



2. 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 planning period through 2035. The NFRMPO researched a variety of documents and plans to develop an accurate, up-to-date database of existing transportation facilities and services. CDOT maintains a Geographic Information System (GIS) Transportation Planning Data Set and the NFRMPO develops regional data for use in the planning process. These two sources are the basis for much of the information presented in this chapter, along with data from the land use allocation and the travel demand models.

A. Regionally Significant Corridors

The concept of Regionally Significant Corridors (RSCs) 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 plan is corridor-based, the RSCs 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 individual corridors was first done in the 2030 RTP. The corridors were updated and affirmed in the 2035 RTP and carried forward in this updated plan. The Technical Advisory Committee (TAC) assisted NFRMPO staff with the development of the Regionally Significant Corridors Report. The report defines Regionally Significant 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.

Three criteria were used to identify RSCs. They are presented below in order of how they are applied.

1. **Includes all State Highways**

- The Colorado Department of Transportation (CDOT) requires that a corridor vision be developed for all state highways as part of the regional transportation plan. 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.
- 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.

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

In 2007, the tiering of the corridors was a new component of the RSC process. The tiers identify the top priorities for the region and focus the congestion management system and public involvement on the top tiered corridors. The tiers and process to develop them are described in detail in **Chapter 7** of this document.

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

Table 2-1 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 Drive in Fort Collins, turns east to parallel I-25 (freight & potential passenger rail)
US 287	Southern NFRMPO boundary to northern NFRMPO 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 US 287 on the north
Corridor 2 – SH 1	
SH 1	US 287 on the south to the northern NFRMPO boundary
Corridor 3 – I-25	
I-25	Southern NFRMPO boundary to northern NFRMPO boundary
Timberline/LCR 9e/WCR 7	Southern NFRMPO boundary to Vine Drive on the north, follows WCR 7 to LCR 9e (road approximate) to Timberline Road
LCR 5	US 34 on the south to SH 14 on the north
LCR 3	Southern NFRMPO boundary to Crossroads Blvd on the north
WCR 13	Southern NFRMPO boundary to SH 14 on the north
Corridor 4 – SH 257	
WCR 17	Southern NFRMPO 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 NFRMPO boundary to northern NFRMPO 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
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 the NFRMPO



Corridor Name/Component	Description
Corridor 7 – SH 14	
Poudre River Trail	Northwest corner of NFRMPO boundary to junction with South Platte
SH 14	Eastern NFRMPO boundary to College Avenue (US 287)
Mulberry Street	Riverside Avenue (SH 14) to LCR 19
Corridor 8 – Prospect Road	
Spring Creek Trail	Poudre River on the east to Horsetooth Reservoir on the west
Prospect Road (Fort Collins)	LCR 5 on the east to US 287 on the west
Corridor 9 – SH 392	
Harmony Rd/WCR 74 (Fort 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 NFRMPO boundary to western NFRMPO boundary
US 34 Business	Eastern NFRMPO 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 portion of the river trails (existing or planned) that is outside of municipal boundaries.

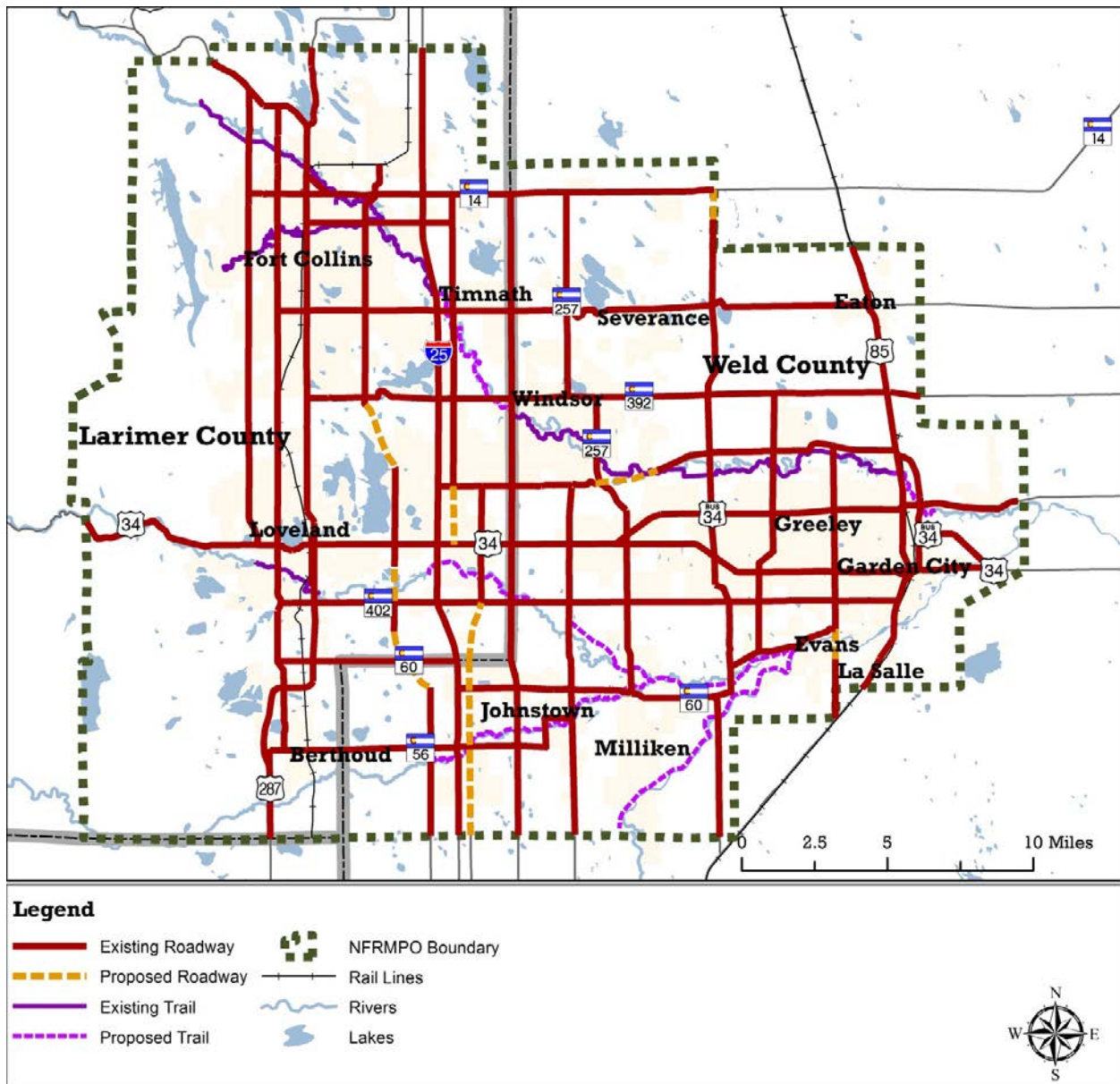


SH 14 near I- 25 in Larimer County



Looking west down the Poudre River Bike Trail in Greeley

Figure 2-1 Regionally Significant Corridors





B. Roadway System

The roadway system is currently the principal transportation component within the NFRMPO. 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 comprises 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 classifications described below are 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 for administration of federal aid highway programs. Transportation planning agencies use functional classification 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 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 US 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 contain grade separations and other higher classification-type design features. State and US 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 with, 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 2-2 summarizes the classification and the associated lane miles of roads within the North Front Range, and **Table 2-3** summarizes the same information for Regionally Significant Corridors.



Table 2-2 Lane Miles by Functional Classification in the NFRMPO

Functional Class	Lane Miles
Freeway	109
Expressway	216
Major Arterial	616
Minor Arterial	681
Collector	1,170
Ramps	16
Frontage Road	66
Total	2,873

Source: North Front Range 2009 Base Year Regional Travel Model, MPO boundary.

Table 2-3 Lane Miles by Functional Classification for Regionally Significant Corridors

Functional Class	Lane Miles
Freeway	109
Expressway	216
Major Arterial	463
Minor Arterial	300
Collector	74
Ramps	-
Frontage Road	-
Total	1,161

Source: North Front Range 2009 Base Year Regional Travel Model, MPO boundary.

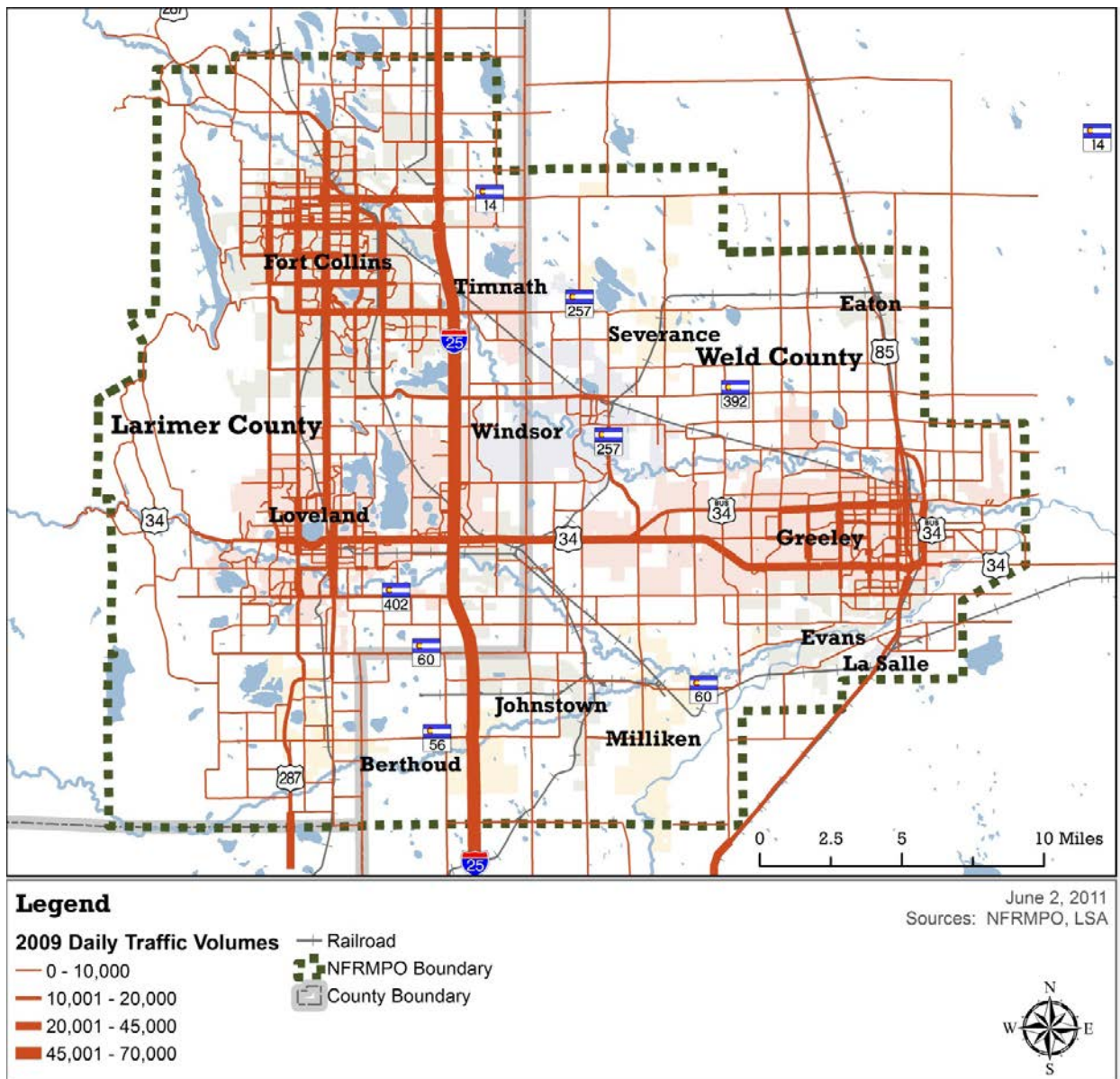
Existing Daily Traffic Volumes

Figure 2-2 presents the 2009 daily traffic volumes on major roadways in the North Front Range. This grouping is an equal interval representation of the traffic volumes.



Traffic stopped at a traffic signal in Greeley

Figure 2-2 2009 Average Daily 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 of less than six years. Roadway conditions are illustrated in **Figure 2-3**.

Figure 2-3 Roadway Surface Conditions

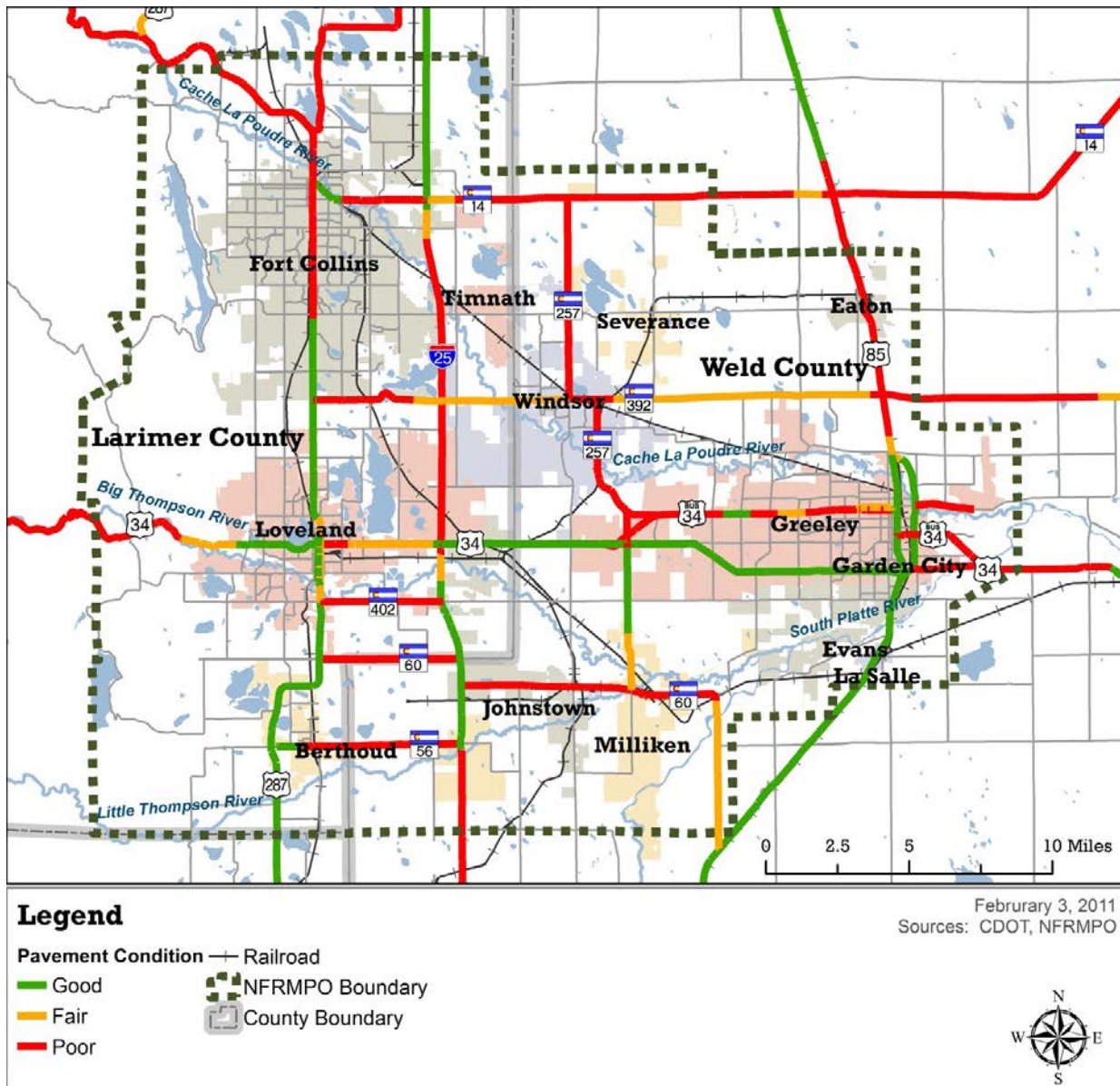


Table 2-4 shows a comparison between the conditions of the State Highways in the North Front Range region and the state as a whole. In general, facilities in the North Front Range region are in worse condition than the state as a whole. **Table 2-4** also shows a comparison between the 2005 and 2009 surface conditions. The statewide average percentages have remained relatively unchanged since about 2000. Since 2005, the NFRMPO has seen a 17 percent increase in highways with a ‘good’ rating due to recent maintenance efforts. The portion of NFRMPO highways in poor condition is 11 percent higher than the statewide total.

Table 2-4 Surface Conditions of State Highways

	Surface Condition					
	2005			2009		
	Good	Fair	Poor	Good	Fair	Poor
North Front Range	15%	20%	65%	32%	16%	52%
Statewide	35%	22%	43%	36%	23%	41%

Source: CDOT’s 2035 Transportation Planning Data Set, 2009.

Special Roadway Corridors

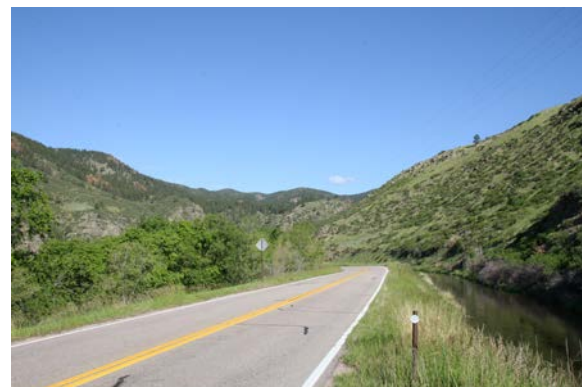
The following section describes roadway corridors which have special designations, serve a special purpose, or can be characterized by the nature of their use.

National Highway System

The National Highway System (NHS) includes interstate highways as well as a portion of the urban and rural major arterial system. Approximately 102 miles of National Highway System are within the boundaries of the NFRMPO, as shown on **Figure 2-4**. The Federal Highway Administration (FHWA) has designated “High Priority Corridors” as a focus for improvements to enhance mobility for trade (both domestic and international) and to promote economic development. Camino Real extends from Mexico to Canada via I-25 through Colorado.

Scenic and Historic

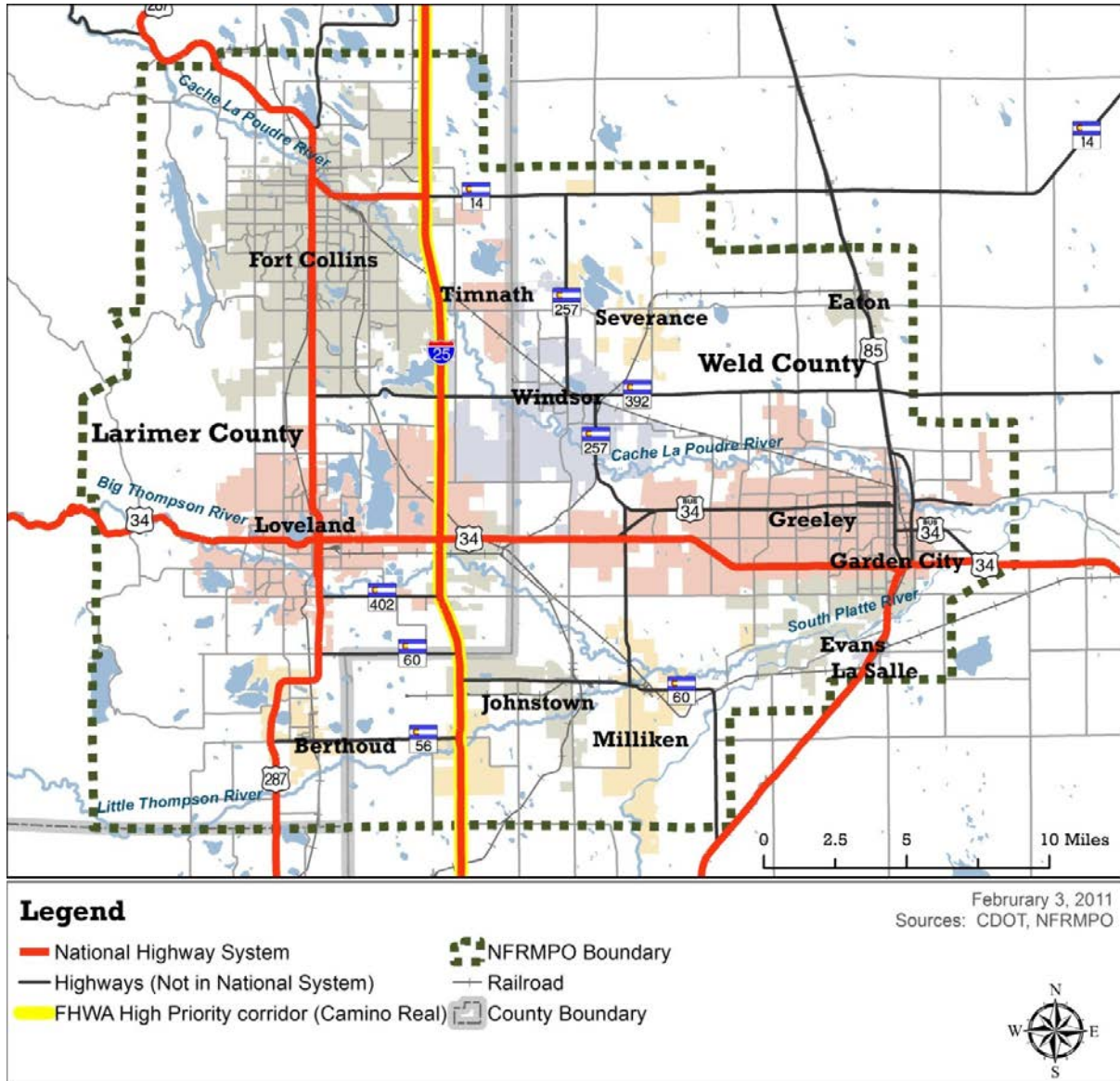
The State of Colorado has identified more than 2,000 miles of roadway as Scenic Byways. The Cache La Poudre - North Park (SH 14 and US 287) is the only Scenic Byway in the North Front Range. Only a few miles of this byway are within the northern part of the North Front Range.



US 287 (the Cache la Poudre-North Park Scenic Byway) heading northbound into the Colorado Rocky Mountains



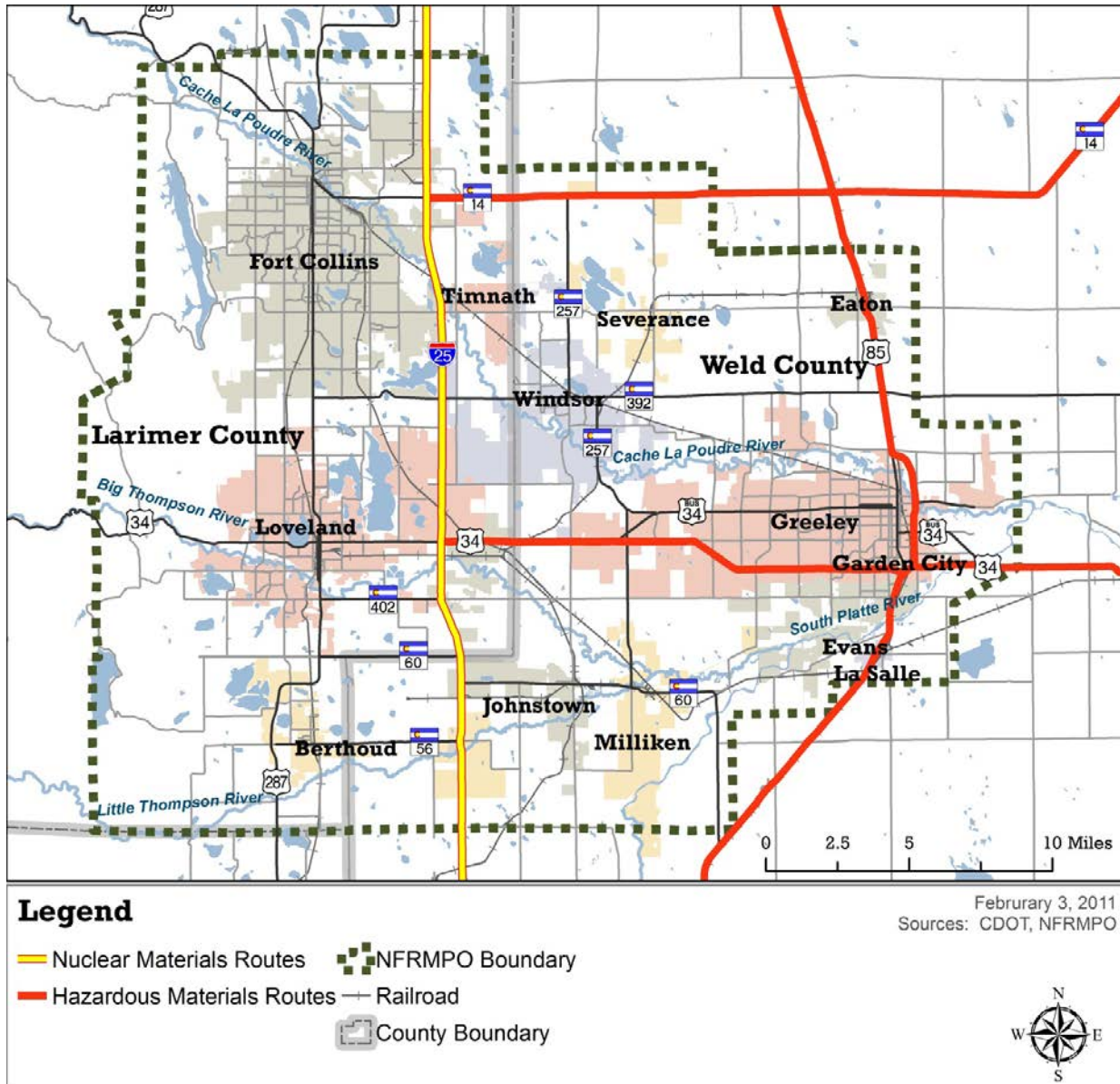
Figure 2-4 National Highway System



Hazardous and Nuclear Materials

The transportation of hazardous and nuclear materials is limited to designated roadways. **Figure 2-5** illustrates the roadways in the North Front Range region that the State of Colorado designates for transportation of hazardous and nuclear materials. As shown, nuclear materials are restricted to I-25. Hazardous materials can be transported on I-25, US 85, SH 14, and US 34 east of I-25.

Figure 2-5 Hazardous and Nuclear Materials Routes





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 assigns a sufficiency rating so that structurally deficient and functionally obsolete bridges are identified. The definitions used by the FHWA for these categories are as follows:

- ▶ **Structurally Deficient:** 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:** Bridges which have acceptable load carrying capacity, but impose unacceptable physical restrictions such as narrow width, restricted vertical clearance, limited sight distances, speed reducing curves, or insufficient waterway adequacy.

Within the NFRMPO, 165 bridges are on the State Highway system and 328 are off the State Highway system, totaling 493 bridges. At the end of 2010, 102 bridges had documented inadequacies, as shown in **Table 2-5**. 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 structure replacement. Those structures with a rating between 50 and 80, classified as Functionally Obsolete or Structurally Deficient, are eligible for rehabilitation funds administered by CDOT with a possibility of replacement on a case by case basis. **Table 2-5** presents the bridges within the NFRMPO with documented deficiencies in 2010 and **Figure 2-6** depicts the bridge locations.

Table 2-5 Bridges with Deficiencies

Bridge Structure No.	Location	Facility	Bridge Condition	Rating
FCWHTM-0.0-LAPT	Arthur Ditch	Whitcomb/LaPorte	Structurally Deficient	20.1
LR11C-0.7-24E	Boyd/Horseshoe Canal	County Road 11C	Structurally Deficient	26.3
LOVCO-FAIRGRNDS	Big Thompson River	Service Road	Structurally Deficient	27.5
LR3-0.2-50	Larimer & Weld Canal	County Road 3	Structurally Deficient	28.3
FCSHLD-0.4-DRK	Larimer Co Canal No 2	S. Shields Street	Structurally Deficient	33.2
WEL068.5-013.0A	New Cache La Poudre Canal	County Road 68.5	Structurally Deficient	35.3
B-16-D	Cache La Poudre River	SH 14 ML	Structurally Deficient	38
WEL052.0-013.0A	Hillsborough Ditch	County Road 52	Structurally Deficient	39
LASALLE-001	Union Ditch	Main Street	Structurally Deficient	43.4
LOV850MADISONAV	Greeley Loveland Canal	North Madison Ave.	Structurally Deficient	43.8
FCBRYN-0.2-MULB	Larimer Co. Canal No. 2	Bryan Street	Structurally Deficient	45.2
C-17-BN	Little Thompson River Sr	I 25 SERVICE RD	Structurally Deficient	45.3
C-17-EL	Draw	I 25 ML	Structurally Deficient	45.5

Table 2-5 Bridges with Deficiencies (Continued)

Bridge Structure No.	Location	Facility	Bridge Condition	Rating
TNTH38-0.3-I25	Cache La Poudre River	County Road 38	Functionally Obsolete	45.7
WIN015.0-068.0A	New Cache Lapoudre Canal	15th Street	Structurally Deficient	46.6
B-16-AE	Draw	US 287 ML	Structurally Deficient	47.2
B-16-EU	I 25 ML	County Road 48	Structurally Deficient	47.3
LOV0390NTAFTAVE	Big Thompson River	Taft Hill Rd(Cr17)	Functionally Obsolete	47.7
FCHRMYE-0.7-I25	Fossil Creek Res. Inlet	EB Harmony Road	Structurally Deficient	49.3
C-18-BK	Us 85 Buss Rt	US 85 Bypass SBND	Structurally Deficient	49.6
LASALLE-002	Union Ditch	Railroad Drive	Structurally Deficient	50
GREELEY-0000012	Greeley No. 3 Ditch	59th Avenue	Structurally Deficient	50.6
LR18-0.4-23E	Handy Ditch	County Road 18	Structurally Deficient	50.8
WIN021.0-068.0A	New Cache Lapoudre Canal	County Road 21	Structurally Deficient	50.9
WEL019.0-046.5A	Little Thompson River	County Road 19	Structurally Deficient	52.4
LR54G-0.5-52E	Terry Lake Inlet Canal	County Road 54G	Functionally Obsolete	55.6
FCRVSDE-S.2PRST	Spring Creek	Riverside Drive	Structurally Deficient	57.5
C-18-J	South Platte River	US 34 Business	Structurally Deficient	58.9
C-16-AB	Louden Canal	US 287 ML AR	Functionally Obsolete	60.1
B-16-EX	I 25 ML	SH 14 ML WBND	Structurally Deficient	60.7
C-16-W	Barnes Inlet Canal	US 34 ML WBND	Functionally Obsolete	60.8
C-17-G	Draw SR	I 25 Service Rd	Structurally Deficient	61
LOV150MONROE AV	Greeley Loveland Canal	Monroe Avenue	Structurally Deficient	62
C-18-BH	Up Rr	US 34 EB	Functionally Obsolete	62.1
WEL013.0-044.0B	Little Thompson River	County Road 13	Functionally Obsolete	62.6
B-16-EW	I 25 ML	SH 14 ML EBND	Functionally Obsolete	62.9
LR19E-0.5-20	Big Thompson River	County Road 19E	Structurally Deficient	63.5
C-18-BM	CO.RD 39.5, UP RR	US 85 ML SBND	Structurally Deficient	64.4
FCLINC-0.0-WLLW	Cache La Poudre River	Lincoln Avenue	Functionally Obsolete	64.6
LOV150WASHTN AV	Greeley Loveland Canal	Washington Avenue	Structurally Deficient	64.6
LOV1050TAFT AV	Big Barnes Ditch	Taft Avenue	Functionally Obsolete	65
FCLAPT-0.1-TFTH	New Mercer Canal	LaPorte Avenue	Functionally Obsolete	65
GREELEY-0000028	Sand Creek	8th St (CR60.5)	Structurally Deficient	65.1
B-16-AM	I 25 ML	Prospect Road	Functionally Obsolete	65.4
FCVINE-W.5-SUMV	Lake Canal	East Vine Drive	Functionally Obsolete	65.4
FCMULB-0.1-OVLD	Pleas. Valley Lake Canal	Mulberry Street	Functionally Obsolete	65.6



Table 2-5 Bridges with Deficiencies (Continued)

Bridge Structure No.	Location	Facility	Bridge Condition	Rating
WEL076.5-021.0A	Larimer and Weld Canal	County Road 76.5	Functionally Obsolete	65.9
LR46E-1.1-13	Dry Creek	Lincoln Avenue	Functionally Obsolete	66.2
LR13E-0.3-24E	Love/Horse Shoe Canal	County Road 13E	Functionally Obsolete	66.3
LR27-0.1-32C	Buckhorn Creek	County Road 27	Functionally Obsolete	66.7
JSTWN-004	Consol Hillsborough Cana	County Road 3	Functionally Obsolete	67.2
EVN031.0-050.0A	Big Thompson River	County Road 396	Structurally Deficient	68.9
LR42-0.0-9	Fossil Creek Res. Inlet	County Road 42	Functionally Obsolete	69.5
C-17-C	Little Thompson River	SH 60 ML	Functionally Obsolete	70.3
C-18-AP	Us 85 Buss Rt	US 34 Bypass	Functionally Obsolete	70.3
C-16-AI	Draw	US 34 ML	Functionally Obsolete	71
C-17-ER	I 25 ML	SH 392 ML	Functionally Obsolete	72.3
C-17-CZ	Draw	SH 257 ML	Functionally Obsolete	73.1
C-16-AG	Home Supply Ditch	US 34 ML	Functionally Obsolete	73.3
LR15-0.9-4	Little Thompson River	County Road 15	Functionally Obsolete	73.6
B-17-BN	I 25 ML	County Road 36	Functionally Obsolete	73.9
B-16-AL	Larimer Co Canal	SH 1 ML	Functionally Obsolete	74.2
C-17-EH	I 25 ML	US 34 ML EBND	Functionally Obsolete	75.6
C-17-EG	I 25 ML	US 34 ML WBND	Functionally Obsolete	75.6
C-16-AH	Handy Ditch	US 34 ML	Functionally Obsolete	75.7
FCELIZ-0.1-BRYN	Larimer Co. Canal No. 2	Elizabeth Street	Functionally Obsolete	76.4
LR17-0.5-48	Cache La Poudre River	County Road 17	Functionally Obsolete	76.5
FCSHLD-0.1-HLPD	Spring Creek	Shields Street	Functionally Obsolete	76.6
FCCRST-0.1-BRYN	Larimer Co. Canal No. 2	Crestmore Court	Functionally Obsolete	76.9
EVN052.0-033.0A	Ashcroft Draw	49th Street	Functionally Obsolete	77
LR11H-0.3-S402	Big Thompson River	County Road 11H	Functionally Obsolete	77
LR5-1.0-32E-A	Boxelder Ditch	County Road 5	Functionally Obsolete	77.4
FCMNR-0.0-CLGE	Larimer Co. Canal No. 2	Monroe Street	Functionally Obsolete	77.4
B-17-BC	RR Spur	I 25 ML NBND	Functionally Obsolete	77.4
FCPLM-W0.1-CTYP	Larimer Co. Canal No. 2	Plum Street	Functionally Obsolete	77.6
C-17-Z	Big Thompson River	SH 257 ML	Functionally Obsolete	77.8
B-16-FJ	Windsor Res, Canal Sr	I 25 Service Rd	Functionally Obsolete	77.9
FCLMY-1.2-VINE	Larimer & Weld Canal	LeMay Avenue	Functionally Obsolete	78
LR6C-0.8-15	Little Thompson River	County Road 6C	Functionally Obsolete	78
EVN033.0-048.0A	Union Ditch	County Road 33	Functionally Obsolete	78
C-16-T	Loveland-Greeley Canal	US 34 ML EBND	Functionally Obsolete	78.4
C-16-X	Loveland-Greeley Canal	US 34 ML WBND	Functionally Obsolete	78.4

Table 2-5 Bridges with Deficiencies (Continued)

Bridge Structure No.	Location	Facility	Bridge Condition	Rating
C-18-AV	Ramp To US 85 Sbdn	US 34 ML EBND	Structurally Deficient	78.5
C-17-Y	Little Thompson River	SH 257 ML	Functionally Obsolete	78.7
LR31D-0.0-22H-A	Handy Ditch	County Road 31D	Functionally Obsolete	78.9
C-16-R	Louden Ditch	US 34 ML	Functionally Obsolete	80.5
LR29-0.0-22H	Big Thompson River	County Road 29	Functionally Obsolete	81
C-18-BL	CO.RD 39.5, UP RR	US 85 ML NBND	Structurally Deficient	81
C-17-ET	Crossroads Blvd.	I 25 ML SBND	Functionally Obsolete	82.1
C-17-EK	I 25 ML	County Road 20E	Functionally Obsolete	82.9
B-16-FL	I 25 ML	County Road 52	Functionally Obsolete	84.3
WIN017.0-064.0A	Cache La Poudre River	Seventh Street	Functionally Obsolete	87.8
C-17-CE	GW RR	I 25 ML NBND	Functionally Obsolete	89.3
C-17-CB	GW RR	I 25 ML SBND	Functionally Obsolete	89.3
C-17-AS	County Road	I 25 ML SBND	Functionally Obsolete	89.7
C-17-DH	County Road 46	I 25 ML SBND	Functionally Obsolete	89.7
C-17-BR	SH 60 MI	I 25 ML SBND	Functionally Obsolete	91.7
FCLMY-0.1-STUT	Spring Creek	LeMay Avenue	Functionally Obsolete	91.7
C-17-EI	County Road 16	I 25 ML NBND	Functionally Obsolete	92.1
C-17-EE	County Road 16	I 25 ML SBND	Functionally Obsolete	92.1
C-17-ES	Crossroads Blvd.	I 25 ML NBND	Functionally Obsolete	93.1
B-17-DS	I 25 ML	OLD SH 68 ML	Functionally Obsolete	94.2

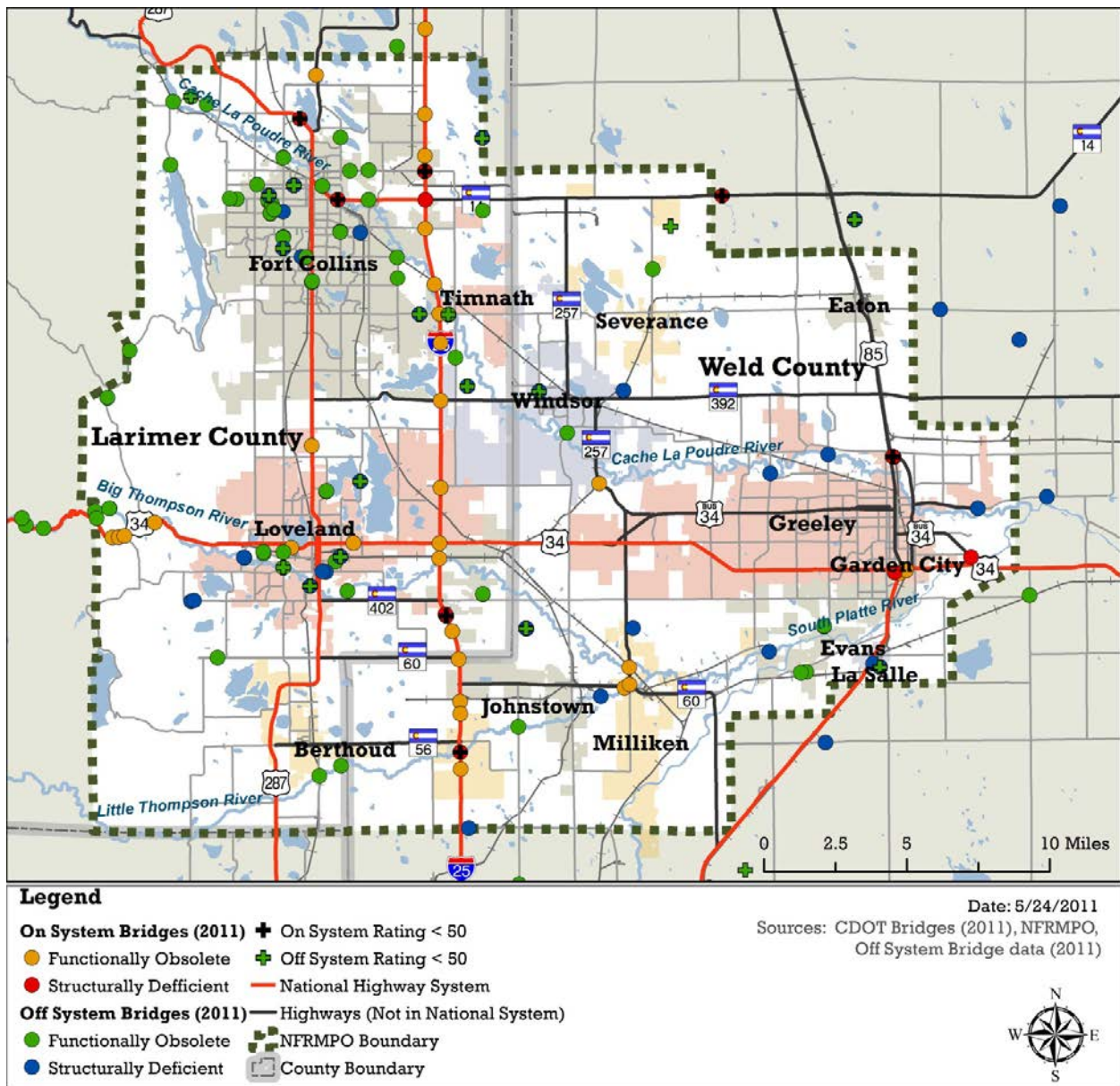
Source: CDOT, bridge data, 2011.



The SH 392 bridge over I-25 in Windsor



Figure 2-6 Bridges with Deficiencies



Safety

Crash data for all Regionally Significant Corridors (State Highways and non-State Highways) were collected from the CDOT Crash Database. The crash data cover a five-year period from June 2001 to June 2006. **Table 2-6** shows the number of crashes by year for all Regionally Significant Corridors by crash severity.

Table 2-6 Regionally Significant Corridor Crashes by Severity

Year	Property Damage Only	Injury	Fatal	Total
6/2001 – 6/2002	2,742	1,211	26	3,979
6/2002 – 6/2003	3,355	1,311	32	4,698
6/2003 – 6/2004	3,187	1,244	31	4,462
6/2004 – 6/2005	3,278	1,167	22	4,467
6/2005 – 6/2006	3,380	1,152	20	4,552
Total	15,942	6,085	131	22,158

Source: CDOT crash data, 2001-2006.

The safety measure was based on the crash rates within each corridor, that is, the number of crashes 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 crash rates were weighted based on the severity of the crash, as follows:

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

Table 2-7 shows the resulting crash rates for each of the eleven Regionally Significant Corridors. Refer to **Table 1-1** for a description of the roadway facilities included in each corridor.

Table 2-7 Weighted Crash Rates on Regionally Significant Corridors

Corridor	Corridor Description	Weighted Crash Rate ¹
1	US 287	9.59
2	SH1	5.19
3	I-25	2.53
4	SH 257	7.72
5	Two Rivers Parkway	7.72
6	US 85	5.27
7	SH 14	5.24
8	Prospect Road	7.60
9	SH 392	3.82
10	US 34	4.45
11	SH 60/SH 56	3.77

¹ Crashes per million vehicle miles of travel based on crash severity. (PDO = 1, Injury = 5, Fatal = 12) CDOT crash data, June 2001-June 2006.



In order to better assess the relative safety of the roadways within the NFRMPO, the crash history along the Regionally Significant Corridors (RSC) was reviewed in detail. Three distinct roadway types are within the Regionally Significant Corridors: Interstate Highways, State Highways, and non-State Highways.

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

The crash 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 crash rate for five crashes along a low volume roadway segment will be much higher than five crashes along a high volume roadway segment of the same length. Likewise, the same five crashes on a five mile roadway segment will result in a higher crash rate than five crashes on a ten mile roadway segment with the same ADT.

While both crash 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 crashes. As such, the crash 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 crash rates were compared against a derived average for all similar segments of the North Front Range RSCs. The average crash rate was approximately 2.13 for State Highways, and approximately 2.56 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 0.90 as documented in the *Accident and Rates on State Highways* report produced by the CDOT Transportation Safety and Traffic Engineering Branch.

Figures 2-7 and 2-8 graphically present the results of the crash rate comparison for the north-south and east-west roadway segments within the RSCs. The red indicates roadway segments that are significantly higher, and the blue indicates roadway segments that are significantly lower than the average total crash rates derived for that type of facility. The green indicates roadway segments that are within 50 percent 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 crash rates due to a large proportion of interchange access and intersection related crashes. For low volume rural roadways, one or two crashes can cause large shifts in the crash rates. Along I-25, the crash rates may be influenced by a wide variety of factors, including congestion and heavy directional flow during peak hours.

Figure 2-7 Crash Rates on North-South Corridors

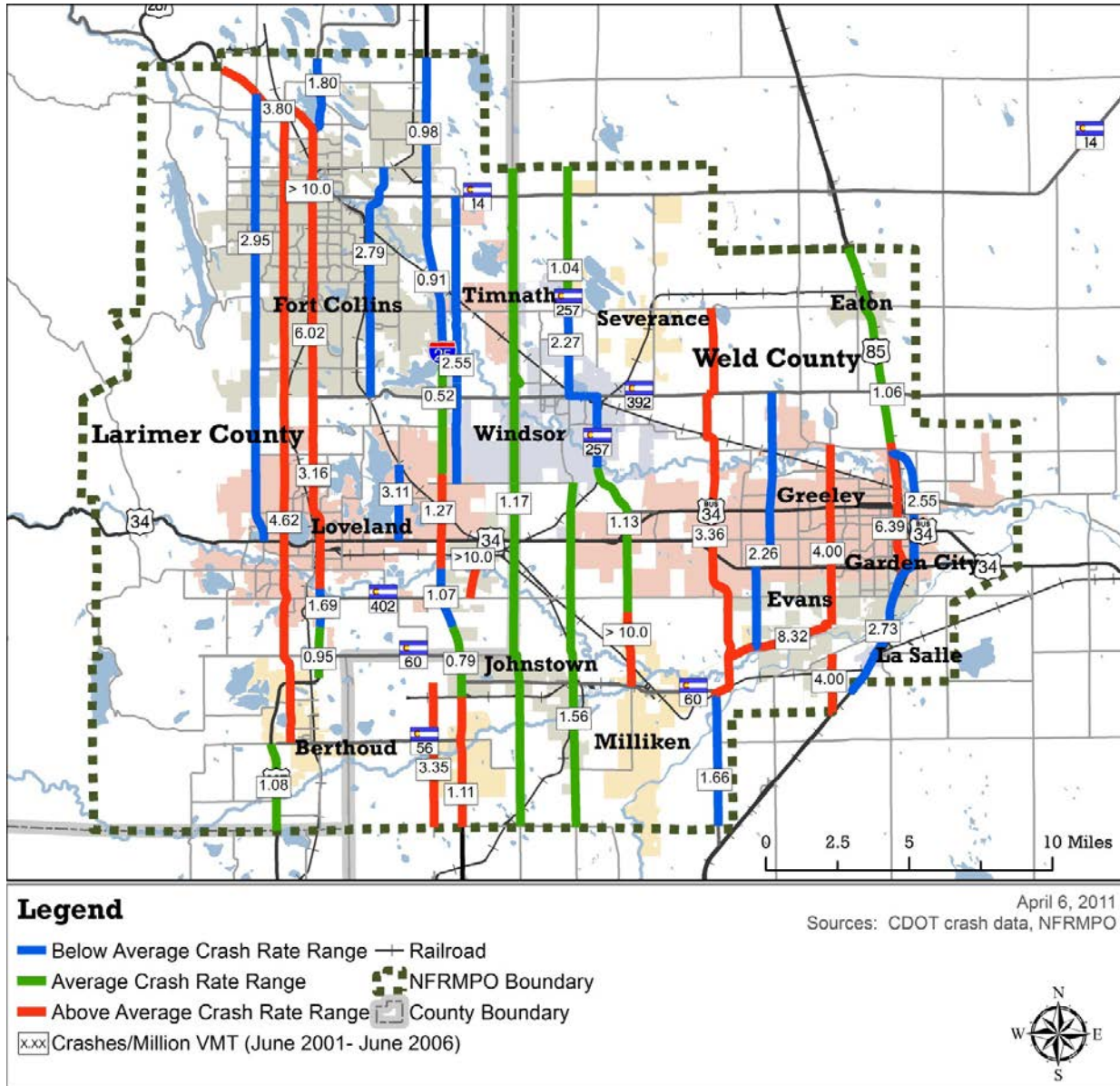
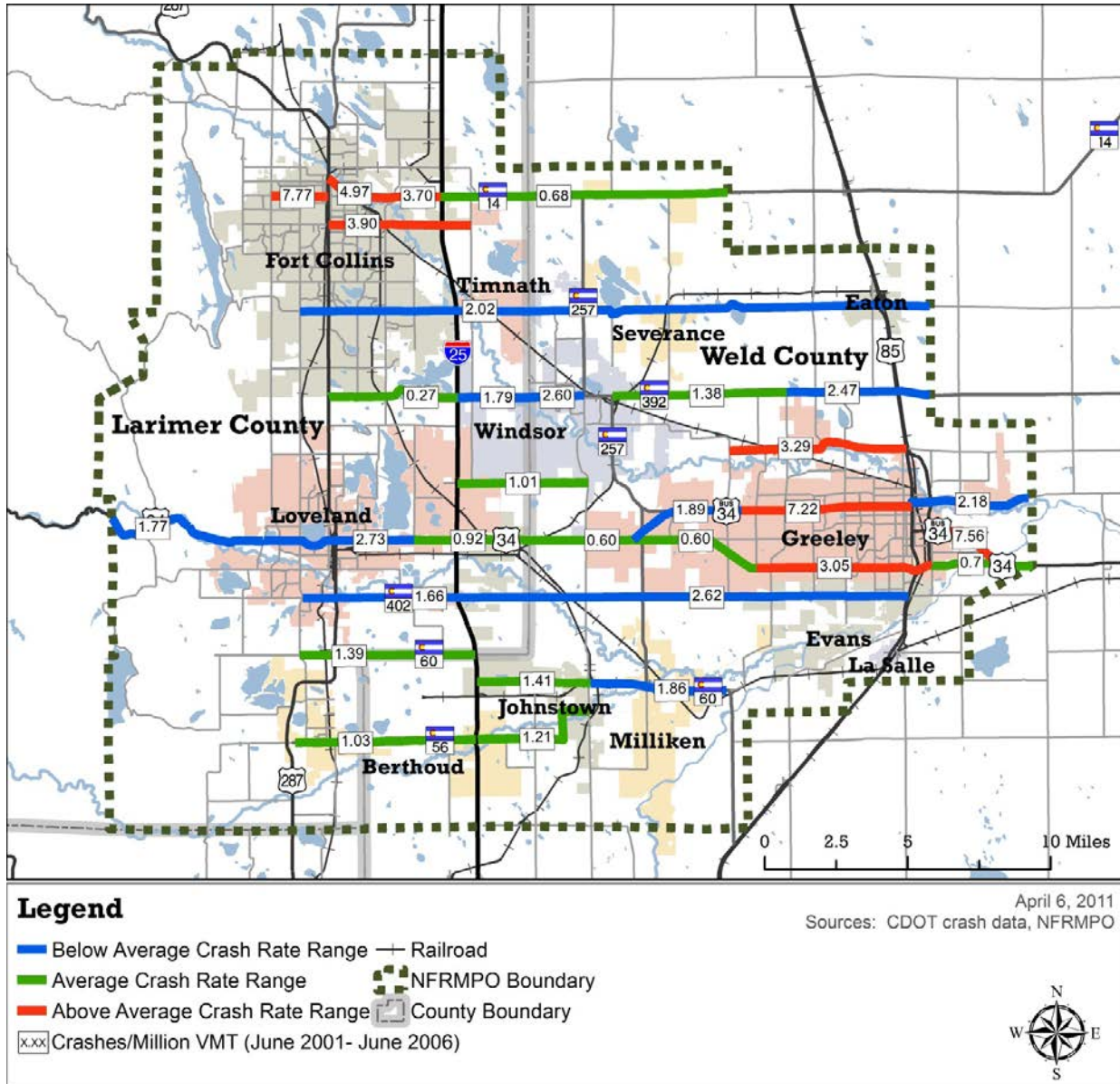




Figure 2-8 Crash Rates on East-West Corridors



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. It is clear that many different strategies are needed to address the challenges surrounding the projected growth of freight transportation.

Truck Freight

The NFRMPO develops economic forecasts for the region every four years in preparation for the update of the RTP. The forecast report for the 2035 RTP, *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 the 2004 Global Insight Transearch Database information as the foundation for the report on truck freight. It should be noted that the truck freight movement shown in **Table 2-8** broadly represents the truck movement regionally.

The most heavily used truck routes in the North Front Range are I-25, US 85, US 34, US 287, 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 2-9** 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 2-8** 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 2-8 Existing Commodity Flows (2004)

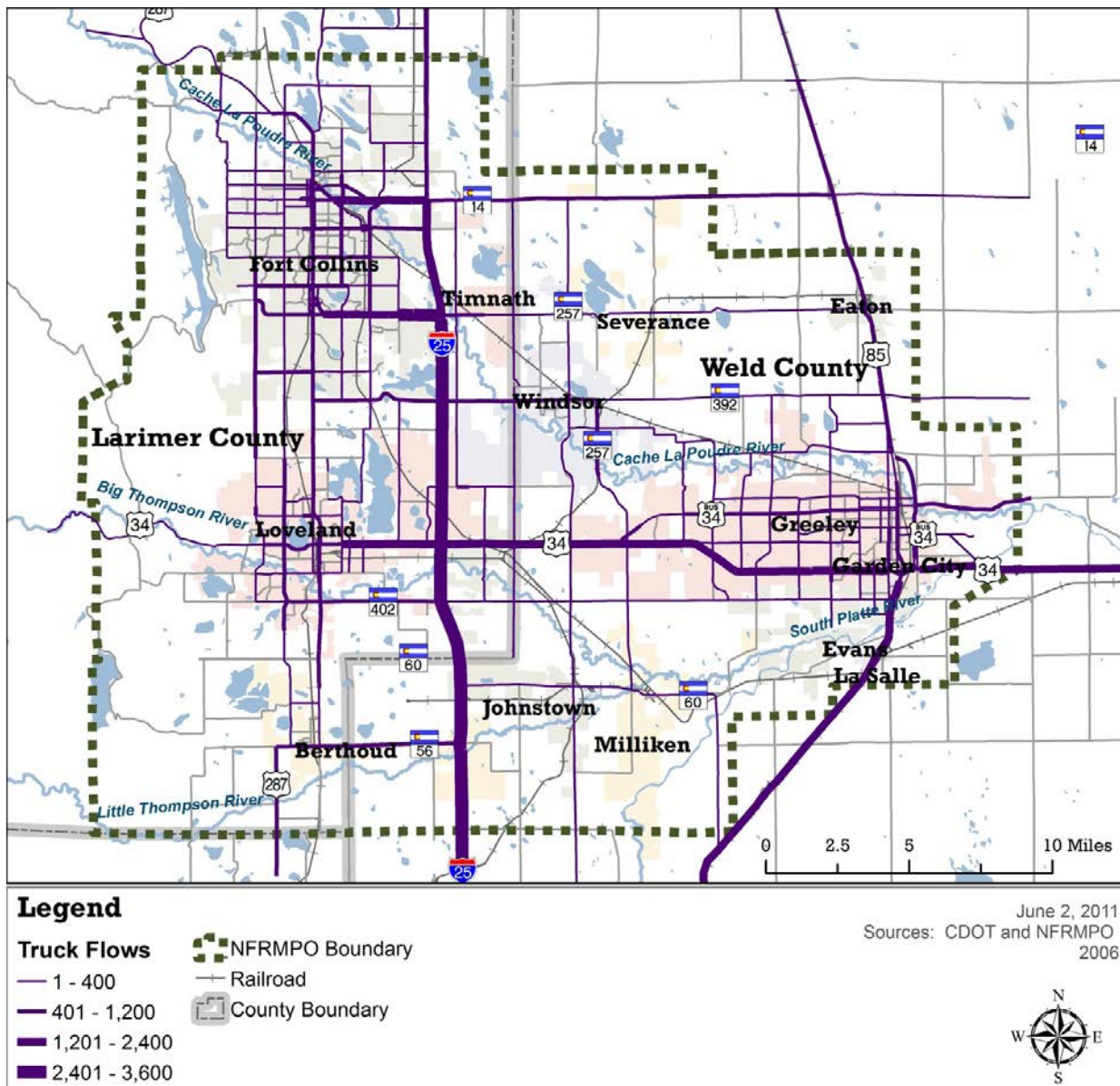
County	Inbound Tonnage (thousands)		Outbound Tonnage (thousands)		Total Tonnage (thousands)	
	1998	2004	1998	2004	1998	2004
Larimer	6,056.6	9,351.8	3,057.4	10,042.1	9,114.0	19,393.9
Weld	6,085.8	8,997.4	5,638.9	15,711.3	11,724.7	24,708.7

Source: Global Insight Transearch Database, 2004

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



Figure 2-9 Existing Truck Traffic



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 six and 17 trains per day, respectively. The BNSF carries approximately 33.0 annual gross tons per mile (in millions) and in 2005, UPRR carried between 20.0 and 39.9 annual gross tons per mile (in millions).

Railroads are classified according to the annual gross operating revenue from the railroad operations. A Class I railroad is one which had, in 2008, an operating revenue of at least \$401.4 million. A Local Railroad is one which is not a Class I and is engaged primarily in line-haul service. There are two Class I

railroads (Burlington Northern Santa Fe and Union Pacific) and one local railroad (Great Western Railway of Colorado) operating in the NFRMPO. They are described below and depicted in **Figure 2-10**.

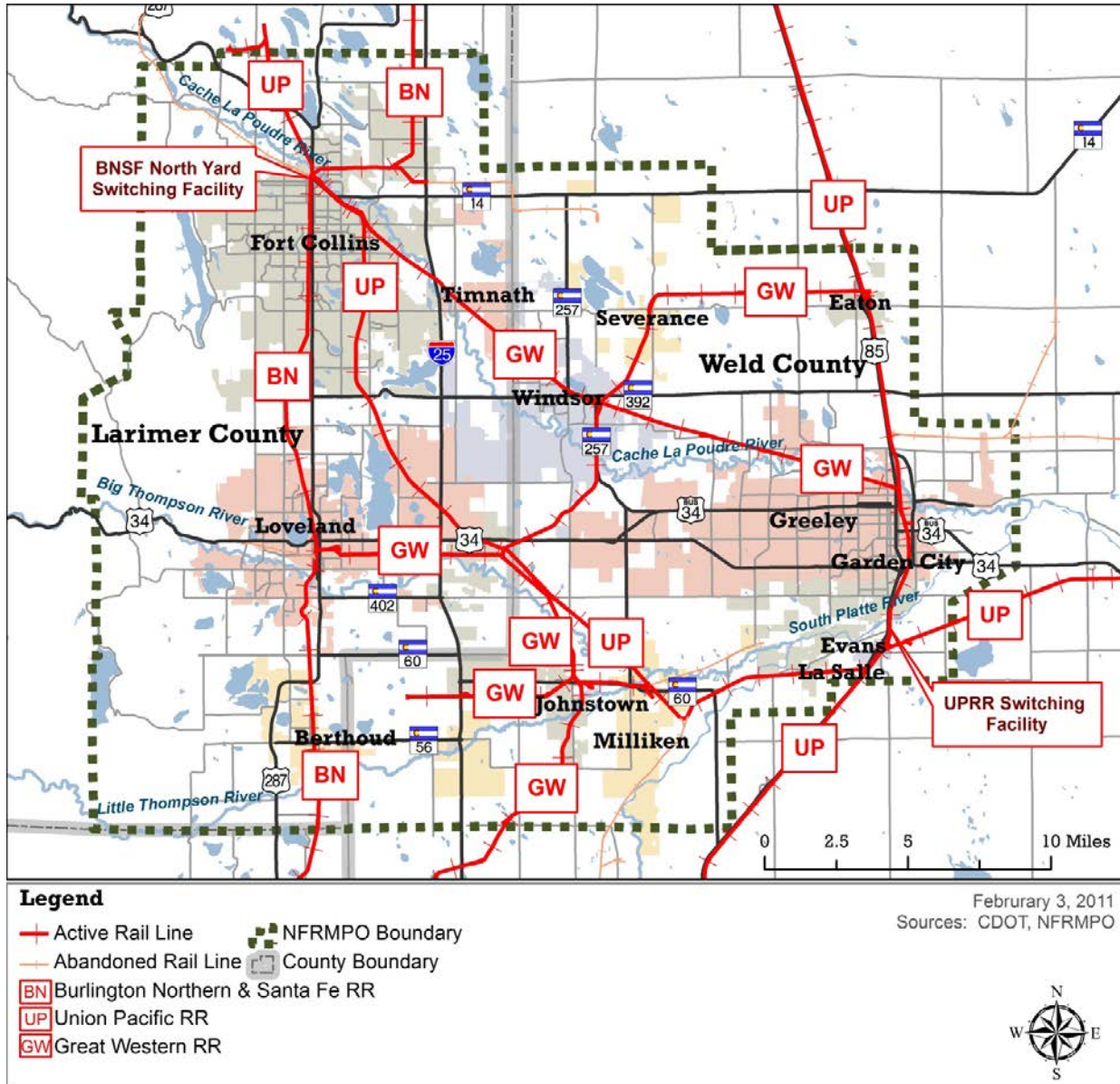
- ▶ **Union Pacific Railroad (UPRR):** The UPRR is a Class I railroad which has several rail lines in the North Front Range. The north-south line runs from the Denver metro region through the North Front Range to Wyoming, generally following the US 85 corridor. The majority of the east-west line of the 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, with a switch yard in Fort Collins. Six trains operate per day on the BNSF line.
- ▶ **Great Western Railway of Colorado (GW):** The GW Railway of Colorado is a local railroad. GW operates a total of 80 miles of track and interchanges with BNSF and UPRR. The company operates freight service between Loveland and Johnstown, with a line splitting to Milliken and Longmont. Another line connects north from Kelim (east of Loveland) to Windsor, and from there to either Greeley or Fort Collins. GW also owns a branch line from Johnstown to Welty (just west of Johnstown). GW serves a diverse base of customers including the Great Western Industrial Park.



Union Pacific Railroad switching station in LaSalle



Figure 2-10 Rail System



Freight Safety

The traveling public and freight movement interface on the roadway system and at rail crossings across the region. **Table 2-9** lists the number of crashes at rail crossings. Twelve crashes occurred at railroad crossings in 2006 through 2010, with three injuries (all of which occurred as a result of one crash) and two fatalities.

Table 2-9 Railroad Crossing Crashes

Year	RR	County	Jurisdiction	Crossing ID	Highway Name	Crossing Protection	Fatal	Injury
2006	GWRR	Larimer	Loveland	872128C	Denver Ave	Highway traffic signal, Cross bucks		
2007	BNSF	Larimer	Fort Collins	244622C	Horse Tooth	Gates, Cantilever FLS	1	
2008	BNSF	Larimer	Fort Collins	244647X	Summit View	Gates, Standard FLS, Audible, Cross bucks		
2010	BNSF	Larimer	Fort Collins	244632H	Plus St	Cross bucks	1	
2006	GWRR	Weld	Windsor	871917X	Eastman Park Dr	Cross bucks, Flagged by crew		
2006	UP	Weld	Milliken	804538S	SH 257	Standard FLS, Audible, Cross bucks		
2006	UP	Weld	Milliken	804539Y	CR 52	Cross bucks		3
2007	UP	Weld	Eaton	804853H	2nd St	Gates, Standard FLS, Audible, Cross bucks		
2007	GWRR	Weld	Windsor	244889T	CR 15	Cross bucks		
2008	UP	Weld	Eaton	804852B	CR 72	Cross bucks, Stop sign		
2008	UP	Weld	LaSalle	804355Y	CR 48	Cross bucks, Stop sign		
2010	UP	Weld	Eaton	804855W	5th St	Cross bucks, Stop sign		

To evaluate the relative safety of truck travel on the roadway network, the percent of overall crashes 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 2-10** shows the percentage of truck traffic, which is a weighted average of the State Highway segments that comprise the corridor, and the percentage of truck crashes (i.e., the percent of the total crashes that involved a truck), which is also a weighted average for the corresponding State Highway segments. The truck traffic is for the year 2008 and the crash data is for the five year time period June 2001 – June 2006. In most of the Regionally



Significant Corridors, the percentage of crashes involving trucks is less than the percentage of truck traffic.

Table 2-10 Truck Crash Rates

Corridor	Description	% Truck Traffic	% Truck Accidents
1	US 287	5.0%	2.4%
2	SH 1	3.0%	3.4%
3	I-25	12.8%	8.3%
4	SH 257	8.6%	8.6%
5	Two Rivers Parkway/SH 60	7.5%	1.7%
6	US 85	10.8%	3.6%
7	SH 14	8.5%	0.1%
8	Prospect Road	NA	NA
9	SH 392	8.5%	4.1%
10	US 34	5.3%	2.8%
11	SH 60/SH 56	5.3%	6.1%

D. Bicycle and Pedestrian System

The NFRMPO identified regional bicycle and pedestrian facilities on Regionally Significant Corridors as well as those that are included in local transportation plans. Facilities identified include multi-use off-street trails, on-street bicycle lanes, and on-street bicycle routes. The following are common definitions of these types of facilities:

- ▶ **Multi-Use Off-Street Facility** – a hard or soft surface trail that is designed to be used by commuters and recreationalists. These facilities are accessible to bicycles, pedestrians, equestrians, and other non-motorized users.
- ▶ **On-Street Bicycle Lane** - an on street bicycle facility delineated by pavement markings and signage for the use of bicyclists. Typically located on roadways with classification of collector and above.
- ▶ **On-Street Bicycle Route** – an on street bicycle facility, delineated by signage only. These facilities tend to be located on lower volume residential streets or in semi-rural areas.

The facilities in the following maps were identified from a number of sources, including the *Colorado Front Range Trail Corridor Plan* (Colorado State Parks, April 2000), local Master Street Plans and Standards, as well as existing local bicycle and pedestrian plans. They were further refined by discussions with individual local governments. **Figure 2-11** shows the existing and planned multi-use trails and segments. **Figure 2-12** shows existing and planned on-street bicycle lanes and routes.

Figure 2-11 Off-Street Multi-Use Trails

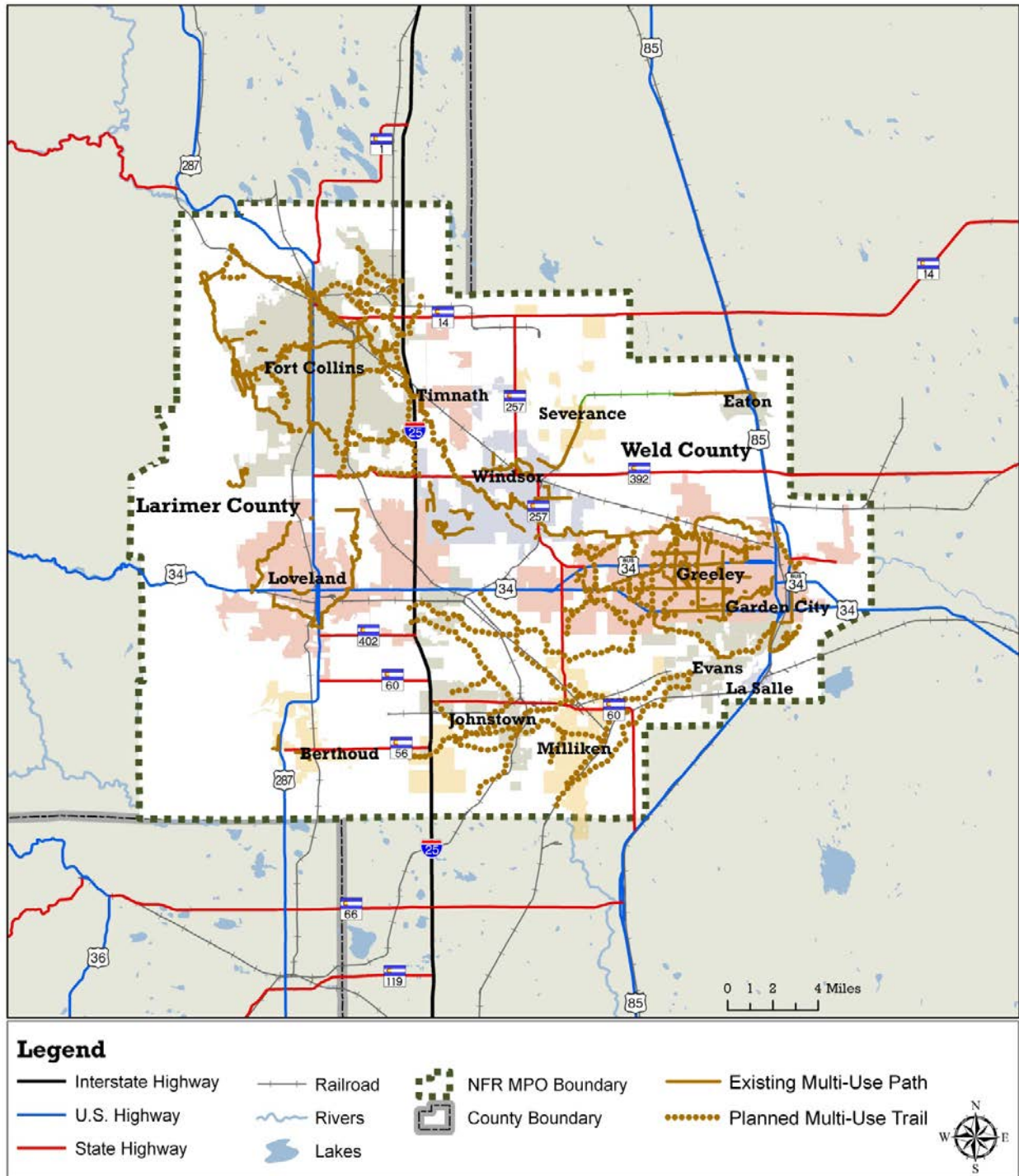
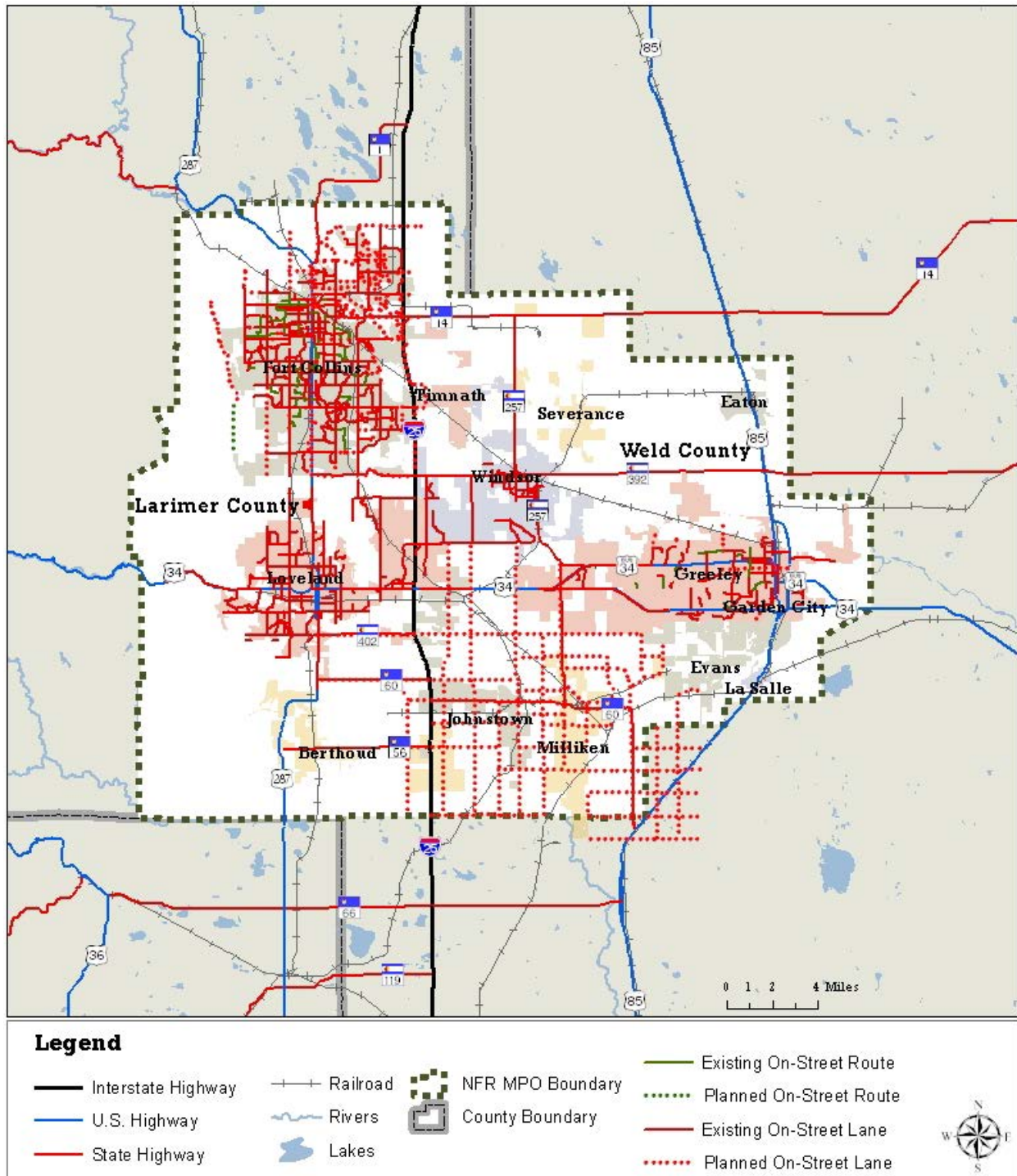




Figure 2-12 On-Street Bicycle Facilities



E. Transportation Demand Management Program

Transportation Demand Management (TDM) – also known locally as Transportation Efficiency Programs – can be described as the actions that improve transportation system efficiency by altering transportation system demand rather than embarking on roadway capital expansion. TDM strategies include the following:

- ▶ Reducing trip length or time (less time congesting roadway)
- ▶ Encouraging off-peak travel (travel during less congested periods)
- ▶ Reducing single occupancy vehicles (fewer vehicles during congested periods)

In 1996, the NFRMPO began implementation of the SmartTrips™ program for Northern Colorado with allocated staff from the NFRMPO and the communities of Fort Collins, Greeley, and Loveland. The program was part of a package of strategies developed to reach the goals established in the Long Range Regional Transportation Plan (RTP) which includes reducing the number of trips made by single occupant vehicles (SOVs) by 10 percent by the year 2015.

Later, the three local programs were dissolved to reduce confusion and to increase efficiency. The NFRMPO then began to administer the carpool (CarGo) and vanpooling (VanGo™) programs which support increased regional carpooling and vanpooling, decreased SOV use, and increased biking, walking, and telecommuting within the member municipalities.

The NFRMPO currently provides several TDM programs, including the VanGo™ vanpooling program, ridematching through the Go Portal (www.smarttrips.org), and business outreach services and events.

NFRMPO Household Survey of 2010 and Implications for TDM

The NFRMPO conducted a household survey in 2009 for the four Front Range Colorado Metropolitan Planning Organization (MPO) sub-regions. The NFRMPO collected data throughout the NFRMPO region and documented it in the *NFRMPO Household Survey of 2010*. The survey was conducted in the same manner across all of the sub-regions, providing a snapshot of current travel behavior throughout the Front Range. The data can be used to target TDM service improvements for existing programs as well as exploring the potential for new services and programs in the NFRMPO region.

Key differences between the cities, towns, and rural areas in the NFRMPO are reflected in the household travel behavior. Some characteristics include:

- ▶ **Greeley/Evans** – Households in the Greeley/Evans area are the most different from the other four areas. Consisting of more retirees and minorities than other areas, these households tend to be smaller, with fewer vehicles, fewer students, fewer workers, lower incomes, and the highest disability rates. The Greeley/Evans area has higher renter rates, and respondents are more likely to hold a transit pass than other areas of the region, with the exception of Fort Collins. Households in the Greeley/Evans area use transit more frequently than other parts of the region. Thirteen percent of Greeley/Evans drivers do not have a driver's license, which may contribute to higher levels of walking or transit use.



- ▶ **Loveland** – Loveland households generally tend towards average characteristics for the region. They report somewhat smaller household sizes and number of workers per household, but higher-than-average renters. Loveland households have above-average transit usage for the region.
- ▶ **Fort Collins** – Fort Collins households report smaller-than-average household sizes and fewer vehicles. These households report the highest levels of non-motorized travel in a typical week and the highest levels of holding a transit pass. Household members have higher-than-average education levels and more students per household than the other areas. Fort Collins respondents have a higher average number of bicycles per household and report riding a bicycle or walking to work or school more frequently than in other parts of the region.
- ▶ **Larimer County** – Household size in non-urbanized Larimer County is smaller than average, but respondents report the highest number of vehicles per household. They have the highest licensure rate, lowest levels of disability, above-average number of workers per household, and have the highest reported income levels in the area.
- ▶ **Weld County** – Respondents in Weld County are similar to those in Larimer County, except that they have lower education rates and more Hispanic households than the regional average. They are younger, have more students, and report the largest household size. Transit use is lowest in outlying areas of Weld County.

I-25 Carpool Park and Ride Study

In the summer of 2010, the NFRMPO conducted a survey to find out how park and rides (PNRs) are being used along the I-25 corridor in Northern Colorado. The following six park and rides were surveyed during morning (a.m.) and evening (p.m.) peaks on weekdays during July and August 2010:

- ▶ Harmony (Fort Collins)
- ▶ SH 392 (Windsor)
- ▶ US 34 (Loveland)
- ▶ SH402 (Loveland)
- ▶ SH 60 (Johnstown)
- ▶ SH 56 (Berthoud)

The results of the surveys show a significant change in PNR use compared to previous surveys. Highlights from the 2010 survey include:

- ▶ SH 402 and SH 60 approached or exceeded 100 percent capacity on the days surveyed. At the SH 402 PNR, which currently has 88 paved spaces, users also were parking in a makeshift unpaved extension of the lot.
- ▶ SH 392 had the largest drop in use (from 36 vehicles in previous surveys down to 11 - 12 vehicles).
- ▶ License plate data collected from 532 license plates and matched with home addresses in Northern Colorado reveals that 38 percent of the cars at the six PNRs were from the Fort Collins

area, while 25 percent were from the Loveland area. Greeley, Berthoud-Johnstown, and Denver-Metro each yielded between 9 and 10 percent.

- ▶ Carpools represent more than 70 percent of the overall usage at PNRs in the NFRMPO region. Vanpools account for 24 percent of the vehicles leaving in the morning and 20 percent of the vehicles arriving in the afternoon. Harmony Road PNR had the largest number of morning and afternoon carpools (39 and 48 vehicles, respectively).
- ▶ 54 percent of carpools in both the morning and afternoon contained two passengers while the three passenger vehicles accounted for 11 and 18 percent respectively.

Regional TDM Efforts

The NFRMPO serves as the regional coordinator for TDM programs in the NFRMPO area which includes the VanGo™ Vanpool Services program and business outreach.

SmartTrips™

SmartTrips™ is an NFRMPO program that provides resources, information, and incentives to help area residents travel by means other than by single occupancy vehicles. Funding cuts in recent years have resulted in the scaling back of both the number and scope of TDM programs offered by SmartTrips™, particularly at the local level. The NFRMPO has focused on regional modes of transportation which includes carpooling and vanpooling along with the ridesharing website smarttrips.org.

VanGo

The VanGo™ program, managed by the NFRMPO, provides vanpool services to meet the origin and destination needs of commuters in the region and between the North Front Range and the Denver metro area. The program, in operation since 1994, has grown throughout the years to a peak of more than 500 riders (in 2008). The program is more fully addressed in the transit section toward the end of this chapter.



CarGo

Carpool matching is provided by CarGo, a ridesharing system available through the smarttrips.org web site (the same web site used by the VanGo™ program). The CarGo program enables users to receive personalized carpool matches. The tool matches willing carpool participants who live near each other and are traveling in the same direction and during the same time to share the ride to school or work.



The Go Portal (GreenRide)

The NFRMPO has developed a new online commuter service called The Go Portal (GreenRide) which will enhance the current services that allow commuters to find carpool matches, calculate commute savings, and get information on commute options. Commuters will also be able to track their carpool trips and earn incentives with The Go Portal. Users of both VanGo™ and CarGo may also track their savings, calories burned, and reduction in carbon monoxide emissions by using a savings calculator.



The new tool can also be used by employers to promote and gather data on their own programs, provide incentives for employees, and assist employers in implementing successful commute programs. GreenRide will be provided free of charge to employees and employers in the NFRMPO region.

Bicycle Programs

The NFRMPO works with CDOT and local governments to promote Bike Month and Bike to Work Day every June. In addition, there are more than 290 miles of bicycle facilities (bike routes, paths, lanes, and off-street trails) within a quarter mile of the Tier One Regionally Significant Corridors in the region (I-25, US 34, and US 287 and parallel facilities, as defined in the 2035 RTP). Also, the smarttrips.org website allows users to track miles of bicycle travel. Tracking of these miles will serve as an important measure for the program. Personal and employer incentives will need to be employed to increase reporting participation.

Local Government TDM Efforts

Local governments in the NFRMPO region are also involved in TDM efforts. Transit and bicycle programs are the most common focus of TDM efforts in the NFRMPO region. Some local governments have also developed Intelligent Transportation Systems (ITS) that provide information to travelers about traffic, weather, construction, and other travel factors.

City of Fort Collins

The City of Fort Collins is the largest city in the NFRMPO region, with a population of 143,986 (2010 Census). It is an economic and academic hub within the region and is home to Colorado State University (CSU).

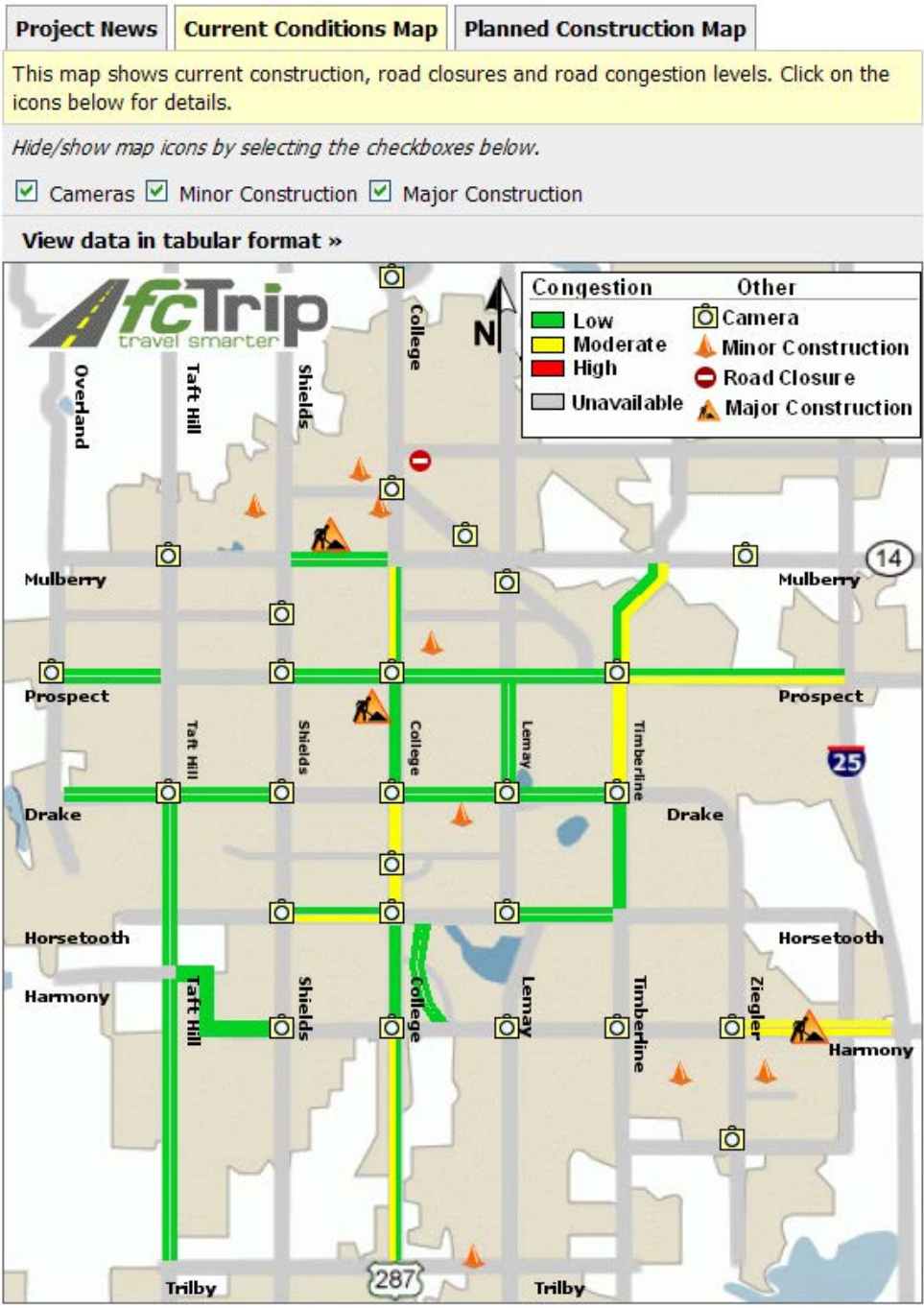
FCTrip

FCTrip is a web-based application that provides information to travelers in the City of Fort Collins. FCTrip provides:

- ▶ Timely and accurate information regarding traffic conditions
- ▶ Information regarding alternative modes of transportation
- ▶ Information on weather conditions, work area traffic/construction
- ▶ Links to Denver Metropolitan Area traveler information
- ▶ Technology foundation for future North Front Range Traveler Page

FCTrip provides this information through a network of closed-circuit television cameras, video detectors and pavement sensors. Users are able to view real-time maps that provide information on traffic conditions, congestion, construction, and road closures. An example FCTrip map is shown in **Figure 2-13**.

Figure 2-13 FCTrip Map



Map generated at <http://www.fcgov.com/fctrip/>



Fort Collins Bike Library

The Fort Collins Bike Library¹ is a free service for residents, students, and visitors to Fort Collins. Members can borrow a bike for as short as one hour or for as long as seven days. The Bike Library is a cooperative effort between the City of Fort Collins, Bike Fort Collins (a local advocacy group), and the Fort Collins Bike Co-op, which provides maintenance and rehabilitation for the library's bikes. As of 2010, 1,950 registered patrons have logged 21,000 miles and 2,600 rider days, preventing 9.7 metric tons of carbon dioxide from being released into the atmosphere, according to Bike Fort Collins.

FC Bikes

FC Bikes is the City of Fort Collins' bicycle program. The City completed a 2008 update to its 1995 Bicycle Plan and Program. The updated plan proposes improvements to nearly every facet of bicycling in Fort Collins. The goals, principles, and policies that pertain to bicycling established in *City Plan* and the *Transportation Master Plan* have set the foundation for the current policies, projects, and programs as well as the focus for the numerous recommendations provided. In addition, FC Bikes promotes bicycling in the city by sponsoring events such as Bike to Work Day, Winter Bike to Work Day (in December), and BikeWinter, encouraging cyclists to ride throughout the winter. Winter Bike to Work Day in December is the cornerstone event, with increased numbers of participants in each year since its inception in 2007. The City of Fort Collins Transportation Board recently incorporated a bicycle sub-committee.

Climate Wise

Climate Wise is a free, voluntary City of Fort Collins program that is dedicated to helping local businesses reduce greenhouse gas emissions. The alternative transportation part of the program promotes the CarGo and VanGoTM programs, as well as School Pool.

Colorado State University – TDM Programs

Colorado State University, with approximately 25,000 students enrolled, has a significant transportation impact on the City of Fort Collins. The presence of students and faculty affects the city's demographics and transportation system. For instance, Fort Collins has a higher level of bicycle commuting than the national average (and other parts of the region). This can be partially attributed to the student population. In addition, more than 35 percent of Fort Collins households reported that someone walks or bicycles to work or school at least once a week (NFRMPO Household Survey of 2010). CSU has implemented TDM programs to alleviate parking issues and congestion, as described below.

All CSU students receive a pass to ride the Transfort bus system at no cost per ride. In addition, CSU offers reduced price annual faculty/staff bus passes (\$50 in 2010). The 2006 transit center at Lory Student Center includes a Transfort customer counter, flat screen monitors displaying departure times and news stories, and an indoor passenger waiting area to increase comfort and convenience. The transit center is certified LEED Gold.

¹ The Fort Collins Bike Library is a pilot project funded by the North Front Range MPO Planning Council for a period of 3 years. Funding is made possible by a federal Congestion Mitigation Air Quality (CMAQ) grant. Once the pilot period is over, local funding will need to be secured.



Lory Transit Center, image courtesy of the CSU Facilities Management website

The Fort Collins Bike Library has a station at the Lory Student Center, with free access to bicycles to students, faculty, and staff. Colorado State University has recently purchased hundreds of new, user-friendly bike racks to accommodate more than 15,000 bicyclists daily (City of Fort Collins 2008 Bicycle Plan).

CSU also provides a full subsidy for employee vanpools through the VanGo™ program.

City of Greeley

University of Northern Colorado (UNC) – TDM programs

The UNC Bear Bus Blue and Gold Routes are a joint effort between Greeley Evans Transit and the students of the University of Northern Colorado. UNC students ride free with a student ID.

The Gold Route runs Monday through Friday, every 8-10 minutes, from 7:45 a.m. until 2:00 p.m. The route is designed to serve the University Center, West Campus residence halls, Student Recreation Center, Arlington Park Apartments, Gunther, Skinner and Kepner Halls, University Family housing, the Jackson Field complex, and Central Campus residence halls- Candelaria and Butler-Hancock.

The Blue Route runs Wednesday, Friday, and Saturday every 30 minutes from 9:00 p.m. until 2:00 a.m. The route provides evening service connecting the UNC Campus with downtown Greeley, South 8th Avenue, and the Grove Apartments.

City of Loveland

Loveland Bicycling and Pedestrians

The City of Loveland also sponsors an annual Bike to Work Day event, including a business challenge to encourage employers to promote cycling as transportation to their employees. Additionally, the City of Loveland's Engineering Department has partnered with the Thompson School District to promote the Safe Routes to School Program, a federally-funded program through CDOT. This program benefits children and the community by reducing traffic congestion in school zones, improving air quality, increasing physical activity of children and adults, and promoting safe neighborhoods.

The City of Loveland Bicycle and Pedestrian Plan will provide a comprehensive approach to identifying bicycle and pedestrian needs, reviewing improvements, and prioritizing implementation strategies and viable funding sources. The plan will look for opportunities to connect and integrate existing facilities.



Precise alignments may be determined during the implementation process. It is anticipated that the plan will be adopted in the middle of 2011.

Local Transit Programs

Transit is a big part of TDM and a later section of this chapter provides more detail about the various transit programs. Briefly, programs in the region include:

- ▶ Transfort, Fort Collins
- ▶ FLEX, operated by Transfort, with service between Fort Collins and Longmont
- ▶ Greeley-Evans Transit (GET), Greeley-Evans
- ▶ City of Loveland Transit (COLT), Loveland
- ▶ Windsor Senior Ride, demand-responsive service in Windsor
- ▶ Berthoud Area Transportation Services (BATS), Berthoud
- ▶ Larimer Lift, Larimer County demand-responsive service
- ▶ Weld County Transportation program, demand-responsive transit service in Weld County

Employer-based TDM programs

Employer-promoted TDM programs are an effective, locally-based mechanism to increase employee utilization of alternative modes for their commute to work.

A notable employer-based TDM effort in the region is the New Belgium Brewery. New Belgium actively promotes and supports bicycle commuting, both by their own employees and in general nation-wide. New Belgium employees receive a custom cruiser bicycle after a year of employment with the company. Team Wonderbike is New Belgium's bicycle commuter advocacy program which has more than 10,000 members who have pledged to offset more than eight million car miles per year by riding their bikes. New Belgium also offers local grants, sponsorships, and product donations to applicants whose objectives align with New Belgium's.

Another notable employer-based effort in Northern Colorado is AMD (Advanced Micro Devices). Just over a year ago, AMD purchased GreenRide Connect™, a web-based ride matching and trip reduction solution recognized for its ease-of-use and top performance in engaging user and organizational participation. Connect identifies personally relevant and more environmentally friendly transportation matches for users such as carpools, vanpools, bicycle buddies, park and ride, and transit. AMD also holds an annual transportation fair that encourages employees to seek out information on alternative methods of transportation. AMD has also solicited coupons and prizes from area bicycle shops to use as awards and incentives during their annual Bike to Work Month each June.

Two high tech companies in Fort Collins, Intel and LSI Corporation, have taken the lead in establishing first class facilities for their employees who bike to work. Both companies invested heavily in constructing secure, lockable weatherproof bike lockers that are just outside the employee entrance to their facilities. The bike locker area at both companies is protected by around the clock video

surveillance. In addition to the storage facilities provided, both companies have also built change facilities with lockers and showers. These facilities are available to all employees who ride or walk to work or who might want to work out during their lunch break. In addition to the bike facilities, both of these employers have designated reserved parking spaces in their parking lots for carpools and hybrid/low emission vehicles.

Another company that has encouraged alternative modes of transportation for its employees is Platte River Power Authority (PRPA) headquartered in Fort Collins. PRPA helped establish a vanpool for several of its employees who live in Loveland and Fort Collins and who work at the remotely located Rawhide Power Plant 20 miles north of Fort Collins. The company has established a flexible benefits plan in which the monthly vanpool fare is pre-deducted from employee paychecks, thus reducing their tax liability.

CDOT offers TDM programs to its employees located throughout Colorado. Employees who work in the NFRMPO region are provided with a monthly commuter check worth \$35 to subsidize vanpool costs. Employees who travel to the Denver metro area for meetings are provided with an RTD Eco Pass to allow them to ride transit. Full-time employees who commute to the Denver region from the NFRMPO region are also provided with Eco Passes. CDOT sponsors Bike to Work Day events in June at all of its statewide offices and provides incentives for employees to ride their bikes to work through the month of July.

Several employers promote transportation alternatives in conjunction with other events at the workplace, most commonly health fairs. These employers include:

- ▶ Hewlett-Packard
- ▶ Intel
- ▶ Weld County
- ▶ Hach
- ▶ AMD
- ▶ Avago Technologies
- ▶ Platte River Power Authority - Rawhide Power Plant
- ▶ LSI Corporation
- ▶ Advanced Energy, Inc.
- ▶ Rickards Long & Rulon, LLP
- ▶ Gallegos Sanitation
- ▶ Poudre River Public Library District
- ▶ State Farm Insurance – Great Western Region
- ▶ Woodward Governor
- ▶ McKee Medical Center



F. Aviation Facilities

Two airports currently operate within the NFRMPO region; Greeley-Weld County 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 2-14**. This information was provided by the CDOT Aeronautics Division.

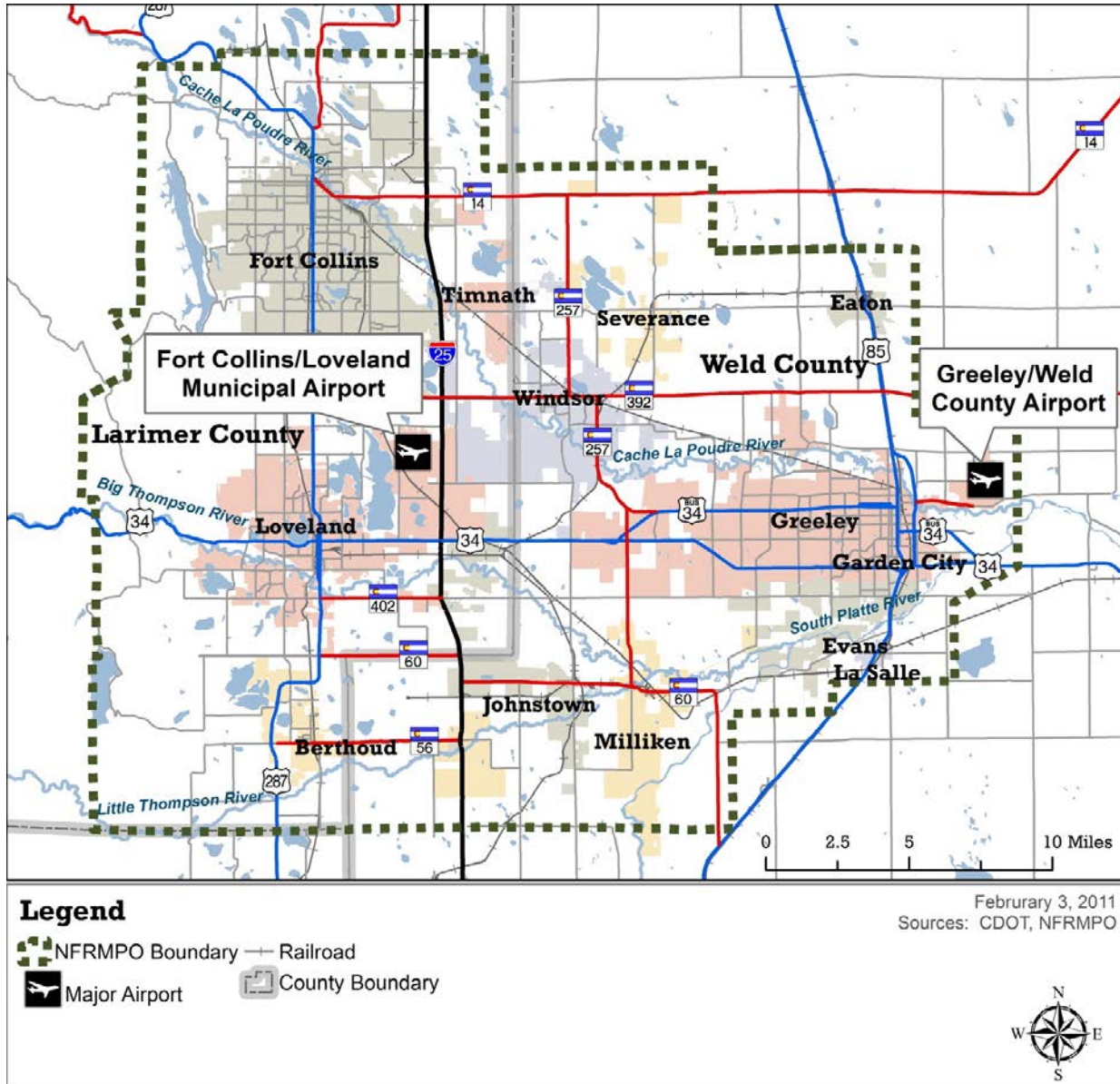
Greeley-Weld County

The Greeley-Weld County Airport is a large general aviation airport with 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 2010, 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. In 2007, the airport employed 1,766 people with a total payroll of approximately \$65,000,000. The total economic impact of the airport (including direct, indirect, and induced impacts) is estimated to be \$120,800,000. (Source: *Colorado Airports Economic Impact Study, 2008*)

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. The airport has 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 VOR, ILS, and GPS as navigation aids. The airport has approximately 100,000 annual operations. In 2007, the airport employed 749 people with a total payroll of approximately \$21,600,000. The total economic impact of the airport (including direct, indirect, and induced impacts) is estimated to be \$56,000,000. (Source: *Colorado Airports Economic Impact Study, 2008*)

Figure 2-14 Airports





G. Intelligent Transportation System (ITS)

In 2011, CDOT, in cooperation with the cities, towns and the NFRMPO developed a Strategic Plan in 2011 for the deployment of Intelligent Transportation System (ITS) in CDOT Region 4 over the next ten years.

The purpose of this project was to update and expand the previously developed ITS Strategic Plan and ITS Architecture to include all of the geographic area in Region 4. Specific tasks included an assessment of how ITS can address critical transportation problems, an inventory of existing and planned ITS applications, generation of an ITS Strategic Implementation Plan and development of an ITS Regional Architecture. The CDOT Region 4 ITS Strategic Implementation Plan (CDOT R4 ITS Plan) provides a comprehensive document that details a vision and framework for the application of ITS to meet recognized transportation problems within the region.

The CDOT Region 4 ITS Plan shows how ITS applications will be implemented in a systematic and coordinated manner using a corridor approach. The CDOT R4 ITS Plan identifies the funding needs, recommended deployment time frames, and potential funding sources. For more information, the ITS Plan is located on the NFRMPO website.

National ITS Architecture and Standards

This plan conforms with the National ITS Architecture and Standards (1997) that guide the standardized development and deployment of ITS across America. The purpose of the National ITS Architecture is to foster institutional agreement and technical integration for the implementation of ITS projects or groups of projects into regional ITS systems. The National ITS Architecture defines the ITS system components, key functions, organizations involved in developing an architecture, and the type of information to be shared between organizations and between parts of the system.

Committee Findings

The NFRMPO recruited members of the Technical Advisory Committee (TAC) and Transit Advisory Group (TAG) to participate in the Transportation Service Area meetings on behalf of the region towards the end of 2010 and the beginning of 2011. **Table 2-11** identifies the regional transportation problems and their alignment with ITS Transportation Service Areas. The ITS Plan includes additional information about ranking of regional transportation problems, as well as an ITS Element Inventory. Those lists are not included in this plan because they will change periodically.

Table 2-11 Transportation Problems and ITS Transportation Service Areas

	Problem	Regional Traveler Info.	Regional Transportation Ops.	Regional Traffic Incident Mgmt.	Transit Operations / Mgmt.	Maintenance and Construction	Regional Parking Mgmt.	Regional Data Mgmt.	Emergency M Mgmt.	Commercial Vehicle Ops.
1	Not enough real-time information (traffic conditions, incidents, and construction) provided to the travelers	X	X	X		X			X	X
2	Not enough real-time weather and pavement data	X	X	X		X	X		X	X
3	Not much awareness of available existing real-time information	X		X	X	X	X	X	X	X
4	No on-line trip planning services				X					
5	Not enough video surveillance to monitor traffic conditions, incidents and construction activities.	X	X	X		X			X	
6	Freeway/arterial congestion	X	X							
7	Synchronization of signals and strategies beyond TOD plans		X							
8	Event traffic management	X	X				X			
9	Lack of communications infrastructure	X	X	X			X	X	X	
10	Tracking and data collection from maintenance vehicles	X	X							
11	Not enough reliable communication for signals		X							
12	Security of key infrastructure		X							
13	Weather (high winds, flooding, and icing)	X	X	X		X			X	
14	Improve highway-rail crossing		X							
15	Incidents	X	X	X					X	X
16	Management of road closures	X	X	X					X	X
17	Speeding		X						X	
18	Not enough coordination and integration between other travel modes				X					
19	No priority for transit vehicles at signals		X		X					
20	Not many regional bus routes				X					
21	Lack of dedicated transit outreach to boost competitiveness				X					
22	Work zone management	X	X			X				
23	Parking management	X	X				X			
24	Not enough historic traffic count (volume) data		X							
25	Data sharing between agencies	X	X		X			X	X	
26	Lack of performance monitoring data		X							
27	Access to MDSS and CDOT Traveler Information		X	X	X					
28	Antiquated Business Systems									X
29	Inadequate support infrastructure									X
30	Champion for ITS within the Region	X	X	X	X	X	X	X	X	X
31	Lack of adequate funding	X	X	X	X	X	X	X	X	X



H. Transit System

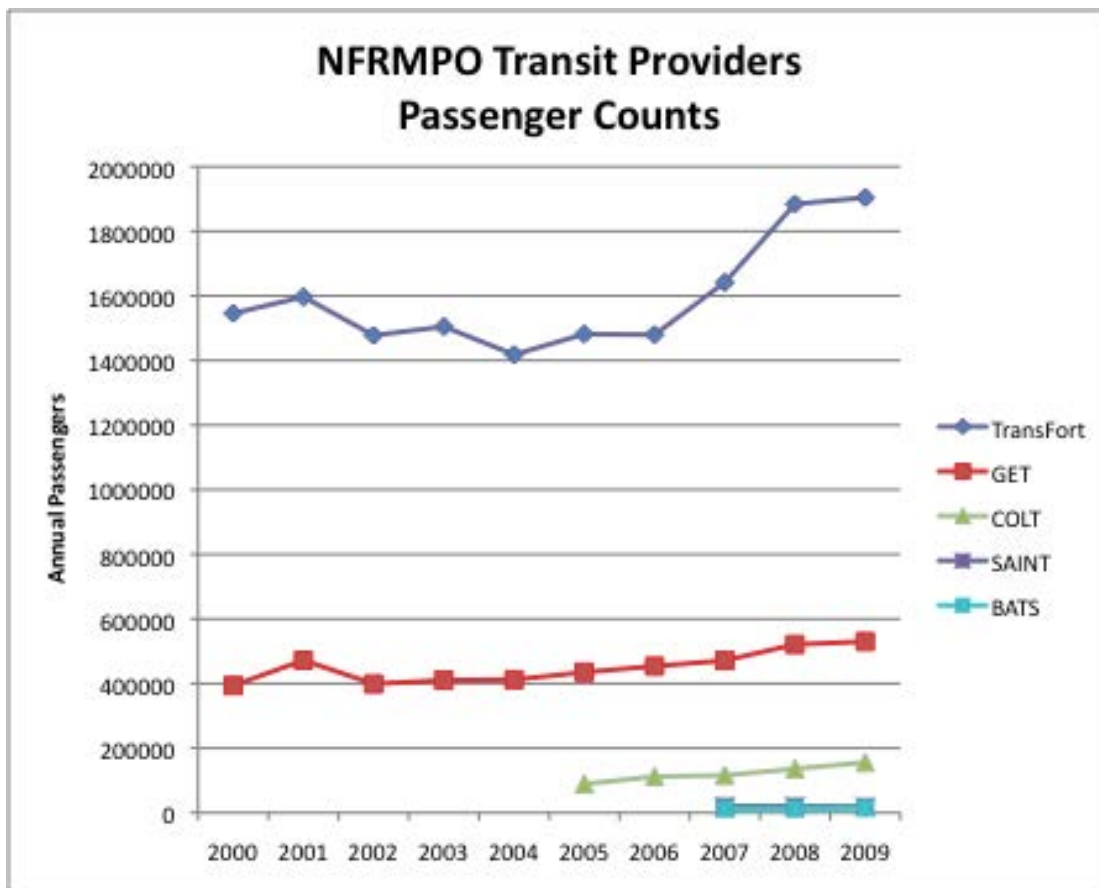
This section provides information on municipal, county, private, and non-profit transit providers. These entities operate services in urban and in rural areas, including limited inter-regional services.

Public Transportation Providers

Current municipal and county systems include those operated by the cities of Fort Collins, Loveland, and Greeley, the Town of Berthoud, and the counties of Larimer and Weld. Other transportation services active in the region include the Senior Alternatives in Transportation (SAINT) volunteer driver program, and the SmartTrips VanGo vanpool program.

Public transportation in the NFRMPO has evolved primarily as a city or county government function. SAINT and the Berthoud Area Transportation Services (BATS) have evolved to meet the needs of seniors, while the transit services in Fort Collins, Loveland, and Greeley operate fixed routes serving broad markets. **Figure 2-15** illustrates the comparative levels of ridership among these systems.

Figure 2-15 Ridership on Publicly Funded Services



(Note: SAINT is just under BATS)

Transfort – The City of Fort Collins

The Transfort system is owned and operated by the City of Fort Collins. Transfort provides fixed route and paratransit services. The paratransit service is known as Dial-a-Ride.

Transfort fixed routes are illustrated in **Figure 2-16**. Transfort operates 19 local routes and two regional routes. Routes generally run from 6:30 am until 6:30 p.m., Monday through Saturday, but there is considerable variation with some service until 10 p.m. to the Colorado State University (CSU) campus. There is no service on the major holidays. Transfort also adjusts its schedule depending on whether the CSU and the Poudre School District (PSD) are in session or not. CSU is in session approximately 150 days/year while the school district is in session approximately 183 days.

Transfort also operates the FLEX regional service between Fort Collins and Longmont through a partnership with the City of Loveland, the Town of Berthoud, the City of Longmont, and Larimer and Boulder counties. This project is described more thoroughly in the discussion of existing regional transit services, found after the description of municipal services.



A Transfort bus carrying a rider's bicycle

Service Characteristics

Transfort tallied more than 1.9 transit riders in 2009 on the fixed route system. The system productivity was 27.2 riders per hour as shown in **Table 2-12**. Routes 2, 3, and 11 serve the CSU market and have some of the highest productivities in the system. These three routes carry a combined average of 63 passengers per hour, showing that Transfort has done an excellent job not only of building ridership in the student market but also of matching service levels to demand both when CSU is in session and not in session. Similarly, routes 91 and 92 are designed to serve Poudre School District students and operate limited hours with high productivity. The remaining routes average 21.5 riders per hour, a solid number for a system operating in a city the size of Fort Collins.

Transfort's Dial-a-Ride service provides paratransit service within ¼-mile of regular fixed routes. In 2009 the system provided 1,771 hours of service and carried 3,338 riders. Travel training is also provided to assist riders in learning to use the fixed route buses for some or all of their trips.



Figure 2-16 Transfort System Map

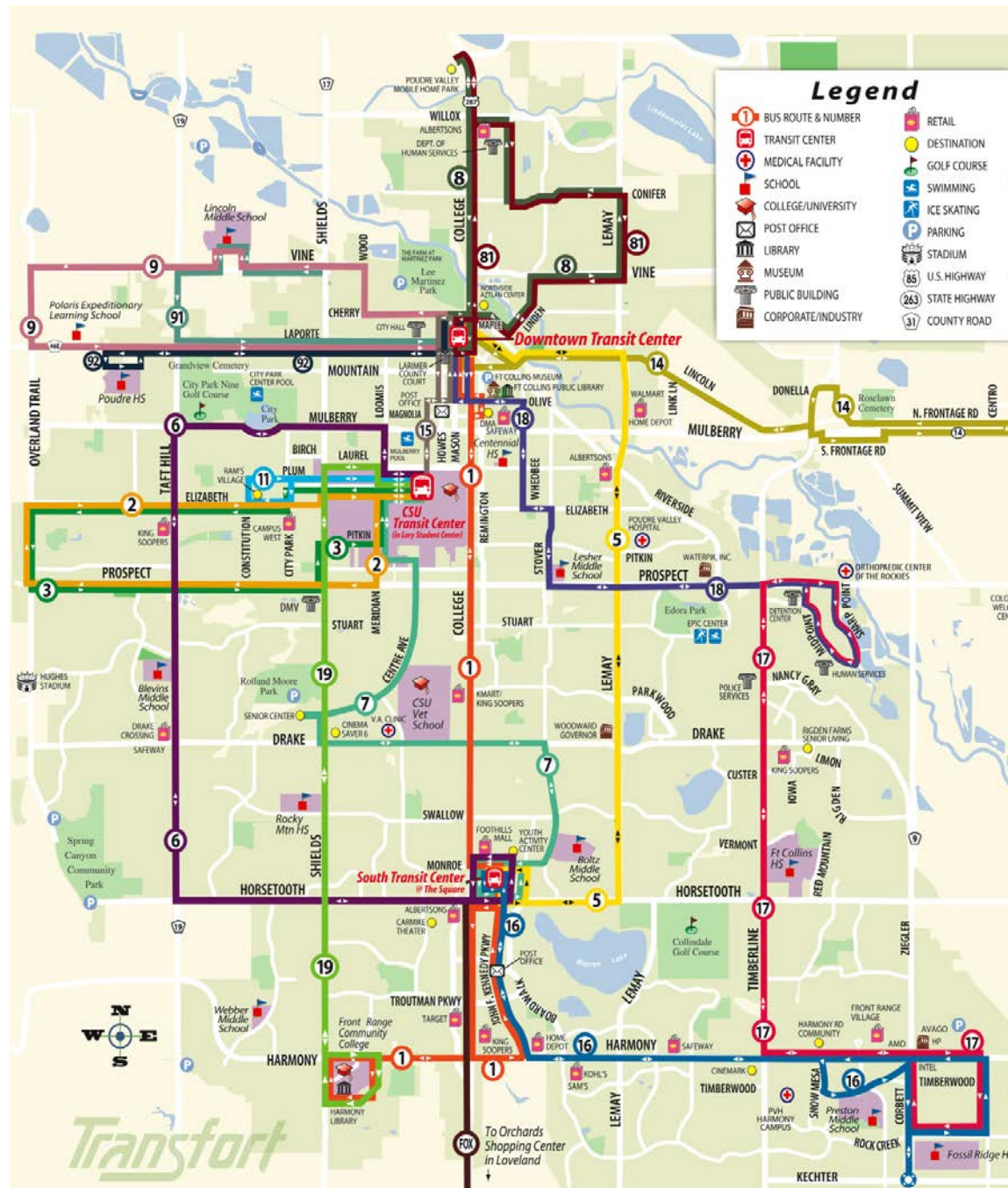


Table 2-12 Transfort Route Statistics

Route	Annual Passengers	Annual Service Hours	Passengers per Hour
1	312,729	13,989	22.4
2	181,496	4,313	42.1
3	156,760	2,680	58.5
4	5,686	359	15.8
5	88,561	3,967	22.3
6	106,646	5,073	21
7	74,371	4,378	17
8	130,702	3,835	34.1
9	55,377	1,971	28.1
11	252,319	2,364	106.7
14	49,018	2,587	18.9
15	105,765	4,528	23.4
16	72,226	6,522	11.1
19	48,968	2,787	17.6
91	4,145	91	45.5
92	5,289	55	96.9
17 & 18	137,233	6,514	21.1
FoxTrot	111,228	3,973	28
Specials	5,710	115	49.7
TOTAL	1,904,229	70,099	27.2

Source: Transfort. Hours estimated, except Specials hours.

The above information was reported for 2009 and includes operating statistics for the FoxTrot, a route connecting Fort Collins and Loveland on behalf of these two cities and Larimer County. This has now expanded to the FLEX route and operates between Fort Collins and Longmont.

Vehicles

Transfort operates 31 full-size buses for fixed route service and 13 body-on chassis vehicles for paratransit services. All are accessible and 38 operate on Biodiesel fuel. The remaining six are fueled with compressed natural gas.

System Characteristics

Table 2-13 illustrates system-wide characteristics over the past several years. All categories show a steady increase, with a 29 percent increase in ridership and service hours. On the financial side, there was a 32 percent increase in costs and a 37 percent increase in fare revenues.

The City of Fort Collins funds Transfort with a combination of Federal Transit Administration (FTA) urbanized area funds, city general funds, operating revenues, and contract revenue for CSU students and Poudre School District. **Table 2-14** illustrates system-wide performance measures for Transfort.



Table 2-13 Transfort Trends

Characteristic	2006	2007	2008	2009
Ridership	1,479,241	1,641,407	1,884,197	1,904,229
Annual Vehicle Miles	640,677	774,466	798,952	791,627
Annual Vehicle Hours	54,665	66,675	68,368	69,984
Annual Operating Cost	\$4,553,023	\$5,857,751	\$6,288,216	\$6,001,968
Annual Fares	\$578,686	\$663,213	\$699,681	\$790,883

Source: Transfort

Table 2-14 Transfort System-wide Performance Measures

Performance Measures - 2009	Total
Cost/Operating Hour	\$85.76
Passengers/Operating Hour	27.21
Cost/Passenger Trip	\$3.15
Subsidy/Passenger Trip	\$2.74
Farebox Recovery	13.20%
Ridership per Capita	13.88
Cost per Capita	\$43.75

Greeley-Evans Transit (GET)

Greeley-Evans Transit (GET) is operated by the City of Greeley. GET provides fixed route, demand-response, and paratransit services.

GET fixed routes are illustrated in **Figure 2-17**. GET operates six local routes plus evening demand-response services. Routes generally run from 6:30 a.m. until 6:30 p.m., Monday through Saturday, but some routes run until 8 p.m. Paratransit service is operated within ¼ mile of bus routes. There is no service on the major holidays. The Boomerang route only operates when the University of Northern Colorado (UNC) is in session. Demand-response service operates along the routes, with extended service during the evening, until 8:45 p.m. Monday through Friday and 9:45 p.m. on Saturday. Demand-response service is also available on Sunday from 7:45 a.m. until 1:45 p.m.

Service Characteristics

GET carried nearly 530,000 passengers in 2009 on the fixed route system. The fixed route system productivity was 17.2 riders per hour as shown in **Table 2-15**. Route 7 serves the UNC market and carries 46.9 passengers per hour. The remaining routes averaged 15.2 riders per hour.

The paratransit and demand response services operated 15,123 hours of service and carried 26,088 riders for an average productivity of 1.7 riders per hour. This service uses one-third of the system service hours. Travel training is also available to assist riders in learning to use the fixed route buses for some or all of their trips.

Figure 2-17 GET Fixed Route Services

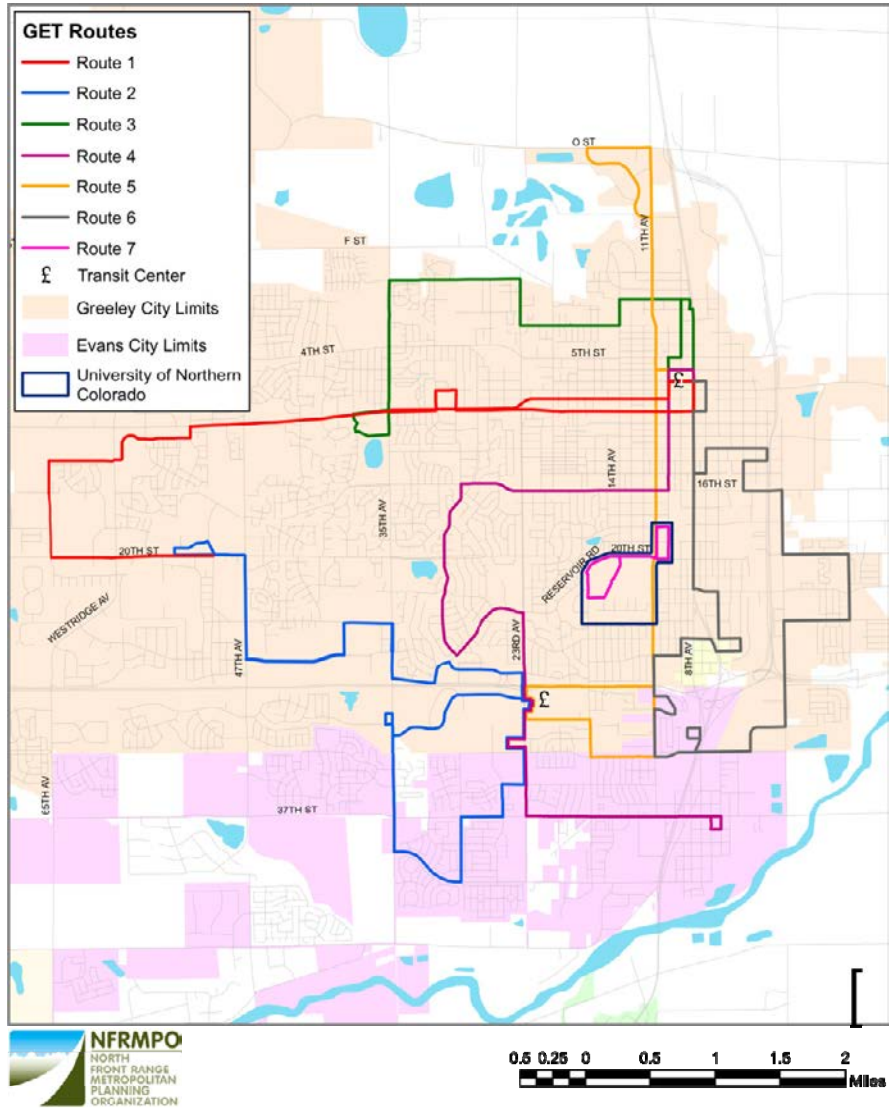




Table 2-15 GET Route and Service Statistics

Route	Annual Passengers	Annual Service Hours	Passengers per Hour
Route 1 / 2	55,649	4,016	13.9
Route 2 / 1	55,401	3,977	13.9
Route 3 / 4	36,496	4,054	9
Route 4 / 3	34,296	3,862	8.9
Route 5	202,012	8,043	25.1
Route 6	38,401	3,913	9.8
UNC Boomerang	107,722	2,297	46.9
FR SUBTOTAL	529,977	30,162	17.6
Paratransit/DR	26,088	15,123	1.7
Total	556,065	45,285	12.3

Source: GET

Vehicles

GET has a fleet of 26 vehicles.

System Characteristics

Trends in basic characteristics are illustrated in **Table 2-16**. GET held onto ridership gains that occurred in 2008 when gas prices increased, and ridership continued to grow in 2009. Over the three-year period, ridership grew by 10 percent while service hours remained steady. A 36 percent increase in operating revenues is the result of fare increases.

Table 2-16 GET Trends

Characteristic	2007	2008	2009
Ridership	504,487	541,770	556,065
Annual Vehicle Miles	589,635	557,739	537,251
Annual Vehicle Hours	45,222	45,997	45,285
Annual Operating Cost (\$)	\$2,111,672	\$2,557,364	\$2,553,479
Annual Fares (\$)	\$367,141	\$457,590	\$498,542

Source: GET

The \$2.5 million in operating costs are funded by fares, UNC contract revenues, and local and FTA funding. Service is provided to the City of Evans through a contract wherein Evans provides a portion of the local funding. The potential for losing the ability to use federal money for unrestricted operating expenses is an important concern for the City.²

² The cities of Greeley and Evans are awaiting the outcome of the 2010 Census and decisions by the US Department of the Census on how urbanized area boundaries will be determined for the next decade. There is a possibility that the Greeley/Evans area will be combined with Fort Collins and Loveland in a large Transportation Management Area. If this happens, the funding rules for large urbanized areas will apply, resulting in restrictions on funds for operating costs and a lower rate of FTA funding per capita.

A series of performance measures are shown in **Table 2-17**. The system has a very low cost per hour, reflecting the limited staff available to run the system. The other performance measures reflect a basic system that has a relatively high level of paratransit service compared to the fixed route services that are provided.

Table 2-17 GET 2009 System-wide Performance Measures

Performance Measure	System Total
Cost/Operating Hour	\$56.39
Passengers/Operating Hour	12.28
Cost/Passenger Trip	\$4.59
Subsidy/Passenger Trip	\$3.70
Farebox Recovery	19.50%
Ridership per Capita	5.04
Cost per Capita	\$23.14

Source: GET

City of Loveland Transit (COLT)

The COLT system is operated by the City of Loveland Public Works Department. COLT fixed route service is provided from 6:40 a.m. to 6:40 p.m., Monday through Saturday, and it operates on one-hour headways. Paratransit service is available during the same hours for eligible passengers. The service is organized by three color-coded routes: Blue, Orange, and Green, as illustrated in **Figure 2-18**.

In addition, COLT is a partner in providing FLEX regional service between Longmont and Fort Collins. Other partners include the cities of Fort Collins and Longmont, Town of Berthoud, Larimer County, and Boulder County.

A regular one-way adult fare is \$1.25 and reduced fares are offered for seniors and youth. 20-Ride, Monthly and Annual passes are available at discounted rates. Regular paratransit trips are \$2.00 each way with 20- and 40-ride passes available at a discounted rate.

Service Characteristics

COLT, while the smallest of the fixed route systems, has had steady increases in ridership each year. COLT provides significant service in the community with respectable levels of farebox recovery and riders per hour. As with Greeley-Evans Transit, the system has relatively high levels of paratransit service in relationship to its fixed route services. COLT has provided a relatively high level of demand response services to individuals in the community who are elderly or have disabilities. This has enabled the City to meet the mobility needs of its citizens while keeping fixed route services at a basic level. COLT route and service statistics are provided in **Table 2-18**.



Figure 2-18 COLT Routes

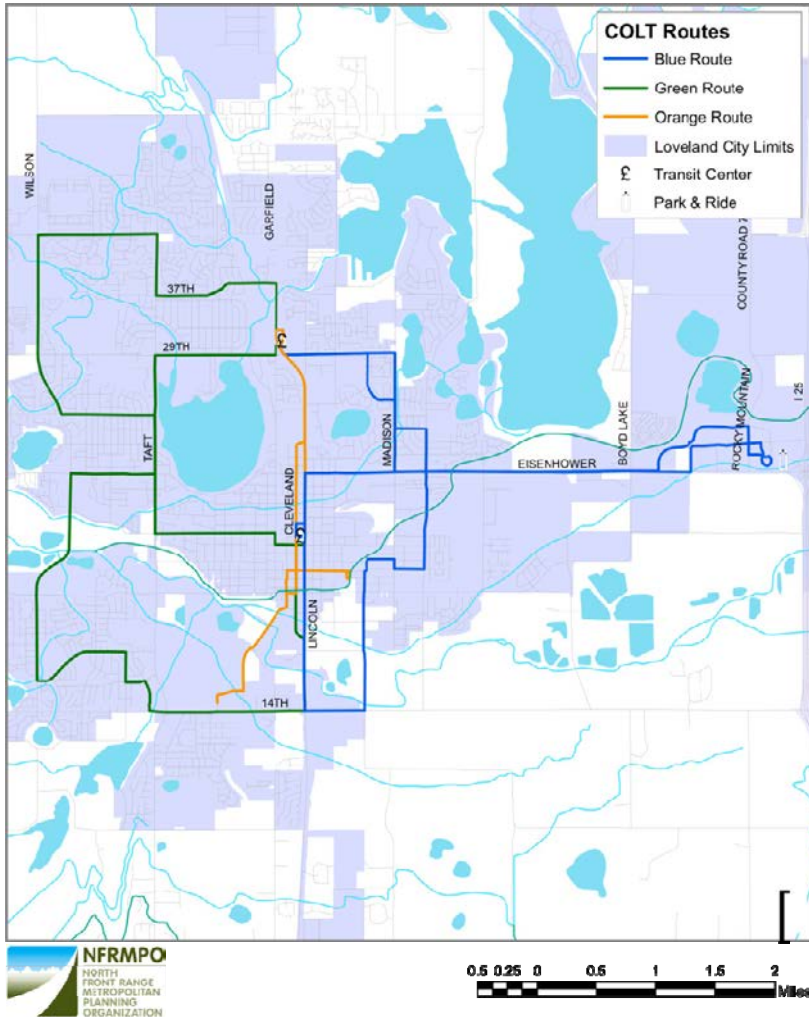


Table 2-18 COLT Route and Service Statistics

	Ridership	Hours	Passenger/Hour
Blue	55,171	3,660	15.07
Green	48,862	3,660	13.35
Orange	34,251	1,830	18.72
Total	138,284	9,150	15.11

Source: COLT, 2011

Vehicles

COLT has a fleet of 10 vehicles, a mix of full-size transit coaches and body-on-chassis vehicles. Two replacement vehicles (Gillig coaches) were delivered in January of 2011.

System Characteristics

COLT ridership grew by almost 40,000 riders between 2007 and 2009, as shown in **Table 2-19**. At the same time, the Annual Vehicle Hours decreased by 11% with vehicles operating at an average speed of 16.4 miles per hour in 2009.

Table 2-19 COLT 2009 Trends

Characteristic	2007	2008	2009
Ridership	115,895	136,255	155,695
Annual Vehicle Miles	184,058	192,481	200,370
Annual Vehicle Hours	13,617	14,112	12,237
Annual Operating Cost	\$900,070	\$948,463	\$978,013
Annual Fares	\$68,518	\$75,332	\$76,468

Source: COLT

Performance measures for the system show that COLT's operational costs are average, as shown in **Table 2-20**, and the riders per hour are comparable to that of GET. As with Greeley, this reflects a relatively high percentage of demand-response service and healthy ridership on the fixed routes. COLT has the lowest cost per capita of any of the fixed route systems. This is a reflection both of the operational efficiency and level of service. The City of Loveland provides 0.19 service hours per capita, compared to 0.38 for GET and 0.55 for the City of Fort Collins.

Table 2-20 COLT 2009 System-wide Performance Measures

Performance Measures 2009	Total
Cost/Operating Hour	\$79.92
Passengers/Operating Hour	12.7
Cost/Passenger Trip	\$9.28
Subsidy/Passenger Trip	\$5.79
Farebox Recovery	7.82%
Ridership per Capita	2.37
Cost per Capita	\$13.70

Berthoud Area Transportation Services (BATS)

Berthoud Area Transportation Service (BATS) is operated by the Town of Berthoud. BATS began providing transportation around Berthoud in 1992 before becoming a town service in 2006.

BATS provides shared-ride demand response service for the general public within Berthoud town limits or within the Berthoud Fire Protection District and will transport people to Loveland or Longmont. BATS operates Monday through Friday, 7:00 a.m. to 5:00 p.m. Service is not provided on most holidays. Rides must be scheduled at least 24 hours in advance.



BATS schedules trips to popular locations to improve efficiency. For example, it goes to Hays Market every Friday afternoon and Super Wal-Mart the second Monday of the month. BATS has been traveling to Loveland and Longmont daily, but the number of trips to these locations may be reduced with the initiation of the FLEX service.

BATS has a suggested donation based on the destination rather than a flat fare. Even with this voluntary system, fares cover about 8.5% of operating costs, a respectable level.

Vehicles

BATS operates with a fleet of 5 body-on-chassis vehicles.

BATS Service Characteristics

Trends in basic characteristics are illustrated in **Table 2-21**. BATS grew by more than 2,000 riders between 2007 and 2009 although ridership dipped in 2008. Ridership recovered strongly in 2009 with a 17% increase over 2007. Service hours increased by 16% in this timeframe, while fares more than doubled. The \$210,000 in operating costs is funded by fares, local, and FTA funds. The system is fortunate in that it has a small source of revenue, with one-cent of sales tax allocated to several town services, one of which is transit services.

Table 2-21 BATS Trends

Characteristic	2007	2008	2009
Annual Ridership	12,189	11,885	14,273
Annual Miles	81,642	99,696	112,172
Annual Hours	5,378	5,822	6,253
Annual Operating Cost	\$187,414	\$220,746	\$209,975
Annual Fares	\$8,520	\$13,520	\$17,571

Source: BATS

BATS service characteristics and performance measures reflect the demand response service mode as shown in **Table 2-22**. Considering the large geographic area the system covers, the system productivity is relatively high. BATS characteristics can perhaps be best compared with SAINT, although they use paid drivers rather than volunteers. Their budget and cost per hour remain low. While the riders per capita is low, again considering that it is a demand-response system, 1.4 riders per capita shows solid community use. By way of comparison, the City of Loveland has 2.4 riders per capita for their fixed and demand-response service. Fixed route systems in small cities generally carry 3-8 passengers per hour.

Table 2-22 BATS 2009 System-wide Performance Measures

Performance Measures 2009	Total
Cost /Operating Hour	\$33.58
Passengers/Operating Hour	2.3
Cost/Passenger Trip	\$14.71
Subsidy/Passenger Trip	\$13.48
Farebox Recovery	8.4%
Ridership per Capita	1.4
Cost per Capita	\$21.00

SAINT – Senior Alternatives in Transportation

SAINT is a non-profit program that provides rides to seniors (aged 60 and older) and people with disabilities in Loveland and Fort Collins. SAINT volunteers drive their own cars. SAINT staff recruits volunteers, schedules rides, and provides a mileage allowance and extra insurance to the volunteers. SAINT’s 500 clients are served by 160 volunteers and four staff members (one full-time and three part-time). In addition, SAINT describes its services as follows:

- ▶ SAINT cannot provide transportation to individuals requiring wheelchairs or scooters.
- ▶ SAINT operates within Fort Collins and Loveland and provides transportation for any purpose to eligible riders. SAINT cannot provide transportation between the two cities or outside the city limits of each city.
- ▶ SAINT operates from 8:15 a.m. to 4:00 p.m. Monday through Friday. Weekend and evening rides may be available in Fort Collins only by special request. Riders must call to make reservations at least three business days in advance. Reservations are taken Monday through Friday from 8:00 a.m. to noon. Donations are suggested but no fare is required.

Larimer Lift

The Larimer Lift, operated by Larimer County, is a demand-response service operating in the northern portion of unincorporated Larimer County, primarily to locations in Fort Collins. The service area extends from Wellington on the north end to East County Road 30 (Carpenter Road) on the south and covers only the area outside Fort Collins city limits. The west border is near Horsetooth Reservoir while the east border extends to the Larimer County line.

The service operates from 8:00 a.m. to 5:30 p.m. Mondays, Wednesdays, and Fridays and from 8:00 a.m. to 2:30 p.m. on Tuesdays, except for published holidays. Reservations must be made at least 48 hours, but not more than two weeks in advance. Trips may be scheduled Monday through Friday between 8:00 a.m. and 3:00 p.m. and the scheduler calls back after 4 p.m. with a confirmed reservation time. A basic client registration form must be completed.



Weld County Transportation Program

The Weld County Transportation program is primarily a demand-response transit service for rural Weld County residents and connects outlying communities to Greeley by providing assistance to elderly, disabled, low income persons and the general public. The Transportation division is a subordinate division of the Department of Buildings and Grounds. NOTE: Greeley-Evans Transit is the primary transportation provider for "urban" residents.

In addition, Medicaid (not Medicare) may permit two methods of obtaining a ride with Weld County Transportation. These are Non-Emergent Medical Transportation (NEMT) and the Home and Community Based Service (HCBS) programs. Each has its own strict application and pre-authorization guidelines. Pre-Authorization must be obtained before Weld County Transportation can be utilized. Under these programs, trips may be made to adult day care centers and/or doctor's appointments outside the Weld County boundaries depending on proper authorizations.

Rides using Weld County Transportation can be obtained through three methods: FTA/CDOT, NEMT, and HCBS.

Windsor Senior Ride Program

The Windsor senior transportation program operates out of the Recreation Department within the Town of Windsor. Service is provided for seniors ages 60 or older for trips to medical appointments and nutrition sites, on Wednesdays and Fridays, and for grocery shopping on Thursday mornings. The program also serves the disabled, but the disabled must go through a registration process prior to using the service. The disabled may use the service for the same trips as the seniors.

Passengers must call at least 24 hours in advance to schedule a ride, but may call up to one week in advance to make a trip reservation. The top destinations for the Senior Ride program outside of Windsor in order of demand are: Fort Collins, Loveland, and Greeley.

The Windsor Senior Ride program has a very modest budget and employs one driver, who works an average of 15 to 30 hours per week depending upon demand. The Senior Ride program coordinator is funded through the Town of Windsor's recreation budget and is therefore not included as a direct expense to the Senior Ride Program.

FLEX Regional Transit Service

In June 2010 the FoxTrot route was replaced with the FLEX route, extending service to Berthoud and Longmont. The route terminates at RTD's Longmont Park-n-Ride at 8th Street and US 287. The service, now known as FLEX, is provided through a regional partnership between the cities and counties in northern Colorado and uses TransFort vehicles and drivers. This two-year pilot project connects riders in Fort Collins, Loveland, and Berthoud with the Denver Metro Area and Boulder. During peak morning and afternoon commute time, an express route operates on 30-minute headways at key stops between Fort Collins and Longmont. Off-peak service is provided on one-hour headways between Fort Collins and Loveland.

34-Xpress

The 34-Xpress is a discontinued service as of spring 2010. The 34-Xpress Bus was a commuter-oriented bus route that ran between Greeley and Loveland along the U.S. Highway 34 corridor. The intent of this pilot project was to provide transit access to employment centers along the U.S. 34 corridor and to demonstrate the positive potential of regional collaboration.

The 34-Xpress ran Monday through Saturday from the East Loveland Transfer Center at The Loveland Visitors Center to the South Greeley Transfer Center at The Greeley Mall.

VanGo – Van Pool Program

A vanpool is a group of six to nine people with similar commutes (consistent start time and destination) of 20 to 80 miles to and from work who share a comfortable van provided by the VanGo™ Vanpool Program. They usually live and work in approximately the same areas and work roughly the same hours. Vanpool members pay a monthly fee that helps cover the costs of the van, fuel, maintenance and insurance. Driving responsibility is shared.

The VanGo website lists currently active vanpools and any available vacant seats. On June 4, 2010, there were 83 separate van pools, with 442 seats reserved out of 498 available. Full vanpools carry six people. Van Go showed 56 available seats in 38 vanpools. Waiting lists are maintained for the full vanpools.

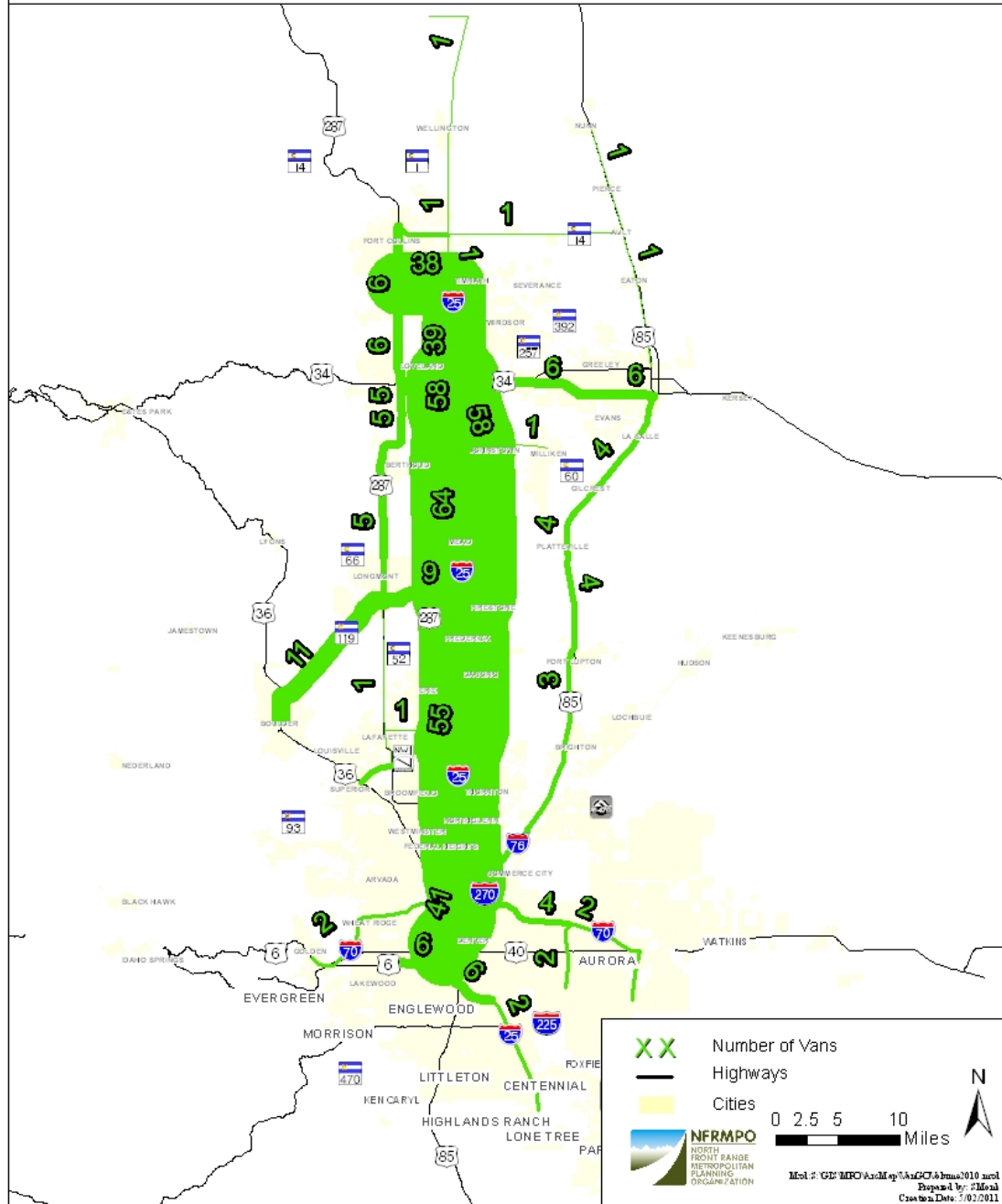
Each of the 83 vanpools has different pick-up and drop-off locations as well as times of travel. Despite the variety of vanpools, grouping them into routes shows the relative demand for travel on those routes. **Figure 2-19** and **Table 2-23** illustrate the general travel patterns of these regional riders, with strong demand along the north-south corridors. It is likely that a number of vanpool riders would also be interested in using transit service in the north-south corridors.

Table 2-23 VanGo Service by Corridor

Van Go Corridor	People	Percentage
North-South Connections		
Commuter Rail Corridor - Ft. Collins to Denver via Loveland and the US 287 corridor	213	48%
Commuter Rail Counter Flow to Fort Collins	43	10%
FasTracks Connection to Boulder and other communities	76	17%
FasTracks Connection Counter-Flow to Fort Collins	6	1%
Subtotal Along Proposed Rail Corridors	338	76%
I-25 Express Bus Corridor to Denver	31	7%
US 85 Commuter Bus Corridor Greeley o Denver	36	8%
North of Fort Collins	10	2%
Subtotal North-South Flow	415	94%
East-West Connections		
Fort Collins to Greeley	6	1%
Greeley to Fort Collins	9	2%
Greeley to Boulder	12	3%
Subtotal East-West Flow	27	6%
TOTAL ALL ROUTES	442	100%



Figure 2-19 VanGo Volume (2010)



Private Carriers

Privately funded transportation services include SuperShuttle taxi and airport express services and intercity bus services operated by Greyhound, Black Hills Stage Lines, and El Paso-Los Angeles Limousine Express. The routes and schedules are described in this section.

Greyhound

Greyhound Lines, Inc. is the largest provider of intercity bus transportation in the nation and operates primarily between major cities. TransFort partnered with Greyhound Lines, Inc. to provide ticket sales at the Downtown Transit Center in Fort Collins. Greyhound travels along I-25 serving Fort Collins to Denver, with two northbound and two southbound departures departing Fort Collins each day. No service is available between Greeley and Denver. No service is provided in Loveland or any of the smaller communities.

Black Hills Stage Lines

Black Hills operates a route traveling between Denver, Greeley, and Fort Collins, with two southbound departures and one northbound departure from Fort Collins per day. Greeley has two southbound and one northbound departure per day.

El Paso-Los Angeles Limousine Express

The El Paso-Los Angeles Limousine Express operates along US 85 and makes three southbound departures per day from Greeley to Denver, and three northbound departures from Denver to Greeley per day. The Greeley terminal is located at 2410 8th Avenue in the Agency Boutique Seis Rosas. The Denver terminal is located at 2215 California Street, a few blocks from the Denver Bus Station.

SuperShuttle

SuperShuttle provides scheduled service between the communities in the region and Denver International Airport (DIA). It also operates Yellow Cab taxi service in Fort Collins, Loveland, and Greeley. SuperShuttle has several stops in Fort Collins, Wellington, Windsor, Loveland, and Greeley, stopping at various hotels and other commercial businesses. In Fort Collins, it also stops at the Harmony Transfer Center. Service from DIA to communities in the I-25 corridor departs hourly between 6 a.m. and 11 p.m. In the southbound direction, the first morning bus departs Fort Collins at 4:00 a.m. Service from DIA to Greeley departs every two hours, with the first bus at 5:45 a.m. and continuing until 11:40 p.m.

Green Ride Colorado Shuttle

Green Ride provides service to DIA from Northern Colorado communities and Cheyenne, Wyoming. Twenty-one round-trips are provided daily, with hourly service from 3:30 a.m. until 11:30 p.m. for the Fort Collins area. DIA service operates hourly from 5:00 a.m. until 1:00 a.m. Pickup locations are at various hotels, the Harmony & I-25 park-n-ride, and Foothills Mall. Door-to-door service is also available.