

COLORADO
Department of Transportation

ELECTED OFFICIALS & STAKEHOLDERS BUSTANG TOUR

I-25 PEL: CO Springs Denver South Connection

Tour Guide

October 7, 2016



WELCOME!

Organizations represented on this tour:

- Air Force Academy
- Castle Pines North Metro District
- City of Castle Pines
- City of Colorado Springs
- City of Lone Tree
- Colorado Department of Transportation
- Colorado High Performance Transportation Enterprise Board
- Colorado House of Representatives
- Colorado State Senate
- Colorado Transportation Commission
- Denver Regional Council of Governments
- Douglas County
- El Paso County
- Federal Highway Administration
- Perry Park Metropolitan District
- Pikes Peak Area Council of Governments
- Town of Castle Rock
- Town of Larkspur
- Town of Monument
- Town of Palmer Lake
- US House of Representatives

Project Background

Between Monument and C-470, I-25 experiences congestion on numerous days throughout the week. Weekday and weekend travel delays and unreliability frustrate travelers now and will only get worse as Colorado's population grows from 5 to more than 8 million in the next 20 years. Congestion, high (75 mph) speeds, and climbing grades contribute to severe crashes and can lead to long periods of highway closures.

CDOT initiated this Planning and Environmental Linkages (PEL) Study to identify immediate and longer-term solutions to this vital stretch of highway connecting Colorado Springs and the Denver South area. This stretch of I-25 between Monument and C-470 is important to corridor communities and travelers. I-25 is the only north-south interstate route through Colorado, connecting the state's largest population and employment centers; providing access to recreation and cultural amenities; and supporting Homeland security and the military, interstate commerce, and tourism. This PEL study is the first step to analyze and address safety, travel reliability, and mobility issues. Action is coming and we need your help.

PEL Study Vision

Conduct a **collaborative** PEL process that results in a **stakeholder supported roadmap** for implementing projects to **improve safety, travel reliability, and mobility** on this vital stretch of I-25 between Colorado Springs and the Denver South area.



Why is CDOT conducting this PEL study?

CDOT is focused on developing a clear and supported plan of action for this critical stretch of I-25 and, more importantly, forwarding projects that provide immediate and long-term benefits. Although CDOT is fully committed to implementing improvements on I-25, the nature, timing, and funding of those projects is unknown. This PEL will lay the ground work for future improvements by:

- Helping to identify, define, and prioritize projects based on the corridor's greatest needs.
- Identifying significant environmental constraints that may influence design options and/or delay project development with lengthy environmental reviews.
- Clarifying project costs and identifying necessary financing and funding options to implement improvements.
- Providing a framework for CDOT to engage with local corridor communities, regional travelers, and other interested stakeholders to understand their concerns and ideas for improvements.

Conducting a thorough and inclusive analysis of the issues through the PEL process will save time in the long-run if the recommended solutions alleviate transportation problems, are supported, and reflect community needs and values.



C-470/I-25 Interchange

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The I-25/C-470/E470 interchange connects Colorado Springs and Denver South communities to significant regional destinations, including the I-70 mountain corridor and Denver International Airport. The I-25: CO Springs Denver South PEL study limits extend north to the interchange in recognition of the prominent corridor travel pattern between Colorado Springs and the Denver metro area, the importance to regional mobility of maintaining a seamless connection between C-470/E470 and I-25, and the importance of maximizing the substantial transportation investments underway and planned for these roadways.



Shahn Sederberg | CDOT

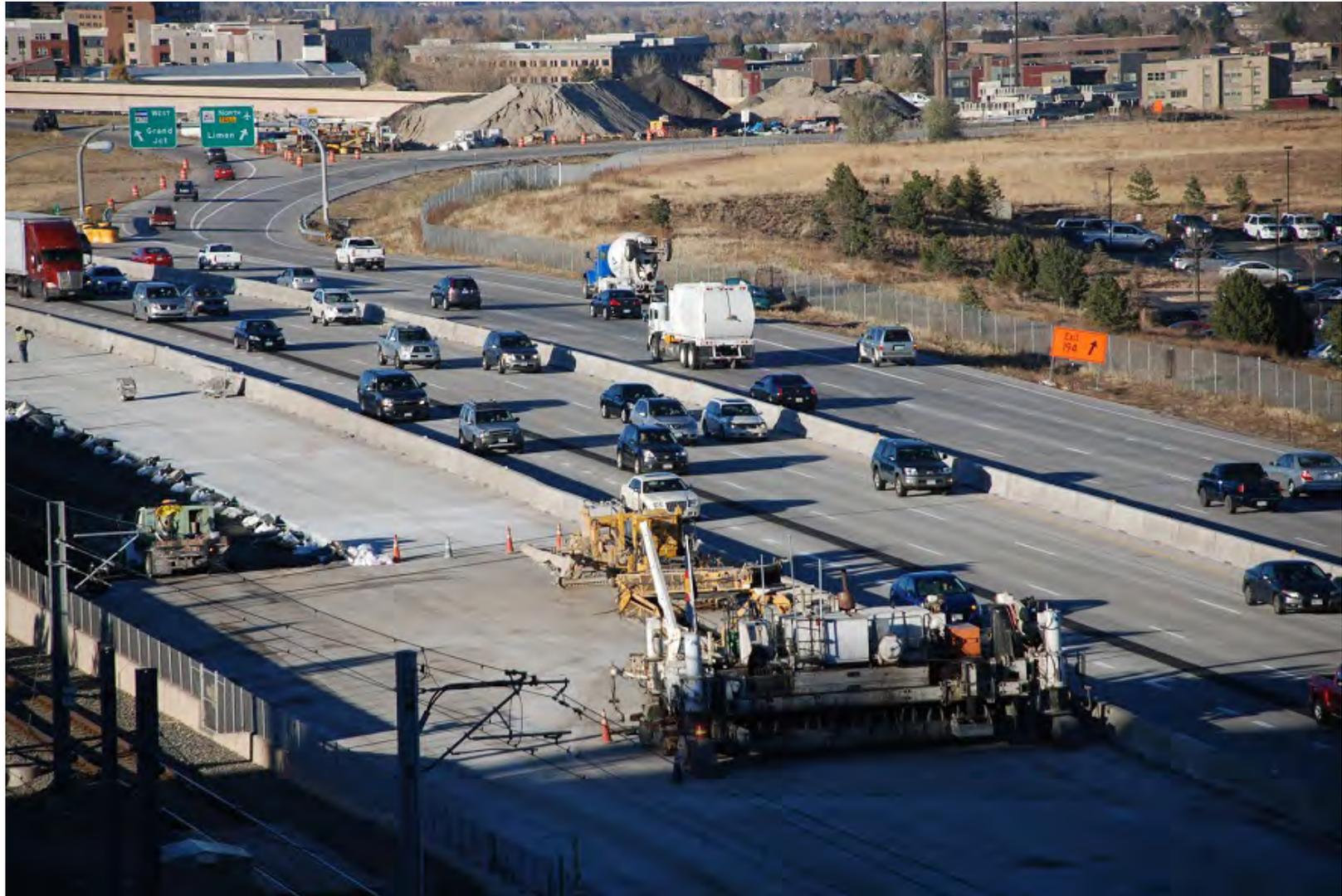




I-25 Lane Balance Project

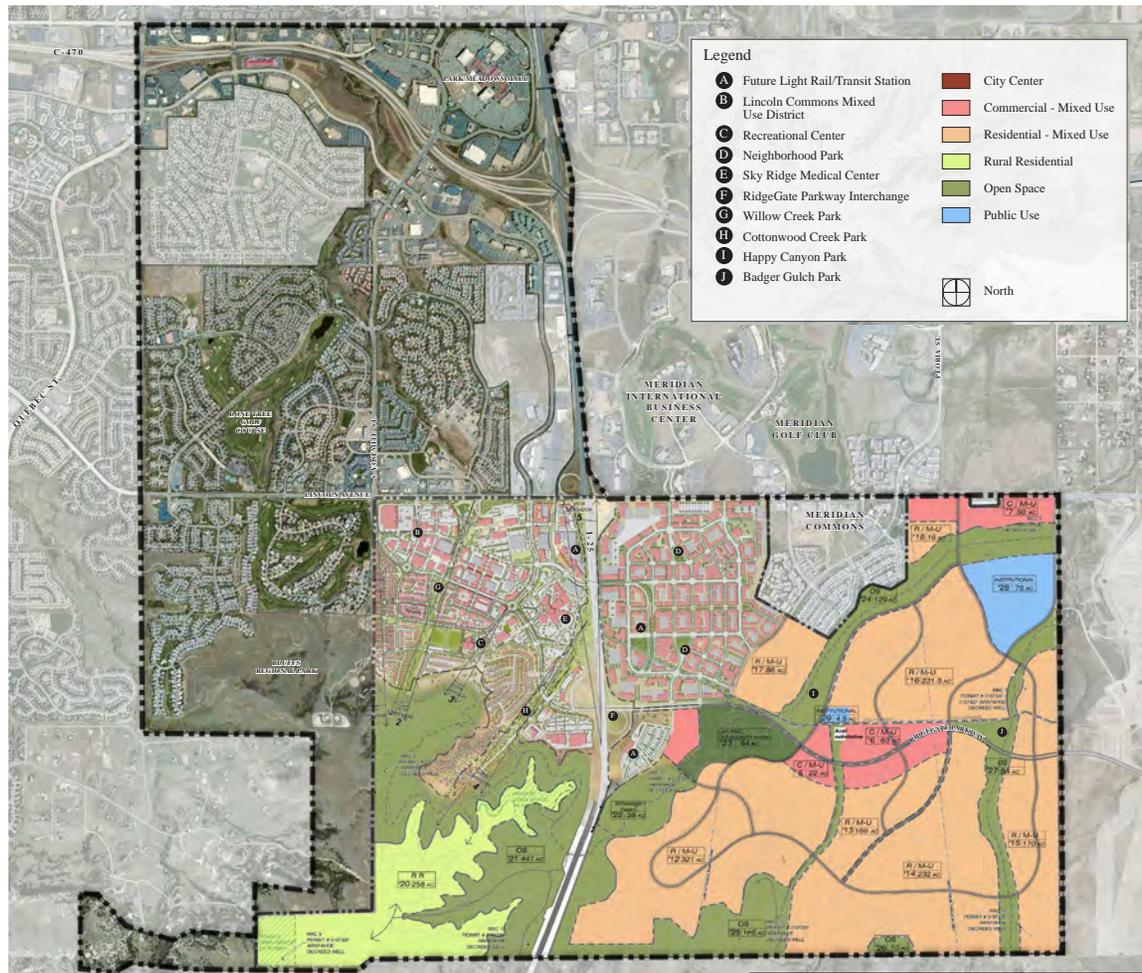
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The I-25 Widening (Lane Balance) from Lincoln Avenue to County Line Road Project added 2 additional travel lanes (from 6 to 8) to I-25 between Lincoln Avenue and County Line Road. The project addressed a gap between the 8-lane TREC improvements, which ended at County Line Road north of C-470, and the 8-lane South I-25/US85 EIS improvements, which ended at Lincoln Avenue south of C-470.



RidgeGate

Within the City of Lone Tree, the RidgeGate mixed use development is planned for both east and west of I-25. At 3,500 acres, RidgeGate will take several decades to develop and will ultimately have 12,000 new homes, a variety of commercial and office development, and 30,000 residents. Construction is well underway on the west side of I-25, with the Sky Ridge Medical Center, Lone Tree Recreation Center, Lone Tree Arts Center, Charles Schwab campus, and a variety of commercial and residential developments completed, and full build out expected within the next couple of years. RTD began construction of the SE light rail extension from Lincoln to RidgeGate earlier this year. The RidgeGate station will be a hub for additional mixed use development on the east side of I-25, which will build out for decades to come.



Local Transportation Projects

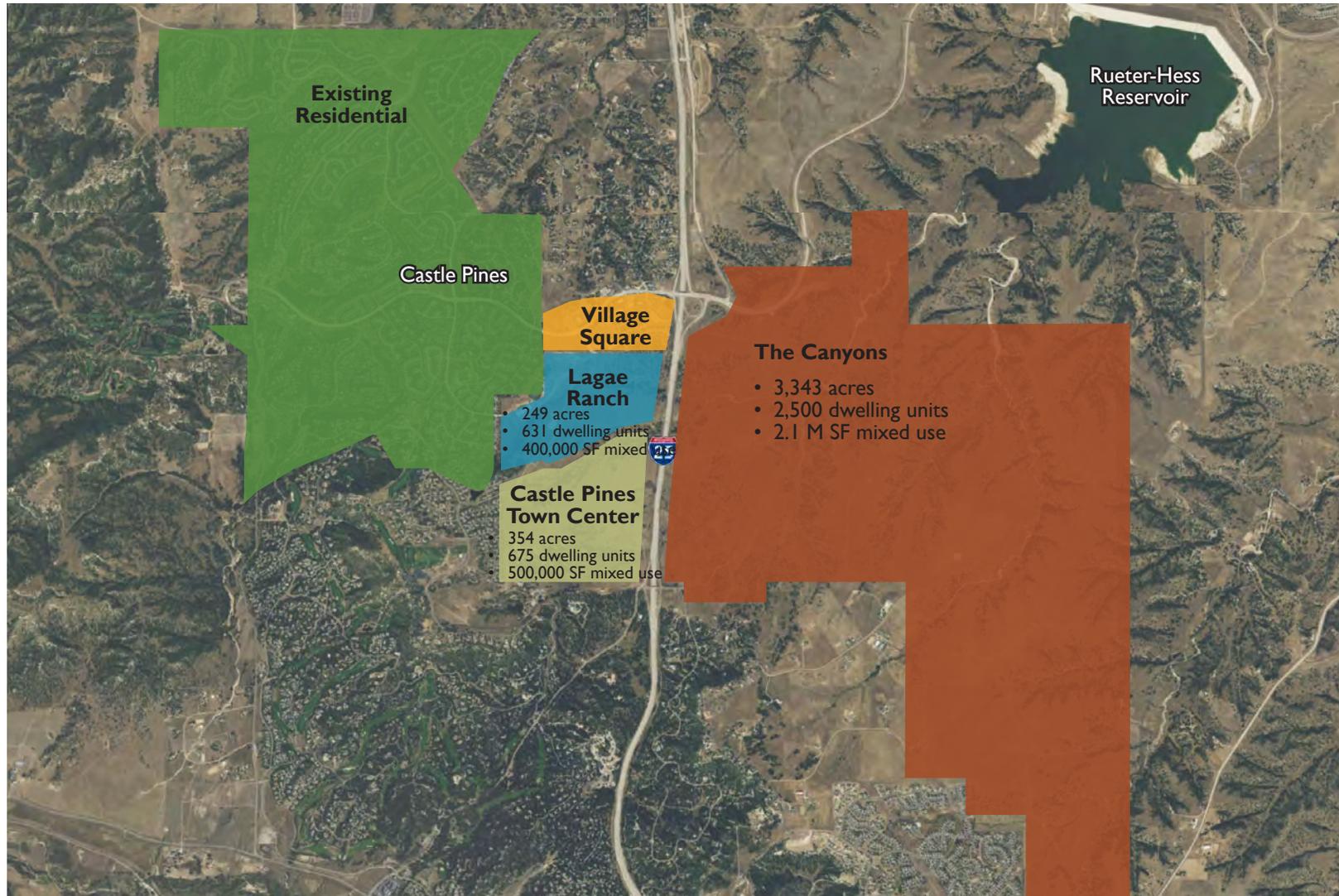
The City of Lone Tree and Douglas County continue to partner on new roadway projects and corridor enhancements to meet Denver South's growing population, employment, and transportation demands. These have included the I-25 and Castle Pines Parkway interchange reconstruction; new Hess Road; new RidgeGate Parkway; Peoria Street extension; and Lincoln Avenue interchange improvements, corridor widening, and intersection enhancements, to name a few. These improvements provide alternate routes and reduce congestion on major arterials. These improvements also reduce travel times and improve safety for local and regional travelers. Furthermore, a quality transportation system helps to attract major employers like Charles Schwab, enhancing economic vitality.



Charles Schwab Campus

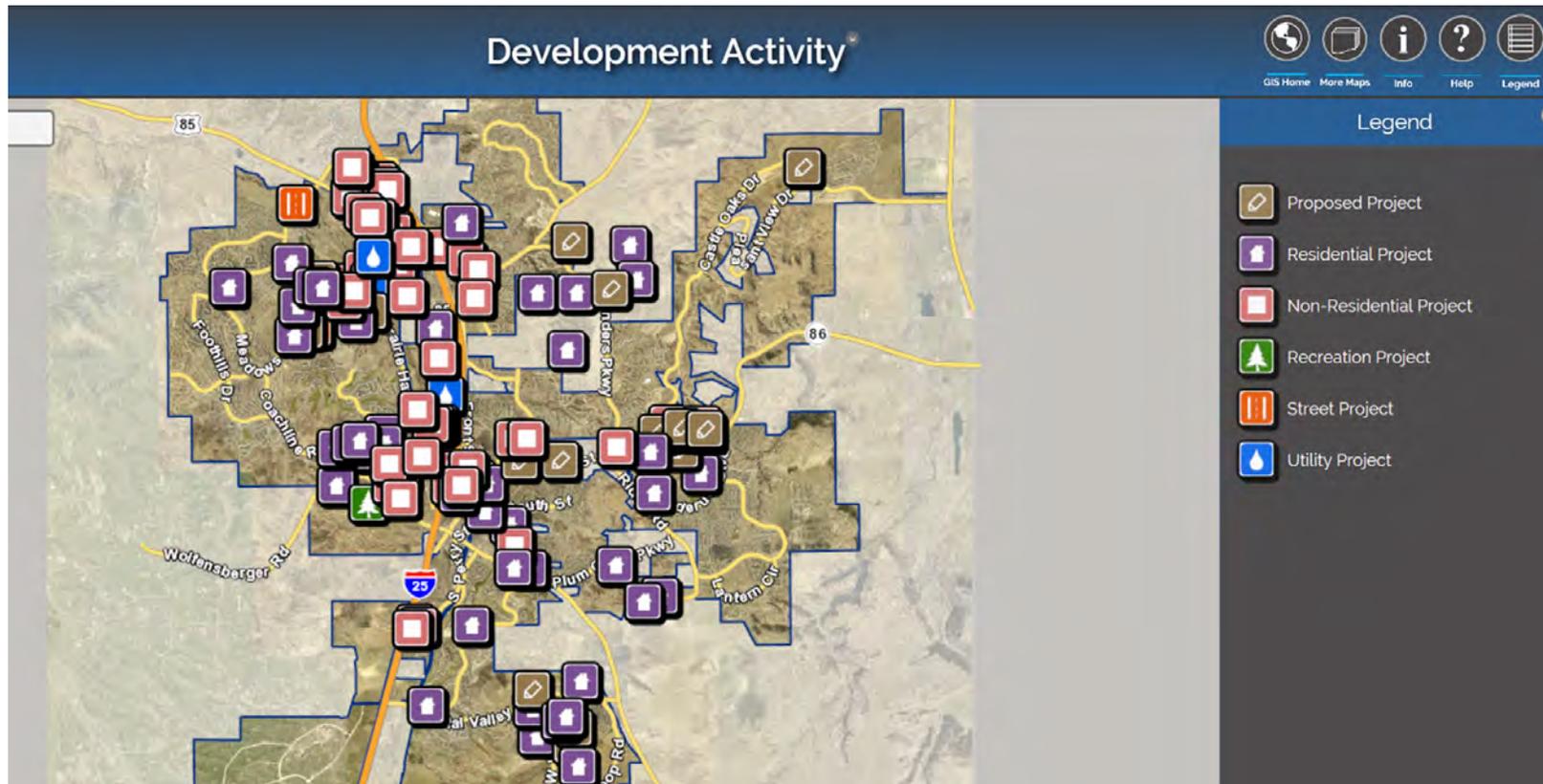
Castle Pines Development Projects

With a population of approximately 10,000 residents and growing, the City of Castle Pines was incorporated in 2008. In 2009, the City annexed property on the east side of I-25. The Lagae Ranch and Castle Pines Town Center developments underway on the west side of I-25 and the Canyons development on the east side of I-25 will double the size of the City at build out.



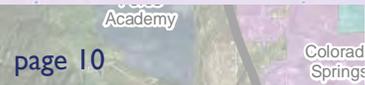
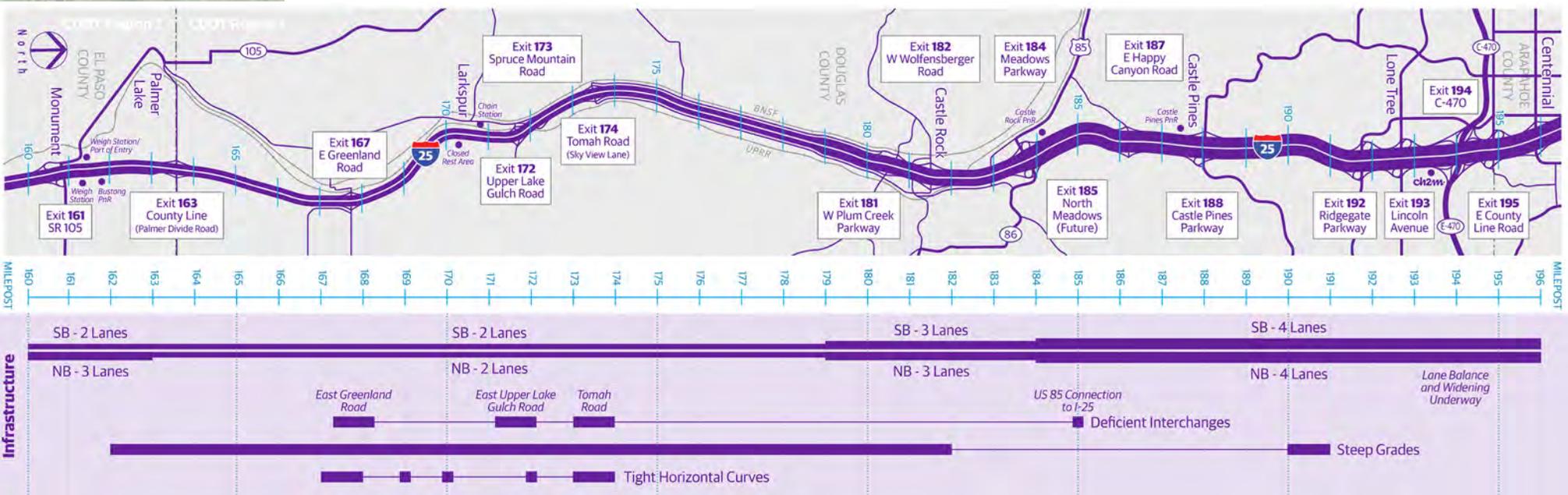
Castle Rock Development Projects

The Town of Castle Rock has added nearly 36,000 residents since 2000 and continues to grow quickly with an expected population of 60,000 by 2020. Currently, because of the topography of the area, many of the residential developments are physically separated from each other. Retail and service oriented commercial uses are now beginning to develop in the outlying residential areas to serve individual developments. The I-25 corridor serves primarily the higher intensity and larger scale commercial and industrial uses and is a main travel route connecting new and established residential areas throughout the Town. The recently opened Castle Rock Parkway/I-25 interchange was designed and constructed to relieve a significant amount of the traffic volume from the Founders/Meadows corridor. Promenade, a new commercial and residential development, is currently in construction near the new interchange. Community identity, small town flavor, clean environment, and natural scenic beauty are some of the qualities of Castle Rock emphasized in the Town's 2020 Master Plan.



Corridor Infrastructure Issues

I-25 through the study area is a high-speed facility with tight horizontal curves and steep vertical grades. A mixture of 8-lane, 6-lane, and 4-lane sections are present. The 4-lane section, referred to as “the Gap” by some stakeholders, has been a particular area of focus because two lanes provide limited options for drivers to maneuver around slow moving vehicles, crashes, or other obstacles, especially when traffic volumes are high. A lack of alternate routes and a disconnected frontage road system further complicate travel. Frontage roads, where available, parallel freight railroad tracks with closely spaced, at-grade intersections. If a crash or other emergency forces closure of the lanes or the entire highway, drivers can be stuck for hours. Snow plows and emergency vehicles have little room to maneuver or stage operations. Several of the 12 interchanges in the study have substandard horizontal ramp geometry and inadequate acceleration and deceleration lanes, which also affects mainline mobility as cars enter and exit the highway. Within the corridor, two closed rest stops (one now used as a truck chain-up area), port of entry/truck weigh stations, and a Bustang Park & Ride provide challenges for vehicles accessing the interstate but also present opportunities to optimize those functions at these or alternate locations within the corridor.



“The Gap”

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For 16 miles between Monument and Castle Rock, I-25 is a 4-lane freeway section (2 lanes in each direction). This stretch where I-25 narrows between Colorado Springs and the Denver South area has been referred to as “the Gap.” Largely undeveloped, views along this stretch of I-25 are expansive with drivers able to see snowcapped Pikes Peak in the distance and rural ranches reminiscent of the settlement of the West. However, current congestion levels and high-profile traffic incidents regularly interrupt this scenic drive, and corridor travelers and political leaders are anxious for corridor improvements. The 4-lane capacity is seen not just as an impact to commuters but also tourism and the economy.

The number of lanes on a freeway segment influence the speed at which drivers can travel. As the number of lanes increases, drivers are afforded a higher level of comfort and the opportunity to position their vehicles within the traffic stream to avoid slower moving vehicles. This ability to maneuver is most impacted when slow moving vehicles pass slower moving vehicles, reducing speeds for both lanes. But with just two lanes and high rates of speed, corridor traffic operations within this section are volatile. Even minor disruptions such as entering ramp traffic or lane changing causes traffic shockwaves. The traffic stream has limited ability to dissipate these disruptions, which often leads to serious breakdown and queuing.



Grade Changes

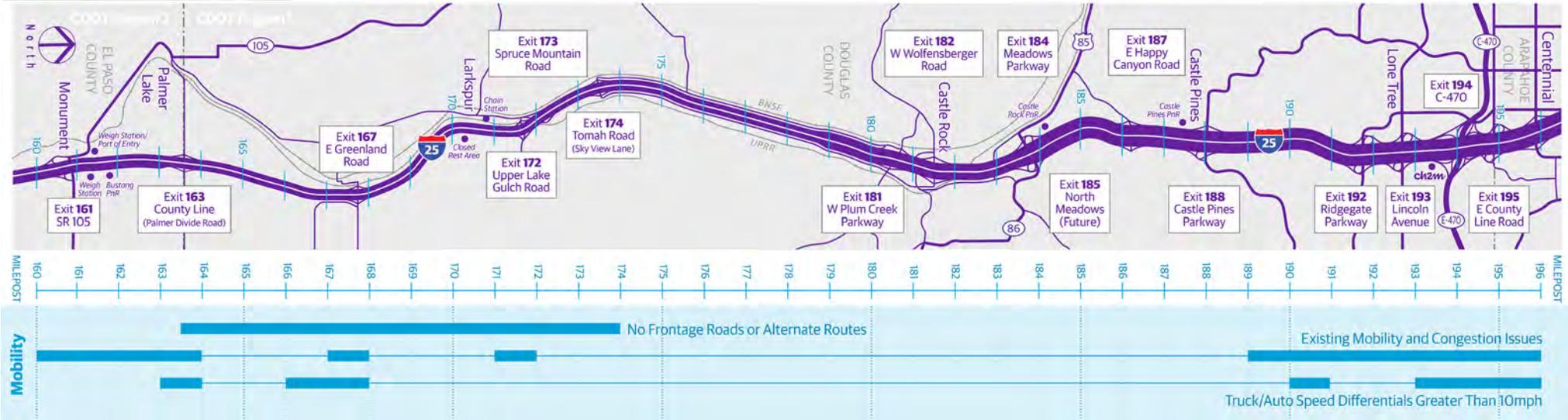
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I-25 has long stretches of climbing grades in both the north and southbound directions. Trucks, which have a hard time negotiating the grades and curves in the corridor, comprise 5 to 7 percent of the traffic but contribute disproportionately to congestion. Along the two-lane section traveling south from Plum Creek Parkway to Monument, the grade is generally climbing. Trucks travel 10 to even 20 miles per hour slower than automobiles in these climbing sections. When trucks attempt to pass slower moving trucks, corridor speeds slow, traffic backs up, and safety concerns with varying speeds arise.



Corridor Mobility & Operations Issues

Average daily traffic (ADT) along I-25 south of C-470 ranges from 122,000 to 63,000, with the highest volumes on the north end of the corridor. The corridor is a major lifestyle and employment corridor for commuters between the Denver metropolitan area and Colorado Springs, and approximately half of the corridor trips are through trips with origins and destinations outside the study area. This trend is expected to continue as the primary travel demand is coming from the Colorado Springs area and El Paso County, which by 2040 is projected to be the state's most populous county. Congestion is prevalent today, and by 2035, CDOT projects that the entire stretch of highway will operate near or above capacity.

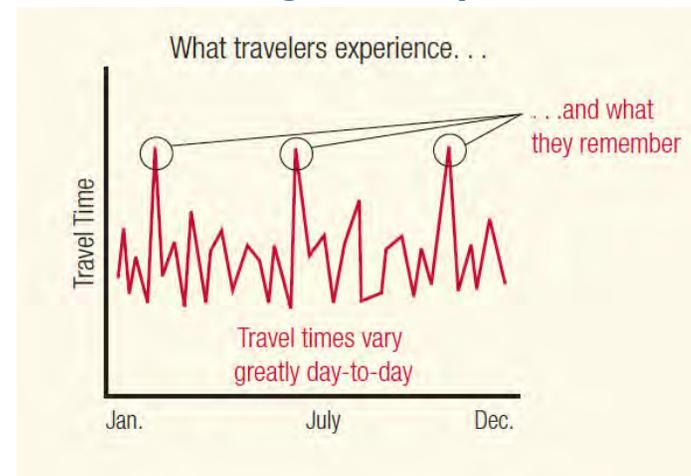
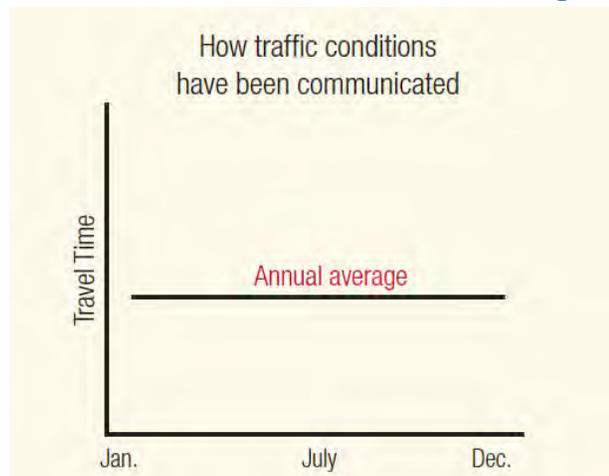


Reliability

With an increasing number of residents and drivers on our roadways, nearly all Colorado drivers experience – and plan around – traffic congestion as part of their daily activities. However, on many primary roadways like interstates, travel times vary greatly from day to day, and travelers are less tolerant of unexpected delays. Comments and complaints received from corridor travelers nearly every day on this stretch of I-25 suggest that unexpected congestion and delays from incidents, weather, work zones, special events, fluctuations in demand, or other factors are especially frustrating. Travelers remember the bad days and report the bad days are becoming more common, even the norm. The Federal Highway Administration and departments of transportation across the country have come to refer to unexpected traffic delays as a reliability problem.

The PEL study will collect and analyze data that characterize the reliability of travel in this corridor. Reliability measures will be included to assess how well proposed solutions address the need to provide a predictable and improved travel experience. The PEL study will also be looking at opportunities to improve operations in the short-term to reduce congestion and provide more predictable travel times for users.

Travelers tend to remember the few bad days they spent in traffic, rather than the average time for travel throughout the year.



Source: FHWA. 2016. *Travel Time Reliability Overview*.



Alternate Routes / Frontage Roads

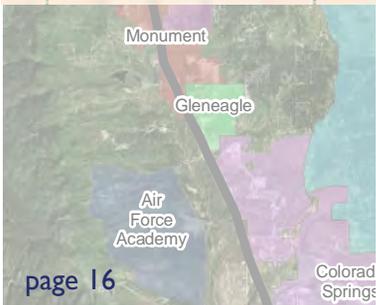
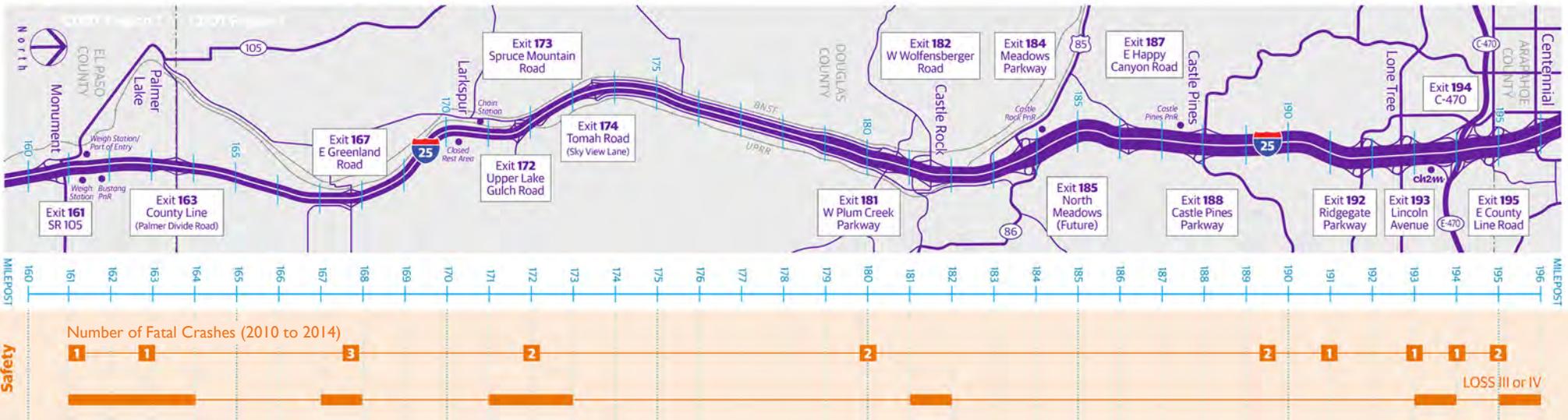
Due to limited alternate routes and discontinuous frontage roads, incident management on I-25 is challenging. This is particularly true when vehicles are diverted off I-25 at the Greenland interchange where the detour route along Noe Road and Spruce Mountain includes dirt roads and a passive railroad crossing without an active warning device, such as flashing lights. The sparse number of dynamic message signs between Monument and Castle Rock do not provide adequate coverage for drivers to get the necessary information in a timely fashion to make informed travel decisions. When drivers do divert to local roads to avoid delays on I-25, they often travel circuitously through local communities on roads not designed for highway volumes or the mix of vehicles that includes heavy trucks.



Corridor Safety Issues

CDOT uses the concept of Level of Safety of Service (LOSS) to quantify the magnitude of safety problems and potential for improvements. LOSS reflects how the roadway segment is performing in regard to its expected crash frequency and severity for specific levels of daily traffic. LOSS III indicates a moderate to high potential for crash reduction, and LOSS IV indicates a high potential for crash reduction.

Through the I-25 PEL study limits, nearly 30 percent of the corridor operates at LOSS III or LOSS IV. Many locations in the corridor have a high number of crashes, with multiple fatalities over the past five years. Reduced safety performance likely results from a combination of road geometry, tight curves, congestion, high travel speeds, and inclement weather conditions.





Severe Crashes

Victims of deadly I-25 crash near Larkspur identified

By: The Associated Press • May 16, 2016 • Updated: May 16, 2016 at 1:46 pm

NEWS One dead after motorcycle crash on I-25 at Monument Hill



A view from the CDOT camera after the scene of a crash at I-25 and Monument Hill.

Over 100 drivers get stuck on I-25 near Monument Hill



EL PASO COUNTY - Many drivers went head-to-head with the storm, but couldn't overcome the adverse conditions. The Colorado State Patrol reported that more than 100 drivers were stranded on Interstate 25. The Colorado Department of Transportation shut down southbound lanes between Castle Rock and Monument because of the poor conditions. All lanes reopened around 7:30.

Colorado State Patrol Trooper Jaimie Jursevics hit and killed on I-25 south of Castle Rock Sunday

Jursevics survived by husband and infant daughter

BY: Anica Padilla, Phil Tenser, Alan Gathright
 POSTED: 10:24 AM, Nov 16, 2015
 UPDATED: 5:46 PM, Nov 16, 2015
 TAG: colorado state patrol | interstate 25 | castle rock | i-25 | csp

NEWS Traffic snarls on I-25 south of Castle Rock multi-vehicle crash

By: NIERAN NICHOLSON | nicholson@denverpost.com
 PUBLISHED: April 22, 2016 at 11:48 am | UPDATED: June 13, 2016 at 2:05 pm

Multiple traffic crashes on Interstate 25 south of Castle Rock Friday afternoon have knotted southbound traffic. The crashes, at about 4:40 p.m. near the Upper Lake Gulch Road interchange has Friday rush hour has created long backups according to the Colorado State Patrol. Lanes have been shut down by the crashes, typically heavy traffic heading out of Denver to Colorado springs will be delayed by the incident. Drivers should "expect some delays," according to a 4:43 p.m. state patrol Twitter post. There were no immediate reports of injuries. A traffic crash in Franktown Friday afternoon blocked the intersection of Colorado 88 and Colorado 86, according to the CSP. The Franktown crash also involved "multiple vehicles" and possible injuries, the state patrol said in a 4:39 p.m. Twitter post. —nicholson 303-954-1822, nicholson@denverpost.com or

UPDATE: All lanes open after crash on I-25 near Castle Rock

By: The Gazette • April 13, 2016 • Updated: April 13, 2016 at 9:04 am

Accident closes I-25 southbound near Larkspur

POSTED 9:46 PM, JULY 23, 2016, BY WEB STAFF. UPDATED AT 02:50PM, JULY 24, 2016

Victims killed in I-25 crash identified; police search for possibly aggressive driver

DOUGLAS COUNTY, Colo. -- It was a horrific single-vehicle crash in the heart of rush hour Friday that left three people dead.

Nine vehicle car crash on I-25 near Monument Hill

Posted: Jan 18, 2016 4:28 PM MST
 Updated: Jan 18, 2016 4:47 PM MST

Officials Say Drivers In Massive I-25 Traffic Jam Weren't Cooperating

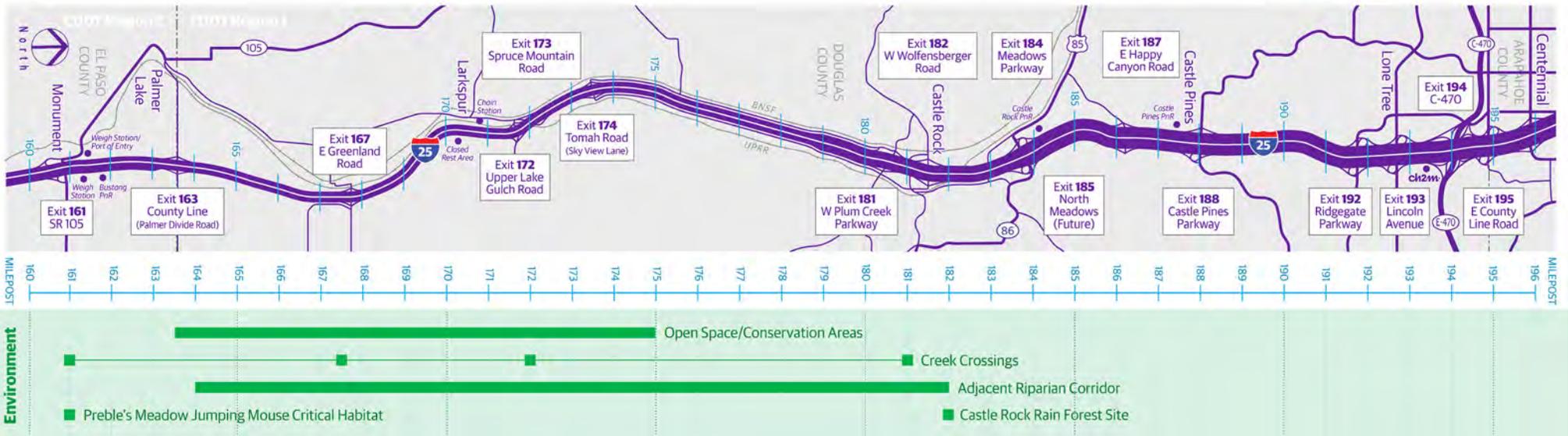
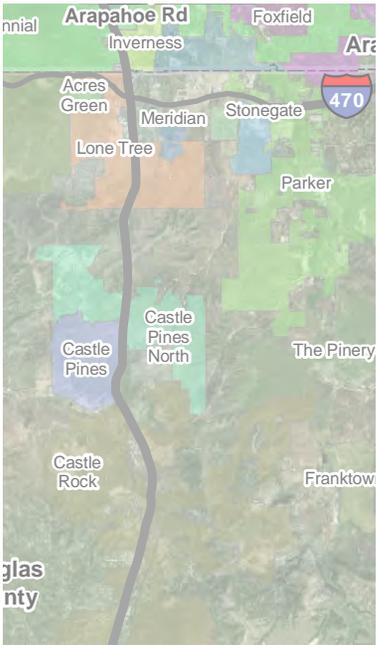
March 23, 2016 9:41 PM

"We need drivers to follow the directions of the emergency responders so we can clear the blocked stuck cars and jackknifed semis and reopen the highway," Micki Trost with Colorado Emergency Management said.

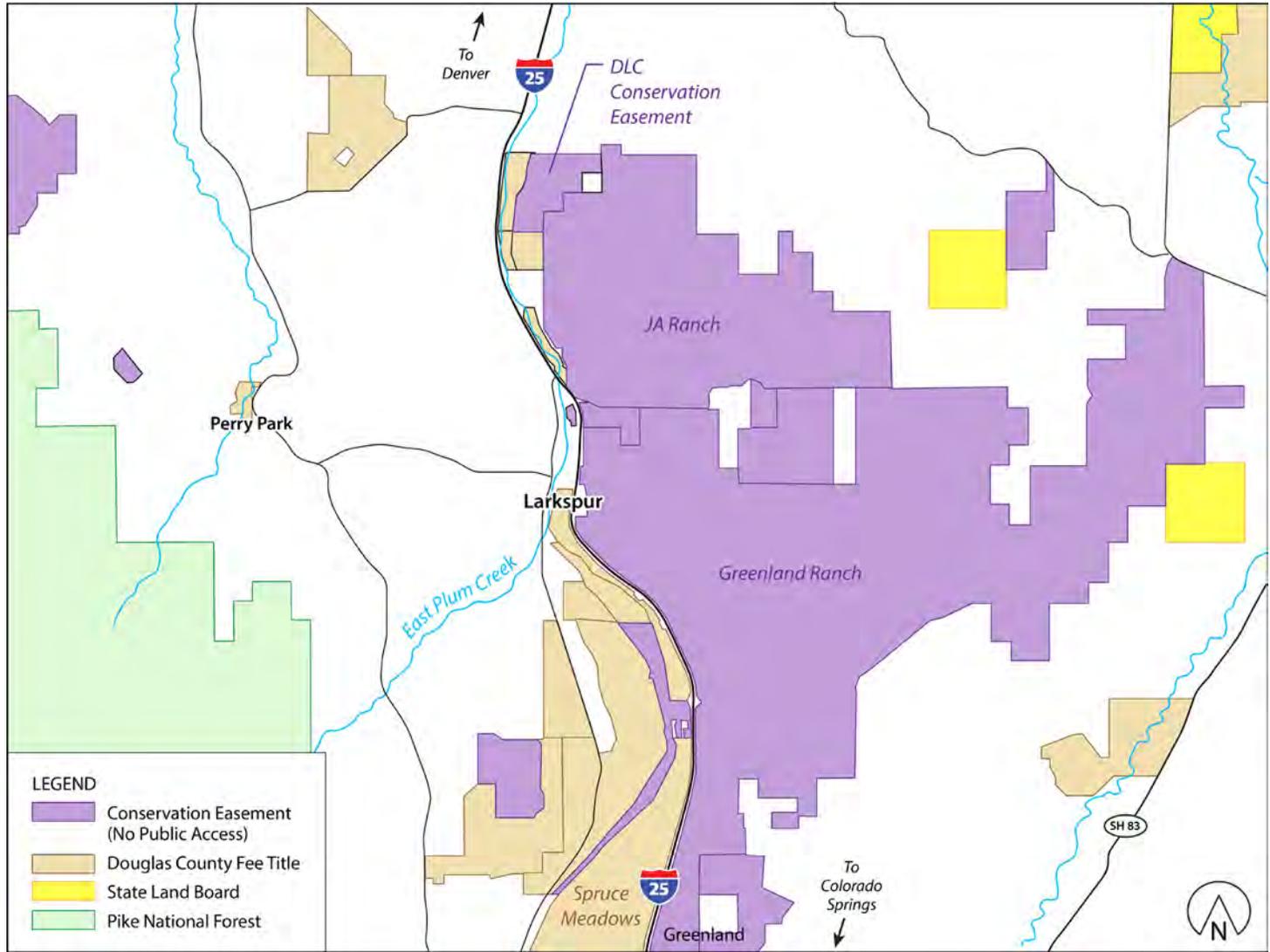


Corridor Environmental Issues

The I-25 corridor between Colorado Springs and the Denver South area is characterized by scenic vistas, open spaces, and small communities bookended by the state's two largest urban areas. Because of the limited development through the middle of the corridor, promoted by significant conservation easements and public open space lands, the study area is rich in natural resources and recreational amenities. Streams and wetlands meander along and under the highway and provide riparian habitat for protected wildlife species. One of the state's most important paleontological sites, the Castle Rock Rain Forest, straddles the highway. Community interest and regulatory issues may limit options to expand the highway footprint through these sensitive areas.



Open Space & Conservation Easements



Greenland and open space history video

Greenland Trail

Map and Trail Tips



Courtesy John Fielder



**Douglas County
Open Space**

Enjoy Greenland Open Space

This magnificent landscape has been protected with many partners for its conservation values. The scenic viewshed along I-25, historical value, natural resources and recreational values are tremendous. The 17,000 acres east of I-25 is protected in private conservation easements. West of I-25, 3,600 acres with the Greenland trail is open to the public. Adjacent land protected by Douglas County will be opened as trails are built.

At the Greenland trailhead, you will find plenty of parking for cars and horse trailers. An accessible group picnic shelter, patterned after Greenland's old mercantile building, seats up to 48 people. Also available are a restroom, garbage cans, water spigot, information kiosk and horse hitch rails.

The crusher fines and natural surface trails are designed for mountain bikes, horseback riders and hikers. Benches, hitch rails and picnic tables can be found along the 10 miles of trails which wind through rolling grasslands, past ponds, and through oak shrublands and pine forests.

Greenland was once a bustling little village and shipping point. By 1871, the Denver & Rio Grande Railroad extended to the site and it was platted as a 20-acre town in 1875. It continued to thrive with two general stores, a post office, school and even a saloon or two. Two railroad stations shipped out livestock, potatoes, grains, milk, building stones and pottery. The ranching industry continued even after the town declined in the 1930s.

Enjoy viewing wildlife throughout the open space. You may expect to see elk, mule deer, coyotes, turtles, leopard frogs, foxes, porcupines, thirteen-lined ground squirrels and many varieties of birds. Please keep a respectful distance.



Noe and Higby Families and Friends of Greenland

Douglas County Division of
Open Space and Natural Resources
100 Third Street
Castle Rock, CO 80104
Phone: 303-660-7495 Fax: 303-663-2064
www.douglas.co.us

Tips For the Trail

Take Plenty of Water & Know Your Limitations
Water is available at the trailhead. The 4.6-mile trail from Greenland to County Line Road is fairly level, then crosses the road and loops for about 1 mile to the trailhead in Palmer Lake. The 8.5-mile Kipps Loop has about 500 feet of elevation gain.



Dress in Layers

Weather changes rapidly near the Palmer Divide.

Be Courteous and Communicate

Trail users have varying abilities and modes of travel, so be friendly and not startle others when passing.

Keep Right & Pass Left

This rule of thumb will eliminate indecision. Step to the right side of the trail if you stop.

Stay on Designated Trails

Wildlife and native plants will survive better.

Keep Dogs on Leash

Help lessen conflicts with other trail users and wildlife and protect your own dog's safety.

Respect Private Property

Land outside the fences is privately owned.



Pack Out Your Litter
Bearproof trash cans are at the trailhead.

Obey Open Space Rules & Regulations
An abbreviated set is available at the trailhead.

Complete rules available at www.douglas.co.us

Wildlife Movement & Vehicle Collisions

Over the past ten years, an average of 3,300 wildlife collisions are reported on CDOT roadways each year. This number does not include the number of Wildlife Vehicle Collisions that are not reported to law enforcement. An average of 33 deaths per year occur due to animal collisions.

According to Carole Walker, Executive Director of the Rocky Mountain Insurance Information Association, the average property damage cost of a typical animal-vehicle collision is \$3,103.

On this stretch of I-25, wildlife such as deer and elk are prevalent along the highway, particularly during migration seasons in the fall and spring.

Source: Colorado Department of Transportation (CDOT) 2016. Wildlife on the Move. Wildlife Program website accessed at <https://www.codot.gov/programs/environmental/wildlife/wildlifeonthemove> on 19 September 2016.



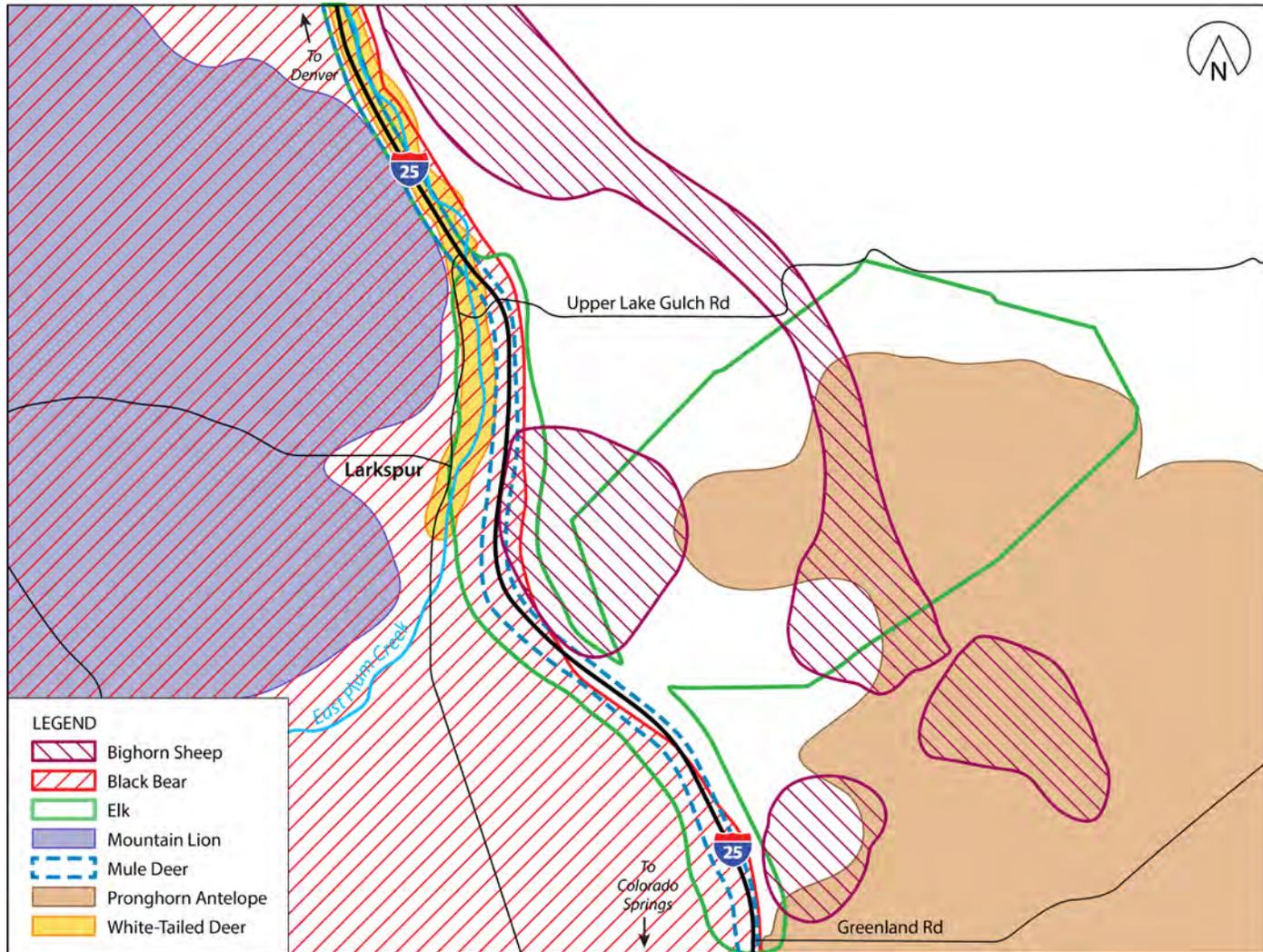
Photo: Julie Montoya



Wildlife Crossings

In the fall, Elk and Mule Deer cross I-25 as they migrate from higher elevations in the Rocky Mountains to the lower elevations around Larkspur Butte and Corner Mountain. In the spring the migration is reversed.

East Plum Creek and Carpenter Creek provide wildlife habitat along I-25, which attract a high concentration of wildlife near the busy highway.



LEGEND	
	Bighorn Sheep
	Black Bear
	Elk
	Mountain Lion
	Mule Deer
	Pronghorn Antelope
	White-Tailed Deer

High Level of Public and Political Interest



CDOT studies widening I-25 between Monument, Castle Rock

Agency started \$2.2 million, 18-month study earlier this month

By: Scott Harrison
 Posted: Aug 21, 2016 05:42 AM MDT
 Updated: Sep 06, 2016 04:52 AM MDT



EDITORIAL: I-25 should not take 10 years, while CDOT gets new offices

By: The Gazette editorial board · September 7, 2016 · Updated: September 7, 2016 at 6:59 am

More needs to be done to fix I-25 between Springs, Denver, editorial says



Rayburn: I-25 expansion can't wait 10 years

By: Danielle Kreuter | Posted: Wed 9:06 PM, Sep 07, 2016 | Updated: Thu 6:18 AM, Sep 08, 2016

Study will determine expansion on I-25 corridor between Monument & Castle Rock

By: Kalyn McMackin
 Published: August 22, 2016, 8:04 pm | Updated: August 22, 2016, 9:08 pm



EDITORIAL: Progress begins on I-25 'wormhole'

LETTERS: I-25 transformation to parking lot; support for Fonda-Redford movie; troubling language

I-25 study approved, could add more lanes between Denver

By: Ted Skrobback, Reporter | CONNECT
 Posted: Aug 21, 2016 10:26 PM MDT
 Updated: Aug 21, 2016 10:26 PM MDT

An estimated 10-year project to widen I-25 between Monument and Castle Rock would follow Colorado Department of Transportation's newly approved environmental impact study.



"There's so much congestion on the highway that it's almost like we are trying to suck a thick milkshake through a thin straw. Completely an unsatisfactory experience." London called.

I-25 Importance to Colorado Springs



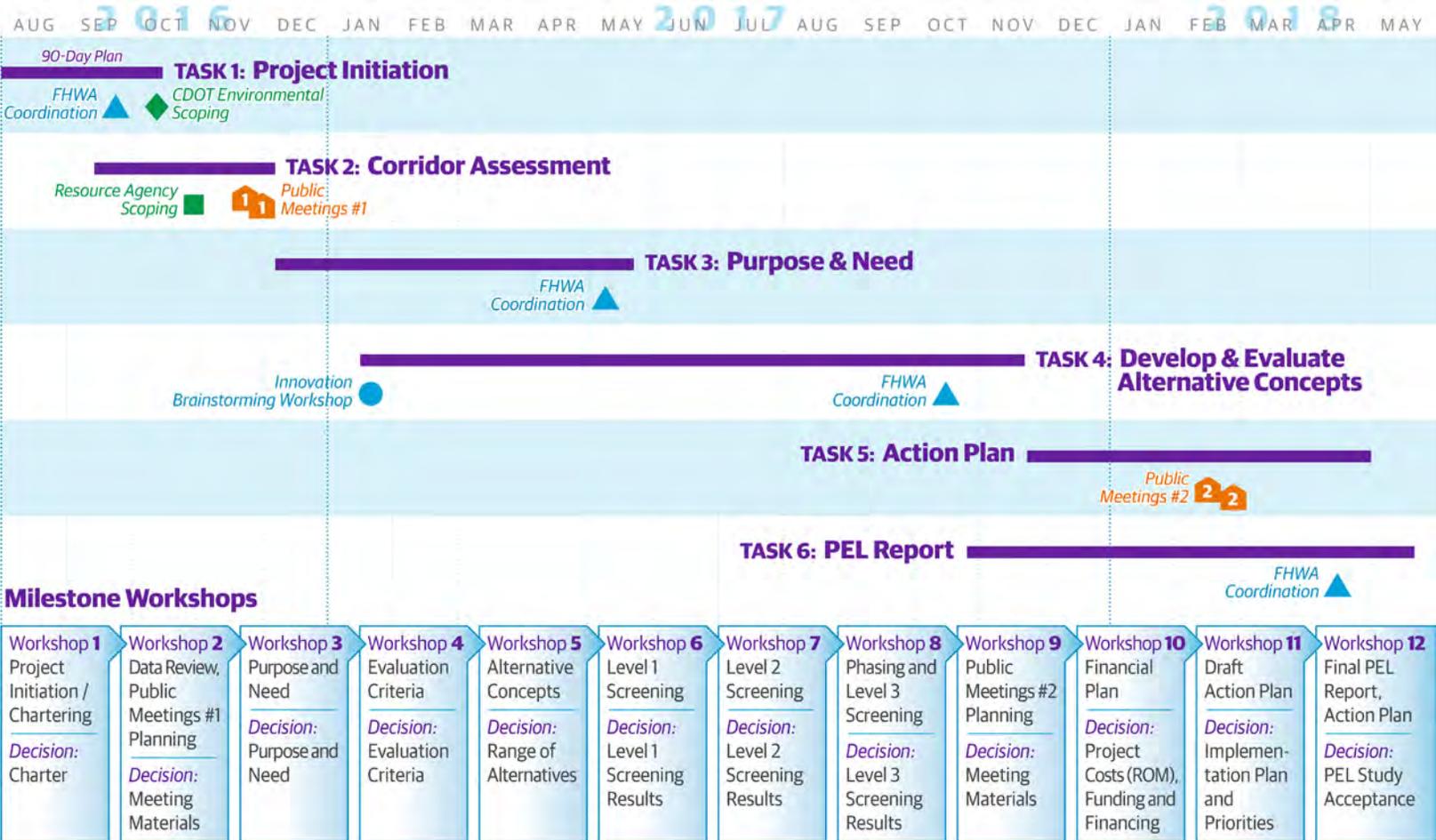
Colorado Springs Regional Business Alliance video



Open Discussion



PEL Study Schedule



Outreach & Coordination

The project teams that will help to inform this Study are:

- **Project Management Team (PMT)**

The PMT will be comprised of CDOT and consultant team staff. This group will meet monthly to oversee the management of this study.

- **Technical Working Group (TWG)**

The TWG will be comprised of engineering, planning, and environmental staff from CDOT and corridor jurisdictions. This group will guide the technical aspects of the project and will be called upon for specific input as needed. The TWG will meet at key milestones throughout the study – 3 to 4 times in the first six months. The members of the TWG will serve as the primary connection with their elected officials and community organizations.

- **Policy Committee (PC)**

The PC will be comprised of elected officials representing each jurisdiction along the corridor. This group will review the PEL study's analyses and recommendations to prioritize, plan, and implement corridor improvements. The PC will work cooperatively with CDOT to develop solutions that address the needs of corridor communities and other travelers. The PC will meet 3 to 4 times in the first six months.



Outreach & Coordination

Stakeholders & Public

- **Stakeholders**

This group includes individuals and organizations interested in the outcome of this study not represented on the TWG or PC. Some groups include: Chambers of Commerce of the jurisdictions involved, media representatives, Home Owners Associations, environmental groups, etc. The Stakeholder Committee will be kept informed of the progress of this project via email updates. Two meetings with the Stakeholder Committee are also planned during the first six months of the study.

- **Public Meetings**

Two public meetings with the exact same information – one at each end of the corridor – will be held toward the end of the year. Their purpose is to introduce the PEL Study, educate the public on the PEL process, and collect input about the vision for the study and potential transportation improvements.

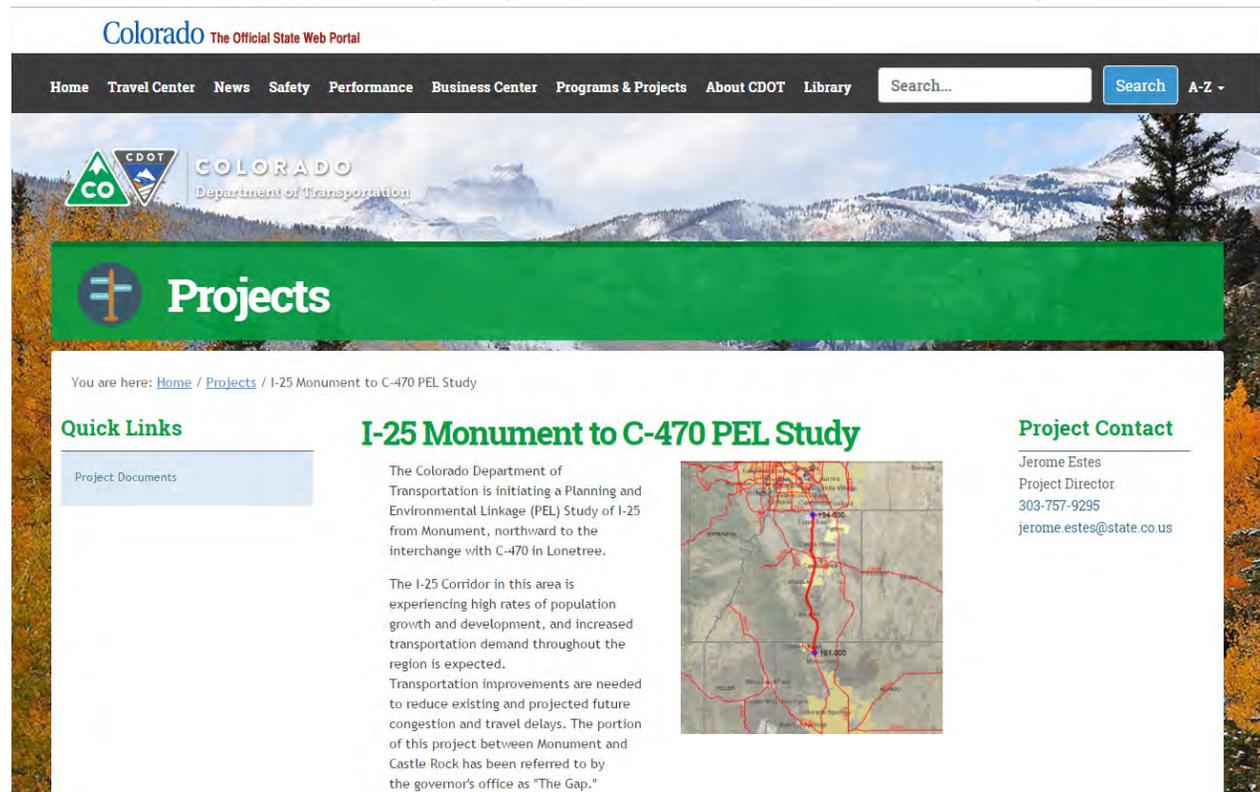
**Collaboration
Builds
Community**



How You Can Stay Involved

- Stay informed and help your constituents stay informed
- Participate in the Policy Committee meetings
- Help identify members for the Technical Working Group
- Send interested parties to the Stakeholder Committee meetings

www.codot.gov/projects/i25monumentc470pel



The screenshot shows the Colorado Department of Transportation (CDOT) website. The page title is "I-25 Monument to C-470 PEL Study". The page includes a "Quick Links" section with a "Project Documents" link. The main content area contains a description of the project, a map of the I-25 corridor, and a "Project Contact" section listing Jerome Estes as the Project Director with contact information: 303-757-9295 and jerome.estes@state.co.us. The website header includes the CDOT logo and navigation links such as Home, Travel Center, News, Safety, Performance, Business Center, Programs & Projects, About CDOT, and Library. A search bar and a language selector (A-Z) are also visible.





THANK YOU!

