

TIGER III: CDOT Potential Projects Summary

CDOT Region 1

- **I-70 Mountain Corridor: Active Traffic Management (ATM)**
 - Project Cost: \$6 million
 - TIGER III Requested Amount: \$3.0 million
 - Urban or Rural: Rural, Jefferson County (Non-EDA)

CDOT Region 2

- **I-25 Dillon/Eden Interchange (Pueblo)**
 - Project Cost: \$22.6 million
 - TIGER III Requested Amount: \$11.3 million
 - Urban or Rural: Urban, Pueblo County (EDA)
- **Powers/Peterson AFB Interchange**
 - Project Cost: \$35 million
 - TIGER III Requested Amount: \$30.0 million
 - Urban or Rural: Urban, El Paso County (Non-EDA)

CDOT Region 3

- **I-70B (Grand Junction)**
 - Project Cost: \$14.3 million
 - TIGER III Requested Amount: \$10.0 million
 - Urban or Rural: Urban, Mesa County (Non-EDA)

CDOT Region 4

- **I-25 Interchange at US 34**
 - Project Cost: \$30 million
 - TIGER III Requested Amount: \$15 million
 - Urban or Rural: Urban, Larimer County (Non-EDA)
- **I-76 Ft. Morgan to Brush**
 - Project Cost: \$40 million
 - TIGER III Requested Amount: \$32 million
 - Urban or Rural: Rural, Morgan County (EDA)

CDOT Region 5

- **No Projects Submitted**

CDOT Region 6

- **I-25 North Interim Managed Lanes (US 36 to 120th Avenue – Adams County)**
 - Project Cost: \$40 million
 - TIGER III Requested Amount: \$15 million
 - Urban or Rural: Urban, Adams County (Non-EDA)

HPTE/Region 4

- **US 36 Managed Lane/BRT – Phase II**
 - Project Cost: \$150 million
 - TIGER III Requested Amount: \$150 million
 - Urban or Rural: Urban, Boulder County (Non-EDA)
 - TIFIA: Possibly

TIGER III CDOT Pre-Application Form

- i. **Project Title:** I-25 Dillon / Eden Interchange in Pueblo, Colorado
- ii. **Description:** This new access to I-25 requires construction of a new bridge over I-25 at Platteville Boulevard/ Dillon Drive and new on- and off-ramps to I-25 south of that bridge. These new ramps will replace the existing ramps at the south half of the Eden Interchange which would be removed. This configuration, called a “split diamond interchange,” provides all of the movements of a typical “diamond” interchange except the freeway connections are split between two nearby roads. In this case, the connections will be from Platteville Boulevard/ Dillon Drive and Eden Road. A new one-way frontage road east of I-25 and a two-way frontage road along the west side of I-25 will connect the south half of this interchange at Platteville Boulevard/ Dillon Drive with the north half at Eden Road. The System Level Feasibility Study, the Interstate Access Request and the NEPA process have all been completed.

The interchange improvements provide more direct access for Pueblo West commuters to I-25 and improved access to a growing commercial and retail area.

iii. **Project Application Selection Criteria:**

Economic Competitiveness: Over the years, the Pueblo area has experienced varying degrees of prosperity; however, its economic performance generally lags behind that of the Nation and State of Colorado. This project would give the City a substantial economic boost. The majority of the project’s area of impact includes a tax-increment financing (TIF) zone established by the Pueblo Urban Renewal Authority (PURA). The 2009 assessed valuation of properties in this area is \$8,943,770. On the basis of financial calculations developed by PURA, the forecasted assessed valuation of the area is anticipated to grow by an additional \$24,631,233 over the next twenty years. The total assessed valuation of the area is anticipated to be \$33,575,003 by 2030.

The TIGER funding would allow the project to be constructed in one phase rather than the two planned phases. This reduces the total project cost by \$1.1 million through eliminating the need to mobilize construction crews a second time.

Job Creation and Economic Stimulus: As a rule of thumb, for every \$1 million dollar investment in construction projects, 20 jobs are created. This is a \$20 million project; therefore 400 jobs can be expected to be created during the construction phase. Admittedly, at any one time, not all of these jobs would be required. Construction is anticipated to begin mid summer 2012 with completion in 18 to 24 months. In addition, the on-site construction workers will provide immediate stimulus to the local economy as staff spends resources to acquire local goods and services.

- iv. **Total Project Cost:** \$22,600,000
- v. **Project TIGER III Request Amount:** \$11,300,000
- vi. **Project TIGER III CDOT Match Amount (source):** \$5,650,000 CDOT (RPP) and \$5,650,000 City of Pueblo.

- vii. Project Type:** Urban Interchange including new Bridge
- viii. Whether the project is requesting a TIGER II TIFIA Payment:** No
- ix. Type of jurisdiction where the project is located:** Urban, Economically Distressed Area
- x. NEPA Status of Project:** The NEPA process is complete. The Environmental Assessment was signed in January 2011 and the Finding of No Significant Impact was approved in July, 2011.

TIGER III CDOT Pre-Application Form

- i. **Project Title:** I-25 interchange at US34 in Loveland, Colorado
- ii. **Short Project Description:** Upgrade a portion of this interchange complex to the ultimate Preferred Alternative configuration.
- iii. **Project Application Selection Criteria (which Primary Selection Criteria will the application be written for?):**
 - a. Long Term Outcomes:
 - i. State of Good Repair
 - ii. Economic Competitiveness
The I-25 / US34 interchange provides access to Rocky Mountain National Park, one of the most popular tourist destinations in Colorado. Vibrant commercial and industrial developments lie adjacent to, or in the vicinity of the I-25 and US 34 corridors. Improving the operations and safety of the interchange increases the economic viability of the region by facilitating tourist, commuter and freight travel, contributing to Colorado's economic growth.
 - iii. Livability:
This investment increases mobility in a congested area while opening multi-modal options to residents and visitors. The existing, and well-utilized park & ride will be improved to enable better transit access.
 - iv. Environmental Sustainability
 - v. Safety
In its current configuration, oversize commercial vehicles have inadequate space to negotiate tight turns in the modified clover leaf design. The clover-leaf on-ramps also prohibit vehicles from reaching adequate speeds needed to safely merge into main-line traffic. Bicycle and pedestrian users are prohibited due to space constraints, making for an unsafe facility. Current interchange ramps were not designed to meet the traffic volumes, vehicle mix or speeds of today, let alone tomorrow. With significant current and future growth within the area, this facility must provide safe, reliable access for all modes. Recent interim improvements at the I-25 interchange with US 34 were privately funded, but did not address all the safety concerns.
 - vi. Cost Benefit
The project will construct a significant phase of the multi-modal interchange on I-25 and US34, alleviating safety issues while improving roadway operations.
 - vii. Job Creation and Economic Stimulus
- iv. **Total Project Cost:** \$30 Million

- v. **Project TIGER III Request Amount:** \$15 Million
- vi. **Project TIGER III CDOT Match Amount (source):** The City of Loveland is contributing \$15 million to the construction of the final configuration.
- vii. Project type:
 - a. Highway:
 - b. Transit
 - c. Rail
 - d. Multimodal: This project will construct an interchange that accommodates private and commercial vehicles, bicyclists, pedestrians and transit service.
- viii. **Whether the project is requesting a TIGER II TIFIA Payment:** No.
- ix. **Type of jurisdiction where the project is located (urban or rural):** Loveland, Colorado, which is urban in nature.
- x. **NEPA Status of Project:** The I-25 EIS Record of Decision is scheduled for October 2011.

TIGER III CDOT Pre-Application Form

- i. **Project Title:** I-25 Interim Managed Lanes: US36 to 120th Avenue – A High-Value, Low-Cost Investment for Sustainable Congestion Relief

- ii. **Short Project Description:** Provide one new managed toll lane in each direction on a six-mile stretch of Interstate 25 from US 36 north of Downtown Denver to 120th Avenue in Adams County. At the north end, the project will improve bus operations to the Wagon Road Park & ride – one of the north region’s busiest bus stations with over 1,500 parking spaces. The proposed improvements are a high-value/low-cost investment, making more efficient use of existing highway capacity. The project will put to use a technique called “shoulder running” recently endorsed for temporary or interim use by the Federal Highway Administration in an October 2010 report to Congress. The new lanes will be constructed in an interim configuration on right-of-way that currently serves as the inside shoulder. No additional right-of-way or additional paved surface is needed. The project provides sustainable congestion relief and improved express bus service at much lower cost and decades earlier than originally planned. Similar to the phased approach utilized on the US 36 managed lanes, this interim project is consistent with and does not preclude full build out of improvements identified in the North I-25 Final Environmental Impact Study, scheduled for Record of Decision (ROD) in October, 2011. Both public and private entities in Adams, Broomfield and Weld Counties along the North I-25 corridor (as represented by the North Area Transportation Alliance), the Denver Regional Council of Governments, CDOT and the Colorado High Performance Transportation Enterprise support this project as the first logical step toward much needed improvements along I-25, enhancing mobility, driving economic development and reducing traffic congestion in the north metro area. RTD, the region’s primary transit operator, also is interested in exploring these interim improvements in partnership with the above stakeholders.

- iii. **Project Application Selection Criteria (which Primary Selection Criteria will the application be written for?):**
 - a. Long Term Outcomes:
 - i. State of Good Repair
As part of this project, the entire stretch of I-25 in the project limits would be resurfaced.
 - ii. Economic Competitiveness
In 2006, the existing I-25 Express Lanes located just south of this proposed project opened to toll-paying customers, providing a congestion-free alternative between Downtown Denver and US 36. In the four-and-a-half years since opening, the I-25 Express Lanes have maintained free-flow travel speeds for customers while generating more than enough revenue to cover the initial capital costs and ongoing operations and maintenance. As identified in the I-25 North EIS, there is significant need for developing a similar facility in the I-25 corridor north of US 36. Currently this stretch of I-25 carries up to 175,000 vehicles per day, with peak hour traffic operating at less than half the posted speed (24 mph vs. 55 mph). By 2035, congestion on north I-25 is expected to be severe, with vehicle hours of delay increasing by 67%. 2035 projections show that building managed lanes on

this stretch of I-25 would shave nearly 30 minutes off the daily commute from 120th Avenue to Downtown Denver for those using the managed lanes. I-25 is a primary link to and through downtown Denver and is home to hundreds of businesses that rely on this facility for access. Reduced delay and predictability of travel time on I-25 would be a great benefit to businesses and residents alike. The new managed lanes will extend the existing network of tolled capacity in the Denver Metro Area, with connections to 7-miles of I-25 Express Toll Lanes to the south and 10 miles of US 36 Managed Lanes to the west, scheduled to be completed in 2015.

iii. Livability

This project will improve mobility and provide a sustainable alternative to congestion along North I-25. High Occupancy Vehicles (HOV) and public transit vehicles (buses, express bus) would use the managed lanes free of charge while Single Occupant Vehicles (SOV) would pay a toll to use these lanes. The mixture of SOV tolled and HOV/Transit non-tolled vehicles using the lanes would be managed through variable pricing to maintain free flow conditions within the managed lanes at all times. The improvement would expand choice for those who live and work along the corridor, providing a congestion free alternative at all times.

iv. Environmental Sustainability

Managed lanes on I-25 will provide travelers a congestion free alternative when they choose to carpool, take transit or pay a fee. Rather than simply building more lanes to meet traffic demand (not a sustainable way to relieve congestion) this project adds capacity and manages the new capacity in a way that encourages more environmentally responsible travel patterns. The project provides capacity in an environmentally sustainable way rather than continuing past efforts of trying to build our way out of congestion.

v. Safety

vi. Cost Benefit

The project will deliver much needed capacity improvements on I-25 in an interim configuration using existing pavement in the inside shoulder to create the new lanes. I-25 in this stretch is one of the most congested segments of freeway in the Denver Metro area. This innovative approach allows CDOT to complete the proposed improvements at ¼ of the cost and 10 to 20 years earlier than originally planned.

vii. Job Creation and Economic Stimulus

iv. **Total Project Cost:** approximately \$40 Million

v. **Project TIGER III Request Amount:** \$15 Million

vi. **Project TIGER III CDOT Match Amount (source):** The Colorado High Performance Tolling Enterprise is pursuing Public/Private Partnerships and/or public finance alternatives to leverage additional resources for this critical improvement to I-25 in the Denver area. In addition, contributions from the following sources are actively being pursued:

- a. Local agencies along the corridor
- b. RTD (Express Bus service would be operated in the new managed lanes)

- c. State FASTER Transit funds (HOT/ HOV lanes are eligible where bus service benefits)
 - d. STP-Metro -- DRCOG will receive additional funds from FHWA for FY 2011
 - e. Additional Federal funds that may be available from FHWA in FY 2011 for CDOT projects
 - f. Future toll revenue.
- vii. **Project type:**
- a. Highway:
 - b. Transit
 - c. Rail
 - d. Multimodal -- The managed lanes will provide one new tolled lane on I-25 in each direction, improving choices for drivers, and also improving transit service reliability.
- viii. **Whether the project is requesting a TIGER II TIFIA Payment:** No.
- ix. **Type of jurisdiction where the project is located (urban or rural):** Urban. Adams County, and the Cities of Thornton, Westminster and Northglenn in the Denver, Colorado metropolitan area.
- x. **NEPA Status of Project:** The I-25 EIS Record of Decision is scheduled for October 2011.

I-25 NORTH WIDENING RECONSTRUCTION: From Academy Boulevard North to Interquest



Project Description: Total length: 4.52 mile; Widening 4 to 6 lanes (Concrete Pavement): From Academy North to Interquest							
I-25 NORTH WIDENING RECONSTRUCTION				Cost(Thousand Dollar)			
Design				270			
Construction				35000			
2010 ADT: 83000				2010: PM Volume/Capacity: 1.04			
2035 ADT: 107000				2035: Non-Action: PM Volume/Capacity ratio: 1.34			
Life cycle benefit cost analysis	Vehicle Operating Cost Savings	Time & Reliability Savings	Value of Personal Time Savings	Logistics Cost Savings	Environmental Benefits	Total Cost	Benefit/Cost Ratio
I-25 North: Widening from 4 to 6 lanes; Total length: 4.52 mile	36.8	23.6	313.2	3.9	1.8	65.7	5.78

TIGER III CDOT Pre-Application Form

- i. **Project Title:** Interstate 70 Mountain Corridor: Active Traffic Management (ATM) System Implementation (Mt. Vernon Canyon)
- ii. **Short Project Description:** This project would be consistent with the “non-infrastructure component” portion of the I-70 Mountain Corridor EIS preferred Alternative. This project would consist of an Active Traffic Management System (ATM) for reducing congestion and maximizing throughput in one of the most heavily travelled sections of I-70; from Chief Hosa to Golden/Morrison (Mile Posts 253-259) eastbound, an area with continuous downhill grades of up to 6 percent. Specifically, ATM alternatives which include - but are not limited to - speed harmonization, queue warning, temporary (“hard”) shoulder running, and dynamic truck restriction. Variable Speed Limit per lane and Incident Lane Restriction messaging would be employed individually or in combination to actively manage traffic to improve safety, and increase trip reliability.

Currently, the speed limits on this downhill (6%) segment of the interstate are posted variably between trucks and regular vehicles. Truck speed limit is posted at 35 MPH whereas regular vehicles are 55MPH. For years, motorists have complained and claimed inappropriate speed limits. However, due to safety reasons potential unsafe “speed differential”, the current posted static speed limits remain.

CDOT’s ultimate goals are the safe free-flow speeds and increased levels of service in the I-70 Corridor. As the TRB notes, “All of these strategies center on the theme of getting more out of facilities already in place.”

This first phase implementation project would remove the currently static speed limit signs and replace them with a series of dynamic full-color, full matrix overhead gantries, spaced approximately one half to one mile apart in the eastbound (downhill) direction at the final approach to the Denver metropolitan area from Mount Vernon Canyon. These overhead gantries would be operated by the Colorado Transportation Management Center (CTMC) and assign a specific speed limit and use restriction for each of the three lanes, based on external factors (e.g., congestion, inclement weather, slow moving freight trucks weaving with fast moving passenger vehicles). In addition, the matrices could immediately warn travelers of approaching bottleneck points, traffic incidents, work zones, or other real-time highway conditions.

- iii. **Project Application Selection Criteria:**
 - a. Long Term Outcomes:
 - i. Safety and Mobility improvements
 - b. Job Creation and Economic Stimulus
- iv. **Total Project Cost:**\$6.0M
- v. **Project TIGER III Request Amount:**\$3.0M
- vi. **Project TIGER III CDOT Match Amount (source):** Colorado FASTER Safety (Senate Bill 09-108) funding
- vii. **Project type:** Interstate Highway
- viii. **Whether the project is requesting a TIGER II TIFIA Payment:** No
- ix. **Type of jurisdiction where the project is located (urban or rural):** Rural (Jefferson County, Colorado)
- x. **NEPA Status of Project:** A recent and similar overhead dynamic messaging system project in the I-70 Mountain Corridor was cleared through a Categorical Exclusion process. This project would also be

cleared under a CatEx. CDOT is committed to conducting the Context Sensitive Solutions (CSS) process for this traffic and safety implementation project.

TIGER III CDOT Pre-Application

- i. **Project Title:** I70B widening (Phase II) between 24³/₄ Road and east of Rimrock Avenue
- ii. **Short Project Description:** This safety project will replace the existing I70B asphalt main lanes and frontage roads with a six-lane concrete roadway, medians and frontage roads from 24 ³/₄ Road to east of Rimrock Avenue. Roadside ditches will be enclosed, signals upgraded and pedestrian sidewalks added. Access will be restricted to critical intersections.
- iii. **Project Application Selection Criteria (which Primary Selection Criteria will the application be written for?):**
 - a. Long Term Outcomes: **Safety** - The average injury rate for the I70B corridor as a whole is 60% higher than the statewide average for similar corridors.

Improvements to I-70B are necessary due to higher traffic retail uses, which have resulted in traffic volumes and access needs inconsistent with the original frontage road system. As a result, traffic capacity is hampered, and accidents are higher than similar roadways across the state. The improvements will complement the Riverside Parkway corridor, a locally funded project completed in 2008. The Parkway provides congestion relief along portions of I-70B east of the proposed project. The completion of I-70B Phase II will provide congestion relief and greater safety along those portions of the corridor not positively impacted by Riverside Parkway.
 - b. Job Creation and Economic Stimulus: Short-term employment will occur as part of the construction project. The number of jobs to be created over the construction term (9 months) is estimated to average 75.

In addition, I-70B is an important regional commercial corridor providing access to most of Grand Junction's commercial and business areas. Further, the corridor, also designated as U.S. 50, serves as a gateway between Utah and southwest Colorado. Two economically distressed areas (EDAs) in Colorado, Delta (9.4% unemployment rate) and Montrose (10.6% unemployment rate) counties, are located immediately south of Mesa County and will be directly affected by the project. EDAs also impacted in Utah include Grand County (10.1% unemployment rate) and parts of San Juan County (10.0% unemployment rate). Mesa County, while not an EDA, has an unemployment rate of 10.3% and this project will provide an economic boost for the area.
- iv. **Total Project Cost:** \$14,309,000
- v. **Project TIGER III Request Amount:** \$10,000,000
- vi. **Project TIGER III CDOT Match Amount (source):** In FY 2012 and 2013, the TIP identifies \$4,309,000 in Colorado FASTER funds.
- vii. **Project type:** Multimodal
- viii. **Whether the project is requesting a TIGER II TIFIA Payment:** No
- ix. **Type of jurisdiction where the project is located (urban or rural):** Urban
- x. **NEPA Status of Project:** NEPA Complete

I-70B Tiger III Grant

I-70B is the backbone of the transportation system in the Grand Valley, connecting the heart of the business/industrial district to I-70 and US 50/US 6. Based on analysis performed in the I-70B Corridor Study; improvements along I-70B will **provide the most effective** improvement to achieve transportation mobility in Mesa County. Improvements to I-70B are necessary due to higher traffic retail uses, which have resulted in traffic volumes and access needs inconsistent with the original frontage road system. As a result, traffic capacity is hampered, and **accidents are higher than similar roadways across the state.**

Local Significance/Competitiveness

- 27% of Grand Junctions Retail Business is conducted along the corridor.
- I-70B corridor has been the top priority for the GVMPO since 2003; with \$9.5 Million Local, State and Federal funds invested to **complete the NEPA and ROW acquisition and Utility relocation** for this project. Phase I was constructed this year at a cost of \$12.8 Million in State and Federal funds.
- **Local support** in funding expenditures of over \$100,000,000 dollars in just the last 5 years have improved connectivity to, and around I-70B, including Riverside Parkway construction. The result is an overall improvement for levels of service on most of I-70B. TIGER III dollars will be used to improve the safety and efficiency of the section of I-70B that was not positively impacted by Riverside Parkway.

Statewide Significance/Competitiveness

I-70B supports numerous Energy Supply/Distribution Yards and is the key connection to I-70 that supports the Energy Circle in Western Colorado, Eastern Utah, and Northwestern Wyoming.

- Within the corridor will be a major inter-modal center, including **inter-city, Intra- State and nationwide travel** through Grand Valley Transit, Greyhound, and TNM&O bus service and connection to Amtrak.
- **This project is shovel ready.** NEPA is complete and the project is ready to advertise.
- Geographical distribution is critical for a statewide transportation system and this is the only CDOT project submitted from the Western Slope for TIGER III Grant Funding.

National Significance/Competitiveness

- This corridor is the Gateway into Western Colorado and the Grand Junction Community from the Western United States.
- The I-70B Corridor is the connection for all traffic coming from Southwest Colorado to and from Utah via I-70.
- Mesa County has a current **unemployment rate of 10.3%**, which is among the highest in the state. In addition, the adjacent counties of Delta, Montrose, Grand County Utah, and San Juan County Utah, are all listed as EDA communities and jobs resulting from this project will have a direct impact on all of these bordering counties on the Western Slope.
- U.S. Bureau of Economic Analysis announced that Grand Junction was one of only four metro areas in the US to show a **decline in personal income.**
- This Project currently has a programmed matching to federal funding of over 30%. Region 3 is requesting \$ 10 Million in grant funding for a total project request of \$ 14.3 Million.

I-70B Phase One Construction



BEFORE



AFTER



TIGER III CDOT Pre-Application Form

- i. **Project Title:** I-76 Reconstruction from Fort Morgan to Brush, Colorado
- ii. **Short Project Description:** Reconstruct 2 lanes, both eastbound and westbound, of I-76 from MP 75 to MP 90. The I-76 Corridor is a high priority corridor for the UFR. It connects northeastern Colorado and I-80 with the Denver metropolitan area. I-76 crosses the UFR, Eastern TPR, and DRCOG regions, including Adams, Weld, Morgan, Washington, Logan, and Sedgwick Counties. I-76 is the primary east-west corridor for Northeastern Colorado.
- iii. **Project Application Selection Criteria (which Primary Selection Criteria will the application be written for?):**
 - a. Long Term Outcomes:
 - i. State of Good Repair
The Project will use construction, maintenance, and operation practices that encourage a more efficient and improved state of good repair for I-76. This includes the use of sustainable materials. CDOT has developed new paving standards that allow up to 25 percent of asphalt materials to be comprised of recycled materials. These standards resulted in 80,000 tons of recycled asphalt pavement used on State highways in 2008. The Project will seek to implement this policy and other best practices to ensure a sustainable design and construction. The Project will reconstruct and upgrade failing pavement and structurally deficient bridges.
 - ii. Economic Competitiveness
I-76 provides a logistics lifeline for the movement of goods to, from, and through Colorado. 2010 traffic counts show 18% of the vehicles using this segment of I-76 are trucks- which bring food, materials, and goods for sale. I-76 also provides a critical link between I-70 and I-80, two of the longest interstate routes in the nation.
 - iii. Livability:
This investment increases the roadway safety, thus improving the reliability in travel and freight movement.
 - iv. Environmental Sustainability
 - v. Safety
 - vi. Cost Benefit
The project will reconstruct the next logical phase of I-76, thus reducing the expenditure of CDOT's resources to simply hold the road together. In addition, the new, stable roadway will reduce the amount of vehicle wear and tear.
 - vii. Job Creation and Economic Stimulus
- iv. **Total Project Cost:** \$40 Million

- v. **Project TIGER III Request Amount:** \$32 Million
- vi. **Project TIGER III CDOT Match Amount (source):** \$8.0M, Region Surface Treatment Funds
- vii. Project type:
 - a. Highway: This project is for desperately needed interstate reconstruction to facilitate the movement of goods and people.
 - b. Transit
 - c. Rail
 - d. Multimodal:
- viii. **Whether the project is requesting a TIGER II TIFIA Payment:** No.
- ix. **Type of jurisdiction where the project is located (urban or rural):** Fort Morgan, Morgan County and Brush! Colorado, which are rural locations.
- x. **NEPA Status of Project:** The project is designed and cleared.

TIGER III CDOT Pre-Application Form

i. **Project Title:** Powers Boulevard and Peterson Air Force Base Interchange

ii. **Short Project Description:**

The project will construct a new interchange on Powers Blvd (SH 21) at the entrance to Peterson Air Force Base at Airport Road and Stewart Avenue. The project will construct free-flow access ramps for ingress and egress movements at the west gate of Peterson AFB. The west gate from Powers Boulevard is the Base's primary access. In addition, Stewart Avenue will connect to Airport Road linking Base access to the local street system. The project will also improve access to local businesses and future land development sites.

The project does not include widening of Powers which is planned to be widening from 4 to 6 lanes within the interchange limits and from Platte Avenue, on the north side, to Fountain Boulevard, on the south. This widening can be phased with a future widening project as dictated by traffic demand. The estimate for this widening is approximately \$10 Million. Currently, the Powers Corridor has \$12 Million identified in the STIP (FY 13 and 14) which could be used for this additional widening if necessary. The project costs and funding are as follows:

Funding sources:

• Local Pikes Peak Rural Transportation Funding (Already expended on right of way preservation)	\$2.5 Million
• Public Lands Highways Discretionary Program (Currently Obligated for ROW and design)	\$2.3 Million
• With Anticipated TIGER III	\$30 Million
• Future FY 13 CDOT RPP Funds (STIP'ed)	\$2 Million
• Future FY 14 CDOT FASTER Safety Funds (State) (STIP'ed)	\$10 Million
Total	<u>\$46.8 Million</u>

iii. **Project Application Selection Criteria (which Primary Selection Criteria will the application be written for?):**

- a. Long Term Outcomes:
 - i. State of Good Repair
 - ii. Economic Competitiveness
 - iii. Livability
 - iv. Environmental Sustainability
 - v. Safety
 - vi. Cost Benefit
- b. Job Creation and Economic Stimulus

The application will be written based the primary selection criteria of Long Term Outcomes. However, Job Creation and Economic Stimulus will be mentioned.

a. Long Term Outcomes:

- i. **State of Good Repair:** *the US DOT will give priority to projects that have a significant impact on desirable long-term benefits (an emphasis on projects that minimize the life-cycle costs and improve safety).*

The Powers Corridor is a high priority asset to the Region as it is the second busiest corridor in the Pikes Peak Region. This Long term investment is committed in the regions strategic plan to upgrade Powers Boulevard to a freeway. It is expected that the maintenance commitment will continue for Powers Boulevard due to its regional and national importance to provide mobility and access to several military bases and regional facilities including Peterson AFB, the US Air Force Academy, Fort Carson, Schriever AFB, and the Colorado Springs Municipal Airport.

The Interchange at Powers and Airport will replace an existing at-grade interchange with a grade-separated interchange and life-cycle costs will be minimized to determine the most cost effective roadway surface, bridge and retaining wall structures necessary to complete the interchange.

- ii. **Economic Competitiveness:** *contribute to the economic competitiveness of US (Medium to Long Term).*

A new interchange will provide better access to adjacent property and the Peterson Air Force Base. Much of the surrounding property is undeveloped. There is interest from local development to move forward with a new development plan called the “Westgate Development at Powers” which is located on the west side of the interchange. This planned development will provide additional employment in food retail and commercial office space.

In addition, a 2006 study conducted by Peterson Air Force Base anticipates the Base will grow from the currently population of 11,000 personnel to potentially over 31,000 personnel for the build-out year of 2030. The completion of the interchange is necessary for this planned growth, as the West Gate is the primary access into Peterson AFB.

- iii. **Livability:** *improve the quality of living and working environments.*

The Interchange design will fit into the planning efforts by Peterson AFB and the surrounding land uses to provide an attractive, safe and cohesive project that meets the needs of the surrounding community. The project will provide connectivity to local trail systems and provide modern access to handicapped and disadvantaged populations. The added investment into the project will enhance the living and working environment for the surrounding community and provide a more “livable” section on Powers Boulevard by the following:

- a. enhancing the local trail system for planned and existing trails (Powers Trail and East for of Sand Creek Trails);
 - b. providing safer and more efficient access for Peterson Air Force Base employees and visitors;
 - c. facilitating more economic growth with improved access to vacant properties on the west side of the interchange by providing direct access to planned businesses and restaurants serving the local community and a growing Peterson AFB;
 - d. complimenting Peterson AFB's vision to implement a based-wide transit system that can shuttle personnel from parking lots to work location. The Interchange access improvements to the west gate will provide a more cohesive transportation network from commuter vehicle to base shuttle services.
 - e. reducing travel time along the corridor and travel time to access the AFB and surrounding businesses.
- iv. **Sustainability**: *improving energy efficiency, reducing dependence on oil, reducing green house gas emissions and benefiting the environment.*

Building the interchange would accommodate higher traffic volumes with less congestion. Localized carbon monoxide concentrations would be well below the national ambient air quality standard with total VMT based on micro scale modeling of the region. At a nearby at-grade intersection located at Powers Boulevard and Constitution Avenue, the modeled carbon monoxide concentrations for a future freeway would be 5.6 parts per million in 2025 and 6.0 ppm in 2030. These projected 8-hour average concentrations would not exceed the national health standard of 9 parts per million.

Compared with the current at-grate intersection at Peterson, the interchange would have lower emission rates, and less idling emissions. Less idling emissions and improve traffic flow will also contribute overall fuel savings compared to the current congested intersection.

In summary the a new interchange would provide the following benefits:

- Improved water quality with a new drainage system.
- Lower Greenhouse Gas Emissions with reduced congestion.
- Provide better pedestrian trail access.

- v. **Safety**: *improving the safety of U.S. transportation facilities and systems.*

A new interchange at Airport Road and Powers will significantly reduce the number and severity of accident types by replacing the existing at-grade intersection with a

full movement interchange that will meet current standards for freeway access. Results shown below from a traffic study for the Powers Environmental Assessment determined the rate of accidents during a two year period that was nearly double the expected accident rates for this type of intersection.

<u>No. of Crashes</u>	<u>Rate (per million vehicles)</u>
49	1.920

It is anticipated that the accident rate will decrease by 4 times the current accident rate based on findings of similar interchange projects on Powers where comparisons were made with an existing at-grade intersection and the post construction of a full movement interchange.

vi. **Cost Benefit:**

The Pikes Peak Area Council of Governments performed a benefit-cost analysis of widening Powers Boulevard between US 24 and Platte Avenue to determine benefit-cost for the Airport and Powers Interchange. **The results, as shown in exhibit 10 yielded a benefit-to-cost of 8.6 revealing a very high benefit to the community.**

b. Job Creation and Economic Stimulus

Additional Job Benefits

Additional retail jobs are expected by completing Powers Boulevard as a freeway according to a 2006 economic study for the Powers Environmental Assessment.

“The corridor has previously experienced growth in retail and light industrial driving the need for additional mobility and access improvements along the corridor. As a result of upgrading Powers to a freeway, it is anticipated that 6863 additional retail jobs will be created along the 11-mile Powers.” – 2006 Powers EA Economic Study.

A conservative estimate of job growth for the Interchange was determined from this study. The Peterson AFB Interchange and associated access improvements are expected to contribute approximately one-twelfth of the total retail growth or about 572 jobs. In addition, the construction of the project is expected to create another 333 jobs.

This study did not account for planned additional military personnel from a 2006 Transportation Study completed by Peterson AFB. According to that study, the Base is anticipating to grow from the currently population of 11,000 to potentially over 31,000 for the build-out year of 2030.

c. **Total Project Cost:** \$35 Million

d. **Project TIGER III Request Amount:** \$30 Million

e. Project TIGER III CDOT Match Amount (source):

CDOT has acquired additional local, and federal and State funding to prepare this project for construction. Additional source already contributed include:

- \$2.5 Million recently spent on right of way preservation (Local Pikes Peak Rural Transportation Funding).
- \$11.9 Million of Federal and State funding recently spent (7th Pot for the Powers EA and conceptual design).
- \$2.3 Million from the Public Lands Highways Discretionary Program (for additional right-of-way and design). Approximately 10% spent towards design and right of way.

f. **Project type:** Highway

g. **Whether the project is requesting a TIGER II TIFIA Payment:** NO

h. **Type of jurisdiction where the project is located (urban or rural):** Urban

i. **NEPA Status of Project:** A FONSI was completed January 2011 for the Powers Environmental Assessment. Obtaining the right-of-way for the project is nearly complete (about 85% complete). The project will be constructed using a design-build to expedite the procurement process. If successful with a TIGER grant, the project can be ready for construction with two months of receiving funding.

TIGER III CDOT Pre-Application Form

- i. **Project Title:** US36 Managed Lane/ BRT Project Segment III from Interlocken to Table Mesa in Boulder County.

- ii. **Short Project Description:**

Construct the final segment of the US36 Managed Lane/ BRT project; the first segment was a recipient of a TIGER TIFIA Challenge Grant, which was leveraged into a \$300M project. This project would extend the Managed Lane from Interlocken to Table Mesa, continued implementation of a BRT system, which will become part of the RTD FasTracks system as well as construction of portions of a commuter bikeway. Additionally, the project would include replacement of aging infrastructure, some of which has not been upgraded since the 1950's.

- i. **Project Application Selection Criteria (which Primary Selection Criteria will the application be written for?):**
 - a. Long Term Outcomes:
 - i. State of Good Repair

The Project will use construction, maintenance, and operation practices that encourage a more efficient and improved state of good repair for the U.S. 36 facility. This includes the use of sustainable materials. CDOT has developed new paving standards that allow up to 25 percent of asphalt materials to be comprised of recycled materials. These standards resulted in 80,000 tons of recycled asphalt pavement used on State highways in 2008. The Project will seek to implement this policy and other best practices to ensure a sustainable design and construction. Moreover, the Project will reconstruct and upgrade failing pavement and structurally deficient bridges, while addressing crippling congestion. Additionally, the Colorado Transportation Commission sets annual performance goals that optimize value, minimize long-term life cycle costs, and guide decisions on how to spend limited financial resources. The U.S. 36 tolling and roadway components will be consistent with CDOT's existing asset management programs, including computer driven models that determine the optimal times to repair/replace elements of the highway system. Additionally, BRT transit vehicles and equipment will be managed using RTD's fleet management plan which conforms to the FTA's guidance on life cycle costs and maintenance standards. The aim of RTD's system is to perform routine maintenance and fleet replacement at optimal times to minimize long-term costs.
 - ii. Economic Competitiveness

U.S. 36 is a technology corridor of emerging business clusters that align closely with national and regional goals and contribute to Colorado's support of the nation's new economy. While Colorado's gross state product accounts for only 1.6 percent of the U.S. gross domestic product,

Colorado accounts for six percent of the U.S. wind and photovoltaic markets and five percent of the U.S. bio-fuels market. Due to the proximity of a well-educated workforce, complimentary services, and a transportation network that provides easy access to Denver and to the global aviation network at Denver International Airport (Airport), many global companies such as, Level 3 Communications, Ball Corporation, Hunter Douglas, and Sun Microsystems, are headquartered along U.S. 36. The University of Colorado at Boulder is also located at the western end of the corridor. In Louisville, ConocoPhillips is building its new corporate learning center and a global renewable energy technology center that anticipates supporting several thousand new employees. U.S. 36 also is integral to connecting Colorado's bioscience and renewable energy triangle, with Fort Collins's northern federal labs, Colorado State University, the University of Colorado at Boulder and federal labs to the west, and the Fitzsimmons Medical Campus to the southeast.

Colorado has one of the highest concentrations of federally funded science and research laboratories in the nation – half of which are located along the U.S. 36 corridor. Employing more than 4,500 scientists and engineers, the laboratories generate an estimated \$720 million annual regional economic impact and contribute to the continued growth of metro Denver's high tech industries. The labs stimulate significant technical transfer opportunities among higher education and area companies in critical areas such as climate research, space science and renewable energy development. The prospect of 25 minute travel time savings and a reliable travel time between Denver and Boulder would generate significant economic benefits. Improved efficiency in getting workers to and from their jobs is critical to the State's economy. Connecting the rest of the metro area's workforce to these well-paying jobs and stimulating additional employment are key benefits of the Project. The estimated economic impact of the Project includes: 7,234 person years of employment in the short term; \$276 million in direct wages; \$52 million in annual travel time savings; \$90 million in long-term employment benefits and; \$30 million in savings from reduced vehicle operating costs.

iii. Livability

Communities along the corridor are investing in over 560 acres of city council-adopted Transit Oriented Development (TOD) plans. This will reduce overall driving for the more than 13,200 residents and over 18,800 employees in these TOD areas while generating substantial economic activity. A 2007 U.S. 36 TOD workshop found that BRT and rail investments will influence the market for new compact development by more fully connecting station areas. Given these new connections, unmet market demand for housing and

commercial development in proximity to one station may be accommodated at neighboring stations.

The completion of the Project also will improve connections to the entire regional transit system through Denver Union Station, which serves as a multimodal transportation hub, integrating light rail, commuter rail, and intercity rail (Amtrak), as well as regional, express, and local bus service; the 16th Street Mall shuttle; Downtown Circulator and intercity buses; and taxis, shuttles, vans, limousines, bicycles and pedestrians. BRT users will be able to travel from Boulder to downtown Denver, or continue on transit to the Denver International Airport or employment centers throughout the metro area. Conversely, metro area residents will be able to access destinations in Broomfield or Louisville through consistent transit service.

Additionally, SOV drivers will also have the option of paying to use the congestion-free lane, freeing valuable space on the highway. The Project also constructs portions of a commuter bike path, underpasses and sidewalks that already or will connect to regional transit stops, providing car-free connectivity to what was once a traditional highway corridor. Corridor travelers currently experience four hours of severe congestion each day, resulting in 2.4 million annual person hours lost valued at \$52 million. For the 14.6 percent of truck trips on U.S. 36, the yearly cost of congestion totals nearly \$16 million. Without this project, U.S. 36 will become even more congested, making continued development of the new energy economy in this area less attractive.

The Project will enhance user mobility and modal connectivity, reduce congestion and demonstrates the benefits of coordinated transportation and land use decisions.

iv. Environmental Sustainability

Colorado's gross greenhouse gas (GHG) emissions are rising faster than those of the nation as a whole. The State's gross GHG emissions increased 35 percent from 1990 to 2005, while the national emissions rose by only 16 percent during this same period. The principle sources of Colorado's GHG emissions are electricity use and transportation, accounting for about 37 percent and 23 percent, respectively. This trend is largely due to rapid population and production growth within the State. Although the Denver metropolitan area is in attainment for Particulate Matter and Carbon Monoxide, the area was designated as being in non-attainment for the eight-hour ozone standard in 2007. The area is currently in attainment for the remaining pollutants.

Numerous actions have been taken to address air quality, including the adoption of a State Climate Action Plan and calling for new GHG emission vehicle standards. In the first two to three years after construction has been completed, the Project will support these polices, as well as yield immediate and tangible environmental benefits. Estimated Project benefits include the annual reduction of 9.9 million vehicles miles traveled, 2 million hours, and 8,630 metric tons of vehicle emissions.

According to DRCOG, Project construction will increase transit ridership by 26 percent along U.S. 36 in the near-term and the total percentage of transit ridership could double over the next 20 years. Carpooling will increase by five percent following the construction of the managed lanes. Increased transit ridership and carpool usage is expected to decrease oil dependence, resulting in an estimated reduction of 1.1 million gallons of fuel per year. In conjunction with the Project, there are number of programs already in place that are designed to encourage the reduction of automobile usage and fuel consumption. Including commuter cash programs, Eco Pass (an unlimited transit pass), and managed parking.

i. Safety

Many areas of the U.S. 36 corridor still use structures and geometry from the original construction in the 1950s. Deficiencies include: three structurally deficient and two functionally obsolete bridge structures; 12-miles of poor pavement with a remaining service life of less than six years; sections have substandard vertical alignments with greater than five percent grades; several locations where stopping sight distance, decision sight distance, and highway cross-sections are not to standard, and; several instances of lane imbalances along the corridor, including through lanes and acceleration/deceleration lanes that disrupts traffic flow.

In 2005, TRIP's Heartburn Highways report identified and ranked 50 segments of roadway throughout Colorado that caused the greatest stress to motorists. The entire U.S. 36 corridor was ranked #1 on the list due to deteriorated pavement conditions, high rates of traffic congestion, and serious traffic accidents. Similarly, CDOT safety assessments conducted in 2004 and 2005 showed worse than expected safety performance along the Project corridor in comparison to similar urban four-lane highways. The assessments found patterns of rear-end accidents attributable to congestion and barrier collisions attributable to narrow shoulders, which suggest potential for improved safety through geometric improvements planned for this heavily travelled highway. The facility remains one of the most hazardous in the State.

From 2002 to 2004, there were 1,284 crashes (1 crash/0.80 million VMT), 673 injuries (1 injury/0.29 million VMT), and 4 fatalities (0.25 fatalities for every 100 million VMT). The Project will reduce the number and rate of crashes along the corridor. Reconstruction of the highway will allow the new facilities to be built to current design standards, improving safety and operations. Repairing 50 percent of the poor pavement along U.S. 36 will alleviate pavement roughness and rutting that leads to increased crash rates on urban highways. The current substandard shoulder widths on U.S. 36 will be upgraded and widened as part of the Project, providing a safe refuge for disabled vehicles. Additional accident reduction is a likely result from the addition of two new lanes, as research shows four to six lane roadway expansions typically reduces accidents from 20 to 25 percent.

- ii. Cost Benefit
 - b. Job Creation and Economic Stimulus
 - ii. **Total Project Cost:** \$150 Million
 - iii. **Project TIGER III Request Amount:** \$150 Million
 - iv. **Project TIGER III CDOT Match Amount (source):** A Phase III financial strategy is the early stages of development.
 - v. **Project type:**
 - a. Highway:
 - b. Transit
 - c. Rail
 - a. Multimodal:

The Project will involve the construction of one managed lane in each direction along the U.S. 36 median, BRT service connecting to Denver Union Station and Boulder, enhancements to BRT stations, widening of the general purpose lanes and pavement replacement, bridge replacements, sound and retaining walls in selected areas, the construction of a bikeway, and Intelligent System Improvements (ITS).
 - vi. **Whether the project is requesting a TIGER II TIFIA Payment:** Potentially
 - vii. **Type of jurisdiction where the project is located (urban or rural):** Boulder County, Colorado. This area is urban in nature.
 - viii. **NEPA Status of Project:** The US36 Environmental Impact Study is complete, including a Record of Decision that was signed in 2009.