Part 1 –Value Engineering Program

Number	Question	Background and Instructions
1a	**Does your DOT have a formalized VE Program that includes:** **(** *Select all that apply):* ☐ **Agency VE Policy documented and adopted** ☐ **A VE Coordinator established** ☐ **A VE Training Plan or sustained initiative established** ☐ **VE Program performance goals & measures approved** ☐ **VE Program evaluation and reporting conducted** ☐ **VE analysis procedures and guidelines developed** ☒ **No formalized VE Program currently exists at the DOT** **Comments:**	Check each program element that currently exists at the DOT. Select "VE Program performance measures approved" if the DOT has goals and measures besides those used in the FHWA reporting requirements to evaluate the effectiveness of the VE Program. Briefly describe these goals and measures in the "Comments" space. Select "VE Program evaluation and reporting conducted" if the DOT prepares an annual report (separate from the FHWA reporting requirements) that summarizes and evaluates the performance of the VE Program. Briefly describe in the "Comments" space. Select "No formalized VE Program currently exists at the DOT" if the DOT does not have a VE Program comprised of any the elements listed.
1b	**If your DOT's VE Program has an official VE Policy, indicate which of the following items are included in the policy:** **(***Select all that apply):* ☐ **Processes to identify projects for VE analyses** ☐ **Processes to assure that required VE analyses are completed** ☐ **Processes to conduct VE analyses** ☐ **Timing of VE analyses** ☐ **Processes to review/accept/reject VE recommendations** ☐ **Processes for tracking and monitoring VE analyses** ☐ **Processes for tracking and monitoring implementation of VE recommendations** ☐ **VE coordinator roles and responsibilities established** ☒ **No official VE Policy is in place, or the general requirements of 23 CFR 627 are followed** **Comments**: Only a reference to the CFR and a couple general statements that do not go into process. The state has drafted some language in their Project Delivery Manual to discuss expectations and requirement for VE. See next question.	Select each item that is currently included in the DOT's VE Policy.

Number	Question	Background and Instructions
2	**Provide links to any of your DOT's currently available, VE-related web sites, such as:** **X General VE Program Information** **Official VE Policy** **General VE Processes and procedures** CDOT has an updated section in the project development manual. Currently, the process is included in section 2.08 of the PDM at: http://www.coloradodot.info/business/designsupport/bulletins_manuals/project-development-manual/pdm_sect8_2001.doc/view	
3a	**Describe any practices your DOT uses to make the VE Program, and VE analyses conducted, more successful.** CDOT performs VE studies in the NEPA stage. This helps in making major changes while still in the NEPA decision stage.	Briefly describe individual practices or policies that enable VE analyses to be conducted in a successful manner. Examples for discussion include but are not limited to: • Program Coordination and Communication • Planning, coordinating and conducting VE analyses • Integrating VE within Project Development • Coordinating VE with other project cost and quality review techniques • Reviewing/Accepting/Rejecting recommendations • Monitoring and tracking activities • Other practices and policies
3b	**Describe any practices your DOT uses to encourage more successful implementation of VECPs during construction.** CDOT Encourages all Contractors to submit VECPs by discussing the possibility in the Preconstruction Conference.	Briefly describe individual practices or policies that enable VE Change Proposals to be implemented in a successful manner. Examples include but are not limited to: • Encouraging submittals of VECPs • Reviewing/approving/rejecting VECPs • Monitoring and tracking the implementation of VECPs • Implementing VECPs on design-build projects
4a	**Identify the typical project factors and associated measures that your DOT requires to be analyzed on VE Analyses.** Safety Cost Savings/Efficiency Schedule Savings Environmental	Identify and briefly describe how project functions (e.g., traffic flow, safety) are typically addressed during the Investigation, Speculation, and Evaluation phases of your VE analyses; explain the typical level of effort expended in analyzing these critical project functions.

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4b	**Describe how your DOT incorporates life-cycle cost analyses in VE analyses.** LCCA are used as part of the determination of cost benefit. This is done as part of the study when recommendations are presented.	Summarize your DOTs use of life cycle cost analyses while conducting VE analyses; indicate whether they are conducted as part of the study directly, if the study incorporates an independently conducted life cycle cost analysis, etc.
4c	**What percentage of VE analyses completed in FY 10 occurred in during the following stages of project development:** 0% ***Planning and concept development phase*** 0% ***Up to 30% Design Phase (i.e., preliminary design, alternative analysis, environmental review)*** 0% ***30-60% Design Phase (i.e., final design)*** 0% ***60% or later Design Phase (i.e., final plans complete, PS & E)*** **Provide comments describing your experience regarding the timing of the VE analyses:** CDOT conducted no VE Analyses in FY 2011	For the total number of VE analyses completed in FY 10 (as reported in Question 9a) select the approximate percentage of analyses completed during the timetables shown. Provide additional details about successes and lessons learned, or describe when your DOT would not follow the general trend.
4d	**For design-build projects, identify the timetable that best describes when VE analyses are typically conducted by your DOT**. *Select one of the following:* ☒ **Planning/scoping** ☒ **Prior to Issuance of RFP** ☐ **After Issuance of RFP** ☐ **State DOT does NOT currently use design-build** **Provide comments describing your experience regarding the timing of the VE analyses:**	Select the timetable that best matches your DOTs timing for scheduling and conducting analyses. If your state does not use or permit design-build contracting, indicate as appropriate and proceed to question 4e. Use the "Comments" section to briefly detail the approach taken to conduct the study based on the stage of the project when the study was conducted and identify successes and lesions learned.
4e	**If your DOT conducts multiple VE analyses on Major Projects, describe the points in the project development process where the analyses occur.** During NEPA after preferred alternative is identified. and then again during design effort that follows NEPA for each individual phase or project that implements the NEPA decision.	Identify the common points in the project development process when VE analyses typically occur for Major Projects ($500 Million or greater). If the DOT does not conduct multiple analyses for Major Projects, proceed to Question 5.

Number	Question	Background and Instructions
5	**Briefly describe any special analyses conducted by your DOT in FY 2011.** CDOT did not conduct any new Special Analyses in FY 2011.	Describe any business process, review of standards & specifications, or any other unique analyses that used the VE job plan for which cost savings were not calculated. Answer "N/A" as appropriate.
6	**Briefly describe a successful VE analysis that was completed by your DOT in FY 2011**. CDOT did not conduct any new Value Engineering Special Analyses in FY 2011.	Briefly describe a successful VE analysis or "lesson learned" from conducting a VE analysis that is an agency "best practice".
7	**Describe a unique or innovative VE recommendation or VE Change Proposal that provided significant benefit to the project on which it was implemented**	Describe an implemented recommendation or VE Change Proposal that could potentially find application in other projects or by other DOTs.
8a	**Enter the number of State DOT, FHWA, and other individuals receiving VE training in FY 2011** **0 DOT** **0 FHWA** **0 Other**	
8b	**Identify the method(s) that best describe(s) your DOT's approach to conducting VE training and education (***Select all that apply):* ☒ **Short-duration orientation presentations for agency leadership** ☐ **Short-duration orientation presentations for technical staff** ☒ **Short-duration workshops/analyses** ☐ **NHI VE Workshop** ☐ **SAVE Mod I training course** ☐ **SAVE Mod II training course** ☐ **Other**	

Part 2 --Summary of VE Analyses

Number	Question	Background and Instructions
9a	**Total # of Analyses Completed in FY 2011** *0 In-House* *4 Consultant*	Report only on analyses that for which all activities were completed; distinguish between analyses accomplished by in-house resources and consultants
9b	**# of Analyses Completed in FY 2011 that were required by Federal Law** *0 In-House* *2 Consultant*	Of the numbers reported in Question 9a, indicate the number of analyses that were conducted to meet current Federal Regulations.
9c	**# of Analyses Completed in FY 2011 that were specially designated by the Secretary.** *0 In-House* *1 Consultant*	The Secretary of Transportation has the authority to require states to conduct VE analyses on any project determined to be appropriate (as specified in 23 USC 106(e)(2)(c)). This authority has been delegated to the Division Administrator in each Division Office. Of the analyses reported in Question 9a, indicate if any of these were specially directed.
9d		
9e		
9f	**Anticipated # of Analyses to be Completed during FY 2012 and 2013.** 0 ***FY 2012 # In-House*** 4***FY 2012 # Consultant R1= 2,R2 =1 , R6 = 1,*** 0 ***FY 2013 # In-House*** 0 ***FY 2013 # Consultant***	For informational purposes only, report on any analyses that were initiated in 2011 but will be finalized in 2011, in addition to all other planned analyses for completion in 2011 and 2012 if information is available.
10a	**Estimated costs associated with conducting the VE analyses** **<u>TOTAL $207, 000 + unknown costs for I25 Lane Balancing</u>**	When reporting on cost of analyses completed, include the following: • Contract amounts associated with consultant-led VE analyses • Approximate salary, travel and incidental in-house costs associated with supporting consultant-led VE analyses • Approximate salary, travel and incidental costs associated with conducting in-house VE analyses • Approximate costs with documenting in-house VE analyses

Number	Question	Background and Instructions
10b	**Estimated costs of the projects studied** Total 452,000,000	Use the estimated costs of the projects at the time the VE study was conducted. Project Costs include: • Planning • Environmental Compliance • Preliminary Engineering • Construction Estimate • Construction Engineering Estimate
11a	**Enter the total number of recommendations proposed** *Total 61*	Enter the total number of recommendations proposed.
11b	**Enter the total number of recommendations approved** *Total 38*	Enter the total number of recommendations that were approved.
12a	**Enter the value of recommendations proposed** **Total $28,850,000 + Unknown costs from US36**	Enter the total **net** value of the proposed recommendations.
12b	**Enter the value of recommendations approved** **Total $11,627,000 + Unknown costs from US36**	Enter the total **net** value of the recommendations that were approved.
13a	**Enter the total number of VECP Submitted** 118	Enter the total number of VECP that were submitted.
13b	**Enter the total number of VECP approved** 32	Enter the total number of VECP that were approved.
14a	**Enter the total value of VECP submitted** **Total $25,024,556 +Missing VECP #1 from Bear Creek Bridge**	Enter the total value of the proposed VECP.
14b	**Enter the total value of VECP approved** **Total $25,024,556**	Enter the total value of the approved VECP.

Part 3-Benefits of VE Analyses and VE Change Proposals

Number	Question	Background and Instructions
15	**Tabulate the approved VE recommendations according to functional benefit** **0 safety** **6 operations** **4 environment** **13 construction** **15 other**	Report each approved recommendation (from Question 11b) in terms of the project feature or features that recommendation benefits. If a specific recommendation can be shown to provide benefit to more than one feature described below, count the recommendation in **each category that is applicable**: • **Safety:** Recommendations that mitigate or reduce hazards on the facility • **Operations:** Recommendations that improve real-time service and/or local, corridor, or regional levels of service of the facility. • **Environment:** Recommendations that successfully avoid or mitigate impacts to natural and or cultural resources. • **Construction:** Recommendations that improve work zone conditions, or expedite the project delivery. • **Other:** Recommendations not readily categorized by the above performance indicators.
16	**Tabulate the approved VECPs according to functional benefit** **1 safety** **7 operations** **6 environment** **16 construction** **2 other**	Report each approved change proposal (from Question 13b) in terms of the project feature or features that recommendation benefits. If a specific recommendation can be shown to provide benefit to more than one feature described below, count the recommendation in **each category that is applicable**: • **Safety:** Recommendations that mitigate or reduce hazards on the facility • **Operations:** Recommendations that improve real-time service and/or local, corridor, or regional levels of service of the facility. • **Environment:** Recommendations that successfully avoid or mitigate impacts to natural and or cultural resources. • **Construction:** Recommendations that improve work zone conditions, or expedite the project delivery. • **Other:** Recommendations not readily categorized by the above performance indicators.

Part 4-FHWA Stewardship & Oversight of the VE Program

(The following information is for use by the FHWA only)

Number	Question	Background and Instructions
17a	**Is VE evaluated as part of your Division's Risk Assessment process?** ☒ **Yes** ☐ **No**	
17b	**If the answer to Question 17a is "Yes", how is VE currently evaluated?** *Select One of the Following:* ☐ **Directly (i.e., VE-specific risk assessment conducted)** ☒ **Indirectly (e.g., VE risk assessed via Design Program)** **Comments:**	
17c	**What was the identified level of risk assigned to VE by your Division?** *Select One of the Following:* ☒ **High risk to program** ☐ **Moderate to program** ☐ **Low risk to program** ☐ **Not evaluated**	
18a	**Did your Division Office conduct a review of the DOT's VE Program between FY 2008 and FY 2011?** ☒ **Yes** ☐ **No**	**It was a simple check of the past three years. We created a list from FMIS of construction projects >$20M. Then verified if a VE was performed. All but one was performed. It was a D/B project and should have had a VE.**
18b	**Will your Division Office conduct a Process Review of the DOT's VE Program in FY 2012?** ☐ **Yes** ☒ **No**	**We will be systematically communicating VE expectations to various level at CDOT and we have jointly created a VE section in the State's Project Delivery Manual.**
19a	**Is VE discussed in your Division's Stewardship and Oversight Agreement with your DOT?** ☒ **Yes** ☐ **No**	
19b	**If the answer to Question 19a is "Yes", describe how the VE Program is currently addressed in your Division's Stewardship and Oversight Agreement with your DOT.** *Select All that Apply:* ☒ **VE is addressed by reference in Design Oversight Section** ☒ **Federal Regulations for VE are referenced** ☐ **State DOT's VE Policies and Procedures are referenced** ☐ **Division's VE Coordinator is identified** ☐ **Division's general roles and responsibilities are discussed** ☒ **Division's participation in VE Analyses is discussed** ☐ **Division's role in review of VE recommendations is discussed** ☐ **Division's role in VE Program monitoring is discussed**	

Number	Question	Background and Instructions
20a	**Describe your Division's typical level of participation in VE Analyses** *Select that answer that best applies:* ☐ **Normally (80-100% of projects)** ☒ **Frequently (60-80% of projects)** ☐ **Occasionally (40-60% of projects)** ☐ **Seldom (20-40% of projects)** ☐ **Rarely (0-20% of projects)**	
20b	**Describe your Division's typical level of participation in the approval/rejection process for VE recommendations** *Select that answer that best applies:* ☐ **Normally (80-100% of projects)** ☒ **Frequently (60-80% of projects)** ☐ **Occasionally (40-60% of projects)** ☐ **Seldom (20-40% of projects)** ☐ **Rarely (0-20% of projects)**	
20c	**Describe your Division's level of effort monitoring the implementation of recommendations** *Select that answer that best applies:* ☐ **Normally (80-100% of projects)** ☐ **Frequently (60-80% of projects)** ☐ **Occasionally (40-60% of projects)** ☐ **Seldom (20-40% of projects)** ☒ **Rarely (0-20% of projects)**	
21	**Describe your Division's efforts to ensure that the States complete the required VE Analyses prior to authorizing a project for construction:** *Select that answer that best applies:* ☐ **All projects with full FHWA oversight are checked for compliance** ☐ **Projects with full FHWA oversight are "spot checked" for compliance (e.g., sampling & assessment of projects, process reviews)** ☐ **State administered projects are "spot checked" for compliance** ☒ **VE policies, procedures & guidance verified for compliance** ☐ **VE program evaluation and reporting verified for compliance** ☐ **Completion of required VE analyses is not checked formally**	**We have a box on our checklist that all engineers fill out prior to granting FMIS authorization for Construction**