


Approved:

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Management
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Director

DESIGN VALUE ENGINEERING POLICY

POLICY STATEMENT:

Value Engineering (VE) is a systematic application of recognized techniques by a multi-disciplined team, to identify the function of a product or service, establish a worth for that function, generate alternatives through the use of creative thinking, and provide the needed functions to accomplish the original purpose of the project, reliably, and at the lowest life-cycle cost without sacrificing safety, necessary quality, and environmental attributes of the project. Design Value Engineering is usually performed during the preliminary engineering and early detailed design phases of transportation improvement projects. Value Engineering in Construction is covered by Policy 27-008(P).

AUTHORITY:

*23 U.S.C. 106(d), 106(f), 112(b), 302, 307, and 315; 23 CFR 627,
49 CFR 18*

SOURCE:

62 FR 6868, February 14, 1997 (as amended at **67 FR 75924**, December 10, 2002), unless otherwise noted.

REFERENCES:

NHI Course No. 13405, Value Engineering for Highways; USDOT; FHWA: Publication No. FHWA-HI-88-047 and V.E. Study Workbook; Publication No. FHWA-HI-88-051. This Policy supersedes Policy No. 21-006(P).

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Federal Highway Administration (FHWA) VE Page web site:
www.fhwa.dot.gov/ve/index.htm

SCOPE:

All Assistant Directors, Central Office Division Deputy Directors, and District Deputy Directors. The practice of engineering is the application of logic and mathematics to the solution of problems. But beyond merely solving problems, good engineering involves finding practical, cost effective solutions. It is relatively easy to solve problems if there are no monetary constraints. When we design solutions to transportation problems, we want designs that are reliable, safe, quality driven, environmentally friendly, and above all, cost effective. We expect everyone who works for ODOT, directly or indirectly, to incorporate value engineering in their designs. After all, it is what we are paying for. Beyond applying value engineering everyday to the projects we design, for large, complex, costly projects, we are establishing this policy to insure we are providing the people of Ohio the value they deserve.

BACKGROUND & PURPOSE:

The Federal Highway Administration published its regulation establishing the Federal Value Engineering Program on February 14, 1997. This regulation requires value engineering studies be applied to all National Highway System (NHS) funded projects estimated to cost in excess of \$25 million for any project type and \$20 million for bridge projects (including design, right of way and construction costs). In addition, it should be used on other Federal-aid projects where its employment has high potential for cost savings. The Department requires value engineering studies for all projects with an estimated total cost of \$20 million or more, and standalone bridge projects with an estimated cost of \$18 million or more. If the total cost of a standalone bridge project falls between \$18 to \$20 million, and \$20 to \$25 million for all other projects, the COVEC and the District will evaluate the project to determine if a VE study is warranted.

The Value Engineering Regulation also states that Life Cycle Cost Analysis (LCCA) be considered in VE studies, where applicable. It can help to assure that the long-term economic effects of various transportation improvement alternatives are well understood.

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FISCAL IMPACT:

The value engineering studies conducted under this policy, annually recommend millions of dollars in potential cost savings to the Department. There are two primary costs for the application of Value Engineering during the design phase: the cost of conducting the studies which include the VE facilitator(s), and the costs of the ODOT and Consultant staff participation. Typically, even if only a portion of the recommendations are implemented, the sum of the VE recommendations will be greater than the total cost of the VE Program.