

CHAPTER 13 - VALUE ENGINEERING REQUIREMENTS

13.1 OVERVIEW

Value Engineering (VE) is a systematic process used by an independent multi-disciplinary team to improve the value of a project, product or service through the identification and analysis of functions. Project functions are the intent or purpose of the components that make up the project. FDOT VE teams strive to optimize the use of allocated funds without reducing safety, quality, or performance by strictly following the ***Value Engineering Program (FDOT Procedure 625-030-002)***.

Congress authorized the use of VE on Federal-Aid Highway Program projects beginning in 1970. The National Highways Designation Act of 1995 (amended in 2005 and 2012) requires VE be performed on Federal-Aid highway projects as identified in [23 United States Code \(USC\) 106](#) and further defined in [23 Code of Federal Regulations \(CFR\) 627](#).

13.2 REQUIRED PROJECTS

The following Federal-Aid Highway Program projects are required to utilize the VE process per [23 CFR 627](#):

- Projects on the National Highway System (NHS) with an estimated total cost of \$50 million or more and are not delivered using the Design/Build method of construction.
- Bridge projects on the NHS with an estimated total cost of \$40 million or more and are not delivered using the Design/Build method of construction.
- Any major project (as defined in [23 USC 106\(h\)](#)) located on or off the NHS that utilizes Federal-Aid highway funding in any contract or phase comprising the major project, and are not delivered using the Design/Build method of construction.
- Any other project the Federal Highway Administration (FHWA) deems applicable.

The total estimated cost shall include all costs associated with all phases of the project, including environment (Project, Development and Environment, PD&E), design, right-of-way, utilities and construction.

The VE study shall be performed during one of the following phases of project development: Planning, Project Development & Environmental (PD&E) or Engineering

Design. The optimal time to perform VE is during PD&E and continuing up to thirty percent design plan review. Projects delivered with the Design/Build method of construction do not require VE Analysis.

13.3 ADDITIONAL PROJECTS

Additional projects outside of the federal requirements identified in **Section 13.2** may also utilize the VE process. Projects to consider should include:

- A. Projects on the State Highway System (SHS) with an estimated total cost of \$25 million or more that utilizes FAHP funding and are not delivered using the Design/Build method of construction.
- B. Projects that significantly exceed initial cost estimates
- C. Complex projects
- D. Projects requested for VE by the Department
- E. Projects with high right-of-way costs
- F. Projects and processes with unusual problems

13.4 VALUE ENGINEERING COORDINATION

The District LAP Administrator will coordinate with the District VE Coordinator and the Local Agency on those projects that require VE per the thresholds defined in **Section 13.2**. VE Analysis requires a multi-disciplinary team of experts and may also require consultant support. VE Analysis is eligible for reimbursement under the Federal-Aid Highway Program. District staff will coordinate with the Central Office on a project by project basis for additional support for VE.

13.5 VALUE ENGINEERING CHANGE PROPOSALS

Value Engineering Change Proposal (VECP) is a construction contract change proposal submitted by the construction contractor based on a VECP provision in the contract. These proposals may improve the project's performance, value and/or quality, lower construction costs, or shorten the delivery time, while considering their impacts on the project's overall life-cycle cost and other applicable factors.

Local Agencies are encouraged to include a VECP clause or such a clause under a

different name, such as Cost Savings Initiative (CSI) Proposal. Whenever such clauses are used, the local agency considers changes that may improve the project's performance, value and quality, shorten the delivery time, or lower construction costs, while considering impacts on the project's overall life-cycle cost and other applicable factors. FDOT implements its CSI program through the use of the CSI specification in contracts and ***FDOT procedure 625-030-005, Cost Savings Initiative Proposal***. All LAP projects greater than \$10 million dollars are Type I projects and required to use the ***FDOT Standard Specifications for Road and Bridge Construction***, which includes the CSI specification.

13.6 RESOURCES

[Code of Federal Regulations, Title 23, Chapter I, Part 627](#)

Value Engineering Program Procedure (625-030-002)

<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625030002.pdf>

Cost Savings Initiative Proposal (625-030-005)

<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625030005.pdf>

Value Engineering - Project Management Web Page

[http://www.dot.state.fl.us/officeofdesign/ProjectReview/ValueEng /](http://www.dot.state.fl.us/officeofdesign/ProjectReview/ValueEng/)