

Value Engineering (VE) FAQs

Question 1: What costs should be included to determine whether or not a project meets thresholds requiring a VE study for a project?

According to DES 01-03, the estimated total project cost includes all financial cost to deliver the project as programmed in the STIP including planning, development, preliminary engineering, design, utility relocation, and construction, including but not limited to, the costs for environmental considerations, right of way acquisition, permitting, geo-environmental considerations, internal ODOT resources, consultant contracts and construction contracts.

Question 2: How much does a Value Engineering Study cost?

From June 2018 to November 2019, the 8 VE studies were conducted at an average cost of \$70,000. However, the average Return on Investment (ROI) for these 8 projects was \$97 to \$1, meaning for every \$1 spent on the study the study produced \$97 in cost savings to the project.

Question 3: How does a VE study benefit my project?

VE can be utilized to benefit all aspects of the project such as the design, traffic operations, construction, maintenance, specifications, standard drawings, and planning. The benefits ODOT will gain from performing VE include:

- Improved value, quality, and cost effectiveness of projects, operations, and processes.
- Opportunity for innovation.
- Unbiased and in-depth multi-disciplinary review of the project by independent Subject Matter Experts.
- Stabilize the project scope and provides a validation of the costs.
- Identify solutions to enhance project opportunities and mitigate project threats impacting scope, schedule, and budget.

According to FHWA, Value Engineering is also “the most effective technique for identifying and eliminating unnecessary costs and enhancing value”.

Question 4: What if my project isn't a good candidate for a VE study, is there an exemption required to waive this requirement?

Certain projects that do exceed \$25 million in estimated total project cost, but do not include one or more of the other attributes listed in [VE Highway Directive DES 01-03](#) may not be good candidates for a VE study. For these projects, the Transportation Project Manager (TPM) and/or Resident Engineer-Consultant Projects (RE-CP) may submit a written request to the VE/Project Risk Engineer to waive the VE study requirement for a project.

Question 5: Is there an official form that must be completed to apply for a VE study exemption?

No. An email request to waive the VE requirements for a project to the VE/Project Risk Engineer is sufficient.

Question 6: When is the best time to perform a VE Study? During planning, scoping, design development, or final design?

There is not a universal "best time" to conduct VE study that would apply to each and every project. The simplest answer is that a VE should be conducted as soon as sufficient information is available to perform an analysis. Some projects may benefit from two studies, one early in design to inform design development and a second after DAP, for example, to evaluate constructability.

The VE program can provide guidance on specific projects to determine the "optimum" timing of a VE study to maximize value added. There is greater potential for added value if the VE study is conducted early in the project rather than later.

Question 7: What is the proper team size for a VE team?

There are no set rules regarding the number of participants in a VE study team or the amount of time required to complete a VE study. The VE process provides flexibility to best meet the objectives of each project being analyzed, and these considerations should be carefully evaluated during the planning and coordinating activities for the VE study. Generally, a team of 5 to 10 persons with diverse backgrounds suited to the scope and complexity of the project seems to work best.

Question 8: How long does a typical VE study take?

Typically, a VE study is 5 days in length, but can vary based on project size and complexities. Projects such as bridge painting or large pavement preservation projects can be shortened to a 3 day VE study. Conversely, projects such as large urban interchange projects may benefit from a VE study that is two weeks in length.

Question 9: Is there a form for the Region Manager or Program Funding Manager to reject a VE recommendation?

A form is currently under development and will be posted to the Project Risk Management/ Value Engineering Website in early 2020.