Freight Advisory Council Meeting

Date: Thursday, April 28, 2016 Time: 8:30 am -11:00 am

Location: CDOT HQ Auditorium 4201 E. Arkansas Ave., Denver, CO 80222

Welcome and Introductions (2 min.)	8:30	Jenyce Houg
Minutes Adoption – April 4, 2016 (3 min.)	8:32	Jenyce Houg
CDOT Updates (10 min)	8:35	Jason Wallis
New Funding Proposals (30 min)	8:45	Jenyce Houg
Work Group Breakout Sessions (45 min.)	9:15	Jason Wallis
Networking Break (10 min)	10:00	
Work Group Discussion (45 min.)	10:10	Jason Wallis
Wrap-up	10:55	Jason Wallis

- Next Meeting - Date and Location (5 min)

Freight Advisory Council (FAC) Meeting Minutes
April 28, 2016

Location: CDOT HQ Auditorium, 4201 E. Arkansas Avenue, Denver, Colorado 80222
Date/Time: April 28, 2016, 8: 30 am to 11:30 am
FAC Chair: Jenyce Houg
Attendees: See Attached

Agenda Items Presenters/Affiliations	Discussion Highlights	Actions
Welcome and Introductions (Jenyce Houg)	• Jenyce welcomed FAC members to the meeting and had attendees introduce themselves.	N/A
Last FAC Meeting Minutes Adoption (Jenyce Houg)	• The notes taken from the April 4, 2016 FAC meeting were approved without comment.	• Finalize notes for April 4, 2016 FAC Meeting.
CDOT Updates (Jason Wallis)	• FAC request to see list of freight projects in the pipeline is underway; will bring information regarding which freight projects are included in the Statewide Transportation Improvement Program (STIP) and Development Program and how they align with Freight Corridors at the next FAC meeting. • High Level summary of Freight Round Table topics were distributed at this FAC meeting. • Key Freight Facilities map is a work in progress – need to get better definition of intermodal connectors • Intra versus inter-modal facilities should be a consideration for making distinctions and definition for too. • BNSF definition (that was submitted to the Surface Transportation Board (STB) of intermodal facilities includes consideration of three types of facilities: (1) Trailers to trains; (2) Automotive facility, and (3) Transload facilities. An example of transload is Denver Rock Island stockyards at 3400 E 56th Ave, Commerce City, CO 80022. • All types but number 3 of the facility types are railroad owned facilities, with private entities	• FAC needs to agree on definitions for these facilities in Colorado as National definition (with two types of intermodal connectors identified based on varying criteria for selection) • Add photos to definitions to provide clarity the facility types and scale (small to large) • There is data for Colorado that locates firms based on North American Industry Classification System (NAICS) codes for 2010 – that information is a good resource. • Also need to identify intermodal connectors along with intermodal facilities. Intermodal connectors are segments of roadway that connect to National Highway System (NHS) corridors. • Define Intra-modal facilities/transport also. • These connectors were codified by Federal Highway Administration (FHWA) in 2001 and are not anticipated for being evaluated for updates until 2020. • A request to post Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies (FASTLANE) grant applications for FAC access; Transportation Investment Generating Economic Recovery (TIGER) grant application submittal due tomorrow, April 29, 2016.

Agenda Items Presenters/Affiliations	Discussion Highlights	Actions
	owning #3 for both the rail facility and the goods being moved. • Grain elevators are important facilities to consider intermodal facility for truck/rail transfers. • Important consideration for air freight is avoiding conflicts with passenger service in terms of parking, staging facilities, etc. • Airport truck access is important • Eastern Mobility Study has grain elevator information for eastern Colorado. • Signage for intermodal facilities is important. • A safety audit of US 160 at Wolf Creek Pass is scheduled for June 15th – this will include a field survey of the area. • I-70 closures that result in detours along US 50/US 285 are a safety concern as not places to pull off the road for chain ups – need pull-offs and signage indicating the location of pull-offs here; overall, road closures and work zone detours need to accommodate heavy trucks • Truck parking will be removed at Eagle County Fairgrounds • I-70 Peak Period Shoulder Lane (PPSL) is confusing to truck drivers • Critical Freight Corridors (urban and rural) now have FHWA guidance for identification; Need to be identified by December 4, 2016; this corridor selection will occur as a component of development of the Multimodal Freight Plan (MFP) • Large project at 61st Panasonic/ Xcel along Denver International Airport (DIA) A-Line – need to be sure freight access and movement works in that area. Denver Regional Council of Governments (DRCOG) is tracking this project and they see Tower Road providing the freight access. • Marijuana transport is another issue to be resolved in terms of goods movement.	• Bring list of CDOT freight projects underway (highlighted in the Development Program) to present and discuss with the FAC at the next FAC meeting.

Agenda Items Presenters/Affiliations	Discussion Highlights	Actions
New Funding Proposals (Jenyce Houg)	• Discussion regarding volunteers reviewing proposed funding proposals. • Level of detail in what FAC supports was discussed. It seems FAC should support high level concepts and not necessarily specific funding ballot initiatives. • A draft resolution from FAC member Kiely is under review. • Concern was raised over the draft resolution supporting the existing Highway User Tax Fund (HUTF) distribution and pre-designated percent of portions that go to state, counties, cities. • CDOT noted that it is at the FAC's discretion what initiatives/funding proposals they decide to support.	• Initial motion was passed by FAC to support the draft resolution now and modify later if deemed appropriate. • Subcommittee of Fulton, Kiely and Kirkmeyer will review further, and share their thoughts with FAC at next meeting.
Work Group Breakout Sessions (Jason Wallis/Jenyce Houg)	***Railroad Crossing Breakout Session (Spokesperson Pete Rickerhauser)*** • Only $3 million of existing federal funding is dedicated to railroad/state highway crossing improvements in Colorado under Section 130 program • Grade separation is the ultimate solution, but not feasible due to cost constraints • Opportunities exist to close railroad crossings and re-direct traffic should be explored • Maintaining connectivity in communities and for emergency response is an issue • Congestion at railroad crossings is an issue • Poor condition of road surface conditions at crossings needs to be addressed • Noise at railroad crossing can be considered a nuisance at some locations ***Low Clearance Bridges Breakout Session (Spokesperson Lisa Streisfeld)***	• ***Railroad Crossing Breakout Session Action Items*** • **Short-Term** • Consider a FAC member to participate in collaboration with Union Pacific (UP) Railroad, CDOT and communities along US 85 for Corridor goals pilot project. • Provide FAC opportunity to provide input to State Freight and Passenger Rail Plan (SFPRP) beyond the railroads. • **Long-Term** • Provide opportunity for FAC to provide continuing and ongoing input to Metropolitan Planning Organizations (MPOs) and Transportation Planning Regions (TPRs) regarding transportation improvements that enhance freight movement. ***Low Clearance Bridge Session Action Items*** **Short-term** • Update the CDOT website to have a trip planning resource for freight trips – as identified in the State Highway Freight Plan (SHFP); identify truck

Agenda Items Presenters/Affiliations	Discussion Highlights	Actions
	• Grinding pavement down under I-25 bridges is not feasible at all locations due to drainage issues and proximity to the river; FAC member suggested making replacement of these low clearance bridges a priority to enhance freight movement and safety • Between 2010 and 2015 forty-one (41) bridge strikes were recorded in Colorado • Bridge strikes are a safety concern, cause potential injuries, and delays in movement of people and goods ***Safety Breakout Session (Spokesperson Frances Tinsley)*** • Need definition of safety terms and crash types to better understand safety data • Define rear end crashes (passenger cars cutting in front of trucks?), and side swipe crashes – (determine if side swipes include crashes resulting from passenger vehicles getting in blind spots for trucks making turns) • Secondary crashes caused by traffic incidents/crashes are a concern	parking locations and rest stop areas that accommodate heavy trucks • Provide a smart phone or mobile app to identify low clearance bridges prior to truck trip departures; or, use Waze or other commercial vehicle driving apps **Long-term** • Via public private partnerships (P3) work to have height measuring radar to provide tall trucks with advance notification of low clearance bridges • In-cab driver notification through dash board for eminent low clearance bridges ***Safety Breakout Session Action Items*** **Short-term** • Get more details on crash data from CDOT Traffic Safety • Consider including photos of truck crashes to send sobering message to the public pertaining to accommodation of heavy trucks • Look at Georgia DOT Highway Safety initiatives and ITS facilities • Get more shoulders and pullouts installed for heavy trucks • Distribute stickers to place on back of trucks that identify heavy truck blind spots • Public notifications regarding truck accommodation on roadways – e.g., breaking time for trucks is longer • Install repetitive advance signage reminding passenger vehicles of freight movement • Use variable speed limit signs more • Incorporate freight-related signage in Spanish along with English • Establish focus groups with drivers

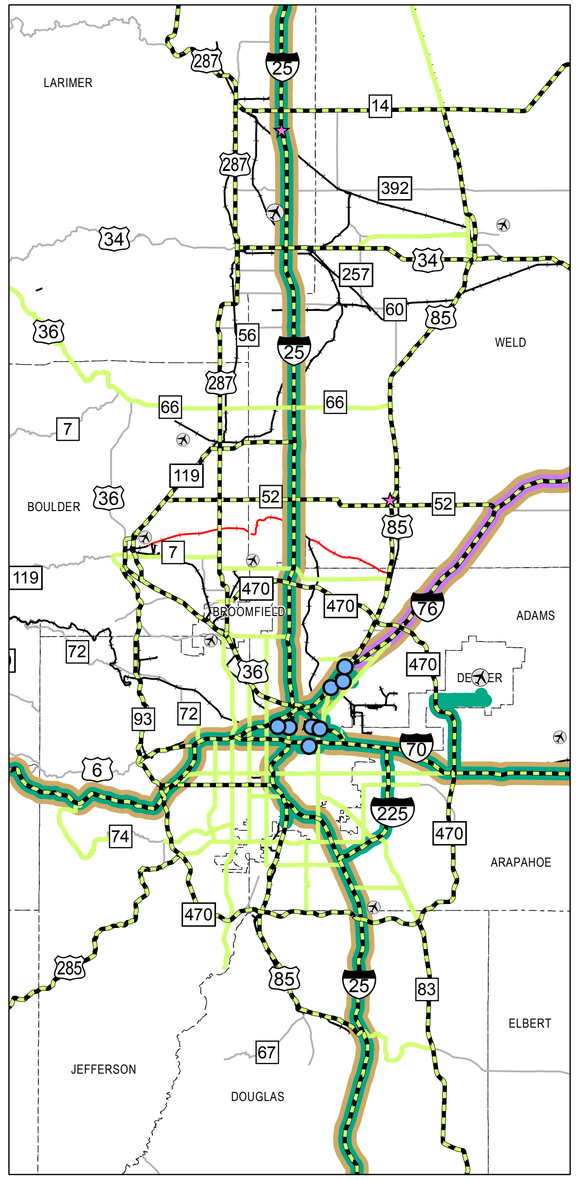
Agenda Items Presenters/Affiliations	Discussion Highlights	Actions
		Long-Term • Passenger vehicle voice notifications via crowd sourcing pertaining to high impact area alert for key times of day and high truck traffic season – April through September • Make geometric improvements on roadway infrastructure, e.g., at roundabouts and intersections, pullouts, shoulders, passing lanes (with signs providing advance notification of passing lane locations) to better accommodate heavy truck movement • Emergency Response vehicles also experience same difficulties navigating segments of roadway with their larger vehicles **FAC Work Group Action Plans** • Eventually draft action plans for each FAC Work Group over the next few months
Wrap-up/Next Meeting (Jason Wallis)	• No meeting date decided at this time for next FAC meeting; will work out when and develop a schedule for the remainder of the year to identify when and where FAC meetings will occur and their location – F	• FAC Secretary, in coordination with the FAC Chair, will be in touch with the FAC members regarding future meetings. • Will conduct the truck parking and shoulders/pullouts breakout sessions at the next FAC meeting. • Consider also forming the work group for Freight Communication at the next FAC meeting.

Freight Advisory Council (FAC) Meeting Attendance Check List
04-28-2016

Check (if in Attendance)	Member Last Name	First Name	FAC Member Status
X	Houg	Jenyce	Chair
	Ogborn	Mike	Vice Chair
	Bailey	Grier	General
X	Beedy	Gary	General
X	DeWitt	Bill	General
X	Dhuru	Sarod	General
X	Douglas	Kevin	General
X	Fulton	Greg	General
X	Goetz	Andy	General
X	Howes	Brandon	General
X	Kiely	Joe	General
X	Kirkmeyer	Barbara	Ex Officio
X	Lathrop	Mason	General
X	Lewis	Mike	Ex Officio
	McCarthy	Dennis	General
	Morgan	Jason	General
X	Pelton	Rod	General
	Rich	Tim	General
	Ruppel	David	General
X	Spaulding	Carl	General
	Steen	Norm	General
	Thompson Cassidy	Sara	General
X	Tinsley	Frances	General
	Wagner	Howard	General
X	Wallis	Jason	Secretary
	Perkins-Smith	Debra	Alternate
X	Rickerhauser	Pete	Alternate
X	Karasko	Becky	Partner
	Riger	Jacob	Partner
X	Bustow	Aaron	FHWA
X	Collins	Kathleen	CDOT Statewide Planning
X	Deselnicu	Oana	CDOT Freight Program Economist
X	Greco	Aaron	CDOT Policy and Government Relations
	King	Mike	CDOT Regional and MPO Planning
	Kirby	Tim	CDOT Regional and MPO Planning
X	Krutsinger	David	CDOT Division of Transit and Rail
	Scheuerman	Michelle	CDOT Multimodal Freight Plan PM
X	Streisfeld	Lisa	CDOT Traffic Operations
X	Sudmeier	Jeff	CDOT Multimodal Planning
X	Terranova	Sharon	CDOT State Freight and Passenger Rail Plan PM
	Ulane	David	CDOT Aeronautics Division

Key Freight Facilities

- Ports of Entry
- Commercial Service Airport
- Publicly-Owned and Operated Airport
- Intermodal Facilities
- Counties



Corridor Details

National Highway Freight Network

- National Primary Freight System
- Interstate Non-National Primary Freight System
- Critical Urban Freight Corridors
- Critical Rural Freight Corridors

- Colorado Freight Corridors
- Colorado Freight Corridors that are NHS
- NHS (On-System)
- Highways
- High Priority Corridors
- In Service Railroad
- Out of Service Railroads

N

20 10 0 20 40 60 Miles

0 5 10 20 30 Miles

Data Source: CDOT 2014
Published: April 2016
www.codot.gov

COLORADO
Department of Transportation

Definitions for Key Freight Facilities Data Layers

Corridor Details Legend – Layer Definitions

National Primary Highway Freight System (PHFS) – (Source: http://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm) - This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data. The network consists of 41,518 centerlines miles, including 37,436 centerline miles of Interstate and 4,082 centerline miles of non-Interstate roads.

Interstate Non-National Primary Highway Freight System – Interstates in Colorado **not** designated as part of the National PHFS.

Critical Urban Freight Corridors – (Source: http://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm) - These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities. The 80 urban miles to added as critical freight corridors in Colorado will be identified by the five Metropolitan Planning Organizations in consultation with CDOT.

Critical Rural Freight Corridors - (Source: http://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm) These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities. The 160 rural miles to be added as critical freight corridors will be identified by CDOT with input from planning partners (rural Transportation Planning Regions).

Colorado Freight Corridors (Source: CDOT, State Highway Freight Plan, 2015) – primary and secondary roads providing access to the state's 15 intermodal connectors, as identified via the FAC based on the following criteria: Annual Average Daily Truck Traffic (AADTT), Percentage of Trucks, Truck Throughput, Roadway Classification, Urban or Rural Classification, Network Connectivity, and Industry Stakeholders. These roadways are considered critical for the interregional, intrastate, interstate, national, and international movement of freight.

National Highway System (NHS) (Source: CDOT, 2014) – Routes that are designated as important to the nation's economy, defense, and mobility. NHS facilities can be either on-system (CDOT owned, operated and maintained), or off-system (locally owned or maintained by cities and counties).

High Priority Corridors (Source: FHWA, http://www.fhwa.dot.gov/planning/national_highway_system/high_priority_corridors/hpcor.cfm). – The Intermodal Surface Transportation Efficiency Act of 1991 established eighty-eight priority corridors nationwide intended to promote collaborative planning along corridors. Five of these corridor pass through Colorado and include:

- El Camino Real – Extends from El Paso, Texas to the Canadian Border
- Heartland Expressway – Extends from Denver/Limon Colorado to Rapid City, South Dakota.
- High Plains – Extends along US 50 from Newton, Kansas to Pueblo, Colorado
- Ports to Plains – Extends from Laredo, Texas to Denver Colorado
- I-70 – Extends from Salt Lake City, Utah to Denver, Colorado

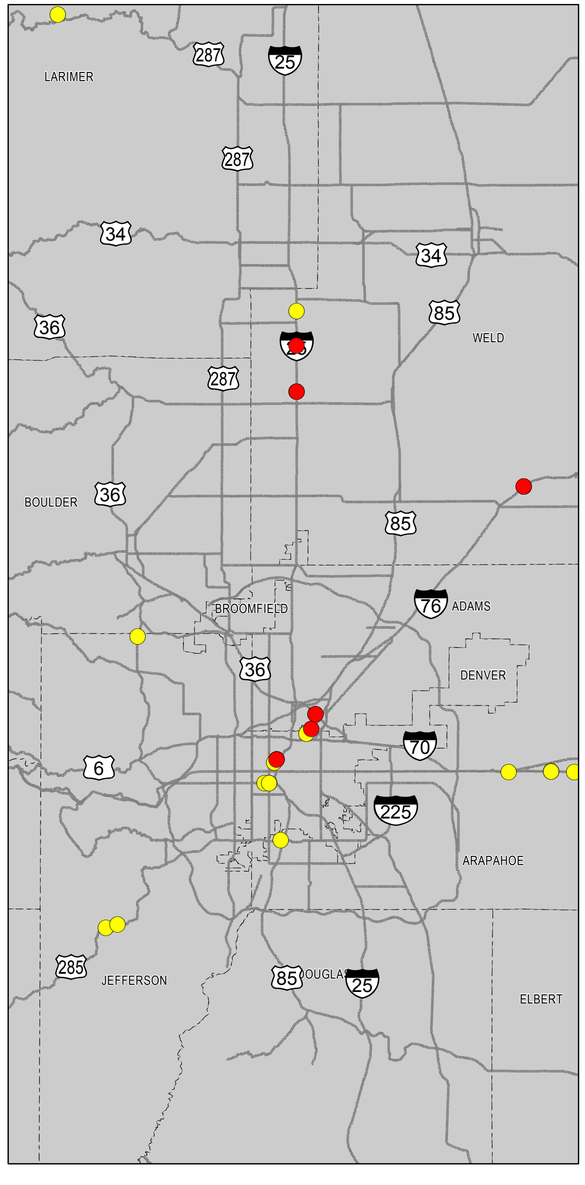
Base Map Legend – Layer Definitions

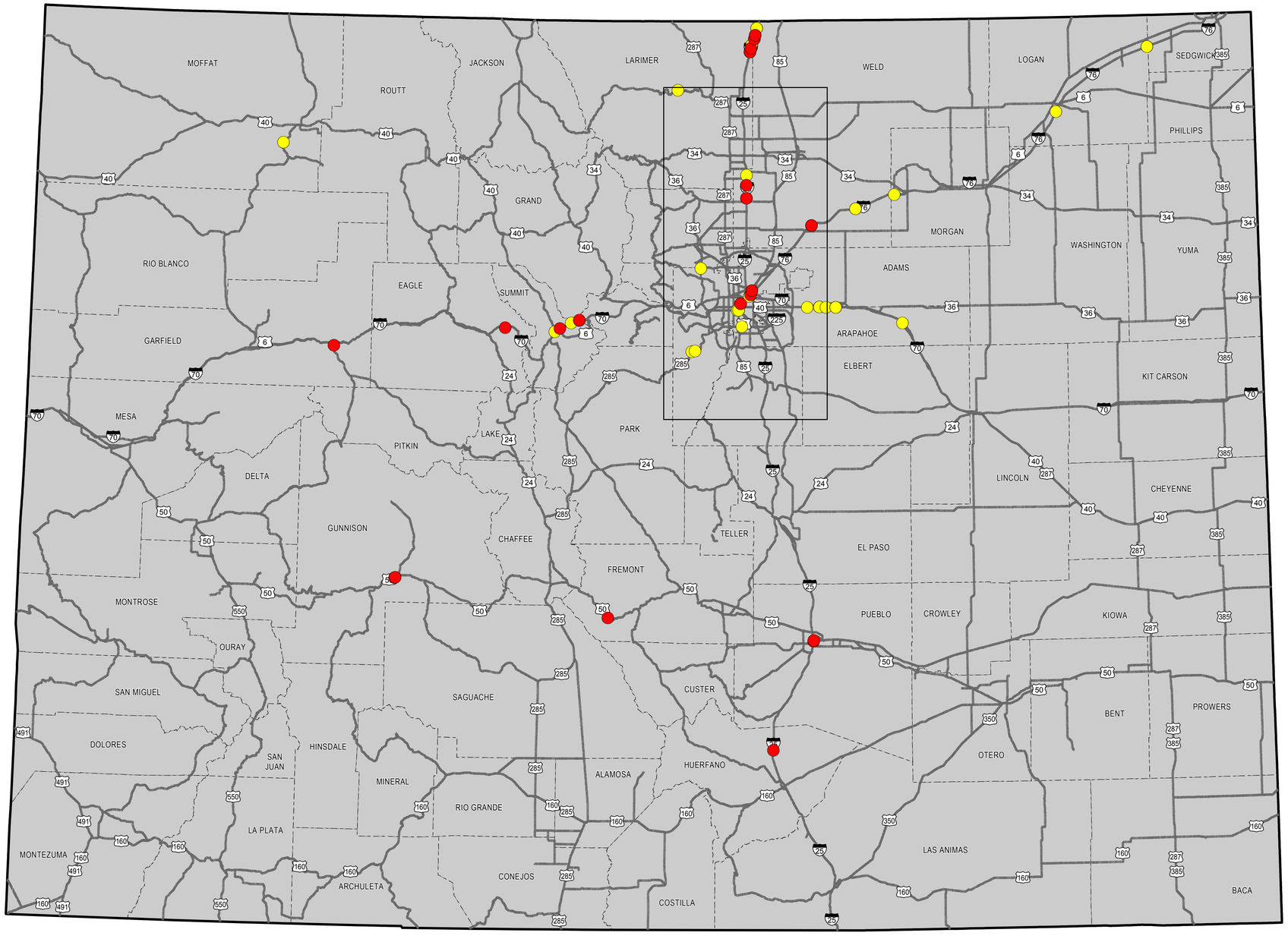
Intermodal Facilities (Source: FHWA, Source: http://www.fhwa.dot.gov/planning/national_highway_system/intermodal_connectors/) – [A facility] used for the movement of freight, in a container or on a trailer, by more than one mode of transportation.

Bridges with Low Vertical Clearance

Bridges with Low Vertical Clearance below 13'6"

Bridges with Low Vertical Clearance below 14'6"





20 10 0 20 40 60 Miles

Data Source: CDOT 2015

Published: April 2016

WWW.CODOT.GOV

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The information contained in this map is based on the most currently available data and has been checked for accuracy. CDOT does not guarantee the accuracy of any information presented, is not liable in any respect for any errors or omissions, and is not responsible for determining "fitness for use".

FAC Safety Work Group Handout
Safety Information from the 2015 Colorado State Highway Freight Plan
April 28, 2016

Multimodal Freight Plan Crash Data Update & Safety Analysis

The following information pertaining to freight safety was taken from the Colorado State Highway Freight Plan that was finalized in July 2015. Please note that crash data presented below is out of date (2008-2012) and does not accurately portray crash trends identified currently. This crash data and safety analysis will be updated and further analyzed and refined during the development of the Multimodal Freight Plan.

Safety

Safety is CDOT's top priority, and in recent decades Colorado has made substantial progress in reducing deaths and injuries on the State Highway System. Within the last 15 years, the total number of fatalities occurring on the entire statewide transportation system fell from 742 in 2002 to 472 in 2012, as shown in Figure 1. This decline occurred during a period in which the total number of vehicle miles traveled was increasing statewide.

In the recently completed Strategic Highway Safety Plan (SHSP), CDOT adopted a statewide goal of Moving Towards Zero Deaths. CDOT believes that the goal of zero traffic deaths is both realistic and attainable, particularly given the potential of new emerging technologies, ongoing educational campaigns, and targeted safety investments to dramatically improve roadway safety in the future. In order for this goal to become a reality, it will be necessary to coordinate efforts along all state highways, including the Colorado Freight Corridors.

While freight vehicles travel on the same roads as the general traveling public, the safety issues they confront are often different. In order to better understand safety on Colorado Freight Corridors, an analysis was completed to compare truck crash rates on Colorado Freight Corridors with total crash rates. Crash data of Freight Corridor segments was analyzed to compare crash rates (crashes per million vehicle miles traveled) of trucks to crash rates for all vehicle types for years 2008-2012.

Section 130 Rail Crossing Safety Program

The Colorado Department of Transportation, Division of Project Support, Project Development Branch, Statewide Utilities Office administers the federal aid Highway Rail crossing program which is authorized by United States Code Title 23, Section 130. The goal of this safety fund, commonly referred to as Section 130, is to reduce the crash risk of the most hazardous public highway rail crossings in Colorado. Overall, safety at highway rail crossings has been improved by projects funded with Section 130 assistance.

Section 130 funds are typically used to install train-activated warning bells, flashing lights, overhead cantilevers, gates and constant warning time circuitry at highway rail crossings on the state and local highway system. Note that Section 130 funds cannot be used at private highway rail crossings.

Typical highway rail crossing upgrades using Section 130 funds usually fall into two categories:

1. With existing passive protection (such as cross bucks and/or stop signs) at the crossing a safety project would install train-activated warning devices. Usually, warning bells, flashing lights, overhead cantilevers with flashing lights, and gates, and constant warning time are installed.

2. With existing train-activated protection (such as flashing lights and/or gates), a safety project would upgrade the existing signal equipment, add four-quadrant gates, install an overhead cantilever with flashing lights, upgrade circuitry to add constant warning time, modernize adjacent highway traffic signals, add a median barrier (to prevent motorists from driving around lowered gates) or other enhancements to reduce crash risk at the highway rail crossing.

Section 130 improvements require 10% matching funds by local government authorities, but certain safety projects can be funded at 100% Federal share, including grade crossing closures and traffic control/signalization [23 USC 120(c)(1)]. With the current level of federal funding, the number of Section 130 crossing upgrades in Colorado is roughly 4 - 7 crossings per year.

Crossing Hazard Index

A hazard index for each public rail-highway crossing in the state is calculated annually using Federal Railroad Administration (FRA) formulas and guidelines. The Railroad-Highway Grade Crossing Handbook – Revised Second Edition (the handbook) is used as a basis for the hazard index calculation and is a single reference document based on the prevailing and best practices as well as adopted standards relative to rail-highway crossings. The guidelines and alternative improvements presented in the handbook are primarily those that have proved effective and are accepted nationwide.

A rail-highway crossing is unique in that it constitutes the intersection of two very different transportation modes. The hazard index is a measure of the potential for crashes (or predicted number of crashes per year) at the rail-highway crossing. The

FRA safety database serves as the source of information for train traffic and accident history at all crossings. The hazard index is based on many factors including the number trains and vehicles at the crossing, the number of main tracks, the road surface type, maximum train speed, and the number of highway lanes.

Because the FRA safety data cannot describe the precise characteristics of each crossing, such as sight distances, the calculation of predicted accident rates is improved by the addition of actual accident experience at a rail-highway crossing. The predicted accident rate is calculated using the factors above and the result is then multiplied by a factor containing the actual accident experience (usually the crash rate over a five year period). The final hazard index is obtained after applying a normalizing constant. The normalizing constant correlates the accident prediction formulas with actual crash rates on a nationwide basis. This Accident prediction and resource allocation procedure normalizing constant is provided by the FRA.

The hazard index is used to compare the crash potential (predicted number of crashes per year) of one crossing to another in a consistent manner. Crossings with the highest hazard index value are studied in detail. In order to gauge effectiveness of likely countermeasures, crossings selected for improvement are analyzed based upon seven decision criteria to generate a final score or ranking. The seven decision criteria applied are the hazard index, type of improvement selected, type of protection already on the rail corridor, the type of development near the rail-highway crossing, motorist expectancy with regards to train movements, the type of highway, and finally the public or local authority interest or comments on safety of the rail-highway crossing. The seven decision criteria allows INDOT to incorporate the concerns of local officials, new development issues (such change of traffic patterns), and rail corridor projects into the project selection process.

Section 130 Projects

Unlike most other federal highway funds, local agencies cannot request Section 130 funds. However, comments regarding the safety performance of any public rail-highway crossing are welcome and the comments may be addressed directly to the central CDOT Railroad coordinator. The comments will be reviewed during the annual project selection process.

The hazard index is the primary initial factor used to rank and select Section 130 projects. The final ranking is based on the combination of the hazard index, recent accident history, and local input received. Certain rail corridors might be identified as needing upgrades based on increasing rail traffic. Projects for the highest ranked locations are funded, limited by the total funding available in each fiscal year. If funded, the selected locations are programmed for project development and most can be constructed within 24 months after they are programmed.

Local government agencies are allowed to fund and improve the crossing protection at public rail-highway crossings under their jurisdiction at any time. There is a common misconception that because the CDOT administers the Section 130 federal

funds, it is therefore responsible for funding all rail-highway crossing safety improvements. Local government agencies should note that the Section 130 funds are used only to address the most critical needs statewide. Local safety concerns and knowledge are very important and there is nothing in Colorado law that prohibits a county, city, or town with jurisdiction over a crossing from funding safety improvements on their own. Local agencies are encouraged to initiate projects for crossing safety improvements using locally available highway safety funding or funds from any other source.

Since CDOT can only fund up to 8 or so Section 130 crossing improvement projects a year and there are more than 3,000 public rail-highway crossings statewide, local agencies should not wait for CDOT's funding involvement. The owner of the road at the crossing -- be it the state, the county, or a local municipality -- has the responsibility for deciding what warning devices rail-highway crossings should have and for paying the installation costs.

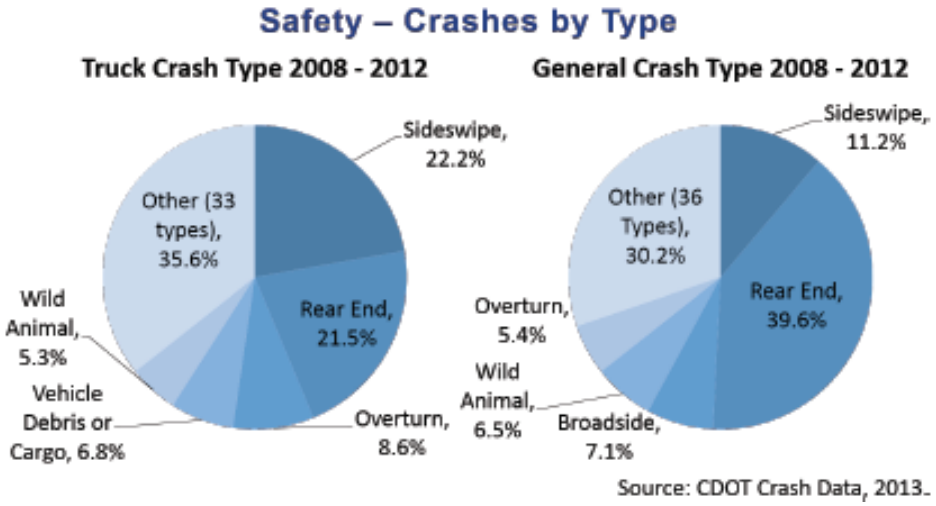
If a local agency wishes to fund a rail safety improvement project at a public rail-highway crossing using their own funds, the CDOT Railroad Coordinator can assist with developing the project.

The CDOT Rail Coordinator should be contacted to assist in drafting agreements with the affected railroad when initiating a local rail-highway safety project. The Colorado Public Utilities Commission governs the approval of all changes to rail-highway crossings.

Figure 1: Fatality and Serious Injury

The percent difference was calculated between the truck crash rate and the general crash rate. A negative percent difference that resulted from the analysis indicated that the truck crash rates were lower than the overall crash rate for a given Freight Corridor segment. The majority of these corridor segments' crash rates were negative numbers, indicating that truck crash rates are mostly lower than the overall crash rate for all vehicle types. This is likely due to the fact that truck drivers are generally well-trained professionals, who exhibit safe driving behavior. However, the analyses also identified certain segments of Freight Corridors where the truck crash rates were higher than the overall crash rate. CDOT will focus on these segments with relatively higher truck crash rates. CDOT is working to obtain additional data to assess the causes of these increased crash levels and determine potential mitigation strategies.

Figure 2: Safety – Crashes by Type



As with crash rates, freight vehicle crash types also differ from those of the general traveling public in Colorado. As Figure 2 indicates, trucks have twice the rate of involvement in sideswipe crashes as the total vehicle population, a rate of 21.5% as compared to 11.2%. They likewise show a greater chance of overturning, albeit with a smaller difference of 8.6% versus 5.4% for all vehicles. Overall, sideswipe and rear end crashes account for a combined 43% of truck crash types, indicating that these may be the key areas to focus on with various educational safety campaigns related to driver awareness.

As in the case of crash rates, additional data collection and analysis will be needed in order to devise proper strategies for improving safety performance in this area.

Other Freight Facilities

Other facilities that support the movement of freight on the State Highway System include:

- Runaway Truck Ramps - Steep gravel ramps built along a highways of steep grade (over 6%) that provide refuge for trucks with insufficient downhill braking capacity.
- Chain Up Areas - Staging areas built along highways prone to snowy and icy conditions, for large trucks and other vehicles to temporarily stop (usually no more than 30 minutes) to install tire chains safely during inclement weather.
- Weigh Stations Located at Ports of Entry (these facilities are managed and owned by the Colorado State Patrol, for more information on these facilities see: http://www.coopsareopen.com/colorado-weigh-stations.html).
- Truck Parking Facilities
- Rest Areas

See Figure 3: Other Freight Supporting Facilities for the location of runaway truck ramps, chain up areas, and weigh stations in Colorado.

See Figure 4: Truck Parking Needs from the 2007 truck Parking Issues Study. Since that time a new *Truck Parking Guide: Long-Term Parking — Emerging Parking — Chain Stations* was produced in April 2012 that covers facilities along all Colorado interstates, I-70, I-25, and I-76.

Figure 3: Other Freight Supporting Facilities

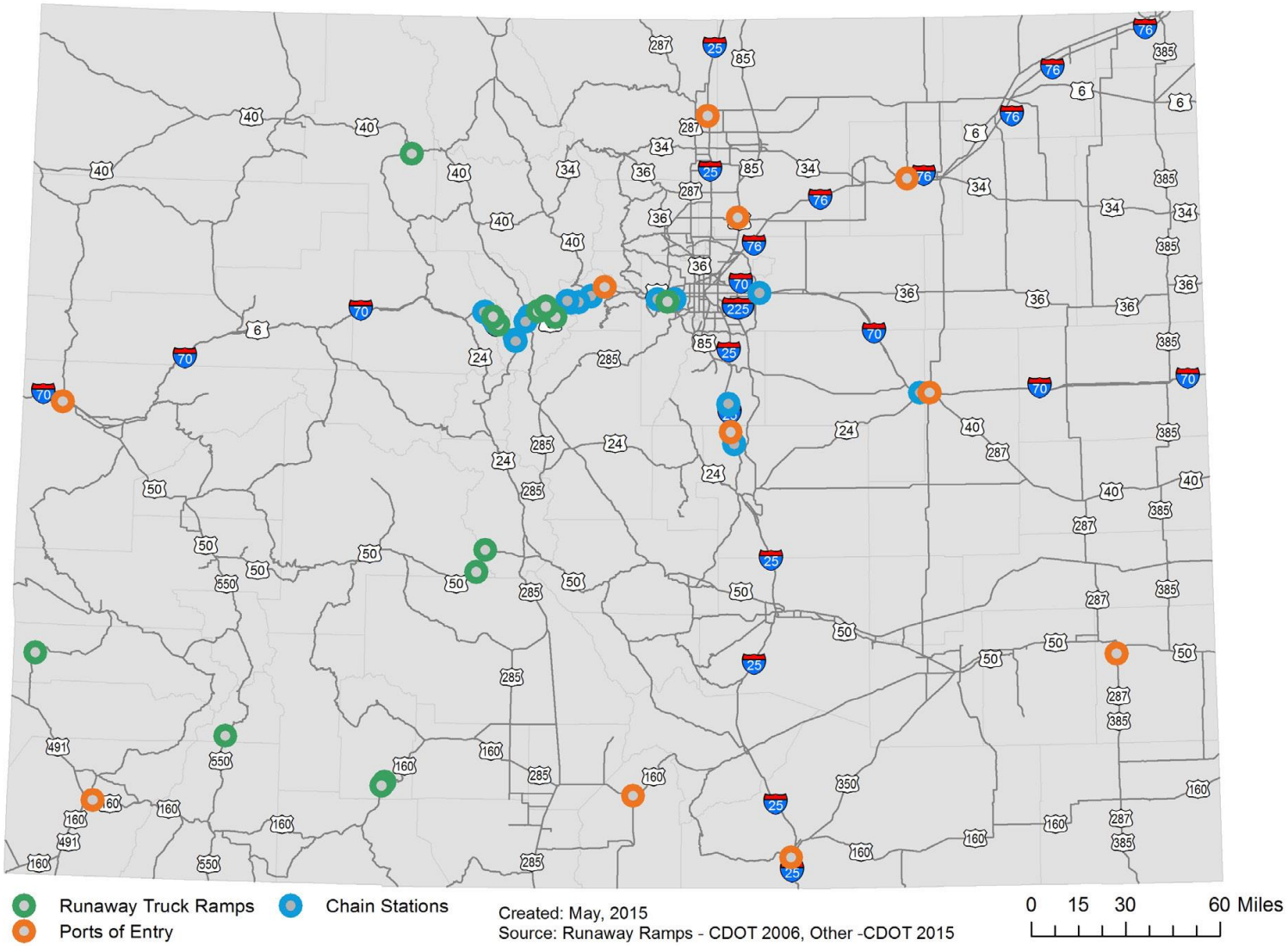
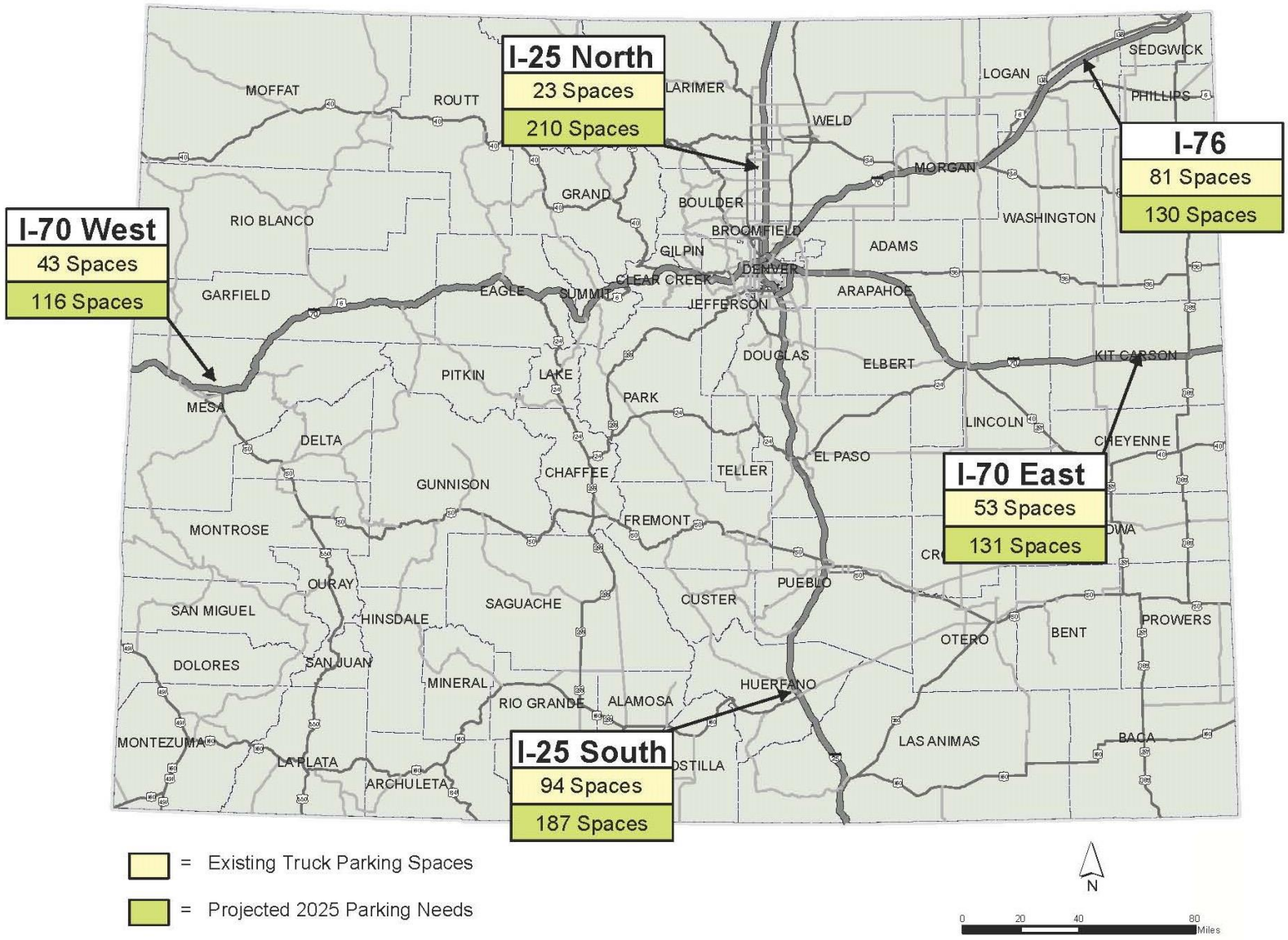


Figure 4: Truck Parking Needs



In addition, CDOT oversees permitting for oversize/overweight vehicles. CDOT recently conducted a LEAN process improvement for these permits. The oversize/overweight permitting process is now approximately 30% faster and 60% more accurate than it was previously (Source: CDOT 2014). This permitting process helps to ensure that oversize and overweight vehicles follow safety procedures, and that their travel routes can accommodate their size and weight.

Freight Policy Strategies

CDOT has identified a variety of policy strategies designed to improve the safety of freight transport in Colorado, as follows:

1. **Data-Driven Planning** - Identify and prioritize road safety problems using data-driven processes to support implementation of the most effective improvements to reduce roadway crashes.
2. **Highway Truck Crash Reduction** - Identify corridors and hot spots with truck crash rates higher than the overall crash rate and prioritize improvements for investment.
3. **Bridge Strike Reduction** - Identify causes and trends of bridge strike incidents and actions to reduce future bridge strikes.
4. **Targeted Crash Type Mitigation** - Analyze data to identify trends in truck crash types and identify solutions including public outreach to educate drivers concerning factors relating to the most common truck crash types
5. **Improved Access to Safe Truck Parking Facilities** - Update truck parking facility study and develop action plan for addressing current and future truck parking needs.