

APPENDIX A PEL QUESTIONNAIRE

FEDERAL HIGHWAY ADMINISTRATION (FHWA)
COLORADO DEPARTMENT OF TRANSPORTATION (CDOT)

STATE HIGHWAY 9 AND US HIGHWAY 6 IMPROVEMENT PROJECT
AT THE INTERSTATE 70 SILVERTHORNE/DILLON INTERCHANGE

PLANNING AND ENVIRONMENTAL LINKAGES (PEL) QUESTIONNAIRE

July 9, 2012

1. Background:

- a. Who is the sponsor of the PEL study? (state DOT, Local Agency, Other)

CDOT

- b. What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan or transportation improvement program years)?

“State Highway 9 and US Highway 6 Improvement Project at the Interstate 70 Silverthorne/Dillon Interchange, Planning and Environmental Linkages Study”

Sub Account: 16755
STIP Number: SSP 4126
Long Range Plan Reference(s): Silverthorne 2030 Plan

- c. Who was included on the study team (Name and title of agency representatives, consultants, etc.)?

FHWA

Randy Jensen, Program Delivery Team Leader
Monica Pavlik, Senior Operations Engineer
Stephanie Gibson, Environmental Program Manager
Melinda Urban, Operations Engineer and Civil Rights Program Manager

CDOT

Grant Anderson, P.E., CDOT Region 1 Resident Engineer
Peter Kozinski, P.E., CDOT Region 1 Program Engineer
Tyler Weldon, P.E., CDOT Region 1 Project Manager
Chuck Attardo, CDOT Region 1, Environmental Manager

PROJECT LEADERSHIP TEAM*

Dan Burroughs, Town of Dillon Town Engineer
Bill Linfield, Silverthorne Public Works Director
Thad Noll, Summit County Assistant County Manager
Steve Swanson, Blue River Watershed Group

* Also includes Grant Anderson, Peter Kozinski, Tyler Weldon, Melinda Urban, R.A. Plummer, Alan Eckman, and Tom Schilling

CONSULTANTS

AECOM

R.A. Plummer, P.E., Vice President, Principal in Charge
Alan Eckman, P.E. PTOE, Vice President, Project Manager
Brian Kennedy, AICP, Deputy Project Manager, Task Leader for Environmental Analysis
Don Holloway, P.E., Task Leader for the Traffic Analysis and Modeling

Jacobs

Dean VanDeWege, P.E., Task Leader for Engineering Design

Ordonez & Vogelsang

Beth Ordonez, Principal, Task Leader for Land Use, Transit and Alternative Modes

InterMountain Corporate Affairs

Tom Schilling, President, CSS/Public Inv, Task Leader for CSS/Public Engagement
Megan Alderton, Public Affairs Associate
Laura Chapin, Public Affairs Associate

GBSM

Andy Mountain, Facilitator

- d. Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding environment (urban vs. rural, residential vs. commercial, etc.)

SH 9 and US 6 provide the primary circulation route through Silverthorne and Dillon and meet under the Interstate 70 Silverthorne/Dillon interchange (Exit 205). The project study area is presented in Figure 1. Figure 2 presents a detailed map of SH 9, US 6, the interchange and the local street network.

Figure 1 Project Study Area

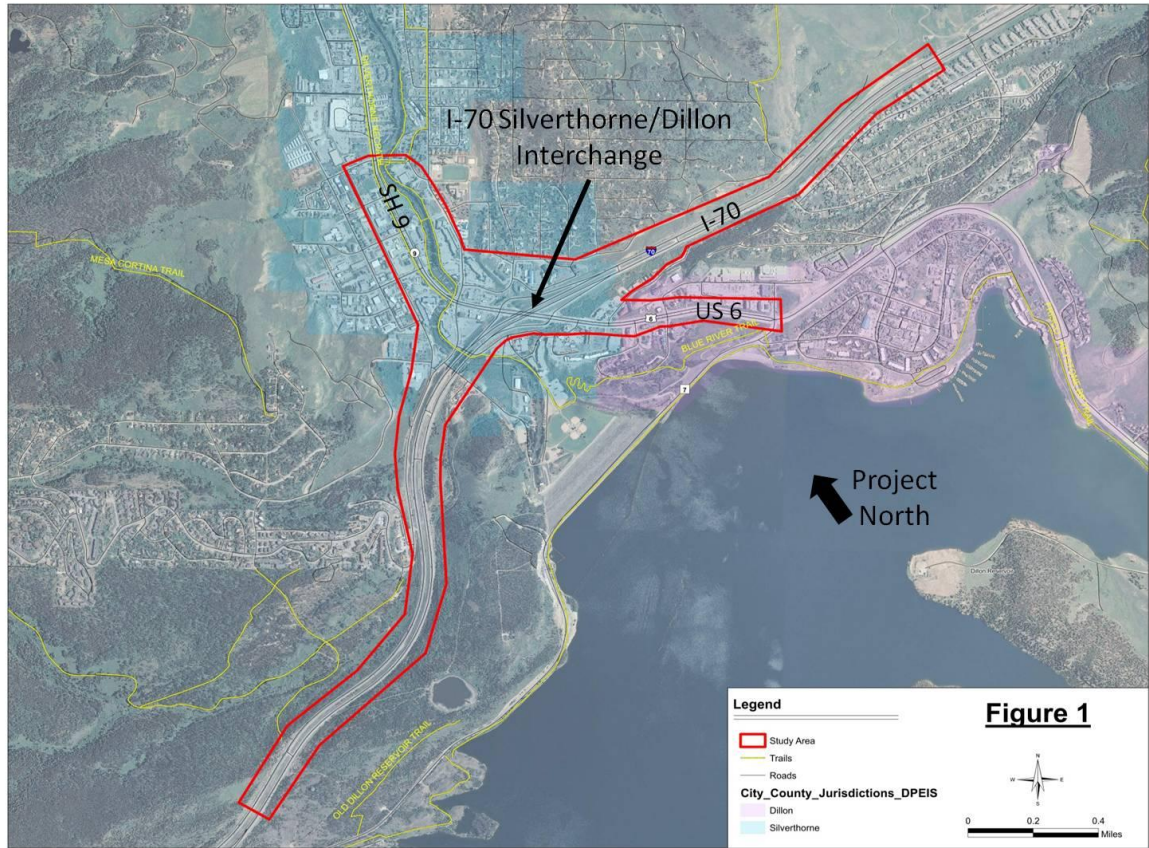


Figure 2 Detailed Map of the Interchange Area



Note: References to north, east, south and west within the study area differ from actual compass directions. The direction references are applied to conform to the general understanding that I-70 passes through Colorado in an east/west manner with westbound and eastbound traffic and that State Highway 9 and US 6 generally pass through the area in a north/south manner.

The project limits are as follows:

State Highway 9: MP 101.56 to 103.00

US Highway 6: MP 208.66 to 210.00

I-70: MP 202.35 to 208.27

The functional classifications are as follows:

State Highway 9: Urban Principle Arterial

US Highway 6: Urban Principle Arterial

I-70: Urban Federal Aid Interstate

The surrounding environment is characterized by urban and suburban development and open space associated with the Blue River and natural areas in the vicinity.

Access control is as follows:

State Highway 9: access by signalized and unsignalized driveways/streets

US Highway 6: access by signalized and unsignalized driveways/streets

I-70: Limited access, interchange

The SH 9 and US 6 serve motor vehicles, bus transit, bicycles and pedestrians. Summit Stage provides bus service. The Blue River Trail provides an exclusive pedestrian and bicycle route along the river. Sections of attached sidewalks and detached sidewalks are provided along SH 9 and US 6. Table 1 provides details about the number of lanes, lane widths, shoulder widths, speeds, grades and other considerations.

Table 1 Facility Description Details

Roadway	Lanes Each Direction	Shoulders (Inside/ Outside)	Posted Speed	% Grade	Comments * Substandard Items
I-70 WB	2 plus auxiliary	4'/6'	60	<3.5 to east; Up to 6 to west	2 lanes across bridge Bridge widths 6'/12'/12'/12'/6' Blue River Bridge 6'/12'/12'/12' Over US 6 & SH 9
I-70 WB off Ramp	1-3	Substandard Inside 4'/6' Standard	45	5.25	Double left turn and single right *Substandard inside shoulder
I-70 WB on Ramp	2-1	Substandard Outside 4'/6' Standard	Not Posted	6	Adequate width exists to restripe lanes and provide adequate shoulders
I-70 EB (west of interchange)	2	4'/varies	60	6	2 lanes across bridge Bridge widths 6'/12'/12'/12'/6' Blue River Bridge 6'/12'/12'/12' Over US 6 & SH 9
I-70 EB (east of interchange)	2 plus auxiliary	4'/varies	60	3.5	-
I-70 EB off Ramp	1-3	4'/6'	35	<3	Double left turn and single right
I-70 EB on Ramp	2-1	Substandard Outside 4'/6' Standard	Not Posted	5	Adequate width exists to restripe lanes and provide adequate shoulders
SH 9	2	C&G	35	<3	Raised median with left turn bays Substandard turn lane widths
US 6	2	C&G	35	>4	Raised median with left turn bays Adequate width exists to restripe lanes and provide adequate shoulders Grades are 4% at the intersection and 6% towards Keystone
Wilderness Road	1	C&G Gravel	25	4% at SH 9	Raised median with left turn bays *Substandard turn lane widths *Substandard lane widths at SH 9

Roadway	Lanes Each Direction	Shoulders (Inside/ Outside)	Posted Speed	% Grade	Comments * Substandard Items
Stephens Way	1	Gravel	25	Up to 7%	C&G within 300' of intersection with US 6 Steep Grades are about 200' to 400' from US 6 *Substandard sight distances *10 mph advisory speed under I-70
Rainbow Drive	1	C&G	20	5%	Raised median with left turn bay – allows double turn at SH 9 *Posted speed of 20 mph does not match city standards for Collector road *Substandard lane widths
4 th Street	1	C&G Gravel	Not Posted	<3% No Survey	Left turn lane at intersection with SH 9
3 rd Street	1	C&G Gravel	Not Posted	<3% No Survey	Left turn lane at intersection with SH9
W. Anemone Trail	1	C&G	20	<3% No Survey	-
E. Anemone Trail	1	C&G	20	<3% No Survey	-
Little Beaver Trail	1	C&G	25	<3% No Survey	*Narrow lanes, poor sight distance and substandard 60 degree skew Combination of narrow road and lack of sidewalk a concern Right turn lane at intersection with US 6
Dillon Ridge Road	1	C&G	25	Assume >3% No Survey	Left turn lanes
Bicycle/ Pedestrian Facilities	NA	2' suggested	NA	NA	Inconsistent segments of attached and detached sidewalks from four to 10 feet along SH 9 Attached and detached eight foot sidewalks along US 6 with no sidewalks on the east side of SH 9 south of Little Beaver Trail intersection Blue River Trail *No truncated domes on ramps *Inconsistent widths for off road bicycle facility Wheelchair ramps present

- e. Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were completed.

The chronology of the PEL planning activities is summarized as follows:

Launch Phase

Notice to Proceed:	August 2010
Project Leadership Team (PLT) Chartering Meeting: PLT Meetings	September 27, 2010 Monthly
Elected Officials Briefings:	October 2010
Resource Agency Meeting:	October 28, 2010
Business Stakeholder Meeting:	October 28, 2010
Project Website Launched:	November 5, 2010
Stakeholder Meeting:	November 8, 2010
Public Open House:	November 15, 2010
Video E-Mail Distribution:	December 16, 2010

Evaluate Phase

FHWA Meeting	February 4, 2011
Technical Team Workshop:	April 21, 2011
Elected Officials Briefings:	June 2011
Public Open House:	July 20, 2011
FHWA Meeting	March 29, 2012
Elected Official Briefings:	June, 2012
Resource Agency Briefings:	June, 2012
Public Open House:	June 13, 2012

The overall process is described in the project's PEL Study and appendices.

- f. Are there recent, current or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?

The I-70 Mountain Corridor Final Programmatic Environmental Impact Statement (PEIS) is the primary planning study in relation to the interchange. The PEIS provides Tier 1 NEPA analysis for an extended portion of I-70 including the portion in the vicinity of the interchange. The Tier 1 Final EIS calls for Tier 2 NEPA review for future improvements in the I-70 corridor and provides a limited level of baseline data for the project Study Area.

The proposed improvements are not considered Tier 2 actions under the PEIS because the improvements are not primary components of the Consensus Alternative, are independent of future I-70 corridor improvements, and would not preclude future I-70 corridor improvements.

2. Methodology used:

- a. What was the scope of the PEL study and the reason for completing it?

The PEL Study summarizes the SH 9 and US 6 improvement project process and findings. The PEL Study summarizes the following project documents:

Purpose and Need
Launch Phase Technical Report
Feasibility-Level and Concept Level Screening Analysis
Detailed-Level Screening Analysis
Public Involvement Summary
Environmental Resource Analysis

The Purpose and Need defines the scope of the study. The Launch Phase Technical Report provides baseline information for alternative development. The two screening reports applied CSS-based criteria adapted to the project to provide a rationale for narrowing down the range of alternatives and options advanced for further analysis. The Public involvement summary clarifies how agencies, stakeholders and the public were involved in the project. The Environmental Resource Analysis characterizes the effects of the proposed improvements and clarifies what future NEPA process and documentation appear to be appropriate at this time. The PEL Study provides information for future engineering and environmental analysis when funding becomes available.

- b. Did you use NEPA-like language? Why or why not?

The PEL uses NEPA-like language because NEPA documentation is anticipated once project funding becomes available.

- c. What were the actual terms used and how did you define them? (Provide examples or list)

The PEL Study uses standard NEPA terms and definitions such as purpose and need, alternatives, effects and mitigation.

d. How do you see these terms being used in NEPA documents?

Because the PEL Study used standard NEPA terms in the PEL Study, the terms will be applied directly in the NEPA clearance and documents.

e. What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by state DOT and the local agency, with buy-in from FHWA, the USACE, and USFWS and other resource/regulatory agencies.

Refer to the schedule presented in the response to Question 1 e. for key steps and coordination points in the process. Table 2 highlights the key PEL process steps and the associated decision-makers and participants.

Table 2 Key PEL Process Steps and the Associated Decision-Makers and Participants.

Key Steps	Decision Makers	Other Participants
Assessing Baseline/Affected Environment Conditions	CDOT and CSS Process Project Leadership Team (PLT)	FHWA, other agencies, stakeholders, public
Defining the Project’s Purpose and Need	CDOT and CSS Process Project Leadership Team (PLT)	FHWA, other agencies, stakeholders, public
Development of Alternative Screening Criteria Based on I-70 Mountain Corridor CSS Process (Concept, Feasibility and Detailed-Level Criteria)	CDOT and CSS Process Project Leadership Team (PLT)	FHWA, other agencies, stakeholders, public

The PLT included representatives from CDOT, FHWA, Town of Silverthorne, Town of Dillon, Summit County, stakeholders (The Blue River Watershed Group), and the business community (See Response to Question 1c for a complete listing of PLT members).

f. How should the PEL information be presented in NEPA?

The PEL Study should be summarized and incorporated by reference in the appropriate NEPA documentation. The NEPA process should update the information in the PEL Study, as appropriate. The need for and level of effort for an update would depend on the time between the completion of the PEL Study and initiation of the NEPA process, substantive changes in project site conditions, or substantive modifications to the proposed improvements.

3. Agency coordination:

- a. Provide a synopsis of coordination with federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.

Resource agency coordination was conducted during the study timeline. A resource agency meeting was conducted on October 28, 2010; and a formal letter of project recommendations was transmitted to the resource agencies on May 18, 2012. This letter included an invitation to the June 13, 2012 public meeting, a map of the proposed improvements and the Environmental Resource Analysis. The following resource agencies were on the project distribution list:

Colorado Department of Local Affairs -- Northern Mountain Region
Colorado Department Public Health and Environment
Colorado Department of Regulatory Agencies
Colorado Division of Water Resources
Colorado Division of Wildlife -- Northwest Region
Colorado Geological Survey
Colorado Historical Society
Colorado Public Utilities Commission
Colorado River Water Conservancy District
Colorado Water Quality Control Commission
Denver Water
US Army Corps of Engineers
US Environmental Protection Agency -- Region 8, NEPA Program/Forest Service
US Department of the Interior, Bureau Land Management -- CO
US Forest Service --Arapahoe National Forest
US Forest Service -- White River National Forest
US Department of Transportation -- Federal Transit Administration
US Fish and Wildlife Service -- Colorado Field Office

Federal:

FHWA has been continuously involved with the project and continues to be part of the project through their involvement in the PLT. The federal agencies referenced above have been contacted to describe the project. Baseline data collection included evaluation of issues and regulatory procedures administered by key federal agencies.

Tribal:

CDOT is responsible for all project level Tribal consultation and coordination. No formal consultation and coordination with Tribal Leaders was initiated during the early stages of the project. Consultation and coordination did occur during the preparation of the Tier 1 Mountain Corridor EIS.

State:

Colorado Parks and Wildlife (CPW) was contacted to describe the project. Baseline data collection presented in the Launch Phase report included evaluation of issues and regulatory procedures administered by this agency

Local:

The Town of Silverthorne, Town of Dillon and Summit County were active participants in the project through their membership in the PLT. During the Launch and Evaluate phases of the work, the PLT representatives from the Towns and County provided baseline information including traffic studies, traffic engineering design drawings, and information about local businesses and resources within the project study area.

The Blue River Trail, a resource protected under Section 4(f) of the Department of Transportation Act, was the subject of extensive consultation and coordination efforts with the Town of Silverthorne. The Blue River Trail was also characterized by the Final Programmatic EIS for the I-70 Mountain Corridor as a resource protected by Section 6(f) of the Land and Water Conservation Act. However, based on consultation with local officials those protections appear to be applicable to areas beyond the impact footprint for the proposed action. The Blue River may be subject to direct and indirect effects from the alternatives and options under consideration.

One other Section 4(f) resource may be subject to direct and indirect effects from the alternatives and options under consideration. This resource is the open space area owned by the Town of Dillon located along Straight Creek upstream from U.S. 6. Coordination with the Town confirms that this property is owned and managed as open space reserved for habitat protection. Based on this use and management intent, this resource is addressed as a Section 4(f) wildlife refuge and specific steps have been taken to avoid, minimize and mitigate potential effects on this resource.

- b. What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved during the PEL study?

Summit Stage

- c. What steps will need to be taken with each agency during NEPA scoping?

Additional consultation and coordination with local agencies (Town of Silverthorne, Town of Dillon and Summit County) and other agencies will occur once the NEPA process is initiated and final design proceeds. Specific steps with each agency will be defined individually based on previously disclosed issues and the potential for new issues that may have arisen since completion of the PEL Study. The PEL Study is expected to expedite the scoping process.

4. Public coordination:

- a. Provide a synopsis of your coordination efforts with the public and stakeholders.

The Public Involvement Report provides a thorough description of the project's coordination efforts with the public and stakeholders. In summary, the project included an extensive public involvement process (See Response to Comment 1e for a process schedule, including public outreach steps). This process, consistent with CDOT's commitment to the I-70 Mountain Corridor Context Sensitive Solutions (CSS) Program and the requirements of the National Environmental Policy Act (NEPA), was designed to:

- Include multiple opportunities for stakeholders and the public to provide input into the development of project rationale and purpose and need;
- Include multiple opportunities for stakeholders and the public to engage in scoping activities, including:
 - The identification of existing conditions considerations,
 - The identification of critical project issues, and
 - The development of project-specific alternative evaluation criteria;
- Ensure that alternatives development and screening processes had broad stakeholder involvement and support; and
- Ensure that the public was consistently informed of project activities throughout the life cycle of the project.

The process was conducted under the I-70 Mountain Corridor Context Sensitive Solutions Guidance and incorporated the six CSS process steps into three phases: Launch, Evaluate, and Deliver. The process involved meetings with the business community, local elected officials, and the public. Refer to the response provided for Question 1 e. for a summary schedule of the process.

5. Purpose and Need for the PEL study:

- a. What was the scope of the PEL study and the reason for completing it?

The scope of the PEL study was to fully document the process of evaluating alternatives and options to address the project's purpose and need and to address key issues prior to initiation of the NEPA process.

- b. Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.

The project's purpose and need is fully defined in a separate Purpose and Need document. The following highlights the key needs of the project:

SAFETY

- High crash risks exist along SH 9 and US 6, particularly at and near intersections.
- Backups onto I-70, particularly from the eastbound off ramp, substantially increase I-70 safety risks and accident rates.
- High speeds and speed differences involving merging interchange ramp traffic and through traffic on I-70 create safety issues and accidents, particularly in association with the eastbound off ramp and westbound on ramp.
- Cycling on local sidewalks along SH 9 and US 6 and evidence of shortcuts across I-70 ramps and lanes creates safety issues despite the presence of the Blue River Trail.

CAPACITY

- The number and density of signalized and unsignalized local access points and turning movements within close proximity to the I-70 interchange ramps serves existing commercial development, but causes much of the congestion along SH 9 and US 6 as well as difficulty accessing I-70.
- Skewed intersections, split phase signals and necessary green time for pedestrian movements, particularly at the SH 9/Wilderness intersection, limit through and left turn movement green times, resulting in reduced traffic capacity along SH 9 and US 6.
- Motorists using the westbound off ramp who plan to turn left onto Wilderness at the SH 9/Wilderness intersection are required to weave across two SH 9 through lanes in a short distance.
- The southbound left turn movement from SH 9 to eastbound I-70 has inadequate capacity/storage.
- Motorists using the eastbound off ramp turning right onto US 6 are required to negotiate southbound weaving vehicle movements on US 6 associated with the close proximity of the nearest interchange and intersection immediately to the south.
- Motorists using the westbound on ramp must weave into one lane over a short distance before merging with I-70 westbound traffic. This weave and merge is complicated by a steep grade.

MULTIMODAL CONNECTIVITY

- Existing local bus service and future transit service are important and should not be limited or precluded by future improvement plans.
 - Direct access for pedestrians and cyclists under I-70 is limited because some sidewalks and crosswalk transitions are in poor condition and/or are difficult to use in the winter.
- c. What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?

No further steps are needed to make this existing Purpose and Need a project-level Purpose and Need. The Purpose and Need may or may not need to be updated, when the NEPA process is initiated.

6. **Range of alternatives:** Planning teams need to be cautious during the alternative screen process; alternative screening should focus on purpose and need/corridor vision, fatal flaw analysis and possibly mode selection. This may help minimize problems during discussions with resource agencies. Alternatives that have fatal flaws or do not meet the purpose and need/corridor vision cannot be considered viable alternatives, even if they reduce impacts to a particular resource. Detail the range of alternatives considered, screening criteria and screening process, including:

- a. What types of alternatives were looked at? (Provide a one or two sentence summary and reference document.)

The Feasibility-Level and Concept-Level screening process evaluated four alternatives and eight options. The Detailed-Level screening process evaluated three alternatives, 11 options and the continuous auxiliary lane from the I-70 Frisco interchange to the Silverthorne/Dillon interchange. The screening reports fully describe and compare the alternatives and options analyzed prior to preparation of the PEL study (See PEL Study Appendixes D and E for more detail).

How did you select the screening criteria and screening process?

The criteria were based on the CDOT I-70 Mountain Corridor CSS process. The final criteria were customized to apply appropriately to the I-70 Silverthorne/Dillon interchange and were reviewed and effectively approved by the PLT, stakeholders, public and FHWA.

- b. For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s). (During the initial screenings, this generally will focus on fatal flaws)

Feasibility and Concept- Level Screening Evaluation

Alternatives

No fatal flaws were found with the alternatives, but the four roundabout interchange had serious flaws and was eliminated because two of the four roundabouts included in the alternative, those closest to the interchange, did not provide enough traffic capacity and because the roundabouts would be difficult for trucks including hazardous materials carriers to navigate safely. Due to considerable local interest in roundabouts, roundabouts at the SH9/Wilderness and US 6/Little Beaver intersections were advanced as options for further consideration.

Options

Fatal flaws were found with four options.

The Eastbound Off Ramp Option C: Combined Stevens Way/Frontage Road had fatal flaws associated with mobility and accessibility because it requires closing the existing off ramp and consolidating ramp traffic and local traffic on Stephens Way creating an offset off ramp condition at US 6.

The Westbound On Ramp Option C: Slip Ramp to Wilderness Road had fatal flaws because of the alternative creates a weaving requirement with safety and mobility problems while trying to solve a weaving problem at and near the SH 9 on ramp intersection.

The Straight Creek Flyover Option had fatal flaws because the elevated alignment over I-70 may conflict with future transit options using the I-70 alignment, is not compatible with the existing and planned roadway system and because it does not improve safety.

The Straight Creek Underpass Option had fatal flaws because the alignment under I-70 is not compatible with the existing and planned roadway system and because it does not improve safety.

Detailed-Level Screening Evaluation

The detailed-level screening analysis compared the alternatives and options that passed through the feasibility-level and concept-level screening analysis in relation to the CSS-based detailed-level screening criteria. The outcome of the analysis provided a clear and distinct advantage for one alternative relative to the other three and justification for specific improvement options to be implemented in concert with the recommended interchange alternative.

In summary, the Diverging Diamond was preferred because the Improved Diamond and SPUI involved:

- Traffic operations that would be less efficient thereby generating more overall delay than the DDI through 2035
- Design features that would result in more safety conflicts and risks than the DDI design
- ROW requirements, business access disruption and loss of parking impacts greater than those associated with the DDI
- Far more expensive construction, life cycle costs and construction phase disruption because the DDI does not require reconstruction and expansion of the existing I-70 bridge

With respect to the options, the following findings clarify why specific options were eliminated and others were advanced for further consideration:

- **Eastbound Off Ramp Options:** The purpose and need for eastbound off ramp options, (inadequate off ramp capacity resulting in backups onto I-70) could be resolved by the efficient operations of the DDI interchange design. No ramp widening or other capacity improvements were needed. With these improvements, there would be no benefits from the Eastbound Off Ramp Options A and B, so they were eliminated from further consideration. In addition, weaving and accidents on eastbound I-70 near the interchange would be most effectively addressed by constructing an eastbound auxiliary lane along I-70.
- **Westbound On Ramp Options:** The benefits of providing direct access to I-70 for westbound motorists with origins within the Wildernest development did not justify the unconventional design requirements necessary to make this connection and the additional costs. In addition, the DDI design does not require this diversion of traffic to achieve adequate operational conditions in 2035. These findings eliminated further consideration of Westbound On Ramp Option B.
- **SH 9/Wildernest Intersection Options:** The capacity and safety of the roundabout did not compare favorably with improvements to the conventional intersection design for motorists, cyclists or pedestrians. The footprint for the roundabout required considerably more right of way and business disruption than the other Options and created impacts on the Blue River trail and Blue River corridor that were avoided by the other Options. The roundabout was also more costly than the conventional intersection improvements. These findings eliminated further consideration of Option B, a roundabout at the SH 9/Wildernest intersection.
- **US 6/Little Beaver Trail Intersection Options:** Option A involved no substantive physical improvements to this intersection while Option B involved a roundabout at this location. Option A performed efficiently and safety with the DDI, so the highly disruptive and expensive roundabout design offers inadequate benefits to justify its impacts and costs. These findings eliminated further consideration of Option B, a roundabout at the US 6/Beaver Trail intersection.
- **Advanced Intersection Signal Timing and Equipment:** This improvement will be incorporated into the DDI signal timing system such that optimized operations of this design will result during normal conditions, inclement weather and when traffic volumes are unusually high (tunnel closure for reasons other than weather).

- c. Which alternatives should be brought forward into NEPA and why?

The Diverging Diamond interchange, improvements at the SH 9/Wilderness intersection (interim and ultimate) and improvements to the westbound on ramp (grade improvement and two-lane ramp) and a continuous auxiliary lane from Frisco to Silverthorne were advanced for further consideration. As a package, these improvements fully address the project's purpose and need and provide flexibility for phased implementation based on funding availability.

- d. Did the public, stakeholders, and agencies have an opportunity to comment during this process?

Yes. As described in the PEL Questionnaire under item 1.e., the public, stakeholders, and agencies have participated in various ways throughout the process. PEL Study Appendix F provides a summary of the overall public involvement program.

- e. Were there unresolved issues with the public, stakeholders and/or agencies?

Final details about right of way requirements, access changes and related impacts on businesses were unresolved. These details will be resolved in the Final Design phase of the project.

7. Planning assumptions and analytical methods:

- a. What is the forecast year used in the PEL study?

2035

- b. What method was used for forecasting traffic volumes?

Future travel demands were developed using a variety of sources. Existing traffic counts conducted in August 2010 were the starting point for all future-year travel forecasts. These counts and the trip patterns provided the base over which the more generalized demand growth rates from the I-70 Mountain Corridor RDPEIS model were then overlaid. This methodology accounts for both local travel patterns and constraints while still being consistent with the overall macro-level growth patterns suggested in the RDPEIS model.

In March 2007, Felsburg Holt & Ullevig (FHU) conducted a traffic study for the Town of Silverthorne to assess the impact of proposed new commercial projects near the existing factory shops at the interchange. The 2030 forecasts from the FHU study are nearly identical with those reported for 2035 in this study. While there were some minor differences, most notably the fact that FHU forecasted more growth towards Keystone during peak periods. Both this study and the FHU study recognize the need for improvements to the interchange and the SH 9/US 6 corridor to maintain adequate traffic flows with future traffic growth.

- c. Are the planning assumptions and the corridor vision/purpose and need statement consistent with the long-range transportation plan?

Yes. Response to Questionnaire Item 7.d. addresses how transportation planning assumptions from prior studies were integrated into the PEL Study analysis.

The need for safety, capacity and multimodal connectivity improvements where SH 9 and US 6 meet at the I-70 Silverthorne/Dillon interchange is described within the I-70 Mountain Corridor Final Programmatic Environmental Impact Statement (PEIS). An improvement at the interchange is defined as early action project and priority of the “Consensus Recommendation” or Preferred Alternative defined in the I-70 Mountain Corridor Record of Decision (ROD). The PEIS also describes “continuous eastbound auxiliary lanes” from Frisco to Silverthorne (Mileposts 202.7 to 205.1) as part of the Consensus Recommendation.

The proposed improvements are not identified in the CDOT 2012-2017 *Statewide Transportation Improvement Program* (STIP), but “Silverthorne Interchange Reconstruction” is identified in the *Intermountain Transportation Planning Region 2030 Regional Transportation Plan* (RTP).

- d. What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs and network expansion?

Future year travel demands were estimated by splitting the land uses of the study east and west of US 6/SH 9 and further north and south of I-70. This resulted in four analysis areas; Silverthorne West, which is west of SH 9 and between I-70 and roughly 6th Street, Silverthorne East bounded west by SH 9 between I-70 and 6th Street, Dillon west (west of US 6 between Dillon Dam Road and I-70), and Dillon east of US 6 between I-70 and Dillon Dam Road. Two other analysis areas were also taken into consideration. SH 9 north of Silverthorne from about 6th Street to the end of the Silverthorne town area development, and US 6 southwest of Dillon Dam Road including Keystone. From the sources mentioned in Questionnaire Item 7b, future year land use and daily trips forecasts were developed by AECOM to reflect not only regional growth patterns but also anticipated Dillon/Silverthorne generated traffic growth from future development. The following in Table 1 are the transportation demands and the corresponding development generating that demand.

Table 1 Forecast Land Use and Daily Trip Forecasts (Saturday, August)

	Units		2000	2025	2035		2000	2025	2035
Population	persons	Silverthorne, north of Study Area	1,950	4,800	5,710	Dillon, West of Study Area	2,840	480	570
Households	households		670	1,860	2,210		1,190	190	230
Basic Employment	# of emp.		420	1,220	1,410		1,080	3,110	3,600
Retail Employment	# of emp.		120	130	150		300	330	380
Service Employment	# of emp.		390	730	840		1,000	1,850	2,140
Total Employment	# of emp.		930	2,080	2,410		2,380	5,290	6,120
Daily Trips Generated, Saturday, Aug.	veh. trips		9,290	21,700	24,940		19,520	19,740	22,690
Population	persons	Silverthorne, west of Study Area	1,910	1,000	1,190	Dillon, East of Study Area	2,280	340	400
Households	households		810	390	460		930	130	150
Basic Employment	# of emp.		790	2,290	2,650		320	930	1,080
Retail Employment	# of emp.		220	240	280		90	100	120
Service Employment	# of emp.		730	1,360	1,570		300	550	640
Total Employment	# of emp.		1,740	3,890	4,500		710	1,580	1,830
Daily Trips Generated, Saturday, Aug.	veh. trips		12,820	15,980	18,370		10,870	7,310	8,400
Population	persons	Silverthorne, east of Study Area	1,240	530	630	Dillon/ Keystone, south of Study Area	3,240	3,260	3,880
Households	households		440	210	250		1,110	1,260	1,500
Basic Employment	# of emp.		360	1,040	1,200		500	1,400	1,620
Retail Employment	# of emp.		100	110	130		180	200	230
Service Employment	# of emp.		330	620	720		1,080	1,880	2,180
Total Employment	# of emp.		790	1,770	2,050		1,760	3,480	4,030
Daily Trips Generated, Saturday, Aug.	veh. trips		6,960	7,170	8,240		30,520	34,300	39,420
<i>Totals</i>						<i>Population</i>	13,460	10,410	12,380
						<i>Total Employment</i>	8,310	18,090	20,940
						<i>Daily Trips Generated, Saturday, Aug.</i>	89,980	106,200	122,060

The data represented in Table 1 indicates an overall drop in population in the core interchange area reflecting further commercialization of the interchange area resulting in an increase in overall travel demand caused by commercial and recreation traffic. Travel demand growth is expected to more than double north of the study area while growth south towards Keystone and Loveland Pass is expected to increase at a much lower rate. Figure 3 on the following page depicts this growth graphically showing some of the data presented in Table 1.

Further detail about the traffic forecasting resulting from the land use and economic development assumptions can be found in the PEL appendix documents.

8. **Environmental resources (wetlands, cultural, etc.) reviewed.** For each resource or group of resources reviewed, provide the following:
 - a. In the PEL study, at what level of detail was the resource reviewed and what was the method of review?

Qualitative and/or quantitative detail was provided for all of the key resource areas in a manner consistent with CDOT’s definition of an environmental overview. The level of detail provided and the methods used were determined by the level of specificity possible with the design drawings at this stage of the project, and by the level of detail needed to address impact thresholds defined in CDOT’s NEPA manual for a Categorical Exclusion or by permit requirements.

Some examples include:

- Acres of right of way and the number of business displacements are provided because the CDOT NEPA Manual includes criteria for these considerations in relation to NEPA documentation requirements (Categorical Exclusions vs. EAs and EISs.)
- Acres of wetland impact were provided because they specifically define the corresponding Section 404 permit requirements.
- Qualitative findings are provided in relation to Section 4(f) resources because the potential effects (de minimis) can be addressed adequately without quantities.

b. Is this resource present in the area and what is the existing environmental condition for this resource?

The documentation addressed all of the applicable resources. Further detail can be found in the PEL Study appendices.

c. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?

Wetlands: loss of 0.175 acres

Noise: A noise analysis has been performed. Further evaluation of mitigation is anticipated.

Business Disruption/Displacement: There are right of way impacts to businesses and impacts to their access points. Final design efforts will occur to avoid and/or minimize these effects. Compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Uniform Act will address compensation and relocation assistance. An estimate of 0.73 acres of right of way is needed for the project.

Section 4(f) Resources: Section 4(f) de minimis documentation.

d. How will the data provided need to be supplemented during NEPA?

The following supplements are needed:

- Formal wetland delineation and associated Section 404 permit steps
- Water quality analysis and permitting
- Initial Site Assessment
- Noise mitigation analysis
- Further evaluation of potential business access changes during final design
- Section 4(f) de minimis documentation

- 9. List environmental resources you are aware of that were not reviewed in the PEL study and why? Indicate whether or not they will need to be reviewed in NEPA and explain why.**

None.

- 10. Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where it can be found.**

Yes. The analysis references the cumulative effects analysis of the Tier 1 EIS for the I-70 Mountain Corridor, lists cumulative effects from that analysis, relates impacts from the proposed improvements to those effects and then clarifies related Tier 1 mitigation measures and commitments. In summary, the proposed improvements incrementally contribute to each of the cumulative effects defined in the Tier 1 EIS. However, the incremental contributions from the proposed improvements would be considered minor and would be addressed by ongoing programs and mitigation measures cited in the Tier 1 EIS, project specific measures presented in the PEL Study and refinements that may result from the NEPA process and project related permits. The cumulative effects analysis is presented in PEL Study Appendix G.

- 11. Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.**

Measures to address water quality, noise, business displacement and Section 4(f) effects should be analyzed. Water quality measures to be included in the final design would refine the designs for detention ponds and strategies for handling runoff into Straight Creek and the Blue River.

- 12. What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?**

The PEL Study is available to the agencies, stakeholders and the public on the project website and from the Resident Engineers office (P.O. Box 399 Dumont, CO 80436). The PEL documentation will be used during the NEPA scoping process and will be summarized and incorporated by referenced in future NEPA documentation. A public meeting will be held once project funding becomes available. This meeting will be designed to address applicable NEPA scoping requirements.

13. Are there any other issues a future project team should be aware of?

- a. Examples: Controversy, utility problems, access or ROW issues, encroachments into ROW, problematic land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.

There are no other substantive issues to describe to a future project team. However, some of the key areas of focus for the future project team include:

- Addressing Clean Water Act and related permitting
- Resolving construction phase Section 4(f) bicycle and pedestrian access along the Blue River Trail
- Noise mitigation (if determined to be required by further study)
- Negotiating with land owners and business owners in relation to right of way requirements, temporary and permanent access changes, and related impacts.