

Appendix A.
Transportation Technical Memorandum (HDR, 2015)



120TH AVENUE TO SH 7



Transportation Technical Memorandum



RECORD OF DECISION 2

FINAL September 28, 2015

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1.0 INTRODUCTION

1.1 Purpose of Document

The *North I-25 Final Environmental Impact Statement* (2011 FEIS) (CDOT, 2011) detailed the existing and future roadway geometric, traffic volume, and operational conditions in the North I-25 study area. This technical memorandum documents changes in laws, regulations, and guidance as well as changes in traffic conditions and roadway geometric conditions. It provides a comparison of the 2011 FEIS Selected Alternative to the Record of Decision² (ROD2) Selected Alternative.

1.2 Description of the Selected Alternative

The proposed project is located north of Denver, Colorado, on Interstate 25 (I-25) between 120th Avenue and SH 7. The project includes the addition of an Express Lane on I-25 in each direction between the project limits. The ROD2 updates the findings in the 2011 FEIS *Record of Decision*¹ (ROD1) (CDOT, 2011), including the *North I-25 Transportation Analysis Technical Report Addendum* (CDOT, 2011), and documents the transportation operational analyses for all improvements that are a part of this Selected Alternative. The Selected Alternative shown in Figure 1 is described as follows:

The Selected Alternative consists of adding one buffer-separated Express Lane in each direction of I-25 from just south of 120th Avenue to SH 7. The Express Lanes would be separated from the existing general purpose lanes by a painted 4-foot lane marking. The new Express Lanes would connect to the Express Lanes that are currently under construction just south of 120th Avenue. The widening of I-25 would occur to the outside shoulder because the existing cross section does not include a median; a concrete barrier separates the northbound and southbound lanes.

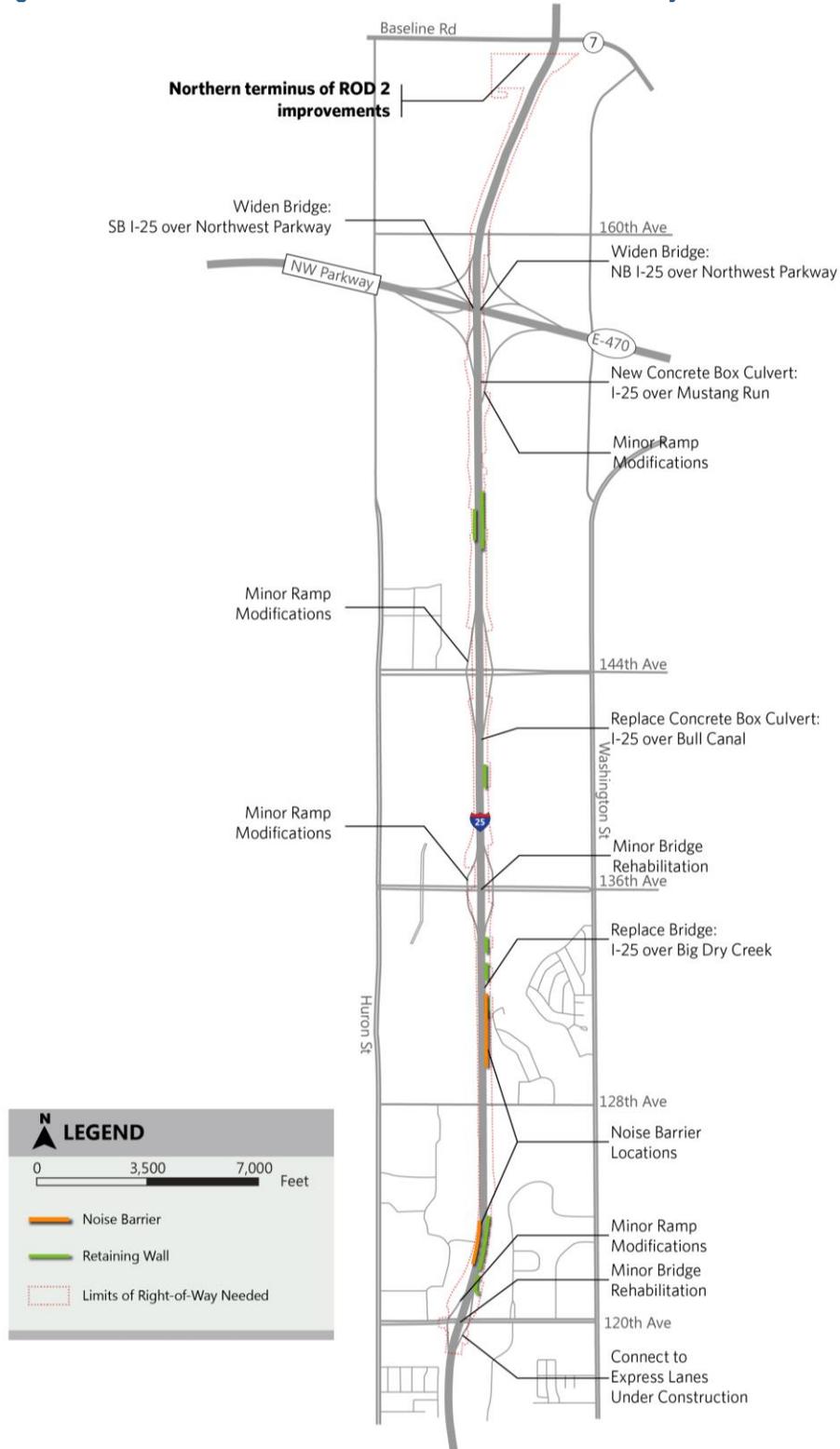
The Express Lane design for ROD2 differs from the 2011 FEIS design in one location. The 2011 FEIS assumed one access/egress point north of 120th Avenue. The ROD2 model assumed a 0.6 mile weaving section between 120th Avenue and 136th Avenue instead.

2.0 CHANGES IN LAWS, REGULATIONS, AND GUIDANCE

There are no changes to laws, regulations, or guidance for the design of transportation facilities that affect this project since the publication of the 2011 FEIS ROD1. CDOT and FHWA procedures for the review and approval of new or modified interchanges have not changed. However, since that publication, the Transportation Commission provided new guidance regarding the consideration of managed lanes and toll-free travel on managed lanes.

In December 2012 the Colorado Transportation Commission adopted *Policy Directive 1603* requiring that managed lanes be strongly considered during the planning and development of capacity improvements on state highway facilities (Colorado Transportation Commission, 2012). Compliance with Policy Directive 1603 is assured for this ROD2 because the Action scenario includes the use of managed lanes.

Figure 1. Location of Selected Alternative in the ROD2 Study Area



In February 2013 the Colorado Transportation Commission adopted *Resolution #TC-3052* requiring that as of January 1, 2017, toll-free travel offered to High Occupancy Vehicles (HOV) on all tolled managed lanes that are part of the state highway system shall be limited to vehicles with three or more occupants (Colorado Transportation Commission, 2013). This change in policy does not affect overall corridor traffic forecasts, but would result in a higher mix of toll-paying single-occupant vehicles in the Express Lanes, and a corresponding lower portion of shared ride vehicles.

3.0 EXISTING CONDITIONS

3.1 Summary of 2011 FEIS Conditions

The existing data for the 2011 FEIS were collected in two parts by Felsburg Holt and Ullevig. In 2005 and 2006, ramp volume data were collected for all interchanges between the 84th Street interchange and SH 1 interchange. Then, the volumes on the mainline were collected using three CDOT Automatic Traffic Recorders (ATRs) and two radar counters. These five counters were set up in 2006 on I-25 north of SH 7, south of US 34, south of SH 1, north of 84th Avenue, and north of 136th Avenue. All other mainline volumes were then calculated by distributing volumes from the furthest upstream counter using on-ramp and off-ramp volumes. The ramp volumes were then adjusted in order to bring the mainline volumes to within one standard deviation of the average weekday traffic volumes originally measured by the five counters. Overall, the study area for the 2011 FEIS reported volumes and operational statistics for the I-25 mainline and ramps between the SH 1 interchange in northern Colorado and the 20th Street interchange in downtown Denver.

Traffic volumes on North I-25 reflect typical patterns that are easy to recognize. The highest volumes of traffic on the mainline and on interchanges are nearest to Denver and the lower volumes are the furthest away from the city of Denver. The high volumes on I-25 create congestion that breaks down operations frequently. The two most predictable times of congestion are during the AM peak period when the southbound direction is heavy with commuter traffic travelling to Denver, and the PM peak period when the northbound traffic is heavy with commuter traffic travelling away from Denver.

3.2 Changes in existing conditions since the 2011 FEIS

The existing condition year established by the 2011 FEIS was 2006. This data is nine years old and changes in socio-economic conditions and traffic patterns have occurred in the ensuing years. For this ROD2 update, traffic data collected by others in 2012 have been used to establish a new existing conditions assessment.

3.2.1 Geometry

There are two major differences in geometry between the existing conditions described by the 2011 FEIS and current existing conditions. The 144th Avenue interchange had not yet been constructed while the 2011 FEIS existing condition data were being compiled and, therefore, has no volumes or operational statistics attached to it. The second difference between the two models is the configuration at the 120th Avenue interchange. In 2014, the two ramps south of this interchange each have two lanes. The 2011 FEIS modeled these ramps with only one lane for all design years. The comparison of the existing number of lanes is shown in Figure 2.

3.2.2 Volumes

The existing volumes on I-25 in 2012 were higher than the volumes from 2006 in the 2011 FEIS. This is due to the amount of time between data collection periods. In some cases, ramp volumes were higher in 2006, but in general, I-25 carried more traffic in 2012. Higher ramp volumes in the 2011 FEIS can be attributed to the absence of the 144th Avenue interchange. Figure 3 shows the difference between the 2011 FEIS existing condition volumes (year 2006) and the ROD2 existing condition volumes (year 2012).

Overall, the observed growth in traffic between 2006 and 2012 exhibits an annualized growth rate of around 1 percent, lower than the annual growth rate of slightly over 2 percent as anticipated in the 2011 FEIS through 2035. However, the lower growth reflects the economic downturn of 2008 that occurred during the initial years after the 2011 FEIS.

3.2.3 Operations

The updated 2012 existing mainline and interchange operations were found to be the same or worse as the 2006 conditions in the 2011 FEIS. While the 2011 FEIS reports higher ramp volumes in some cases, higher mainline volumes in 2012 generally result in levels of service (LOS) that are equal to or worse. Figure 4 shows the LOS comparison between the two analyses.

In addition to the traffic volume differences between the two years, the analysis was conducted with different versions of the Highway Capacity Software (HCS). The HCS is based on the methodologies in the Highway Capacity Manual (HCM), which is published by the Transportation Research Board. The HCM methodology is periodically revised to incorporate new research and analysis techniques. The ROD2 analysis was based on the HCM 2010, which is the latest version. The 2011 FEIS model analysis was based on a previous version of the HCM.

3.2.4 Safety

A *Safety Assessment Report* (CDOT, 2014) contains an updated and more detailed safety analysis for the ROD2 corridor than was conducted in the 2011 FEIS. This safety analysis provided crash rates on I-25 between 120th Avenue and SH 7 for the years 2011 through 2013. The data indicate that there are higher than expected crashes in the study area because of traffic congestion. Rear-end crashes in the southbound direction were congestion related. Incidents involving concrete barriers were higher than expected, primarily occurring at night or during inclement weather.

3.2.5 Trails

I-25 Trail (also called the I-25/Tanglewood Creek Trail)

The I-25 Trail was identified in the 2011 FEIS as Westminster #1, #2, and #3. The City of Westminster, with support from Adams County, has been building its I-25 regional trail system in phases over the last several years since the 2011 FEIS was approved. Per city and county Management Plans^{a b c}, this trail has the purpose of serving as a regional north-south trail

^a 2005 *City & County of Broomfield Open Space, Trails, Parks and Recreation Master Plan* and/or Broomfield's online 2012 map for Existing and Planned Trail Surfaces.

through Westminster and Adams County, providing access to many existing and planned businesses within the I-25 corridor.

The current existing facilities include three trail segments paralleling the west side of I-25. The northernmost segment begins at West 150th Avenue and Huron Street and extends southward to West 144th Avenue. This segment parallels I-25 about 155 feet west of the shoulder of the highway. The central segment parallels the west side of the I-25 ramps north and south of West 136th Avenue, behind the Lowe's and Walmart Stores at 136th Avenue. The Tanglewood Creek segment between West 128th Avenue and West 123rd Avenue went into construction in fall 2013 partly because of its designation in the *2012 Adams County Master Plan* as High Priority for completion within 3 years.

Several trail underpasses exist at Huron Street and West 150th Avenue, and at West 144th Avenue, West 136th Avenue, and West 128th Avenue, just west of I-25. Missing trail connections will connect the trail ending at the northeast corner of Lowe's northward to the northernmost existing trail, and southward from Walmart to the existing Quail Creek trail, as well as continuing south of the Big Dry Creek Trail to West 128th Avenue.

The ROD2 Selected Alternative will not impact the I-25 Trail.

4.0 FUTURE CONDITIONS

4.1 Comparison of the 2011 FEIS 2035 Volumes to 2040 Volumes

The 2011 FEIS Preferred Alternative was analyzed for a 2035 planning horizon year with the DRCOG regional transportation model. In February 2015, DRCOG adopted a 2040 Regional Transportation Plan. The ROD2 analysis will need to be consistent with the 2040 planning horizon year.

Traffic analysis of the 120th Avenue to State Highway 7 segment of I-25 indicates that the new 2040 traffic volume projections are comparable to the 2011 FEIS 2035 traffic volumes. Table 1 shows the daily traffic volume comparison between the 2011 FEIS 2035 and DRCOG 2040 direct model output.

^b 2012 *Adams County Open Space, Parks and Trails Master Plan*.

^c 2012 *City of Thornton Parks and Open Space Master Plan*.

Figure 3. Existing Volume Comparison

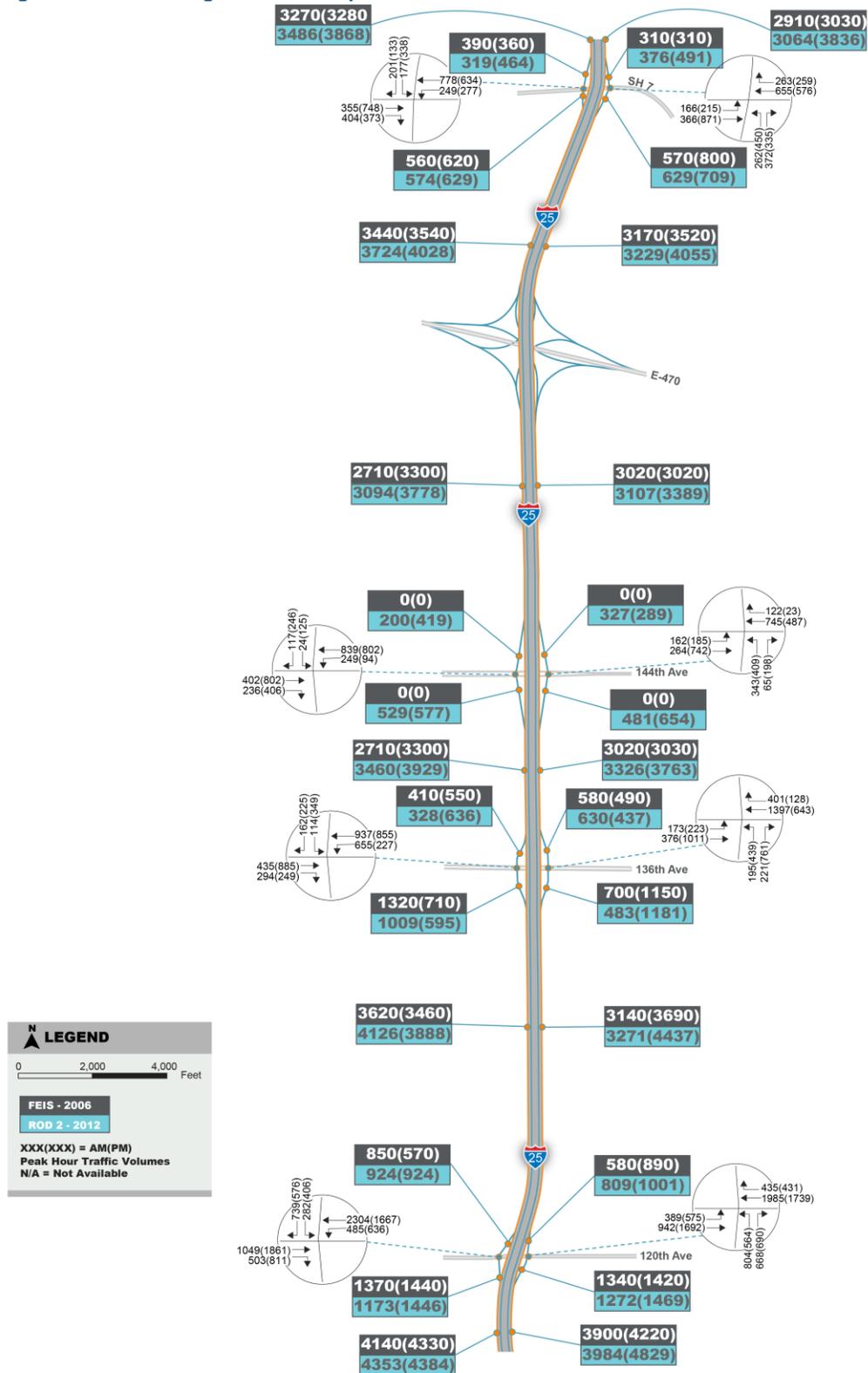
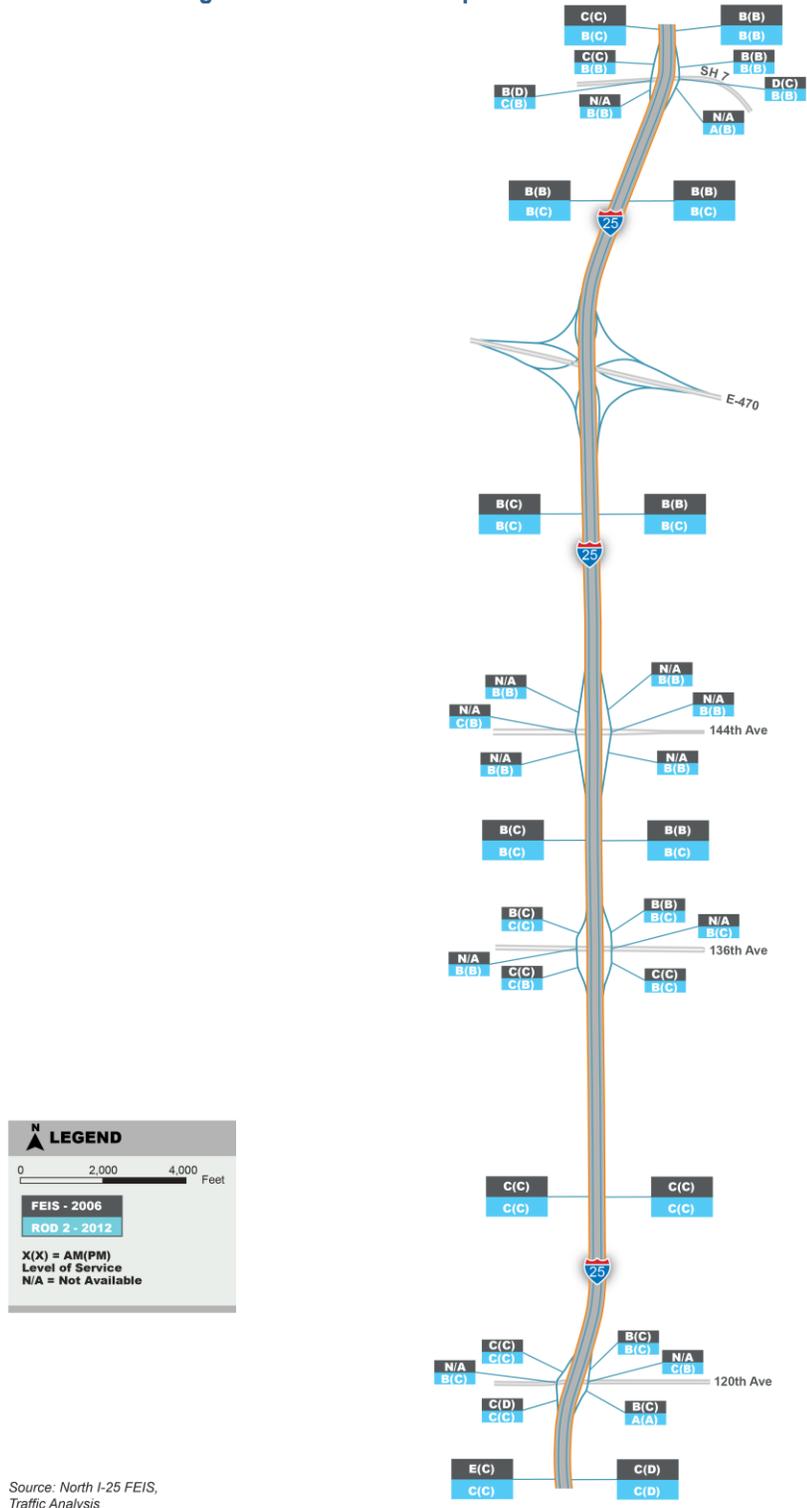


Figure 4. Existing Level of Service Comparison



Source: North I-25 FEIS,
 Traffic Analysis

Table 1. 2011 FEIS 2035 and DRCOG 2040 Corridor Volume Comparison

North of:	2011 FEIS 2035 Model Daily Volumes		DRCOG 2040 Model Daily Volumes		Difference	
	SB Total	NB Total	SB Total	NB Total	SB Total	NB Total
E-470	94,198	94,304	97,294	95,818	3%	2%
144th	82,686	79,721	81,776	80,074	-1%	0%
136th	91,604	90,530	87,027	86,628	-5%	-4%
120th	92,996	91,048	98,086	96,626	5%	6%

Sources:

2011 FEIS 2035 Model—North I-25 FEIS 2035 PA-4_b—Appendix G (Completed 2011)

DRCOG 2040 Model—HwyForc2040_rtp2040-f14r_coc83ft_shp (Received 01/23/2015)

Table 1 indicates that projected DRCOG 2040 traffic volumes along I-25 are very similar to those used in the 2011 FEIS 2035 analyses. It is noted that the 2011 FEIS projections were prepared in 2007, before the economic downturn of 2008 and 2009. DRCOG accounted for the downturn in 2014 upon preparing the 2040 socio-economic projections that are the major input to the travel demand model. For this reason, the traffic projections are similar for the I-25 corridor in the study area, despite a horizon year of 2040 versus 2035. Therefore, the 2011 FEIS 2035 traffic volumes adequately represent projected 2040 traffic conditions and the use of 2011 FEIS traffic data is appropriate for analysis of the ROD2.

A letter of concurrence on this forecast approach from the Colorado Department of Public Health and Environment—Air Pollution Control Division is included in this document as Appendix A.

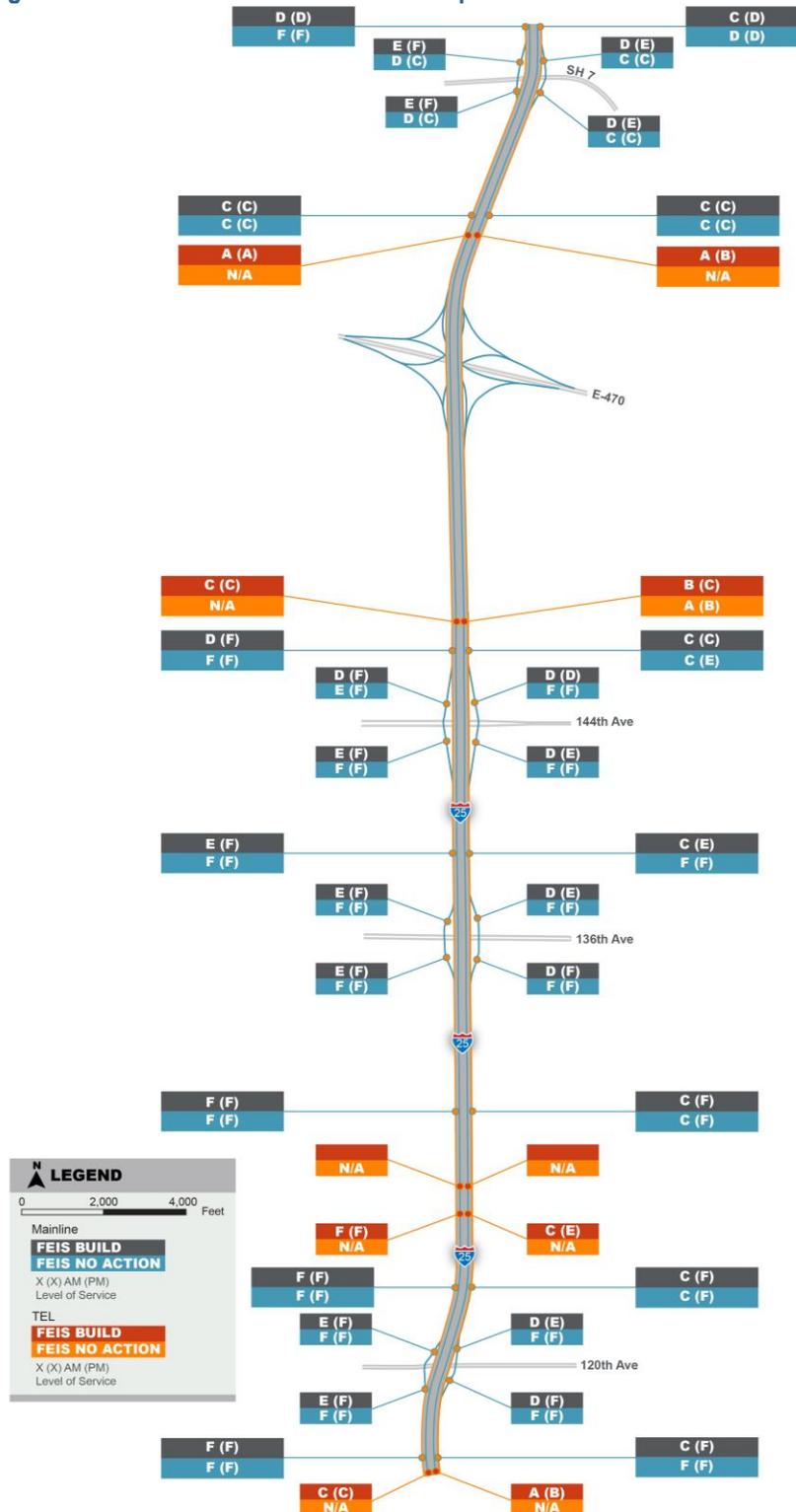
For the remainder of this report "future" refers to the 2011 FEIS year 2035 data as used for the ROD2 traffic impact analysis and documentation.

4.2 Summary of Impacts

Chapter 4 of the 2011 FEIS contains a summary of transportation impacts for the various build alternatives. The LOS results along the corridor from the 2011 FEIS are summarized in Figure 5. Some of the impacts or benefits that are described include:

- The 2011 FEIS reports that the peak average daily traffic in the Express Lane will occur around the 104th Avenue interchange and is projected to carry approximately 45,000 vehicles per day.
- The combined VMT on major highways within the 2011 FEIS study area increases compared to the No Action Alternative on I-25. This includes I-25 and portions of I-76, US 36, E-470, and NW Parkway.

Figure 5. Future Level of Service Comparison



- VMT on the adjacent arterial system decreases compared to the No Action Alternative.
- The combined VHT of major highways within the 2011 FEIS study area decreases compared to the No Action Alternative. This includes I-25 and portions of I-76, US 36, E-470, and NW Parkway.
- Future AM peak hour travel time is forecasted to be 20 minutes in the Express Lanes from SH 7 south to the 20th Street interchange in downtown Denver compared to 53 minutes in the general purpose lanes, compared to 65 minutes in the No Action Alternative.
- Substantially improved travel time reliability is provided in the Express Lanes.
- There is overall improved safety because of the replacement of functionally obsolete I-25 infrastructure and improved highway geometry.
- There is Express Lane LOS of C, D, or F between 120th Avenue and E-470; compared to general purpose lane LOS of mostly E or F and No Action Alternative LOS of all F.

5.0 MITIGATION

FHWA requires that a traffic management plan be developed for roadway projects. This plan will follow guidelines outlined in FHWA's *Developing and Implementing Transportation Management Plans for Work Zones* (FHWA, 2005). Some elements that will be specific to the construction of the Express Lane on I-25 include:

- Maintain the same number of existing lanes on I-25 at all times except during off-peak travel times.
- Limit peak period ramp closures to low-volume interchanges.
- Limit closure of high-volume ramps to nights or weekends.
- Maintain access to local businesses/residences.

Another element of the construction mitigation measures defined in Section 4.9.3 of the 2011 FEIS and in the FHWA *Guide for Developing and Implementing Transportation Management Plans for Work Zones* is travel demand management. CDOT has a history of providing travel demand management programs during construction to assist in mitigating traffic impacts. This is currently being done on both the US 36 Corridor and on the North I-25 Express Lanes project south of 120th Avenue. For the ROD2 Selected Alternative, CDOT will work to promote the future usage of the Express Lanes for bus service and carpool and vanpool usage by providing information about the Express Lanes on variable message signs (VMS) that will be installed between 120th Avenue and SH 7. Additionally, CDOT will provide courtesy patrol. CDOT will continue to participate in coordination with Smart Commute Metro North, the Transportation Management Organization for this area, to take into consideration an appropriate travel demand management program.

6.0 REFERENCES

CDOT. 2011. *North I-25 FEIS Record of Decision.* 2011.

—. **2011.** *North I-25 Final Environmental Impact Statement.* 2011.

—. **2011.** *North I-25 Transportation Analysis Technical Report Addendum.* 2011.

—. **2014.** *Safety Assessment Report: SH 25A (MP222.88 to MP 230.00).* 2014.

Colorado Transportation Commission. 2012. *Policy Directive 1603: Managed Lanes Policy.* December 28, 2012.

—. **2013.** *Resolution #TC-3052.* February 21, 2013.

FHWA. 2005. *Developing and Implementing Transportation Management Plans for Work Zones.* 2005.

**Appendix A.
CDPHE-APCD Concurrence Letter**



COLORADO

Department of Transportation

Division of Transportation Development

Environmental Programs Branch
4201 E. Arkansas Ave. Shumate Bldg.
Denver, CO 80222-3400

March 11, 2015

Chris Colclasure
Planning and Policy Program Manager
Air Pollution Control Division
Colorado Department of Public Health and Environment
4700 Cherry Creek Drive South
Denver, CO 80901

Dear Dear Mr. Colclasure:

The Colorado Department of Transportation (CDOT) is requesting your concurrence with the following air quality analytical methodology for the North I-25—Denver DUS to Wellington second Record of Decision (ROD 2), for the Express Lanes project planned on I-25 from 120th Avenue to State Highway 7.

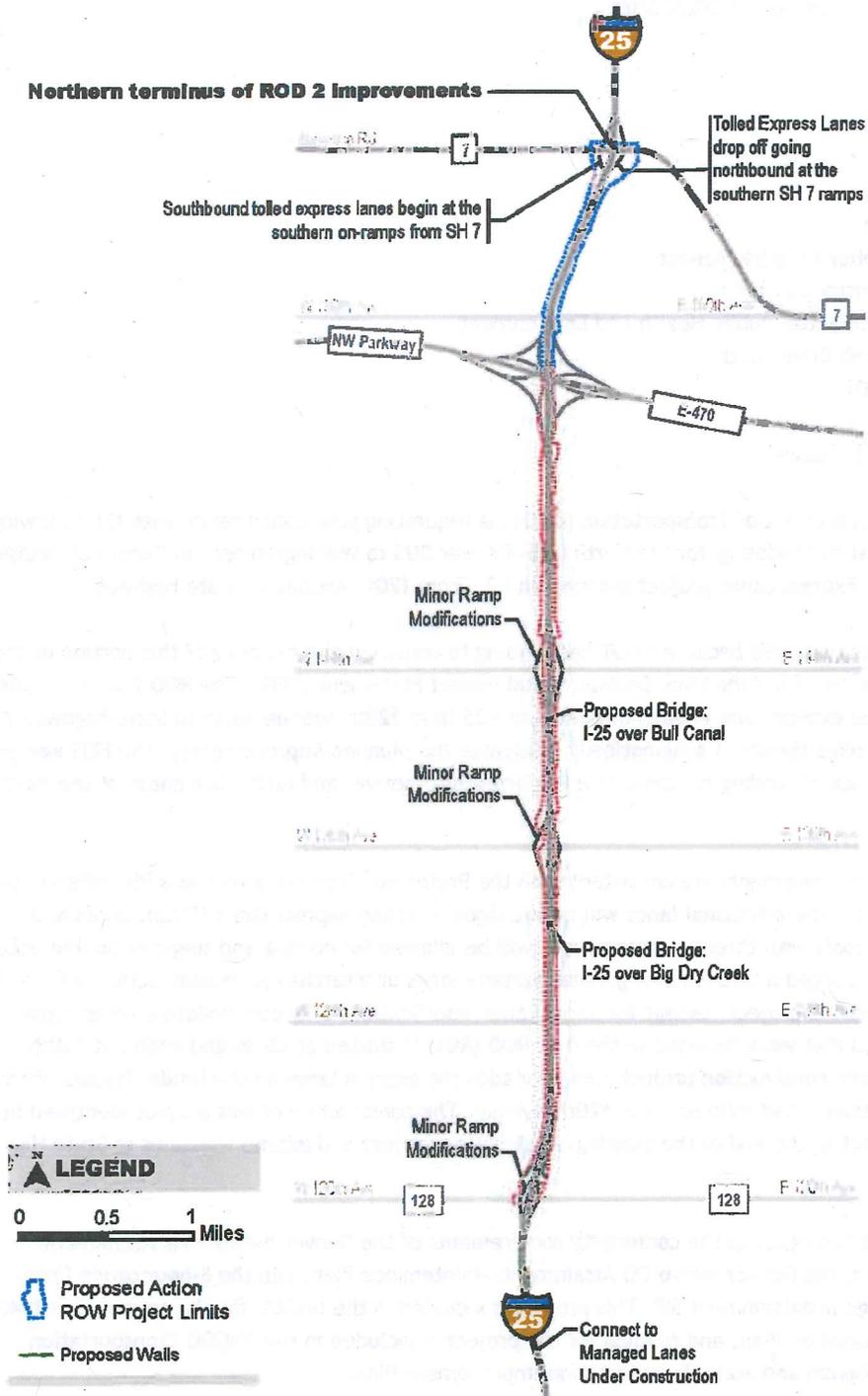
The ROD 2 is being pursued because CDOT has funding to construct the majority of this portion of the Preferred Alternative from the Final Environmental Impact Statement (FEIS). The ROD 2 work consists of adding one tolled express lane in each direction on I-25 from 120th Avenue north to State Highway 7, a distance of 6.6 miles (Exhibit 1 schematically illustrates the planned improvements). The FEIS was phased because of the lack of funding for the whole Preferred Alternative, and ROD 2 is a phase of the North I-25 project.

These proposed improvements are consistent with the Preferred Alternative that was identified in the FEIS (CDOT, 2011). The additional lanes will be managed as tolled express lanes (TELS). Buses and carpools or vanpools with three or more people will be allowed for no cost and single or double occupant vehicles will be charged a toll. No new general purpose lanes or interchange reconstruction will be included in the ROD 2 project, except for minor ramp modifications to accommodate a wider cross section. The TELs that were included in the first ROD (ROD 1) started at US 36 and ended at 120th Avenue. An interim construction project currently adds the express lanes on the inside shoulder from US 36 and ending about a half mile south of 120th Avenue. The construction of this project identified in this letter will connect to the end of the existing construction project and extend the lanes to State Highway 7.

The project area is subject to the conformity requirements of the Denver metro PM_{10} Attainment/Maintenance Plan, the Denver metro CO Attainment/Maintenance Plan, and the 8-hour ozone Denver-North Front Range nonattainment SIP. This project is included in the DRCOG fiscally constrained 2040 Regional Transportation Plan, and funding for the project is included in the DRCOG Transportation Improvement Program and State Transportation Improvement Plan.



Exhibit 1. Planned Improvements



PROJECT BACKGROUND

CDOT and FHWA approved the FEIS completed in August 2011, which evaluated commuter rail, highway improvements, and tolled express lanes on I-25 between the vicinity of Denver Union Station and Fort Collins, a distance of almost 63 miles. The ROD 1 identified partial funding for the Preferred Alternative and was insufficient to complete the entire corridor proposed work. As a part of the FEIS, air quality analyses were performed in consultation with APCD staff, and the results met all applicable air quality requirements under NEPA and transportation conformity for that time.

Project funding has now been secured for another piece of the Preferred Alternative on I-25 between 120th Avenue and State Highway 7 and is ready to move forward. Although the FEIS is less than 4 years old, and there are no significant changes in the affected environment or the results reported in the FEIS, this new project requires a ROD to complete the NEPA process in addition to a project level conformity determination. Therefore, the air quality analyses need to be completed before FHWA can approve the ROD 2. Including the project in DRCOG fiscally constrained, conforming 2040 plan will be adequate for the regional conformity determination.

An air quality analysis was completed for the FEIS, conducted quantitatively utilizing the FHWA EMIT speed-sensitive Mobile6.2 interface and included CO and PM₁₀ hotspot and quantitative MSAT analyses. The key project-level conformity results from FEIS analyses which overlap or brackets the ROD 2 project area include:

- Carbon monoxide (CO) hot spot modeling conducted just north and south of the project at State Highway 7 and at Thornton Parkway. In both locations, worse-case CO concentrations were below the 8-hour National Ambient Air Quality Standard (NAAQS) of 9ppm with 5.5ppm and 7.1ppm, respectively.
- PM₁₀ qualitative hot spot modeling completed at the same two locations because the Preferred Alternative for the FEIS included building an express bus station and parking area at SH 7 and modifying existing transit facilities near the Thornton Parkway. Idling buses, internal parking travel and parking access, and pass-by vehicles were all considered in the analyses. The results of the modeling at State Highway 7 and Thornton Parkway showed concentrations that are well below the 24-hour NAAQS (150 µg/m³) for PM₁₀ with 89.42 µg/m³ and 103.13 µg/m³, respectively.
- Quantitative inventory/burden analyses for priority MSAT) pollutants completed for the entire regional study area in the FEIS for the purpose of comparing the three build alternatives to the existing and no build future conditions. The quantitative analysis showed that all priority MSAT levels declined appreciatively by 2035, and build alternatives showed no significant inventory emissions differentiation.

CHANGES IN REGIONAL PLANNING CONTEXT

The 2011 FEIS Preferred Alternative was analyzed for a 2035 planning horizon year in the DRCOG regional transportation modeling. The 2015 Proposed Action will need to be consistent with a 2040 planning horizon year. Construction is expected to begin within the next 1 to 2 years.

New preliminary traffic analysis of the 120th Avenue to State Highway 7 segment of I-25 for the year 2040 finds that traffic volumes will be comparable to the 2035 FEIS traffic volumes. Table 1 shows the daily traffic volume comparison between the FEIS 2035 and DRCOG 2040 direct model output.



Table 1. FEIS 2035 and DRCOG 2040 Corridor Volume Comparison

North of:	FEIS 2035 Model Daily Volumes		DRCOG 2040 Model Daily Volumes		Difference	
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120th	92,996	91,048	98,086	96,626	5%	6%

Sources:
 2035 FEIS Model—North I-25 FEIS 2035 PA-4_b—Appendix G (Completed 2011)
 DRCOG 2040 Model—HwyForc2040_rtp2040-f14r_coc83ft_shp (Received 01/23/2015)

Table 1 indicates that projected DRCOG 2040 traffic volumes along I-25 are very similar to those used in the FEIS 2035 analyses. Therefore, FHWA and CDOT find that FEIS traffic volumes adequately represent projected 2040 traffic conditions and recommend use of FEIS traffic data for analytical modeling and roadway link input parameters for MOVES and project-limited inventory modeling.

NEW AIR QUALITY EMISSION FACTORS

EPA-developed MOVES emission factors are available now to replace the MOBILE6.2 emission factors and EMIT modeling interface that were used in the previous FEIS air quality analysis. These analyses will use the recently released MOVES2014 emissions model. CDOT would acquire revised inventories, emissions factors, and background concentrations from Air Pollution Control Division (APCD) for all new analysis.

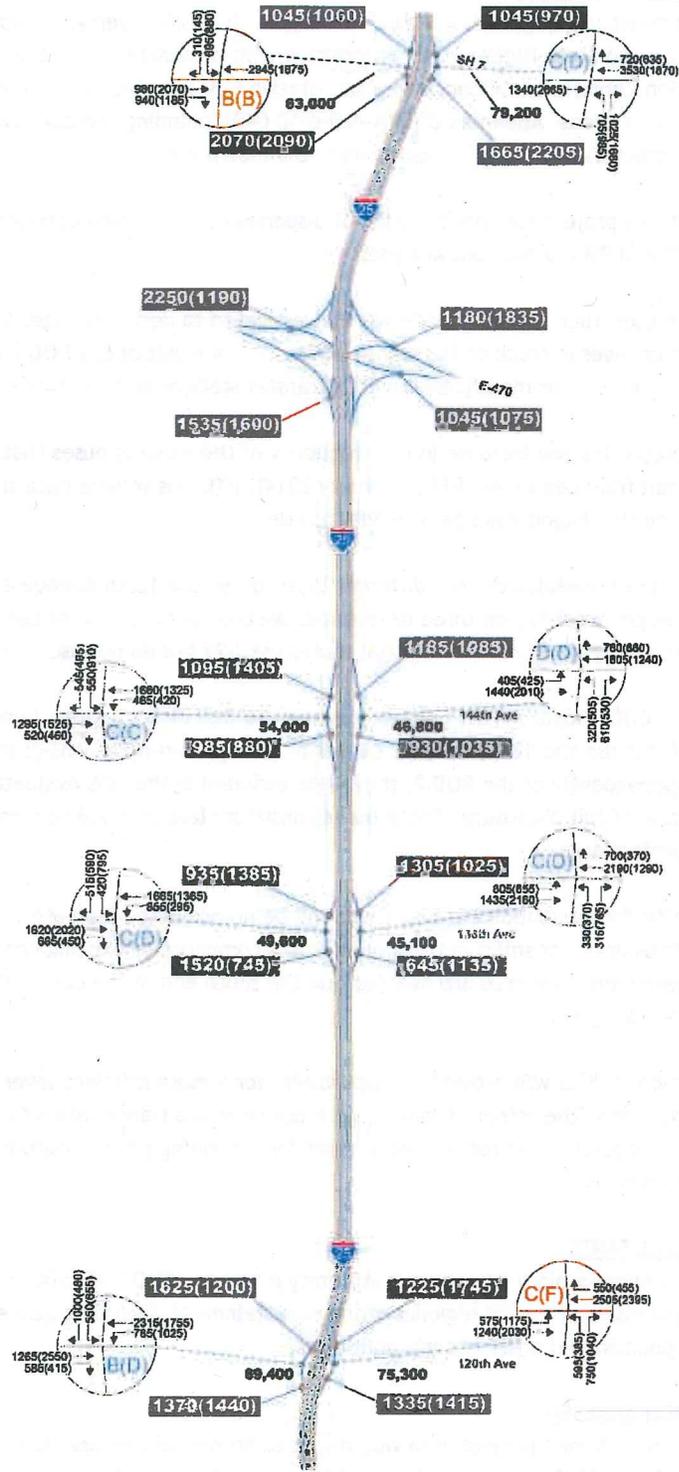
CARBON MONOXIDE MICROSCALE ANALYSIS

Although the last violation of the national carbon monoxide standard in the Denver region was in 1995, microscale CO analysis is conducted to show that a proposed action will not cause or contribute to a future violation. As previously noted, the FEIS analyses for the State Highway 7 CO dispersion analysis resulted in a worst case concentration well below the NAAQS at 5.5ppm. Traffic level of service (LOS) analysis indicates that the 120th Avenue interchange is the lowest performing and next highest volume interchange within the planned project area (see Exhibit 2).

The 120th Avenue at I-25 interchange was not modeled in the 2011 FEIS air quality analyses and is recommended as the single site to be evaluated for hotspot dispersion modeling for this project. CDOT also proposes to utilize a worst case analysis, which utilizes the highest traffic volumes expected over the project planning timeline (2035) with the worst emissions rates expected over that same timeframe (current 2015 emission rates). The results of this type of analysis adequately simulate the highest potential carbon monoxide concentrations possible over the 20-year timeframe, eliminating the need for interim year analyses. If the results of a worst-case analysis are less than the NAAQS for CO, then no violation is likely to be caused by the project actions. If the results indicate a higher concentration than the NAAQS, then a more extensive analysis will be required comparing No Build and Build traffic and emissions. EPA approved this approach for the I-70 East Supplemental EIS and C-470 Managed Lanes EA.



Exhibit 2. Level of Service and Volumes



LEGEND

0 2,000 4,000 Feet

2035 FEIS Preferred Alternative Intersection LOS at Ramp Terminals
 X (X) AM (PM)
 Level of Service

2035 FEIS Preferred Alternative Ramp Volumes
 XXXXX AM (PM) Peak Hour Traffic Volumes
 XXXX Daily Traffic Volumes

Source: North I-25 FEIS, Traffic Analysis



PM₁₀ MICROSCALE ANALYSIS

The project conduct a qualitative analysis of PM₁₀ for the 120th Avenue interchange and mainline I-25 between 120th and State Highway 7 in accordance with provisions of the EPA December 2010 Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas, Appendix C (EPA-420-B-10-040) including comparative analysis with similar traffic volume interchanges and mainline segments in the metro area.

Screening of this project for consideration of dispersion analyses was conducted utilizing 40 CFR 93.123(b) PM 10 and PM 2.5 hot-spot analyses.

Changes to diesel truck and bus traffic were investigated to define changes in the percent of diesel vehicles and changes in truck or bus transit patterns as a result of the ROD 2 project. The ROD 2 project will not construct new or modify existing bus transfer stations or park-n-ride lots.

RTD is not projecting any increase in the frequency of the existing buses that use the area around 120th Avenue (e-mail from Lee Cryer, RTD, February 2014). RTD bus volume data show the number of buses currently using the Wagon Road park-n-ride include:

- 193 buses per weekday on four different local routes use 120th Avenue and the park-n-ride
- 197 buses per weekday on three different express or Sky Ride routes use I-25 and the park-n-ride
- 15 buses per weekday on two regional routes use I-25 but do not use 120th or the park-n-ride

Six additional CDOT *Bustang* Fort Collins/Longmont to DUS direct express buses will run daily weekdays on I-25, but will not use the 120th transfer center or local park-n-rides. Although these buses are funded and operated independently of the ROD 2, they were included in the FEIS evaluation and are included here for the purpose of full disclosure. These buses constitute less than 2.8 percent of the total I-25 bus traffic within the project area.

The FEIS traffic forecasts indicate that there will be no projected increase in the percentage of diesel truck daily trips or major shifts in truck movements compared to existing conditions. Truck volumes are heaviest where traffic volumes are heaviest (on the south end of the corridor). This project does not change any truck egress.

The installation of TELs will provide an opportunity for a more efficient level of service travel lane during times of congestion. The effect of moving light-duty and bus transit into a faster moving TELs will act to relieve some congestion and reduce delay times for remaining general purpose lanes where most diesel truck traffic remains.

CRITERIA POLLUTANTS

In addition to micro-scale analyses for conformity purposes, CDOT will also include qualitative discussion of criteria pollutants affecting regional ozone nonattainment, including ozone, nitrogen oxides, volatile organic compounds, and other criteria pollutants.

MSAT EMISSION ANALYSIS

A portion of the 6.6-mile project area would exceed an Annual Average Daily Traffic (AADT) of 140,000 vehicles per day in 2040, triggering the need for a quantitative MSAT analysis. CDOT proposes to conduct quantitative inventory of priority MSAT emissions for the proposed action and no-build highway



conditions. EPA identified seven priority compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers. These compounds, which will be included in this analysis, are:

- acrolein
- benzene
- 1,3-butadiene
- diesel particulate matter plus diesel exhaust organic gases (diesel PM)
- formaldehyde
- naphthalene
- polycyclic organic matter

CDOT proposes to limit this analysis to the year 2035 using the FEIS data and to only assess interstate traffic for this analysis. Meaningful differences in MSAT emissions for the two alternatives are not anticipated.

GREENHOUSE GAS EMISSIONS

Per current FHWA guidance, CDOT plans to provide a summary assessment of the direct, indirect, and cumulative effects of GHG emissions from the project, including a comparative analyses of global, statewide, and project-generated GHG emissions.

Thank you for your consideration of our proposed analytical approach. For your convenience, a concurrence signature block is provided below for your possible use. If you feel there is a need for an interagency consultation meeting regarding this project, please contact me at (303) 757-9016 (jill.schlaefer@state.co.us) so that a meeting can be scheduled as soon as possible. Again, if you or your staff has any questions regarding this project-level air quality analysis, please let me know.

Cordially,



Jill Schlaefer

Air Quality and Noise Programs Manager

APCD CONCURRENCE:

For the Air Pollution Control Division of the Colorado Department of Public Health and Environment, I concur that the project-level analytical approach described above for the North I-25 ROD 2 is acceptable and appropriate for this project.

Chris Colclasure
Signature

3/17/15
Date

Planning and Policy Program Manager
Title



