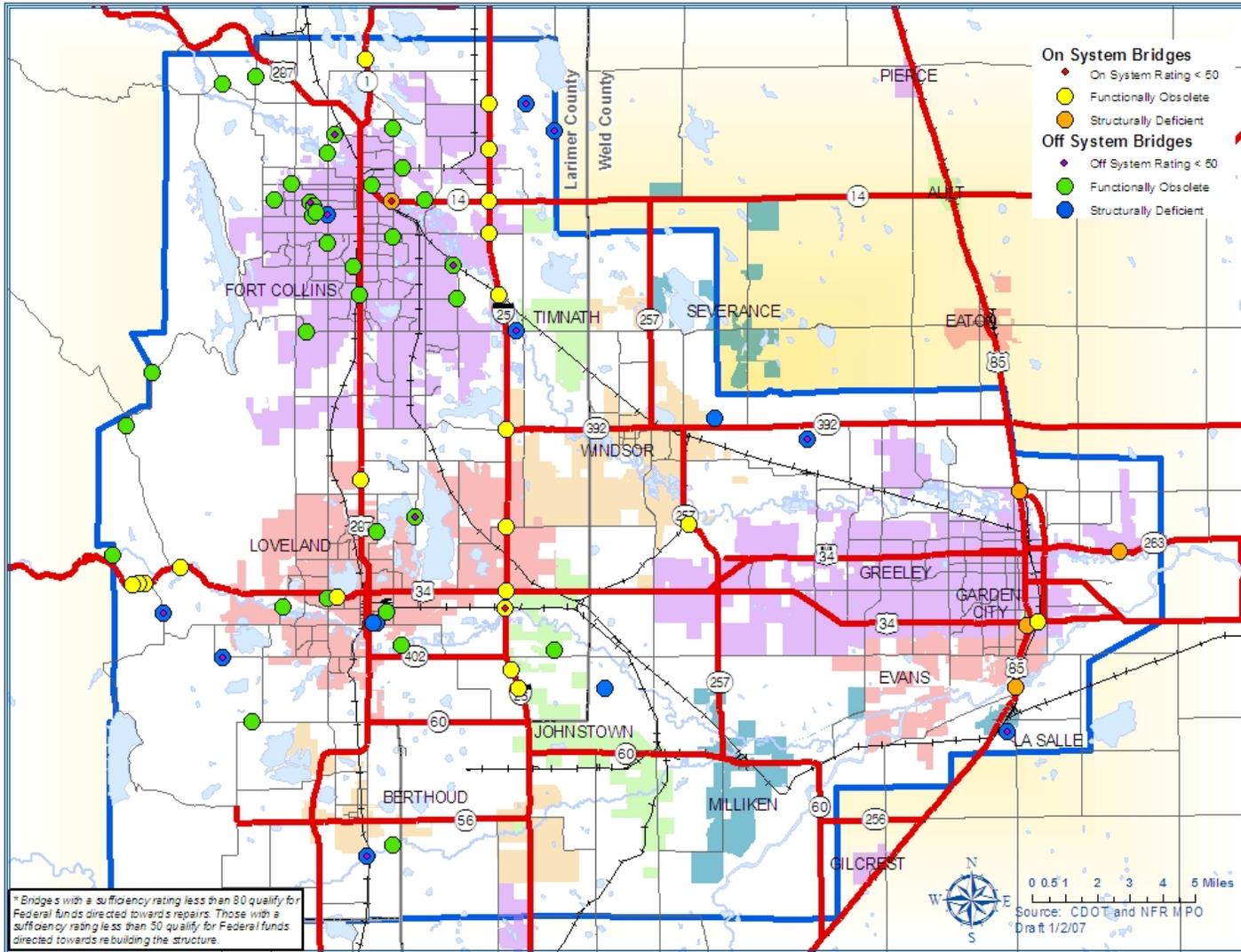
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Bridge Structure No.	Location	Facility	Bridge Condition	Rating
FCMNR-0.0-CLGE	Larimer Co. Canal No. 2	Monroe Street	Functionally Obsolete	78
FCPLM-W0.1-CTYP	Larimer Co. Canal No. 2	Plum Street	Functionally Obsolete	78
LOV150MONROE AV	Greeley Loveland Canal	Monroe Avenue	Structurally Deficient	78
LR6C-0.8-15	Little Thompson River	County Road 6C	Functionally Obsolete	78
C-18-AV	Ramp to US 85 SBND	US 34 ML EBND	Structurally Deficient	78.7
FCLMY-1.2-VINE	Larimer & Weld Canal	LeMay Avenue	Functionally Obsolete	79.6
C-16-R	Louden Ditch	US 34 ML	Functionally Obsolete	80.5
C-18-BL	CO.RD 39.5, UP RR	US 85 ML NBND	Structurally Deficient	80.9
C-17-ET	CO.RD 26 Airport Drive	I 25 ML SBND	Functionally Obsolete	82.1
B-16-FL	I 25 ML	County Road 52	Functionally Obsolete	84.3
LR3-0.2-18	Consol Hillsborough Cana	County Road 3	Functionally Obsolete	84.5
LR21C-0.3-50-A	Larimer Co. Canal No. 2	County Road 21C	Functionally Obsolete	85
LR19-1.2-80-A	Boxelder Creek	County Road 19	Structurally Deficient	91
C-17-EE	COUNTY ROAD 16	I 25 ML SBND	Functionally Obsolete	92.3
C-17-EI	COUNTY ROAD 16	I 25 ML NBND	Functionally Obsolete	92.3
C-17-ES	CO.RD 26 Airport Drive	I 25 ML NBND	Functionally Obsolete	93.1
FCLMY-0.1-STUT	Spring Creek	LeMay Avenue	Functionally Obsolete	94



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Figure 7. Bridges with Deficiencies





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Safety

Accident data for all Regionally Significant Corridors (both state highways and non-state highways) were collected from the CDOT Accident Database. The accident data covered a five-year period from 1999 to 2003. **Table 6** shows the number of accidents by year for all Regionally Significant Corridors by accident severity.

Table 6. Regionally Significant Corridor Accidents by Severity

Year	Property Damage Only	Injury	Fatal	Total
1999	1,883	1,212	17	3,112
2000	1,737	1,161	18	2,916
2001	2,365	1,212	24	3,601
2002	3,307	1,378	29	4,714
2003	3,298	1,300	30	4,628
Total	12,590	6,263	118	18,971

The safety measure was based on the accident rates within each corridor, that is, the number of accidents per million vehicle miles of travel (VMT). Since most corridors include several roadway segments with varying levels of traffic, the VMT was derived using the current traffic volumes weighted by roadway segment length.

As a preliminary assessment of the overall corridor safety, the accident rates were weighted based on the severity of the accident, as follows:

- ▶ Property Damage Only (PDO) Accidents = 1
- ▶ Injury Accidents = 5
- ▶ Fatal Accidents = 12

Table 7 shows the resulting accident rates for each of the eleven Regionally Significant Corridors. Refer to **Table 1** for a description of the roadway facilities included in each corridor.



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Table 7. Weighted Accident Rates on Regionally Significant Corridors

Corridor	Corridor Description	Weighted Accident Rate ¹
1	US 287	6.99
2	SH1	5.99
3	I-25	6.71
4	SH 257	4.32
5	Two Rivers Parkway	7.36
6	US 85	6.54
7	SH 14	8.52
8	Prospect Road	6.69
9	SH 392	3.91
10	US 34	5.21
11	SH 60/SH 56	4.81

¹ Accidents per million vehicle miles of travel based on accident severity. (PDO = 1, Injury = 8, Fatal = 12)

In order to better assess the relative safety of the roadways within the North Front Range MPO, the accident history along each roadway within the eleven Regionally Significant Corridors was reviewed in detail. There are three distinct roadway types within the Regionally Significant Corridors: Interstate Highways, State Highways, and Non-State Highways.

Accident rates were developed using the total accidents per million vehicle miles traveled along a segment of roadway. While the weighted accident rates are useful when comparing corridors as a whole, a segmented analysis would require additional information in order to properly weight accidents by severity that is not readily available for all roadways within the Regionally Significant Corridors. Therefore, for the purpose of this detailed analysis, the rates were not weighted by accident severity.

The accident rates are sensitive to both the length of the segment analyzed, and the average daily traffic (ADT) counts along the segment. The results are such that the accident rate for five accidents along a low volume roadway segment will be much higher than five accidents along a high volume roadway segment of the same length. Likewise, the same five accidents on a five mile roadway segment will result in a higher accident rate than five accidents on a ten mile roadway segment with the same ADT.

While both accident data and ADT data were available for both State Highways and Non-State Highways within the study region, the Non-State Highway data lacked sufficient detail to accurately pinpoint the location of the accidents. As such, the accident rates were derived for long stretches of roadway. This approach allows for a reasonable comparison between the facilities since this methodology was used for all Non-State Highway segments.

By way of comparison, the calculated State Highways and Non-State Highway accident rates were compared against a derived average of for all similar segments of the NFR Regionally Significant Corridors. The average accident rate was approximately 2.38 for State Highways, and approximately 2.18 for Non-State Highways. Because I-25 is the only Interstate Highway in the region, it was compared to the Rural Interstate Highway statewide average of 1.03 as



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documented in the *Accident and Rates on State Highways* report produced by the Colorado Department of Transportation, Transportation Safety and Traffic Engineering Branch 2003.

Figures 8 and 9 graphically present the results of that accident rate comparison for the north-south and east-west roadway segments within the Regionally Significant Corridors. The red indicates roadway segments that are significantly higher, and the green indicates roadway segments that are significantly lower than the average total accident rates derived for that type of facility. The blue indicates roadway segments that are within 50% of the standard deviation for State Highways, Non-State Highways and the statewide rate for Interstate Highways, respectively.

With the exception of the Interstate Highway segments, the red segments are predominantly located along arterial roadways, or low volume rural roadways. Arterial roadways, particularly through more densely populated areas, often experience high accident rates due to a large proportion of interchange access and intersection related accidents. For low volume rural roadways, one or two accidents can cause large shifts in the accident rates.

Along I-25, the accident rates may be influenced by a wide variety of factors, including congestion and heavy directional flow during peak hours.



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C. Freight

The U.S. Department of Transportation estimates that by 2020 the Nation's transportation system will handle cargo valued at almost \$30 trillion, compared with \$9 trillion in 2004. Volumes, in tons, will increase by nearly 70 percent over current levels. These huge increases in freight movement will place even greater demands on the Nation's transportation system. Thus, it is critical that transportation planning agencies throughout the country integrate freight considerations into their long range planning process. And it is clear that there are many different strategies needed to address the challenges surrounding the projected growth of freight transportation.

Freight has always been one of the planning factors in national transportation legislation that must be considered in developing the required long range transportation plans. As a result, the North Front Range MPO has included a freight discussion in its Regional Transportation Plan for a number of years, but due to a lack of available data, this section has never been robust. While many of the data issues remain, the MPO has now strengthened its staff resources to the extent that a more comprehensive freight effort has been undertaken.

Policy

It is the policy of the NFRMPO to integrate freight considerations in long range, multi-modal planning and short range programming. This will allow the MPO to meet its goal of improving the accessibility and mobility options available for freight. Improvements in the movement of freight can have important economic development benefits. Lower costs and better service in freight have a positive outcome for all companies engaged in the production, distribution, and retail sale of goods. Reducing the cost of shipment enables companies to serve wider markets with more economic gains.

Three strategies have been established by the NFRMPO to integrate freight movement into the transportation planning process, as described below.

Coordinate freight plans with other transportation and land use plans to encourage desirable mobility patterns.

Coordinating transportation and land use policies can result in more efficient use of the regional transportation system. A more efficient transportation system will bring in more jobs and development (both residential and service), and reduce the effects of growth. To accomplish this strategy, the North Front Range MPO will:



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- ▶ Consider the impact that transportation decisions can have on existing as well as future land use.
- ▶ Maximize the public benefit of our decisions by considering appropriate use and maintenance of transportation rights-of-way.
- ▶ Seek the input of environmental, community, economic development, and other suitable agencies to promote the integration of transportation with these interests.

Promote the safe and efficient movement of goods while facilitating freight operations.

Attaining an efficient regional transportation system requires safety and mobility as major objectives. To promote safety and increase the mobility of our freight system the North Front Range MPO will:

- ▶ Support designs, projects, and programs that accommodate safe travel for all system users throughout the transportation network.
- ▶ Support maintenance and operations of system infrastructure to provide safety.
- ▶ Work with state agencies and communities to ensure that consideration of operational efficiency and convenience of the freight sector are balanced with the needs of the communities, pedestrians, and the environment.

Engage the private sector to explore options that will benefit the freight system and the regional economy.

Participation, collaboration, and cooperation all are ways to strengthen our freight policy. Encouraging this type of interaction will add to the strength of our region's transportation planning efforts. The North Front Range MPO will promote engagement by:

- ▶ Information exchange such as networking, conferences, research, and working groups for collaboration of ideas
- ▶ Industry feedback on freight plans and policy.

Public Involvement

Public involvement for freight revolves primarily around the private sector. This involvement is the key to a successful freight planning effort, since it is the private sector that is responsible for almost all of the freight movement in this country. These freight stakeholders add enormous value to the planning process, and they need to be engaged early and often in order to do a thorough job of identifying needed transportation infrastructure investments.

The MPO developed a basic survey in June of 2006. The identification of companies to be surveyed was done by the Northern Colorado Economic Development Corporation (NCEDC) and the Greeley/Weld Chamber of Commerce. This survey was intended to gather general freight information within the MPO region. In the summer of 2006, the MPO sent the freight survey to 67 Larimer County and 33 to Weld County companies that use freight in their daily business activities. With the assistance of NCEDC and the Chambers of Commerce, the MPO



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has received 32 surveys, a little over 30% response rate, from the companies in Larimer and Weld Counties.

The predominant mode of freight movement in the NFRMPO is truck. Freight coming into the region uses a fair amount of rail as well as truck while freight leaving the region is predominately by truck. Freight companies are most sensitive to time and cost which includes such items as fuel, insurance, equipment, and staff. Of the companies surveyed, a couple of issues were identified as relevant to transportation planning. They are congestion on the roadways and slow rail service to this region.

MPO staff intends to co-host freight roundtables with both Larimer and Weld Counties to gain additional knowledge on the needs of the freight industry. Also some additional interviews with individual companies will take place.

Truck Freight

The NFRMPO develops economic forecasts for the region every four years in preparation for the regional transportation plans. The forecast report for the 2035 Plan, *Economic and Demographic Forecast for the North Front Range Modeling Area and Its Sub-Regions Supplemental Report*, March 2006, included analysis of freight movement in the North Front Range. This Supplemental Report used Global Insight Transearch Database, 2004, information as the foundation for the report on truck freight. It should be noted that the truck freight movement shown broadly represents the truck movement regionally.

The most heavily used truck routes in the NFR are I-25, US 85, US 34, SH 14, as well as portions of Larimer County Road 5 and 19. The data collected through the Supplemental Report formed the basis for developing a truck flow calculation in the travel demand model. **Figure 10** identifies the existing level of truck traffic from the travel model, using natural breaks in the data set. As shown, I-25 carries the heaviest volume of truck traffic, followed by US 85 and US 34. The Port-of-Entry on I-25 south of Prospect Road is automated, and handles an average of 83,000 trucks per month. This number is bi-directional and includes both automated and non-automated.

The Transearch database provides freight movement at the county level. **Table 8** shows the commodity flows in Larimer and Weld Counties for a 2004 base year. The tonnage of truck freight movement has more than doubled since 1998. These data are for the entire counties of Larimer and Weld, not just the areas within the North Front Range.

Table 8. Existing Commodity Flows (2004)

County	Inbound Tonnage (thousands)		Outbound Tonnage (thousands)		Total Tonnage (thousands)	
	1998	2004	1998	2004	1998	2004
Larimer	6,056.6	9,351.8	3,057.4	10,042.1	9,114.0	19,393.9
Weld	6,085.8	8,997.4	5,638.9	15,711.3	11,724.7	24,708.7

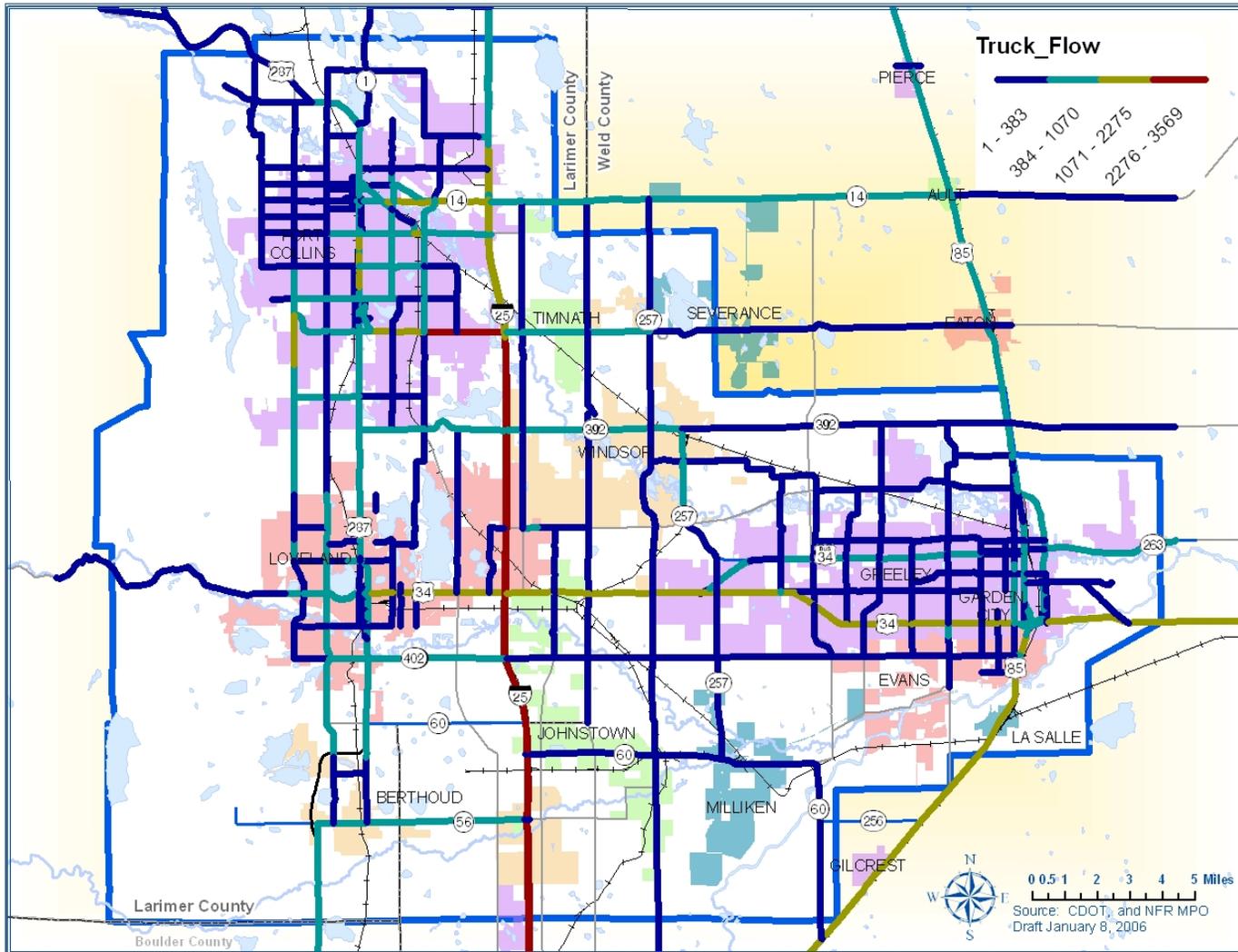
Source: Global Insight Transearch Database, 2004

Note: Includes entire counties of Larimer and Weld, not just the areas within the North Front Range.



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Figure 10. Existing Truck Traffic





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Rail Freight

Rail freight in the NFRMPO is primarily on the Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) Railroad lines, which carry an average of 6 and 17 trains per day, respectively. The BNSF carries annual gross tons per mile (in millions) of approximately 33.0 and UPRR carries annual gross tons per mile (in millions) between 20.0 and 39.9, 2005.

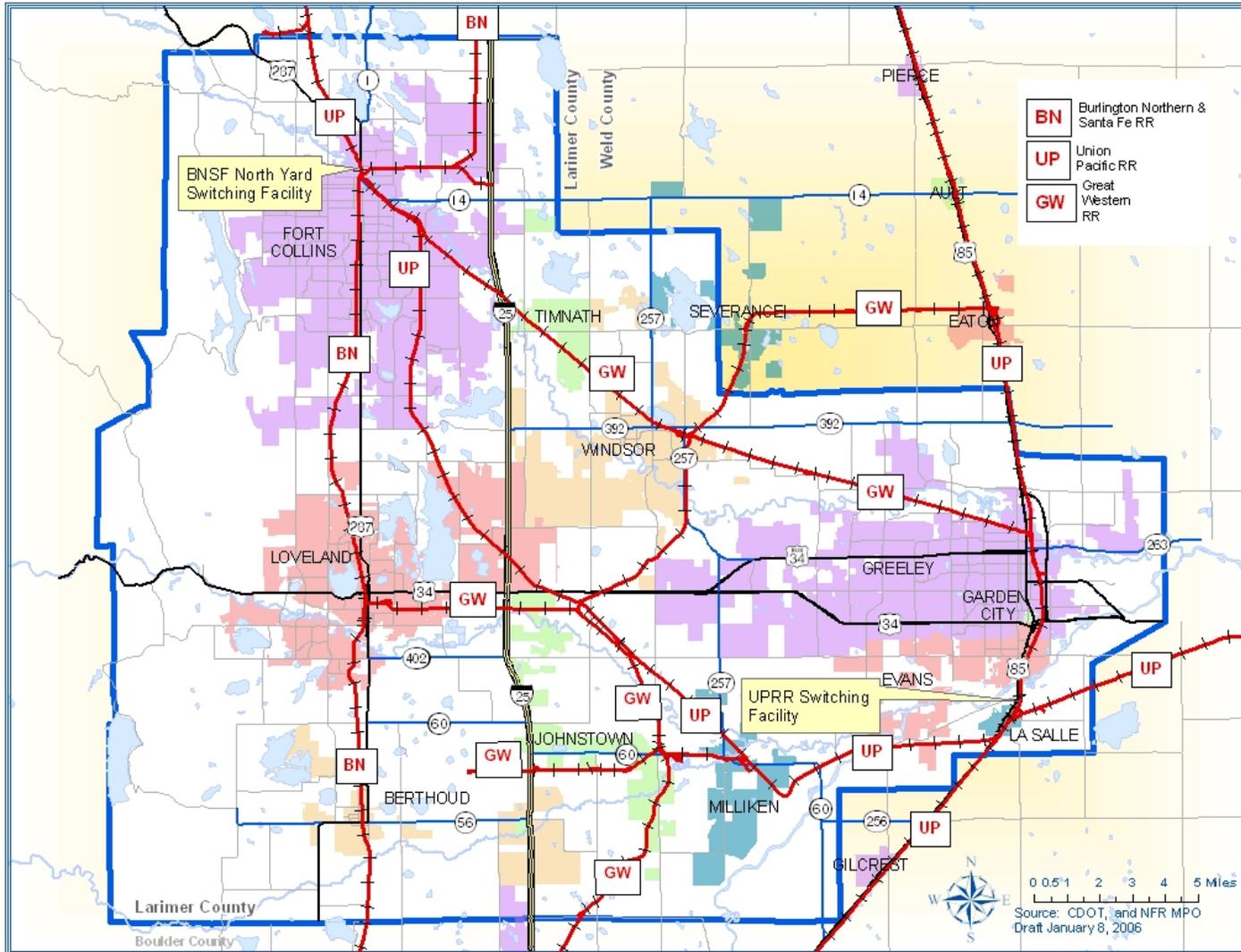
Railroads are classified according to the annual gross operating revenue from the railroad operations. A Class I railroad is one which had, in 2001, gross operating revenue of over \$266.7 million. A Local Railroad is one which had, in 2001, gross operating revenue of less than \$40 million and is engaged primarily in line-haul service. There are two Class I railroads (Burlington Northern and Santa Fe and Union Pacific) and one Local railroad (Great Western) operating in the North Front Range. They are described below and depicted in **Figure 11**.

- ▶ **Union Pacific Railroad (UPRR):** The UPRR is a Class I railroad which has several rail lines in the North Front Range. The north-south line runs from the Denver metro region through the North Front Range to Wyoming, generally following the US 85 corridor. The majority of the east-west line of the Union Pacific runs between Milliken and LaSalle, with a switching yard in LaSalle, and from Milliken into Fort Collins. There are 17 trains per day on the UPRR lines.
- ▶ **Burlington Northern Santa Fe Railroad (BNSF):** The BNSF is a Class I railroad which traverses the length of the NFRMPO, passing through Fort Collins, Loveland, and Berthoud, parallel to US 287. There are 6 trains per day on the BNSF line.
- ▶ **Great Western Railway (GW):** The GW is a Local railroad which has three lines in the North Front Range. The company operates freight service between Longmont and Loveland and from Eaton to a connection east of Loveland. GW also owns a branch line from Milliken to Welty. The Great Western links to both the BNSF and the UPRR rail lines.



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Figure 11. Rail System





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Freight Safety

The traveling public and freight movement interface on the roadway system with the mix of personal vehicles and commercial trucks and at rail crossing across the region. **Table 9** lists the number of crashes at rail crossing. There were 12 identified from 2003 to 2005, with three injuries and one fatality.

Table 9. Railroad Crossing Accidents

Year	RR	County	Jurisdiction	Crossing ID	Hwy Name	Xing Protection	Fatal	Injury
2003	BNSF	Larimer	Loveland	245032J	Private	Stop sign		1
2003	GWR	Larimer	Loveland	872130D	Monroe	Stop sign		
2004	BNSF	Larimer	Loveland	245031C	Private	Cross bucks		1
2004	BNSF	Larimer	Fort Collins	244626E	Prospect	Gates		
2004	GWR	Weld	Windsor	849379N	CR17	Cross bucks		
2004	GWR	Weld		849372R	CR 15	Cross bucks		
2004	GWR	Weld	Windsor	871920F	Hwy 257	Cross bucks		
2004	GWR	Weld	Windsor	871920F	Hwy 257	Cross bucks		
2004	GWR	Weld		849343F	Private	None		
2004	UP	Weld	Evans	804362J	Main St	Gates	1	
2005	GWR	Weld	Windsor	245106Y	Hwy 257	Watchman		1
2005	UP	Weld	Greeley	816131K	22 nd St	Gates		

In order to evaluate the relative safety of truck travel on the roadway network, the percent of overall accidents involving a truck have been compared against the percent of truck traffic on a particular segment of roadway. Due to limitations in the data for non-state highway facilities, this comparison is limited to the state highway portions of the Regionally Significant Corridors. **Table 10** shows the percent truck traffic, which is a weighted average of the state highway segments that comprise the corridor, and the percent truck accidents (i.e. the percent of the total accidents that involved a truck), which is also a weighted average for the corresponding state highway segments. The truck traffic is for the year 2005, and the accident data is for the five year time period 1999 – 2003. One might expect that the percent of truck accidents would be comparable to the percent of truck traffic using a corridor. In most of the Regionally Significant Corridors, however, the percentage of accidents involving trucks is less than the percent truck traffic.



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Table 10. Truck Accident Rates

Corridor	Description	% Truck Traffic	% Truck Accidents
1	US 287	4.53%	2.9%
2	SH 1	8.93%	3.6%
3	I-25	12.81%	7.5%
4	SH 257	8.21%	7.0%
5	Two Rivers Parkway/SH 60	3.06%	1.6%
6	US 85	11.86%	6.0%
7	SH 14	8.50%	6.0%
8	Prospect Road	NA	NA
9	SH 392	6.73%	4.6%
10	US 34	5.27%	3.9%
11	SH 60/SH 56	5.12%	4.6%

D. Bicycle And Pedestrian System

The NFRMPO, through the Regionally Significant Corridors, identified regional bicycle and pedestrian facilities. While all Regionally Significant Corridors are considered multi-modal, which means they could be used for bicycle and pedestrian purposes, there are specific river trails identified within the grouped corridors. The river trails have been identified based on the work developed in the *Colorado Front Range Trail Corridor Plan* (Colorado State Parks, April 2000), that had regional participation. They were further refined by discussions with individual local governments. **Figure 12** shows the existing and proposed river trail segments. **Table 11** lists the corridor and the river segment as identified in the Regionally Significant Corridors.

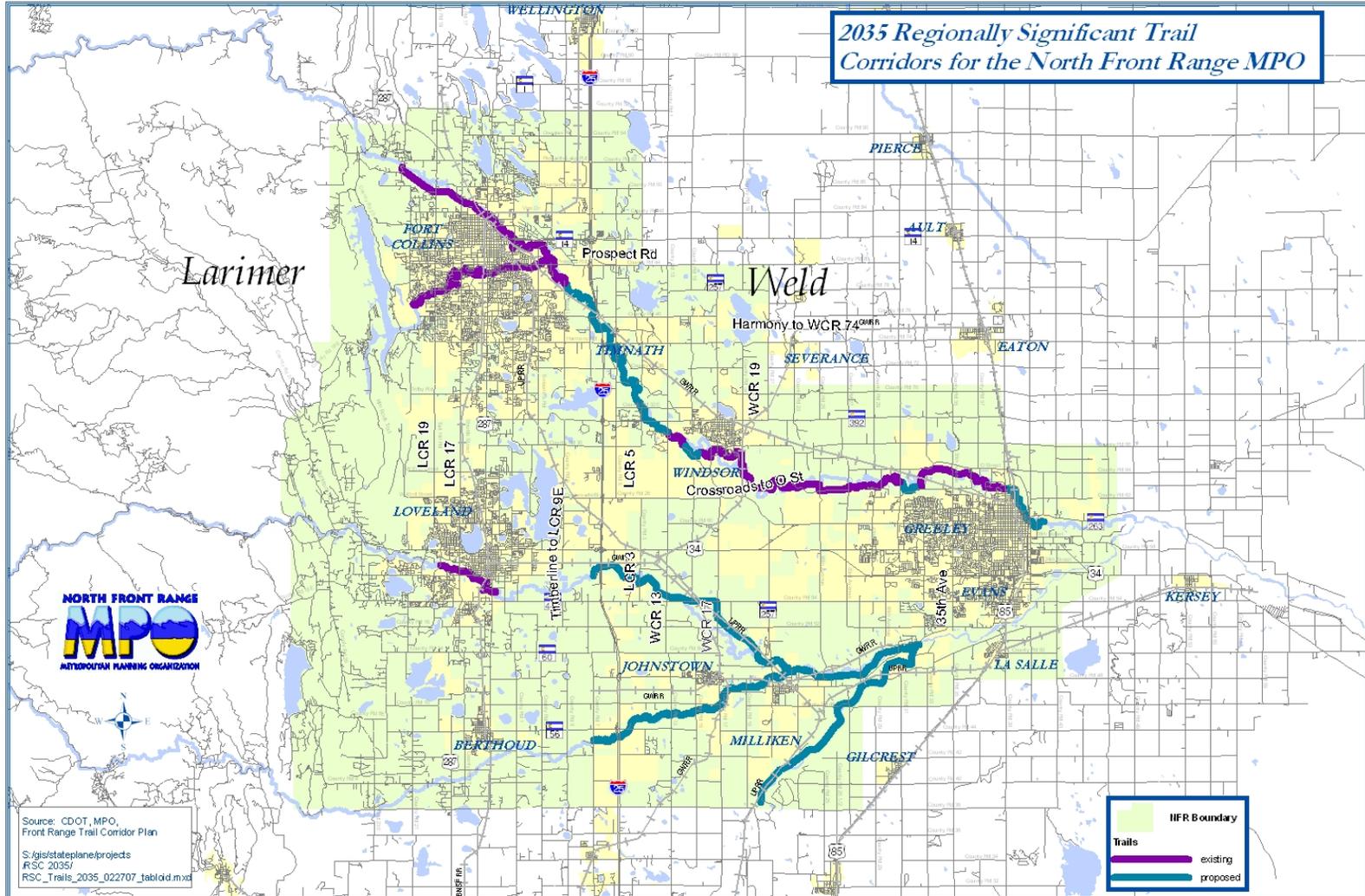
Table 11. River Trails in Regionally Significant Corridors

Corridor #	Corridor Name	River	Description
7	SH 14	Poudre River Trail	NW corner of MPO Boundary to junction with South Platte
8	Prospect Rd	Spring Creek Trail	From Horsetooth Reservoir to junction of Poudre River
9	SH 392	Poudre River Trail	SH 392 on W to SH 257 on E (through Windsor)
10	US 34	Big Thompson Trail	US 34 on W to US 287 on E (through Loveland)
12	Rural River Corridors	Various river trail corridors that include Big Thompson, Little Thompson, Cache la Poudre, and South Platte.	This corridor is the portions of the river trails, either existing or planned, but is outside of a municipal boundary.



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Figure 12. River Trails





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There is continued discussion in the NFR about regional bicycle and pedestrian facilities. The crux of the issue is whether to focus on commuter bicycle and pedestrian facilities, which are generally shorter in nature and within one community, or on region connections that are longer and are generally believed to serve more recreational purposes rather than commuting. The NFRMPO has opted at this time to focus on the river corridors within communities, while not ignoring the more rural sections, until there is further resolution on this issue.

E. Transportation Demand Management Program

In 1996, the NFRMPO Planning Council established SmartTrips™ as the regional Transportation Demand Management (TDM) program to shift behavior away from single occupant vehicles (SOVs) through business outreach and targeted marketing. The program advocates carpooling (CarGo) and vanpooling (VanGo) regionwide while supporting local SOV-reduction efforts (such as biking, walking, and telecommuting) within the member municipalities.

In the spring of 2007, NFRMPO released a transportation web portal for the residents and commuters of Northern Colorado. The website utilizes the SmartTrips branding and web address, www.smarttrips.org, to provide real-time traveler information, traffic camera images, and enhanced trip-matching services (carpool, School Pool, and vanpool) while providing local municipalities the capability to feature their local TDM programs.

The web portal transitions interested commuters from lead identification to successful placement into an active or forming carpool or vanpool using Customer Relations Management (CRM) software. In 2006, the NFRMPO managed over 400 VanGo™ Vanpool riders in a fleet of 70 commuter vans that saved over nine million vehicle miles of travel in the North Front Range, Boulder, and Denver metropolitan areas.

For carpoolers, the transportation portal encourages carpool groups to actively promote themselves to fill empty seats. When a new carpool registers with the portal, they are able to provide their commute times, start/end locations, and space available in their vehicle along with providing the carpool a name. The new carpool will have the ability to look-up riders in the database and electronically invite them to join their carpool. Likewise, the portal allows the NFRMPO to promote newly-forming carpools through email announcements to matching members in the carpool database and vanpool waiting lists. Finally, all carpools are eligible for incentives and participating business discounts/prizes for actively recording their travel in the system.

Business outreach is the prominent strategy employed by the NFRMPO for reducing SOV in the region. The outreach strategy supports employer efforts to retain the best employees through trip-matching, reducing employee commuting expenses (flexible spending, employer subsidy, etc), and company-specific carpools and vanpools.



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F. Aviation Facilities

There are two airports currently operating in the North Front Range; Greeley-Weld and Fort Collins-Loveland. The Fort Collins Downtown Airport closed in 2006. Each of the two operating facilities is described in more detail below and represented in **Figure 13**. This information was provided by the CDOT Aeronautics Division.

Greeley-Weld County

The Greeley-Weld County Airport is a large general aviation airport. There are two runways: 9/27 and 16/34. Runway 16/34 is 10,000 feet long and 100 feet wide. This runway has an asphalt surface and medium intensity runway lighting. Runway 9/27 is 5,800 feet long and 100 feet wide. This runway also has an asphalt surface with medium intensity runway lighting. The airport is equipped with a VHF (Very High Frequency) Omni-directional Range (VOR), an Instrument Landing System (ILS) and a Global Positioning Satellite (GPS) and NDB (Non-Directional Radio Beacon) as aids to navigation. As of April 2006, the airport had 143,000 operations for the previous 12 months; in 2003 it had \$73,102,000 in economic activity, with 1,436 related jobs.

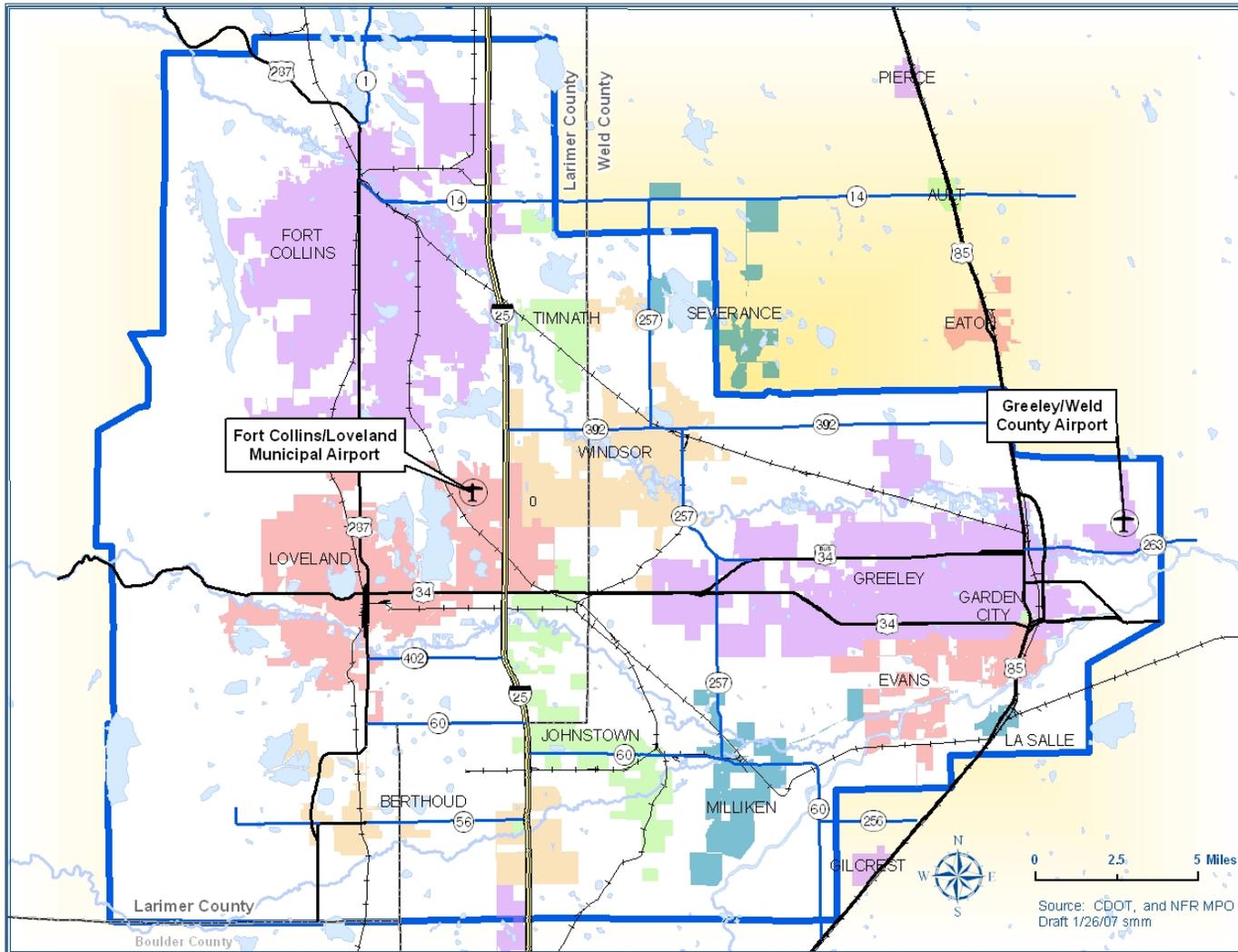
Fort Collins - Loveland

Fort Collins - Loveland Airport is a Commercial Service aviation airport, which operates under a limited Federal Aviation Regulation (FAR) Part 139 certificate. This Regulation establishes operation procedures for commercial service. Allegiant Air serves Fort Collins - Loveland three times a week with the McConnell Douglas-80 series of aircraft. There are two runways - 15/33 and 6/24. Runway 15/33 is 8,500 feet in length and has a width of 100 feet. This runway has an asphalt surface with high intensity runway lighting. Runway 6/24 is 2273 feet in length and 40 feet in width. This runway has an asphalt surface but does not have any runway lighting. Fort Collins-Loveland has a Visual Omnidirectional Range (VOR), Instrument Landing System (ILS) and Global Positioning System (GPS) as navigation aids. As of March 2006, the airport had 107,220 operations for the previous 12 months. In 2003 it had economic activity of \$37,178,000 with 619 related jobs.



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Figure 13. Airports





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G. Intelligent Transportation System (ITS)

The *CDOT Region 4 ITS – Strategic Plan* (FHU and IBI Group), was adopted by the NFR Council in April, 2004. This is the first regional ITS plan, and it includes all of the North Front Range MPO, the Estes Park area, and a section in southwest Weld County that is adjacent to the Denver region.

The ITS Strategic Plan was developed with the assistance of a stakeholder committee comprised of interested parties which represented various government agencies across the region. The existing ITS elements in the region were inventoried, as reflected in **Table 12**. CDOT and Fort Collins have the largest inventory of ITS components in the region, followed by Greeley, Loveland, and Windsor. There were seven steps to developing the Plan.

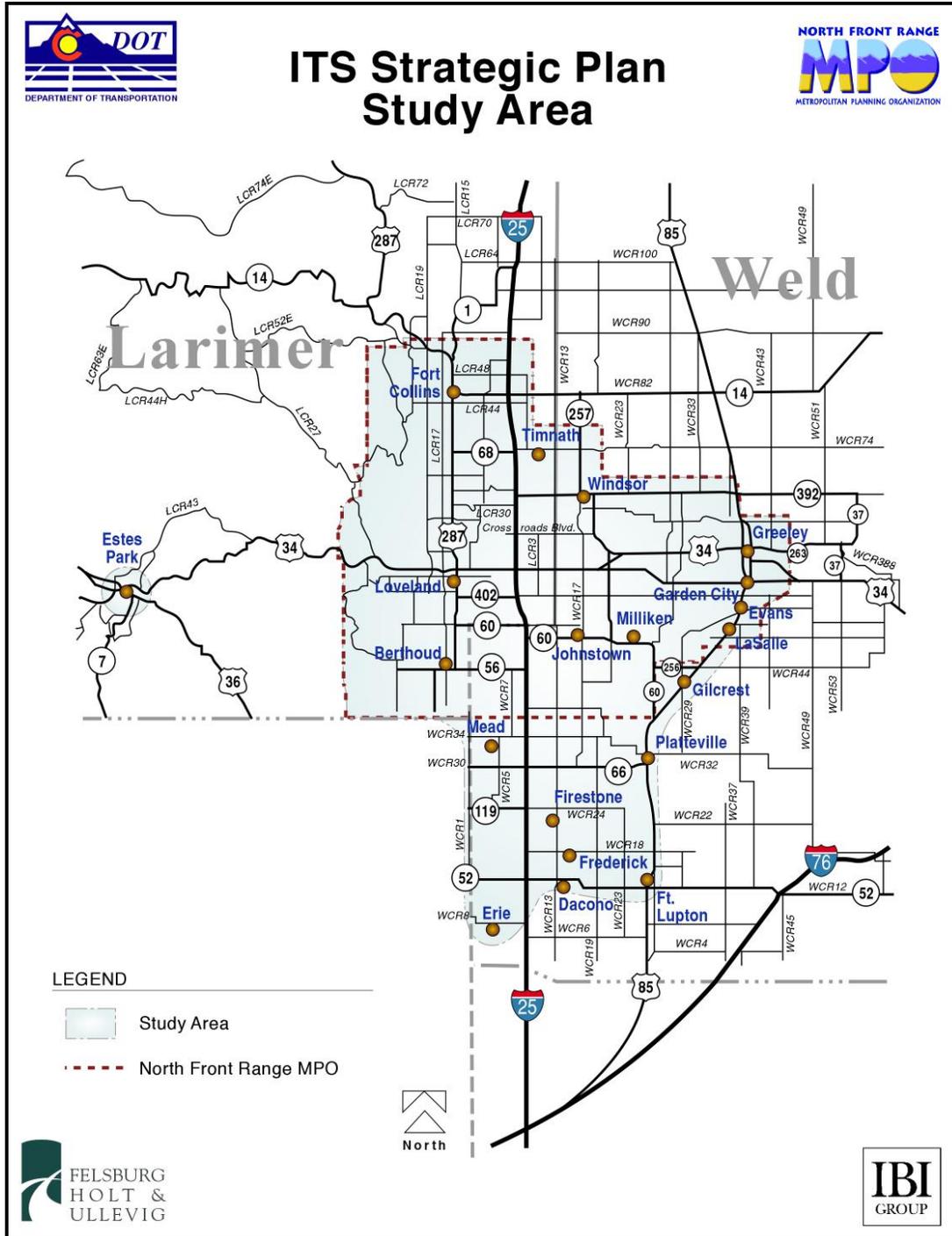
- ▶ Develop problem statements: Based on input from the review of the planning documents, the ITS inventory review, and the stakeholder meetings, needs and problems were identified.
- ▶ Define network: The transportation network was defined within the context of the regional study area boundaries as shown on **Figure 14**.
- ▶ Identify problems on the network: Once the network and the problems were defined, a map of “trouble spots” was developed, showing the locations of problems on the network.
- ▶ Link Market Packages to problems: The complete set of the 85 market packages, defined in the National ITS Architecture, was assessed for their applicability to each of the transportation problem areas defined by the stakeholders.
- ▶ Link Market Packages to problems on the network: This involved the marriage of the previous two steps in the process.
- ▶ Develop deployment scheme: Each project on the list was then assigned a priority and a time frame for deployment (short, medium, or long-term). An overall vision for deployment was also developed in order to guide the prioritization process.
- ▶ Prepare ITS Strategic Plan Document: Culmination of all previous work.

In order for ITS projects to move into the Transportation Improvement Program (TIP), they must be compatible with the Strategic Plan.



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Figure 14. ITS Study Area



Source: IBI Group and Felsburg Holt & Ullevig



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Table 12. ITS Element Inventory

Device Type	Agency	Location	Notes
Dynamic Message Signs (DMS)	Loveland	US 34/Denver Ave.	Spring '07
	CDOT	I-25, MM 237, North of SH 52	Southbound
		I-25, MM 239, South of SH 119-Del Camino	Northbound
		I-25, MM 244, North of SH 66-Platteville	Southbound
		I-25, MM 251, North of SH 56-Berthoud	Northbound
		I-25, MM 253, North of SH 60	Northbound
		I-25, MM 255, North of SH 402	Southbound
		I-25, MM 256, North of SH 402	Northbound
		I-25, MM 263, North of Windsor	Northbound
		I-25, MM 264, South of Harmony Road-Fort Collins	Southbound
Highway Advisory Radio (HAR)	CDOT	I-25, MM 247, Between SH 66 and SH 56	East side of I-25
	Loveland	Just north of US 34 on Lincoln Avenue	Weekly Road Report for Loveland
	Fort Collins	At CSU	No City Involvement
Weigh-In-Motion	CDOT	I-25, MM 269, North of Prospect Road	Northbound
		I-25, MM 270, North of Prospect Road	Southbound
Weather Station	CDOT	I-25, MM 241, North of SH 119-Del Camino	West side
			of I-25
		I-25 MM 251, North of SH 56	West side
			of I-25
		I-25, MM 259, North of Crossroads Blvd.	East side of I-25 - Loveland added a video camera/CDOT added traffic counts- view info on COTRIP.ORG
	Greeley	10th Street at	Weather Station Exists and Includes Pavement Sensor
		35th Avenue	
		3rd Street at	Snow Emergency Center Streets Division is operational
		12th Avenue	
	Loveland	Taft Avenue/1st Street Intersection	Includes Video Camera/Atmospherics/Pavement Sensor- View on CoTRip.org
		Wilson/50th St.	Rain gauge and pavement sensor
		US 34/Redwood Ave. Intersection	Pavement Sensor-Scan detector
	Fort Collins	Elizabeth Street at Taft Hill Road	
		Shields Street at Harmony Road	
		Prospect Road at Timberline Road	



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Device Type	Agency	Location	Notes
Weather Station (Con't.)		Timberline Road at Carpenter Road (LCR 32)	
		College Avenue at the Poudre River	
		Mountain Vista Drive at Busch Drive	
		Timberline Road at Poudre River	Includes Automatic De-Icing Equipment
		Harmony Road at I 25 Frontage Road	
		Ketcher Road at Ziegler Road	Pavement Sensor
	Windsor	Off Parkwood Drive	Rainfall Gauge #1-COMM to Fort Collins via Radio
		At Windsor Reservoir	Rainfall Gauge #2- COMM to Fort Collins via Radio
Stream Monitoring Station	Greeley	US 85 at 8th Street	Poudre River Flow monitor station is currently operational
Emergency Dispatch	Weld County	1950 "O" Street in Greeley	
	Loveland	Police/Fire – 810 E. 10th Street	
		Emergency Operations – 410 E. 5th Street	
	Estes Park	170 McGregor Avenue	
	Larimer County	2501 Midpoint Drive	Sheriff Department Communication Center
		Fort Collins	
Automatic Traffic Recorder	CDOT	I-25, South of US 34	
		I-25, North of Fort Collins	
		US 34, 1 Mile East of SH 257	
		SH 257, North of US 34 Business	
		SH 14, West of I-25	
		US 34, East of Estes Park	
		US 36, East of Estes Park	
	Fort Collins	Lemay Avenue at Stuart Street	
		College Avenue at Laurel Street	
		College Avenue at Horsetooth Road	
		College Avenue at Columbia Road	
		Horsetooth Road at Meadowlark Avenue	
		Drake Road at Constitution Avenue	
		Shields Street at Rolland Moore Park	
		Drake Road at Research Boulevard	
		College Avenue north of Willox Lane	
		Riverside Avenue North of Mulberry Street	
		Shields Street South of Mulberry Street	
		Mulberry Street West of Shields Street	



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Device Type	Agency	Location	Notes
Automatic Traffic Recorder (Con't.)		Lemay Avenue North of Mulberry Street	
		Mulberry Street West of Lemay Avenue	
		Mulberry Street West Timberline Road	
		Shields Street West of Prospect Road	
		Prospect Road South of Shields Street	
		Shields Street South of Drake Road	
		Drake Road East of Shields Street	
		Lemay Avenue North of Horsetooth Road	
		Horsetooth Road West of Lemay Avenue	
		Shields Street South of Horsetooth Road	
		Horsetooth Road West of Shields Street	
		Shields Street South of Harmony Road	
		Harmony Road East of Shields Street	
		Lemay Avenue North of Harmony Road	
		Harmony Road West of Lemay Avenue	
		Timberline Road North of Harmony Road	
		Harmony Road East of Timberline Road	
		College Avenue South of Mulberry Street	
		Mulberry Street West of College Avenue	
		Lemay Avenue South of Prospect Road	
		College Avenue South of Prospect Road	
		Prospect Road West of College Avenue	
		Taft Hill Road South of Prospect Road	
		Prospect Road West of Taft Hill Road	
		Taft Hill Road South of Drake Road	
		Drake Road West of Taft Hill Road	
		College Avenue South of Drake Road	
		Drake Road East of College Avenue	
	Taft Hill Road North of Harmony Road		



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Device Type	Agency	Location	Notes
Automatic Traffic Recorder (Con't.)		College Avenue South of Horsetooth Road	
		Horsetooth Road West of College Avenue	
		College Avenue South of Harmony Road	
		Harmony Road East of College Avenue	
		Timberline Road North of Horsetooth Road	
		Horsetooth Road West of Timberline Road	
Traffic Operations Center	CDOT	1420 2nd Street, Greeley	
	Fort Collins	626 Linden Street	
	Greeley	1300 "A" Street, Building E	Phase I is in design, Wireless Communication 50% complete, System hardware and Software complete 12/30/07 (STP Metro)
	Loveland	105 W. 5th Street	
Transit Operations Center	Fort Collins	6570 Portner Road	
	Greeley	1200 "A" Street	Operational
	Loveland	318 N. Garfield	
Transit Scheduling Software	Fort Collins	Trapeze Software	
	Greeley	Trapeze Software	Not Programmed
	Loveland	Trapeze Software	
Paratransit	Transfort	Fleet Device	
AVL	Loveland	Fleet Device	
Transit Security	Transfort	Fleet Device	
	Loveland	Fleet Device	
Fiber-Optic Network	Fort Collins	City-Wide	Connection of Numerous Traffic Signals
	Greeley	City-Wide	Circular Ring around the City should be complete 3/1/07 Level III Communication should complete splices in March
	Loveland	City-Wide	Main rings are Platte River Power Authority-several miles of city owned
	Windsor	City-Wide	Connects Town Hall, Library, Public Works Shop and Six Schools



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Device Type	Agency	Location	Notes	
Video Surveillance	Greeley	10th Street at 35th Avenue	Project is complete 1/15/06	
		US 34 Bypass at 23rd Avenue	Project is complete 1/15/06	
	Loveland	I-25/Crossroads Blvd.	Shared with CDOT	
	Loveland	US 34/I-25 Interchange		
	Loveland	US 34/Centerra		
	Loveland	Centerra/Sky Pond		
	Loveland	Centerra/Kendal Parkway		
	Loveland	Taft Avenue/1st Street Intersection		
	Fort Collins		College Avenue at Prospect Road	
			College Avenue at Drake Road	
			College Avenue at Foothills Parkway	
			College Avenue at Horsetooth Road	
			College Avenue at Harmony Road	
			Harmony Road at Lemay Avenue	
			Harmony Road at Timberline Road	
			Harmony Road at Ziegler Road	
			Shields Street at Prospect Road	
			Riverside Avenue at Mulberry Street	
			Overland Trail at Prospect Road	
			Taft Hill Road at Mulberry Street	
			Taft Hill Road at Drake Road	
			Shields Street at Elizabeth Street	
			Shields Street at Drake Road	
			Shields Street at Horsetooth Road	
			Shields Street at Harmony Road	
			College Avenue at Jefferson Street	
			Lemay Avenue at Riverside Street	
			Lemay Avenue at Drake Road	
			Lemay Avenue at Horsetooth Road	
			Timberline Road at Prospect Road	
Timberline Road at Drake Road				
Greenfields Court at Mulberry Street				
Ziegler Road at Kechter Road				

Source: ITS Strategic Plan, FHU & IBI, February 2004, Updated January 2007



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H. Transit System

This section covers transit throughout the MPO portion of Larimer and Weld Counties in Northern Colorado. The following is a summary of the existing transit services within the MPO area.

Public Transit Providers

Three urban fixed-route systems, with paratransit services, are operated in the region. The City of Greeley operates Greeley-Evans Transit (GET). The City of Fort Collins operates Transfort and Dial-A-Ride (DAR). The City of Loveland operates City of Loveland Transit, also known as COLT.

Systems that serve people in the rural areas are operated on a demand response basis. These include the Berthoud Area Transportation Services (BATS) which is operated in the urban and surrounding rural area, the Town of Wellington/Wellington Senior Center services, and Windsor Senior Services. In addition, Larimer County operates the Larimer Lift for services in rural Larimer County.

A summary of the urban area providers follows with a map illustrating the current coverage area for the fixed-route providers. Subsequently, the rural providers are described.

City of Fort Collins - Transfort/DAR

The City of Fort Collins operates fixed-route, demand responsive and paratransit services. The fixed-route system operates on a “pulse” system with vehicles meeting at a single point at regular intervals to transfer passengers. Transfort routes are illustrated in **Figure 15**. Most of the fixed-route service is provided within the city limits but some extends into the urban growth area. DAR service is operated within $\frac{3}{4}$ mile of the fixed routes.

Transfort has two levels of service: CSU school year (approximately 160 days) and summer schedule (approximately 145 days). A lower level of transit service is provided during the summer schedule. Service operates Monday through Saturday from 6:00 AM to 7:00 PM.

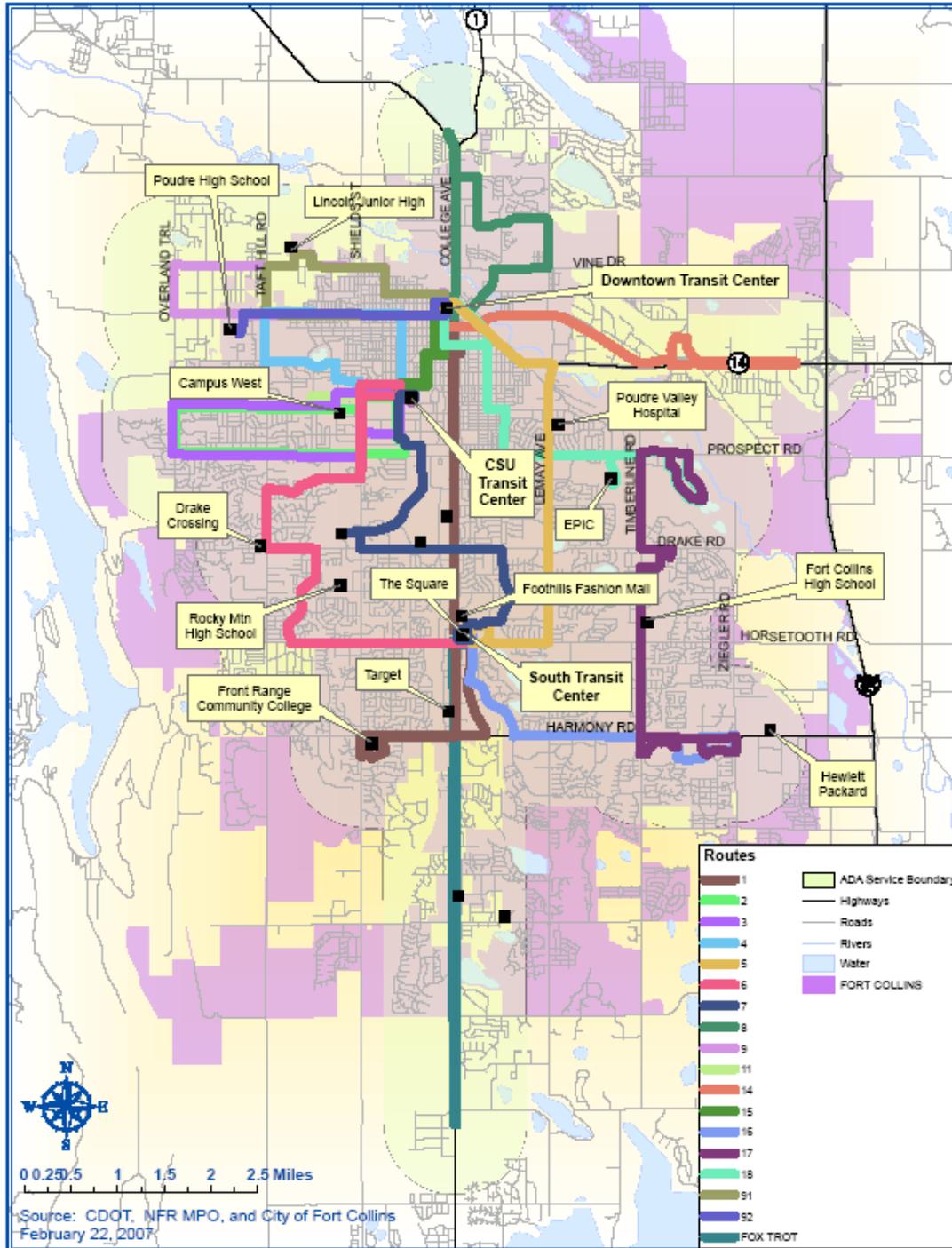
Fares for Transfort are \$1.25 per ride and \$.60 for seniors and disabled passengers. Youth (17 and younger) and CSU students presenting their CSU Student Bus Pass ride for free.

Dial-A-Ride (DAR) is a door-to-door paratransit service for individuals who, because of a disability, are prevented from using Transfort, the City's fixed-route bus service. DAR costs \$2.50 per one-way trip. Beginning on January 2, 2007 the Dial-A-Ride service hours were aligned with the fixed route hours, except that limited evening service is available. Strict ADA eligibility was established at the same time.



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Figure 15. Transfort Transit Routes





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Population Served

Several years ago the City of Fort Collins made a strategic decision to focus its transit resources on serving the portion of the city with the densest development and the student market. This has resulted in a system that serves a constrained service area with good productivity. The system carries an average of 26.7 passengers per hour with the routes serving the university carrying the highest numbers of passengers.

Table 13 illustrates the 2006 ridership by route for the system. As shown, Route 1 carries the largest number of passengers annually. It connects the CSU Transit Center to the Foothills Fashion Mall and the South Transit Center via College Avenue. Route 91/92 carries the fewest passengers annually with fewer than 9,000 passenger trips in 2006. On the basis of productivity, routes range from 13.5 passengers per hour on Route 4 to 75.4 passengers per hour on Route 11, with a system-wide average of 26.7 passengers per hour.

Table 13. 2006 Transfort Route Information

Route	Annual Passengers	Annual Service Hours	Passengers per Hour
1	270,295	14,913	18.1
2	156,898	4,104	38.2
3	105,884	1,872	56.5
4	26,004	1,926	13.5
5	94,361	3,915	24.0
6	136,390	4,051	33.6
7	90,658	5,506	16.4
8	109,978	3,793	28.9
9	63,130	1,706	36.9
11	172,262	2,284	75.4
14	51,728	2,109	24.5
15	91,336	5,019	18.1
16	n/a	n/a	n/a
17	n/a	n/a	n/a
18	n/a	n/a	n/a
91&92	8,820	149	59.1
FoxTrot	95,338	3,900	24.4
Special	6,665	136	48.9
TOTALS/AVERAGE	1,479,747	55,383	26.7

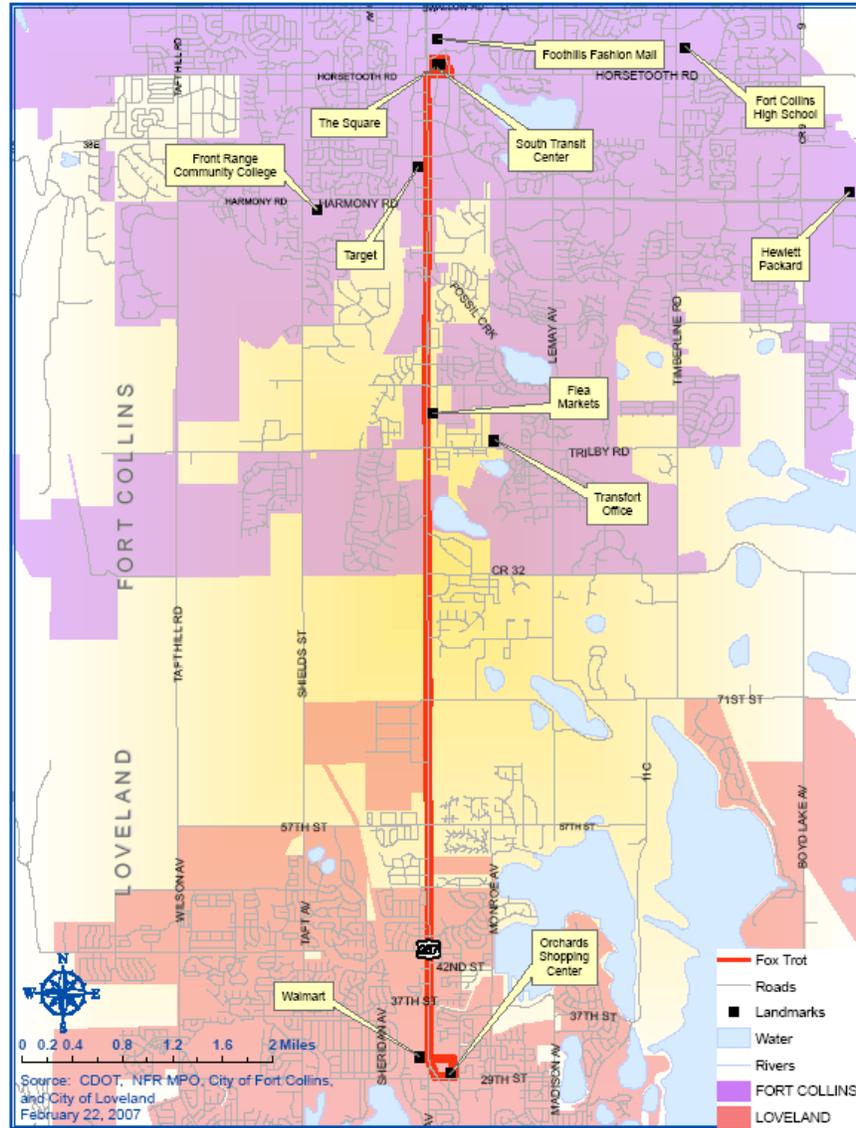
Source: Transfort

In addition to serving Fort Collins residents, Transfort is the operator of FoxTrot, the regional route connecting Fort Collins and Loveland (see **Figure 16**). This route is funded by Fort Collins, Loveland, and Larimer County.



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Figure 16. FoxTrot Regional Bus Route



In 2001 the City of Fort Collins prepared a Strategic Plan to guide its future development. This plan has been adopted by the City Council and the first phase has been completed with the addition of three routes to the existing system. The implementation of the Mason Corridor project has brought in additional funds. The Transfort system following its Strategic Plan is gradually moving towards a grid system, extending service to many areas of town that now have little or no service. The plan extends service to the I-25 corridor and responds to planned development. In general, transit service is provided on a ½- to 1-mile grid, with closer spacing in the densely developed downtown area. Service improvements are focused on increased frequencies, a strategy that will make the service more attractive to a broad range of people.



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Operating Statistics

Table 14 illustrates the operating statistics for Transfort's fixed-route system.

Table 14. Transfort Fixed-Route Operating Statistics (2002-2006)

	2002	2003	2004	2005	2006
Ridership	1,477,735	1,504,683	1,418,102	1,481,472	1,479,717
Annual Vehicle Miles	705,886	729,639	703,081	686,030	640,676
Annual Vehicle Hours	56,616	57,165	58,516	57,782	54,665
Operating Cost	\$4,759,551	\$4,985,104	\$4,989,453	\$4,770,104	\$4,553,023
Annual Fares	\$715,528	\$708,333	\$832,838	\$677,759	\$578,686

Source: Transfort

Table 15 illustrates the operating statistics for Transfort's DAR system.

Table 15. Transfort Dial-A-Ride Operating Statistics (2002-2006)

	2002	2003	2004	2005	2006
Ridership	77,300	73,607	82,278	87,725	85,735
Annual Vehicle Miles	432,087	419,127	439,771	450,047	560,053
Annual Vehicle Hours	35,921	31,628	31,690	38,399	47,188
Operating Cost	\$1,751,944	\$1,648,132	\$1,744,325	\$1,974,685	\$2,394,238
Annual Fares	\$66,630	\$95,970	\$139,926	\$209,927	\$238,542

Source: Transfort

On the fixed route side, ridership has been stable since 2002 while service hours have declined by 3.4% and miles have declined by 9.2%. Fare revenues have decreased 19% from \$0.48 per passenger in 2002 to \$0.39 per passenger in 2006. The net effect is that productivity has increased while costs and subsidy have remained relatively flat. Dial-A-Ride services have had a 31% increase in service hours, 30% increase in service miles and 10.9% increase in passengers carried. Similarly, costs have increased by 37%.



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Performance Measures

Table 16 provides information on Transfort performance measures. These are used to determine how well resources are being used and whether the services are cost-effective.

Table 16. 2006 Transfort Performance Measures

System Wide Performance Measures	Fixed Route	Dial-A-Ride
Cost per Operating Hour	\$83.30	\$50.74
Passengers/Operating Hour	27.07	1.82
Cost/Passenger Trip	\$3.08	\$27.92
Farebox Recovery	12.7%	10.0%
Ridership/Capita	12.03%	1.48%
Cost/Capita	\$37.68	\$18.75

Source: Transfort

Financing

Funding for Transfort and Dial-A-Ride comes from a combination of farebox revenues, federal and local funds. Fort Collins is part of the Transportation Management Area that receives an allocation of Federal Transit Administration urban area formula funds for areas over 200,000 in population. In addition, the agency receives contract funds for services it operates that are oriented to university students. In addition, the allocation formula for federal funds provides for Fort Collins to receive a portion of the urban area formula funds that Fort Collins, Loveland and Larimer County have agreed will be used to fund the FoxTrot regional route. However, starting with Federal Fiscal Year 2008, annual formula funds will be restricted to only capital expenditures. This loss of flexibility is due to the Fort Collins area's designation as a TMA after the 2000 U.S. Census.

Vehicles

Transfort has a fleet of 27 fixed-route vehicles and 13 Dial-A-Ride vehicles.

Facilities

The three transfer centers in Fort Collins are the Multi-Modal Downtown Transit Center in downtown; the Transit Center at Colorado State University located on campus, west of the Student Center; and in the South Transit Center, located at The Square, Horsetooth and College.



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City of Loveland Transit – COLT

COLT operates two fixed routes and provides funding for the regional FoxTrot route connecting Loveland and Fort Collins. In addition COLT operates a paratransit or demand response service for elderly and disabled residents of Loveland. Paratransit service is provided throughout the city. **Figure 17** illustrates the current transit routes. The city is presently evaluating how best to provide transit services and what future routes may best serve the community.

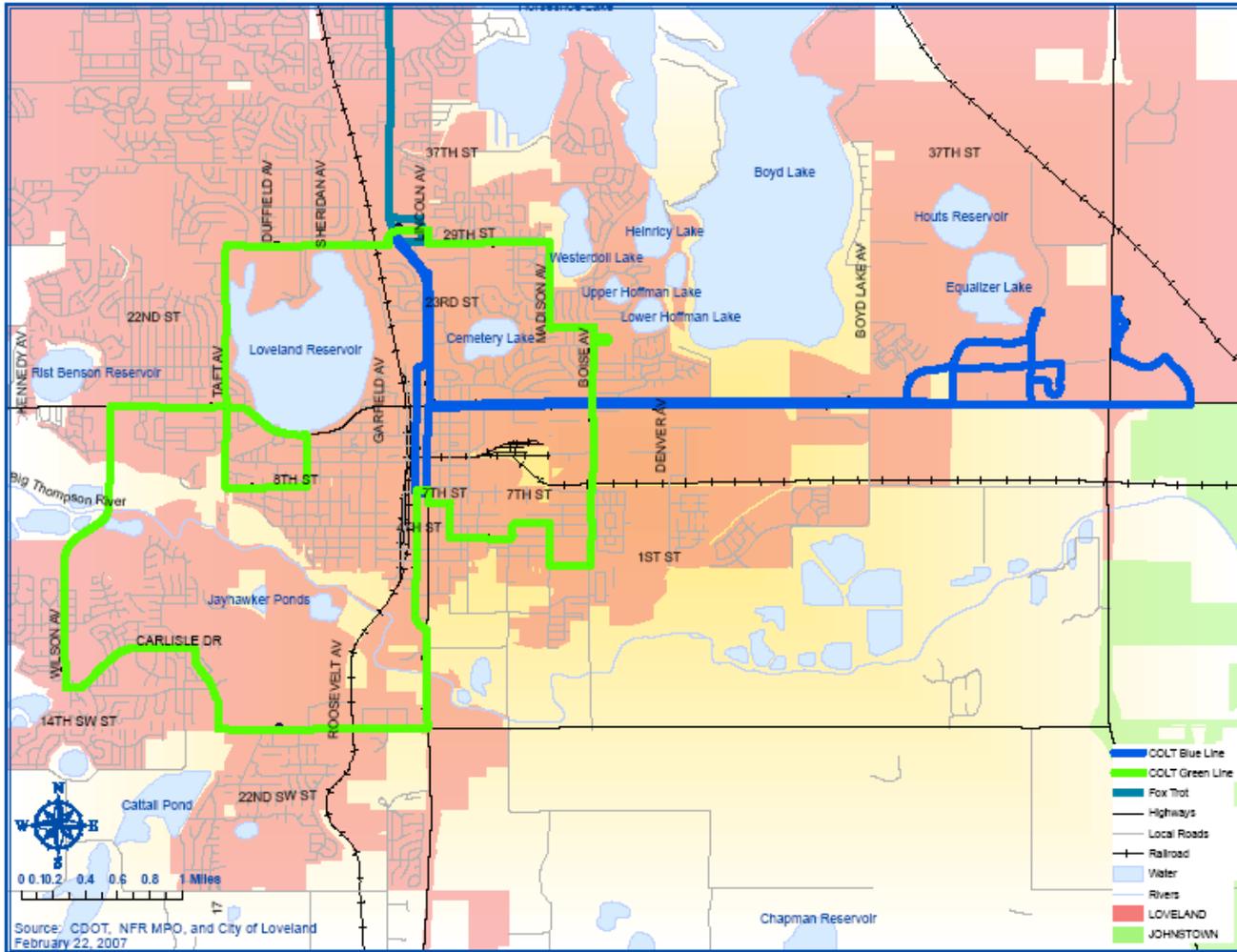
COLT's local routes begin service at 6:40 A.M. and continue until 6:55 P.M., Monday through Friday. Weekend routes are available on Saturday from 9:40 AM to 9:50 PM. The regular fares are \$1.25 for a one-way ride. People who are elderly or have disabilities pay \$.60 per ride, with youth between the ages of six and fourteen paying \$0.50 per ride. Special rates are also available for low income residents. Passes and tickets are available.

Only seniors and ADA are eligible for the paratransit service. Paratransit fares are \$2.00 for a single ride. A 20-ride pass is available for \$37.50 or a 40 ride pass for \$70. Low income fares are also available.



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Figure 17. COLT Transit Routes





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Population Served

The fixed-route system connects the residential areas of the Loveland to major activity centers in the downtown area and along Eisenhower Boulevard to I-25. An on-board survey conducted in January, 2004 indicated that individuals who do not have access to an automobile (because they do not have a driver's license, cannot afford a car, or other reasons) make up the majority of the ridership.

Ridership in 2006 is illustrated for the two main routes in Loveland in **Table 17**. The FoxTrot, connecting Loveland and Fort Collins is described as part of the Transfort system.

Table 17. COLT 2006 Ridership by Route

Route	Riders	Service Hours	Riders / Hour
Green Line	48,888	n/a	n/a
Blue Line	50,757	n/a	n/a
Fixed Routes Total	99,645	7,296	13.7
Paratransit	12,591	9,732	1.29

Source: COLT

The city is growing towards the I-25 corridor, and major activity centers are already located at I-25. Over time, service between the older portions of Loveland and the interstate will grow in importance.

Operating Statistics

Tables 18 and 19 illustrate the operating statistics for Loveland's fixed-route system and paratransit system, respectively.

Table 18. COLT Fixed-Route Operating Statistics (2004-2006)

	2004	2005	2006
Ridership	59,934	74,856	99,645
Annual Vehicle Miles	110,842	109,800	122,936
Annual Vehicle Hours	7,536	7,344	7,296
Annual Operating Cost	\$388,612	\$415,313	\$493,213
Annual Fares	\$31,160	\$36,639	\$44,648

Source: COLT

Table 19. COLT Paratransit Operating Statistics (2004-2006)

	2004	2005	2006
Ridership	15,270	14,220	12,591
Annual Vehicle Miles	63,363	61,577	63,351
Annual Vehicle Hours	9,240	9,816	9,732
Annual Operating Cost	\$321,696	\$339,891	\$438,463
Annual Fares	\$17,524	\$13,271	\$14,323

Source: COLT



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Performance Measures

Table 20 provides information on COLT performance measures. These are used to determine how well resources are being used and whether the services are cost-effective.

Table 20. 2006 COLT Performance Measures

	Fixed Route	Paratransit
Cost per Operating Hour	\$67.60	\$45.05
Passengers/Operating Hour	13.65	1.29
Cost/Passenger Trip	\$4.94	\$34.82
Fare Box Recovery (%)	9.1%	3.3%
Ridership per Capita	1.7	0.2
Cost per Capita	\$8.40	\$7.47

Source: COLT

The COLT Transit Plan indicates that the breakouts between fixed-route service and paratransit services are knowledgeable estimates and that data is now being collected separately for each type of service.

Financing

Funding for COLT comes from farebox revenues, local funds, and federal funds. The City of Loveland has switched from a system that was considered rural (less than 50,000 population) to urbanized as part of the Fort Collins/Loveland TMA (with over 200,000 population) since the 2000 Census. Loveland has taken advantage of the waiver which allows new urbanized areas over 200,000 in population to use federal transit assistance for operating expenditures, but that waiver is expiring.

The City of Loveland receives Federal Transit Administration funds, including 5307 funds for service within the TMA and 5311 funds for service outside the TMA.

Vehicles

COLT currently has nine vehicles, including two back-up vehicles. One is a three passenger Caravan and the rest seat between 14 and 24 passengers. All vehicles are equipped with wheelchair lifts. Most vehicles operated by COLT were purchased between 1999 and 2002 and have useful lives of five to seven years. Two replacement vehicles are expected in May 2007.

Facilities

Loveland uses 8th Street, between Cleveland and Lincoln, to serve as its transit center. Their operating facility includes offices, dispatch/reception areas, a meeting room and vehicle parking. Transfers with FoxTrot occur at the Orchards Shopping Center.



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City of Greeley - Greeley-Evans Transit (GET)

The City of Greeley operates fixed-route service, known as Greeley-Evans Transit (GET), paratransit services, and evening demand response services. The fixed-route system serves the Greeley urban area, including the City of Evans. Seven fixed routes operate on a modified grid system, as illustrated in **Figure 18**. Service operates Monday through Saturday, from 6:45 A.M. to 6:45 P.M. One route, the Boomerang, serves UNC students and operates only during fall and spring semesters when the university is in session. The remainder of the system operates year-round.

As the City of Greeley has expanded to the west, GET service has extended to serve major activity centers. The routes currently serve as far west as 61st Avenue and as far east as Balsam Avenue. The north and south portions of the system reach as far as O Street and Prairie View Drive, respectively. Requests are mounting to serve the Promontory Development as the business park at the intersection of the US 34 Bypass and the US 34 Business route grows.

Population Served

In addition to serving Greeley, GET provides service to Evans through an intergovernmental relationship. GET serves many people who are transit dependent – because they do not have driver’s licenses, have disabilities that prevent them from driving, or cannot afford an automobile. As these people live throughout the city, the system makes an effort to serve most of the major areas of the city. GET routes serve a variety of areas including low-density residential areas, commercial areas, and the University. In addition, when the Weld County moved its offices to the north end of Greeley, the system found it necessary to serve these facilities.

The Greeley system is known for its excellent service to people with disabilities. In addition to the active paratransit service, the fixed-route buses also carry many riders who use wheelchairs; the wheelchair lifts were used 11,114 times in 2006.

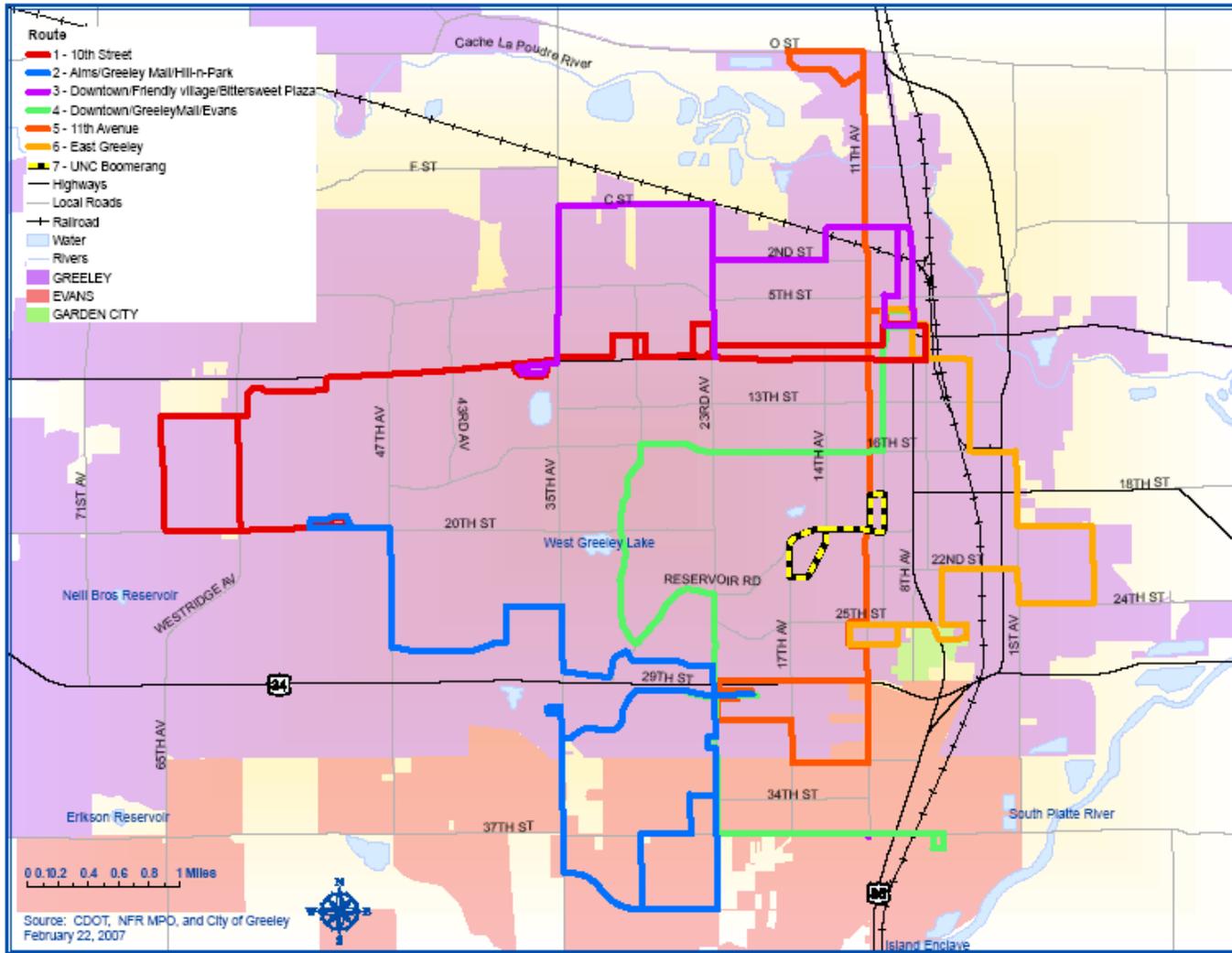
GET has broad-based ridership covering all age groups. With the establishment of the Boomerang route serving UNC, its student ridership increased substantially.

Ridership by route is illustrated in **Table 21**; Routes 3, 4, and 6 have relatively low productivity for fixed route service, carrying between eight and nine passengers per hour. Routes 1, 2, and 5 are much stronger. These routes serve a mix of areas that serve a variety of commercial areas and other activity centers. The UNC route, while just operating when school is in session, provides an effective connection for students traveling within the university. The UNC route has significantly higher ridership than other local routes, numbering about three times ridership of any other route. Each of these routes serves an important purpose, connecting the residents, particularly in the areas of town with the most transit dependent population with the activity centers. In the last decade, Greeley has seen important activity centers develop on the north and west ends of town.



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Figure 18. GET Transit Services





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Table 21. GET Ridership by Route in 2006

Route ¹	Annual Passengers	Annual Service Hours	Passengers per Hour
1/2	49,399	3,984	12.4
2/1	48,966	3,945	12.4
3/4	33,891	4,021	8.4
4/3	32,975	3,832	8.6
5	136,717	7,979	17.1
6	29,118	3,882	7.5
UNC	122,633	2,530	48.5

¹ Routes for GET are displayed above. These routes are *interlined* so route 1/2 means that a bus runs route 1 then begins transfers onto route 2; the same holds true for 2/1, 3/4, and 4/3 routes.

Operating Statistics

Table 22 illustrates the operating statistics for Greeley's fixed-route system.

Table 22. GET Fixed-Route Operating Statistics (2002-2006)

	2002	2003	2004	2005	2006
Ridership	398,841	410,299	403,316	431,520	453,390
Annual Vehicle Miles	355,472	355,268	353,863	383,997	398,820
Annual Vehicle Hours	27,305	27,090	26,834	29,013	30,173
Annual Operating Cost	\$1,468,346	\$1,443,943	\$1,550,888	\$1,811,873	\$1,767,140
Fares Revenue	\$216,416	\$228,244	\$199,353	n/a	n/a

Source: GET

Table 23 illustrates the operating statistics for GET paratransit/Demand Response system.

Table 23. GET Paratransit Operating Statistics (2002-2006)

	2002	2003	2004	2005	2006
Ridership	28,544	28,657	31,148	34,720	32,610
Annual Vehicle Miles	131,349	149,642	145,443	172,926	190,405
Annual Vehicle Hours	13,254	13,918	14,391	15,520	16,321
Annual Operating Cost	\$491,177	\$535,337	\$609,234	\$684,388	\$733,606
Fares Revenue	\$39,052	\$52,572	\$53,495	n/a	n/a

Source: GET



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Performance Measures

Table 24 lists GET performance measures. These are used to determine how well resources are being used and whether the services are cost-effective.

Table 24. GET Performance Measures 2006

System-wide Performance Measures - 2006	Fixed Route	Paratransit and Demand Response	System Total
Cost per Operating Hour	\$58.57	\$44.95	\$52.81
Passengers/Operating Hour	15	2.0	10.3
Cost/Passenger Trip	\$3.89	\$22.50	\$5.14
Farebox Recovery (%)	15.6	8.1	13.4
Ridership per Capita	4.31	0.31	4.62
Cost per Capita	\$16.80	\$6.97	\$23.73

Source: GET

Financing

Funding for GET comes from Federal Transit Administration urbanized area funds (Section 5307), local general funds, and farebox. The federal funds can be used for capital and operating expenses.

Vehicles

GET operates with a fleet of 14 fixed-route vehicles and 10 paratransit vehicles. The fixed-route fleet is relatively new, although routine replacement will be needed with some of the older vehicles. The paratransit fleet includes eight Goshens from 1999 to 2005 in age, one 2002 Thomas, and one 1995 Star Trans Supreme.

Facilities

Greeley has an operating and maintenance facility as well as transfer centers located at the Greeley Mall and in downtown Greeley.

Berthoud Area Transportation Services (BATS)

The Berthoud Senior Center operates demand response service, not only within Berthoud but also for the surrounding rural area. The BATS service area is unique in the way that the boundary matches the limits of the Berthoud Rural Fire Protection District. This district, most of which is still classified as “rural”, includes portions of Boulder and Weld Counties as well as Larimer County (see **Figure 19**).

Demand-response service is operated from 7:00 A.M. to 4:00 P.M., Monday through Friday. The fare for local service is \$0.50 per ride. The suggested donation for out-of-town trips is \$2 to \$5, depending on income. Rides can be scheduled seven days in advance, but must be scheduled at least 24 hours ahead of time.



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BATS operates service to the RTD station in Longmont where riders can connect to services in Denver and Boulder. BATS also operates to Loveland’s transfer centers where riders can connect to COLT or the FoxTrot that travels to Fort Collins.

Population Served

BATS finds that about 70% of its passengers reside in the urban area and 30% reside in the rural area. BATS is used by seniors to attend congregate meals at the Berthoud Senior Center. It is also used by students and other members of the general public for local trips and to connect to the COLT, Transfort and RTD systems. While seniors continue to make up a major part of the ridership, use of the transportation service is growing among the general public, particularly young students.

BATS has been in operation for over ten years, and is growing steadily in response to increased demand. The population in the BATS service area continues to grow. Today BATS is positioning itself for the long-term so it can respond to the demand it faces and so it will be a stable ongoing service.

The Town of Berthoud now manages a more active role than in the past, providing almost half of the BATS funding. The Berthoud Area Transportation Services plays a key role in serving the rural needs in the southern part of Larimer County.

Operating Statistics

Table 25 illustrates the operating statistics for BATS.

Table 25. BATS Demand Responsive Operating Statistics (2002-2006)

	2002	2003	2004	2005	2006
Ridership	11,669	12,773	13,027	16,181	14,830
Annual Vehicle Miles	42,138	57,911	70,695	81,550	76,521
Annual Vehicle Hours	2,887	4,078	4,684	5,713	5,197
Annual Operating Cost	N/A	\$147,029	\$202,570	\$246,760	\$203,319
Annual Fares	\$4,144	\$5,115	\$8,616	\$8,688	\$6,013

Source: BATS

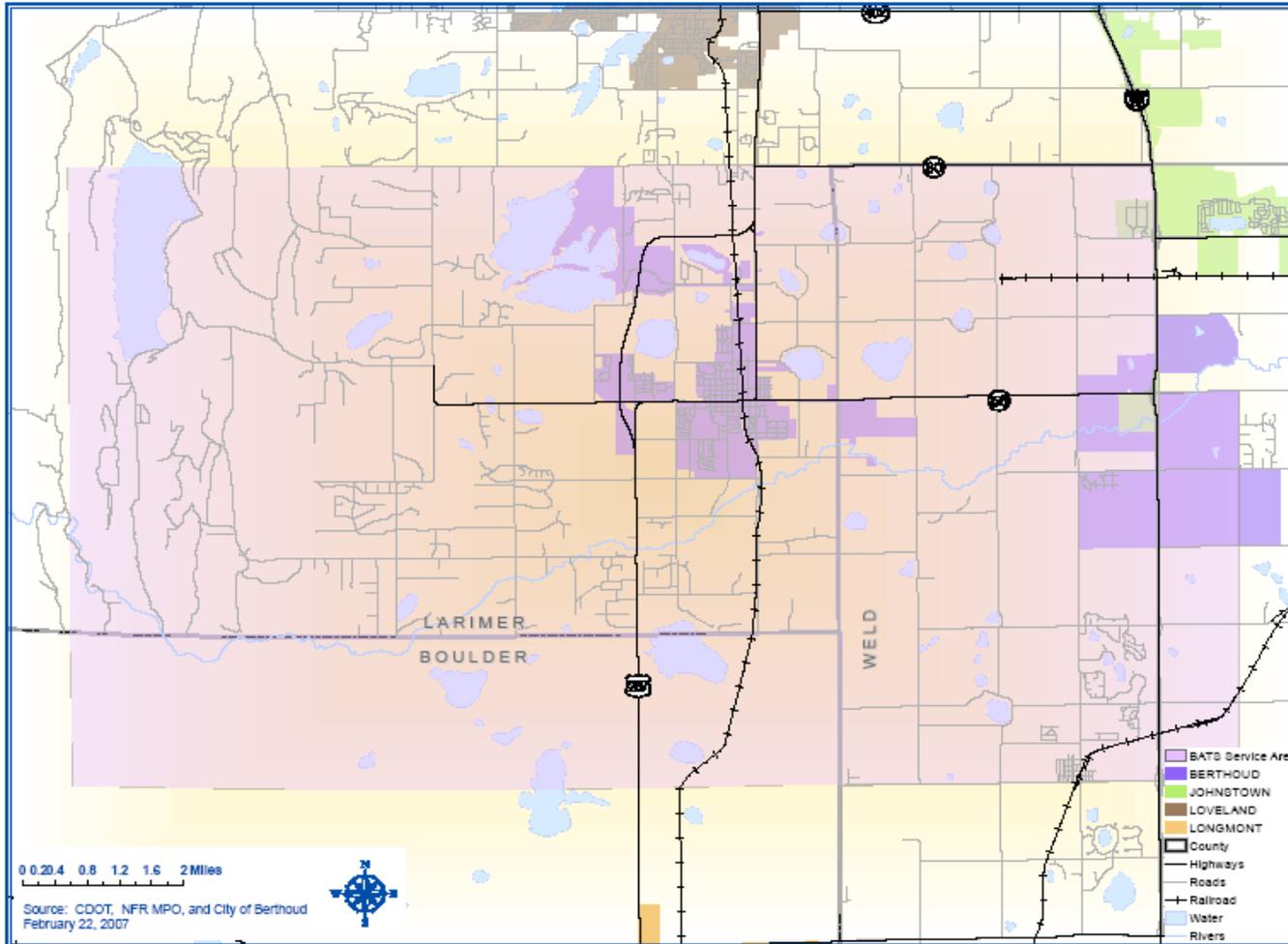
Performance Measures

Table 26 provides information on BATS performance measures. These are used to determine how well resources are being use and whether the services are cost-effective.



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Figure 19. BATS Service Area





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Table 26. BATS Performance Measures 2006

System-wide Performance Measures - 2006	System Total (Demand Response)
Cost per Operating Hour (\$)	39.12
Passengers/Operating Hour	2.85
Cost/Passenger Trip (\$)	13.70
Farebox Recovery (%)	2.95
Ridership per Capita	3
Cost per Capita (\$)	41.18

Source: BATS

Financing

Both federal and local financial support are the foundation of the service, with \$40,236 in local funds (Section 5307) from the Town of Berthoud, \$32,718 in federal rural transportation funds (Section 5311) and \$63,843 in federal urban transportation funds (Section 5309). They are also supported with a variety of grant funds, Older Americans Act funds, and Golden Links contributions.

Vehicles

Berthoud has a fleet of four vehicles. These vehicles range from 1997 to 2004 in age, with all but one equipped with a wheelchair lift.

Facilities

BATS operates out of the Senior Center. It is working with the Town to purchase a building that will be used as an operations center and as a garage. BATS was awarded Federal Section 5309 funding through the Colorado Transit Coalition for this facility.

Summary of Public Transit Providers

System Performance Measures

Fixed-Route Services

The systems providing fixed-route service illustrate a wide range of services and performance. Much of the fixed-route service in Fort Collins, Greeley, and Loveland serves people who do not have the option of driving. Transfort, in Fort Collins, also serves a large number of students, both in making trips to and from campus and, for many students, the other travel needs of this population. Student ridership is also significant in Greeley, although GET has only one primary route oriented to university trips. Greeley has an important orientation to serving people with disabilities, and carries many passengers who use wheelchairs on its fixed-route service. **Table 27** provides a comparison of the performance on fixed routes. The wide range in performance that reflects the markets served and effectiveness of the routes.



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Table 27. 2006 Fixed-Route Performance Measures

	Larimer County		Weld County
	Transfort	COLT	GET
Cost/Service Hour	\$83.30	\$67.60	\$58.57
Passengers/Service Hour	27.07	13.65	15
Cost/Passenger Trip	\$3.08	\$4.94	\$4.31
Cost per Capita	\$37.68	\$8.40	\$16.80

Demand Responsive Services

There are six demand responsive services available in Larimer and Weld Counties. They are Berthoud, COLT, Transfort, and GET. **Table 28** compares the performance measures of the demand response services.

Table 28. 2006 Demand Responsive Performance Measures

	Larimer County			Weld County
	Berthoud	COLT	Transfort	GET
Cost/ Service Hour	\$39.12	\$45.05	\$50.74	\$44.95
Passengers/Service Hour	2.9	1.3	1.82	2.0
Cost/Passenger Trip	\$13.70	\$34.82	\$27.92	\$22.50
Cost/Capita	\$41.18	\$7.47	\$18.75	\$6.97

N/A = Not Available

Other Transit Providers – Regional Services

Regional transit services are limited, with the FoxTrot providing connections between Fort Collins and Loveland and rural services providing some connections between outlying rural communities and urban area services. VanGo provides regional vanpool services. Other regional transit services today are provided by the private sector. Two private operators provide regional services: Greyhound/TNM&O and Shamrock Airport Express. The FoxTrot and rural services were described in the previous section. VanGo and private services are described below.

VanGo Services

The North Front Range MPO operates a vanpool program providing intra- and inter-regional trips. VanGO first started in 1994 and has grown dramatically each year into 2006. **Figure 20** illustrates the growth in the number of vans along with ridership increases from 1994 to 2006. **Table 29** lists the VanGo number of vans in 2006 between various origins and destinations. These services provide an indication of demand for alternative transportation services to regional destinations and serve an important role in helping to build shared-ride ridership. An increase in the amount of ridership for Van Go decreases the number of single passenger vehicles on the road commuting to and from work. Bringing vehicles off of the road will create fewer emissions in our environment. **Figure 21** shows the vehicle miles saved along with the amounts of carbon monoxide (in tons) saved per year with the induction of VanGO.



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Figure 20. VanGo Ridership and Number of Vans

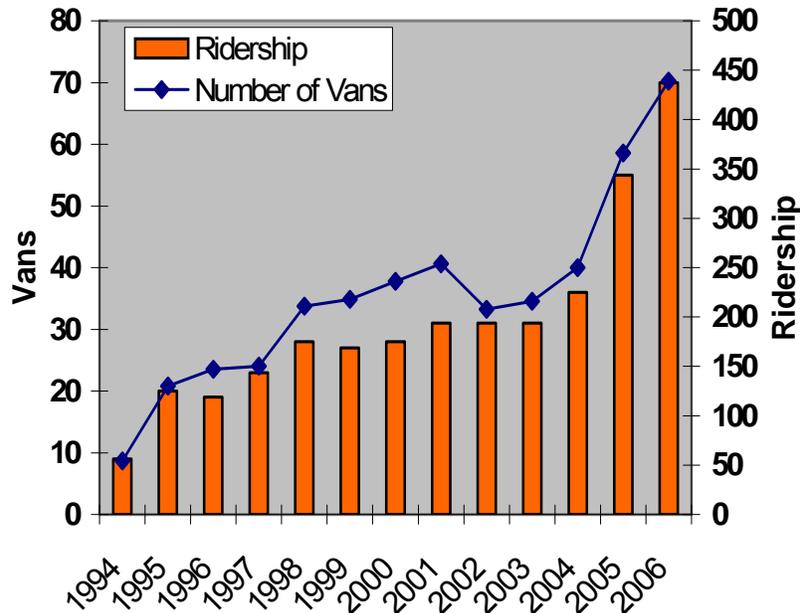


Table 29. VanGo Service Levels

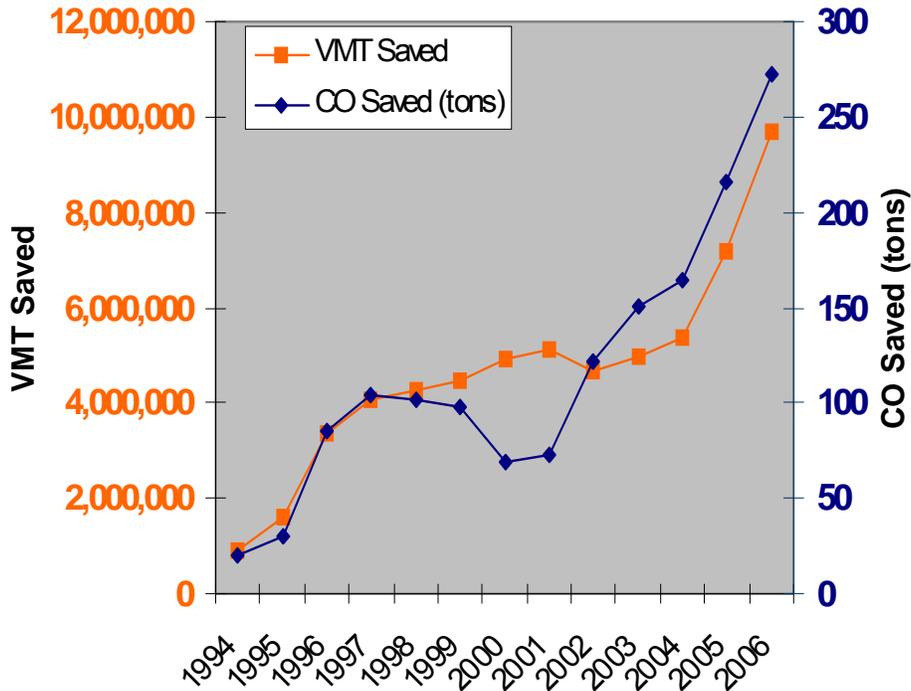
Destination \ Origin	Interlocken/Louisville	Golden/Denver West	Longmont	Stapleton	Boulder	Colorado Boulevard	Greeley – Banner Health	Rawhide/Wellington	Downtown Denver	DTC	Lakewood	I-25 and 84 th Avenue	I-25 and 120 th Avenue	Aurora	Fort Collins	CSU	West Evans Boulevard	Loveland/Kroll	Total
Fort Collins	7	2	1	1	5	3	1	1	12	3	2	1	1	-	-	-	2	-	42
Greeley	-	-	-	-	-	-	-	-	5	-	-	-	1	-	2	1	-	-	9
Loveland	-	-	-	-	-	-	-	-	2	-	-	-	1	1	2	-	-	-	6
Boulder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	5
Johnstown/Milliken	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2
Denver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	2	5
Longmont	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Total	7	2	1	1	5	3	1	1	22	3	2	1	3	1	12	1	2	2	70

Source: March 2006 NFRMPO/VanGo Vanpool Services



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Figure 21. VanGo VMT Saved vs. CO in Tons Saved



Greyhound and TNM&O Bus Service

TNM&O Coaches, Inc. is a subsidiary of Greyhound Lines, Inc. Both Greyhound and TNM&O operate intercity bus service in the North Front Range, but TNM&O is the primary operator in the region. This service is geared to a wide range of intercity travelers, not the commuter market. **Table 30** lists the trips made connecting cities in the North Front Range to each other and to Denver.

Today, five trips connect Fort Collins to Denver. In the reverse direction, there are also five trips that connect Denver to Fort Collins. Two of these trips connect Fort Collins to Denver directly without any stops, one in the AM and one in the PM. The other three trips have stops in Greeley and Loveland and then continue on to Longmont and Denver. It is more useful to consider the segments of service that are provided as few people would ride this service between Fort Collins and Denver unless they were connecting to the national intercity network operated by Greyhound/TNM&O.



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Table 30. Greyhound/TNM&O Schedule

	Departs	Arrives	Travel Time
Fort Collins to Denver	7:40 PM	8:55 PM	1 Hr 15 m
Denver to Fort Collins	10:45 PM	12:01 AM	1 Hr 16 m
Loveland to Greeley	9:35 PM	10:00 AM	25 m
	7:15 PM	7:50 PM	35 m
Greeley to Loveland	8:30 AM	9:10 AM	40 m
	1:30 PM	2:00 PM	30 m
	6:50 PM	7:20 PM	30 m
Fort Collins to Greeley	7:55 AM	8:30 AM	35 m
	12:55 PM	1:30 PM	35 m
	6:10 PM	6:45 PM	35 m
Greeley to Fort Collins	10:05 AM	10:45 AM	40 m
	7:50 PM	8:30 PM	40 m
	11:30 PM	12:05 AM	35 m
Loveland to Longmont	9:10 AM	9:40 AM	30 m
	2:00 PM	2:30 PM	30 m
	7:20 PM	7:50 PM	30 m
Longmont to Loveland	9:05 AM	9:35 AM	30 m
	6:45 PM	7:15 PM	30 m
Denver to Greeley	10:30 PM	11:35 PM	1 Hr 05 m

Typical one-way fares are:

- ▶ Fort Collins – Greeley: \$9.50
- ▶ Greeley – Loveland: \$8.50
- ▶ Loveland – Fort Collins: \$8.50
- ▶ Loveland – Longmont: \$8.50

While these fares are high compared to typical public transit fares, when one considers they cover the full cost of the trip (capital and operating) and include a profit they begin to seem quite reasonable. For a limited number of trips, it may be possible to subsidize the cost of tickets on the existing service.

The schedules are not particularly conducive to the types of trip demand that occurs in the region, although some segments are better suited than others. For example, the trip times from Fort Collins to Greeley are fair: departing Fort Collins at approximately 8 a.m., noon, and 6 p.m. and arriving in Greeley about 35 minutes later. However, travel from Greeley to Fort Collins is more problematic with trips leaving Greeley at 10 a.m., 8 p.m. and 11:30 p.m. Similarly, the trip times from Greeley to Loveland and Loveland to Longmont/Denver are suitable for a good number of trips, but the return times are difficult.



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Shamrock Airport Express

The Shamrock Airport Express provides service between Fort Collins/Loveland and Denver International Airport. Passenger pick-up in Fort Collins occurs between 3:25 A.M. and 5:55 P.M. The cost to ride the shuttles is \$21 for adults and \$10 for children ten and under.

In Fort Collins the buses stop at:

- ▶ Transit Center at Colorado State University at 25 minutes past the hour.
- ▶ University Park Holiday Inn, 425 W. Prospect Road, on the half hour.
- ▶ Fort Collins Marriott, 350 E. Horsetooth Road, at 15 minutes before the hour.
- ▶ I-25 and Harmony Road Park-n-Ride, 10 minutes after the hour.
- ▶ Courtyard by Marriott, 1200 Oakridge Drive, 5 minutes before the hour.

In Loveland, buses stop at:

- ▶ Showtime Video, Hwy 34 and Van Buren at 50 minutes past the hour.
- ▶ The Egg and I, 25th and Lincoln, at 5 minutes after the hour.
- ▶ Hampton Inn, Hwy 34 and I-25, at 25 minutes past the hour.

From the Hampton Inn, the trip to DIA is one hour and twenty minutes.

Buses depart DIA every hour between 6:00 A.M. and 11:00 P.M.

Client-Specific Transportation Services

A wide range of entities provide client-specific services in Larimer and Weld Counties. Many of these are entities, such as nursing homes, assisted living facilities, senior centers, youth clubs and other entities that have only a single vehicle for outings. The largest of these are the Community-Centered Boards serving people with developmental disabilities. Foothills Gateway in Larimer County and CDSI in Weld County each provide extensive programs for the developmentally disabled populations.

In 2006, a *Public Transit/Human Services Coordinated Transportation Plan* was completed for the NFR region. The report documented a wide variety of public transit and human service agencies providing transportation. The human service agencies included nursing homes, assisted living facilities, senior centers, and disabled services. Together, the public transit and human service agencies operate over 200 vehicles in each county, with the majority of the vehicles used only two to five hours per day.

Service to rural areas is perceived as a major unmet need, as is adequate job access transportation, especially between communities. As part of the planning process, each county identified specific goals, actions, and strategies tailored to the needs in each county.

A list of the major entities with vehicles and transportation services provided to clients follows.



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Foothills Gateway

Foothills Gateway serves as the Community-Centered Board in Larimer County, providing a broad range of services to people with developmental disabilities. The agency operates about 40 vehicles in providing transportation services for individuals between their home and program/work settings. Depending on the needs of the individual, transportation may be provided by FGI or contracted with other service providers.

The agency tries to use public transit alternatives (both fixed-route buses and paratransit services) as much as possible. Clients use Dial-A-Ride operated by Fort Collins, COLT, Loveland's Mini Bus, and BATS.

CDSI - Envision

CDSI / Envision is the Community-Centered Board in Weld County, serving 700-800 individuals in the adult program. A broad range of services are provided to people with development disabilities. Comprehensive services include residential (24-hour) services, day services in the community, and employment services. More limited Supported Living Services (SLS) are provided to other clients.

Transportation is provided "home to program" and "program to home" for people in adult day programs. Transportation is also provided to participate in scheduled activities within the community. CDSI /Envision uses a fleet of 24 vehicles to operate this service. In addition, they purchase bus passes for clients who are able to use GET or Paratransit services.

CDSI / Envision faces the challenge of trying to make its resources go as far as possible. One of the most efficient ways to provide quality services is through "host home" providers. These are individual families that host one or possibly two clients. Host home providers located in outlying areas where housing is less expensive can stretch resources the farthest – but that generally requires that CDSI provide transportation to outlying areas. The agency may have to limit the number of homes they serve in rural areas – or require that the host families provide transportation to a central pick-up point – because of the cost of transportation services.

A transportation problem faced by CDSI / Envision is getting public transportation to the new businesses, such as Target, that are building on the west side of Greeley. CDSI / Envision has been able to place clients in jobs in these businesses, but regular public transportation is needed to these locations.

Wellington Senior Center

The Wellington Senior Center has provided limited service to seniors in Wellington for several years. The Senior Center, with the support of the Town of Wellington, has considered expanding this service and making it available to the general public, if Section 5311 funds are available for the expansion. The Wellington Senior Center provides services to rural residents who wish to come into Wellington (four days each week). They also operate between Wellington and Fort Collins once a month.



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Windsor Senior Services

The Town of Windsor provides senior transportation services Monday through Friday from 8 AM to 6 PM. The service uses a sedan-style vehicle with paid drivers. The service provides seniors with rides to doctors' appointments in Greeley, Fort Collins and Loveland on Mondays and Tuesdays at a cost of \$4 a roundtrip. Wednesday, Thursday and Friday rides are provided in town to the grocery store, appointments and senior's lunches at town hall.

Summary of Other Transit Providers

Private sector regional services are available along I-25 to DIA and provide limited service between major communities in Larimer and Weld counties. The hourly service to DIA is a solid level of service and with the E-470 connection the travel time is reasonable. The intercity network, while it does a reasonable job given the market and operating economies, does not provide adequate services either between cities in the region or to major cities outside the region. To serve a larger market, more direct service between major communities is needed. Those trips that do provide direct connections between Fort Collins and Denver do so with reasonable travel times. However, most service zig-zags through the region, taking two to three times as long as an automobile trip. In order to improve intercity service through the private sector, some level of public support will be needed.

Limited connections are available between the private services and public services. Greyhound/TNM&O serves the Multi-Modal Downtown Transit Center in Fort Collins. Airport Express serves the transit center at Colorado State University and Harmony Road park-and-ride.

Specialized services in the region vary significantly between Larimer and Weld counties. In part this is due to the geography of the counties and in part due to the historical development of transit services. In Weld County, the primary transportation providers are Weld County, CDSI-Envision, and the various senior centers in rural communities. In Larimer County, rural services are provided by Larimer County (Larimer Lift) and the Town of Berthoud. Rocky Mountain National Park provides service for populations within the park itself. It is hopeful that in the future this service will work with other transit systems to alleviate some of the traffic flow on the US 34 Corridor. Foothills Gateway is also a major provider of service along with a variety of other smaller organizations who provide service to their clients.



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III. SOCIO-ECONOMIC PROFILE

A. Socio-Economic Data

Socio-economic data provides the basis for the travel demand model, which is used to project future travel volumes on roadways and transit ridership. The demographic forecasting process has two steps. The first step develops an overall forecast of housing and employment for the entire region. Second, a land use allocation model, CommunityViz, distributes the housing and employment forecasts geographically to the Traffic Analysis Zone (TAZ) level. For modeling purposes, the NFR has developed 950 TAZs for which the household and employment data are compiled. The household and employment data are estimated for the area within the MPO modeling boundary, shown on **Figure 22**, which is somewhat larger than the area within the MPO boundary. The socio-economic forecasts have been divided into four sub-regions as illustrated on **Figure 23**.

Overall Forecast

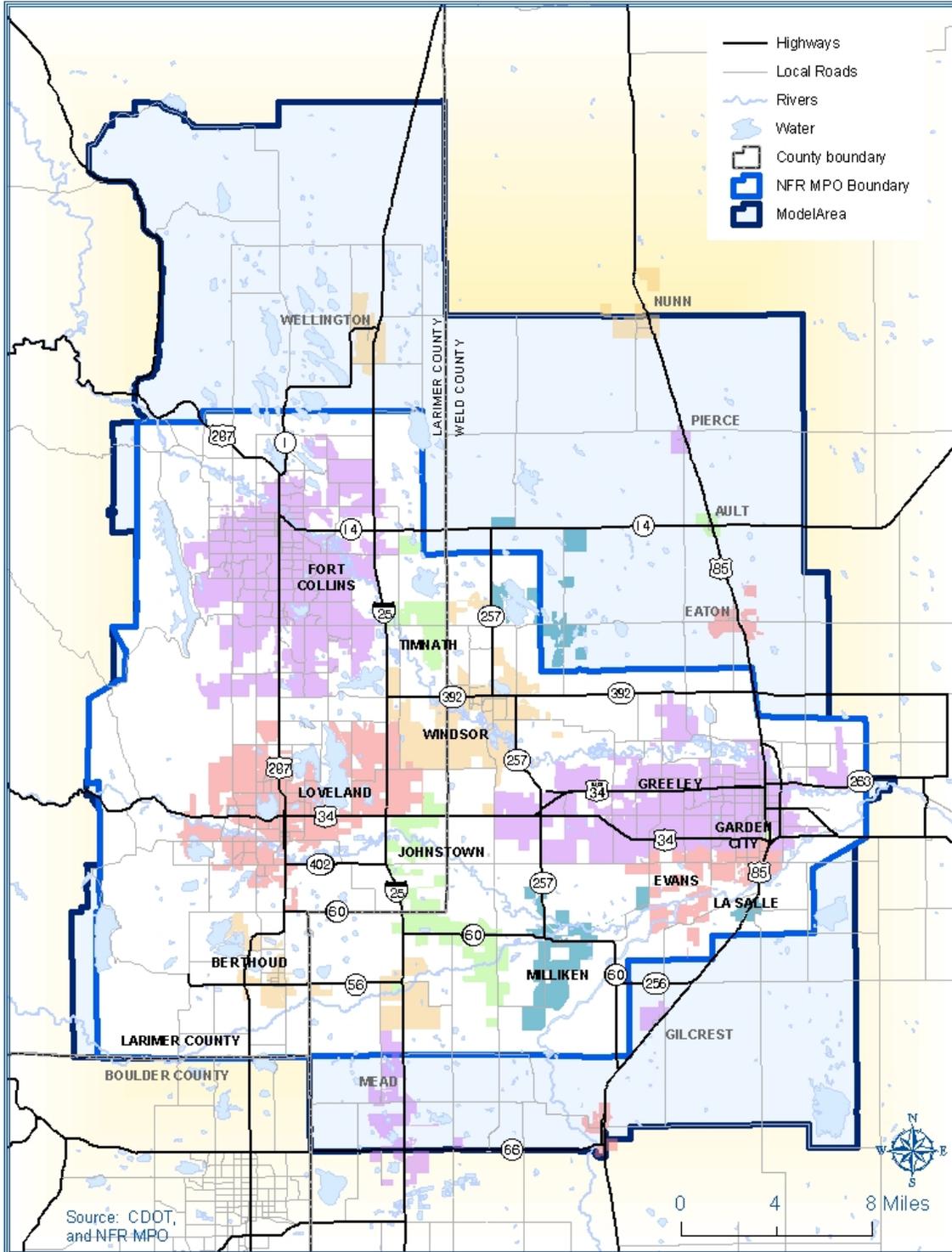
The NFRMPO hired an economic consulting firm to prepare forecast numbers for the NFR's portions of Larimer and Weld counties. The firm worked closely with the State Demographer's office and a stakeholders' group to develop NFR specific information. The report, *2035 Economic and Demographic Forecast for the North Front Range Modeling Area and its Subregions* (CBEF, 2006), describes the forecasting process and the resulting anticipated growth in both households and employment between 2005 and 2035, in five year increments.

As described in the study report, *2035 Economic and Demographic Forecast for the North Front Range Modeling Area and its Subregions*, "The outlook for the region's economy drives the forecast of jobs and population. The Modeling Area forecast is based on a model which balances the demand for labor and the supply of workers. The sub-regional models distribute the Modeling Area's growth among the four sub-regions." The forecast involved three major tasks. First, labor demand was forecast. It is largely determined by projected job growth, which, in turn, results from new jobs in the region's basic industries. Basic industries are those dependent on exports, or outside dollars flowing into the region. New basic jobs generate additional jobs in the region. These are indirect and induced jobs, i.e. jobs from suppliers to basic industries or those caused by spending of workers in basic industries respectively. These are referred in this analysis as non-basic resident service jobs. Each basic job is assigned a multiplier to determine the number of non-basic jobs in more than 70 job categories. The second task was to determine how much of the forecast job growth in the counties would occur in the modeling area. Finally, the population needed to fill these jobs was forecast. Job demand along with the region's age and gender makeup and trends in labor force participation were the critical elements in this calculation. The forecasts were adjusted in response to comments from a review committee made up of local experts.



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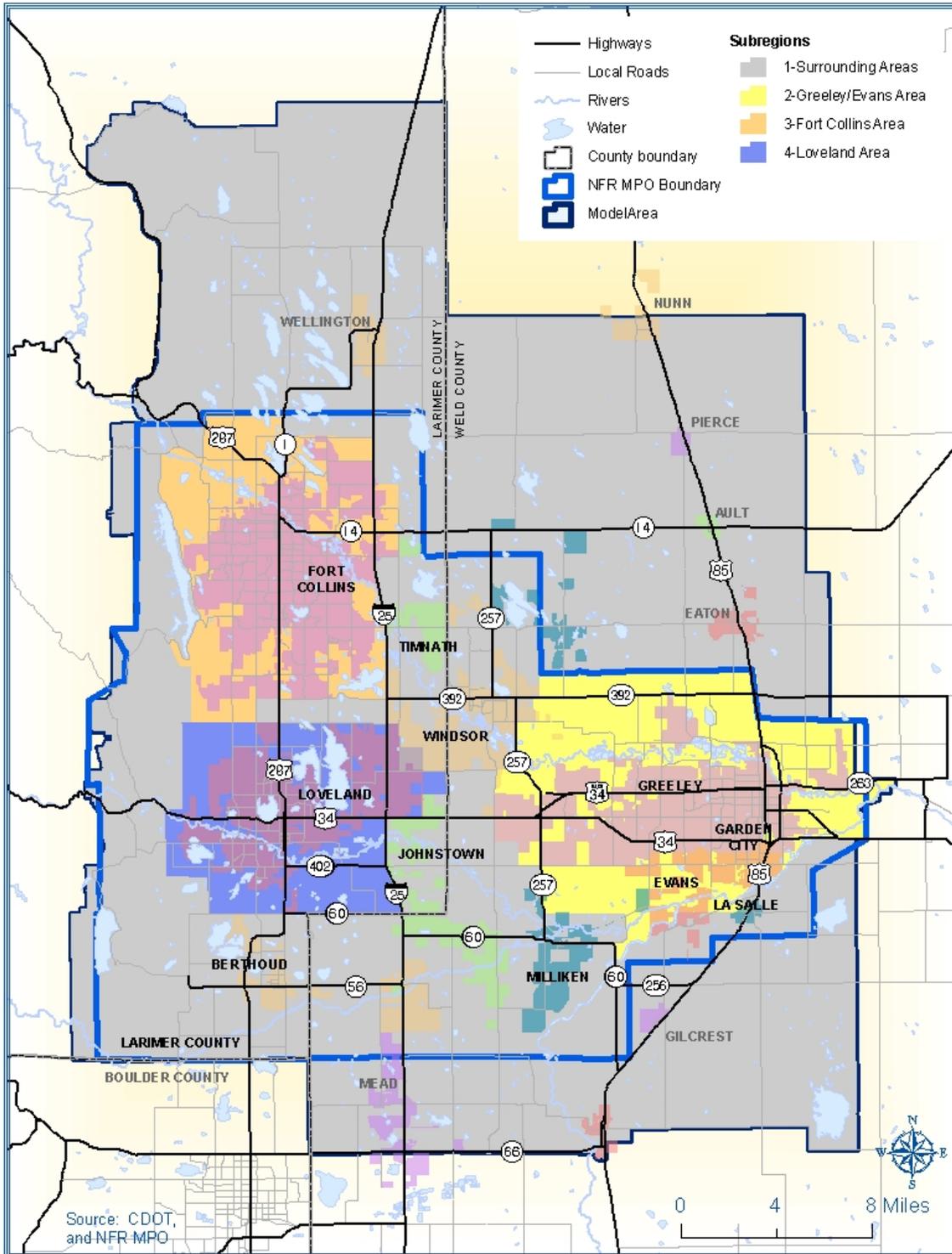
Figure 22. North Front Range Modeling Boundary





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Figure 23. North Front Range Subregions





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Land Use Allocation Model

The 2005 land use allocation model is a parcel based, gravity model that distributes projected household and employment numbers by subregion (Fort Collins, Loveland, Greeley/Evans, and surrounding areas) across the MPO modeling region.

Parcels were obtained from Weld and Larimer County Assessors. Only developable parcels were used in the distribution of household and employment projections. Developable parcels were those that did not have employment or households as of April 1, 2005, and excluded those parcels that were inside the 100-year floodplain, contained parks, open space, golf courses, cemeteries, historic areas, etc.

Future land use was based on comprehensive land use plans or zoning ordinances where land use plans were unavailable. The land use was then assigned to developable parcels. The land use model assumptions and the model inputs were reviewed and developed in coordination with land use planners from the MPO member governments.

Distribution of households and employees was based on the attractiveness of a parcel. Attractiveness was determined by such factors as proximity to arterial roadways, business centers and employment centers and location in a municipal boundary or growth management/urban growth areas.

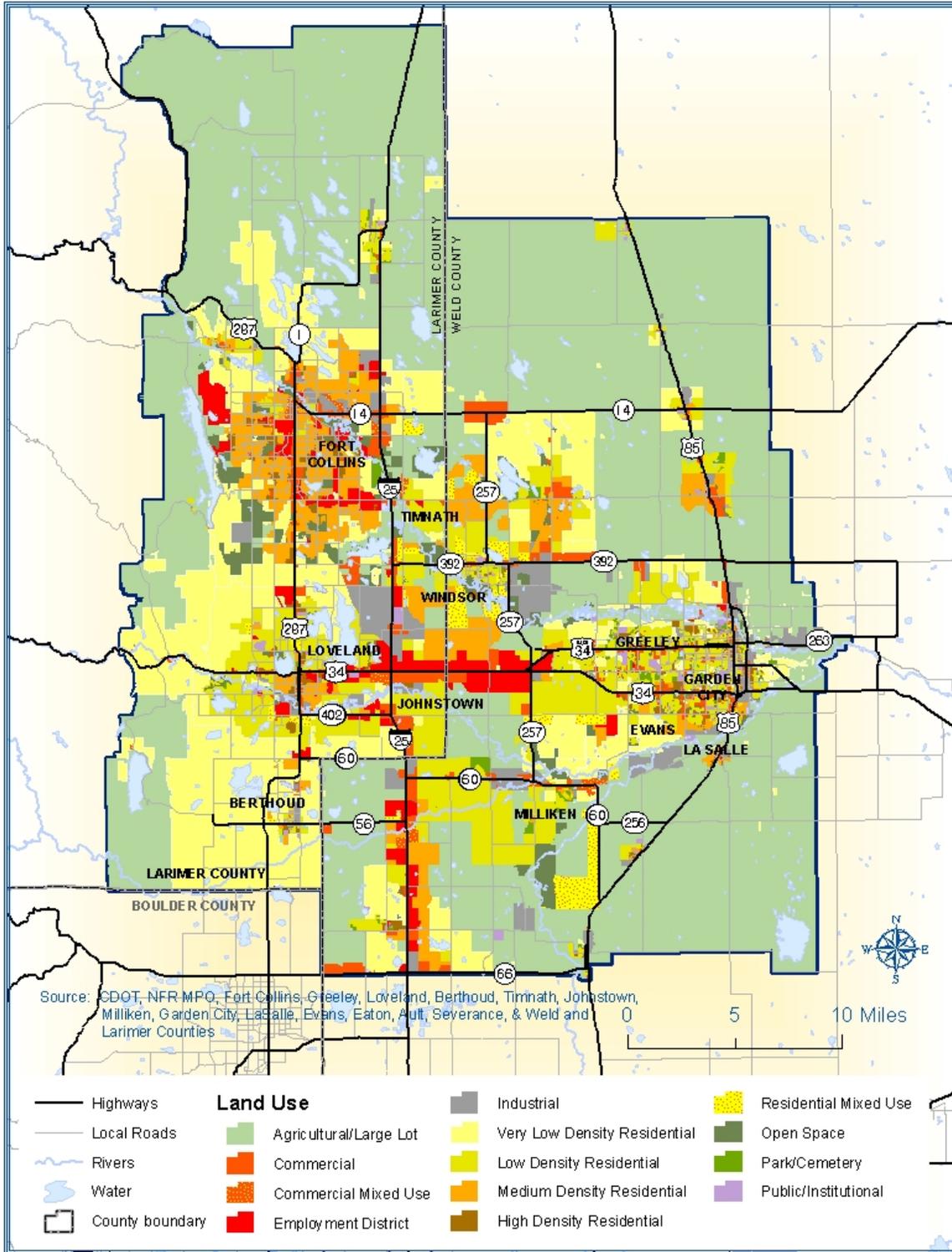
Based on the above assumptions, the model distributed households and employees to developable parcels in each subregion (Fort Collins, Loveland, Greeley/Evans, and surrounding areas) until the forecasted total number for that subregion had been reached. The number of households and employees were then summarized by traffic analysis zone (TAZ). The member government land use planners reviewed the results and submitted comments. Any issues or concerns raised by the land use planners were addressed and the model was further refined.

The following maps **Figure 24 through Figure 28** display the results of the land use allocation model by TAZ.



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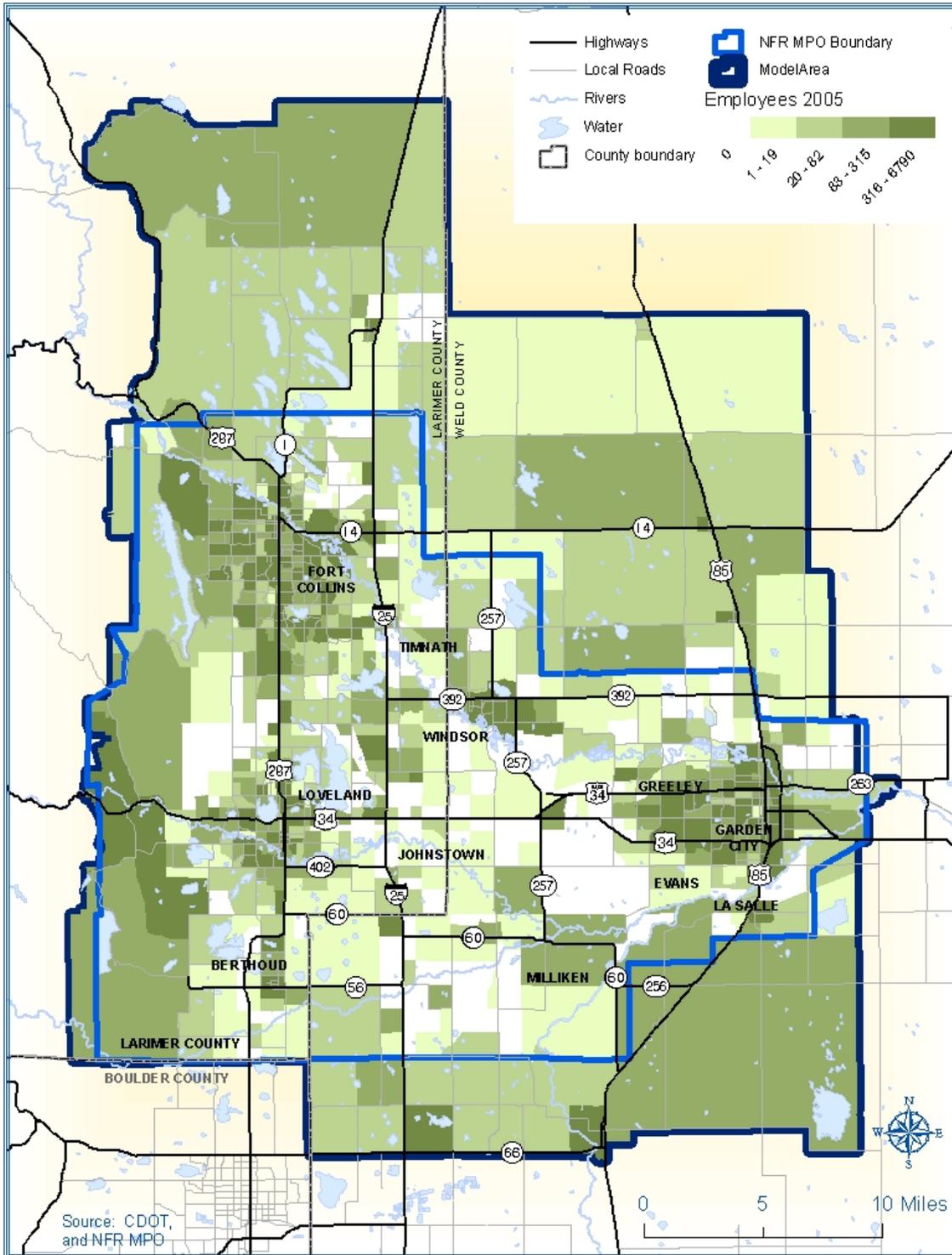
Figure 24. Future Land Use





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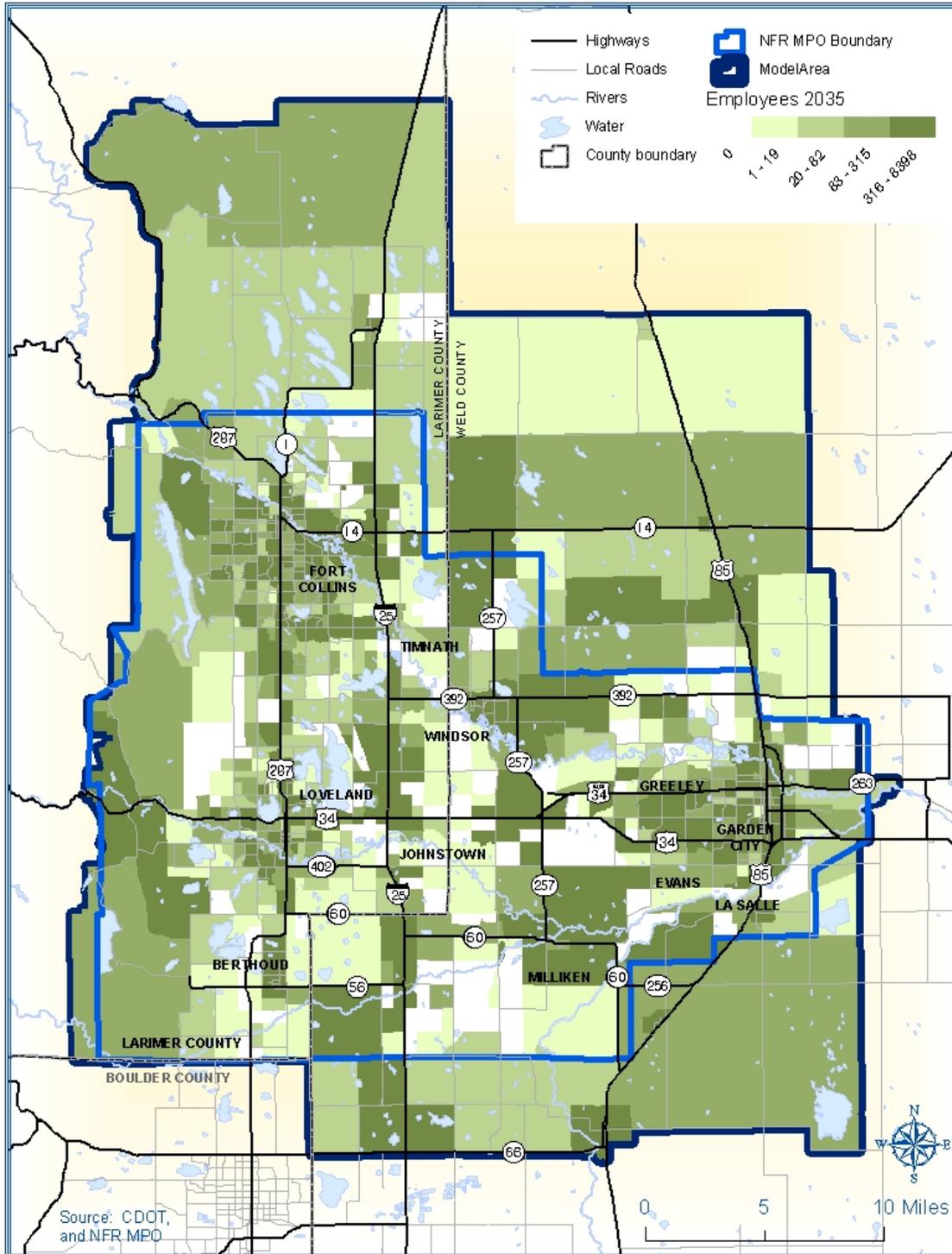
Figure 25. 2005 Employment





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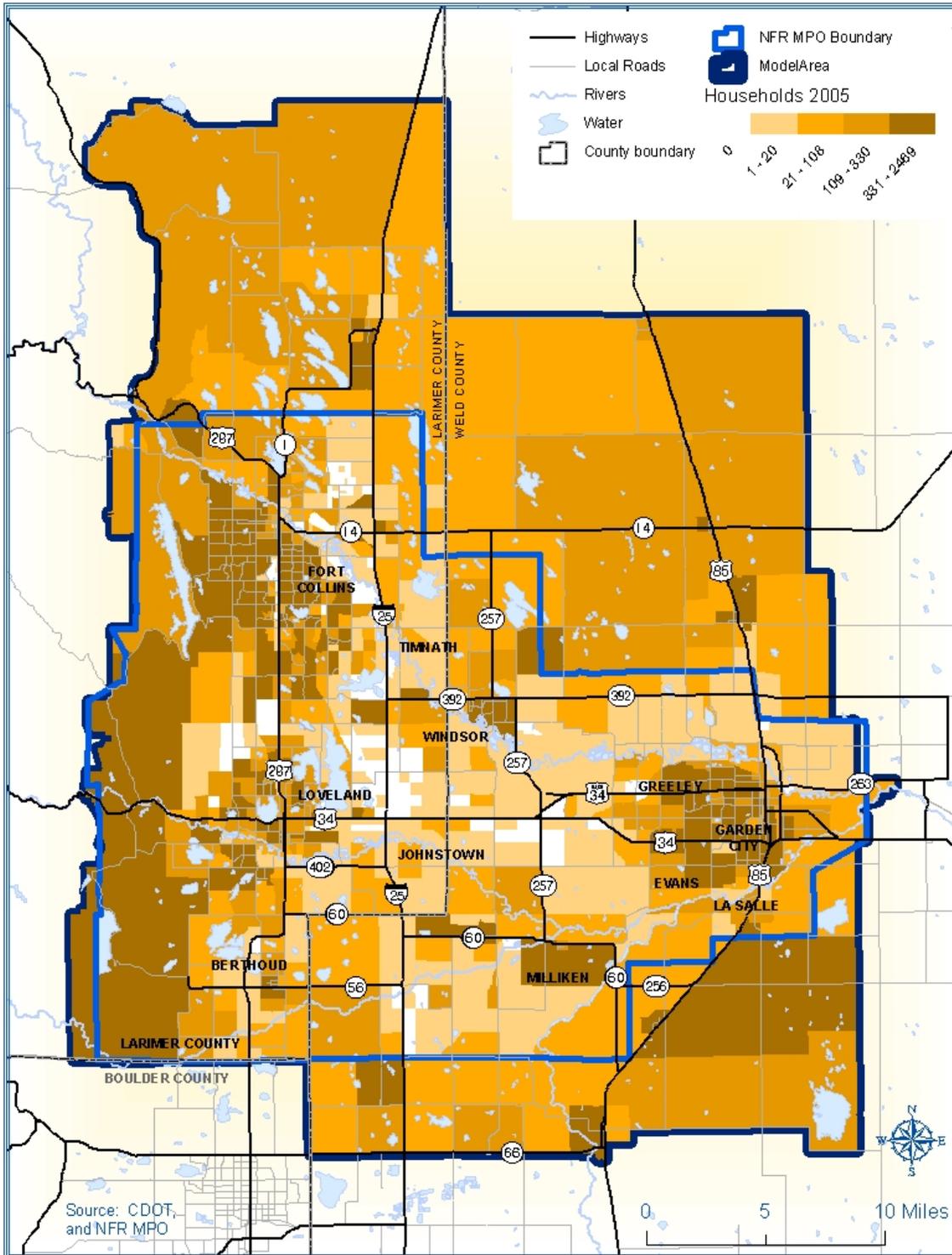
Figure 26. 2035 Employment Forecasts





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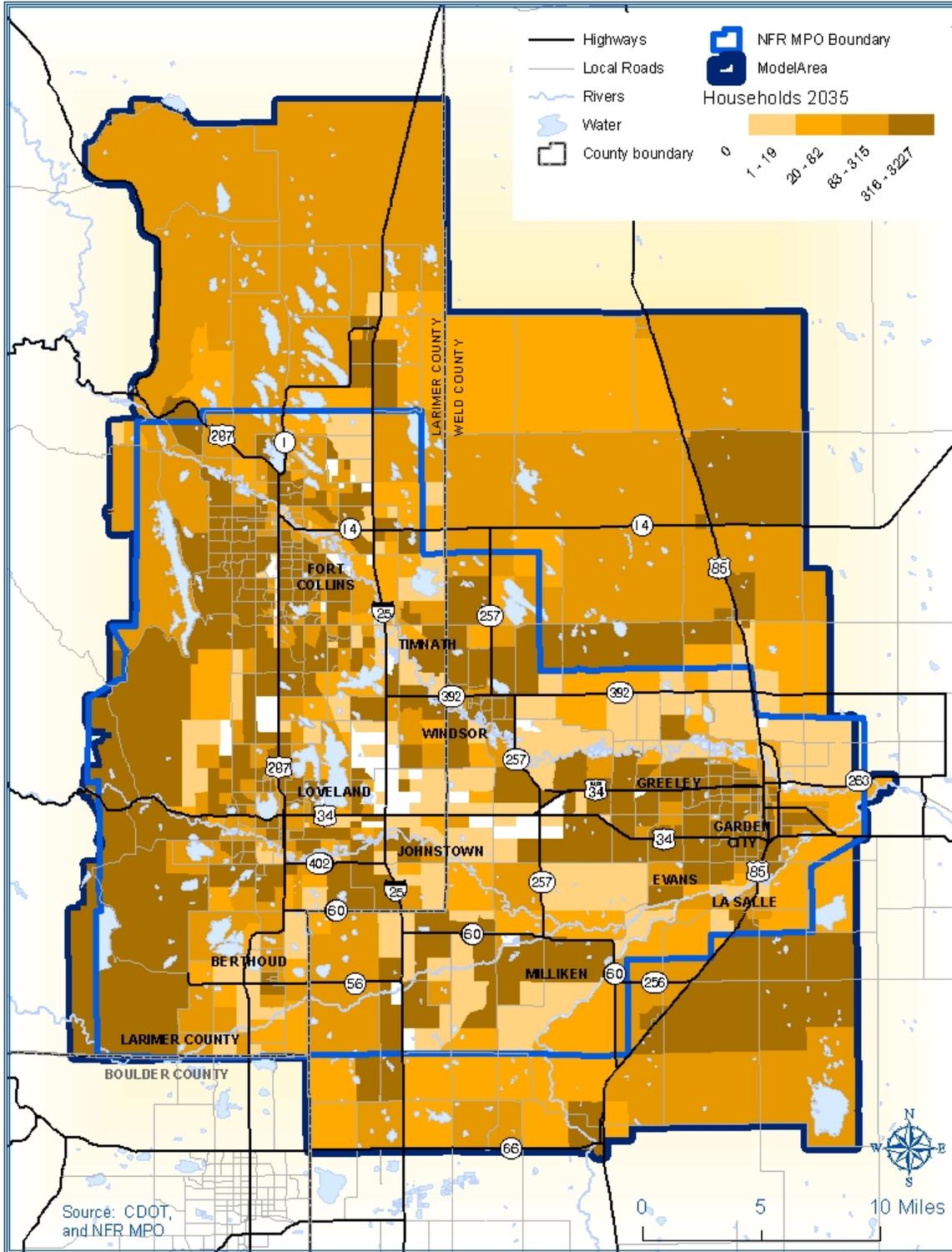
Figure 27. 2005 Households





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Figure 28. 2035 Household Forecasts



Source: CDOT, and NFR MPO



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Demographic Forecasts

Households

The 2035 Economic and Demographic Forecast for the North Front Range Modeling Area and its Subregions projects the number of households in the NFR to increase 2.2% annually for the region between 2005 and 2035.

For input into the travel model, household projections were further classified by household size, or number of people in the household, and income level as illustrated in **Table 31** for the 2005 base and **Table 32** for the 2035 projections. These classifications increase the sensitivity of the travel demand model in response to household characteristics.

Table 31. 2005 Household Size and Income Data

Household Income (2000 dollars)	1-person HH	2-person HH	3-person HH	4-person HH	5+ person HH	Total HH	Percent
\$0-20k	15,751	7,768	3,561	1,867	961	29,908	17.9%
\$20-40k	12,374	14,615	6,371	4,664	2,661	40,685	24.4%
\$40-60k	4,262	14,143	6,902	6,458	3,759	35,524	21.3%
\$60-80k	1,449	9,736	4,975	4,950	2,861	23,971	14.4%
>\$80k	2,190	15,276	7,677	7,329	4,154	36,626	22.0%
Total	36,027	61,537	29,458	25,267	14,398	166,714	100.0%
Percent	21.6%	36.9%	17.7%	15.2%	8.6%	100.0%	

Source: NFR Regional Travel Model, Model Process, Parameters, and Assumptions April, 2007

Table 32. 2035 Household Size and Income Data

Household Income (2000 dollars)	1-person HH	2-person HH	3-person HH	4-person HH	5+ Person HH	Total HH	Percent
\$0-20k	26,537	12,033	6,063	3,216	1,268	49,117	17.0%
\$20-40k	21,223	27,634	11,747	8,779	3,761	73,144	25.3%
\$40-60k	7,081	25,449	12,427	12,363	5,399	62,719	21.7%
\$60-80k	2,211	17,730	9,068	9,615	4,137	42,761	14.8%
>\$80k	3,521	26,011	13,129	13,312	5,607	61,580	21.3%
Total	60,573	108,857	52,434	47,285	20,172	289,321	100.0%
Percent	20.9%	37.6%	18.1%	16.3%	7.0%	100.0%	

Source: NFR Regional Travel Model, Model Process, Parameters, and Assumptions April, 2007



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Employment

In 2005, roughly 86% of the jobs in Weld and Larimer Counties were within the NFR Modeling Area. Overall, employment is projected to grow at approximately 2.0 percent per year for the entire region, with Weld County experiencing a slightly higher percent increase over Larimer County.

The location of employment for 2005 was determined by geocoding QCEW (quarterly census of employment and wages) data, from Bureau of Labor Statistics information, to the street centerline map for the NFR. The results show each employer and the number of employees for each location on a map. These results were then aggregated up to the TAZ level. **Figure 29** shows the major employers (those with more than 100 employees) across the NFR region. In 2005, the major employers were predominately within the cities. These major employers could also be viewed as the major activity centers making sizable contributions to use of the transportation network.

For input into the travel demand model, employment is broken down into three categories: Basic, Retail, and Service. Basic jobs, also known as production-distribution, are those that are based on outside dollars flowing into the local economy and include industries that manufacture and/or produce goods locally for export outside the region. Basic jobs include manufacturing, mining, utilities, transportation, warehousing, and others. Retail jobs include retail trade, post offices, and food service. Service jobs include finance, insurance, real estate, and public administration. The Basic, Retail and Service employment estimates for 2005 and forecasts for 2035 are shown in **Table 33**. The disaggregated total employment in the travel model does not account for people working from home.

Table 33. Classification of Employment

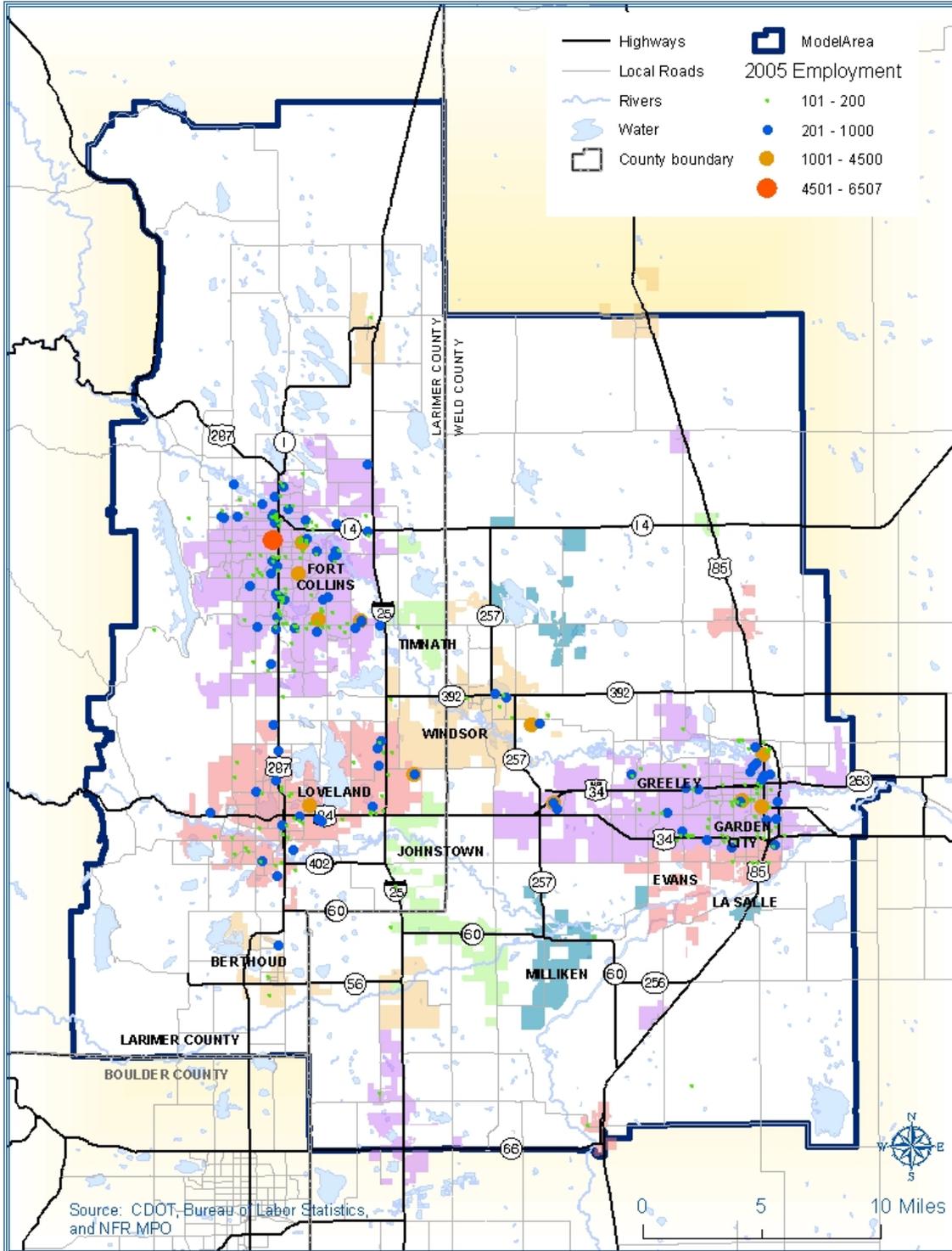
	2005		2035	
	Employees	Percentage	Employees	Percentage
Basic	55,070	26.2%	81,880	21.1%
Retail	40,776	19.4%	55,220	14.3%
Service	114,581	54.4%	250,348	64.6%
Total	210,427	100.0%	387,448	100.0%

Source: North Front Range Regional Travel Model, Model Process, Parameters and Assumptions, LSA and Associates, Inc. 2035 Model build



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Figure 29. 2005 Major Employers



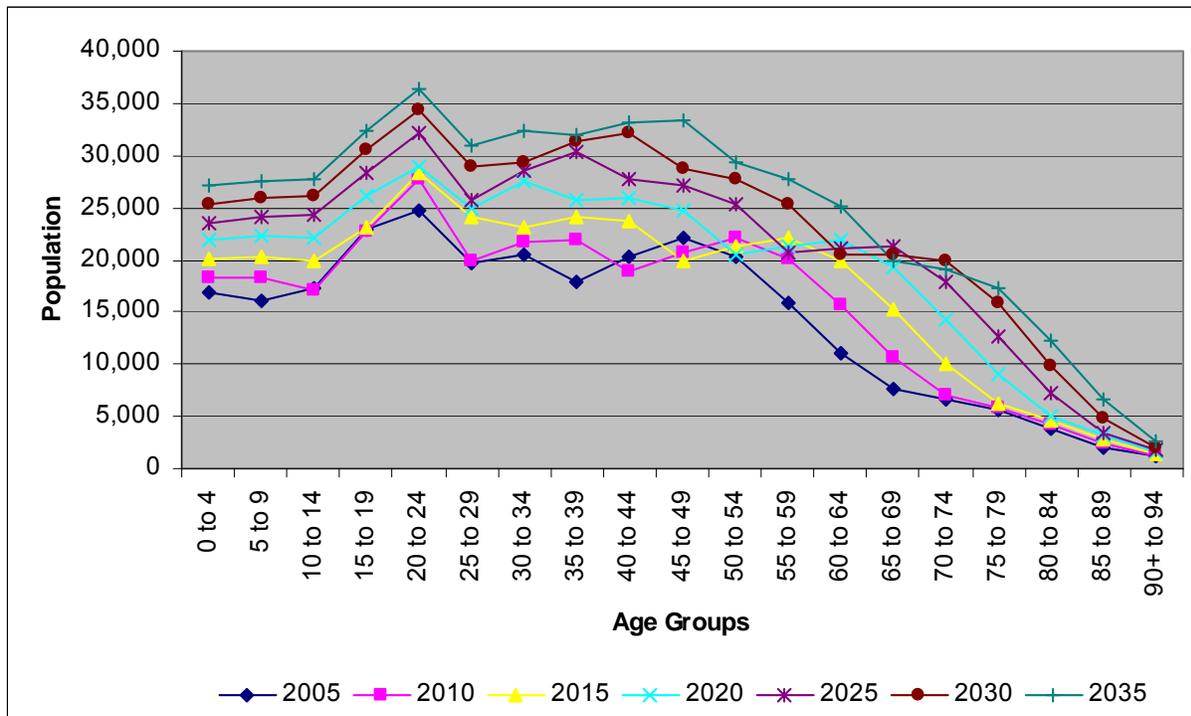


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B. Population Characteristics

The NFRMPO is an area that has experienced strong population growth, and that trend is anticipated to continue into the future. There are certain population characteristics that change noticeably over time. The first is the age distribution. Larimer County is expected to have a larger percent of its population over the age of 60, while the larger portion of Weld County population growth is expected to be in the younger age brackets. The difference in general terms would be an increase in the percentage of retirees in Larimer County and an increase in the percentage of younger families with children in Weld County. The two charts below, **Figures 30 and 31**, depict this trend.

Figure 30. Larimer County Age Distribution

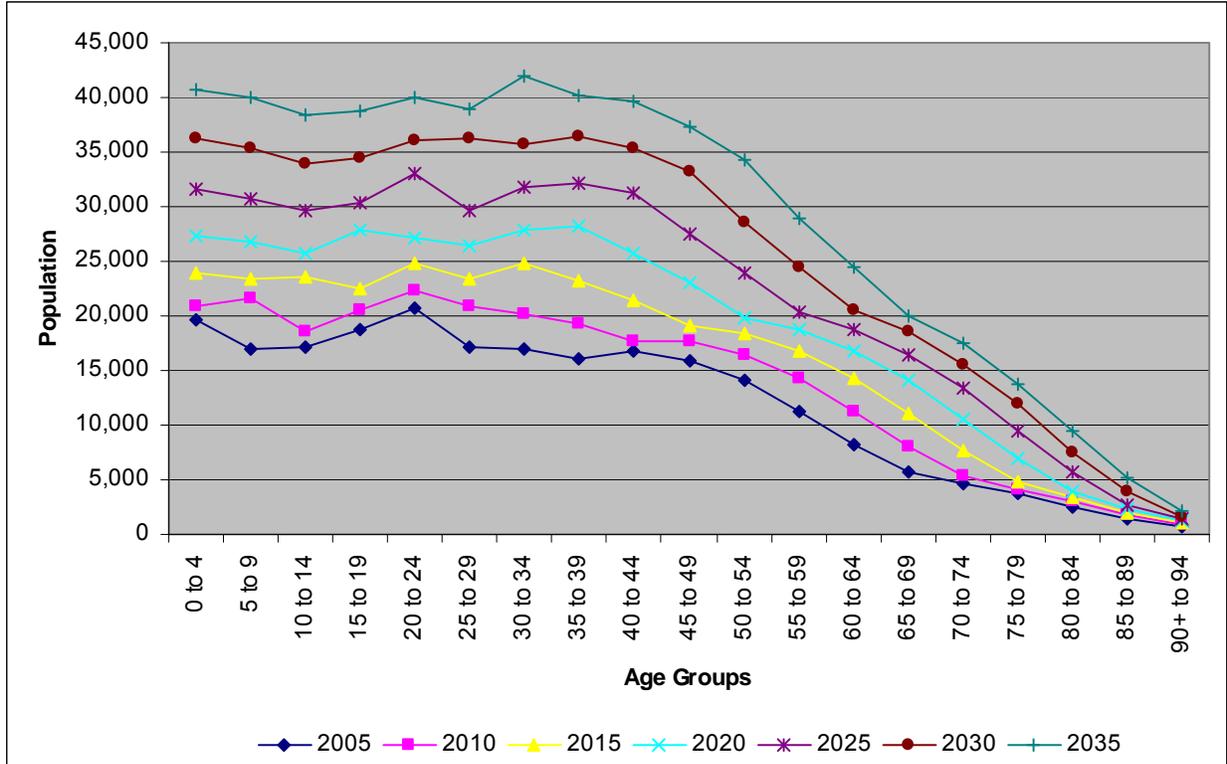


Source: State Department of Local Affairs, Demography Division



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Figure 31. Weld County Age Distribution



Source: State Department of Local Affairs, Demography Division

The socio-economic makeup of the two counties is also different as reflected in the per capita earnings reported in the 2000 Census. Larimer County has an average per capita earning of \$17,197, while Weld County's average is \$14,522. However, the Hispanic population, the largest minority population in both counties, has a lower per capita income of \$14,107 and \$10,934 in Larimer County and Weld County, respectively.

The number of vehicles available by household is slightly different between the two counties with the overwhelming majority having at least one vehicle available as seen in **Table 34**.

Table 34. Percent of Vehicles Available by Household

Number of Vehicles	Larimer County	Weld County
None	4.0%	5.6%
1	28.3%	26.8%
2	42.3%	40.5%
3 or more	25.5%	27.1%

Source: US Census Bureau, 2000 Decennial Census



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The vehicle availability per household is in line with the commute patterns across the region. The 2001 Household Travel Survey provides information about how residents in the region commute to work. The vast majority of people commute to work in automobiles, as shown in the **Table 35**.

Table 35. Commute to Work by Mode

Travel Mode	Percent of Commuter Trips
Auto	96.2%
Bike	1.4%
Walk	0.7%
Transit	0.3%

Source: 2001 Household Travel Survey.

C. Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994 was enacted to reinforce Title VI of the Civil Rights Act of 1964. In the Civil Rights Act, it is stated that “No person in the United States shall, on grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Executive Order 12898 states, “Each Federal agency shall make achieving environmental part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

It is important to identify where significant numbers of minority and low-income households are located within the region in order to comply with the requirements of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. This 1994 Order was enacted to ensure the full and fair participation of potentially affected communities in transportation decisions. The intent of Environmental Justice is also to avoid, minimize or mitigate disproportionately high and adverse impacts on minority populations and low-income populations.

The NFRMPO uses CDOT’s Environmental Justice in Colorado’s Statewide and Regional Planning Process Guidebook, as the framework for addressing environmental justice in the North Front Range. This section discusses minority and low-income populations and the specific efforts in public involvement, mapping, and measuring the benefits and burdens.

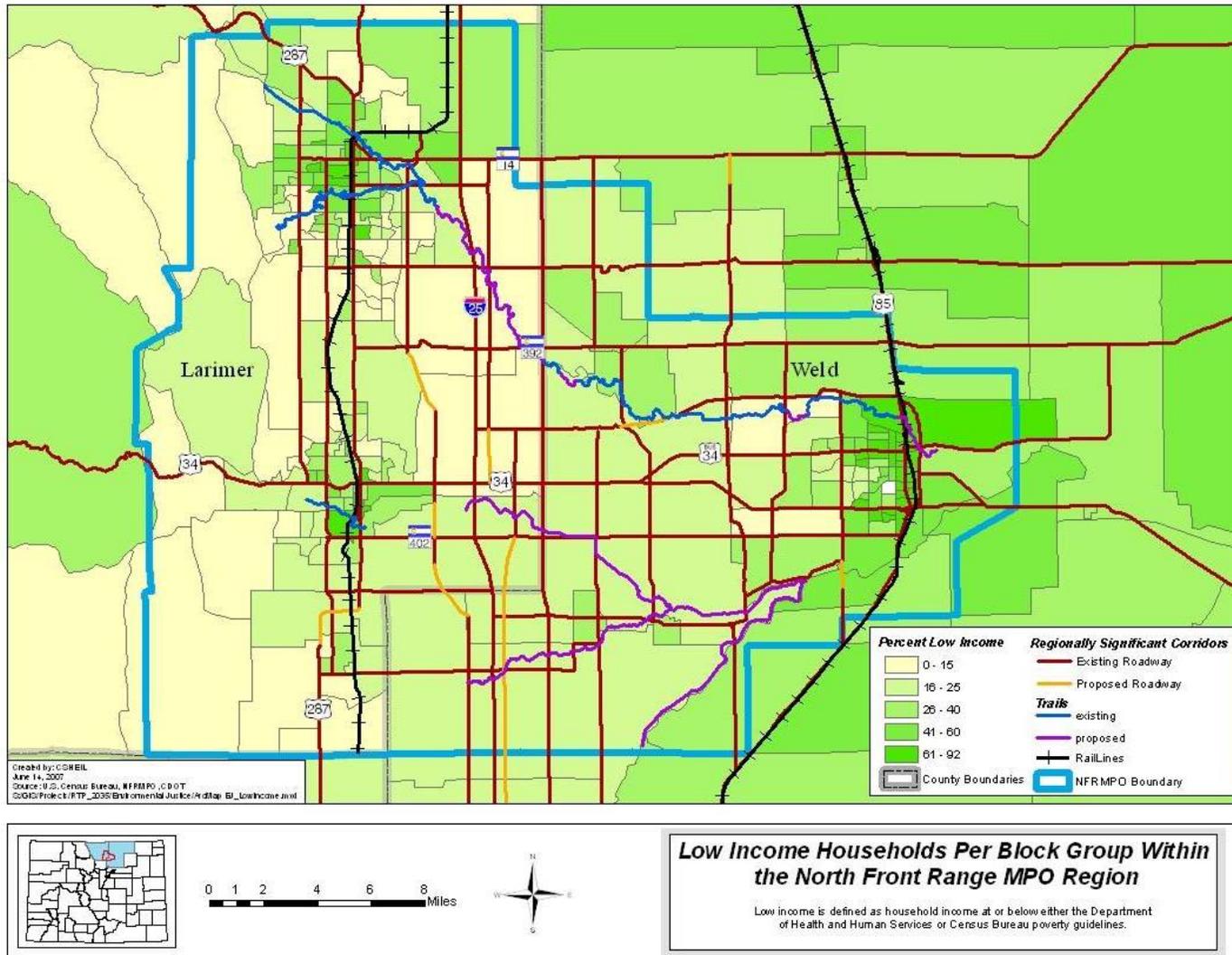
Low income

Low-income thresholds are determined by Housing and Urban Development (HUD) for the counties in the State of Colorado for use by the Department of Local Affairs (DOLA) that allocates Community Development Block Grants. The methodology for determining low-income follows the CDOT Environmental Justice Guidebook. Households that have 2.59 occupants or more and make less than \$30,015 are considered low income in the North Front Range. These households have been mapped using Census Block Groups. **Figure 32** shows that low income households that exist primarily in Fort Collins, Greeley, and Loveland.



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Figure 32. Low Income Households per Block Group





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Table 36 gives the weighted average of poverty for the United States, which is somewhat different than low income, but an indicator of people’s well being. These thresholds are established by the U.S. Census Bureau, Income, Poverty, and Health Insurance Coverage in the United States: 2005.

Table 36. Weighted Average Poverty Thresholds in 2005 by Size of Family

Size of Family Unit	Weighted Average Poverty Thresholds
One person	\$9,973
Two person	\$12,755
Three person	\$15,577
Four person	\$19,971
Five person	\$23,613
Six person	\$26,683
Seven person	\$30,249
Eight person	\$33,610
Nine or more persons	\$40,288

Source: U.S. Bureau of Census 2005, Current Population Survey

Minority

Census data, 2000, was used to identify minority populations as shown on Figure 33 by block group. As defined in Executive Order 12898, the term includes anyone who is:

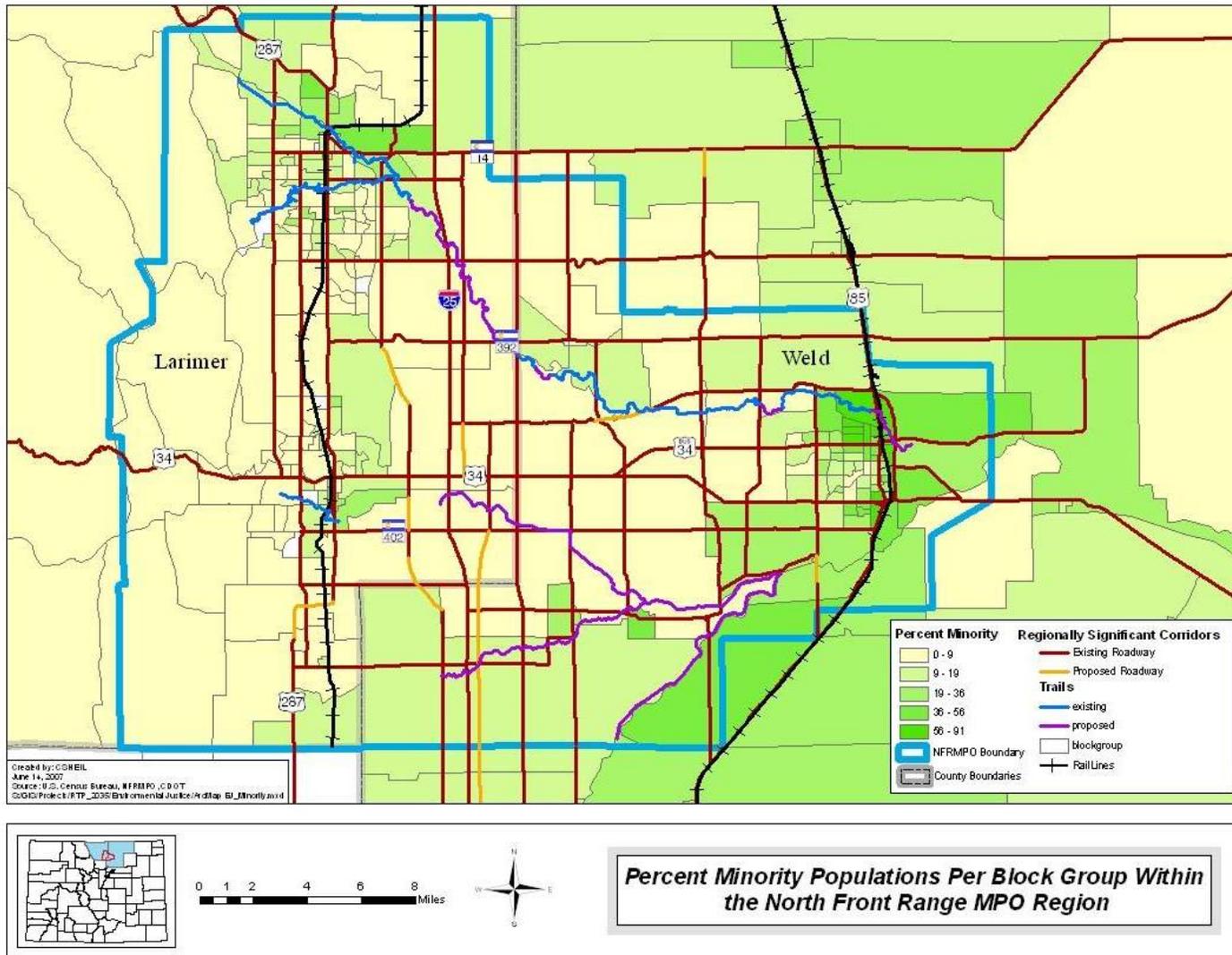
- ▶ American Indian and Alaskan Native – a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.
- ▶ Asian or Pacific Islander (including Native Hawaiian) – a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.
- ▶ Black/African American – a person having origins in any of the black racial groups of Africa, or
- ▶ Hispanic/Latino – a person or Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

The largest minority population in the NFR is Hispanic/Latino with the highest concentrations, by percentage, in the Greeley area at 34%. By comparison, Fort Collins and Loveland have 8.8% and 8.6%, respectively Hispanic/Latino as the largest minority populations.



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Figure 33. Minority Populations per Block Group





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Benefits and Burdens

Figure 34 shows the Census Block Groups that contain both low income and minority populations along with the local fixed route transit for the communities of Fort Collins, Greeley, and Loveland. All of the low income and minority areas have some proximity to the local transit networks though this is at an aggregate scale and does not guarantee access.

The Coordinated Public Transit/Human Service Transportation Plan, 2007 identifies gaps in the transit service for low income and zero-auto households. "Major gaps include the new development along the I-25 corridor (only Loveland provides service to the Centerra Shopping Center) and on the west side of Greeley. Residents on the east side of Loveland living south of Highway 34 – an area with relatively low auto ownership and per capita incomes – only have service on Highway 34. Some low-income neighborhoods on the east side of Greeley and north end do not have access to viable transit services. Finally, connections between communities are limited, so it can be difficult to access services or employment outside of the community in which you live."

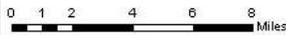
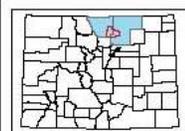
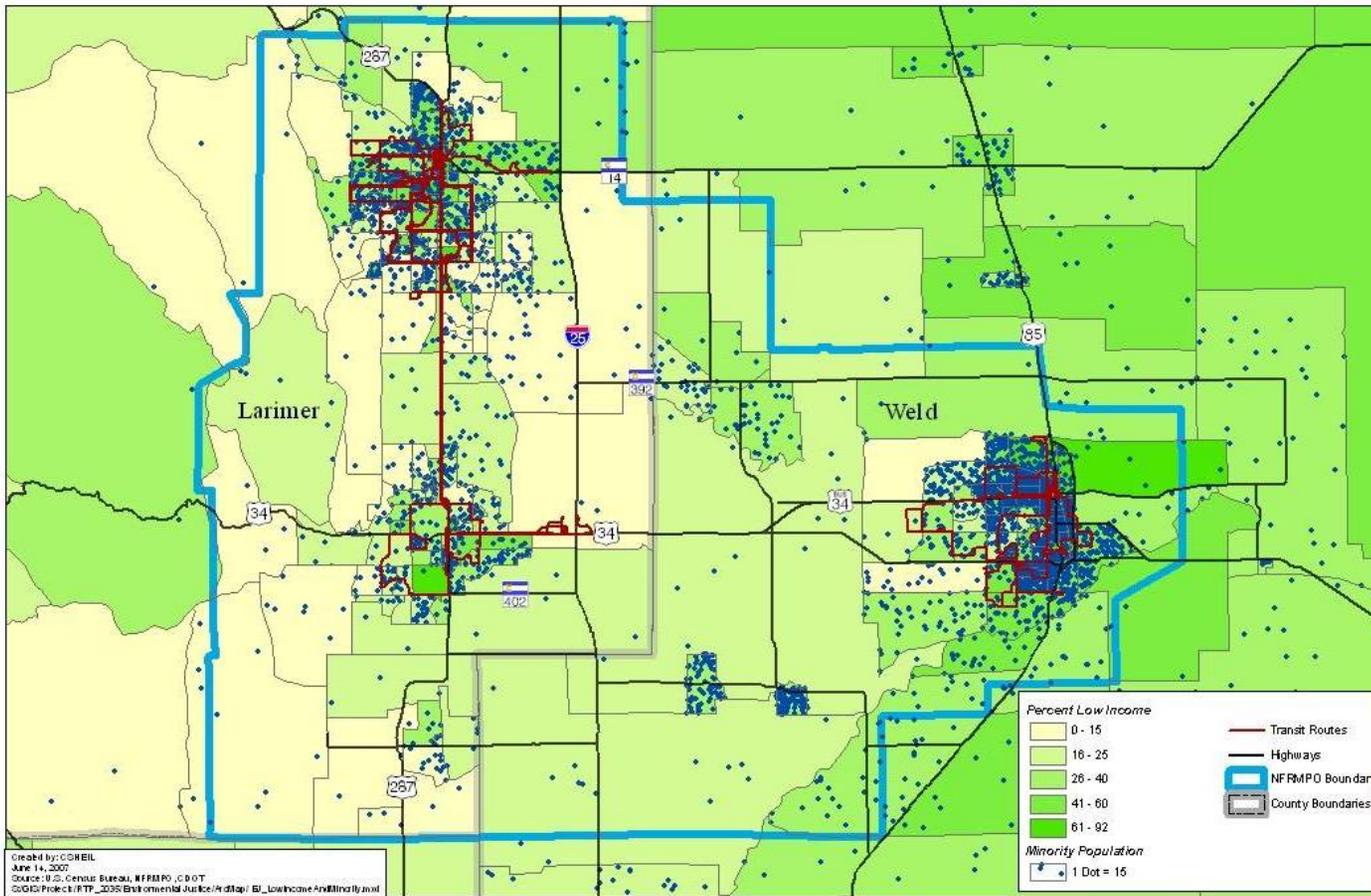
A conclusion from this study is that, "Development is occurring at the center of the region, towards and along the I-25 corridor." While, "Transit services have remained largely centered within the cities that fund the services..." Addressing some of these transit gaps would provide a benefit to the low income population.

As this is a corridor based plan, the identification of specific projects to evaluate the benefits and burdens is not possible in more than general terms. Benefits and burdens will be further addressed in the TIP document as specific projects are brought forward for consideration.



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Figure 34. Low Income & Minority Households per Block Group



Low Income and Minority Households Per Block Group Within the North Front Range MPO Region

Low income and minority households block groups are block groups that have both a high percentage of low income families along with a high percentage of minority population. Both of the ranges are compiled from guidelines set forth by the U.S. Census Bureau.



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Public Involvement

The NFRMPO is dedicated to creating “an environment that encourages the participation of diverse people in the selection and design of transportation facilities that will positively impact the mobility and quality of life of Colorado citizens.” (From the CDOT Environmental Justice Training Manual). When the Public Participation Plan for the NFRMPO was written in 2005 in stated in the introduction “The NFRMPO understands the value of input from the public in helping define and implement effective transportation and congestion solutions.” The Plan continued on page 4 with “Just opening the process to the “public” is not enough. There are numerous populations that are not likely to get involved unless a special effort is made to reach out to them.” These groups include, but are not limited to, minority and low income community members, as well as physically challenged community members. This group may also include people who are unable to operate a private automobile such as youth and the elderly and people who do not speak English. Because of the commitment to these groups, as the 2035 NFR RTP was being developed, a specific process was developed and followed to gather their input.

The first step was to determine the groups/populations to specifically include as the Plan was developed. This list included the following “underserved populations” that met the diversity required by Title VI as well Environmental Justice requirements. The “underserved populations” targeted in the Plan included:

- ▶ Low Income
- ▶ Hispanic (English and non-English speaking)
- ▶ Seniors (potentially low income and/or mobility issues)
- ▶ Youth (possible mobility issues)
- ▶ People with disabilities that would affect their need for transportation

Once the groups were determined, the next step was to design a process that ensured their active participation. This involved finding where they were located, and the best way to understand their issues and concerns.

The public involvement for the NFR RTP was set up in two phases. Prior to preparing the first draft of the written document, a large amount of public input was collected through over three months of extensive public interaction. This interaction included 36 presentations (including collecting comments) at existing events and meetings. This was followed by a series of three Charrettes (hands-on workshops) where participants “designed” future regional transportation systems. By focusing on public input at this early stage, the public comments could more easily be incorporated into the Plan.

The second phase of public input was after the draft plan was completed. This phase lasted about one month and provided an opportunity for the public to review what was developed and present any additional comments.

Specific strategies were set up in both phase one and phase two to reach the “underserved populations.”



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These strategies included:

- ▶ Going to members of the “underserved populations” instead of asking them to come to us; talking to and gathering comments from these groups in places where they were already gathered
- ▶ Providing a background presentation that was basic, easy to understand, colorful, and with no transportation lingo or acronyms
- ▶ Providing translators for people who might speak only Spanish. Spanish households are the largest non-English group in the North Front Range area with 27% of the population in Weld County of Hispanic origin and 8.3% in Larimer County.
- ▶ Sending mailed invitations to people without internet access.
- ▶ Providing a wide variety of ways for people to comment in addition to face-to-face meetings. These included: a toll free phone number, a comment section on the web page, hard copy written forms for comments, an e-mail address, and a phone number for those who wanted to talk directly to a person.
- ▶ For the Charettes (hands-on workshops) where people were invited to come to a “meeting”, multiple Charrettes were set up in a variety of geographic locations and on different dates. This allowed people to attend at their convenience. The dates were set during the day on the weekends to not conflict with work schedules and so people would feel safe when attending. Every location was handicapped accessible and a translator was provided. In addition special arrangements were made to give rides to people who needed them.
- ▶ Providing food at all the Charrettes

During Phase 1, nine of the 36 presentations (and collected comments) involved “underserved populations” either directly or indirectly. These included:

- ▶ City of Loveland Housing Authority Residents (low income)
- ▶ Lunch Group at Greeley Rodarte Center (Spanish speakers and meeting was done with a translator.)
- ▶ Worthington Seniors with Vision Impairment, Loveland
- ▶ Park Lane Towers Seniors with Vision Impairment, Fort Collins
- ▶ Loveland Senior Advisory Board
- ▶ Loveland Good Sam's Senior Housing
- ▶ City of Loveland Disabilities Commission
- ▶ Disabled Resource Services - Larimer County
- ▶ Fort Collins Youth Advisory Board



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These meetings were well received. Many people commented on how nice it was for the MPO to come to them. One group, (seniors with vision impairment) was so impressed they arranged for the MPO to make a presentation to one of their other chapters. In addition, as a result of these meetings, several people from this underserved group attended a Charrette.

Because of the strategies used to reach these groups, people seemed comfortable expressing their views. From these nine meetings, 120 comments relating to the RTP were recorded. These comments were all reviewed prior to developing the draft plan and are included in **Appendix B**.

During Phase 2 of public involvement, Presentations about the draft plan were again made to specific groups including low income, Spanish speakers, seniors and people with disabilities. In addition, handouts with contact information and open house locations, and comment sheets were translated into Spanish. These were distributed in the Spanish speaking areas. The Executive Summary of the final Plan was also translated into Spanish and put on the MPO website so even those who do not speak English can see the results of their input.

The goal from the beginning of the RTP process was to involve the public including the “underserved populations.” The MPO wanted to hear and understand their concerns and help them feel that their comments were heard and their ideas were welcome. Based on the positive public response, it seems this was done.

“Taking time ... to communicate with potentially affected interests, carefully explain the proposal and gather input, can enhance the project and potentially reduce the time and effort for implementation.” (From: NFRMPO Public Involvement Plan) The Environmental Justice and Title VI related outreach for the 2035 NFR RTP has taken the Plan and the planning process a step closer to this goal.



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IV. ENVIRONMENTAL PROFILE

The NFRMPO was designated by the Governor as the lead air quality planning organization for the Greeley and Fort Collins areas in June of 1993. The Council, in cooperation with the Colorado Air Pollution Control Division, CDOT, and local governments, is responsible for the development and implementation of the Fort Collins and Greeley elements of the State Implementation Plan, as well as other transportation related air quality planning projects in the NFRMPO boundary. There are other environmental concerns in the NFRMPO; however, only air quality has been specifically designated as the MPO's responsibility.

A. Air Quality

Maintenance Areas

Air quality is an environmental concern in the North Front Range area that is regulated by stringent state and federal laws. Both Greeley and Fort Collins experienced violations of the National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO) in the late 1980's, and, as a result, their previous non-attainment status continued with the passage of the Clean Air Act Amendments of 1991. CO levels improved substantially in the 1990's, and Greeley was re-designated to attainment status on May 10, 1999, with a revision to the State Implementation Plan (SIP) in December 2002 that removed the Inspection and Maintenance program and the oxygenated fuels program. Fort Collins was re-designated to a maintenance area in July 2002, and the same programs were removed.

Motor vehicle emissions constitute the major source of CO emissions in the NFRMPO. A number of regional strategies are being implemented to offset the increase in CO emissions which accompanies the high population growth rates being experienced in the NFR. These encompass a regional Transportation Demand Management (TDM) program that includes carpool and vanpool programs, a strong emphasis on transit planning, and coordination with the Denver Regional Transportation District on inter-regional transit services. Air quality conformity documentation is provided in **Appendix C**.

Risk Areas

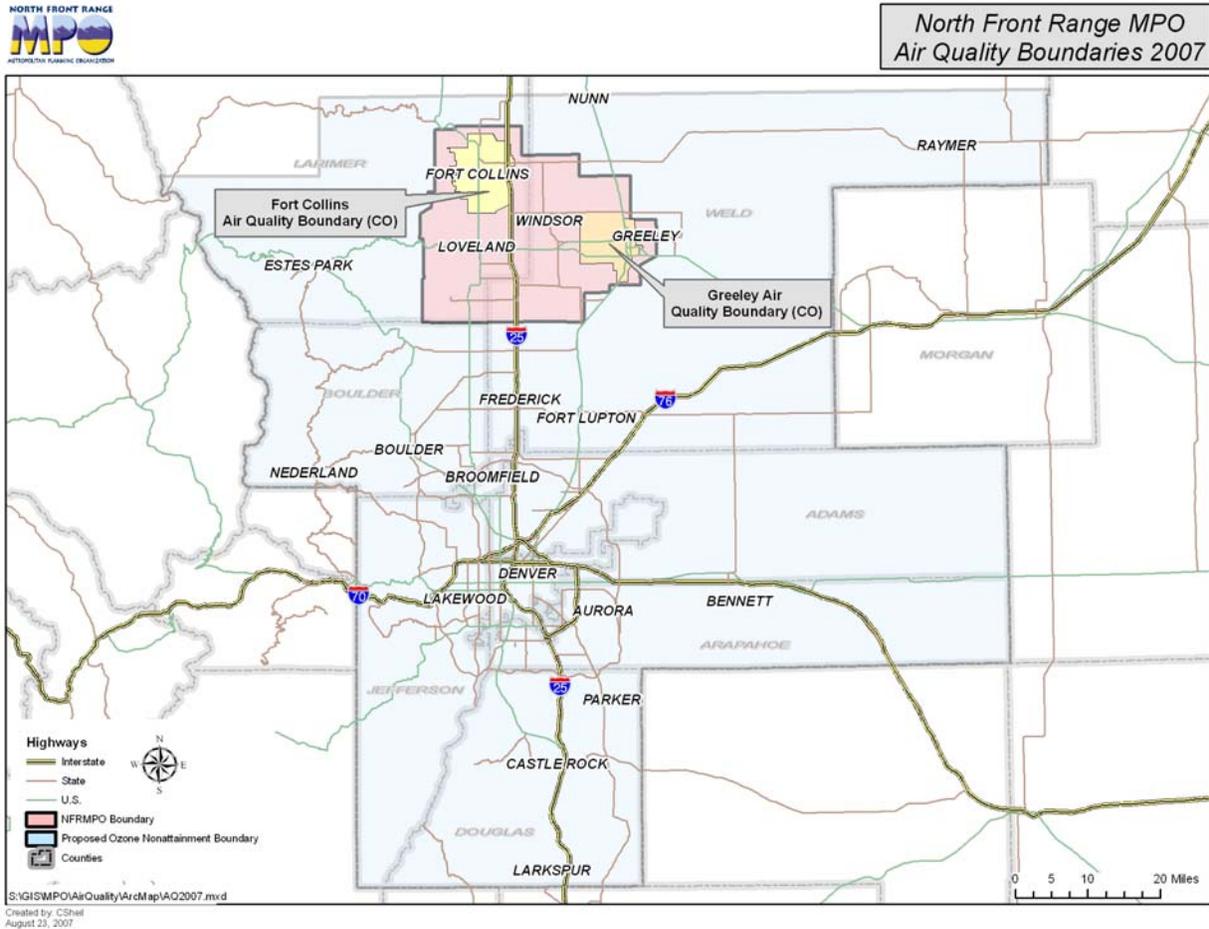
The NFRMPO has been included in the Denver ozone non-attainment area by EPA due to identified precursor contributions from this region. Several monitors in the Denver area have had exceedences of the recently promulgated 8-hour ozone NAAQS. On April 15, 2004, EPA included all of the North Front Range MPO, and additional parts of Larimer and Weld Counties that have the highest concentration of emissions, in the non-attainment boundary as shown in **Figure 35**.

Larimer and Weld Counties have joined with the Denver Metro region in an Early Action Compact (EAC) which is an agreement with EPA to defer the non-attainment status until 2007. The EAC outlines control measures that were in place by the end of 2005 and also requires that the ozone readings to be back in compliance by the end of 2007. The control measures that affect the NFRMPO are emissions controls on stationary sources at oil and gas wells. In addition, EPA is requiring that the Reid Vapor Pressure (RVP), or evaporation rate, of gasoline be reduced to 7.8 from its current 9.0.



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Figure 35. 8-Hour Ozone Non-attainment Area



The EAC does not require any controls on mobile sources in the NFR. The Denver Metro area is subject to an automotive inspection and maintenance program, but that is not required in the EAC for the NFR. The inspection and maintenance program that was in place in the NFR was eliminated on December 31, 2006.

It should be noted that it is likely that the region will be officially designated as nonattainment for ozone. The summer of 2007 had violations of the standards. This would terminate the EAC and there is one year to get a State Implementation Plan in place per EPA requirements. Businesses needing air quality permits will have more stringent requirements, and most important from the MPO's perspective, ozone conformity determinations would be required on all TIPs and RTPs.



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B. Historic and Archaeological Sites

Section 106 of the National Historic Preservation Act (NHPA) sets forth the process that federal agencies and their designated representatives must follow when planning undertakings that have the potential to affect significant historic and prehistoric properties. The Colorado State Register of Historic Places and the National Register of Historic Properties identify sites, areas, and communities that reflect the state’s cultural heritage and resources. **Table 37** is a summary list of historic places and landmarks within the North Front Range. The potential impact of implementing a transportation improvement project relative to the historic sites listed below, as well as other sites considered for inclusion in the historic registers, must be evaluated prior to project initiation.

Table 37. State and National Historic Sites

Site Name	Year	City	Register (State or National)
Bimson Blacksmith Shop	1893	Berthoud	National
United Brethren Church	1904	Berthoud	State
Aggie “A”	1923	Fort Collins	State
Anderson, Peter, House	1900	Fort Collins	National
Armstrong Hotel	1913	Fort Collins	National
Avery House	1870	Fort Collins	National
Baker House	1896	Fort Collins	National
Bee Farm	1894	Fort Collins	National
Bouton House	1893	Fort Collins	National
Colorado State University - various buildings	late 19th early 20th century	Fort Collins	National
Coy Barn	1866	Fort Collins	State
Deines Barn	1918	Fort Collins	State
Fort Collins Armory Building	1907	Fort Collins	National
Fort Collins Post Office	1911	Fort Collins	National
Fort Collins Waterworks	1882	Fort Collins	State
Ft Collins Railway Birney Safety Street Car #21	1919	Fort Collins	National
Fuller, Montezuma, House	1894	Fort Collins	National
Harmony Mill	1886	Fort Collins	National
Kissock Block Building	1889	Fort Collins	National
Laurel School Historic District	1870-1930	Fort Collins	National
Lindenmeier Site - Archaeologic Site	9000-3000 B.C.	Fort Collins	National
Maxwell, R.G., House	1900	Fort Collins	National
Mosman House	1893	Fort Collins	National
McHugh-Andrews House/Mayor's House	1872	Fort Collins	National
Old Town Historic District	late 19th early 20th century	Fort Collins	National
Opera House Block/Central Block Building	1881	Fort Collins	National
Plummer School	1906	Fort Collins	National
Preston Farm	1877	Fort Collins	National



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Site Name	Year	City	Register (State or National)
Robertson, T.H. House	1893	Fort Collins	National
Waycott, Ernest, House	1908	Fort Collins	National
Coronado Building	1905	Greeley	State
First Baptist Church	1911	Greeley	National
First Methodist Episcopal Church	1915	Greeley	National
Greeley Junior High School	1938	Greeley	National
Greeley High School (Greeley Central)	1927	Greeley	State/Nat
Greeley Masonic Temple	1927	Greeley	National
Greeley School/Central Platoon School	1902	Greeley	National
Greeley Tribune Building	1929	Greeley	National
Greeley Union Pacific Railroad Depot	1929	Greeley	National
Glazier House	1902	Greeley	National
Meeker House	1870	Greeley	National
Nettleton-Mead House	1870	Greeley	National
SLW Ranch	1888	Greeley	National
University of Northern Colorado Campus Residential District	1921-1936	Greeley	State
White-Plumb Farm	1904	Greeley	State
Weld County Courthouse	1917	Greeley	National
Woodbury, Joseph A., House	1870	Greeley	National
Anderson Barn	1913	Johnstown	National
Brush, Jared, L., Barn	1860	Johnstown	National
Little Thompson River Bridge	1938	Johnstown	National
Parish, Harvey J., House	1914	Johnstown	National
Benson, A.S. House	1897	Loveland	National
Big Thompson River Bridge III	1933	Loveland	National
Big Thompson River Bridge IV	1933	Loveland	National
Borland, Maude Stanfield Harter	1920	Loveland	National
Chasteen's Grove	1889	Loveland	National
Colorado & Southern Railroad Depot	1902	Loveland	National
Fansler House	1905	Loveland	State
First United Presbyterian Church	1905	Loveland	State
McCreery House	1892	Loveland	National
Loveland State Armory Building	1920	Loveland	National
Rialto Theater	1920	Loveland	National
Shaffer, Henry and Mary E. House	1929	Loveland	National
Daniels School	1911	Milliken	National
Kaplan-Hoover Site	Late Archaic	Windsor Vicinity	State
First Methodist Episcopal Church	1915	Windsor	National
Windsor Mill & Elevator Company Bldg	1899	Windsor	National
Windsor Town Hall	1909	Windsor	National

Source: Colorado Historical Society, Office of Archaeology & Historic Preservation



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For construction projects and many maintenance activities, a certified historian and archaeologist conducts on-the-ground surveys to identify, record, and evaluate cultural resources for eligibility to the National Register of Historic Places. When significant sites are identified within a proposed project area, an interdisciplinary team determines how best to avoid the localities or minimize adverse effects during construction.

C. Agricultural Data

Agriculture in the North Front Range is a major contributor to the economic vitality of the region. The Colorado Department of Agriculture prepares statistics on an annual basis, with profiles of each county. While both counties have an agricultural base, Weld County is significantly more involved in farming and ranching, with 1,812,167 acres in those activities compared to 521,599 acres in Larimer County.

In addition to the field crops listed below, there are 586,500 head of cattle in the two counties that are part of dairy and beef production. **Table 38** shows the breakdown of the crops by each county.

Table 38. Agricultural Production Statistics (2006 Inventory)

Product	Larimer (acres harvested)	Weld (acres harvested)
Barley	1,800	9,400
Corn for Grain	6,900	55,900
Dry Beans	1,600	18,900
Hay, Alfalfa	17,500	83,000
Hay, Other	14,500	38,000
Oats	----	----
Potatoes, all	----	----
Sorghum, Grain	----	500
Sugar Beets	2,700	13,300
Sunflowers, all	600	10,700
All Wheat	7,300	125,400

Source: Colorado Agricultural Statistics 2006

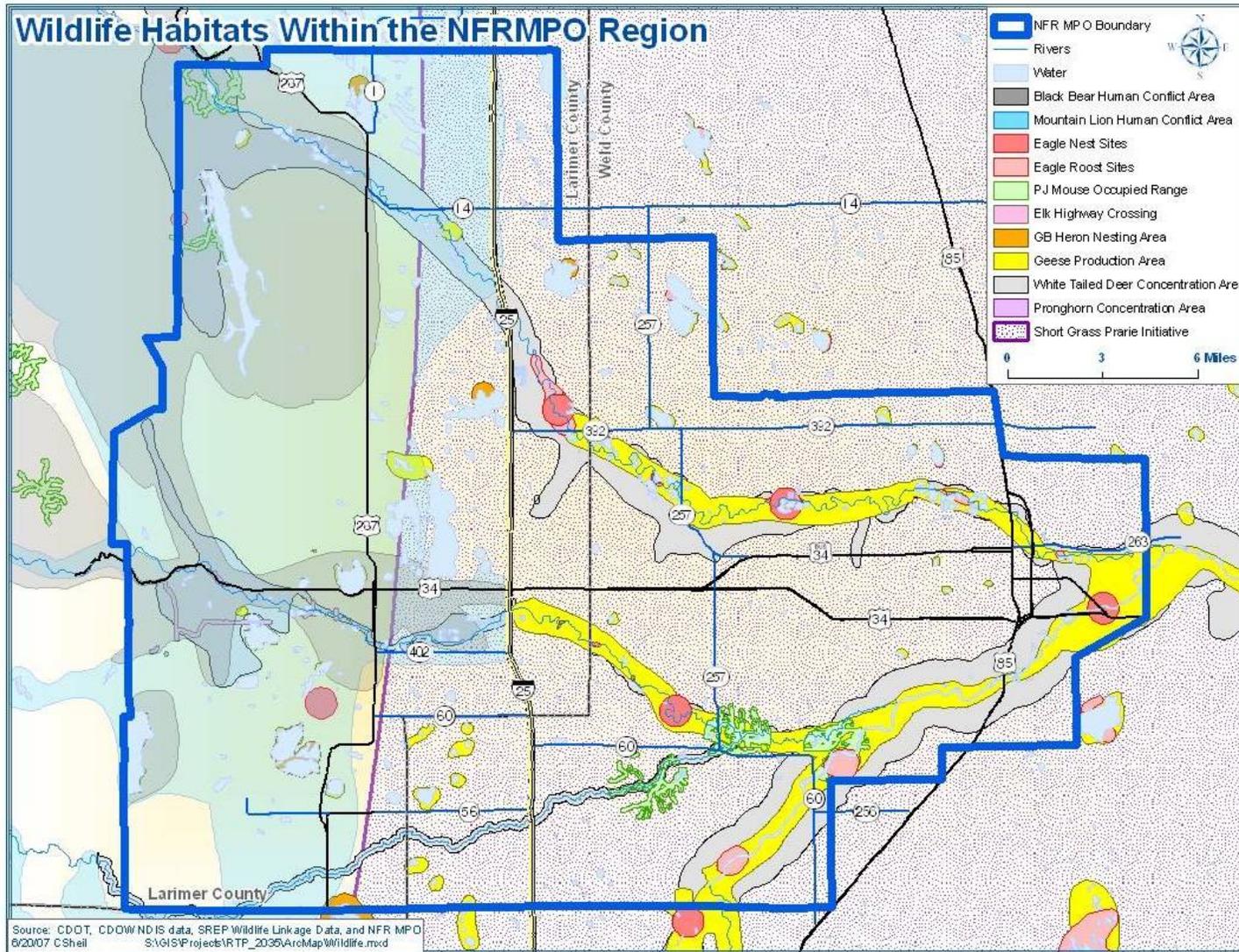
D. Threatened and Endangered Species

General wildlife habitat is important to the NFRMPO. There are numerous laws and regulations that protect wildlife species and their habitats within the MPO region. **Figure 36** illustrates the important species that are within this region. These species could be either threatened species or an important species to this area. Major habitat throughout the area is mainly native short-grass prairie along with major waterways including the Cache La Poudre, Big Thompson, Little Thompson, and South Platte Rivers.



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Figure 36. Wildlife Habitats





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Along with individual pockets of habitat there are some larger habitat areas that cover our entire region. These include the Preble’s Meadow Jumping Mouse and Mule Deer overall ranges. Many agencies helped in the compilation of important habitat and designated wildlife areas including: The U.S. Fish and Wildlife Service (USFWS), Colorado Division of Wildlife (CDOW), and the Colorado Natural Heritage Program (CNHP).

The NFRMPO recognizes that there are threatened and endangered species within Larimer and Weld Counties. It is recommended that further research is conducted at the time of project initiation to determine if threatened and endangered species are an issue in the given geography. The listing of the threatened and endangered species by County is shown in **Table 39** below.

Table 39. Listing of Federal and State Threatened and Endangered Species

Species Common Name	Species Scientific Name	County
Birds		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Larimer and Weld
Interior Least Tern	<i>Sterna antillarum athalassos</i>	Larimer and Weld
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	Larimer and Weld
Piping Plover	<i>Charadrius melodus</i>	Larimer and Weld
Whooping Crane	<i>Grus americana</i>	Larimer and Weld
Mammals		
Black-footed Ferret	<i>Mustela nigripes</i>	Larimer and Weld
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	Larimer and Weld
Canada Lynx	<i>Lynx canadensis</i>	Larimer
Preble's Meadow Jumping Mouse	<i>Zapus hudsonius preblei</i>	Larimer and Weld
Wolverine	<i>Gulo gulo</i>	Larimer
Plants		
Colorado Butterfly Plant	<i>Gaura neomexicana ssp. coloradensis</i>	Larimer and Weld
Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	Larimer and Weld
Fish		
Greenback Cutthroat Trout	<i>Oncorhynchus clarki stomias</i>	Larimer
Northern Redbelly Dace	<i>Phoxinus eos</i>	Weld
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Larimer and Weld
Amphibians		
Boreal Toad	<i>Bufo boreas boreas</i>	Larimer

Source: USFWS and CNHP



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Mitigation

CDOT has recognized the importance of the short-grass prairie habitat and created a proactive mitigation strategy by participating in the Short-Grass Prairie Initiative (SGPI). This initiative covers a little over a third of the state, extending out to the eastern border. It goes from the northern to southern most points of the state. The SGPI included the Nature Conservancy, USFWS, and other federal agencies and protected up to 50,000 acres of the short-grass prairie in eastern Colorado. This allows for CDOT projects that impact short-grass prairie to offset the projects impacts against the areas that have been created through the SGPI.

The Department of Natural Resources is responsible for protecting and preserving the state's fish and wildlife resources from actions of any state agency, or funded by a state agency, which may obstruct, damage, diminish, destroy, change, modify, or vary the natural existing shape and form of any stream or its bank or tributaries.

Certification from the Colorado Division of Wildlife (DOW) must be obtained for actions with adverse impacts to streams or its bank or tributaries. Certification is provided by the DOW which includes appropriate measures to eliminate or diminish adverse effects to such streams or their banks or tributaries.

The Migratory Bird Treaty Act (MBTA) is a federal law that protects migratory birds, nests, and eggs. This protection is extended to all birds except the rock dove (pigeon), English sparrow, and European starling, which are exotics.

E. Water Quality

Numerous watersheds run through the North Front Range region, such as creeks, streams, rivers, lakes, reservoirs, and aquifers. These include major rivers such as the Cache La Poudre, Big Thompson, and South Platte. Also there are many reservoirs like Horsetooth and Loveland reservoirs; finally there are two aquifers to the south eastern portion of the MPO region. The watersheds and aquifers are illustrated below in **Figure 37**.

The Federal Clean Water Act (CWA) protects the waters throughout the United States. From this act, the National Pollution Discharge Elimination System (NPDES) was created to develop water discharge standards to prevent pollution entering our nation's waters.

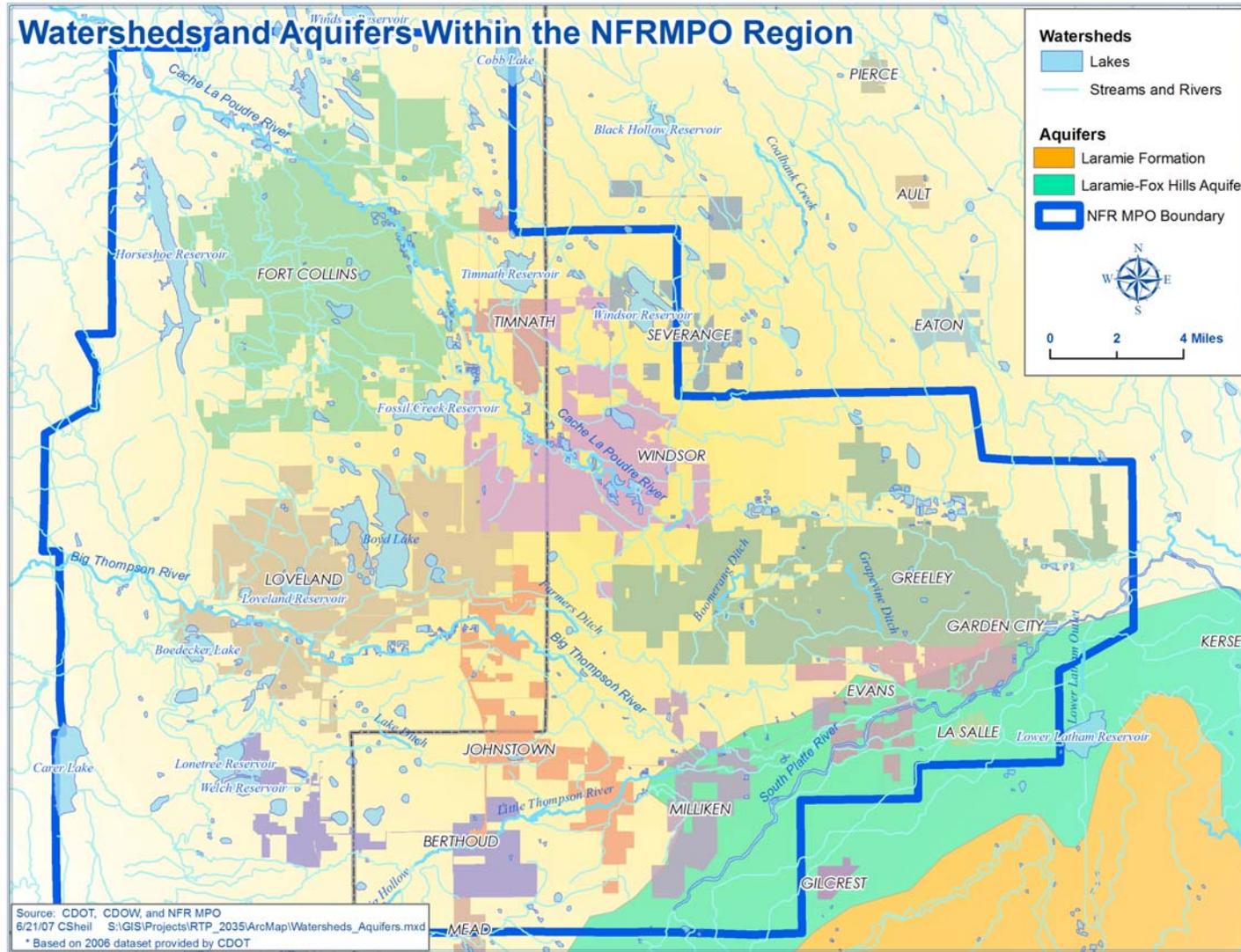
Agencies

The Clean Water Act is administered by the Colorado Department of Health and Environment (CDPHE) throughout the state. The USEPA oversees the Clean Water Act throughout the nation but has granted the Department of Health and Environment this same duty through Colorado.



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Figure 37. Watersheds and Aquifers





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Methods

In accordance with CDOT's Long Range Plan the following Mitigation Strategies are taken. The primary method to control storm water discharges is with best management practices that avoid or control runoff. CDOT's new Municipal Separate Storm Sewer System permit will set into motion a series of requirements, including new programs, training, public involvement, monitoring, and planning, which will result in improved water quality in urban areas.

F. Wetlands

Wetlands are areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. In the North Front Range region, wetlands are primarily found adjacent to streams or rivers where the ground stays saturated. Impacts to wetlands are covered under Section 404 of the Clean Water Act.

Mitigation

CDOT projects are required by federal law to first avoid and minimize impacts to wetlands. Where impacts are unavoidable, they must be mitigated. Preference must be given to the use of wetland banks where the project impacts occur within the Service Area of an approved wetland bank. Use of wetland banks is not appropriate where locally important ecological functions should be replaced on-site. Outside of an approved wetland bank's Service Area, mitigation should be on-site or within the same watershed as the impacts.

As Colorado communities continue to grow, mitigating for wetland impacts is becoming increasingly difficult and expensive. Anticipating and planning for future projects and operations in order to avoid and minimize impacts as much as possible is increasingly important, as is proactive identification of methods to mitigate unavoidable impacts.

CDOT is currently involved in the identification and development of proactive mitigation programs for wetlands. Current programs include the development of new wetland banks and cooperative partnerships with state, local, and federal agencies for the development of wetland enhancement and restoration programs.

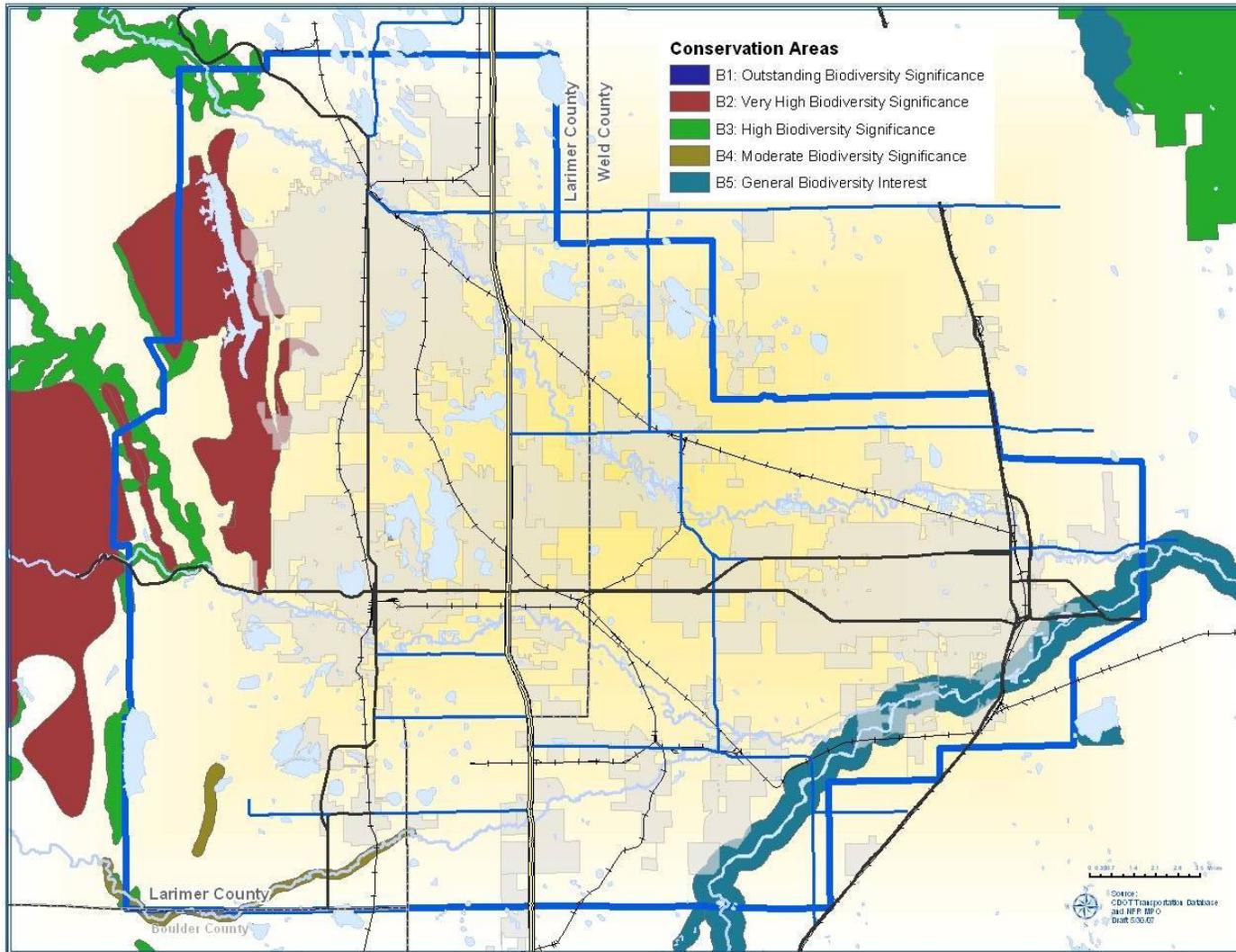
G. Conservation Areas

The Colorado Natural Heritage Program has identified Potential Conservation Areas (PCA) on a statewide map. **Figure 38** identifies the areas within the North Front Range MPO. These areas are the best estimate of the primary area required to support the long-term survival of targeted species or natural communities. The size and configuration of a PCA will be dictated by what species, communities, or systems the Colorado Natural Heritage Program seeks to conserve at a given location.



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Figure 38. Potential Conservation Areas





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The NFRMPO has matched Potential Conservation Areas (PCA) with the Regionally Significant Corridors that have been identified for this long range plan. The regionally significant roadways and rail lines have minimal contact with the potential conservation areas mainly crossing over river features. The proposed bike and pedestrian trails would have more of an impact on the PCAs, especially along the South Platte River that has a general biodiversity interest.

H. Strategic Transportation, Environmental Planning Process for Urbanizing Places (STEP UP)

STEP UP is an environmental streamlining project for Colorado to develop an improved process for addressing environmental impacts related to transportation projects at the earliest stage and the tools to implement the process. This project was started by the Federal Highway Administration (FHWA), the US Environmental Protection Agency (EPA), the Colorado Department of Transportation (CDOT) and the North Front Range Metropolitan Planning Organization (NFRMPO) as a pilot project to develop tools to assist in more comprehensive and effective transportation, land use and environmental planning. The target for the STEP UP was to provide high quality data, limit the impact to the environment, and have coordination early on with the Resource Agencies.

STEP UP has two completed phases. Phase I is the application design stage and Phase II the pilot testing stage. Both phases depended on review and feedback from the Resource Agencies to gather ideas, support, and develop improvements.

Phase I

Purpose

STEP UP was initiated in response to Section 1309 of the Transportation Equity Act for the 21st Century (TEA-21). Section 1309 mandates Environmental Streamlining in order to help achieve the timely delivery of transportation projects while protecting and enhancing the environment. The purposes of this pilot project are to increase consideration of environmental impacts early within the transportation planning process and to help ensure that projects selected for funding are able to proceed more quickly through the environmental review process during the Project Development Phase. The pilot project resulted in a model planning process for identifying environmental issues early in the development of the long-range Regional Transportation Plan, early and continued involvement by resource agencies, creating a better link between transportation, environmental and land use planning, and implementing transportation improvements that protect the environment, enhance the quality of life and promote community values. This process is a more streamlined process resulting in projects moving into the Project Development Phase with fewer environmental impacts.

The primary project objectives of the work included:

1. Development of an improved process and methodology for addressing environmental impacts related to transportation projects at the earliest possible stage.
2. Development of GIS-based tools for identifying the impacts of transportation projects and plans early on.



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3. Development of a Regional Cumulative Effects Assessment (RCEA) process for the NFRMPO's Regional Transportation Plan to help understand the effects of transportation development on land use and the environment.

This effort focused on the process by which projects are planned and implemented from the creation of a Regional Transportation Plan (RTP) through the inclusion of projects in the Statewide Transportation Plan (SWP), the State and MPO Transportation Improvement Programs (STIP/TIP), onto the development of individual projects and clearance through the National Environmental Policy Act (NEPA) process.

Resource agencies are then invited to comment on the information through the website at key points in the regional planning process. These comments are then incorporated into the plan.

The result of the model process is shown in **Figure 39**. The foundation is the environmental database that contains the most accurate and up to date information on the various resources. This data is incorporated in map format through a web interface as shown in **Figure 40**.

Phase II

Phase II was the actual testing of the pilot using the methodology created in Phase I. The pilot used data collected for the North I-25 Environmental Impact Study (EIS) as the geographies were similar in extent and the data was current. The pilot focused on two major areas; review and comment on the regional environmental database and its' content and review the regionally significant corridors, including all goals and strategies as part of the development and update for the regional transportation plan (RTP).

Outcome of Pilot

Comments on wetlands indicated that the Corps is not aware of critical aquatic resources along the three top tiered corridors (I-25, US 287, and US 34). However, given aquatic resources do exist along the corridors, they recommend assessment for wetlands and Waters of the U.S. which are under U.S. Army Corps of Engineers' jurisdiction.

Impacts to wetlands and Waters of the US should be avoided if at all possible.

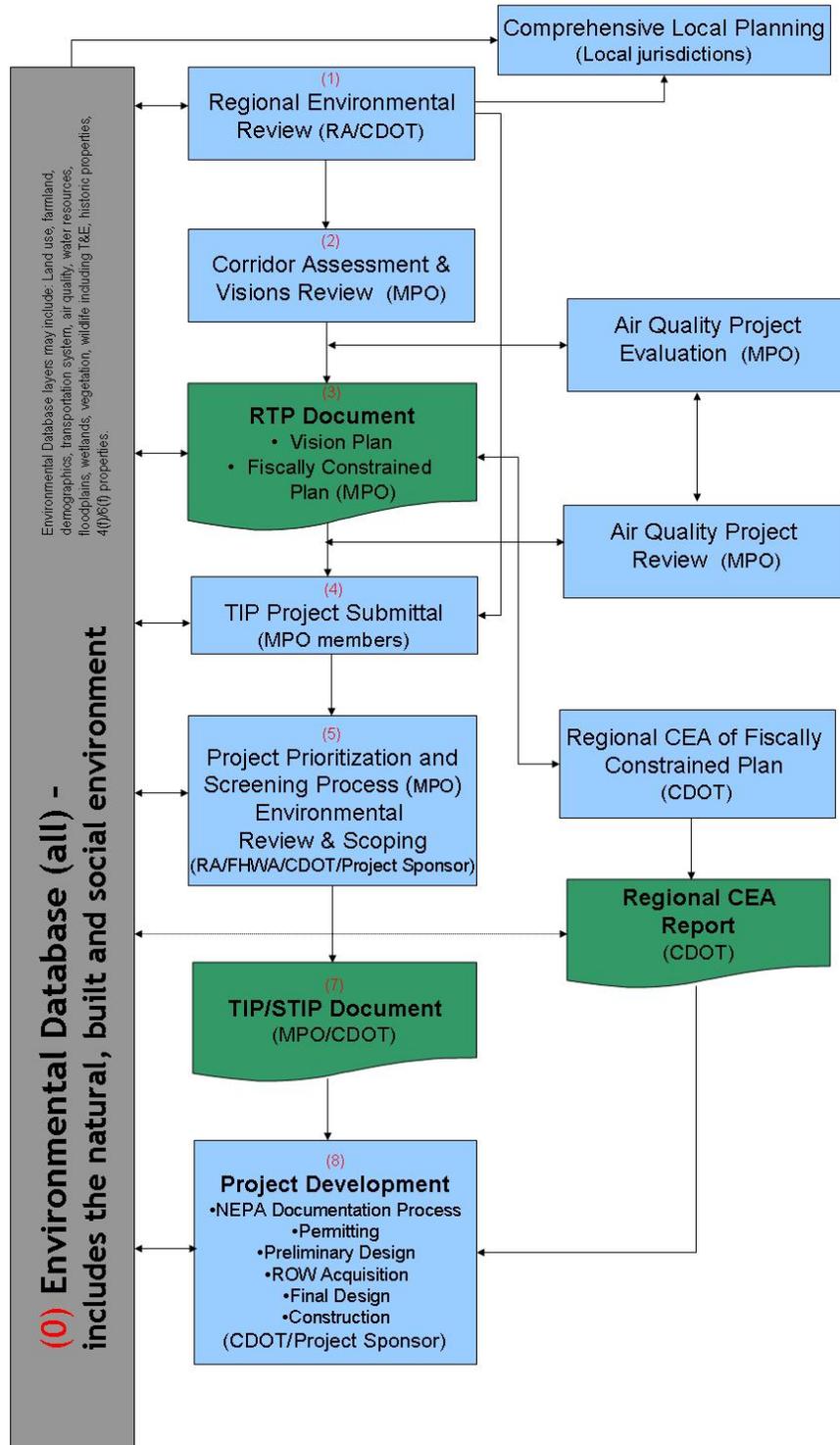
If possible, more specificity on jurisdictional wetlands and Waters of the U.S. should be provided to have a better understanding of any potential impacts associated with transportation improvements.

Comments on threatened and endangered species discussed the possible presence of suitable habitat and several species including Preble's meadow jumping mouse, Colorado butterfly plant, Ute ladies' tresses orchid, Bald eagles, native fish species, and migratory birds. Surveys will need to be conducted as well as consultation with the Colorado Division of Wildlife (CDOW) and United States Fish and Wildlife Service (USFWS).



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Figure 39. STEP UP Process

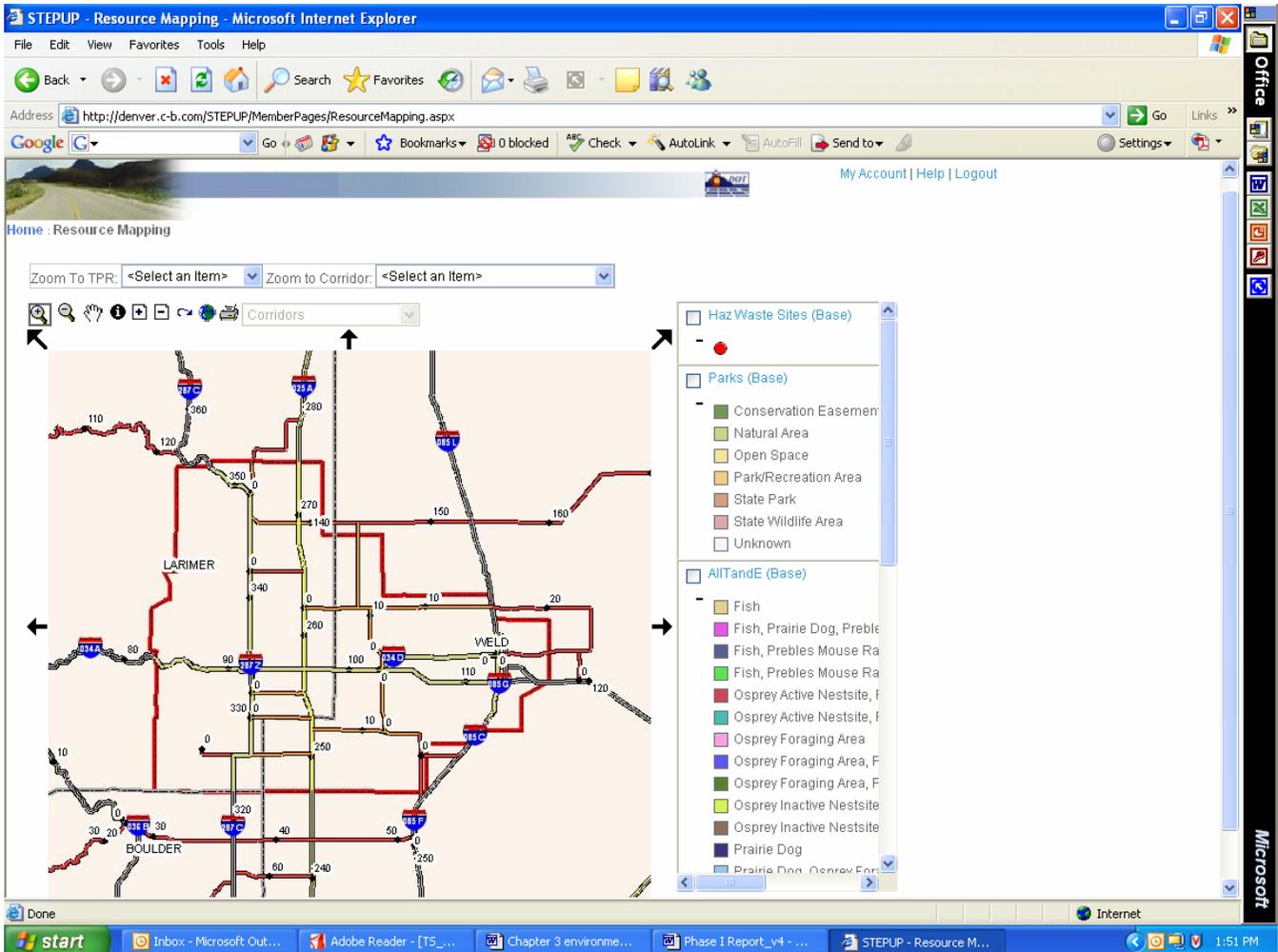


Note: Some of the actions in the process may occur concurrently. Steps indicate a logical flow, but not chronological.



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Figure 40. STEP UP Website Example



Providing habitat information as part of the database would be beneficial in making a preliminary assessment as to presence of Threatened and Endangered (T&E) species.

No comments were provided on hazardous materials sites (solid waste sites) or parks, recreation areas and wildlife refuges. This requires participation by CDOT environmental staff at the region and/or headquarters. In addition, input from agencies with jurisdiction over parks, recreation areas and wildlife refuges should be solicited at the early stages but were not included in the pilot.

Due to the lack of information for the pilot on historic resources, the State Historic Preservation Office (SHPO) did not participate in the pilot program.



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Resources that were not included in the database, but would be beneficial for a complete environmental discussion in the RTP include:

- ▶ Historic resources
- ▶ Additional hazardous materials data
- ▶ NFR land use layer
- ▶ Soil data for identification of farmlands
- ▶ Wildlife data in addition to Threatened and Endangered species

By adding data layers for these resources a more complete understanding of the environmental issues within the region and along the regionally significant corridors can be documented in the RTP and used early on to develop projects.

Conclusions and Benefits

Overall, the pilot was a large success due in part to the contributing agencies with the goal in mind to create a comprehensive and partnered database. Generally, the participants felt that the application was very useful and worked well. Allowing the data to be readily available is a must for the success of this program and the simplification of working through the National Environmental Policy Act (NEPA) process when developing a transportation plan.

I. Environmental Forum

CDOT coordinated an Environmental Forum with various environmental resource agencies and the Statewide Transportation Advisory Committee (STAC) on March 9, 2007. The meeting enabled resource agencies to review environmental data layers and identify insufficiencies in the data along with what the agencies saw as critical environmental issues in the region.

The following list was developed from that meeting for the NFRMPO specifically.

- ▶ Discharge permitting issues are present in the I-25 EIS
- ▶ Municipal Separate Storm Sewer System (MS4) Permits are in place for municipal runoff for the cities of Fort Collins, Loveland, Greeley, and Berthoud
- ▶ There is a potential for the NFR to facilitate regional discussions on storm water issues.
- ▶ Some MPO regional lakes have eagles present.
- ▶ Prebles Meadows Jumping Mouse habitat is present within the region.



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V. TRANSPORTATION SAFETY AND SECURITY

A. Safety

Reducing the number and severity of accidents on the transportation facilities of the North Front Range is a major goal for this region. Safety is one of the main factors in prioritizing and selecting projects. This process involves looking at projects and evaluating how well a project will enhance safety by addressing any existing hazardous or potentially unsafe situations. This is done so that projects will ensure that all the goals and strategies of the plan are being addressed. In the “call for projects,” safety and accident reduction is used as a criterion for ranking the projects against one another.

There are many factors that fall within the realm of safety. The NFRMPO looks at many different safety aspects in its transportation and air quality planning, some of which comes from coordination with CDOT. Through the years CDOT has tracked accident data along with high risk drivers. The planning at the NFRMPO utilizes this data and incorporates it into the planning process. The MPO will continue to coordinate with the state in the data collection process.

Aside from accident data, CDOT compiles other kinds of information that the MPO relies on. The state coordinates with local emergency responders to educate the public on safety. At this time the MPO does not handle any education activities themselves, as they are most effectively coordinated at the state level.

In addition to roadway safety, the 2035 RTP covers other factors that come into play when planning for a safer transportation network. The existing conditions chapter of the RTP discusses the region’s rail system. Rail crossings are identified with the attendant crashes involving trains and automobiles.

Another safety feature identified in the existing conditions portion of the plan is on bridges. Here bridges that are structurally deficient or functionally obsolete have been identified. The locations of the deficient or obsolete bridges are also mapped out. An additional portion of this RTP that identifies safety is in the Congestion Management Process. Bike/pedestrian routes are shown in the Regionally Significant Corridors section of the 2035 RTP. In the North Front Range the bike/pedestrian routes follow ADA regulations in each of the individual communities.

Safety funding is awarded through CDOT on a competitive basis and is awarded directly to the applicant. The NFRMPO is not a part of this process.

The MPO fully stands behind the state and their goals, objectives, and strategies in keeping safety a major priority within our transportation network in the North Front Range. For more information on safety, the *Colorado Integrated Safety Plan*, developed by CDOT, is available on their website at www.dot.state.co.us.



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B. Security

SAFETEA-LU calls for the security of the transportation system to be one of eight stand-alone planning factors. "...Increase the security of the transportation system for motorized and non-motorized users;"...This signals an increase in importance from prior legislation, in which security was coupled with safety in the same planning factor. SAFETEA-LU encourages the transportation planning process to be consistent with applicable security plans, programs, and projects. This new requirement must be in place prior to MPO and State adoption/approval of transportation plans addressing SAFETEA-LU provisions.

The context of Security as a stand alone transportation planning factor is linked to the US Department of Homeland Security and the 2006 implementation of the National Incident Management System (NIMS). The NIMS was issued in 2004 to provide a comprehensive and consistent national approach to all-hazard incident management at all jurisdictional levels and across functional disciplines. Full compliance with the NIMS certification process was required by September 2006. Beginning in 2007, NIMS compliance is a condition for jurisdictions to receive federal preparedness funding assistance.

"The most important of the FY2006 requirements is that states and territories must establish a planning process that incorporates the appropriate procedures to ensure the effective communication and implementation across the state, including tribes and local governments. This planning process must include a mean for measuring progress and facilitate the reporting of NIMS implementation among jurisdictions." (Michael Chertoff, Secretary U.S. Department of Homeland Security)

In response to the SAFETEA-LU requirement, the NFRMPO has inventoried the region's security plans and protocols. This document is merely a reference to the security plans which are in place, both as a direct result of the NIMS requirement, and others which have been standing protocol within our local agencies. This document is in no way designed to replace or modify any security protocol or plan. Please contact the appropriate agency directly with security concerns.



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Transit Security

CDOT



Transit Safety And Security Prototype Report

In 2002, the Transit Unit of the Colorado Department of Transportation (CDOT) contracted with RAE Consultants, Inc. to develop a model transit safety and security program for small urban and rural transit providers in the state. The purpose of the technical assistance framework was to assist small transit agencies with improving their capacity to respond to emergency situations, while working within the framework of the agency's existing safety training efforts. This prototype has been used by several of the NFRMPO member transit agencies as a model for their own emergency management plans.

BATS



Mode: On-call transportation

Berthoud Area Transportation Service (BATS) adopted the Transit Safety and Security Plan in July of 2003. The BATS agency provides seniors regularly scheduled transportation to shopping, and on-call transportation around Berthoud and Loveland. The service takes passengers to Loveland and Longmont everyday with links to Foxtrot and RTD.

The core elements of the BATS Transit Safety and Security Plan are: Driver Selection, Driver Training, Vehicle Maintenance, Drug and Alcohol Programs, Safety Data, and System Safety and Emergency Preparedness Plan (SSEPP). The SSEPP includes a training policy, security and emergency protocol, contacts and other preparedness guidelines. It is modeled after the CDOT prototype.

Contact Director of BATS, Eric Boyd:

Phone: (970) 532-5199

Transfort/Dial-A-Ride



Mode: Fixed-route bus, paratransit, and on-call transportation

Fort Collins adopted the Transfort / Dial-A Ride Snow and Severe Weather Emergency Operations Plan in May of 2006. The objectives of this plan are to: (1) Provide the best possible level of service in a winter storm that is safe, effective, and efficient; (2) Insure that staff respond to the emergency according to plan; (3) Provide mutual support to other departments and a promise of best possible effort during the emergency; (4) Provide public information that imparts the reality of operations in winter conditions.

Contact Transportation Services Director, Mark Jackson: (970) 416-2029

City of Fort Collins Emergency Operations Center (24 hours): (970) 416-2861



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VanGo



Mode: Vanpool

The NFRMPO has developed the VanGo Vanpool Services System Security and Emergency Preparedness Plan (SSEPP), which is modeled after the CDOT prototype. Goals of the VanGo SSEPP are to: (1) Ensure that security and emergency preparedness are addressed during all phases of system operation, including the hiring and training of agency personnel; the procurement and maintenance of agency equipment; the development of agency policies, rules, and procedures; and coordination with local public safety and community emergency planning agencies. (2) Promote analysis tools and methodologies to encourage safe system operations through the identification, evaluation and resolution of threats and vulnerabilities, and the ongoing assessment of agency capabilities and readiness. (3) Create a culture that supports employee safety and security and safe system operations (during normal and emergency conditions) through motivated rules and procedures and the appropriate use and operation of equipment.

Contact VanGo Vanpool Manager, Anne Blair: (970) 221-6859 / (800) 332-0950

COLT



Mode: Fixed-route bus, paratransit

The City of Loveland Transit (COLT) service is currently in the process of writing an emergency operations and security plan. The Transit Services Manager is working together with the Loveland Office of Emergency Management to implement a safety and security protocol for the COLT system.

Contact Transit Services Manager, Marcy Abreo: (970) 962-2700

Greeley Bus



Mode: Fixed-route bus, paratransit

The Greeley Bus is currently in the process of writing a System Safety and Security Plan. The Transit Services Division in Greeley has an Emergency Operations Plan in place. This plan outlines emergency procedures for city transit services, criteria for activating and deactivating the plan, and it identifies the roles responsibility and authority of staff for implementing the plan.

Contact Transit Services Manager, Brad Patterson: (970) 350-9751

Railway Transportation Security

To identify incident locations on the railway system, please have the following information available when contacting the appropriate railroad.

- ▶ Street/highway name
- ▶ Nearest city/town
- ▶ Railroad mile post
- ▶ Railroad subdivision



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- ▶ DOT Number (if available)

Note: The DOT number is a six digit number with an alpha character at the end (e.g., 427 774K) and is found on the blue sign mounted on the crossing post for a passive crossing: it may be found on either the signal mast and/or signal cabin.

Burlington Northern Santa Fe Railway (BNSF)



The BNSF Resource Protection Solutions Team responds to all railroad related emergencies, trespassers, and crimes.

Contact **1-800-832-5452** to report a railroad emergency or a railroad related crime, or to report all suspicious activities, individuals and trespassers.

"Security has become everyone's business. Because of heightened security status, Americans are being asked to be the 'eyes and ears' for law enforcement," says John Clark, assistant vice president, Resource Protection Solutions Team.

ON GUARD is a BNSF employee program which encourages employees to report suspicious activities, trespassers or individuals to BNSF's Resource Operations Call Center (ROCC). More than 200 employees have reported suspicious activities since it's inception in 2003. Employees have reported theft, vandalism, arson, attempted suicide, and other criminal violations, threats to safety, or unusual events on or near railway properties.

The Citizens United for Rail Security (CRS) program encourages interested citizens and rail fans to participate in BNSF security training. Participants receive official identification cards. Citizens and CRS members are encouraged to report all suspicious activity along railroad property to the BNSF Resource Protection hotline, 1-800-832-5452.

Union Pacific Railroad (UPRR)



Reporting Emergencies: Contact UP Police by calling 1-888-877-7267

Reporting Unusual or Suspicious Occurrences and Environmental Hazards

Please call **1-888-UPRR COP (877-7267)** to report hazardous materials releases, personal injuries, criminal activities, illegal dumping, or other environmental incidents.

Reporting Rough or Damaged Grade Crossings

To report emergency grade crossing blockages or damage, please call **1-800-848-8715**.

Great Western Railway of Colorado (GWR)



GWR operates a total of 80 miles of track in the NFR region and it interchanges with BNSF Railway and Union Pacific Railroad. It is owned by OmniTRAX, a unit of the Broe Companies, Inc. located in Cherry Creek, Colorado. Please report all emergencies to GWR at (970) 667-6883, and the local police departments.



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Airport Transportation Security

Greeley-Weld County Airport

In 2004, the Greeley-Weld County Airport Authority updated its Airport Security Plan (ASP) with the assistance of an Airport Security Advisory Committee (ASAC). The ASAC is formed with the assistance of the Greeley-Weld County Airport Tenants & Users Association. The ASAC serves to periodically review the current plan, and works with airport staff to implement updates. Questions about the ASAC can be directed to Linda Belleau at 336-3020, or the Airport Authority administrative offices during normal business hours at 336-3000.

Fort Collins-Loveland Airport

Security operations at the Fort Collins-Loveland Airport are conducted by the Transportation Security Administration. Travelers are advised to arrive at least 1 1/2 hours before departure to allow time for required security measures.

The same level of security inspections, regulations and restrictions used at major airports are in place at the Fort Collins-Loveland Airport as Allegiant Air provides service to and from Las Vegas five days a week with a 161-seat jetliner.

The terminal facilities have been expanded to accommodate a larger number of passengers and expanded security requirements. Questions about airport security can be directed to (970) 962-2852.

Transportation Security - Local Agency Plans

Emergency Management Plan

The purpose of an Emergency Management Plan is to minimize the loss of life and property during and recovering from an emergency or disaster by defining assignments and responsibilities for effective management of an emergency disaster affecting the local agency. Most of the local agencies within the NFRMPO have Emergency Management Plans in place. Generally speaking, they are published under the authority of the County, City or Town, and they support the Emergency Operations Plan of Colorado and the National Response Plan (NRP). Contacts for information about these plans are listed below.

- Town of Berthoud, contact Chief Stephen Charles: (970) 532-2264
- Town of Milliken, contact Jim Burack: (970) 660-5011
- Town of Windsor, contact Chief Brian Martens: (970) 686-9596 ext 310
- City of Evans, contact Warren Jones: (970) 475-1117
- City of Greeley, contact Dale Lyman: (970) 350-9502
- Larimer County, contact Erik Nilsson: (970) 498-5310
- City of Loveland, contact Merlin Green: (970) 962-2519



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City of Fort Collins, contact Mike Gavin: (970) 416-2878
24 Hr Contact: (970) 221-6545

Town of Johnstown, contact Reggie Mayes: (970) 587- 5555

Weld County, contact Roy Rudisill: (970) 304-6540
(800) 436-9276 ext 3990

Smaller NFR communities without adopted Emergency Management Plans are: the Town of Garden City, the Town of La Salle, and the Town of Timnath.

Vulnerability Assessment

A vulnerability assessment is a security plan developed by private businesses and government entities that are confidential in nature. The assessment process helps local planning organizations define locally vulnerable land uses which threaten their jurisdictions, and the extent to which communities are vulnerable to breaching events at those sites. This type of information can enable local governments to better develop security and response programs. Examples of companies/government entity that have these plans are Kodak, Center for Disease Control, and Hewlett Packard.



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VI. TRAVEL DEMAND ANALYSIS

A. Overview

In order to evaluate the effects of growth upon the NFR's transportation system and to meet the Clean Air Act (CAA) requirement, the NFRMPO prepares a regional travel demand model with projections based on socio-economic forecasts provided in Chapter III. The NFRMPO has developed a regional travel demand model which provides estimates and forecasts for the following scenarios:

- ▶ **2005 Base Year** – model calibrated to 2005
- ▶ **2015 Interim Year** – Interim for Conformity testing (CAA), includes 2015 transportation network and 2015 socio-economic forecasts.
- ▶ **2025 Interim Year** – Interim for Conformity testing (CAA), includes 2025 transportation network and 2025 socio-economic forecasts.
- ▶ **2035 No Build** – 2005 transportation network and 2035 socio-economic forecasts.
- ▶ **2035 Build** – 2035 transportation network and 2035 socio-economic forecasts, for Conformity testing (CAA).

It is important to recognize that transportation improvements other than those for increasing highways capacity may result in a reduction of roadway travel demand. The 2035 model is a mode choice model, which means that transit is modeled on its own network and calibrated transit surveys. This new portion of the model allows for scenario testing not only with the roadway network but also with transit.

The remainder of this section provides a summary of travel demand forecasting results focusing on the 2035 out year. This travel model output data is shown for the modeling boundary area, as previously depicted in **Figure 22**, which is somewhat larger than the MPO boundary.

B. Travel Demand Growth

Daily vehicle miles traveled (VMT), which is the total distance traveled by all motor vehicles each day, was used as a gauge to measure the forecast growth of travel in the region. **Table 40** shows the actual VMT for 2005 and forecast VMT for 2035 for the region's three major urban areas and the region as a whole.

It should be noted that using a No-Build scenario does not always create realistic results in smaller areas of the region. This is due to significant levels of congestion in the forecast year without any improvements to the roadway system.



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Table 40. Growth in Vehicle Miles of Travel

Area	Daily VMT		
	2005	2035 (No-Build)	Percent Growth
Fort Collins Area	2,792,000	3,693,000	32%
Greeley Area	1,750,000	3,333,000	90%
Loveland Area	1,665,000	2,611,000	57%
Other Areas	4,430,000	8,696,000	96%
NFR Region	10,637,000	18,333,000	72%

Source: North Front Range Regional Travel Model, Model Process, Parameters and Assumptions, LSA and Associates, Inc.

These forecasts show that regional VMT is projected to increase by 72% between 2005 and 2035. This VMT growth compares with household growth forecasts of 58% and employment growth forecasts of 55%.

Mode Choice

The 2035 travel demand model is a mode choice model. A mode choice model allows the user to also model transit systems and non motorized travel. This is the first model that the NFRMPO has built with this capability. Transit alternatives can now be tested both locally and regionally. Transit ridership is verified through on board surveys that actually count the number of riders on any given route. This is similar to the validation of the volumes on the roadways that are verified using traffic count data.

Figure 41 shows the 2005 bus routes and **Figure 42** shows the future bus routes based on local planning documents. Transit boarding based on the actual boardings and projected ridership from the travel demand model is shown in **Table 41** below.

Table 41. Daily Transit Boardings

	2005	2035
Greeley, GET	1300	1685
Loveland, COLT	394	321
Fort Collins, Transfort	4,689	6,681
Johnstown/Milliken/Windsor, JWM	n/a	230

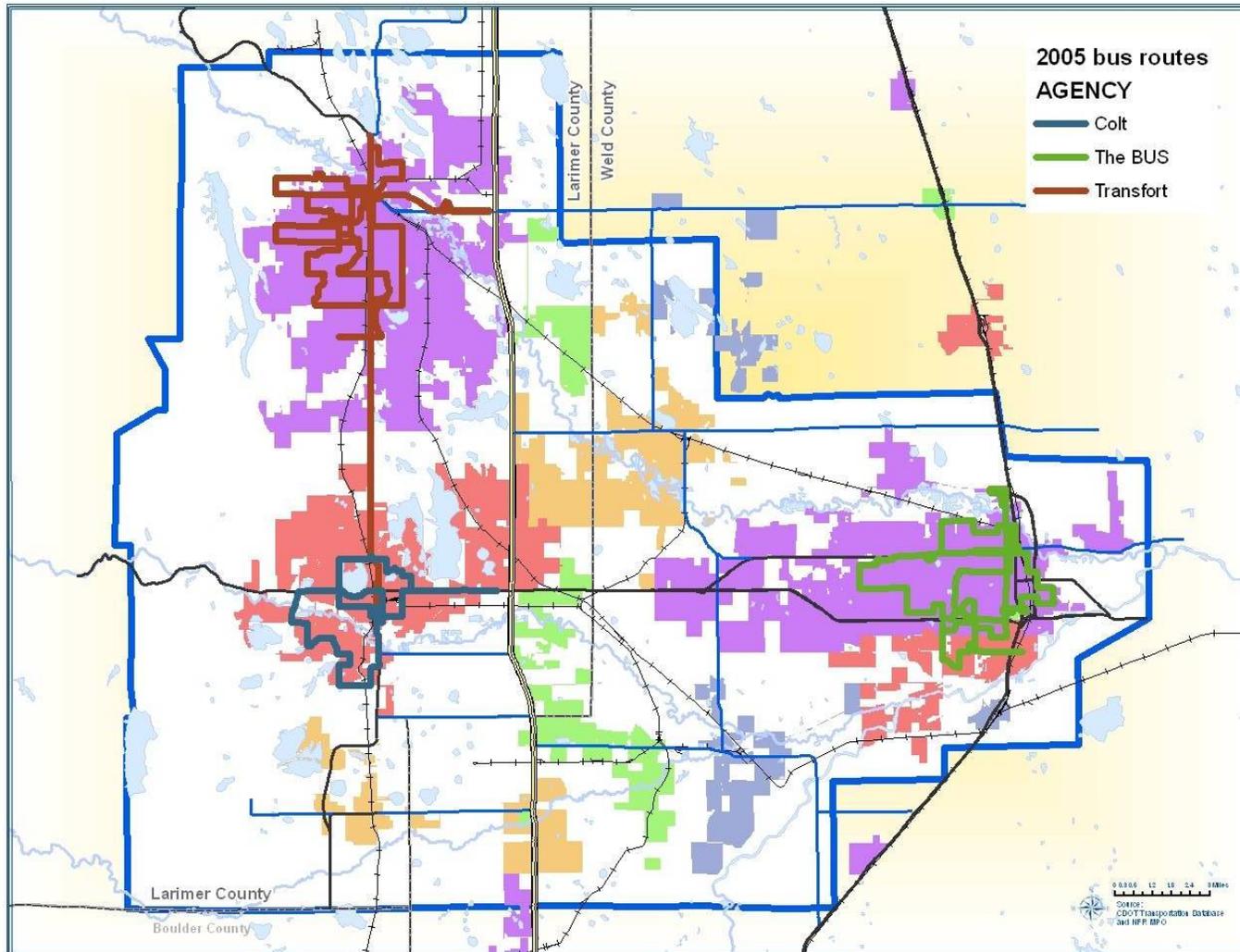
Source: 2005 Travel Demand Model

The mode choice model was further used in the scenario testing.



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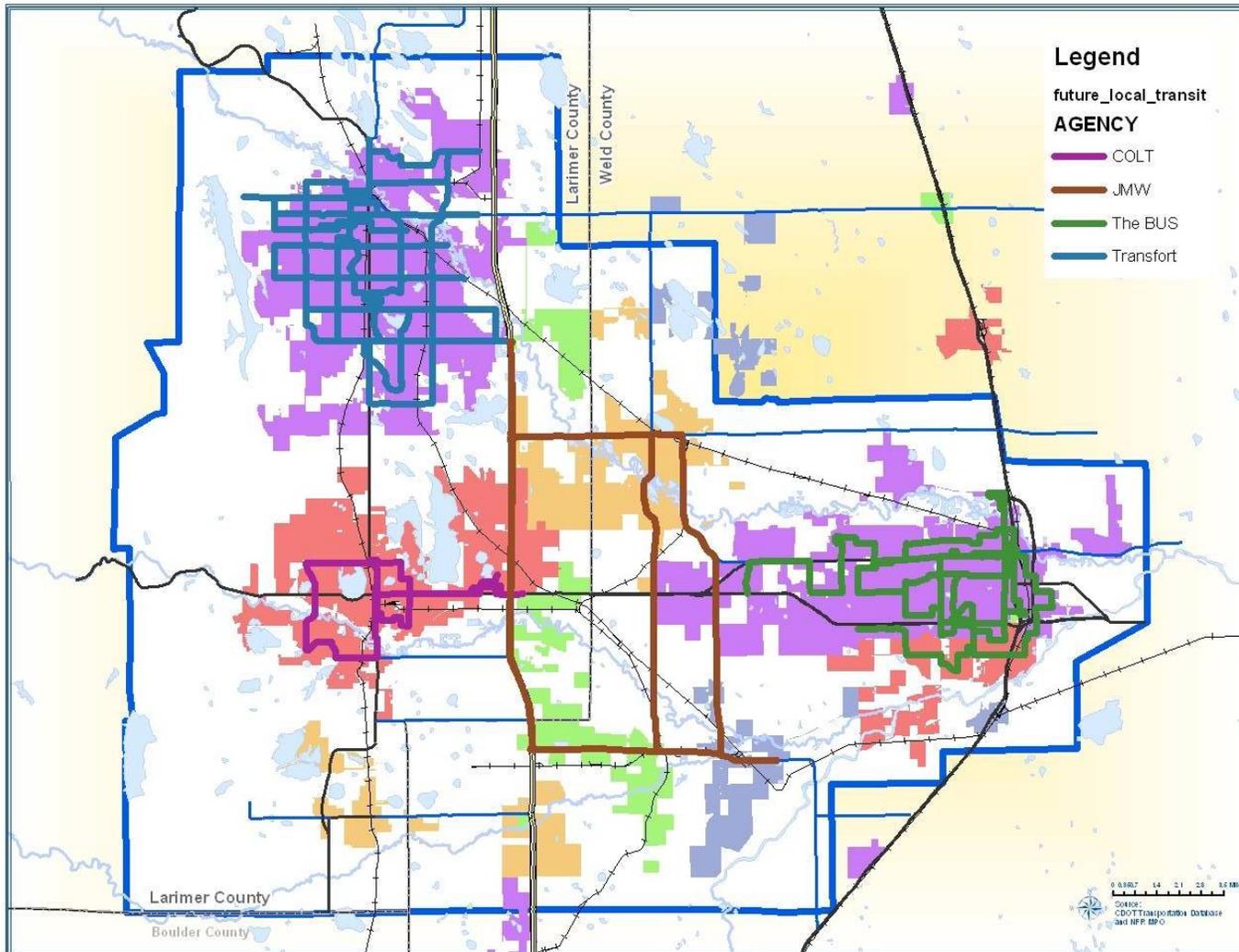
Figure 41. 2005 Bus Routes





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Figure 42. Future Bus Routes





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Level of Service

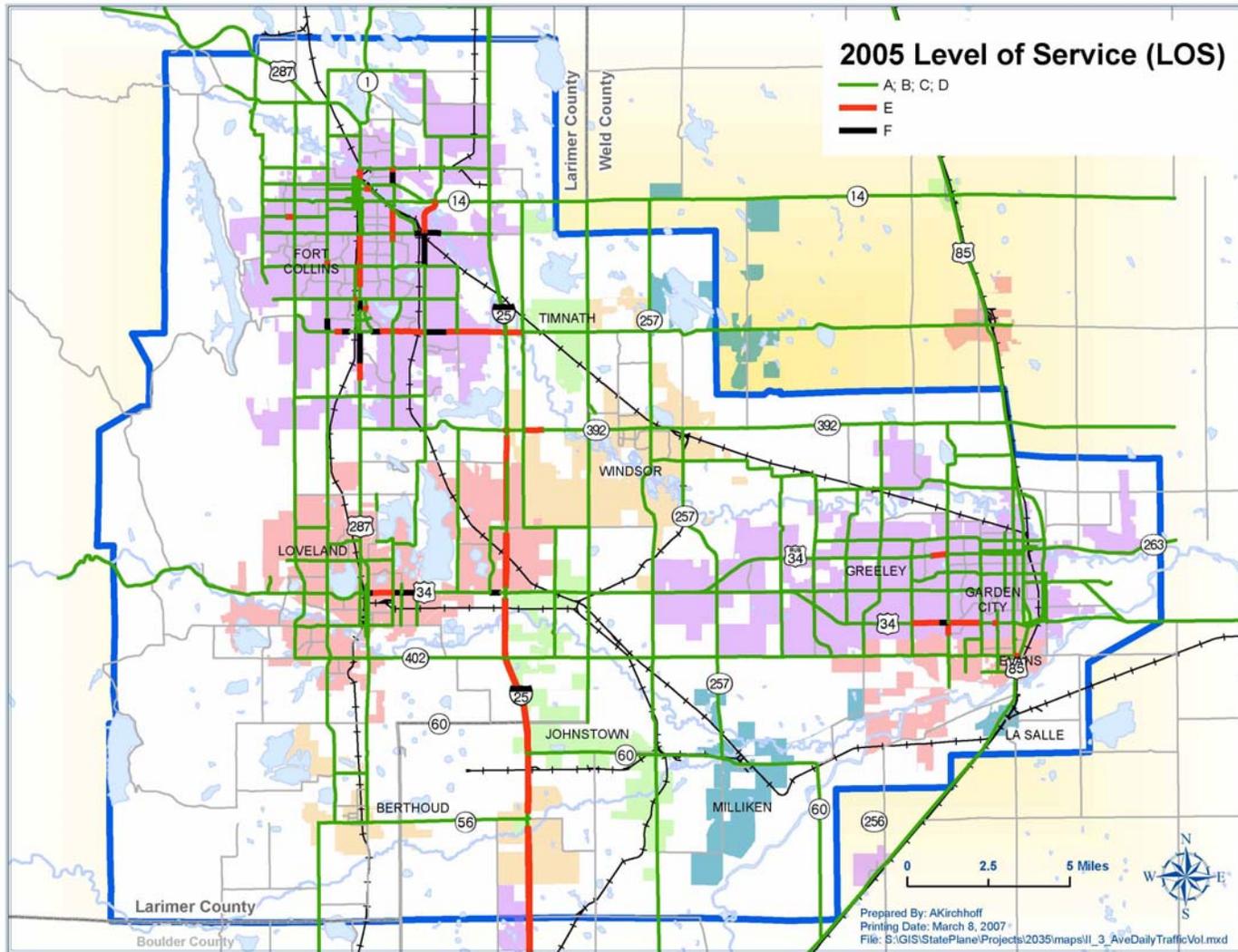
A system wide measure which is a good indicator of the impacts of growth on transportation is level of service (LOS), a qualitative measure which describes operating conditions, or traffic flow rates. LOS A represents a free flow condition, and LOS F represents a breakdown of traffic flow with excessive congestion and delay. Levels of service have been calculated on all arterials, expressways, and freeways based on a generalized peak hour volume (a combination of the morning, midday and afternoon peak periods) and planning level roadway capacities. Congestion, defined in the Congestion Management Program (see Chapter IX), is LOS E or F, with E nearing capacity and F over capacity.

The percent of roadway segments at LOS E or F in 2005 is 4%. It is anticipated to climb to 14% by 2035 with no roadway improvements. **Figures 43 and 44** depict the existing and future roadway levels of service, respectively.



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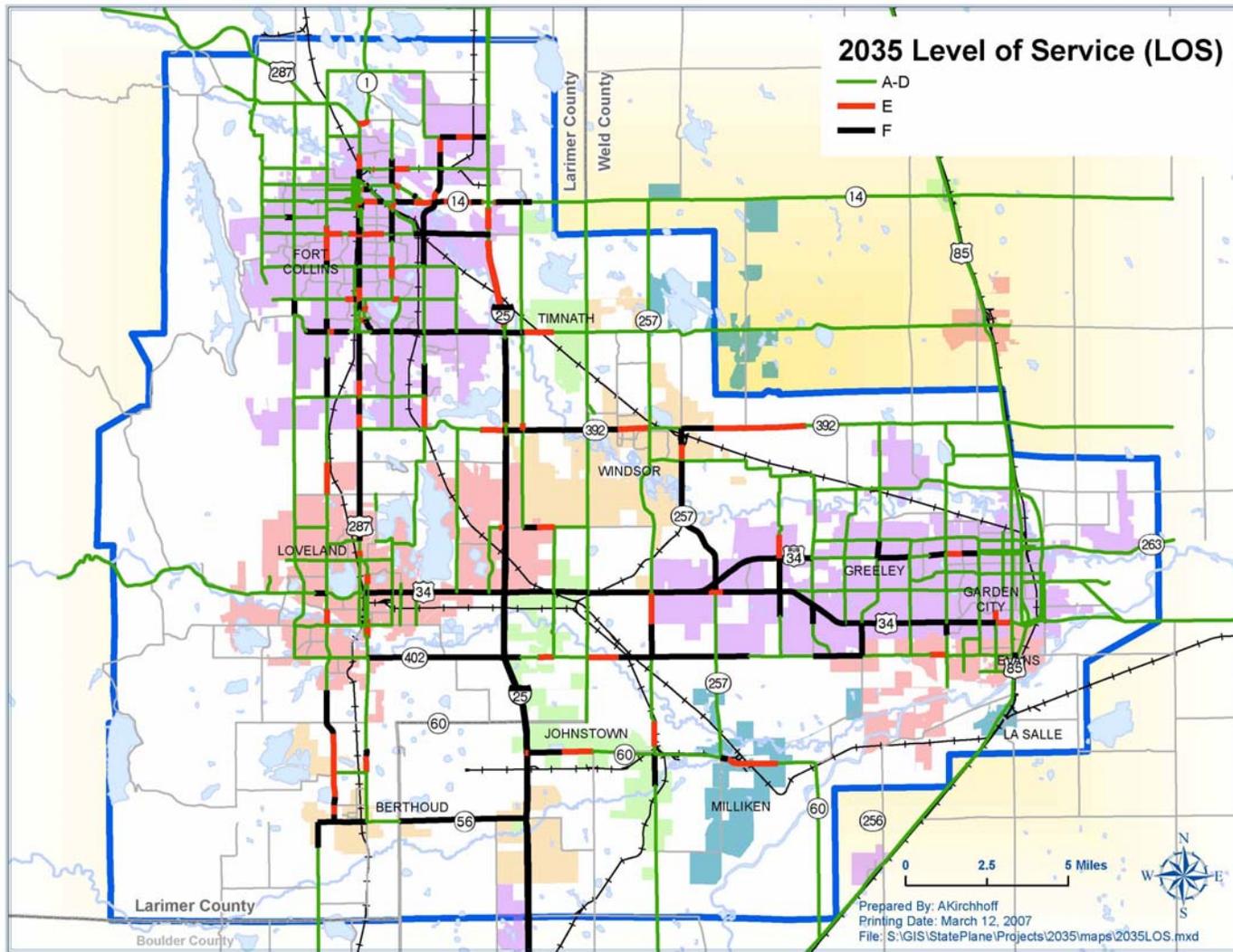
Figure 43. 2005 Base Level of Service





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Figure 44. 2035 No Build Level of Service





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Transit Level of Service

The level of service (LOS)¹ concept can also be applied to the transit mode. LOS measures have been standardized for transit service networks for both fixed route and demand response services. They can be applied to corridors, systems, or individual stops, but for the purposes of the 2035 Regional Transportation Plan will be kept at the system level. The LOS measures address:

- ▶ **Availability of Service** – common measures are the frequency of service, hours in a day in which service is provided, and service area coverage; and
- ▶ **Comfort and Convenience** – common measures are on-time performance, missed or late trips (reliability), and convenience.

For this plan the LOS measures will be considered only for fixed route services at the system level and will focus on availability and convenience. **Table 42** illustrates the national standards for four basic measures. Levels of service A, B, and C are most suitable for large cities and dense downtown areas; levels of service C, D, E, and F are expected in small cities and suburban developments where ridership generally does not justify improvements in frequencies or length of service day. The resulting systems generally have travel times that are significantly longer than making the same trip by automobile.

Table 42. Transit Level of Service Definitions

TRANSIT LEVEL OF SERVICE						
Level of Service	A	B	C	D	E	F
Characteristic	Most suitable for large cities and downtowns.			Suitable for small cities towns and suburban areas		
Coverage of Transit Supportive Area	90% to 100%	80% to 90%	70% to 80%	60% - 70%	50% - 60%	40% - 50%
Frequency of Bus	< 10 minutes	10 - 14 min.	15 - 20 min.	21 - 30 min.	31 - 60 min.	> 60 minutes
Operating hours in a day	19 - 24 hours Night service provided	17 - 18 hours Late evening service	14 - 16 hours Early evening service	12 - 13 hours Daytime service only	4 - 11 hours Only peak hour or mid-day	0 - 3 hours Very limited or no service
Convenience	Faster by transit than by auto	Transit trip is the same as by auto	Transit slower, but tolerable for choice riders	Round-trip an hour longer than by auto	Tedious for all riders, <i>may be best possible in small cities</i>	Undesirable for most riders
Reliability	1 late vehicle every 2 weeks	1 late vehicle every week	3 late vehicles every 2 weeks	2 late vehicles every week	1 late vehicle daily	Greater than 1 late vehicle daily

Table 43 illustrates how transit systems in the planning area score on these four criteria – coverage of areas that would support fixed route transit, frequency of service, span of service, and convenience as measured by travel time. These scores are based on the overall system averages for each of the three municipal systems and for the regional service connecting cities. Rural services are not included because they are primarily demand response services. Overall, the transit networks in the region are operating at an E level of service, with some variation on

¹ The Transit Capacity and Quality of Service Manual published by Transportation Research Board of the National Academies as TCRP Report 100, Washington, DC 2003 identifies standard Level of Service measures for fixed route and demand responsive services.



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the different measures. There would be additional variation if the systems were analyzed at the route level. At present the regional services only include service between Loveland and Fort Collins, so the LOS is F for coverage on regional services.

Table 43. Transit Level of Service in NFR Planning Area

Characteristic	Greeley	Fort Collins	Loveland	Regional
Coverage of Transit Support Area	D	D	E	F
Frequency of Service	E	E	E	E
Operating Hours in a Day	D	D	D	D
Convenience	E	E	E	E

If the no-build scenario is selected, the LOS grades for frequency and hours of service would likely remain the same. However, as development continues to occur outside the area presently served by transit the LOS grade for coverage would likely drop from E to F. Concurrently, the LOS grade for convenience as measured by travel time might also drop.

If a build option is selected, it is anticipated that the LOS for coverage would generally increase by one letter grade as systems are expanded to serve a larger geographic area. In both Fort Collins and Greeley implementation of their strategic plans would result in stronger grid systems so convenience would also be improved. For regional services, development of regional bus would improve the LOS for coverage and convenience as more areas would be served and it is anticipated that more frequent peak hour service would be provided in some corridors.



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C. Scenario Testing

Background

At the start of the 2035 RTP process, the NFRMPO did an extensive public outreach. The outreach included numerous presentations and hands on workshops called charrettes. The public involvement gave the NFRMPO information about the public's interest in specific projects in the region. A consolidation of the public's project list was then added to the base travel demand model so that the results of the improvements could be compared against each other and to doing nothing.

The recommended improvements included roadway and transit options. Testing regional transit was done with and without using transit oriented development (TOD) in the scenarios. Transit oriented development is a land use pattern immediately surrounding large transit stations that promote the use of transit. It is defined as a mixed-use community within walking distance of a transit stop that mixes residential, retail, office, open space, and public uses in a way that makes it convenient to travel on foot or by public transportation instead of by car. It was felt that TOD would be likely with a regional transit system available in the future.

Land Use Model

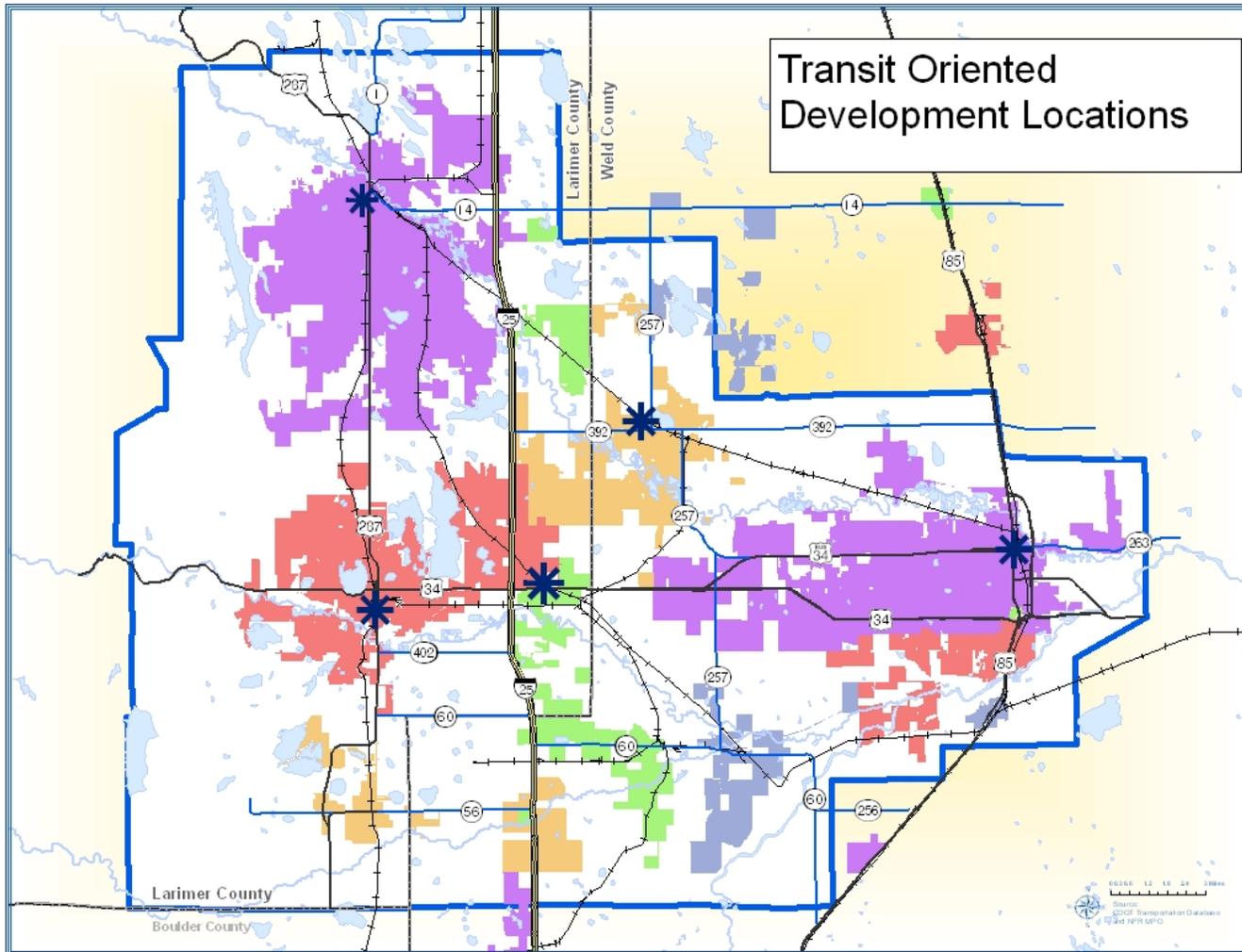
The transit oriented development (TOD) scenarios were run to determine the result of household and employment dispersion throughout the region with the addition of TODs. The potential TOD sites were located in Fort Collins, Loveland, Windsor, and Greeley as shown in **Figure 45**. The parcels that would be affected by TOD development were identified and the new allocation of households and employment for each of the forecasted years was applied through the model. The transit oriented development is a more compact and dense alternative than is currently found throughout the region. The TOD number of households and employment were placed in the forecasted years as well.

A side by side comparison of the Base and TOD scenarios was done to determine the impact of the TOD land use. The combined households, employment for each scenario was charted to analyze the number of acres consumed. As shown in **Figure 46** the amount of land consumed is less overall with the TOD land use. In **Figure 47**, the density of households and employment increases over time as the TOD matures in the future years. The scenarios that follow will discuss the impacts of the TODs on transit ridership.



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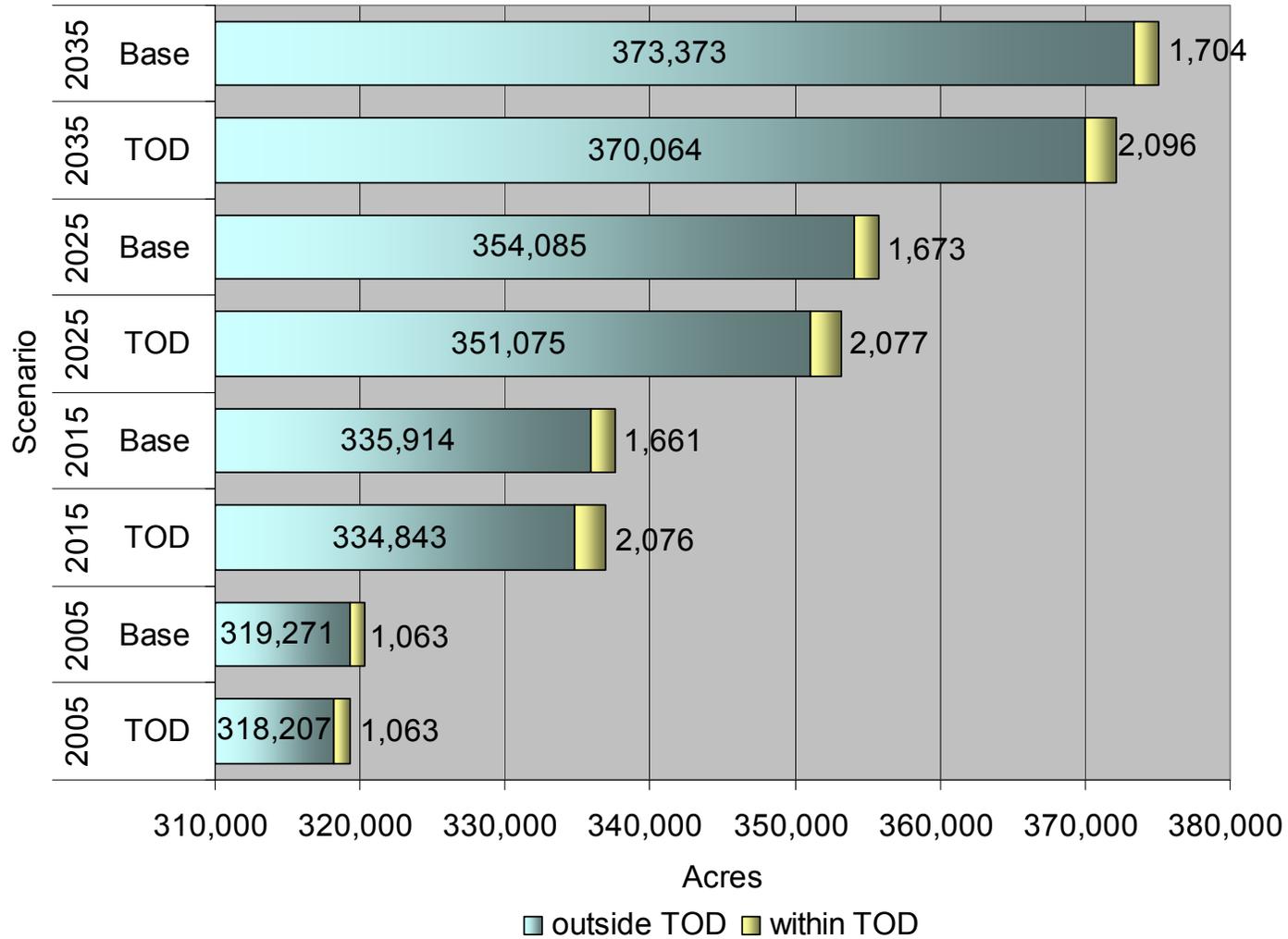
Figure 45. Transit Oriented Development Locations





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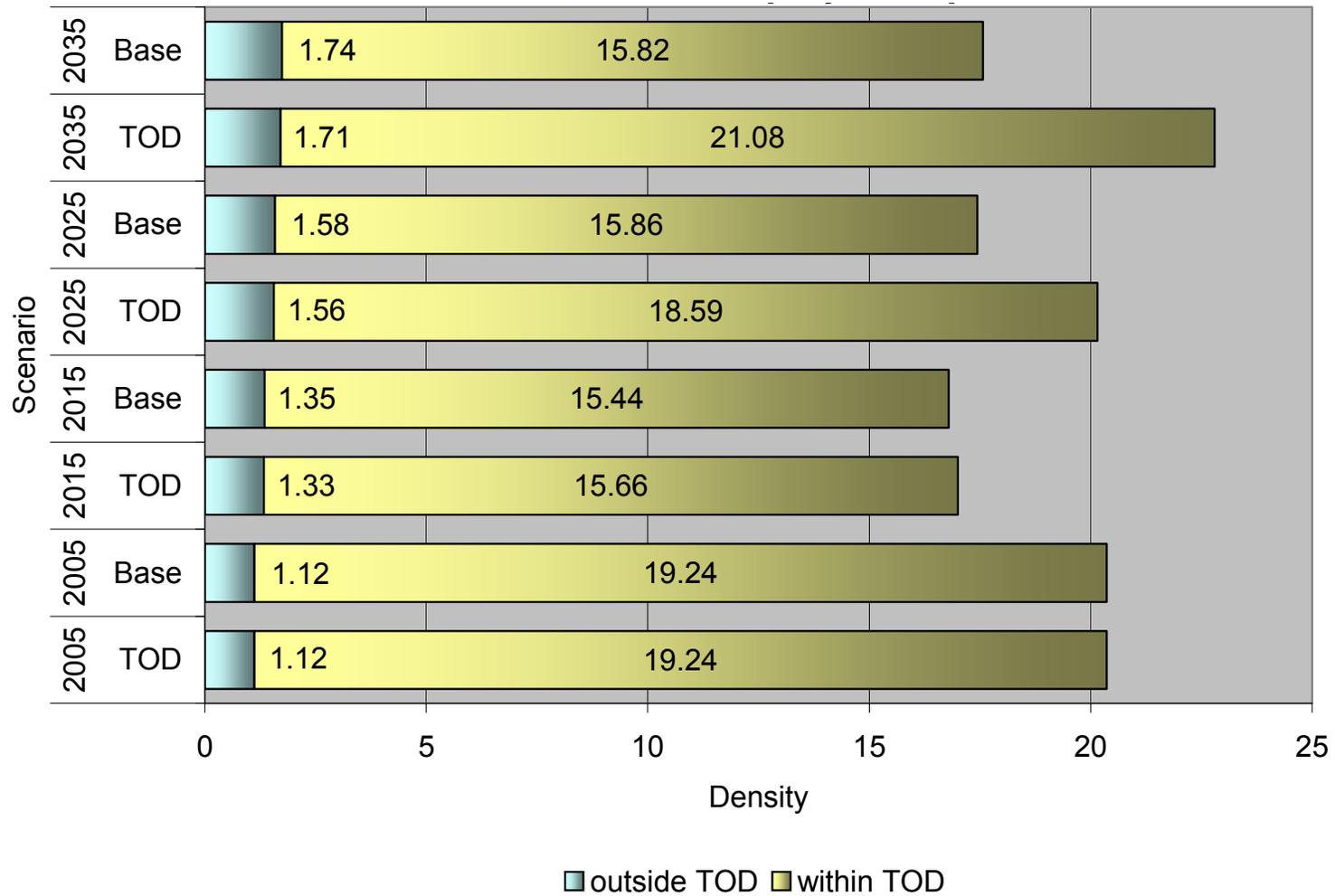
Figure 46. Acres Consumed by Employment and Households





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Figure 47. Combined Household and Employment per Acre





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Scenarios

A compilation of all of the public comment, including local staff expertise, was done for all charrettes and augmented by feedback at public presentations. The following improvements were the top items identified. These were then grouped into various scenarios with the top four items as a consistent base.

- ▶ Widening US 287 between Loveland and Fort Collins
- ▶ Widening I-25 from the southern MPO boundary to Harmony Road (Fort Collins)
- ▶ Redesigning the interchanges on US 34, SH 392, Crossroads Boulevard, and SH 14
- ▶ US 34 regional bus service between Greeley and Loveland, plus widening US 34 from US 287 to SH 257

Scenarios alternatives:

- ▶ Passenger rail on the Great Western line from Fort Collins to Greeley
- ▶ Bus Rapid Transit (BRT) from Loveland to Greeley (in place of the regional bus)
- ▶ Widening on SH 402/37th Street/WCR 54 from US 287 to US 85
- ▶ Widening and construction of "O" Street and Crossroads
- ▶ Widening and construction of Timberline Road/Boyd Lake corridor
- ▶ Widening SH 392 east from US 287 to US 85

The desired improvements were grouped into scenarios as shown in **Table 44** below. There are a total of 10 different scenarios. Each scenario was run using TOD land uses and without TOD land uses. Local transit routes in the future are based on the long range transit plans for the identified communities. The proposed improvements are also shown on **Figure 48**.



The North Front Range 2035 Regional Transportation Plan

Envisioning Transportation Solutions for Colorado's North Front Range



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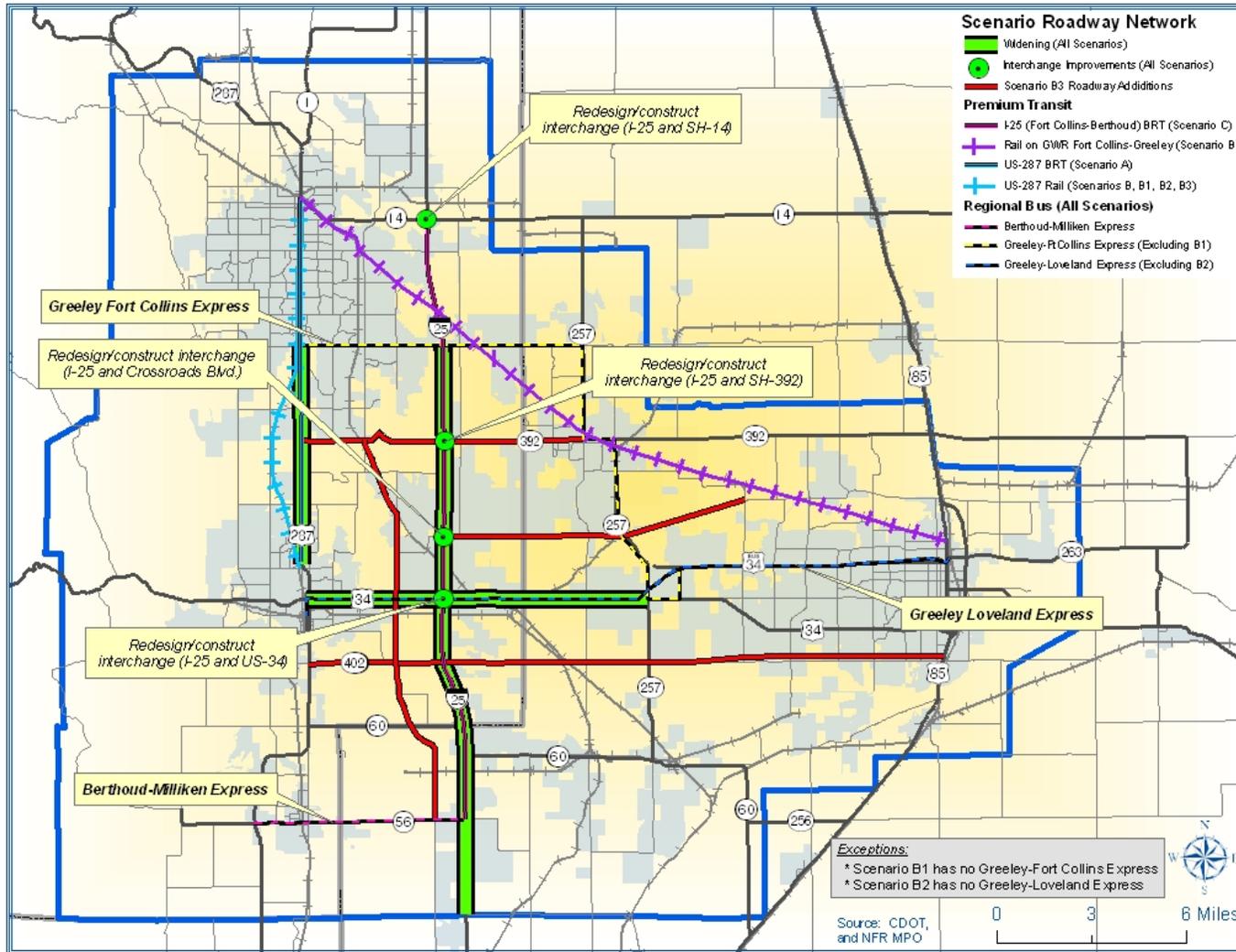
Table 44. 2035 Scenario Assumptions

Model Runs	Socioeconomic Data	Roadway Network								Local Transit Network						Regional Bus			Premium Transit
		RI-1	RI-2	RI-3	RI-4	RA-1	RA-2	RA-3	RA-4	Fort Collins	Loveland	Greeley	Wellington	Johnstown	Milliken	Gre_FTC ¹	Gre_Lov ²	Bert_Mill ³	
2005	2005	No	No	No	No	No	No	No	No	2005	2005	2005		No		No	No	No	No
2035 No Build 1	2035	No	No	No	No	No	No	No	No	2005	2005	2005		No		No	No	No	No
2035 LRTP-A	2035	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005 + new routes	2005+new routes		routes 1, 2 and 3		Yes	Yes	Yes	US 287 BRT
2035 LRTP-B	2035	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005+ new routes	2005+new routes		routes 1, 2 and 3		Yes	Yes	Yes	US 287 Rail
2035 LRTP-B1	2035	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005 + new routes	2005+new routes		routes 1, 2 and 3		No	Yes	Yes	US 287 Rail, Rail on GW Fort Collins - Greeley
2035 LRTP-B2	2035	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005 + new routes	2005+new routes		routes 1, 2 and 3		Yes	No	Yes	US 287 Rail, Greeley-Loveland BRT
2035 LRTP-B3	2035	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Grided	2005+ new routes	2005+new routes		routes 1, 2 and 3		Yes	Yes	Yes	US 287 Rail
2035 LRTP-C	2035	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005+Centerra Feeder + new routes	2005+new routes		routes 1, 2 and 3		Yes	Yes	Yes	I-25 (Fort Collins-Berthoud) BRT
2035 LRTP(TOD)-B	2035 - TOD	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005 + new routes	2005+new routes		routes 1, 2 and 3		Yes	Yes	Yes	US 287 Rail
2035 LRTP(TOD)-B1	2035 - TOD	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005 + new routes	2005+new routes		routes 1, 2 and 3		No	Yes	Yes	US 287 Rail, Rail on GW Fort Collins - Greeley
2035 LRTP(TOD)-B2	2035 - TOD	Yes	Yes	Yes	Yes	No	No	No	No	Grided	2005 + new routes	2005+new routes		routes 1, 2 and 3		Yes	No	Yes	US 287 Rail, Greeley-Loveland BRT
2035 LRTP(TOD)-B3	2035 - TOD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Grided	2005+ new routes	2005+new routes		routes 1, 2 and 3		Yes	Yes	Yes	US 287 Rail
RI	Roadway Improvement																		
RA	Roadway Alternative																		
RI-1	Widening of US-287 between Loveland and Fort Collins																		
RI-2	Widened I-25 from Southern MPO boundary to Harmony Rd																		
RI-3	Redesign Interchanges on US-34, SH-392, Crossroads Blvd & SH-14																		
RI-4	Widened US 34 from US-287 to US-257																		
RA-1	Widen SH-402/35th St from US-287 to US-85																		
RA-2	Widen SH-392 from US-287 to SH-257																		
RA-3	Construct Timberline/Boyd Lake Corridor																		
RA-4	Construct O Street/Crossroads Connection																		
Regional Bus																			
	Gre_FTC ¹	Greeley-Fort Collins Express (From N I-25 EIS)																	
	Gre_Lov ²	Greeley-Loveland Express (From N I-25 EIS)																	
	Bert_Mill ³	Berthoud-Milliken Express (From N I-25 EIS)																	



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Figure 48. Improvements Used in Scenario Testing





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There were two measures used to evaluate the different scenarios amongst themselves for roadway performance. The first is Vehicle Miles of Travel, or VMT. As shown in **Figure 49** below, any improvement, over the no build option, yields reductions in VMT. The largest reduction in VMT is shown in the TOD scenarios.

The B3 scenarios add the most lane miles to the network and more VMT as a result. Scenario B1, with TOD, results in the lowest VMT. Scenario B1 includes the base roadway improvements for all scenarios (listed below) and passenger rail on US 287 and the Great West Railway between Fort Collins and Greeley.

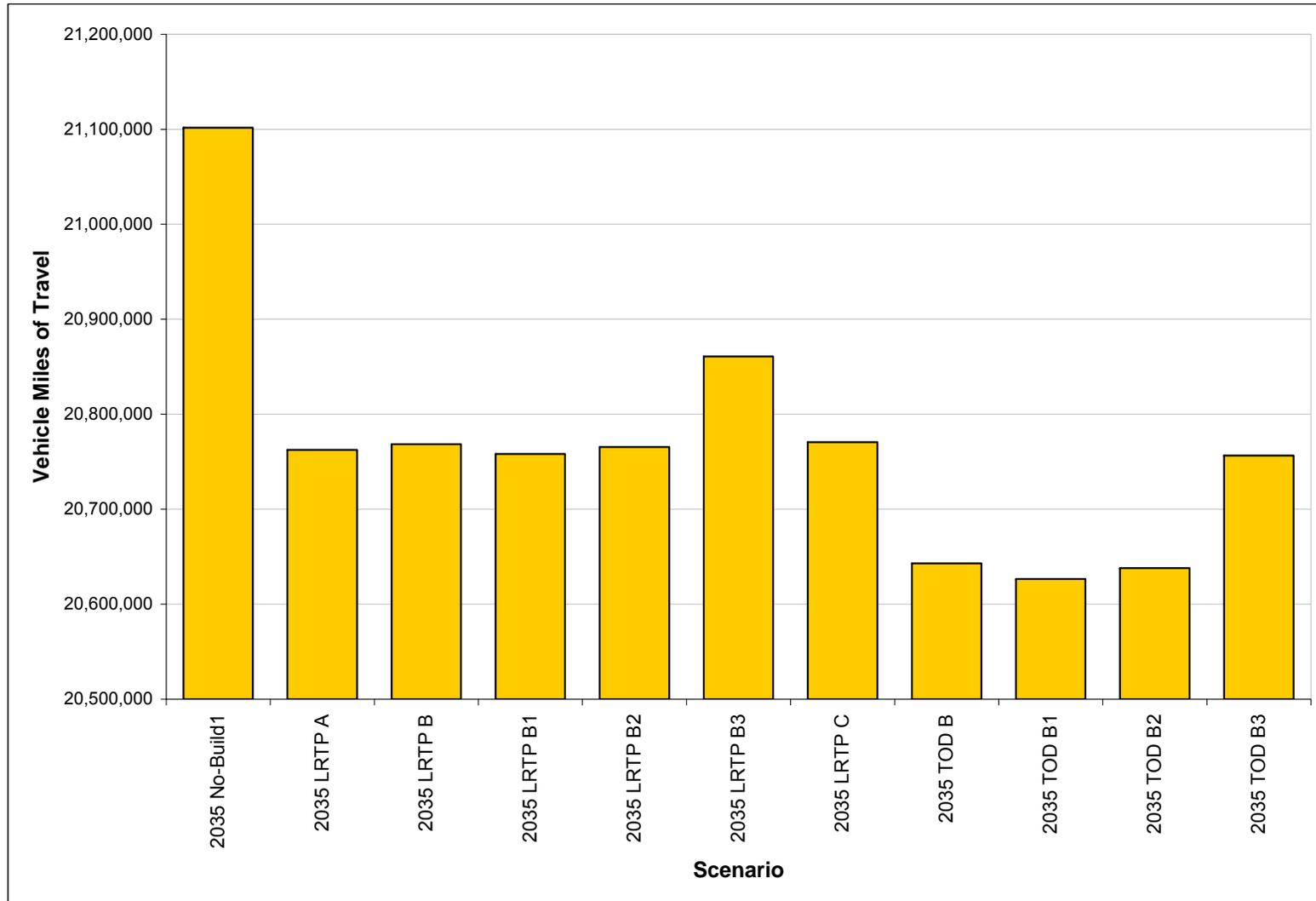
- ▶ Widening US 287 between Loveland and Fort Collins
- ▶ Widening I-25 from the southern MPO boundary to Harmony Road (Fort Collins)
- ▶ Redesigning the interchanges on US 34, SH 392, Crossroads Boulevard, and SH 14
- ▶ US 34 regional bus service between Greeley and Loveland, plus widening US 34 from US 287 to SH 257

The second measure is the amount of congested lane miles. The NFRMPO Council determined that congestion would be defined as Level of Service (LOS) E or F. **Figure 50** shows the variation in the amount of lane miles that are congested with each scenario. The amount of congested lane mile actually increases from the no build scenario, with the exception of the B3. The reason for the increase is that congestion is still present and there are now 124 more lane miles that are congested. The congestion improves on the roadways as the lane miles are increased to closer to 200 as shown in the B3 scenarios.



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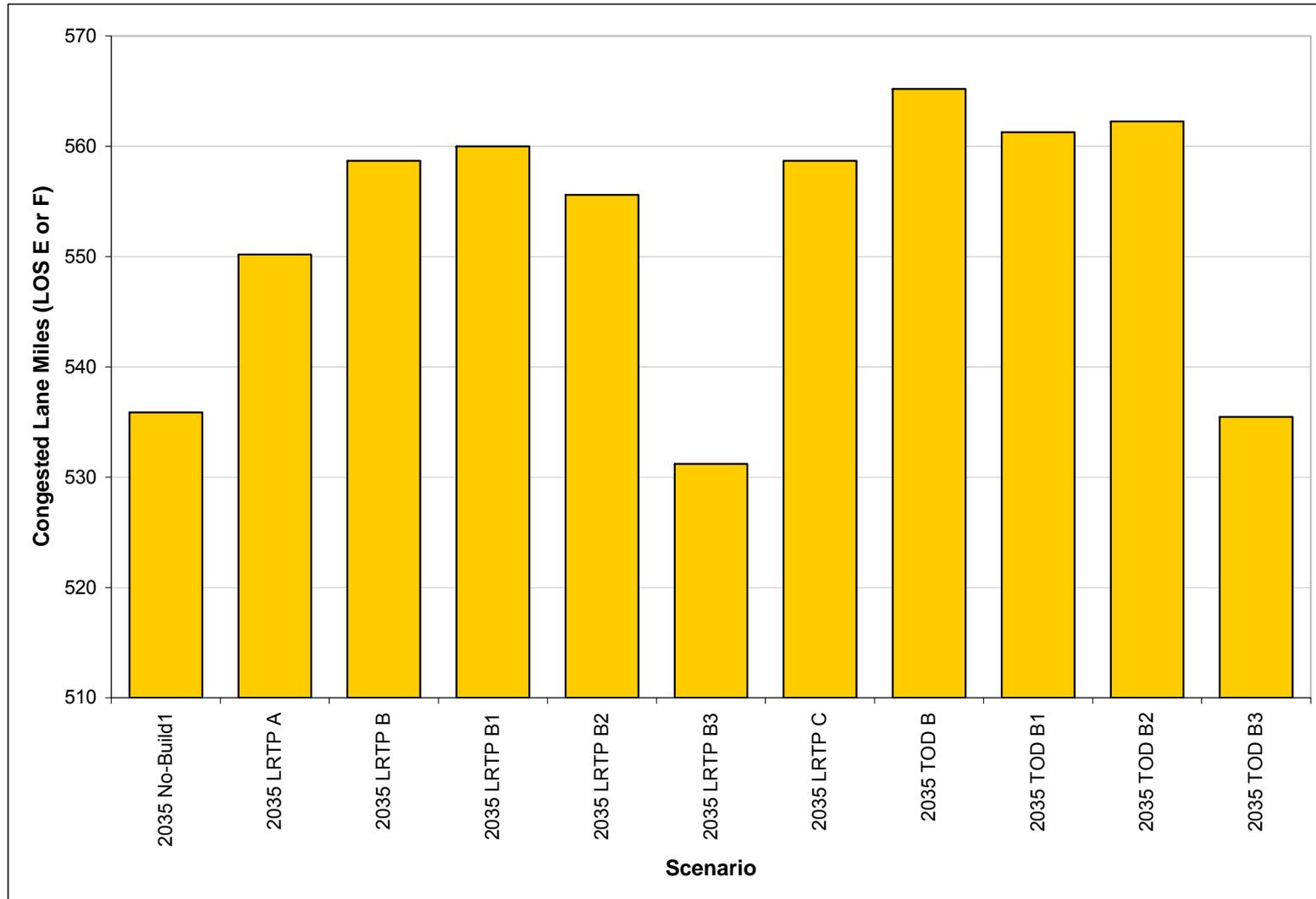
Figure 49. Scenario Testing: Vehicle Miles of Travel





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Figure 50. Scenario Testing: Congested Lane Miles





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Transit Summary

During the development of the alternative scenarios, there was interest in looking at regional transit options. Regional transit does not currently exist in the NFRMPO, with the exception of one route between Fort Collins and Loveland on US 287. The scenarios are variations on different types of transit options and scenario B, B1, B2, and B3 are also evaluated using TOD information. **Table 45** shows just the transit portion of each scenario.

Table 45. Transit Components of Scenario Testing

Scenario	Local Transit	Regional Bus			Premium Transit	
		Greeley to Fort Collins	Greeley to Loveland	Berthoud to Milliken	BRT	Rail
A	Out year routes	Yes	Yes	Yes	US 287	No
B	Out year routes	Yes	Yes	Yes	No	US 287-BNSF
B1	Out year routes	No	Yes	Yes	No	US 287-BNSF, GW Fort Collins to Greeley
B2	Out year routes	Yes	No	Yes	Greeley-Loveland	US 287-BNSF
B3	Out year routes	Yes	Yes	Yes	No	US 287-BNSF
C	Out year routes	Yes	Yes	Yes	I- 25 (Fort Collins to Berthoud)	No

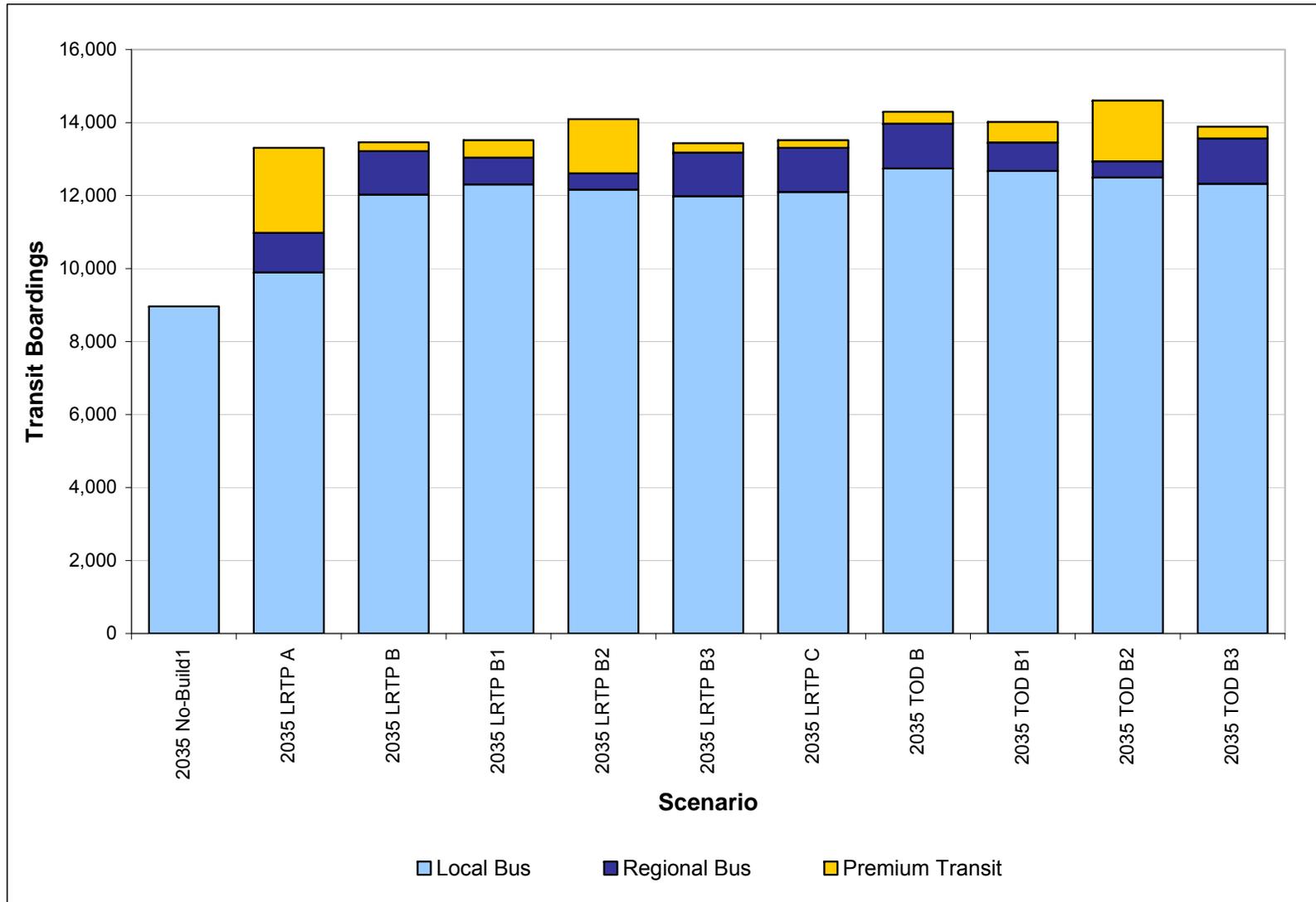
Figure 51 below shows the transit boardings for each scenario by type of transit, local bus, regional bus, and premium transit. Premium transit is defined as either a Bus Rapid Transit (BRT) or passenger rail. BRT are self propelled rubber tire transit vehicles that generally operate in an exclusive right-of-way. The buses can operate in mixed flow traffic, high-occupancy vehicle lanes (HOV), or high occupancy/toll (HOT) lanes as well giving them flexibility. These vehicles can usually seat 45-70 people depending on length.

Premium BRT transit attracts more boardings than rail and is even higher with the TOD. Scenario A, with BRT on US 287 attracts the most boardings. In all of the premium transit scenarios, there is a feeder network of local and regional buses that support those routes. In testing the transit boardings there are other variables that could have a potential impact but which were not tested. These include the frequency of the route, the density and ridership of the supporting transit routes, connections to the Denver area, and cost.



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Figure 51. Scenario Testing: Transit Summary





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VII. VISION PLAN

Since this Regional Transportation is corridor-based, the vision plan is comprised of the corridor visions for the Regionally Significant Corridors (as described in **Chapter II**) and the tiering thereof. The following sections provide the multi-modal corridor visions and the results of the corridor tiering process. The Transit and Aviation Plans provide more detailed information on the vision for those travel modes.

State Statute 43-1-1103(1)(c) requires that Regional Transportation Plans include identification of the total funding needs in addition to identification of anticipated funding sources. The total estimated funding from 2008 to 2035 is approximately \$1.27 billion (described in detail in **Chapter VIII**). Since this is a corridor-based plan, there is not a simple way to quantify the need for the corridors. In developing a vision cost for the 2035 RTP, NFRMPO has used the 2030 RTP vision cost and applied a 33% inflation factor, as calculated by CDOT. This results in a total need of approximately \$6.0 billion. With the estimated revenue of \$1.27 billion, there remains an unfunded amount of \$4.7 billion. There are no identified revenue sources to cover this shortfall.

A. Corridor Visions

Corridor visioning seeks to develop visions, goals, and strategies for statewide corridors. Each corridor is a transportation system that includes all modes and facilities within a defined geographic area, having both a length and a width. The Corridor Vision provides a general description of the corridor's investment needs, future travel modes, geographic and social environment, and the values of the communities served by the corridor. The Corridor Goals begin to define the primary objectives of the corridor, and the Strategies provide more specific guidance on potential means to achieve the visions and goals of the corridor.

A primary investment category (mobility, safety or system quality) has been assigned to each corridor. This does not imply that other types of projects are not needed on a given corridor. For instance, if safety was determined to be the primary investment category, the most pressing need may be for safety type projects. But there may also be spot locations in the corridor where congestion or capacity (the main focus of the mobility investment category) need to be addressed. Likewise, if a corridor's primary investment category has been identified as system quality, there may also be a need for spot safety or mobility improvements. The purpose of identifying the primary investment category is to categorize the primary set of needs given the corridor's place in the regional system prioritization.

The corridor visions for the 12 corridors, as previously defined in **Table 1**, are included on the following pages. However, it should be noted that some of the goals and objectives apply to the entire transportation system in the region. They are included as over-arching goals in all of the 12 corridor visions:



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- ▶ **Maintain or improve infrastructure.** Maintaining the quality of the transportation system is integral to servicing the transportation needs of the region.
- ▶ **Reduce fatalities, injuries, and property damage crash rates.** Decreasing the number and severity of accidents is a high priority for all modes of transportation in the region.
- ▶ **Coordinate transportation and land use decisions.** Land use and transportation are intrinsically linked, and coordination of the two should be considered on all corridors in the region.
- ▶ **Promote transportation improvements that are environmentally responsible.** Potential environmental impacts need to be considered in all transportation improvements; those improvements that provide enhancements to the natural and/or social environment of the region are encouraged.

The three top-tiered corridors (I-25, US 287, and US 34), as defined in the next section of this document, contain a more detailed vision including references from recent corridor studies.

The NFRMPO recognizes that corridors identified as regionally significant within the North Front Range MPO often extend beyond the MPO boundary. The NFRMPO makes an effort to coordinate with the adjacent planning regions of Upper Front Range Transportation Planning Region and Denver Regional Council of Governments in the development of the corridor visions. The corridor visions in this document describe the visions within the NFRMPO boundary.



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Corridor Vision #1: US 287 Front Range Urban

US 287 from approximately WCR 38 (South MPO boundary) to LCR 56 on the North (North MPO boundary). This corridor includes the Burlington Northern Santa Fe Rail line, the Mason Corridor (Fort Collins), LCR 19 from US 34 on the south to US 287 on the north, and LCR 17 from SH 56 on the south to SH 14 on the north.

Primary Investment Need: Increase Mobility

Vision Statement

The vision for the US 287 Front Range Urban corridor is primarily to increase mobility as well as maintain system quality and improve safety. This corridor provides north-south connections within the Fort Collins, Berthoud and Loveland areas and connections to the Denver metropolitan area and north to Laramie, Wyoming and I-80. US 287 is a National Highway System facility and acts as Main Street through both Fort Collins and Loveland. LCR 17 and LCR 19 are off-system facilities which provide connections through residential and commercial areas. Future travel modes in the corridor include passenger vehicle, bus service, passenger rail, truck freight, rail freight, and bicycle and pedestrian facilities. Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase significantly. Freight traffic is primarily limited to the US 287 facility and the BNSF railway line. The Burlington Northern Santa Fe (BNSF) railway line also has the future potential to serve as a multimodal transportation corridor, including transit/passenger rail, bicycle and pedestrian travel. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, system preservation, and residential and retail access. They depend on commercial activity, residential development, Colorado State University, governmental agencies as well as manufacturing and high-tech industries for economic activity in the area. Users of this corridor want to retain the character of the area, including the dedicated open space between Fort Collins and Loveland, while supporting the movement of commuters and freight in and through the corridor and also recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Increase travel reliability and improve traffic flow, with a focus on commuter travel.
2. Reduce dependency on single occupancy vehicles by enhancing transit, TDM, and bicycle/pedestrian options.



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Strategies

1. Perform and implement studies such as US 287 Environmental Overview Study, corridor optimization, and access management plans.
2. Improve mobility by constructing intersection improvements, such as traffic signals, auxiliary lanes and medians.
3. Preserve right of way and construct additional general purpose lanes on US 287 or parallel facilities.
4. Improve and maintain the system of local roads connecting the three major roadways in the corridor.
5. Expand transit service, coverage and frequencies and provide improved transit amenities, including the development of the Mason Street corridor project. Transit development includes supporting connections to the private intercity and regional bus network from other modes.
6. Identify and preserve transportation corridors to improve the multi-modal interface for expanded and more frequent regional transit service; coordinate long-range transit/passenger rail opportunities with Denver RTD.
7. Promote ITS strategies, such as incident response, traveler information and variable message signs.
8. Implement appropriate TDM mechanisms.
9. Provide for bicycle and pedestrian travel through improvements, such as bicycle/pedestrian paths, crosswalk improvements, wider shoulders or designated bike lanes.
10. Increase safety by implementing improvements, such as grade separations and access management improvements.
11. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint, sign replacements, improved landscaping, noise barriers and drainage improvements.

References

US 287 Environmental Overview Study
US 287 Environmental Assessment/FONSI
North I-25 Environmental Impact Statement



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US 287

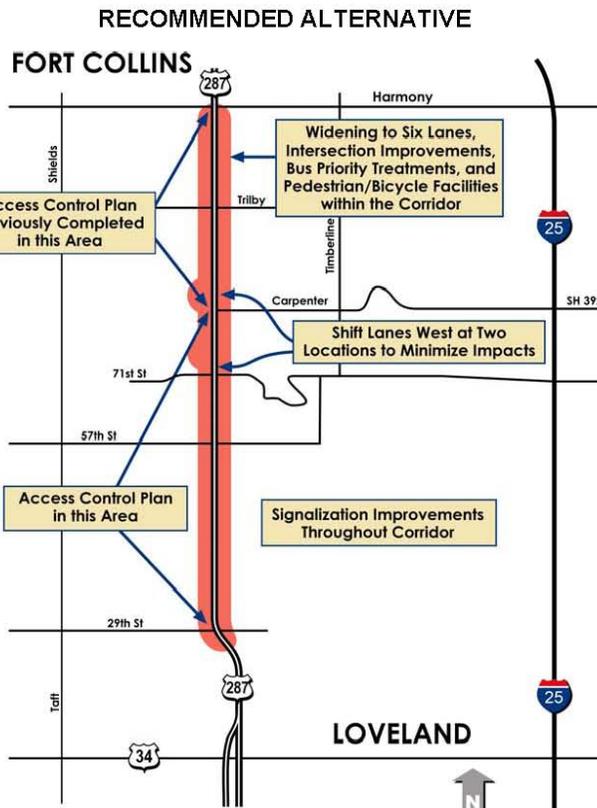
ENVIRONMENTAL OVERVIEW STUDY

EXECUTIVE SUMMARY

The Colorado Department of Transportation, Region 4 (CDOT), the Cities of Loveland and Fort Collins, Larimer County, and the North Front Range Metropolitan Planning Organization have recommended a transportation alternative that addresses safety, mobility, and the preservation of environmental and other community values. Defined as a "context sensitive solution," this alternative identifies a right-of-way width needed for future improvements along a 7.1 mile stretch of the US 287 corridor between 29th Street in Loveland and Harmony Road in Fort Collins. No funds are currently programmed for any of these improvements.

The recommended right-of-way along the US 287 corridor will ensure adequate area for the following future improvements (see map to right):

- Roadway widening to six lanes to accommodate future travel demand and congestion.
- Intersection improvements to accommodate peak-hour demand.
- Priority at intersections for bus transit.
- Safety improvements including auxiliary lanes and medians.
- Access Control south of Carpenter Road to 29th Street to define where and what type of future access changes or modifications can occur.





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US 287
ENVIRONMENTAL OVERVIEW STUDY

Furthermore, a memorandum of understanding (MOU) between CDOT and local agencies adopting the EOS findings will provide the basis for approving development of locally funded transportation improvements along the corridor.



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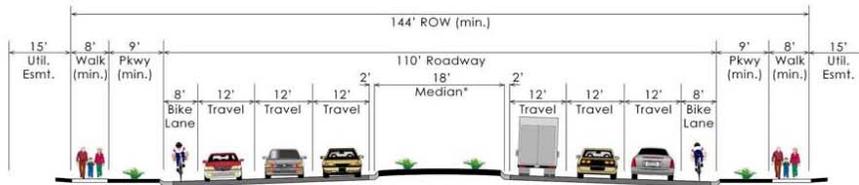


US 287
ENVIRONMENTAL OVERVIEW STUDY

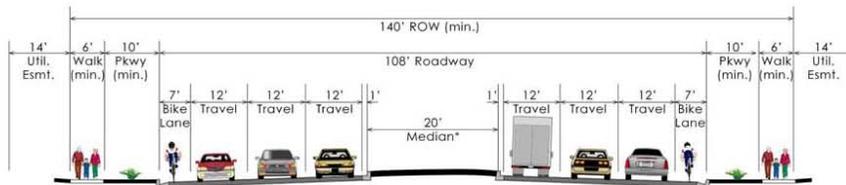
- Pedestrian and bicycle linkages.
- Traffic signal timing improvements to improve coordination between signals.

The recommended widening to six lanes will be centered on the existing four lane roadway, except in two locations where it will be shifted to the west: north of 71st Street to avoid impacting Resthaven Cemetery property, and an area north of Carpenter Road to reduce potential impacts to an existing residential development.

The future right-of-way will provide adequate roadway width throughout the corridor for needed travel lanes, shoulders, raised center median, and left and right-turn lanes at selected intersections. The right-of-way also will provide room for pedestrian and commuter and recreational bicycle linkages between Loveland and Fort Collins (see typical sections below).



US 287 Cross-Section North of 57th Street - 55 mph



US 287 Cross-Section South of 57th Street - 45 mph

Intersection improvements, such as turn lanes and median treatments, are recommended to improve traffic flow and safety. Signal timing improvements are proposed to improve interconnectivity traffic flow, connections to crossroads, and east-west travel. Bus signal priority



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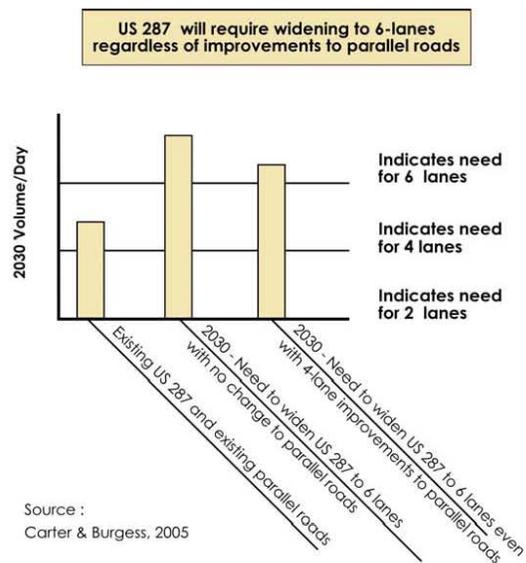
US 287 ENVIRONMENTAL OVERVIEW STUDY

can be developed at intersections as part of signal timing and turn-lane improvements. The widened roadway will have curb and gutter on both sides and will be designed for 55 miles per hour (mph) north of 57th Street and 45 mph south of 57th Street.

These future improvements will enable US 287 to accommodate forecast travel demand in the corridor through the year 2030. These improvements will also address the project's purpose and need and associated goals as defined from input gained during public and agency scoping, two public open houses in April and July 2005, and from meetings with local groups, organizations, and local agencies. The purpose and need and associated goals are presented in Sections 2.2 and 2.3.

Eight build alternatives and a no-action alternative were evaluated during the US 287 EOS study, leading to the identification of the recommended alternative. The recommended alternative for US 287 between Loveland and Fort Collins provides the following benefits:

- Accommodates modal alternatives (auto/truck, transit, pedestrian, and bicycle).
- Accommodates projected 2030 traffic volumes.
- Brings all improvements up to existing safety standards.
- Does not preclude improvements to other north-south parallel routes (see graphic at right which illustrates that even if 4 lane improvements to parallel roads are made, 6 lanes would be needed on US 287).
- Improves traffic flow by applying access control.
- Addresses local plans and identifies right-of-way footprints for all future development along the corridor for the next 20-plus years.





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US 287

ENVIRONMENTAL OVERVIEW STUDY

The study considered environmental factors in the evaluation of the alternatives. Identification of effects to the environment during early planning will make sure they are considered during future roadway design and construction. Major environmental findings related to the recommended alternative include:

- Ten wetlands were identified along the study corridor that potentially could be considered under the jurisdiction of the Army Corps of Engineers (ACOE) and would require further delineation, impact analysis, coordination with the Corps of Engineers and possibly mitigation. Minor alignment adjustments, design modifications, construction permits, and or mitigation may be necessary when roadway improvements are proposed.
- The corridor is adjacent to one site on the State Register of Historic Properties, the Denies Barn, and two structures and one ditch that are potentially eligible for the National Register of Historic Sites. As future NEPA proceeds, properties along the corridor would need to be further evaluated for National Register status, concurrence from the State Historic Preservation Officer (SHPO) would be needed and impacts would need to be avoided if prudent and feasible.
- Widening would likely require right-of-way or easements from four publicly-owned properties: Long View Farm, Manor Ridge Open Space, Robert Benson Lake, and Redtail Grove Natural Area. Although none of these properties currently have public facilities, nor are they open to the public, the City of Fort Collins has plans to develop trails at the Redtail Grove Natural Area in the near future. Trails could also be developed in the future at Long View Farm by Larimer County. Early right-of-way/easement coordination with Larimer County and Fort Collins will be important to minimize impacts to future trails, as well as to assess potential Section 4(f) status and impacts at the time of NEPA processing. Design modifications may be appropriate to avoid or minimize impacts to these properties when roadway improvements are proposed.
- The land along Redtail Grove Natural Area, where Fossil Creek goes through, needs to be monitored for fossils during construction.
- No Threatened or Endangered Species would be negatively impacted by future widening.

Concurrent with the US 287 EOS study, an access control plan was prepared for the City of Loveland and Larimer County from 29th Street to Carpenter Road. (An access control plan already exists for US 287 in Fort Collins from Carpenter Road north to Harmony Road.) Formal approval of this access control plan combined with the access control plan along US 287 in Fort Collins would provide access management tools for the entire US 287 EOS study area.



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Corridor Vision #2: SH 1

SH 1 from US 287 on the south to LCR 56 (MPO boundary) on the north.

Primary Investment Need: Improve Safety

Vision Statement

The vision for the SH 1 corridor is primarily to improve safety as well as increase mobility and maintain system quality. This corridor serves as a local facility, provides commuter access, and makes north-south connections within the Wellington/Fort Collins area. Future travel modes expected in this corridor include passenger vehicle, bus service, bicycle and pedestrian facilities. Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase, while freight volume will likely remain relatively constant. The communities along the corridor value transportation choices, connections to other areas, and safety. The area served by this corridor is primarily residential, including large lot residential, with a significant number of people living in Wellington but working and shopping in Fort Collins. Users of this corridor want to preserve the rural-residential character of the area and support the movement of commuters along the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Support commuter travel and mobility for residents by enhancing transit, TDM and bicycle/pedestrians options.
2. Provide for safe movement of all travel modes.

Strategies

1. Perform and implement studies that focus on improving safety, such as access management plans, speed studies and safety studies.
2. Implement appropriate TDM mechanisms.
3. Improve traffic flow and safety by constructing geometric and intersection improvements, such as auxiliary lanes.
4. Add/improve shoulders with consideration for bike lanes.
5. Initiate/expand transit service, coverage and frequencies and provide improved transit amenities.
6. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping, sign replacements and drainage improvements.



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Corridor Vision #3: I-25 Front Range

I-25 from WCR 38 (southern MPO boundary) to LCR 56 (northern MPO boundary), includes LCR 5 from US 34 to SH 14, LCR 3 from MPO southern boundary to Crossroads Blvd on the north, WCR 13 from south MPO boundary to SH 14 on the north, LCR 7/LCR 9e/Timberline Road from southern MPO boundary to Vine Drive following LCR 9e to Timberline (road is approximate).

Primary Investment Need: Increase Mobility

Vision Statement

The vision for the I-25 Front Range corridor is primarily to increase mobility as well as improve safety and maintain system quality. This multi-modal corridor includes I-25, an interstate facility on the National Trade Network which serves as the principal north-south facility through Colorado. The section of I-25 included in this corridor is one of CDOT's 7th Pot Strategic Corridors. The corridor also includes LCR 3, LCR 5, LCR 7, LCR 9e, WCR 13 and Timberline Road, all of which serve as off-system parallel arterials to I-25, providing for local access off I-25. A future transit connection to the Denver metropolitan area is also envisioned in this corridor. The corridor provides north-south connections throughout the North Front Range area (serving towns, cities and destinations within the corridor) as well as providing connections to the Denver metropolitan area and destinations outside of the state.

Future travel modes could include passenger vehicle, bus service, Bus Rapid Transit (BRT), truck freight, rail freight, bicycle and pedestrian facilities (off of mainline I-25), and aviation (Loveland/Fort Collins Airport). Transportation Demand Management (TDM) would likely be effective in this corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase significantly. Freight traffic in the corridor is primarily limited to the interstate facility. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, system preservation, and intermodal connections. They depend on manufacturing, high-tech industries, commercial activity, retail, and residential development for economic activity in the area. The Larimer County Events Complex and a Port of Entry are located within the corridor, contributing to the activity of the corridor. The area surrounding this corridor is transitioning from rural to suburban, and the corridor needs to support the movement of commuters, tourists, freight, farm-to-market products, and hazardous materials, and provide for long distance travel in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Increase travel reliability and improve traffic flow in order to support commuter travel, accommodate growth in freight transport and maintaining statewide transportation connections.
2. Reduce dependency on single occupancy vehicles by enhancing transit, TDM, and bicycle/pedestrian options.
3. Provide information to the traveling public and promote education to improve safe driving behavior.
4. Increase air travel availability.



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5. Deliver projects on time (7th Pot).

Strategies

1. Perform and implement studies (including the North I-25 Environmental Impact Statement) that focus on enhancing mobility, such as corridor optimization, access management plans and rail studies.
2. Promote ITS strategies, such as variable message signs, incident response, traveler information and traffic management.
3. Preserve right of way and construct additional lanes, or complete missing linkages, and improve and maintain the system of local roads connecting the north-south roadways in the corridor.
4. Improve mobility by constructing intersection and interchange improvements, such as traffic signals, auxiliary lanes, and medians.
5. Implement appropriate TDM mechanisms.
6. Provide for bicycle and pedestrian travel through improvements, such as bicycle/pedestrian paths, wider shoulders or designated bike lanes.
7. Expand transit service, coverage and frequencies and provide improved transit amenities and intermodal connections, including connections to private intercity and regional bus services.
8. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint, sign replacements, improved landscaping, noise barriers and drainage improvements.

References

North I-25 Environmental Impact Statement



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Project Summary

The Colorado Department of Transportation in conjunction with Federal Highway Administration and the Federal Transit Administration is conducting the North I-25 Environmental Impact Statement. The purpose of the project is to meet long-term travel needs between the Denver metropolitan area and the rapidly growing population centers along the I-25 corridor north to the Fort Collins-Wellington area. The project purpose can be explained through five major need categories. These are described below.

Improve safety - Over the last decade, the number of crashes along I-25 has increased, and a number of locations on I-25 currently experience less than expected safety performance. There is a need to reduce crashes on the portions of I-25 that have a high potential for crash reduction.

Improve mobility and accessibility – 2030 projections in the study area show an increase of 84 percent in households and more than 56 percent in employment over the 2000 levels. This growth will result in increases in travel demand throughout the study area. There is a need for transportation improvements to address 2030 transportation demand that balances mobility and accessibility along the I-25 corridor.

Replace Aging and Obsolete Highway Infrastructure - A number of structures along I-25 are currently structurally deficient or are expected to be deficient by 2030. Segments of pavement on I-25 are reaching the end of the pavement's life expectancy, and surface conditions are deteriorating rapidly. There is a need to replace the aging infrastructure along I-25.

Provide for modal alternatives and interrelationships - Modal alternatives are very limited in northern Colorado and between northern Colorado and the Denver metropolitan area. There is a need to increase the number of transportation choices and avoid improvements which would preclude future transportation options.

Economic Growth Demands - There is a need to accommodate transportation demands generated by population and employment growth to maintain a viable economic setting in northern Colorado.

Improvement Packages

Two packages of transportation improvements and the No-Action alternative are being evaluated in the North I-25 Draft EIS. These packages were developed through an alternatives development and evaluation process that considered over 50 different highway, transit, and travel demand management measures to address the project's purpose and need. The two improvement packages and the No-Action alternative are described below.

No-Action Alternative

The No-Action Alternative is a conservative estimate of safety improvements and maintenance requirements that would be necessary if a build alternative is not constructed. It is presented for comparison with the build alternatives in accordance with NEPA requirements. Figure 2 illustrates the No-Action alternative.



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Project Summary

Package A

Package A would add general purpose lanes to I-25, commuter rail along the west side of the study area and commuter bus along US 85 on the east side of the study area. Each of these elements is described briefly below and illustrated in Figure 2.

General-Purpose Lanes

Package A would add one additional general purpose lane from SH 14 to SH 66 for a six-lane cross section and from SH 52 to E-470 for an eight-lane cross section. North of SH 66 widening I-25 would include reconstructing the entire interstate cross section and rebuilding it to today's standards. This includes improving horizontal and vertical alignment, widening both the inside and outside shoulders and reconstructing aging interchanges and structures. South of SH 66, the interstate cross section has recently been rebuilt; the widening would generally occur within the median in those locations.

Commuter Rail

As part of Package A, commuter rail would be built from Downtown Fort Collins at Mason and Maple along the Burlington Northern Santa Fe right of way to FasTracks' Northwest Rail end-of-line at 1st Street and Terry in Longmont. In addition, a connecting line would be built extending north from the North Metro FasTracks end-of-line in Thornton, bending west into Longmont and joining with the main line at 23rd Street in Longmont.

The commuter rail service would run every 30 minutes during the AM and PM peak periods when demand is highest and every hour in the off peak periods. Service to Denver would travel through Longmont and along the North Metro rail line; a transfer would not be necessary. To reach Boulder, northern Colorado riders would transfer to the Northwest Rail line at the Sugar Mill station in Longmont.

Commuter Bus

Package A would also include a commuter bus service along US 85 connecting Greeley to Denver Union Station and Denver International Airport. This service would operate every 30 minutes in the AM and PM peak hours and every hour during the off peak periods.

Package B

Package B would add tolled express lanes and bus rapid transit to I-25. Each of these elements is described briefly below and illustrated in Figure 3.

Tolled Express Lanes

Package B would add one buffer-separated express lane in each direction along the entire corridor except between SH 60 and Harmony Road where two barrier-separated lanes would be added in each direction. The tolled express lanes would require a transponder for all vehicles. HOVs would travel for free while single-occupant vehicles would pay a toll that would vary by time of day. There would be no toll booths and no cash would be accepted. Congestion in tolled express lanes would be managed by pricing so that these lanes would be less congested than the general purpose lanes.



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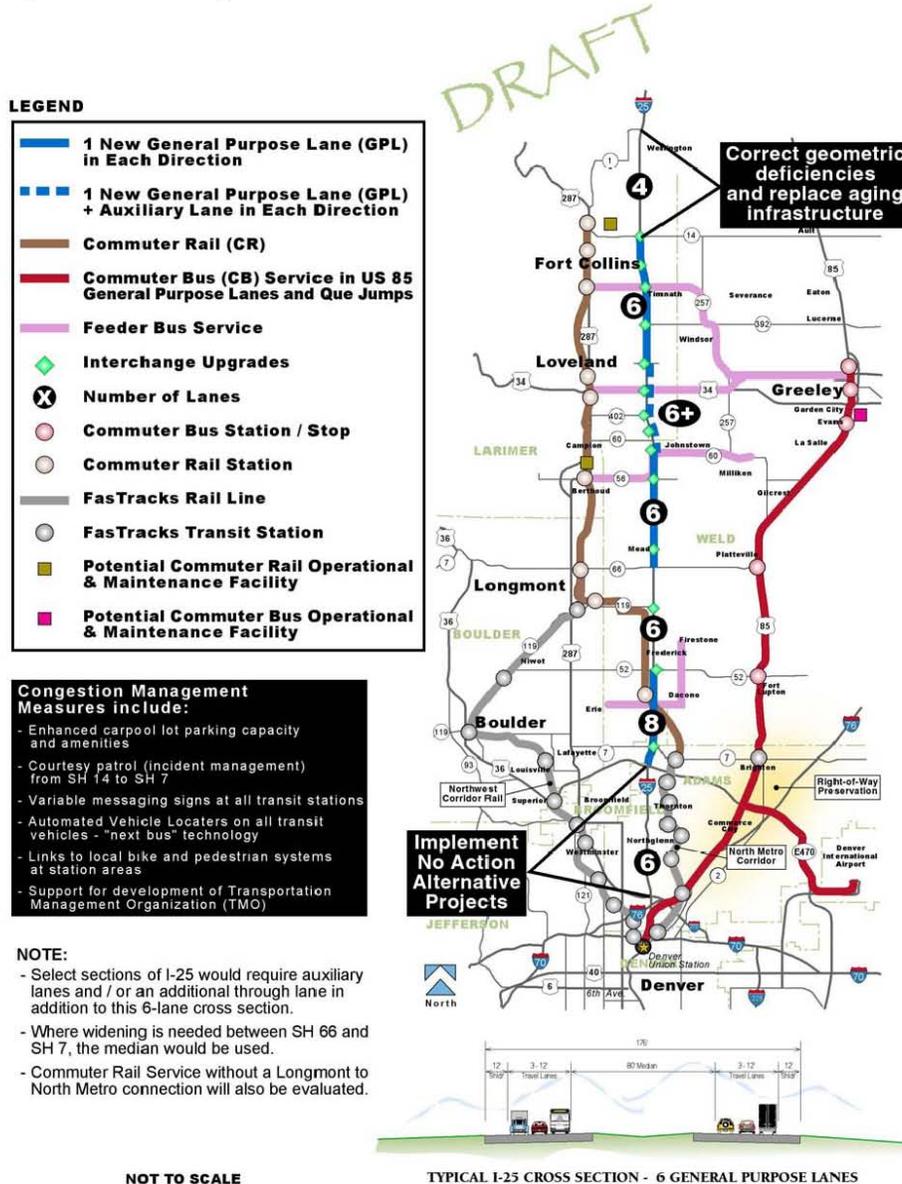
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Project Summary

Figure 2. Package A GP + CR + CB





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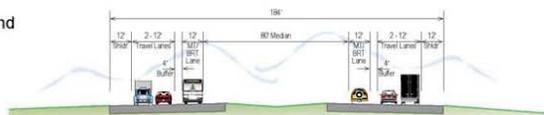
Figure 3. Package B

LEGEND

- 1 Buffer-Separated Tolled Express Lane (TEL) in Each Direction
- ▨ 2 Barrier-Separated Tolled Express Lanes (TEL) in Each Direction
- Bus Rapid Transit (BRT) Route (Uses TELs on I-25)
- Feeder Bus Service
- ◆ Interchange Upgrades
- X** Number of Lanes: General Purpose/Tolled Express Lanes
- Bus Rapid Transit Station
- FasTracks Rail Line
- FasTracks Transit Station
- Potential Commuter Bus Operational & Maintenance Facility

- Congestion Management Measures include:**
- Enhanced carpool lot parking capacity and amenities
 - Courtesy patrol (incident management) from SH 14 to SH 7
 - Variable messaging signs at all transit stations
 - Automated Vehicle Locators on all transit vehicles - "next bus" technology
 - Links to local bike and pedestrian systems at station areas
 - Support for development of Transportation Management Organization (TMO)

- NOTE:**
- A wider barrier and express lanes cross section is included between SH 60 and Harmony Road.
 - BRT stations located within an expanded median area.
 - Where widening is needed between SH 66 and SH 7, the median would be used.



NOT TO SCALE

TYPICAL I-25 CROSS SECTION - BUFFERED SEPARATED TOLLED EXPRESS LANES



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Project Summary

Bus Rapid Transit

Bus Rapid Transit services would operate from Fort Collins and Greeley to Denver Union Station, utilizing the express lanes along I-25. The service from Fort Collins would begin at South Transit Center, and operate along Harmony in mixed traffic until accessing I-25 at its interchange with Harmony Road. In addition, Bus Rapid Transit Service would operate from Fort Collins to Denver Union Station, using Harmony Road to access I-25. (Along Harmony Road, the bus would travel in shared general purpose lanes with mixed traffic.) During peak hours buses would depart every 20 minutes with two going to DUS and one going to DIA. During off-peak hours, buses would depart every thirty minutes: one to DUS and one to DIA.

Service from Greeley would begin at the 8th Street and 8th Avenue Transit Center in Downtown Greeley, and serve stops along US 34 in mixed traffic until turning north to serve the BRT station at Crossroads. The bus would operate in shared general purpose lanes along with mixed traffic along US 34. At Crossroads, it would access the I-25 Tolled Express lanes using a slip ramp, and serve the same stations along I-25 as the service from Fort Collins from Crossroads to Denver Union Station. During peak hours, buses would depart every twenty minutes from Greeley to DUS; during off-peak hours, buses would depart every thirty minutes. Stations along I-25 would be located in the median.

Draft EIS

The North I-25 Draft EIS is evaluating the benefits and impacts associated with the two build packages and comparing them to the No-Action alternative. All benefits and impacts will be reported in the Draft EIS. The Draft EIS is expected to be available for public review mid 2008. A Final EIS will be prepared after that which will identify a preferred alternative. The final federal agency decision will be documented in a Record of Decision.



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Corridor Vision #4: SH 257

SH 257 from SH 60 on the south to SH 14 on the north, which includes offset in Windsor, and WCR 17 from southern MPO boundary to Crossroads Boulevard.

Primary Investment Need: Maintain System Quality

Vision Statement

The vision for the SH 257 corridor is primarily to maintain system quality as well as increase mobility and improve safety. This corridor consists of SH 257, on the State Highway system and WCR 17, an off-system facility. Together, these roadways comprise a corridor that provides commuter access and makes north-south connections within the Milliken, Windsor and western Greeley areas. Future travel modes to be planned for in the corridor include passenger vehicle, bus service, bicycles and truck freight; Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain relatively constant. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. They depend on manufacturing, agriculture, and residential development for economic activity in the area. The area surrounding this corridor is transitioning from rural and agricultural to suburban, and the users of this corridor want to support the movement of commuters and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals / Objectives

1. Preserve the existing transportation system.
2. Increase travel reliability with a focus on supporting commuter travel and increased freight transport.
3. Reduce dependency on single occupancy vehicles by initiating TDM usage.

Strategies

1. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacement, improved striping paint and sign replacements.
2. Increase safety by implementing improvements, such as guardrails, railroad crossing devices, rumble strips and geometric modifications (i.e. flatten slopes and curves).
3. Improve mobility by constructing improvements, such as auxiliary lanes and wider shoulders and routing freight traffic out of downtown areas.
4. Preserve right of way for future widening.
5. Implement appropriate TDM mechanisms.
6. Promote ITS strategies, such as incident response, traveler information and variable message signs.
7. Perform and implement studies that focus on maintaining and enhancing the system quality such as corridor optimization plans or access control plans.



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Corridor Vision #5: Two Rivers Parkway

Two Rivers Parkway from MPO boundaries on south and north – approximately WCR 27, includes 65th Ave in Greeley from 54th St to SH 392, and 35th Ave in Greeley from US 85 on the south to O Street to on the north.

Primary Investment Need: Increase Mobility

Vision Statement

The vision for the SH 60/Two Rivers Parkway corridor is primarily to increase mobility as well as improve safety and maintain system quality. This corridor includes 65th and 35th Avenues in Greeley, which are off-system arterial roadways. The corridor provides local and regional access and makes north-south connections within the Greeley, Evans, and Milliken areas. It serves as a feeder to US 85, SH 392 and SH14 with connections to the Denver metropolitan area. Future travel modes include passenger vehicle and truck freight; Transportation Demand Management (TDM), park-n-ride lots, and bicycling could be effective in this corridor. The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain relatively constant. The communities along the corridor value high levels of mobility, connections to other areas, safety, and system preservation. They depend on commercial activity and residential development for economic activity in the area. The area surrounding the Two Rivers Parkway corridor is transitioning from rural to suburban, and the users of this corridor want to support the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Reduce traffic congestion and improve traffic flow to support commuter travel.
2. Reduce dependency on single occupancy vehicles by enhancing transit, TDM and bicycle/pedestrian options.

Strategies

1. Perform and implement studies that focus on enhancing mobility.
2. Preserve right of way and construct additional general purpose lanes and other connections that complete linkages.
3. Improve mobility by constructing improvements, such as auxiliary lanes and wider shoulders.
4. Expand transit service, coverage and frequencies, provide park-n-ride facilities, and provide improved transit amenities.
5. Implement appropriate TDM mechanisms.
6. Provide for bicycle and pedestrian travel through improvements, such as bicycle/pedestrian paths, wider shoulders or designated bike lanes.
7. Increase safety by implementing improvements, such as guardrails, railroad crossing devices, rumble strips and geometric modifications (i.e. flatten slopes and curves).



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Envisioning Transportation Solutions for Colorado's North Front Range



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8. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint and replacement signs.



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Corridor Vision #6: US 85 Urban

US 85 from WCR 48 on the south to WCR 70 on the north, includes US 85 Business Route through Greeley, and the UPRR rail line.

Primary Investment Need: Increase Mobility

Vision Statement

The vision for the US 85 Urban corridor is primarily to increase mobility as well as maintain system quality and improve safety. The section of US 85 south of US 34 is on the National Highway System, while the section to the north of US 34, as well as the US 85 Business Route, are State Highway facilities. The corridor also includes the Union Pacific Rail Road freight rail line. The corridor provides north-south connections within the Greeley, Evans and LaSalle areas, with connections out of the region to the Denver metropolitan area and Wyoming. Future travel modes to be planned for in the corridor include passenger vehicle, bus service, truck freight, and rail freight. Transportation Demand Management (TDM) could be effective in this corridor. The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. The section of this corridor in the NFR is predominately urban. The area depends on manufacturing, agriculture, commercial activity, and oil and gas for economic activity. The area surrounding this corridor is diverse and includes urban characteristics through the Greeley area, as well as rural and agricultural characteristics through other sections of the corridor. Users of the corridor want to support the movement of commuters, freight, farm-to-market products, and hazardous materials in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Support commuter travel by expanding transit usage and initiating TDM.
2. Increase travel reliability with a focus on supporting commuter travel and increased freight transport.

Strategies

1. Perform and implement studies that focus on enhancing mobility, such as corridor optimization and access management plans.
2. Improve mobility by constructing intersection and interchange improvements, such as traffic signals, auxiliary lanes and roadway improvements, such as medians, wider shoulders and bus pullouts.
3. Expand transit service, coverage and frequencies and provide improved transit amenities, including small park-n-ride lots with passenger amenities for people who may use transit, carpools, or vanpools.
4. Implement appropriate TDM mechanisms.



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5. Promote ITS strategies, such as incident response, traveler information and variable message signs.
6. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint and sign replacements.
7. Increase safety by implementing improvements such railroad crossing devices, rumble strips, geometric modifications and bicycle/pedestrian overpasses.

References

US 85 Access Control Plan

North I-25 Environmental Impact Statement



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Corridor Vision #7: SH 14 Urban

SH 14 from the eastern MPO boundary (approximately LCR 3) to LCR 19, includes Poudre River Trail through Fort Collins.

Primary Investment Need: Increase Mobility

Vision Statement

The vision for the SH 14 Urban corridor is primarily to increase mobility as well as maintain system quality and improve safety. This corridor serves as a National Highway System facility between US 287 and I-25. It is a primary connection between downtown Fort Collins and the I-25 corridor. Future travel modes include passenger vehicle, bus service, truck freight, and bicycle and pedestrian facilities. Transportation Demand Management (TDM) will likely be effective in this corridor. The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The community in this corridor values high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. This community depends on manufacturing and commercial activity for economic activity in the area. Users of this corridor want to enhance the urban character of the area, support the movement of commuters, freight and hazardous materials in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

The Poudre River Trail within this corridor segment is a portion of the larger trail that connects Fort Collins, Windsor, and Greeley. The segment within Fort Collins serves both recreational and commuter purposes for both bicyclists and pedestrians. The trail offers alternative modes of transportation as well as being an amenity to the community.

Note: This corridor is currently used as a connection for freight and travelers from I-25 to I-80.

Goals / Objectives

1. Increase travel reliability and improve mobility.
2. Accommodate growth in freight transport.
3. Reduce dependency on single occupancy vehicles by expanding transit and initiating TDM.

Strategies

1. Perform and implement studies that focus on enhancing mobility, such as corridor optimization and access management plans.
2. Improve mobility by constructing improvements, such as traffic signals, intersection improvements, auxiliary lanes, medians, wider shoulders and bus pullouts.
3. Expand transit service, coverage and frequencies and provide improved transit amenities and pedestrian connections to businesses along the frontage roads.
4. Implement appropriate TDM mechanisms.



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5. Maintain and improve the existing infrastructure through enhancements such as surface treatment, bridge repairs or replacements, improved striping paint and sign replacements.
6. Increase safety by implementing improvements such as railroad crossing devices, rumble strips, geometric modifications and bicycle/pedestrian overpasses.
7. Preserve right of way and construct additional general purpose lanes on SH 14 or parallel facilities.

References

Interstate 25/State Highway 14 Interchange Area Study
North I-25 Environmental Impact Statement



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Corridor Vision #8: Prospect Road

Prospect Road in Fort Collins from LCR 5 to US 287, includes Spring Creek Trail from the junction of the Poudre River to Horsetooth Reservoir.

Primary Investment Need: Increase Mobility

Vision Statement

The vision for the Prospect Road corridor is primarily to increase mobility as well as improve safety and maintain system quality. This corridor serves as a local off-system facility, makes east-west connections within the central Fort Collins area, and provides access to Colorado State University and I-25 with the new rest area located on the west side of I-25. Future travel modes include passenger vehicle, bus service, and bicycle and pedestrian facilities. Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain constant. The community along this corridor values high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. They depend on high-tech industry, commercial activity, and Colorado State University for economic activity in the area. Users of this corridor want to preserve the urban character of the area and the wetlands along the section of the corridor between I-25 and the Poudre River, and support the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Increase travel reliability and improve traffic flow.
2. Reduce dependency on single occupancy vehicles by enhancing transit, TDM, and bicycle/pedestrian options.

Strategies

1. Perform and implement studies that focus on enhancing mobility.
2. Improve mobility by constructing improvements, such as auxiliary lanes, intersection improvements, and wider shoulders.
3. Implement appropriate TDM mechanisms.
4. Expand transit service, coverage and frequencies and provide improved transit amenities.
5. Increase safety by implementing improvements such railroad crossing devices, rumble strips, guardrails and geometric modifications (i.e. flatten slopes and curves).
6. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint and sign replacements.
7. Preserve right of way and construct additional general purpose lanes.



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Corridor Vision #9: SH 392

SH 392 from US 85 to US 287, Harmony Road/WCR 74 from the eastern MPO boundary to LCR 17, and the Poudre River Trail through Windsor.

Primary Investment Need: Increase Mobility

Vision Statement

The Vision for the SH 392 corridor is primarily to increase mobility as well as maintain system quality and improve safety. This corridor serves as a local facility, provides commuter access, and makes east-west connections within the south Fort Collins, Windsor, Lucerne and Severance areas. SH 392 serves as Main Street through Windsor. Future travel modes to be planned for in the corridor include passenger vehicle, bus service, truck freight, and bicycle and pedestrian facilities. Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. They depend on manufacturing, high-tech industries, commercial activity, and agriculture for economic activity in the area. The area surrounding the western portion of the corridor is urban, while the areas surrounding the central and eastern portions of the corridor are transitioning from agricultural to suburban. Users of this corridor want to support the movement of commuters, freight, and farm-to-market products in and through the corridor while recognizing the environmental (including preservation and minimization/mitigation of impacts to protected public open lands/natural areas), economic and social needs of the surrounding area.

The Poudre River Trail within this corridor segment is a portion of the larger trail that connects Fort Collins, Windsor, and Greeley. The segment within Windsor serves both recreational and commuter purposes for both bicyclists and pedestrians. The trail offers alternative modes of transportation as well as being an amenity to the community.

Goals/Objectives

1. Reduce traffic congestion and improve traffic flow with a focus on commuter travel.
2. Reduce dependency on single occupancy vehicles by initiating transit services and TDM usage.
3. Preservation and minimization/mitigation of impacts to protected public open lands/natural areas

Strategies

1. Perform and implement studies that focus on enhancing mobility, such as State Highway 392 EOS, corridor optimization, and access management plans.
2. Improve mobility by constructing improvements, such as auxiliary lanes, intersection improvements, and wider shoulders.
3. Expand transit service, coverage and frequencies and provide improved transit amenities.



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4. Implement appropriate TDM mechanisms.
5. Promote ITS strategies, such as incident response, traveler information and variable message signs.
6. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint and sign replacements
7. Increase safety by implementing improvements such railroad crossing devices, rumble strips, guardrails and geometric modifications (i.e. flatten slopes and curves).
8. Preserve right of way and construct additional general purpose lanes on SH 392 or parallel facilities.

Reference:

SH 392 Environmental Assessment Overview Study
SH 392 Access Control Plan



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Corridor Vision #10: US 34 Urban

US 34 from eastern MPO boundary across the region to western MPO boundary, includes US 34 Business Route from eastern MPO boundary to US 34 and WCR 43 to the Greeley-Weld Airport, O Street/Crossroads Blvd from US 85 to I-25, WCR54/SH 402 from US 85 to LCR 17, and the Big Thompson bike trail through Loveland.

Primary Investment Need: Increase Mobility

Vision Statement

The Vision for the US 34 Urban corridor is primarily to increase mobility as well as maintain system quality and improve safety. This corridor includes US 34 (a National Highway System facility), the US 34 Business Route and SH 402, WCR 43 (local State Highway facilities), and the Crossroads/O Street and LCR 18/WCR 54 alignments (off-system arterials). Additionally, the corridor includes the Big Thompson bike trail through Loveland. Together, these facilities comprise a corridor that provides commuter access and makes east-west connections within the Loveland, Greeley, Evans, Johnstown and Windsor areas. Future travel modes to be planned for in the corridor could include passenger vehicle, bus service, bus rapid transit, truck freight, bicycle and pedestrian facilities, and aviation. Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. They depend on manufacturing, high-tech industry, agriculture, commercial activity, and residential development for economic activity in the area. The Larimer County Events Complex and the University of Northern Colorado are situated along this corridor, contributing to the activity in the corridor. While the majority of the area surrounding the corridor is transitioning from agricultural to suburban, sections of the corridor through Loveland and Greeley are urbanized. Users of this corridor want to support the movement of tourists, commuters, freight, and farm-to-market products in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Increase travel reliability and improve traffic flow.
2. Reduce dependency on single occupancy vehicles by enhancing transit and TDM usage.
3. Accommodate growth in freight transport and support recreational travel.



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Strategies

1. Perform and implement studies that focus on enhancing mobility.
2. Improve mobility by constructing improvements, such as auxiliary lanes, wider shoulders and new/improved intersections and interchanges.
3. Preserve right of way for future widening such for general purposes lanes and/or completing missing linkages.
4. Expand transit service, coverage and frequencies and provide improved transit amenities and pedestrian connections to transit services; and support modal connections between public and regional transit services and other modes.
5. Implement appropriate TDM mechanisms.
6. Promote ITS strategies, such as variable message signs, incident response, traveler information and traffic management.
7. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint and sign replacements.
8. Increase safety by implementing improvements, such as guardrails, rumble strips, and geometric modifications (i.e. flatten slopes and curves).

References

US 34 Corridor Optimization Plan and Access Control Plan
US 34 Business Route Environmental Assessment
US 34 Environmental Assessment/FONSI
North I-25 Environmental Impact Statement



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US 34 Corridor Optimization Plan

EXECUTIVE SUMMARY

Corridor Optimization is a relatively new procedure developed by the Colorado Department of Transportation (CDOT) to identify basic needs for selected highway corridors. The intent of the process is to conduct cursory-level analyses to determine the most effective means of serving future travel demands. The process was developed when the Major Investment Study process was eliminated as part of the Transportation Equity Act for the 21st Century (TEA-21). The procedure provides CDOT a method of evaluating corridors without the large financial commitment of a Major Investment Study to establish CDOT's vision of a corridor for purposes of planning.

The Corridor Optimization process was applied to a 25-mile segment of US 34 extending from I-25 east through the Town of Kersey. A separate and overlapping effort included the development of an Interim and Ultimate Access Control Plan (ACP) for the corridor which is also a significant step toward optimizing the operation of a or this particular corridor.

The development of the ACP began prior to that of the COP, but there was significant overlap in these efforts, which was beneficial to both plans. This close coordination allowed the results and findings of one effort to be considered in the development of the other. For details on the ACP, one should refer to the separate report documenting that specific process dated April 2003.

The development of the US 34 COP was a collaborative effort involving all of the local jurisdictions along or near the 25-mile segment of the highway. These included the City of Loveland, The Town of Johnstown, The Town of Windsor, Larimer County, the Town of Milliken, the City of Greeley, the City of Evans, the Town of Kersey, and Weld County.

The primary steps taken in conducting the US 34 COP were as follows:

- ◆ Identify the future transportation problem/issues along US34,
- ◆ Develop improvement alternatives and measures to address the problems/issues,
- ◆ Evaluate the effectiveness of each alternative relative to its cost and select preferred improvements and measure for inclusion in the COP, and
- ◆ Assemble the COP and develop a business plan.

The following Vision Statement was adopted to guide this effort:

Highway US 34 is the major east-west transportation facility within Northern Colorado. The corridor serves as an expressway connection between Kersey, I-25, Greeley, and Loveland as well as other adjacent communities. Much of the highway has been designed for high-speed traffic. However, historic and on-going growth within the region will continue to place increasing travel demand along the corridor. The Corridor Optimization Plan is a new effort to maintain proper planning to ensure that US 34 continues to function as a high-level expressway to maintain existing and future east-west mobility within the region.



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US 34 Corridor Optimization Plan

Several aspects of this planning should be explored including interchange locations, capacity improvements, alternative modes of transportation, travel demand management measures, appropriate Intelligent Transportation Systems (ITS) techniques, parallel facilities (arterial roads and service roads) and adjacent land uses. The US 34 Access Control Plan will be considered in this planning effort and incorporated into the final optimization plan. The Corridor Optimization planning will also identify the associated right-of-way needs for US 34. Each aspect has a potential role to ensure that the US 34 corridor continues to provide a high level of mobility while recognizing the environmental and social needs of the surrounding area.

Extensive analysis was conducted on the US 34 corridor. Between I-25 and US 85, traffic volumes along US 34 currently range from 21,000 vehicles per day (vpd) to 35,000 vpd. Year 2025 traffic projections indicate that these volumes would approximately double; more than 80,000 vpd are projected just east of I-25. The 20-year traffic forecasts will exceed the highway's capacity between I-25 and US 85 but not east of US 85. As such, there is no need to optimize the segment east of the US 85 interchange. Much of the traffic making use of US 34 will be commuter traffic between Greeley and Loveland as well as Greeley and Fort Collins. Within Greeley, the predominant highway user will be comprised of trips internal to the Greeley/Evans area.

An inventory of the existing transportation services and facilities shows the following:

- ◆ Local transit service within the Greeley/Evans area,
- ◆ Parallel roads to US 34 that could potentially be major arterial facilities in the future,
- ◆ A significant width of right-of-way (ROW) along most of the US 34 corridor.

A total of 17 alternatives were considered including:

- ◆ Widening US 34 to six lanes from I-25 to US 85,
- ◆ Widening US 34 to six lanes from I-25 to Business 34 (west end near SH 257),
- ◆ Establishing Crossroads Boulevard/"O" Street Connection as a major parallel facility (north of US 34),
- ◆ Establishing LCR 18/WCR 54 as a major parallel facility (south of US 34),
- ◆ Building parallel Collector/Service Roads,
- ◆ Building north-South connection via Two Rivers Parkway/Harmony Road,
- ◆ Building HOV Lanes
- ◆ Building north-South connection via WCR 13,
- ◆ Implementing advanced Signal Timing System for US 34,
- ◆ Constructing Interchanges at major cross-streets,
- ◆ Incorporating a bicycle facility along US 34,
- ◆ Providing Inter-City bus service between Greeley and Loveland as well as between Greeley and Fort Collins,
- ◆ Implementing employer Travel Demand Management measures,
- ◆ Providing Intra-Regional rail service along US 34,



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US 34 Corridor Optimization Plan

- ◆ Expanding the Van Pool Program,
- ◆ Expanding Greeley's public bus system,
- ◆ Reducing land use densities for adjacent development.

Each of these alternatives were evaluated relative to their effectiveness in either reducing traffic demand along US 34 or increasing the highway's capacity. Further, the effectiveness was compared against the estimated cost to ascertain the relative value of each alternative. The results of the analysis provided the major elements of the US 34 Corridor Optimization Plan. These are shown in Figure ES-1.

The US 34 COP also recognizes other measures that should will have a positive impact on US 34 travel and are supported by this plan. They include the following:

- ◆ Inter-City Transit Service
- ◆ Local Transit Service
- ◆ Employer Travel Demand Management
- ◆ Van pool services
- ◆ Land Use Decisions; reduced densities along US 34.

The implementation of the US 34 COP will require action from all involved jurisdictions. CDOT will not be able to implement all of the plan's elements since many are "off system." A business plan was developed to identify the appropriate lead agencies for each of the major components, their estimated costs, and potential funding sources.

The ultimate cross-section identified for US 34 includes six through lanes, a median wide enough to accommodate dual left turn lanes at intersections, auxiliary right-turn acceleration/deceleration lanes, and shoulders. A 185-foot ROW envelope should be preserved along the US 34 to accommodate these elements.

Preliminary environmental research was conducted. The following highlights resulted from this effort:

- ◆ Threatened and Endangered species may existing along some of the corridors considered for improvements.
- ◆ Surface waters systems (Big Thompson River and the Cache La Poudre River) must be considered; avoidance and mitigation measures will need to be explored.
- ◆ Oil and gas tanks/pumping stations will need to be investigated as to possible spills.
- ◆ Environmental Justice issues may be a concern in certain areas.
- ◆ Noise investigations may be necessary where there are improvements.
- ◆ Appropriate Storm Water Improvements are necessary.
- ◆ Historical buildings and irrigation canals need to be avoided.



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1.0 PURPOSE AND NEED

1.1 INTRODUCTION AND DESCRIPTION OF PROPOSED ACTION

The Federal Highway Administration (FHWA), in conjunction with the Colorado Department of Transportation (CDOT), initiated an Environmental Assessment (EA) for transportation improvements to United States (US) Business 34 between 71st Avenue and State Highway (SH) 257 in the City of Greeley, Colorado. The project boundaries (see Figure 1.1) are located entirely in Weld County.

In accordance with the National Environmental Policy Act of 1969 (NEPA), actions proposed by federal agencies or that receive federal funding must consider environmental and socioeconomic impacts. This EA evaluates the impacts of the proposed action(s) and documents avoidance, minimization, and mitigation measures.

US Business 34 is an east/west highway that begins on the eastern edge of Greeley, Colorado and ends just west of SH 257. The project area begins at 71st Avenue and ends at SH 257. This segment of the highway is approximately 4.2 miles in length and consists of a two-lane undivided highway with no turn lanes and minimal shoulder width. Major north/south streets along the highway are 71st Avenue, 83rd Avenue, and 95th Avenue. The posted speed limit is 55 miles per hour (mph) with a design speed of 60 mph. The CDOT right-of-way in this corridor is approximately 103 feet.

CDOT proposes to reconstruct US Business 34 between 71st Avenue and SH 257 as a four-lane highway. The four-lane improvements include a 16-foot median, 10-foot shoulders, and signals at 83rd Avenue and 95th Avenue. The design speed will be between 50 and 60 mph. The new right-of-way width will be 180 feet.

1.2 PURPOSE AND NEED FOR THE ACTION

The purpose of this project is to ensure that future travel demand projections on US Business 34 can be accommodated and improve mobility, safety, and access. CDOT aims to proactively build for future travel demands on this highway before mobility declines significantly.

The need to improve the roadway to meet future travel demand projections is illustrated by the following:

- Traffic increases on US Business 34 are projected by the North Front Range 2030 Regional Transportation Plan to occur at an estimated 2.4 percent annually or 60 percent in 25 years (NFRTP 2004).
- Greeley's population has been projected to grow 105 percent between 1998 and 2020 (City of Greeley 2002).
- Traffic projections by the North Front Range 2030 Regional Transportation Plan indicate the Level of Service (LOS) will degrade on US Business 34 from a current B and deteriorate to F without needed improvements.
- The project will provide traffic continuity by upgrading this two-lane highway segment to four-lanes and connecting with the existing four-lane highway on the eastern and western boundaries of the project.



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Purpose and Need

US Highway 34 Business Route
Environmental Assessment

1.3 TRAVEL DEMAND

Travel demand is calculated by identifying trip generation (sources of trips such as commute to work, shopping, home), distribution (where trips go), mode choice (automobile, bus, etc.), and traffic assignment (this information is used to generate trips on various highway networks). For this project, travel demand was forecast for the year 2030.

Level of Service

LOS is a qualitative measure describing the operational characteristics of a traffic stream, ranked from A (best) to F (worst). LOS is described in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. Highway LOS ratings are as follows:

- LOS A – Free flow operations
- LOS B – Reasonably free-flow operations
- LOS C – Noticeable traffic
- LOS D – Declining speeds and congestion beginning to form
- LOS E – Maximum service flow (full capacity)
- LOS F – Heavy congestion, significant delays, stop-and-go traffic

The factors used to determine LOS differ depending on the type of highway and intersection. For instance, an intersection LOS is based on vehicle seconds of delay, whereas highway LOS is generally based on a volume-over-capacity ratio. For two-lane highways, the percent of no-passing zones is also considered.

Average Daily Traffic

Current average daily traffic (ADT) volumes for this segment of US Business 34 were based on traffic counts taken in June 2004 and are shown in Table 1.1. The highway is currently designed to handle a total of 27,936 passenger cars per day for both east and west bound traffic. Traffic projections for 2030 identify ADT volumes that show significant increases over current volumes. The 2030 projections were determined based on the 2004 existing traffic data, The North Front Range 2030 Regional Transportation Plan, and Greeley Comprehensive Transportation Plan 2020. Projected 2030 ADT volumes are shown in Table 1.1.

Table 1.1
Existing 2004 and Projected 2030 ADT Volumes

Location	2004 ADT Volumes- East Bound	2030 ADT Projection- East Bound	2004 ADT Volumes- West Bound	2030 ADT Projection- West Bound
Between Promontory Circle and Promontory Parkway	6,450	18,810	8,380	24,620
Between Promontory Parkway and 95 th Avenue	6,670	19,750	8,610	25,280
Between 95 th Avenue and 83 rd Avenue	6,630	19,400	8,650	25,200
Between 83 rd Avenue and 77 th Avenue	6,020	17,700	8,640	25,640
Between 77 th Avenue and 71 st Avenue	5,960	17,830	8,860	26,020



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*US Highway 34 Business Route
Environmental Assessment*

Purpose and Need

Currently, this segment of US Business 34 operates at a LOS of A or B. However, without this capacity upgrade, by 2030 the LOS deteriorates to F. These increases in 2030 traffic are the result of a number of factors including local and regional population growth, residential and commercial development along the corridor, and local travel demands along this highway. In addition to these population and development factors, traffic forecasts for US Business 34 include North Front Range Transportation (NFRT) and Air Quality Planning Council (AQPC), and City of Greeley planning assumptions.

1.3.1 Accident History

A total of 34 accidents were documented by CDOT from 1997 to 2000 within the project area. These accidents resulted in 22 injuries; with no fatalities resulting from the injuries. The majority of the accidents (21) occurred during daylight hours.



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Corridor Vision #11: SH 60/ SH 56

SH 60 from Two Rivers Parkway to LCR 17 and SH 56 from WCR 17 to US 287.

Primary Investment Need: Increase Mobility

Vision Statement

The Vision for the SH 60/SH 56 corridor is primarily to increase mobility as well as maintain system quality and improve safety. This corridor includes SH 60 and SH 56, which are local facilities on the State Highway system. These facilities comprise a corridor that provides local area-wide access to higher classified facilities and makes east-west connections within the Johnstown, Milliken, Campion, and Berthoud areas. Future travel modes to be planned for in the corridor include passenger vehicle, bus service, and truck freight. Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. They depend on commercial activity and residential development for economic activity in the area. The area surrounding this corridor is transitioning from agricultural to suburban, and users of this corridor want to support the movement of commuters and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

1. Increase travel reliability and improve mobility, particularly for commuter travel.
2. Initiate TDM usage to reduce dependency on single occupancy vehicles.

Strategies

1. Improve mobility by constructing improvements, such as auxiliary lanes and wider shoulders.
2. Implement appropriate TDM mechanisms.
3. Promote ITS strategies, such as incident response, traveler information and variable message signs.
4. Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint and sign replacements.
5. Increase safety by implementing improvements, such as guardrails, railroad crossing devices, rumble strips and geometric modifications (i.e. flatten slopes and curves).
6. Implement studies such as the SH 60 Environmental Overview Study

References

SH 56 Access Control Plan, starting summer 2007
SH 60 Access Control Plan



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Corridor Vision #12: Rural River Trail Corridors

Various river trail corridors that include Big Thompson, Little Thompson, Cache la Poudre, and South Platte. This corridor includes the portions of the river trails, either existing or planned, that are outside of a municipal boundary.

Primary Investment Need: Increase Mobility

Vision Statement

The Vision for the Rural River Trails corridor is primarily to increase mobility as well as improve safety and maintain system quality. This corridor provides bicycle and pedestrian access in the rural areas of the region and primarily serves recreational travel. Future travel modes include bicycle and pedestrian facilities. Based on historic and anticipated demand, bicycle and pedestrian traffic volumes are expected to increase. The communities and County in this corridor values transportation choices and safety. Users of this corridor want to preserve the character of the area, support the movement of commuters and recreational travel in and through the corridor, and maintain regional connections of the trail system while recognizing the environmental, economic and social needs of the surrounding area.

Goals / Objectives

1. Increase travel reliability for commuter and recreational bicycle and pedestrian travel.
2. Initiate and/or increase TDM usage.

Strategies

1. Provide bicycle/pedestrian facilities and connections with other regional trails.
2. Implement appropriate TDM mechanisms to provide alternatives to single occupancy vehicles.
3. Coordinate with existing plans and studies.

References

Front Range Trail Study



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B. Corridor Tiering Process

The Regionally Significant Corridors (RSCs) have been grouped into tiers to identify the top priority corridors, and to focus the Congestion Management System (CMS), corridor visions, goals and strategies, and the public involvement effort. The TAC worked extensively to develop a series of measures upon which to base the corridor tiering. The five tiering measures that have been established include:

- ▶ Safety
- ▶ Congestion
- ▶ Accessibility
- ▶ Freight
- ▶ Public Opinion

The results of the tiering process are listed in the **Table 46**. Tier 1, Tier 2, and Tier 3 corridors are shown graphically on **Figures 52, 53, and 54**, respectively. The corridor tiers along with the corresponding corridor visions represent the vision plan for the NFR. Projects will be selected for the Transportation Improvement Program using the information included in each corridor’s vision along with the allocation of funding as described in **Chapter VIII**.

Table 46. RSC Tiers

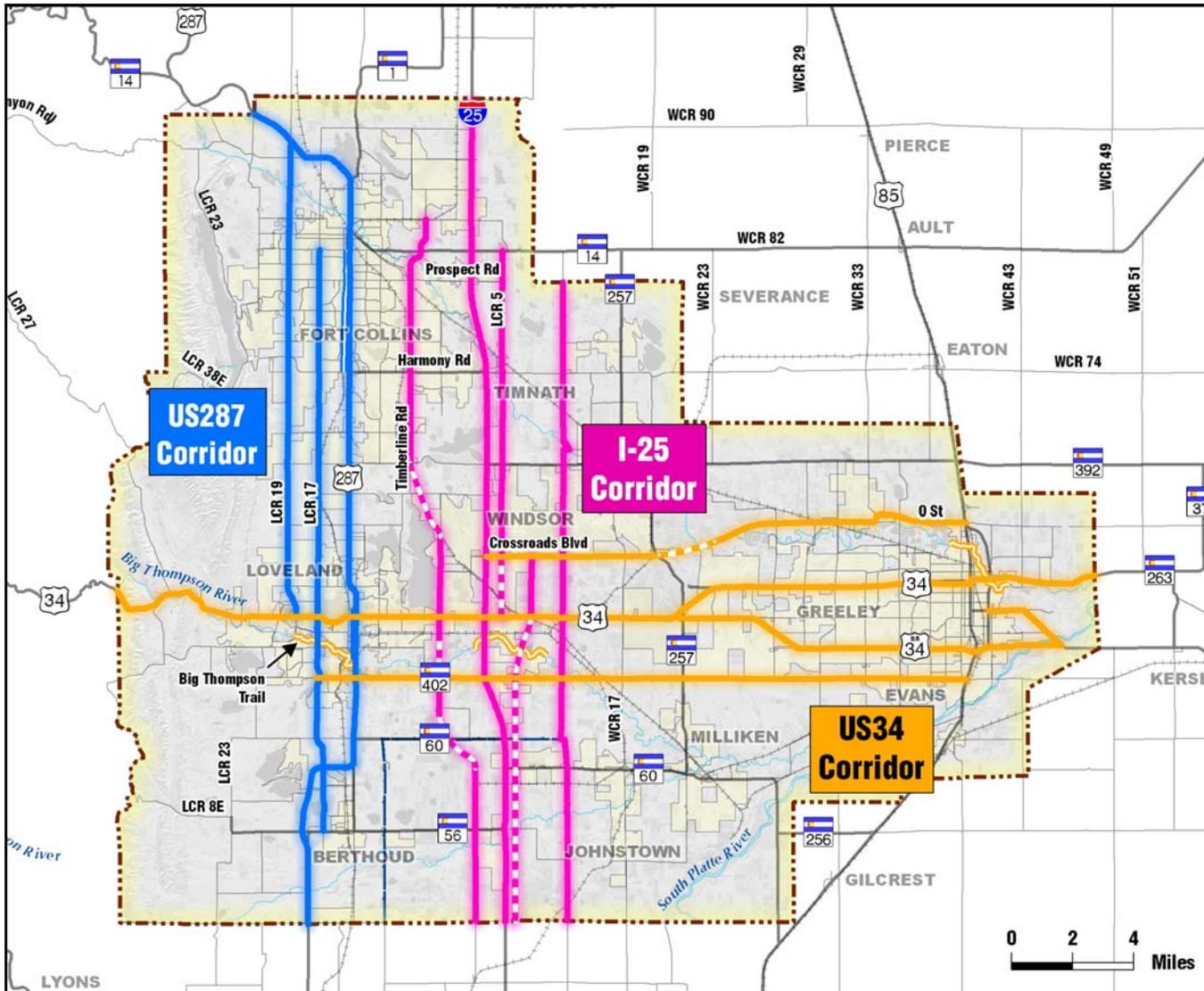
Tier 1	Tier 2	Tier 3
I-25 US 287 US 34	SH 14 US 85 Prospect	SH 392 SH 1 Two Rivers Pkwy SH 60/SH 56 SH 257

Corridor #12, the Rural River Trails Corridor, has not been included in the tiering process because it would be difficult to quantify the tiering measures in the manner that was used on the other 11 corridors. The rural portions of the river trails represent important linkages of the regional trail system.



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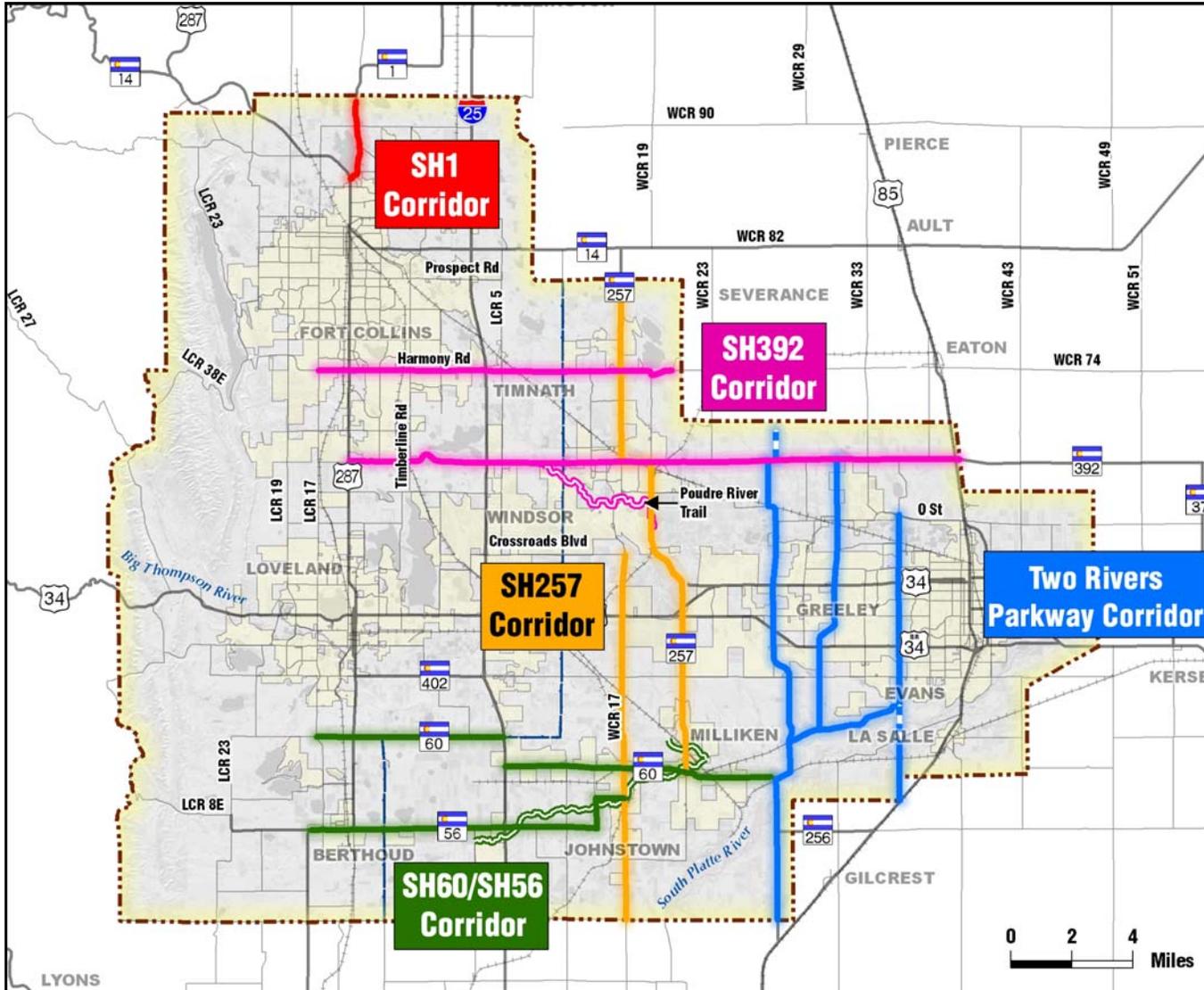
Figure 52. Tier 1 Corridors





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Figure 54. Tier 3 Corridors





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C. Transit Plan

Transit planning is conducted at the local, regional, and statewide levels. Local governments, responsible for operating and funding transit services, prepare plans to guide service development. The City of Fort Collins and City of Greeley have carried out strategic plans while the City of Loveland has a short-range transit plan in place and various rural studies have been conducted for Berthoud, North Larimer County, and the Johnstown/Milliken/Windsor area. At the regional level, transit is incorporated into the transportation planning process and some regional plans have been developed, such as the Regional Transit Framework. At the State level, transit has been actively considered as part of corridor studies including the North I-25 EIS and the US Highway 34 Optimization Plan and Business Route Environmental Assessment.

Transit services are evolving from primarily serving local trips largely taken by individuals who are transportation disadvantaged to becoming an integral part of the transportation network, serving an important role in regional travel and peak hour congestion mitigation. As such, the service needs are evolving and institutional structures will be required to effectively address both local and regional issues. The vision for transit includes effective transit service for local travel needs in growing cities and regional transit service between the cities of the region and to cities outside the region. Important destinations outside the region include Denver (along US 85 and I-25 corridors) and Boulder County – especially Longmont and Boulder.

Fort Collins Strategic Transit Plan: Expands transit services to more of a grid system, and expands services to cover more of the City. This plan takes a phased approach to service expansion and the City has implemented key portions.

Greeley Strategic Transit Plan: This plan identifies the development of the transit system over a ten-year period. Several alternatives were identified, and individual projects packaged that could be implemented incrementally. The plan has a significant focus on funding as Greeley's status as an urbanized area may result in loss of Federal Transit Administration funding for operating expenditures in either 2010 or 2020. The plan identifies a need for 3/8-cent sales tax to provide long-term stability for the transit system.

Rural Transit Plans: Some of the smaller systems have carried out transit studies to identify steps to implement services or expand services.

Public Transit/Human Services Transportation Coordination Plan: In this plan, the vision for regional services is extended to specialized transportation, job access services and rural transit services. The plan identifies the need for increased services between communities in the region and to other counties (Denver, Boulder) as well as to Cheyenne, Wyoming.

Corridor Studies: Transit figures predominantly in the alternatives considered for the north I-25 corridor, with transit services identified on I-25 and parallel corridors (Highways 85 and 287). A variety of transit alternatives were also considered in the US 34 Corridor Optimization Plan including intercity and local services.



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D. Aviation Plan

The preferred list of airport projects and their associated cost estimates were developed utilizing several sources of information:

Six Year Capital Improvement Program (CIP): Every airport in the state of Colorado that receives either Federal Aviation Administration (FAA) or Colorado Division of Aeronautics grant funds must develop and maintain a current six-year CIP list. That list contains major capital projects that the airport anticipates could take place over the six-year planning period. The CIP will show the year the project is anticipated to occur and further identifies anticipated funding sources that will be used to accomplish the project. Those funding sources may include local, FAA and Aeronautics Division funds.

CDOT Aeronautics and FAA staff work very closely with those airports that anticipate funding eligible projects with grant funds from the FAA. Since the FAA and CDOT Aeronautics are concerned with the statewide system of airports, it is very important that individual airport projects be properly planned and time to fit within the anticipated annual federal funding allocation.

FAA and CDOT Aeronautics staffs meet on a regular basis to evaluate the federal CIP program and make any adjustments as may be required. Therefore, projects shown on the individual airport CIP that identify FAA as a source of funding for the project have already been coordinated with FAA and CDOT Aeronautics for programming purposes.

The costs of the projects are estimates and are typically provided to airports through either their own staff, consulting firms, engineering firms, planning documents, FAA, CDOT-Aeronautics or other similar sources.

National Plan of Integrated Airport Systems (NPIAS): The NPIAS identifies more than 3,000 airports nationwide that are significant to the national air transportation system and thus are eligible to receive Federal grants under the Airport Improvement Program (AIP). The projects listed in this document include those that have been identified in the near term and have been programmed into individual airport CIP's as well as long term projects that have only been identified as a need but not programmed into the Federal grant process. The plan also includes cost estimates for the proposed future projects. The projects included in the NPIAS are intended to bring these airports up to current design standards and add capacity to congested airports. The NPIAS comprises all commercial service airports, all reliever airports and selected general aviation airports. The plan draws selectively from local, regional and State planning studies.

The State of Colorado is served by a system of 75 public-use airports. These 75 airports are divided into two general categories, commercial service and general aviation. The Statewide Airport Inventory and Implementation Plan was designed to assist in developing a Colorado Airport System that best meets the needs of Colorado's residents, economy and visitors. The study was designed to provide the Division of Aeronautics with information that enables them to identify projects that are most beneficial to the system, helping to direct limited funding to those airports and those projects that are of the highest priority to Colorado's airport system.



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The report accomplished several things, including the assignment of each airport to one of three functional levels of importance: Major, Intermediate or Minor. Once each airport was assigned a functional level, a series of benchmarks related to system performance measures were identified. These benchmarks were used to assess the adequacy of the existing system by determining its current ability to comply with or meet each of the benchmarks.

Airport Survey Information: As a part of the CDOT 2035 Statewide Transportation Plan Update process, a combination of written and verbal correspondences as well as actual site visits occurred requesting updated CIP information. The CIP list includes those projects that are anticipated to occur throughout the CDOT 2035 planning period. Letters were mailed out to each airport manager or representative that explained the CDOT plan update process. Included with each letter was a Capital Improvement Project Worksheet whereby airports could list their anticipated projects through the year 2035. Follow-up telephone calls as well as several additional site visits were conducted by Aeronautics Division staff to assist airports in gathering this information. Most airports responded to this information request. Some of the smaller airports with limited or no staff were not able to respond.

Joint Planning Conferences: One of the methods utilized by the CDOT-Aeronautics Division to assist in the development of Airport Capital Improvement Programs is to conduct what is known as a Joint Planning Conference (JPC). A JPC is a process whereby an airport invites tenants, users, elected officials, local citizens, special interests groups, and all other related groups to meet and discuss the future of the airport. CDOT-Aeronautics and FAA staff attend these meetings. The JPC allows an opportunity for all of the aviation community to contribute to the planning process of the airport. Many good ideas and suggestions are generated as a result of these meetings.

Table 47 provides the vision plan cost estimates for the needed improvements at the two airports in the North Front Range over the time period from 2008 to 2035. The total vision cost for aviation in the region is approximately \$70.91 million.

Table 47. Aviation Vision Plan

Airport	Amount (in millions)
Greeley-Weld County	\$14.05
Fort Collins/Loveland	\$56.86
Total	\$70.91



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VIII. FISCALLY CONSTRAINED PLAN

The Fiscally Constrained Plan is based on the tiered corridors developed in preceding chapter of this document. Resource allocation has been developed to project anticipated revenues which have been allocated to the three corridor tiers.

A. Funding Estimates

Estimates of available federal, state, and local funding for the plan period from 2008 to 2035 are shown in **Table 48**. Sources for these revenue projections include CDOT estimates (December 14, 2006), the 2007-2012 NFR Transportation Improvement Program (TIP), Transportation Impact Fees in the North Front Range MPO, 2002 Report, and local government estimates. All funding estimates are stated in constant (year 2008) dollars.

Table 48. Available Funding Sources (in millions)

Funding Category	Federal/State	Local	Total
RPP	\$21.6	\$0	\$21.6
Enhancement	\$13.1	\$3.3	\$16.4
CMAQ	\$43.7	\$10.6	\$54.3
STP Metro	\$59.8	\$12.4	\$72.2
Congestion Relief	\$10.2	\$0	\$10.2
Transit – Local (1)	\$145.1	\$224.1	\$369.2
Transit – Regional	\$2.9	\$2.9	\$5.8
Senate Bill 1 – Regional Transit	\$7.3	\$1.8	\$9.1
Strategic Projects (2)	\$238.0	\$0	\$238.0
Strategic Projects – Post 7 th Pot (3)	\$162.0	\$0	\$162.0
Local Impact Fees (4)	\$0	\$154.0	\$154.0
Other Local Funds (5)	\$0.0	\$163.0	\$163.0
Total	\$703.70	\$572.10	\$1,275.80

1. Based on TIP 2007-2012, and CASTA information on FTA 5309. Using FY08 constant dollar
2. Limited to Strategic Project - SP4028 - I-25 North Corridor.
3. Funding is not available until after 2025
4. Based on the Transportation Impact Fees in the NFRMPO, 2002 Report
5. These funds are used on specific projects

Note: All allocations are subject to change based on performance measures and economic conditions. CDOT and the MPO recognize that other funds may become available during the life of the 2035 RTP that include, but are not limited to, HB-1310, Authorization and Appropriation Earmarks, and FHWA discretionary programs.

Funding estimates total \$1,275.8 million for the 28-year plan period. Federal and State funds account for \$696.4 million, or 55% of the total. Local funding, including local government and private contributions, are projected to be \$570.3 million, or 45% of the total.

Following are brief descriptions of the funding categories listed in **Table 48**.



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- ▶ **Regional Priority Program (RPP):** A large portion of this federal/state funding comes from the federal Surface Transportation Program (STP) Federal Highway Administration funds and State Highway Users Tax Fund dollars that are allocated by CDOT to the North Front Range region. Federal guidelines on the use of these funds is relatively flexible in terms of project types including transit capital, however, the Colorado Transportation Commission has historically limited spending of these funds to projects on the State Highway System.
- ▶ **Enhancement:** Starting with Intermodal Surface Transportation Efficiency Act (ISTEA), and continuing with the Transportation Equity Act for the 21st Century (TEA-21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), 10% of Surface Transportation Program Federal Highway Administration funds are set aside for transportation enhancements. Transportation enhancements include bicycles and pedestrians, transportation aesthetics, historic preservation, and environmental mitigation. The CDOT Regions are responsible for the administration of this program, working with their Regional Planning Commissions.
- ▶ **Congestion Mitigation and Air Quality (CMAQ):** CMAQ funds are Federal Highway Administration funds aimed at improvements that will contribute to attainment or maintenance of national ambient air quality standards. Only the Fort Collins carbon monoxide maintenance area is eligible. CMAQ funds in the NFRMPO have been used to finance various projects in the Fort Collins maintenance area.
- ▶ **Surface Transportation Program Metro (STP Metro):** These Federal Highway Administration funds are sub-allocated to urbanized areas with populations over 200,000. The sub-allocation is based on each area's share of population in areas over 200,000 in the state. The funds may be used for any of the eligible purposes set forth in 23 U.S.C. 133(b), which includes a wide variety of programs. This is one of the most flexible federal funding sources available.
- ▶ **Congestion Relief:** This program was created by the Colorado Transportation Commission in October 2003 to address congestion issues that are present throughout the state of Colorado. The program started in FY 2006-07 and will be funded with 8 million dollars per year, statewide. The objective of the program is to show measurable improvements on congested State Highways. Eligible activities are access management, signal timing measures, ramp metering, construction of turning lanes and median separation, tolling/High Occupancy Toll (HOT) lane activities, incident management, ITS, TDM, and alternative modes measures.
- ▶ **Transit:** The federal portion of Transit funds consists of Federal Transit Administration (FTA) funding in various capital, operational, and maintenance funding programs, all of which are specifically targeted at transit service. Local funds in the transit category represent local matches for these federal funds, as well as continuation of the overmatch that the Cities of Fort Collins, Greeley, and Loveland have applied to bus systems within each of those cities. Regional transit funds are the Federal and local expenses of operating FoxTrot. Colorado Senate Bill 1 funds allocated for projects in the region (three buses for Greeley-Loveland transit service, construction of the Mason Corridor BRT Phase 1, and construction of the South Transit Center in Fort Collins) are reflected under Senate Bill 1 – Regional Transit. Senate Bill 1 funds are distributed on a statewide basis by the Colorado Transportation Commission.



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- ▶ **Strategic Projects – 7th Pot:** The Strategic Project program, commonly referred to as the “7th Pot,” is a funding program targeted by the Colorado Transportation Commission for investments in strategic corridors throughout the state. The North I-25 corridor through the North Front Range and Upper Front Range planning areas is one of those strategic corridors. These funds would be used for improvements in this corridor. In addition, 10% of the Strategic Project revenue is assigned to transit capital projects selected on a statewide basis.
- ▶ **Strategic Projects - Post 7th Pot:** The Strategic Projects – Post 7th pot program is the anticipated revenue from the continued generation of Strategic funds past 2025. The Transportation Commission recognizes that no strategic plan has been developed nor adopted by the Commission for use of these funds after the existing 7th Pot is completed. Project inclusion in the 2035 Plan utilizing these funds does not obligate the Commission nor the MPO to include these projects when the next strategic program is developed.
- ▶ **Local Impact Fees:** The local impact fee is based on the fees in place by member governments in the MPO. It is an approximation that potentially half of the collected revenue would go to regionally significant corridors. These funds must be spent in the applicable benefit district.
- ▶ **Other Local Funds:** The MPO Council felt that local funds other than impact fees that were being spent on regional transportation projects in the region should be taken into account. Local governments were contacted and these funds identified, though not all of the members expend such funds. The majority of dollars identified in this category are tied to specific highway projects and those ties were taken into account during the fiscal constraint process.

B. Restricted and Project Specific Funding

A significant portion of the \$1,266.7 million total resources described in the previous section is either restricted with a separate allocation process or it has already been committed to specific projects and programs. Thus these funds are not available to be allocated to new projects in the RTP. **Table 49** shows the funding limitations by funding category.



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Table 49. Funding Restrictions and Commitments (in millions)

Funding Source	Amount (in millions)	Restrictions
Flexible Funding		
Regional Priority Program (RPP)	\$21.6	None
STP Metro	\$72.2	Half used for MPO operations, remainder flexible
Post 7th Pot Strategic Projects	\$162.0	Only available after 2025
Restricted Funding Sources with Separate Processes		
Enhancement	\$16.4	Bicycle/pedestrian, historic rehabilitation, aesthetic projects only
CMAQ	\$54.3	Fort Collins only; non-capacity projects
Congestion Relief	\$10.2	Tier 1 non-capacity projects only (per Congestion Management System)
Project Specific Funding Sources		
Strategic Projects (7th Pot)	\$238.0	I-25 only (Tier 1)
Transit (FTA, SB-1, and Local funding)	\$384.1	Transit services to maintain current levels of service or complete specific projects
Local Impact Fees	\$154.0	Must be spent within applicable benefit district
Other Local Funds	\$163.0	Tied to specific projects
Total	\$1,275.8	

C. Resource Allocation

Resource Allocation is a process that reflects how the MPO Planning Council believes the limited funding that is available for regional transportation system improvements should be distributed in order to best achieve the vision and goals of the plan.

The NFRMPO Council used the above information to identify the amount of flexible funds, assign those funds to tiers (Regionally Significant Corridors) and then to further identify within each tier the split between highway capacity projects and all other projects.

The flexible funding comes from three sources, Regional Priorities Program, STP Metro, and Post 7th Pot Strategic Projects. Of these sources, half of the STP Metro is flexible and the Post 7th Pot Strategic Projects is not available until after 2025. A total of \$219.7 million in flexible funding is available to the region. The MPO Council chose to hold projects that are currently in the TIP, from FY 08 on, harmless. The remaining \$150.3 million in flexible funding is available for allocation to the corridor tiers, as shown in **Table 50**.



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Table 50. Flexible Funding

	Amount (in millions)
Regional Priorities Program	\$21.6
STP Metro (half)	\$36.1
Post 7 th Pot Strategic Projects	\$162.0
Total	\$219.7
TIP Project Costs (FY 08 to completion)	
US 34 Business major widening	\$2.5 ¹
SH 402 reconstruction & major widening	\$29.5
US 287 major widening	\$37.4
Remaining Available Flexible Funding	\$150.3

¹ Total project cost is \$35 million, \$32.5 million of which has been obligated prior to FY08

The NFRMPO Council then distributed the remaining flexible funds to each tier. Seventy percent was allocated to Tier 1, and 15% was allocated to Tier 2 and Tier 3. In order to complete air quality conformity determination, a fiscally constrained list of highway capacity projects is required. The Council further split the available flexible funding between highway capacity projects (75%) and other projects (25%). The resulting resource allocation matrix is shown in **Table 51**.

Table 51. Resource Allocation Matrix (in millions)

	Highway Capacity Projects (75%)	Other Projects (25%)	Total
Tier 1 (70%)	\$78.9	\$26.3	\$105.2
Tier 2 (15%)	\$16.9	\$5.6	\$22.5
Tier 3 (15%)	\$16.9	\$5.6	\$22.5
Total	\$112.7	\$37.6	\$150.3

Corridor #12, the Rural River Trails Corridor, was not included in the corridor tiering process. Although no flexible funding has been allocated to the rural river trails, they are important linkages in the regional trail system and are eligible to receive funding through other MPO funding sources.

D. Project Prioritization for Air Quality Conformity

A project prioritization process for the NFRMPO was originally developed in 1994 as a part of the first Regional Transportation Plan (RTP). The process has been refined in each successive regional planning process; however, the original intent and structure have largely been maintained. The 2035 RTP represents a significant departure from previous RTPs; the 2035 RTP is a corridor-based plan, rather than a project-based plan. The estimated available resources have been allocated to the corridor tiers rather than to specific projects, allowing flexibility in allocating monies as they become available. Under this corridor-based plan approach, the prioritization of projects will occur at the Transportation Improvement Program



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(TIP) level, rather than within the RTP. However, the NFRMPO is required to conduct an Air Quality Conformity Determination on the Fiscally Constrained RTP. Therefore, a project prioritization process for highway capacity projects (to be used in the air quality conformity) has been developed for this plan. This section provides the results of the project prioritization, and the *Project Prioritization Process for Air Quality Conformity* document is included in **Appendix D**.

For the purpose of the air quality conformity determination, Highway Capacity projects have been defined as follows:

Highway Capacity Projects

- ▶ New roadway segments
- ▶ Major widening (adding through lanes)
- ▶ New interchanges

All other project types will be prioritized at the TIP level. These “other projects” include the following:

Other Projects

- ▶ Bicycle/Pedestrian
- ▶ Other Highway (intersection or interchange improvements, safety/geometric improvements, operational improvements, shoulder widening, park-n-ride lots, freight related improvements, rail/highway grade crossing improvements)
- ▶ Local and Regional Transit (bus, BRT, rail)
- ▶ Transportation Demand Management
- ▶ Transportation Systems Management

Highway Capacity projects were submitted by the member governments and were then scored and ranked based on the Project Prioritization Process. The resource allocation matrix (**Table 51**) was used to draw the fiscally constrained lines for each of the three tiers, as shown in **Table 52**. The fiscally constrained Highway Capacity projects are shown on **Figure 55**.



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Table 52. Prioritized Highway Capacity Projects

Rank	Project Number	Submitting Agency	Highway	Limits	Description	Cost (millions)			Weighted Score	Cumulative Cost (millions)	
						Federal Funding Requested	Local Overmatch	Total Project Cost		Federal	Total
Tier 1 Corridors											
T1-1	8	Fort Collins	US 287	Harmony Road to Carpenter Rd	Widen 4 to 6 lanes	\$24.0	\$0.0	\$24.0	250.5	\$24.0	\$24.0
T1-2	27	Loveland	US 287	29th Street to 71st Street	Widen 4 to 6 lanes	\$5.0	\$2.2	\$7.2	235.5	\$29.0	\$31.2
T1-3	25	Loveland	US 34	Denver Avenue to I-25	Widen 4 to 6 lanes	\$9.5	\$4.1	\$13.5	235.5	\$38.5	\$44.7
T1-4	26	Loveland	US 34	I-25 to LCR 3	Widen 4 to 6 lanes	\$7.4	\$3.2	\$10.5	235.5	\$45.8	\$55.2
T1-5	21	Larimer County	County Line Rd	LCR 18 to LCR 26	Pave 2 lane section (new segment)	\$4.9	\$0.9	\$5.8	210	\$50.8	\$61.0
T1-6 ¹	7	Fort Collins	Timberline Rd	Vine Drive to Harmony Rd	Widen 4 to 6 lanes	\$33.6	\$4.4	\$38.0	202	\$84.4	\$99.0
T1-7	18	Larimer County	LCR 17	Loveland City Limits to FC City Limits	Widen 2 to 4 lanes	\$7.7	\$0.0	\$7.7	177.5	\$92.0	\$106.7
T1-8	19	Larimer County	LCR 17	LCR 34 to Scenic Drive	Widen 2 to 4 lanes	\$4.2	\$0.0	\$4.2	177.5	\$96.3	\$110.9
T1-9	20	Larimer County	LCR 17	US 287 Bypass to Loveland City Limits	Widen 2 to 4 lanes	\$11.2	\$0.0	\$11.2	177.5	\$107.4	\$122.1
T1-10	24	Loveland	Boyd Lake Ave	SH 402 to LCR 20E	Widen 2 to 4 lanes + new segment	\$10.0	\$0.0	\$10.0	163.5	\$117.4	
T1-11	22	Loveland	Taft Ave (LCR 17)	50th Street to 71st Street	Widen 2 to 4 lanes	\$5.2	\$0.0	\$5.2	162.5	\$122.6	\$137.3
T1-12	16	Larimer County	LCR 19	LCR 28 to FC City Limits	Widen 2 to 4 lanes	\$10.2	\$0.0	\$10.2	157	\$132.8	
T1-13	13	Greeley	O Street	35th Avenue to 59th Avenue	Widen 2 to 4 lanes	\$11.5	\$0.0	\$11.5	148	\$144.3	\$159.0
T1-14	17	Larimer County	LCR 18	I-25 to County Line Road	Widen 2 to 4 lanes	\$12.4	\$0.0	\$12.4	148	\$156.7	\$171.4
T1-15	14	Johnstown	I-25	at LCR 16 (Johnson's Corner)	Reconstruct Interchange (new ramps)	\$25.0	\$0.0	\$25.0	129	\$181.7	\$196.4
T1-16	23	Loveland	Boyd Lake Ave	37th Street to 71st Street	Widen 2 to 4 lanes	\$6.7	\$0.0	\$6.7	127.5	\$188.4	\$203.1

Tier 1: \$78.9M



The North Front Range 2035 Regional Transportation Plan

Envisioning Transportation Solutions for Colorado's North Front Range



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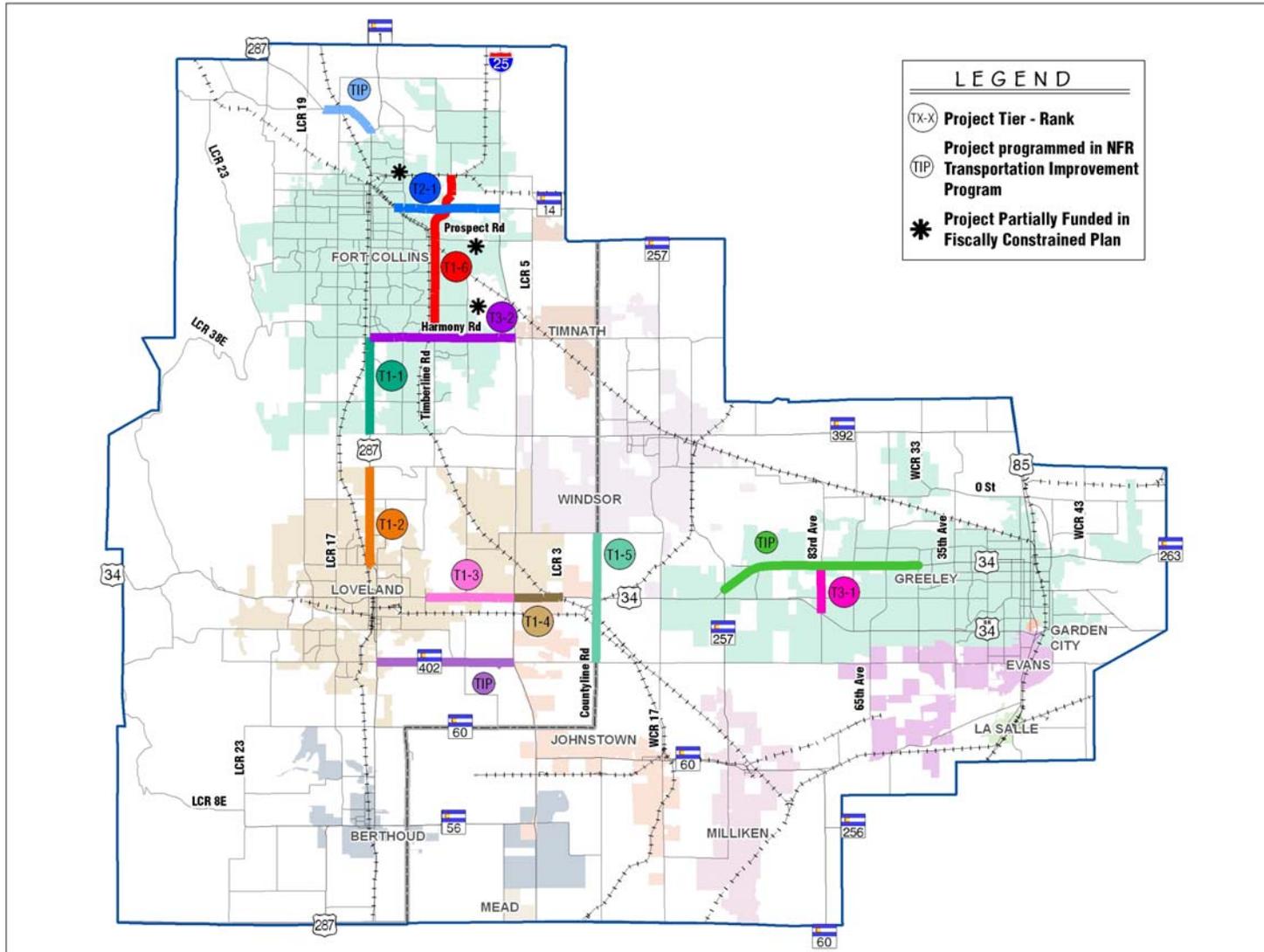
Rank	Project Number	Submitting Agency	Highway	Limits	Description	Cost (millions)			Weighted Score	Cumulative Cost (millions)		
						Federal Funding Requested	Local Overmatch	Total Project Cost		Federal	Total	
Tier 2 Corridors												
T2-1 ¹	5	Fort Collins	SH 14	I-25 to Riverside	Widen 4 to 6 lanes	\$25.5	\$0.0	\$25.5	222.5	\$25.5	\$25.5	Tier 2: \$16.9M
T2-2	6	Fort Collins	Prospect Rd	I-25 to Poudre River	Widen 2 to 4 lanes	\$7.0	\$0.0	\$7.0	218	\$32.5	\$32.5	
Tier 3 Corridors												
T3-1	12	Greeley	83rd Avenue	10th Street to US 34 Bypass	Widen 2 to 4 lanes	\$5.9	\$0.4	\$6.2	214.5	\$5.9	\$6.2	Tier 3: \$16.9M
T3-2 ¹	4	Fort Collins	Harmony Rd	I-25 to US 287	Widen 4 to 6 lanes	\$36.2	\$0.4	\$36.6	210	\$42.1	\$42.8	
T3-3	2	CDOT	SH 392	I-25 to 16th Street in Windsor	Widen 2 to 4 lanes	\$25.4	\$0.0	\$25.4	185.5	\$67.5	\$68.2	
T3-4	11	Greeley	59th/65th Ave	20th Street to US 34 Bypass	Widen 2 to 4 lanes	\$5.8	\$0.0	\$5.8	184	\$73.2	\$74.0	
T3-5	9	Greeley	59th Avenue	C Street to 4th Street	Widen 2 to 4 lanes	\$2.4	\$0.2	\$2.5	168	\$75.6	\$76.5	
T3-6	10	Greeley	65th Avenue	US 34 Bypass to 37th Street	Widen 2 to 4 lanes	\$3.9	\$0.1	\$4.0	157	\$79.5	\$80.5	
T3-7	15	Johnstown	SH 60	I-25 to CR 15	Widen 2 to 4 lanes	\$15.0	\$0.0	\$15.0	156	\$94.5	\$95.5	
T3-8	1	CDOT	SH 60	US 85 to Two Rivers Parkway	Widen 2 to 4 lanes	\$36.2	\$0.0	\$36.2	140	\$130.7	\$131.7	
T3-9	3	Fort Collins	Carpenter Rd	I-25 to US 287	Widen 2 to 4 lanes	\$28.0	\$0.0	\$28.0	134.5	\$158.7	\$159.7	

¹ Project partially funded within Fiscally Constrained Plan



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Figure 55. Fiscally Constrained Highway Capacity Projects





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E. CDOT Programs

This 2035 RTP supports the inclusion of projects in the NFR TIP and the Statewide Transportation Improvement Program selected from the programs listed below by processes involving statewide competition, program-specific applications, or by CDOT Region 4:

- ▶ **CDOT Surface Treatment Program** - The CDOT Surface Treatment Program identifies the remaining service life of the State Highway system to determine where the surface treatment funding should be used in meeting the Transportation Commission's goals. The Transportation Commission has set an objective of having 60% of the State Highway system rated as good or fair.
- ▶ **CDOT Bridge Program** - The CDOT Bridge Program identifies the condition of every bridge on the highway system to determine where bridge funding should be used. The Transportation Commission has set a goal to meet 100% of structural, functional, and maintenance needs of the structures on the State Highway system.
- ▶ **CDOT Rest Area Program** - The CDOT Rest Area Program identifies current rest areas that needed to be replaced, reconstructed, and maintained. Funding for construction and replacement of rest areas sunset in Fiscal Year 2004 when prioritized projects are expected to be completed.
- ▶ **CDOT Safety Program** - The CDOT Safety Program is aimed at meeting the Transportation Commission's goal to reduce motor vehicle crashes, injuries, and fatalities on the State Highway system. In addition, safety program objectives for sign replacement and roadway striping have been established.
- ▶ **CDOT Maintenance Program** - The CDOT Maintenance Program uses a process of grading maintenance levels of service on the State Highway system. The Transportation Commission has established specific grade levels as objectives for the various activities associated with the maintenance program.
- ▶ **CDOT Operations Program** - The CDOT Operations Program addresses the variety of administrative functions enabling CDOT to deliver its construction and maintenance programs. These include general support activities such as procurement services and human resource management, as well as program support activities such as transportation planning and roadway design.

In addition to these programs, federal discretionary programs such as Recreational Trails, the Transportation and Community and System Preservation, Access to Jobs/Reverse Commute, and various Federal Transit Administration grants can provide additional funding for specific transportation projects. Program and grant applicants should coordinate with the NFRMPO to ensure consistency with regional transportation plans and programs. Similarly, notification to CDOT is necessary to facilitate coordination between regional and statewide plans and programs. Consistency at the regional plan and Transportation Improvement Programs (TIP) level would be considered consistent with the statewide transportation plan, and enables the projects awarded grants under the discretionary programs to be interpreted as eligible for inclusion in the STIP.



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F. Transit Plan

A variety of Federal Transit Administration programs are used for funding transit services in the region. For some the funds are received and managed directly by the urbanized areas. Other programs are administered by CDOT through a competitive process and still other funds are competed for nationally. The \$148 million in Federal transit funds identified as resources represents the average amount received from a variety of programs over the last three years. The primary programs through which the region received ongoing funding are the:

- ▶ **FTA 5307 Urbanized Area Transit Program** – This formula program supports the provision of transit services in urbanized areas.
- ▶ **FTA 5310 Elderly and Individuals with Disabilities Program** – This program supports the purchase of vehicles for transportation of the elderly and individuals with disabilities. It is used by a variety of non-profit and public agencies.
- ▶ **FTA 5311 Non-urbanized Area Transit Program** – This program supports the provision of transit services in rural portions of the region.
- ▶ **FTA 5316 Job Access Reverse Commute Program** – This program supports alternative transportation oriented to providing job access for low-wage workers.
- ▶ **FTA 5317 New Freedom Program** – This program is for projects or services that exceed the ADA paratransit requirements. These projects or services support providing access to activities of daily living for people with disabilities.

As some are capital programs or may reflect discretionary funding, it is not unusual to have significant variation in the amount of funding received, especially when projects such as the Mason Corridor or maintenance and operations facility construction/expansion is included.

In addition, Colorado Senate Bill 1 money is now available for transit capital projects, awarded on a statewide competitive basis. Some SB 97-1 funding has been awarded to the region, and the funding for these specific projects has been identified as part of the available resources.

This 2035 RTP also supports the inclusion of projects in the NFR TIP and the Statewide Transportation Improvement Program selected from the programs listed below by processes involving national competition, program-specific applications, or by CDOT:

- ▶ **Colorado Senate Bill 1 Funds** – Three projects have been funded in the region: the purchase of transit coaches to be used to initiate service on US 34 between Greeley and Loveland and the construction of the BRT Phase I and a new South Transit Center to serve the Mason Corridor (\$300,000 for vehicles, \$5.6 million for the Mason Corridor BRT Phase 1, and \$7 million for the South Transit Center).
- ▶ **FTA 5309 Bus Discretionary Program** - This federal discretionary program covers both vehicles and capital facilities. Agencies providing transit service rely upon this program for the capital needed for routine bus replacements and for facility construction or expansion. A base level of funding from this program has been built into the estimations but when facilities are constructed the amount received from this source is likely to exceed the averages. The Town of Berthoud has been approved for funding from this program for an operations facility (\$300,000). The City of Fort Collins is applying for



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funding through this program to expand their existing maintenance and operations program (\$12 to \$15 million cost estimate).

- ▶ **FTA 5309(e) Small Starts Program** – The City of Fort Collins is applying for Small Starts funds for the construction of the Mason Corridor project (\$58 million). Local matching funds have been secured.

G. Aviation Plan

The constrained costs for aviation were developed for the airports in Colorado using very general assumptions and forecasts. Airports that receive entitlement money fell under the assumption that they will continue to receive entitlements through 2035 at the current level. In addition to the entitlements, forecasts were used to determine how much discretionary money an airport would receive. The discretionary money is all FAA dollars other than entitlement and any money the state might grant. The forecasts were derived from any projects in their five year CIP, any major projects anticipated outside the five year CIP, as well as looking at historic funding levels at that airport to help predict the possible level of funding over the next 28 years. Any contributions to the airport from the local communities were not included in these constrained costs. An estimated \$50 million will be available to the two airports in the North Front Range over the 28 year period. By no means do these constrained costs shown in **Table 53** guarantee that each airport will receive this amount through 2035.

Table 53. Fiscally Constrained Aviation Plan

Airport	Amount (in millions)
Greeley-Weld County	\$12
Fort Collins/Loveland	\$38
Total	\$50



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IX. CONGESTION MANAGEMENT PROCESS

A. Introduction

Federal requirements state that regions with more than 200,000 people, known as Transportation Management Areas (TMAs), must maintain a Congestion Management Process (CMP), formerly known as Congestion Management System (CMS), and use it to make informed transportation planning decisions. These requirements were introduced by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and were continued under the successor law, the Transportation Equity Act for the 21st Century (TEA-21). Whereas previous laws referred to this set of activities as a congestion management system (CMS), the most recent surface transportation authorization law, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), refers to a “congestion management process,” reflecting that the goal of the law is to utilize a process that is an integral component of metropolitan transportation planning.

FHWA defines a CMP as “a systematic transparent process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing mobility.” The purpose of the CMP is to define congested corridors in the region, develop strategies to mitigate the congestion, and provide a way to monitor the effectiveness of the strategies. The CMP is also intended to harness performance measures to direct funding toward projects and strategies that are most effective for addressing congestion. The CMP is intended to augment and be folded in to the overall metropolitan transportation planning process in the North Front Range.

FHWA requires that consideration be given first to strategies that reduce single occupancy vehicle (SOV) travel and improve the efficiency of the existing system. All other reasonable strategies must be analyzed before a capacity increase is proposed as a congestion management technique.

The FHWA regulations (23 CFR Part 450 Sec. 320) specify that an effective CMP should include:

- ▶ Methods to monitor and evaluate the performance of the multi-modal transportation system, identify the causes of reoccurring and nonrecurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implemented actions;
- ▶ Definition of objectives and performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies;
- ▶ Establishment of a program for data collection and system performance monitoring to define the extent and causes of congestion, to contribute in determining the causes of congestion, and to evaluate the efficiency and effectiveness of implemented actions;
- ▶ Identification and evaluation of the anticipated performance and benefits of both traditional and non-traditional congestion management strategies;



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- ▶ Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy; and
- ▶ Implementation of a process for periodic assessment of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures.

B. Background of NFRMPO CMS/CMP

The NFRMPO was designated a Transportation Management Agency (TMA) in 2002 as a result of data from the 2000 U.S. Census.

In 2004, FHWA accepted a Congestion Management Framework in lieu of a Congestion Management System, given the short time frame between the NFRMPO designation as a TMA and the publication of the 2030 Regional Transportation Plan (2030 RTP).

This Congestion Management Process is an expansion of the framework published in the 2030 RTP.

The CMP is fully integrated with the Regional Transportation Planning process. The identification and tiering of regionally significant corridors within the RTP is the system-wide process which identifies the corridors for congestion management. The NFRMPO Technical Advisory Committee and Planning Council have identified Tier One of the Regionally Significant Corridors (RSCs) to be the focus of the Congestion Management Process in the North Front Range. The Tier One RSCs include: I-25, US-34, and US-287 and their parallel facilities.

Congestion Management is included as a chapter in the Regional Transportation Plan to provide guidance of the Congestion Management Process and report on its performance.

The application and documentation of the Congestion Management Process will occur at the Transportation Improvement Program (TIP) level. NFRMPO will implement the CMP process as a prerequisite to new project entry into the TIP. For proposed projects located in the Tier one RSC, project sponsors are required demonstrate CMP conformity to the NFRMPO Technical Advisory Committee. Projects may not advance to the TIP without prior approval of the Demonstration of CMP conformity document, described herein. Annually, the NFRMPO will track performance measures and perform system monitoring of the CMP.

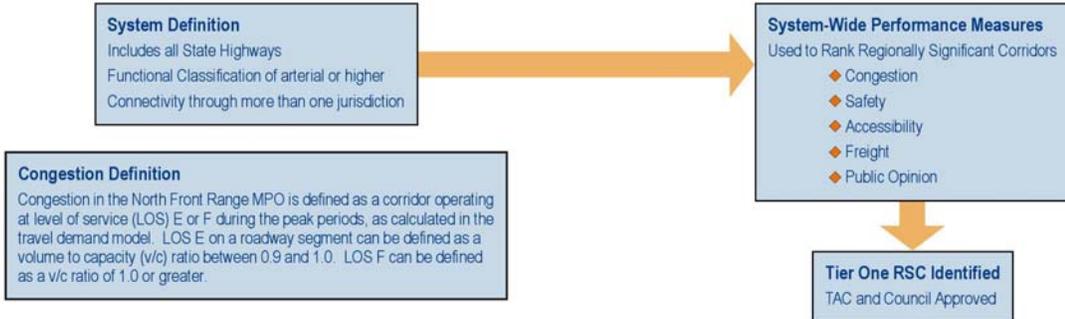
Figure 56 outlines the Congestion Management Process as it fits within the Regional Transportation Plan and Transportation Improvement Program (TIP).



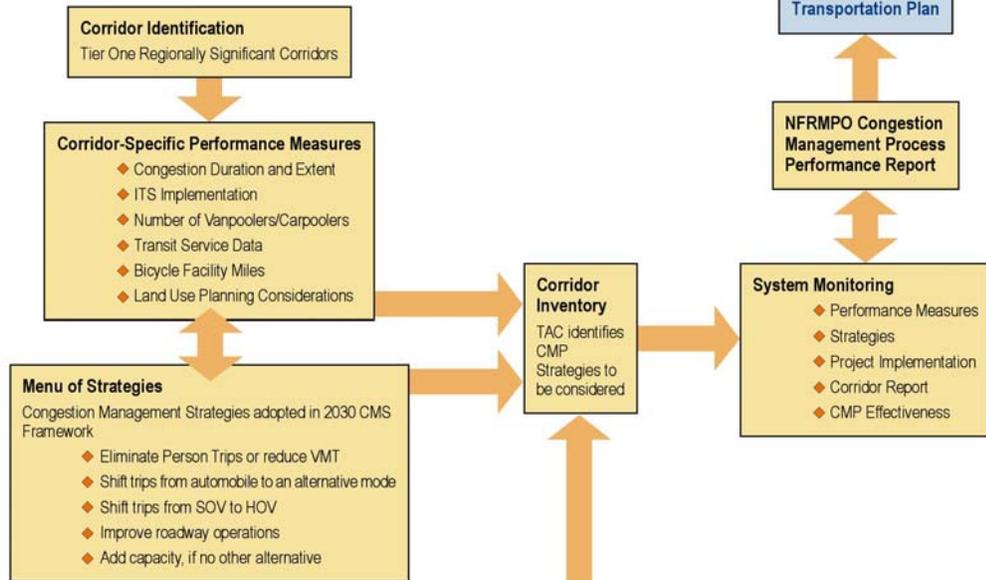
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Figure 56. Congestion Management Plan within MPO Planning Processes

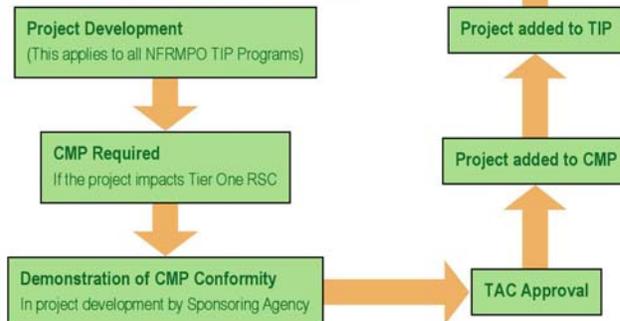
REGIONAL TRANSPORTATION PLAN (RTP) PROCESS



CONGESTION MANAGEMENT PROCESS (CMP)



**TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROCESS
CONGESTION MANAGEMENT PROJECTS**





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C. Congestion Management Process Overview

Congestion Definition

Congestion in the North Front Range MPO is defined as a corridor operating at level of service (LOS) E or F during the peak periods, as calculated in the travel demand model. LOS E on a roadway segment can be defined as a volume to capacity (v/c) ratio between 0.9 and 1.0. LOS F can be defined as a v/c ratio of 1.0 or greater.

Identification of Congested Corridors - RSC

The transportation network used for identifying congested corridors in the North Front Range is limited to the Regionally Significant Corridors. The MPO has gone through the process of identifying and ranking those corridors which are most significant to the region in order to focus the limited transportation resources. The facilities within the Tier One RSC are outlined in **Table 54** and shown in **Figure 57**.

Table 54. Tier 1 Corridors

Corridor Name	Parallel Facilities
I-25	I-25
	Timberline
	LCR 9e
	WCR 7
	LCR 5
	LCR 3
	WCR 13
US 287	BNSF Railway
	Mason Trail Corridor
	US 287
	LCR 19
	LCR 17
US 34	Big Thompson Trail
	Crossroads/O Street
	US 34
	US 34 Business
	SH 402



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Developing Performance Measures

Performance measures are outcomes of the CMP which can be tracked over time to assess CMP effectiveness. Decisions about performance measures have large implications on data collection. Data collection is a major expense in implementing a Congestion Management Process. Currently, in the NFRMPO, congestion funding is limited. Thus, a least-cost approach is presented below with room to grow into a more sophisticated process.

This NFRMPO CMP leverages existing data, which is routinely collected within the NFRMPO. The NFRMPO will be the responsible agency for updating and tracking CMP performance measure data. As the process matures, the performance measure dataset may grow to include other measures. The corridor-specific performance measures described herein are base measures of the NFR Congestion Management Process.

Because there are many aspects of congestion, many different performance measures have been implemented nationwide to meet the federal requirements. Many agencies are migrating away from traditional roadway measures, such as volume-to capacity ratios, to travel-time based measures. Many are also measuring travel conditions for transit, biking and walking, including whether these modes are available, how much the modes are used, and how the modes perform regarding the traveler experience. Regardless of what performance measures are chosen, they must meet the following criteria:

- ▶ Ability of the measure to track roadway congestion for the region overall, as well as for individual transportation facilities;
- ▶ Ability of the agency to collect data and track the measure;
- ▶ Ability of the measure to relate the data of traveler perceptions in a readily understandable way;
- ▶ Addresses different aspects of congestion that are important to users, such as non-reoccurring traffic congestion, impacts on freight movement, and the availability of alternative modes;

Performance measures for the NFR CMP are descriptive corridor-specific measures used to further evaluate congestion along Tier One RSCs. They include but are not limited to:

- ▶ Congestion Duration and Extent
- ▶ ITS Implementation
- ▶ Number of Vanpoolers/Carpoolers
- ▶ Transit Service Data
- ▶ Bicycle Facility Miles
- ▶ Land Use and Transportation Planning Considerations

These performance measures were selected as a baseline of transportation corridor performance because they reflect the existing congestion mitigation strategies employed in the NFRMPO. These performance measures are not intended to limit or define future congestion mitigation strategies.



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As this CMP develops, and congestion mitigation strategies are employed, this list of performance measures will grow to include data which is tailored to monitor specific congestion mitigation activities in each corridor.

Corridor-Specific Performance Measures

Congestion Duration and Extent

This measurement identifies the length of time over which a facility is congested, the portion of the transportation system that experiences congestion, or the total amount of delay time experienced by drivers. These measures include:

- ▶ **Travel Time Delay (PVHT-FVHT)** - The Travel Time Delay, or TTD, is the difference between peak period travel time and free-flow travel time. It reflects the aggregate delay experienced along the corridor.
- ▶ **Travel Time Index (PVHT/FVHT)** - The Travel Time Index, or TTI, is the ratio of peak period travel time to free-flow travel time. The TTI expresses the average amount of extra time it takes to travel in the peak hour relative to free-flow travel.
- ▶ **Lane Miles at LOS E** - Measures the aggregate amount of congesting roadway during peak hour travel
- ▶ **Lane Miles at LOS F** - Measures the aggregate amount of congested roadway during peak hour travel
- ▶ **Percent of Corridor Congested** - Measures the percentage of roadway within a corridor which functions at LOS E or LOS F during the peak hour

In the NFRMPO, these measures are derived from travel model output.

In addition to using travel model output to assess this performance measure, it is possible to use real-time data measured by Intelligent Transportation Systems (ITS). As the CMP matures within the NFR region, this measure may grow to include a real-time data. To date, the NFR local agencies are not yet uniformly equipped with connected Intelligent Transportation Systems (ITS) to implement real-time data as a performance measure.

ITS Implementation

This measure identifies the extent to which Intelligent Transportation Systems are implemented within a corridor. CDOT Region 4 published the Intelligent Transportation Systems (ITS) Plan in February 2004. This measure will identify where each corridor lies in the deployment strategy identified therein.

Three distinct project categories were identified within the ITS Plan: regional improvements, corridor improvements, and transit improvements.

For all three of these project categories, the ITS plan implemented a three-tiered deployment strategy, briefly described below. The tier which most accurately describes the predominant ITS activity within the corridor is the tier indicated as a performance measure in this process.



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- ▶ Tier One deploys high-priority regional ITS projects. Center-to-center communications coordination is of the highest priority. Transit systems which will facilitate real-time tracking of transit vehicles are considered Tier One ITS deployment activities, as is the establishment of institutional framework to support regional transit service.
- ▶ Tier Two deploys road side-systems that collect traffic and roadway condition and enhance capabilities of traffic operations centers.
- ▶ Tier Three deploys Dynamic Message Signs and Highway Advisory Radio to allow information dissemination to the field. This tier also includes the deployment of traveler information systems.

Number of Vanpoolers/Carpoolers

VanGO™ vanpooling service is available in the North Front Range region. It is operated by NFRMPO Smarttrips™. Along each corridor, the number of VanGO™ vans in operation is measured on an annual basis and tracked.

CarGO™ carpool matching services offered through NFRMPO Smarttrips™ measures the aggregate number of carpoolers in the North Front Range region. In the near future, the carpooling internet portal will have the ability to capture the number of carpoolers traveling in each regional corridor. This data will become a part of the CMP performance measures.

Transit Service Data

These performance measures are commonly used by transit agencies to measure the effectiveness of transit services. The number of passengers (ridership) and the availability of transit operations throughout the day (service hours) are descriptive measures of transit performance.

These measures include:

- ▶ Ridership (annual number of passengers)
- ▶ Annual Service Hours

Bicycle Facility Miles

This performance measure indicates the availability of bicycle facilities along the Regionally Significant Corridors. This measure provides an indication of the extent to which travelers are able to choose an alternative mode of travel to single occupancy vehicles. It is included in this process to balance the focus on roadway congestion by providing a way to evaluate the need for non-motorized facilities along congested corridors.

Land Use and Transportation Planning Considerations

This performance measure is designed to indicate and reference specific regional and local planning efforts along corridors which will impact transportation.

Land use planning measures include:

- ▶ Growth Management Areas
- ▶ Comprehensive Land Use Plans



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- ▶ Overlay Zoning Districts
- ▶ Transit Oriented Developments
- ▶ Congestion Pricing
- ▶ Impact Fees

Transportation Planning measures include:

- ▶ Access Management Plans
- ▶ Environmental Assessments
- ▶ Environmental Impact Statements
- ▶ Local Transportation Plans

Collecting Data

Within the Tier One RSC, CMP Performance Measure data is routinely collected by the NFRMPO or the NFR Local Agencies.

The NFRMPO Congestion Management Process Performance Report is updated annually. More information about performance measure data collection is available in the System Monitoring Section of this process.

Identifying and Evaluating Strategies

Congestion Management Strategies

After identifying the corridors that are or will be congested the next step in the CMP is for the NFRMPO and Local Agencies to examine each of these corridors individually and determine which congestion management strategy or strategies would best apply in each situation. Ultimately, this step involves developing an understanding of what the cause of the congestion is on each of the congested corridors in order to assign the appropriate congestion management measure(s) to each corridor.

Within the Corridor Summary of Performance Measures, NFRMPO TAC constructed a Corridor Inventory which identifies probable causes of congestion within CMP facilities.

The I-25 Corridor Inventory, **Tables 55 through 60**, shows where congestion is projected to occur along I-25 RSC and presents possible causes of congestion identified by the NFRMPO TAC. Traffic along the I-25 facility is characterized by short trip capacity and frontage roads which are not continuous.

The US 287 Corridor Inventory, **Tables 61 through 62**, shows where congestion is projected to occur along US-287 RSC and presents possible causes of congestion identified by the NFRMPO TAC.

The US 34 Corridor Inventory, **Tables 63 through 66**, shows where congestion is projected to occur along US-34 RSC and presents possible causes of congestion identified by the NFRMPO TAC.



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Table 55. I-25 Corridor Inventory - I-25

FACILITY WITHIN I-25 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO TRAVEL MODEL PEAK HOUR LOS (NO BUILD)				CAUSE OF CONGESTION IDENTIFIED BY TAC					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	Capacity	other (e.g., land use)
	SH-66										
I-25		E	F	F	F						
	SH-56										
I-25		E	F	F	F						
	SH-60										
I-25		E	F	F	F						
	SH-402										
I-25		E	F	F	F						
	US-34										
I-25		E	F	F	F						
	Crossroads										
I-25		E	F	F	F						
	SH-392										
I-25		A-D	F	F	F						
	Harmony										
I-25		A-D	A-D	E	F						
	Prospect										
I-25		A-D	A-D	A-D	E						
	SH-14/Mulberry										
I-25		A-D	A-D	A-D	A-D						
	NFRMPO boundary										



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Table 56. I-25 Corridor Inventory – WCR 13

FACILITY WITHIN I-25 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO TRAVEL MODEL PEAK HOUR LOS (NO BUILD)				CAUSE OF CONGESTION IDENTIFIED BY TAC					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	Operations	capacity	other (e.g., land use)
	SH-66										
WCR-13		A-D	A-D	A-D	A-D						
	SH-56										
WCR-13		A-D	A-D	A-D	A-D						
	SH-60										
WCR-13		A-D	A-D	A-D	A-D						
	SH-402										
WCR-13		A-D	A-D	A-D	A-D						
	US-34										
WCR-13		A-D	A-D	A-D	A-D						
	Crossroads										
WCR-13		A-D	A-D	A-D	A-D						
	SH-392										
WCR-13		A-D	A-D	A-D	A-D						
	Harmony										



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Table 57. I-25 Corridor Inventory - LCR 3

FACILITY WITHIN I-25 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO TRAVEL MODEL PEAK HOUR LOS (NO BUILD)				CAUSE OF CONGESTION IDENTIFIED BY TAC					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	Operations	capacity	other (e.g., land use)
LCR 3	Harmony	A-D	A-D	A-D	A-D						
LCR 3	SH-402	A-D	A-D	A-D	A-D						
LCR 3	US-34	A-D	A-D	A-D	A-D						
LCR 3	Crossroads	A-D	A-D	A-D	A-D						

Table 58. I-25 Corridor Inventory - LCR 5

FACILITY WITHIN I-25 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO TRAVEL MODEL PEAK HOUR LOS (NO BUILD)				CAUSE OF CONGESTION IDENTIFIED BY TAC					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	Operations	capacity	other (e.g., land use)
LCR 5	Crossroads	A-D	A-D	A-D	A-D						
LCR 5	SH-392	A-D	A-D	A-D	A-D						
LCR 5	Harmony	A-D	A-D	A-D	A-D						
LCR 5	Prospect	A-D	A-D	A-D	A-D						
LCR 5	SH-14/Mulberry	A-D	A-D	A-D	A-D						



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Table 59. I-25 Corridor Inventory – Timberline Road

FACILITY WITHIN I-25 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO TRAVEL MODEL PEAK HOUR LOS (NO BUILD)				CAUSE OF CONGESTION IDENTIFIED BY TAC					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	Operations	capacity	other (e.g., land use)
	SH-392										
Timberline		A-D	A-D	A-D	E						
	Harmony										
Timberline		A-D	A-D	E	E						
	Horsetooth										
Timberline		A-D	A-D	E	F						
	Drake										
Timberline		F	F	F	F						
	Prospect										
Timberline		E	F	F	F						
	SH-14/Mulberry										



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Table 60. US 287 Corridor Inventory - US 287

FACILITY WITHIN US-287 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS - NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
US-287	SH-56	A-D	A-D	F	F						
US-287	SH-60	A-D	A-D	A-D	A-D						
US-287	SH-402	A-D	A-D	A-D	A-D						
US-287	US-34	A-D	A-D	A-D	A-D						
US-287	57th Street	A-D	A-D	E	E						
US-287	SH-392	A-D	A-D	A-D	E						
US-287	Trilby Rd.	A-D	A-D	F	F						
US-287	Harmony	F	F	F	F						
US-287	Horsetooth	F	F	F	F						
US-287	Drake	E	E	F	F						
US-287	Prospect	E	E	E	F						
US-287	SH-14/Mulberry	A-D	A-D	A-D	A-D						
US-287	Vine	E	E	F	F						
US-287	Willox										



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Table 61. US 287 Corridor Inventory - LCR 17

FACILITY WITHIN US-287 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS - NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
LCR-17	SH-56	A-D	A-D	A-D	E						
LCR-17	SH-60	A-D	A-D	E	E						
LCR-17	SH-402	A-D	A-D	A-D	A-D						
LCR-17	US-34	A-D	A-D	A-D	A-D						
LCR-17	57th Street	A-D	A-D	A-D	F						
LCR-17	Trilby Rd.	A-D	A-D	A-D	E						
LCR-17	Harmony	F	F	F	F						
LCR-17	Horsetooth	A-D	A-D	A-D	A-D						
LCR-17	Drake	E	E	F	F						
LCR-17	Prospect	A-D	E	E	E						
LCR-17	SH-14/Mulberry	A-D	A-D	A-D	A-D						
LCR-17	Vine	A-D	A-D	A-D	A-D						
LCR-17	Wilcox	A-D	A-D	A-D	A-D						
LCR-17	US-287										



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Table 62. US 287 Corridor Inventory - LCR 19

FACILITY WITHIN US-287 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS - NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
LCR-19	SH-402	A-D	A-D	A-D	A-D						
LCR-19	US-34	A-D	A-D	A-D	A-D						
LCR-19	57th Street	A-D	A-D	E	E						
LCR-19	Trilby Rd.	A-D	A-D	A-D	A-D						
LCR-19	Harmony	A-D	A-D	E	E						
LCR-19	Horsetooth	A-D	A-D	A-D	A-D						
LCR-19	Drake	A-D	A-D	A-D	A-D						
LCR-19	Prospect	A-D	A-D	A-D	A-D						
LCR-19	SH-14/Mulberry	A-D	A-D	A-D	A-D						
LCR-19	Vine	A-D	A-D	A-D	A-D						
LCR-19	US-287										



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Table 63. US 34 Corridor Inventory – US 34

FACILITY WITHIN US-34 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS – NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
	CR-19/Wilson										
US-34		A-D	A-D	A-D	A-D						
	CR-17/Taft										
US-34		A-D	E	F	F						
	Garfield										
US-34		A-D	A-D	F	F						
	Lincoln										
US-34		E	F	F	F						
	Madison										
US-34		F	F	F	F						
	CR-9/Boyd Lake Ave.										
US-34		A-D	F	F	F						
	I-25										
US-34		F	F	F	F						
	CR-3										
US-34		A-D	F	F	F						
	WCR-13										
US-34		A-D	F	F	F						
	WCR-17										
US-34		A-D	F	F	F						
	SH-257										
US-34		A-D	F	F	F						
	WCR-25/95th Ave										
US-34		A-D	F	F	F						
	WCR-27/83rd Ave										
US-34		A-D	E	F	F						
	WCR-29/71st Ave										
US-34		A-D	E	F	F						



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FACILITY WITHIN US-34 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS – NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
	47th Ave										
US-34		E	F	F	F						
	WCR-35/35th Ave										
US-34		F	F	F	F						
	23rd Ave										
US-34		E	E	F	F						
	11th Ave										
US-34		A-D	A-D	A-D	A-D						
	US-85										



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Table 64. US 34 Corridor Inventory – US 34 Business

FACILITY WITHIN US-34 RSC	CROSS STREET FROM (ABOVE TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS - NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
	SH-257										
US-34 Business		A-D	E	F	F						
	WCR-25/95th Ave										
US-34 Business		A-D	F	F	F						
	WCR-27/83rd Ave										
US-34 Business		A-D	A-D	E	F						
	WCR-29/71st Ave										
US-34 Business		A-D	A-D	E	F						
	47th Ave										
US-34 Business		E	E	E	E						
	WCR-35/35th Ave										
US-34 Business		A-D	A-D	E	E						
	23rd Ave										
US-34 Business		A-D	A-D	A-D	A-D						
	11th Ave										



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Table 65. US 34 Corridor Inventory - O Street

FACILITY WITHIN US-34 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS - NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
	WCR-27/83rd Ave										
O Street		A-D	A-D	A-D	A-D						
	WCR-29/71st Ave										
O Street		A-D	A-D	A-D	A-D						
	35th Ave										
O Street		A-D	A-D	A-D	A-D						
	11th Ave										
O Street		A-D	A-D	A-D	A-D						
	US-85										



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Table 66. US 34 Corridor Inventory - SH 402

FACILITY WITHIN US-34 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS - NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
	CR-19/Wilson										
SH-402		A-D	A-D	A-D	A-D						
	CR-17/Taft										
SH-402		A-D	A-D	A-D	A-D						
	Lincoln										
SH-402		A-D	E	F	F						
	I-25										
SH-402		A-D	E	F	F						
	CR-3										
SH-402		A-D	A-D	A-D	A-D						
	WCR-13										
SH-402		A-D	A-D	A-D	A-D						
	WCR-17										
SH-402		A-D	A-D	A-D	E						
	SH-257										
SH-402		A-D	A-D	A-D	E						
	WCR-25/95th Ave										
SH-402		A-D	A-D	A-D	F						
	WCR-27/83rd Ave										
SH-402		A-D	A-D	E	F						
	65th Ave										
SH-402		A-D	A-D	E	F						
	47th Ave										
SH-402		A-D	A-D	A-D	A-D						
	35th Ave										
SH-402		A-D	A-D	A-D	E						
	23rd Ave										
SH-402		A-D	A-D	A-D	A-D						



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FACILITY WITHIN US-34 RSC	CROSS STREET FROM (ABOVE) TO (BELOW)	NFRMPO MODEL PEAK HOUR LOS - NO BUILD SCENARIO				CAUSE OF CONGESTION - CHECK ALL THAT APPLY					
		2005	2015	2025	2035	lack of parallel facilities	lack of other modes	need for HOV	operations	capacity	other (e.g., land use)
	17th Ave										
SH-402		A-D	A-D	A-D	A-D						
	11th Ave										
SH-402		E	E	E	F						
	US-85										



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The causes identified by TAC in the above tables relate to strategies, as shown in **Table 67**:

Table 67. Strategies to Address Specific Congestion Causes

Cause	Strategy
Lack of Parallel Facilities	Access Management
Lack of Other Modes	Alternative Travel Modes
Need for HOV	Travel Demand Management/Congestion Pricing
Operations	Operational Improvements
Capacity	Capacity
Other (Land Use)	Land Use Considerations

Menu of Congestion Management Strategies

The federal regulations specify that all reasonable congestion management strategies must be evaluated and deemed inappropriate or infeasible prior to considering a capacity increase as a congestion management measure.

Access Management

- ▶ Access control
- ▶ Frontage roads
- ▶ Median control

Alternative Travel Modes

- ▶ Transit fleet expansion
- ▶ Transit service expansion
- ▶ Traffic signal preemption for transit vehicles
- ▶ Transit information systems
- ▶ Bus only lanes
- ▶ New rail service
- ▶ Improved intermodal connections
- ▶ Improved/expanded bicycle/pedestrian network
- ▶ Bicycle storage systems

Travel Demand Management/Congestion Pricing

- ▶ Telecommuting
- ▶ Flextime/Compressed work week
- ▶ Preferential parking (for carpools and vanpools)
- ▶ Vanpool services



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- ▶ Parking fees
- ▶ Road user fees (toll lanes)
- ▶ Improved park-n-ride facilities
- ▶ HOV/HOT lanes
- ▶ Carpool services

Operational Improvements

- ▶ Intersection geometric improvements
- ▶ Intersection channelization
- ▶ Intersection turn restrictions
- ▶ Intersection signalization improvements
- ▶ Coordinated signal systems (ITS)
- ▶ Elimination of bottlenecks on freeways
- ▶ Ramp metering
- ▶ Incident management

Capacity Improvements

- ▶ Freeway lanes
- ▶ Arterial lanes

Land Use Considerations

- ▶ Adequate Public Facilities Regulations
- ▶ Impact Fees
- ▶ Land Use Regulations/Growth Management
- ▶ Land Use Plans

Documenting CMP Activities in the TIP

The NFRMPO Congestion Management Process is a prerequisite for project entry into the TIP. This prerequisite is only applicable to new TIP projects located within the Tier One regionally significant corridors.

Projects exempt from meeting this requirement are those which exist in the TIP or are in the NEPA planning process at the time of this publication. Exempt projects will be grandfathered into the CMP in conjunction with the adoption of the NFRMPO FY2008-20013 TIP.

The NFRMPO Council is the authoritative body which approves project entry into the CMP, and subsequently into the TIP.

The burden of demonstrating project conformity with the CMP belongs to the Project Sponsor.



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Demonstration of CMP Conformity

Project sponsors will present NFRMPO TAC with a document titled Demonstration of CMP Conformity which addresses the following requirements. In addition, project sponsors are encouraged to address the TAC prior to consideration for inclusion into the CMP and TIP. The Demonstration of CMP Conformity will be included in the TIP documentation for the NFRMPO.

The following activities are required of project sponsors in the Demonstration of CMP Conformity document:

- ▶ Project must be clearly defined
- ▶ Project funding need must be clearly identified by program(s) and year(s)
- ▶ Project sponsor must specify segment of corridor congested and discuss characteristics of that congestion. Discussion to include the following as appropriate:

Nature of the facility (classification)

Duration of the congestion

Congested Event type: Sporadic, Peak Hour, or Average Daily

Travel Time Index and Delay

Level of Service

- ▶ Project sponsor must identify an appropriate congestion management strategy based on the TAC inventory and Menu of CMP Strategies. This strategy must be coordinated with neighboring jurisdictions, where applicable.
- ▶ Project sponsor must demonstrate how the proposed project relates to the strategy or strategies chosen.
- ▶ Project sponsor must address corridor-specific performance measures in the project proposal. NFRMPO will assist Project Sponsors by creating travel model scenarios of proposed projects, as required.

System Monitoring: Documenting System Performance

The corridor-specific performance measures discussed in this process will be used by the NFRMPO to monitor performance of the CMP. NFRMPO is the agency responsible for collecting and tracking this data over time. An annual report, NFRMPO Congestion Management Process Performance Report, will be published with available data updates. NFRMPO began tracking the performance measures annually beginning in 2005.

Monitoring Tools

The Monitoring Tools for this CMP are the Corridor-Specific Performance Measures. **Table 68** summarizes the update frequency and data source for each measure.



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Table 68. Monitoring Tools

Performance Measure	Update Frequency	Data Source
Congestion Duration and Extent	Every four years with RTP	NFRMPO Travel Model
ITS Implementation	Annually	NFRMPO Local Agencies
Number of Vanpoolers/Carpoolers	Annually	NFRMPO Smarttrips
Transit Service Data	Annually	Local Transit Agencies
Bicycle Facility Miles	Annually	NFRMPO Local Agencies
Land Use and Transportation Planning Considerations	Annually	NFRMPO Local Agencies

NFRMPO Congestion Management Process Performance Report

The NFRMPO will publish an annual Congestion Management Process Performance Report at the close of each federal fiscal year. This report will:

- ▶ Describe the CMP
- ▶ Describe and explain project awards for the past fiscal year
- ▶ Assess corridor performance
- ▶ Describe project implementation
- ▶ Evaluate project effectiveness
- ▶ Outline TAC recommendations for improvements to the process

Next Steps

Refinements to the NFRMPO Congestion Management Process are anticipated. As the Local Agencies grow accustomed to working within the CMP, the process may be expanded to include new performance measures, strategies for mitigating congestion, new agencies, or new funding sources, such as a Regional Transportation Authority.

Another anticipated change to the NFRMPO CMP stems from proposed changes to the Federal Ambient Air Quality Standards. The NFRMPO is currently in a deferred status for ozone compliance through an Early Action Compact, and a maintenance status for carbon monoxide air quality compliance. If the NFRMPO is designated as an ozone or carbon monoxide non-attainment area, the federal regulation prohibits projects that increase capacity for single occupant vehicles (SOVs) unless the project emerges from a CMP. In these cases, the regulation requires that the CMP provide an appropriate analysis of all reasonable strategies for the congested corridor before giving consideration to a project which increases capacity. This prohibition in the federal regulation will impact all TIP programs.

Annually, the NFRMPO TAC will revise this process to make it more efficiently and effectively achieve the goal of mitigating congestion in the North Front Range.



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D. CMP Corridor Summaries

Corridor Summary of Performance Measures: I-25

Length of corridor

The I-25 Corridor includes approximately 385 lane miles of roadway, as shown in **Table 69**.

Table 69. I-25 Corridor Length

Included Facilities	Lane Miles
I-25 (includes frontage roads)	251.6
Timberline	21.3
LCR 9e	9.48
WCR 7	18.72
LCR 5	20
LCR 3	4.1
WCR 13	60.2
Total	385

Congestion Duration and Extent

Table 70 shows the congestion duration and extent performance measures which are mapped on **Figure 58**. For the 2005 model, both daily and peak period congestion are tracked as performance measures. However, the level of service categorization shown on the map is based on peak period only.

To show how the corridor is modeled to congest over time, the 2035 peak period no-build model scenario results are also shown in **Table 70**. It should be noted that using a no-build scenario does not always create realistic results in smaller areas of the region. This is due to significant levels of congestion in the forecast year without any improvements to the roadway system.

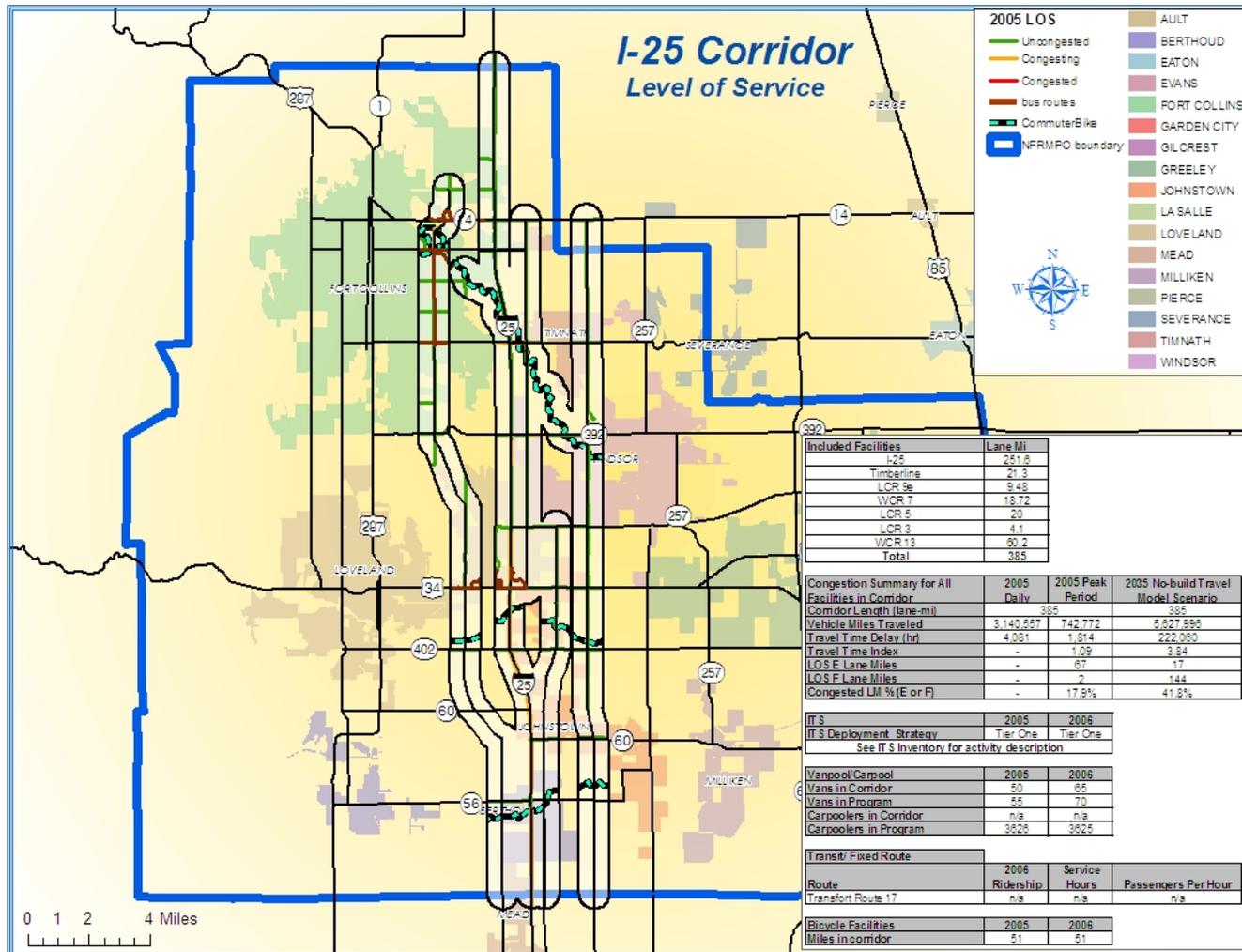
Table 70. I-25 Corridor Congestion Duration and Extent

Congestion Summary for All Facilities in Corridor	2005 Daily	2005 Peak Period	2035 No-build Travel Model Scenario
Corridor Length (lane-mi)	385		385
Vehicle Miles Traveled	3,140,557	742,772	5,627,996
Travel Time Delay (hr)	4,081	1,814	222,060
Travel Time Index	-	1.09	3.84
LOS E Lane Miles	-	67	17
LOS F Lane Miles	-	2	144
Congested LM % (E or F)	-	17.9%	41.8%



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Figure 58. I-25 Corridor Level of Service





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ITS Implementation

This measurement identifies the extent to which Intelligent Transportation Systems are implemented within a corridor. CDOT Region 4 published a corridor-based ITS Plan in February 2004. The I-25 Corridor was prioritized by this plan as the first-ranked corridor for ITS implementation in the region.

CDOT has design 95% complete of the fiber-optic ITS backbone which will extend the length of I-25 into the NFR region. This backbone is vital to Tier One ITS implementation in the NFR region. Discussions are underway to identify funding sources and partners for constructing this backbone.

The ITS activities within this corridor are predominantly Tier One Implementation Strategies, as shown in **Table 71**.

Table 71. I-25 Corridor ITS Activities

Device Type	Agency	Location
Dynamic Message Signs (DMS)	CDOT	I-25, MM 237, North of SH 52
		I-25, MM 239, South of SH 119-Del Camino
		I-25, MM 244, North of SH 66-Platteville
		I-25, MM 251, North of SH 56-Berthoud
		I-25, MM 253, North of SH 60
		I-25, MM 255, North of SH 402
		I-25, MM 256, North of SH 402
		I-25, MM 264, South of Harmony Road-Fort Collins
Highway Advisory Radio (HAR)	CDOT	I-25, MM 247, Between SH 66 and SH 56
Weigh-In-Motion	CDOT	I-25, MM 269, North of Prospect Road
		I-25, MM 270, North of Prospect Road
Weather Station	CDOT	I-25, MM 241, North of SH 119-Del Camino
		I-25 MM 251, North of SH 56
	Fort Collins	Timberline Road at Carpenter Road (LCR 32)
		Timberline Road at Poudre River
Automatic Traffic Recorder	CDOT	I-25, South of US 34
		I-25, North of Fort Collins
	Fort Collins	Timberline Road North of Harmony Road
		Timberline Road North of Horsetooth Road
Video Surveillance	Loveland	I-25/Crossroads Blvd.
		US 34/I-25 Interchange
		US 34/Centerra
		Centerra/Sky Pond
	Fort Collins	Centerra/Kendal Parkway
		Timberline Road at Prospect Road
		Timberline Road at Drake Road



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Number of Carpoolers/Vanpoolers

VanGO™ vanpooling service is available in the North Front Range region. It is operated by NFRMPO Smarttrips™. Along each corridor, the number of VanGO™ vans in operation can be measured on an annual basis and tracked, as shown in **Table 72**.

Table 72. I-25 Corridor Vanpool/Carpool

Vanpool/Carpool	2005	2006
Vans in Corridor	50	65
Vans in Program	55	70
Carpoolers in Corridor	n/a	n/a
Carpoolers in Program	3626	3625

CarGO™ carpool matching services offered through NFRMPO Smarttrips™ measures the aggregate number of carpoolers in the North Front Range region. In the near future, the carpooling internet portal will have the ability to capture the number of carpoolers traveling in each regional corridor. This data will become a part of the CMP performance measures.

Transit Service Data

These performance measures are commonly used by transit agencies to measure the effectiveness of transit services. The number of passengers (ridership) and the availability of transit operations throughout the day (service hours) are descriptive measures of transit performance.

In 2005, transit service did not operate along the I-25 RSC facilities. Transfort initiated a new bus route in the corridor along Timberline road in 2007.

Bicycle Facility Miles

This performance measure indicates the availability of bicycle trails along the Regionally Significant Corridors. This measure provides an indication of the extent to which travelers are able to choose an alternative mode of travel to single occupancy vehicles. It is included in this process to balance the focus on roadway congestion by providing a way to evaluate the need for non-motorized facilities along congested corridors.

In 2005, there were 51 miles of commuter bike lanes within a ¼ mile buffer along the I-25 RSC. Pedestrian facility information is not available for 2005.

Land Use and Transportation Planning Considerations

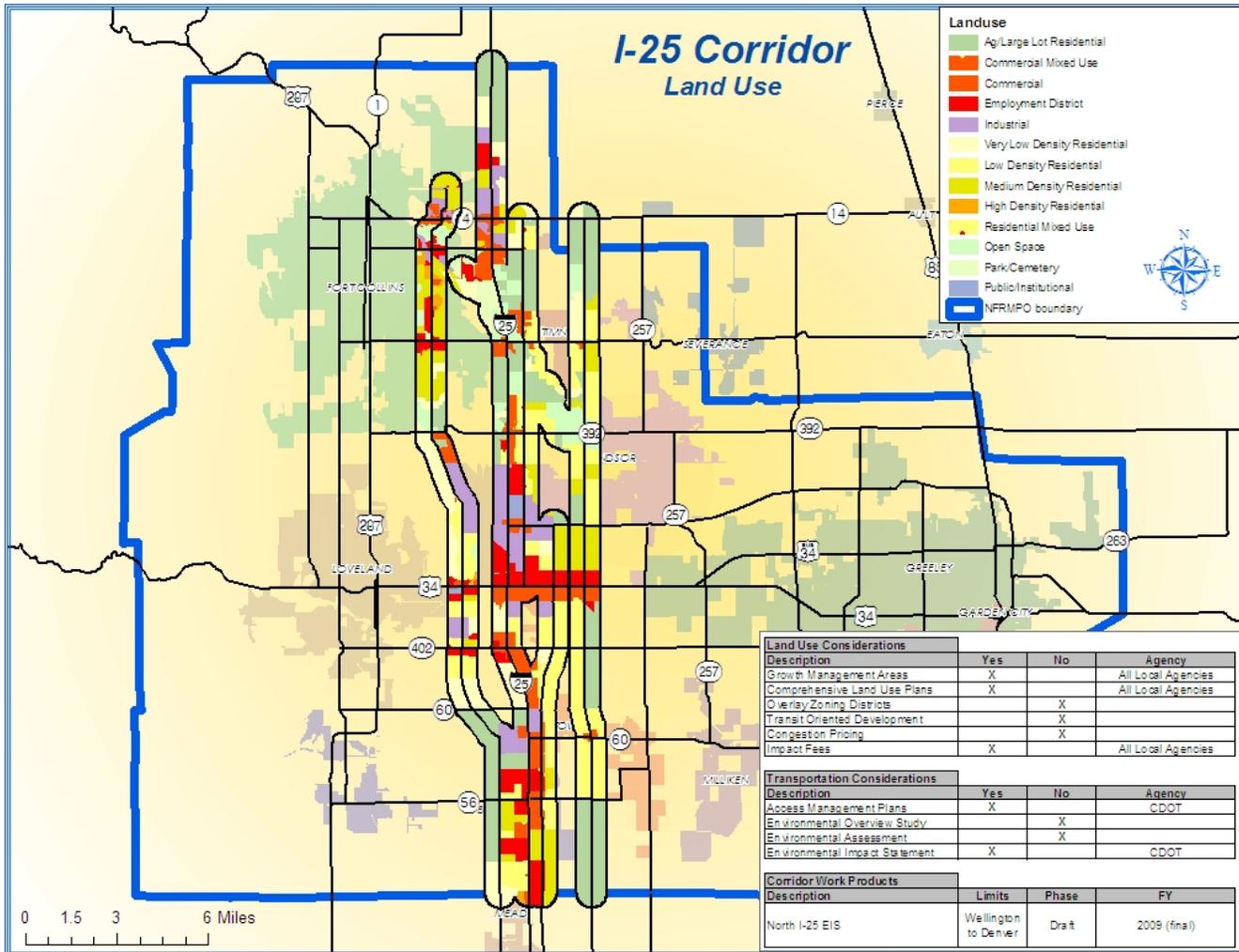
This performance measure is designed to indicate and reference specific regional and local planning efforts along corridors which will impact transportation.

The Land Use Map shown on **Figure 59** identifies critical planning work products, land use designations, and other land use control strategies underway within the I-25 corridor. Of note



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Figure 59. I-25 Corridor Land Use





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are the local agency growth management areas, use of comprehensive land use plans, and impact fees.

CDOT is in the process of drafting the North I-25 EIS. The boundaries of the EIS overlay the entire NFRMPO I-25 corridor. More information about this document may be found at: www.dot.state.co.us/northi25eis/index.cfm.

Corridor Summary of Performance Measures: US-287

Length of corridor

The US 287 Corridor includes approximately 258 lane miles of roadway, as shown in **Table 73**.

Table 73. US 287 Corridor Length

Included Facilities	Lane Miles
Burlington Northern Santa Fe (BNSF) and Mason Trail corridor	-
US 287	157
LCR 19	58
LCR 17	43
Total	258

Congestion Duration and Extent

Table 74 shows the congestion duration and extent performance measures which are mapped on **Figure 60**. For the 2005 model, both daily and peak period congestion are tracked as performance measures. However, the level of service categorization shown on the map is based on peak period only.

To show how the corridor is modeled to congest over time, the 2035 peak period no-build model scenario results are also shown in **Table 74**. It should be noted that using a no-build scenario does not always create realistic results in smaller areas of the region. This is due to significant levels of congestion in the forecast year without any improvements to the roadway system.

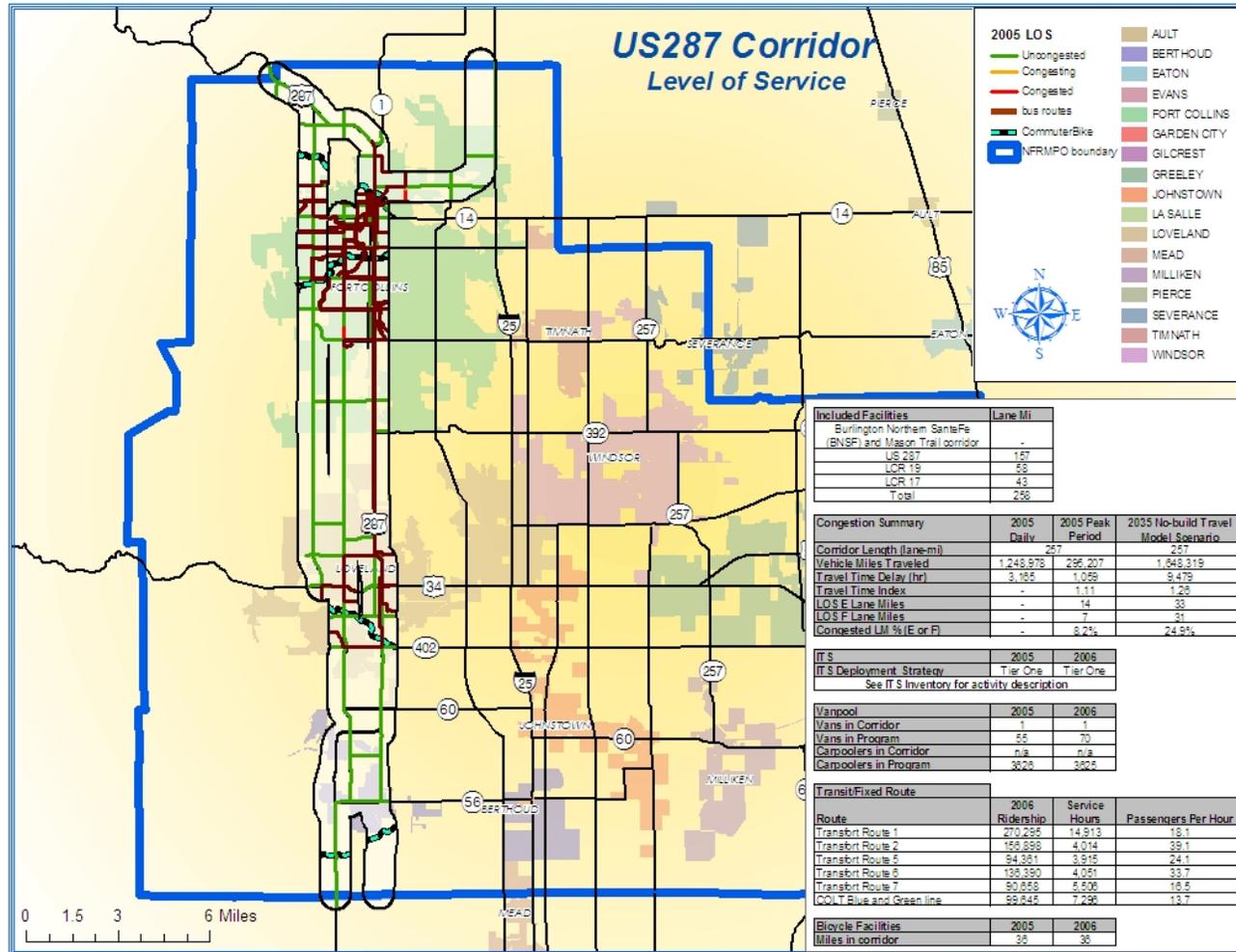
Table 74. US 287 Corridor Congestion Duration and Extent

Congestion Summary	2005 Daily	2005 Peak Period	2035 No-build Travel Model Scenario
Corridor Length (lane-mi)	257		257
Vehicle Miles Traveled	1,248,978	295,207	1,648,319
Travel Time Delay (hr)	3,165	1,059	9,479
Travel Time Index	-	1.11	1.26
LOS E Lane Miles	-	14	33
LOS F Lane Miles	-	7	31
Congested LM % (E or F)	-	8.2%	24.9%



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Figure 60. US 287 Corridor Level of Service





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ITS Implementation

This measurement identifies the extent to which Intelligent Transportation Systems are implemented within a corridor. CDOT Region 4 published a corridor-based ITS Plan in February 2004. The US-287 Corridor was prioritized by this plan as the third-ranked corridor for ITS implementation in the region.

The ITS activities within this corridor are predominantly Tier Two Implementation Strategies, as shown in **Table 75**.

Table 75. US 287 Corridor ITS Activities

Device Type	Agency	Location
Weather Station	Loveland	Taft Avenue/1st Street Intersection
		Wilson/50 th St.
	Fort Collins	Shields Street at Harmony Road
		College Avenue at the Poudre River
Automatic Traffic Recorder	Fort Collins	College Avenue at Laurel Street
		College Avenue at Horsetooth Road
		College Avenue at Columbia Road
		Shields Street at Rolland Moore Park
		College Avenue north of Willox Lane
		Shields Street South of Mulberry Street
		Shields Street West of Prospect Road
		Shields Street South of Drake Road
		Shields Street South of Horsetooth Road
		Shields Street South of Harmony Road
		College Avenue South of Mulberry Street
		College Avenue South of Prospect Road
		Prospect Road West of College Avenue
		Taft Hill Road South of Prospect Road
		Prospect Road West of Taft Hill Road
		Taft Hill Road South of Drake Road
		College Avenue South of Drake Road
		Taft Hill Road North of Harmony Road
College Avenue South of Horsetooth Road		
College Avenue South of Harmony Road		
Harmony Road East of College Avenue		
Video Surveillance	Loveland	Taft Avenue/1st Street Intersection
	Fort Collins	College Avenue at Prospect Road
		College Avenue at Drake Road
		College Avenue at Foothills Parkway
		College Avenue at Horsetooth Road
		College Avenue at Harmony Road
		Shields Street at Prospect Road
		Taft Hill Road at Mulberry Street
		Taft Hill Road at Drake Road
		Shields Street at Elizabeth Street
		Shields Street at Drake Road
		Shields Street at Horsetooth Road
		Shields Street at Harmony Road
College Avenue at Jefferson Street		



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Number of Carpoolers/Vanpoolers

VanGO™ vanpooling service is available in the North Front Range region. It is operated by NFRMPO Smarttrips™. Along each corridor, the number of VanGO™ vans in operation can be measured on an annual basis and tracked, as shown in **Table 76**. There are no locally sponsored carpooling services available in the North Front Range Region today.

Table 76. US 287 Corridor Vanpool/Carpool

Vanpool/Carpool	2005	2006
Vans in Corridor	1	1
Vans in Program	55	70
Carpoolers in Corridor	n/a	n/a
Carpoolers in Program	3626	3625

CarGO™ carpool matching services offered through NFRMPO Smarttrips™ measures the aggregate number of carpoolers in the North Front Range region. In the near future, the carpooling internet portal will have the ability to capture the number of carpoolers traveling in each regional corridor. This data will become a part of the CMP performance measures.

Transit Service Data

COLT in Loveland and Transfort in Fort Collins both operate fixed-route transit services within the US 287 RSC.

The performance measures shown in **Table 77** are commonly used by transit agencies to measure the effectiveness of transit services. The number of passengers (ridership) and the availability of transit operations throughout the day (service hours) are descriptive measures of transit performance.

Table 77. US 287 Corridor Transit Service

Route	2006 Ridership	Service Hours	Passengers Per Hour
Transfort Route 1	270,295	14,913	18.1
Transfort Route 2	156,898	4,014	39.1
Transfort Route 5	94,361	3,915	24.1
Transfort Route 6	136,390	4,051	33.7
Transfort Route 7	90,658	5,506	16.5
COLT Blue and Green line	99,645	7,296	13.7

Bicycle Facility Miles

This performance measure indicates the availability of bicycle trails along the Regionally Significant Corridors. This measure provides an indication of the extent to which travelers are able to choose an alternative mode of travel to single occupancy vehicles. It is included in this process to balance the focus on roadway congestion by providing a way to evaluate the need for non-motorized facilities along congested corridors.



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In 2005, there were 36 miles of commuter bike lanes within a ¼ mile buffer along the US-287 RSC. Pedestrian facility information is not available

Land Use and Transportation Planning Considerations

This performance measure is designed to indicate and reference specific regional and local planning efforts along corridors which will impact transportation.

The Land Use Map on **Figure 61** identifies critical planning work products, land use designations, and other land use control strategies underway within the US-287 corridor. Of note are the local agency growth management areas, use of comprehensive land use plans, and impact fees.

The City of Fort Collins has identified the Mason Corridor Transit Oriented Development (TOD) District. The Mason Corridor utilizes overlay zoning, and congestion pricing to encourage density along the proposed Mason Street Bus Rapid Transit line.

CDOT has completed an Access Management Plan and Environmental Overview Study of this corridor.

Corridor Summary of Performance Measures: US-34

Length of corridor:

The US 34 Corridor includes approximately 271 lane miles of roadway, as shown in **Table 78**.

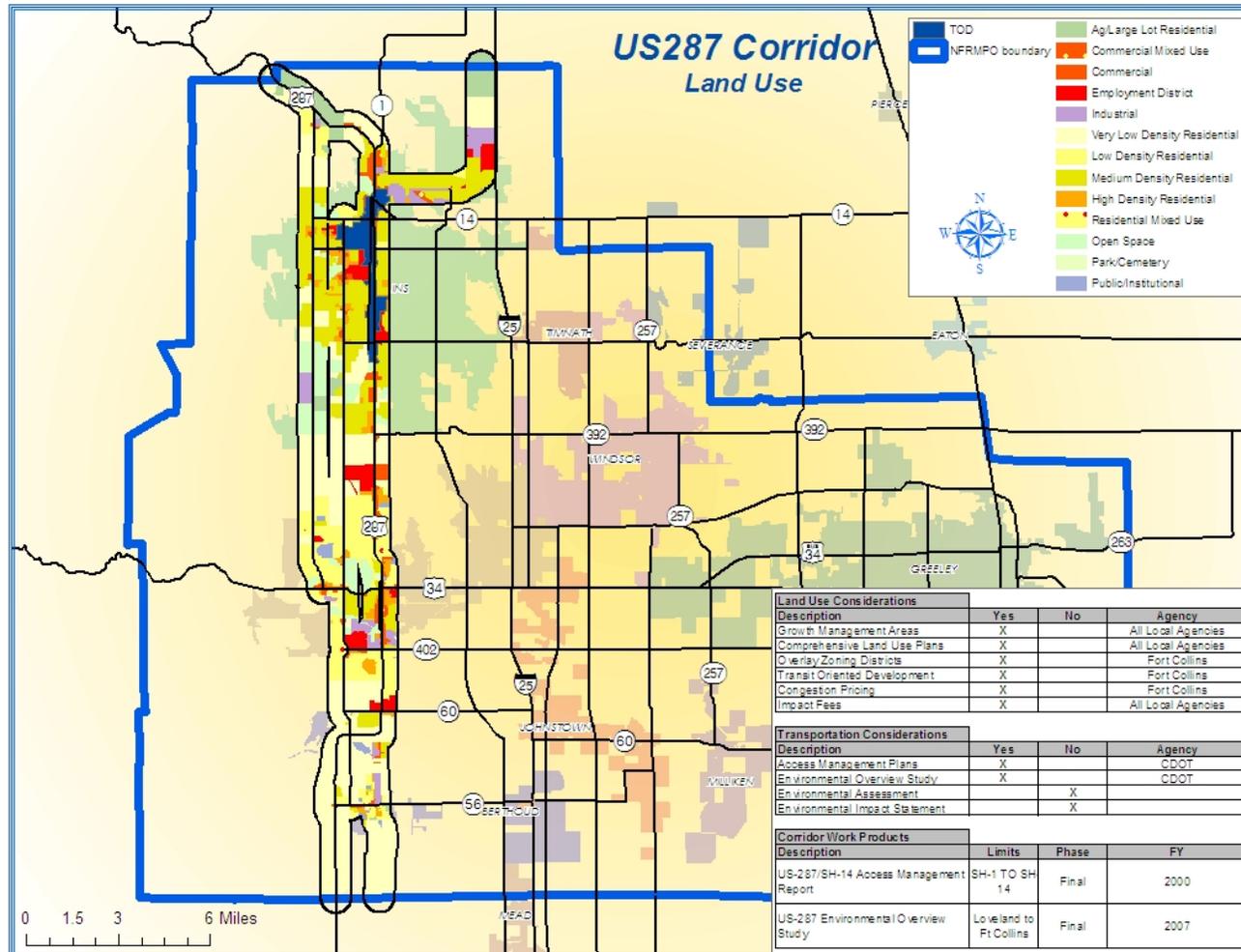
Table 78. US 34 Corridor Lane Miles

Included Facilities	Lane Miles
Big Thompson Trail	-
WCR-64	13
WCR-62	6
WCR-54	30
SH-263	9
SH-257	4
SH 402	9
CR-18	5
CR-26 (Crossroads Blvd)	5
Eisenhower Blvd.	33
US 34 Business	41
US-34	117
Total	271



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Figure 61. US 287 Corridor Land Use





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Congestion Duration and Extent

Table 79 shows the congestion duration and extent performance measures which are mapped on **Figure 62**. For the 2005 model, both daily and peak period congestion are tracked as performance measures. However, the level of service categorization shown on the map is based on peak period only.

To show how the corridor is modeled to congest over time, the 2035 peak period no-build model scenario results are also shown in **Table 79**. It should be noted that using a no-build scenario does not always create realistic results in smaller areas of the region. This is due to significant levels of congestion in the forecast year without any improvements to the roadway system.

Table 79. US 34 Corridor Congestion Duration and Extent

Congestion Summary	2005 Daily	2005 Peak Period	2035 No-build Travel Model Scenario
Corridor Length (lane-mi)	271	271	271
Vehicle Miles Traveled	1,352,955	314,674	2,497,275
Travel Time Delay (hr)	2,265	714	35,987
Travel Time Index	-	1.09	1.76
LOS E Lane Miles	-	15	13
LOS F Lane Miles	-	6	110
Congested LM % (E or F)	-	7.4%	45.4%

ITS Implementation

This measurement identifies the extent to which Intelligent Transportation Systems are implemented within a corridor. CDOT Region 4 published a corridor-based ITS Plan in February 2004. The US-34 Corridor was prioritized by this plan as the fifth-ranked corridor for ITS implementation in the region.

The ITS activities within this corridor are predominantly Tier One Implementation Strategies, as shown in **Table 80**.

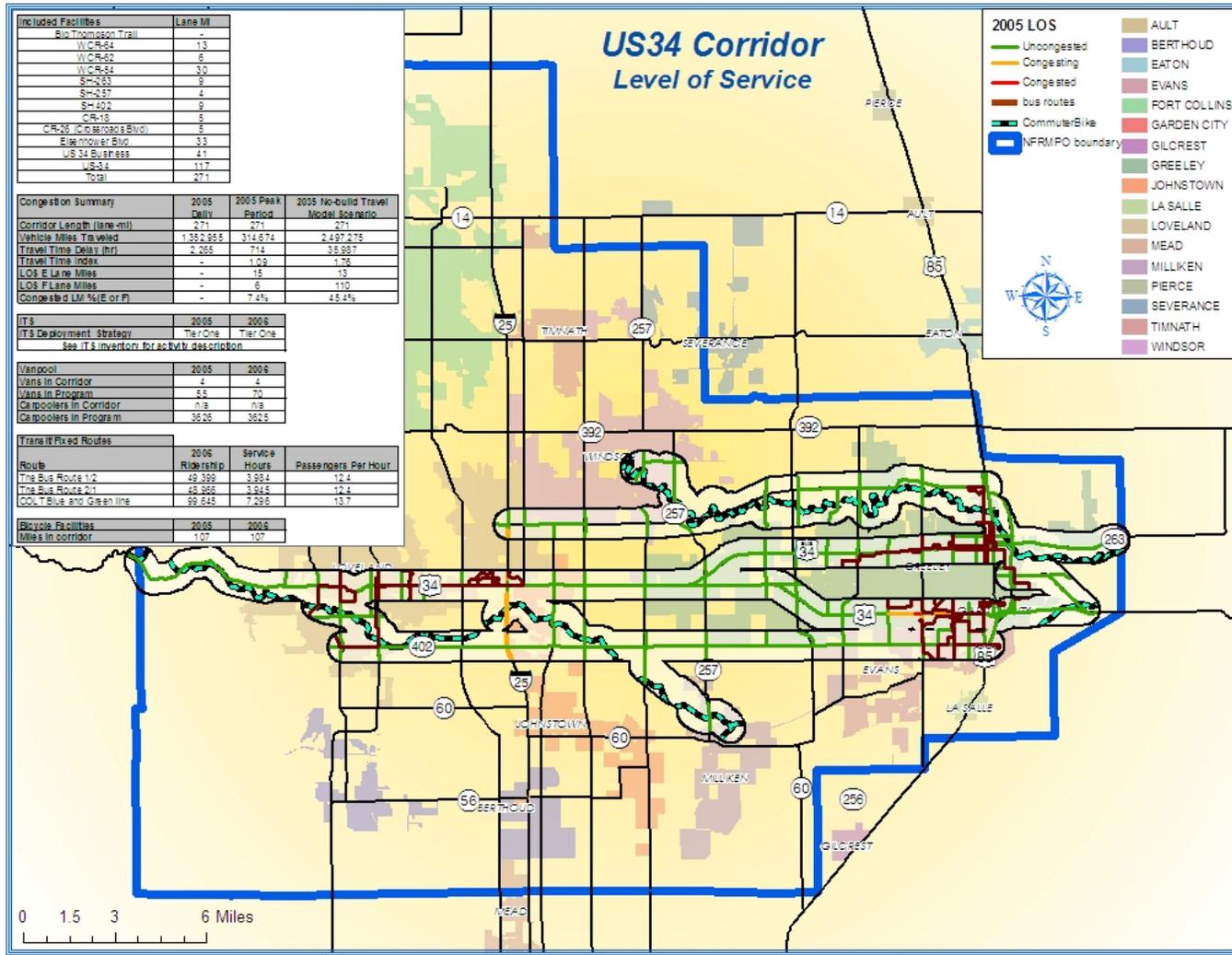
Table 80. US 34 Corridor ITS Activities

Device Type	Agency	Location
Weather Station	Loveland	US 34/Redwood Ave. Intersection
Automatic Traffic Recorder	CDOT	US 34, 1 Mile East of SH 257
Video Surveillance	CDOT	US 34 Bypass at 23rd Avenue
	Loveland	I-25/Crossroads Blvd.
	Loveland	US 34/I-25 Interchange
	Loveland	US 34/Centerra
	Loveland	Centerra/Sky Pond
	Loveland	Centerra/Kendal Parkway



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Figure 62. US 34 Corridor Level of Service





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Number of Carpoolers/Vanpoolers

VanGO™ vanpooling service is available in the North Front Range region. It is operated by NFRMPO Smarttrips™. Along each corridor, the number of VanGO™ vans in operation can be measured on an annual basis and tracked, as shown in Table 81. There are no locally sponsored carpooling services available in the North Front Range Region today.

Table 81. US 34 Corridor Vanpool/Carpool

Table with 3 columns: Vanpool/Carpool, 2005, 2006. Rows include Vans in Corridor, Vans in Program, Carpoolers in Corridor, and Carpoolers in Program.

CarGO™ carpool matching services offered through NFRMPO Smarttrips™ measures the aggregate number of carpoolers in the North Front Range region. In the near future, the carpooling internet portal will have the ability to capture the number of carpoolers traveling in each regional corridor. This data will become a part of the CMP performance measures.

Transit Service Data

GET in Greeley and COLT in Loveland both operate fixed-route transit services in the US-34 RSC. The performance measures shown in Table 82 are commonly used by transit agencies to measure the effectiveness of transit services. The number of passengers (ridership) and the availability of transit operations throughout the day (service hours) are descriptive measures of transit performance.

Table 82. US 34 Corridor Transit Service

Table with 4 columns: Route, Headway, Ridership, Annual Service Hours. Rows include GET and COLT.

Bicycle Facility Miles

This performance measure indicates the availability of bicycle trails along the Regionally Significant Corridors. This measure provides an indication of the extent to which travelers are able to choose an alternative mode of travel to single occupancy vehicles. It is included in this process to balance the focus on roadway congestion by providing a way to evaluate the need for non-motorized facilities along congested corridors.

In 2005, there were 107 miles of commuter bike lanes within a ¼ mile buffer along the US-34 RSC. Pedestrian facility information is not available



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Land Use and Transportation Planning Considerations

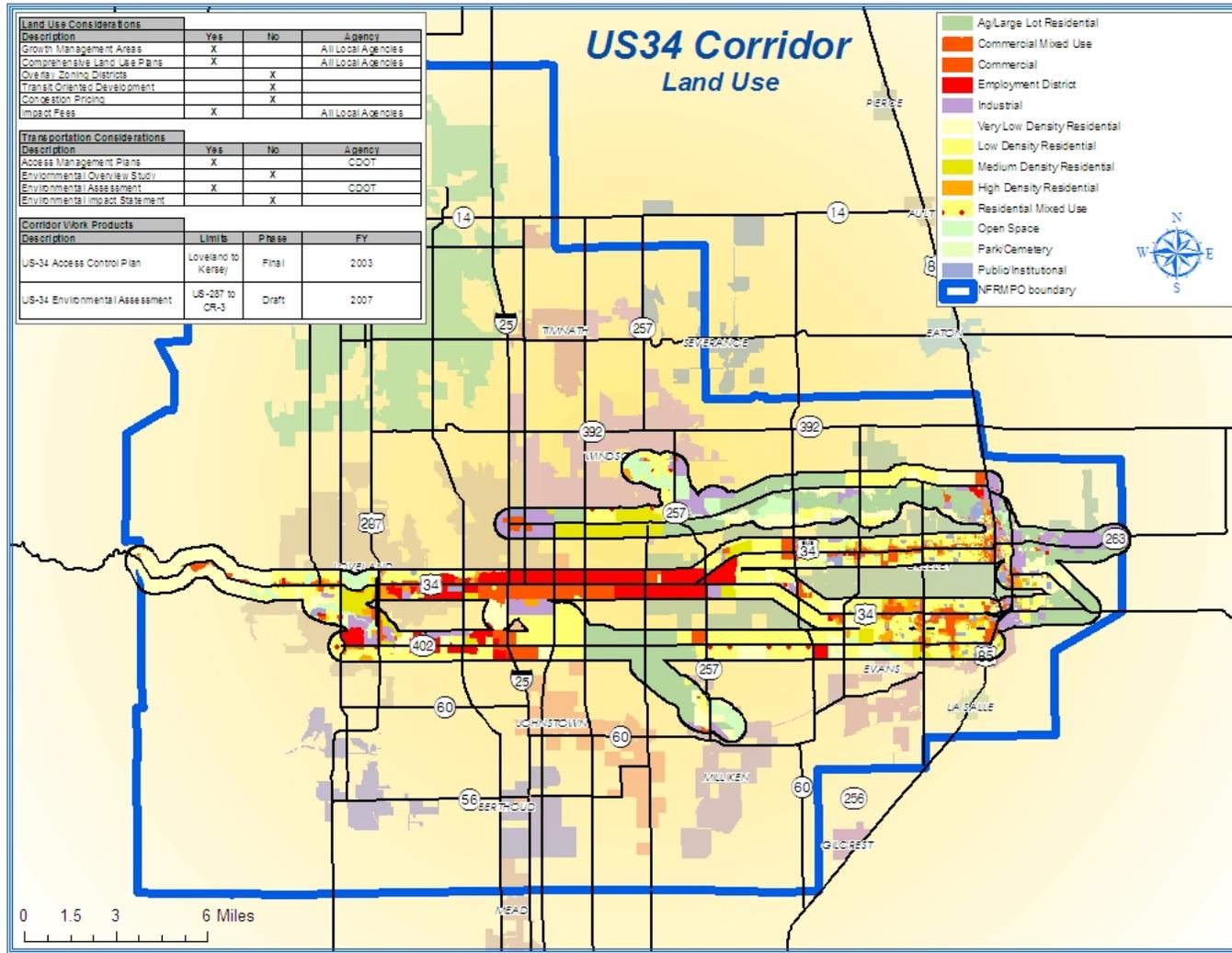
This performance measure is designed to indicate and reference specific regional and local planning efforts along corridors which will impact transportation.

The Land Use Map shown on **Figure 63** identifies critical planning work products, land use designations, and other land use control strategies underway within the US-34 corridor. Of note are the local agency growth management areas, use of comprehensive land use plans, and impact fees. CDOT has completed an Access Management Plan and Environmental Assessment of this corridor.



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Figure 63. US 34 Corridor Land Use





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X. IMPLEMENTATION

A. *Plan Amendment Process*

The NFR will update its regional transportation plan on a four-year cycle as required by Federal law for air quality non-attainment and maintenance areas. In the period between RTP updates, there may be a need to amend the plan. This could be caused by new Highway Capacity projects or substantially modified project descriptions that come about as the result of a regional or local study. An amendment could also potentially be needed if substantial financial resources become available that were not anticipated in the RTP process.

CDOT has developed a Plan Amendment Process using the NFRMPO process as a model. Information is submitted to the MPO outlining the specific amendment request, and a clear explanation of the reason for the amendment. MPO staff review the request and determine how the request should be processed. The TAC and Council have final approval on all amendments prior to submission to CDOT.

B. *Transportation Improvement Programs*

Every four years, the region's six-year Transportation Improvement Program (TIP) is updated by the MPO. The TIP is the primary tool for allocating funds to implement projects that are consistent with the corridor visions included in the RTP. Since this is a corridor-based plan, the identification of projects (other than Highway Capacity projects which have been identified and prioritized herein) will occur at the TIP level. A project prioritization process will be used to rank projects in the following categories:

- ▶ Bicycle/Pedestrian
- ▶ Other Highway (non Highway Capacity projects)
- ▶ Passenger and Freight Rail
- ▶ Transit
- ▶ Transportation Demand Management
- ▶ Transportation Systems Management

Projects will be selected for inclusion in the TIP based on the prioritized project lists, the allocation of funding to Corridor Tiers as outlined in this document, and the type of funding source(s) available.



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C. Strategies

The greatest challenge to meeting transportation demand in the NFR will be finding reliable resources to pay for the implementation of the Plan. There is an estimated funding shortfall of approximately \$4.7 billion to achieve the vision for the NFR transportation system by 2035. In addition, the dollars identified in the fiscally constrained portion of the Plan are not reliable sources of funding. To further address the funding gap, the Planning Council could choose to pursue policies to aid in the implementation of the region's transportation plan. The strategies listed below represent a potential menu of options that could be used to most effectively implement the transportation vision for the NFR.

- ▶ **Focus available funding on only the most critical projects.** This 2035 RTP begins to set the stage for focusing available funding on the most critical projects by establishing the corridor tiers. As described in Chapter VIII, the Planning Council has allocated 70% of the available flexible funding to Tier 1, thus indicating a preference for focusing improvement projects on these high priority corridors. The Planning Council has also specified a desire to complete full projects (e.g., the current TIP projects) rather than distributing the limited funding to small pieces of many projects.
- ▶ **Focus on projects that provide the most benefit for the least expenditure of revenue.** Examples could include Travel Demand Management projects (e.g., carpooling and vanpooling), Transportation System Management projects (e.g., traffic management and traveler information), and intersection improvement projects. The concept of "thin roads, thick nodes" will guide many improvements, particularly intersection improvements, which can provide the highest return on investment for maintaining a transportation facility as a thruway.
- ▶ **Emphasize projects that minimize long-term costs,** such as phased projects or temporary improvements. Another example is roadway maintenance, which, when addressed in a timely manner, can postpone or eliminate the need for expensive reconstruction.
- ▶ **Complete Access Management Plans** to preserve capacity and enhance safety on corridors or portions of corridors where significant residential or commercial development is anticipated. The Planning Council's adopted Strategic Action Plan (March 2004) encourages access management plans for all regionally significant corridors in the North Front Range. Additional county and city arterials that have been identified as "regionally significant" will also have access management plans developed by MPO staff with the involved local jurisdictions providing oversight and assistance.
- ▶ Encourage local governments (counties and municipalities) and state and federal land management agencies, by providing incentives, to work with CDOT and the NFRMPO to **develop or update local comprehensive plans** (including transportation plans) that minimize the effects of growth and development on the transportation infrastructure.



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- ▶ **Generate new funding mechanisms** or increase the level of revenue from existing funding streams. Examples include:
 - Create new opportunities for “leveraging scarce funding sources,” and support initiatives to create Special Improvement Districts and Regional Transportation Authorities (RTA) to contribute local funds to transportation projects on regional facilities. It is especially important for the MPO to recognize projects that leverage MPO funding sources, particularly STP Metro funding. For example, the current (2007) VanGo™ vanpool program leverages around \$250,000 in STP Metro funding with rider fares and Federal Transit Administration incentive funding to the RTD in Denver (of which the NFRMPO receives a major share) for a total project budget approaching \$2 million. Projects supported by such initiatives or funding opportunities could receive priority treatment in the planning and programming process.
 - Support initiatives to increase state and federal funding for transportation. For example, the MPO maintains a 501c(3) organization, North Front Range Mobility Alternatives, for pursuing private foundation grants to assist in providing the required local match for some federally-funded programs among the MPO members.
 - Increase the number of regional services to reduce costs to member governments and provide opportunities for cost-sharing such services as: mobility management, data collection and analysis, aerial photography, modeling, grant applications, geographic information systems, U.S. Census state database affiliate, etc.
 - Support the pursuit of non-traditional federal funding sources for transportation.
 - Create Transportation Management Organizations (TMOs)
 - Private/public partnerships through MPO facilitation
- ▶ **Encourage rail corridor preservation efforts** for both passenger and freight rail by working with the member governments, other agencies and railroads.
- ▶ Work with member governments to **preserve right of way for a regional arterial grid system** to support future development and complement the Regionally Significant Corridors.



*Envisioning Transportation Solutions for
Colorado's North Front Range*

NORTH FRONT RANGE



METROPOLITAN PLANNING ORGANIZATION