

South Carolina Department of Transportation

Engineering Directive

Directive Number: ED-34 **Effective:** June 23, 2016

Subject: Value Engineering Studies

References: 23 Code of Federal Regulations, Part 627

Purpose: Ensure Value Engineering Studies Meet Federal Requirements

This Directive Applies to: All Federally Funded Projects

The Federal Highway Administration (FHWA) defines value engineering (VE) as the systematic process of review and analysis of a project, during the concept and design phases, by a multidiscipline team of persons not involved in the project. The VE process is conducted to provide recommendations for providing the needed functions, safely, reliably, efficiently, and at the lowest overall cost while improving the value and quality of the project and reducing the time to complete the project. The successful application of the VE process can contribute measurable benefits to the quality of the surface transportation improvement projects and to the effective delivery of the overall Federal-Aid Highway Program.

The South Carolina Department of Transportation (SCDOT) will conduct a VE study on projects requiring federal assistance with the following thresholds:

- National Highway System (NHS) \$50 million
- Bridge (NHS) \$40 million
- Major Projects \$500 million

In accordance with Title 23, Part 627 of the Federal Code of Regulations, VE studies are not required on design-build projects.

The estimated total cost includes preliminary engineering, right-of-way, utility, and construction costs. The VE study should be scheduled upon completion of the design field review plans. The Director of Preconstruction or FHWA may require a VE study to be performed on any project regardless of its estimated cost. Also, any member of the Value Engineering Review Committee (VE Review Committee) may submit a request for a VE study to the Director of Preconstruction for consideration.

The VE study will be performed by a multidisciplinary team composed of appropriate representatives from various sections within SCDOT, the FHWA, and others as required. The VE Study Team will follow the American Association of State Highway and Transportation Officials' Guidelines for Value Engineering (latest edition) when performing the studies in order to develop recommendations for improving the quality of the project, as well as identify areas for potential cost savings. The VE Study Team is looking for the optimum blend of scheduling, performance, constructability, maintainability, environmental stewardship, safety, and cost

consciousness. Recommendations from the study will be detailed in a report and furnished to the members of the VE Review Committee.

The VE Review Committee will be comprised of the following or their designee:

- Director of Preconstruction (Chairperson)
- Director of Construction
- Director of Maintenance
- Director of Traffic Engineering
- District Engineering Administrator (for the engineering district in which the project is located)
- FHWA Division Office Representative (acting in advisory role)

After reviewing the recommendations, the VE Review Committee will meet and decide which recommendations should be accepted for implementation. If the VE Review Committee is unable to provide a decision on any recommendation regarding acceptance for implementation, the Deputy Secretary for Engineering will have the final authority.

A summary report, including the VE recommendations and their disposition regarding implementation, will be provided to the Secretary of Transportation, the SCDOT Commission, and the various sections involved in development of the project. It will be the responsibility of the project manager to ensure that the approved recommendations are implemented prior to quality control review for the road or bridge plans and to provide a memorandum to the Value Engineering Coordinator confirming the implementation of the approved recommendations.

Additional information regarding VE studies and the implementation of recommendations is provided in the Manual for Value Engineering Studies.

Submitted by: Ladd Gibson
Director of Preconstruction

Recommended by: Randall L. Young
Chief Engineer for Project Delivery

Approved: Leland Colvin
Deputy Secretary for Engineering

Lead: Director of Preconstruction

History: Issued on September 12, 2007
First Revision on March 5, 2009
Second Revision on June 11, 2012
Third Revision on April 9, 2015
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