



VALUE ENGINEERING PROGRAM PROJECT MANAGER'S GUIDE

INTRODUCTION

This brief guide is intended for Arizona Department of Transportation (ADOT) and Consultant Project Managers whose projects are scheduled for a Value Engineering (VE) study in the near future. It attempts to clarify the Project Manager's responsibilities regarding the study.

PROJECT SELECTION

It is important for ADOT and Consultant design staff to understand that projects are selected for a VE study on their own merits, irrespective of who is designing them. A VE study is not a "Design Review" or "Peer Review". For more information about project selection, please refer to our Value Engineering Program Guidelines available on the Construction & Materials Group's website.

CONSULTANT SCOPE OF WORK

The generic scope-of-work for consultant projects contains a "boilerplate" section on VE study. This guide will supplement the information contained in the scope. For some projects, a special VE study section may be included in the scope.

VALUE ENGINEERING STUDY SCOPE

The ideal situation for a VE study is when the entire project is open for analysis by the team. Accordingly, we assume that each new study is unconstrained unless otherwise stipulated. It is the Project Manager's responsibility to obtain approval from the Group Manager and the Deputy State Engineer for Development for any constraints which are required. A description of the approved constraints should then be sent to the VE Section, and the team will be advised accordingly. Otherwise, the team will be constrained only by the applicable AASHTO and ADOT standards, good engineering judgment, and a consideration of life-cycle costs.

TEAM COMPOSITION

The VE Section is responsible for assembling the VE team. The Project Manager is encouraged however, to offer suggestions as to disciplines or individuals. A representative of the project development team is encouraged to participate in the VE study.

PREPARATION

The VE Section will contact the Project Manager to discuss the documents required for the study.

The VE Section is responsible for arranging an appropriate location for the study. For consultant-

designed projects, a request to use the consultant's conference room may be made. This has proven to be very convenient for both the Consultant and the team, but is not mandatory.

DESIGN PRESENTATION

At the start of each study, the designer conducts a brief presentation of the project. Depending on the complexity of the project, one to two hours is usually sufficient for this process. The Project Manager is responsible for determining who will conduct the presentation and will schedule it accordingly.

VE TEAM PRESENTATION

At the conclusion of each value study, the VE Team gives a brief presentation of its findings and recommendations. The VE Section in consultation with the Project Manager sets the time and place for the presentation. The Project Manager notifies the State Engineer's Office, District Engineer, FHWA Area Engineer, and Group/Section Managers about the VE Team's presentation. The Project Manager and the final Designer shall be present for the VE Team's presentation. The ADOT's design team members and consultants are encouraged to attend the VE Team's presentation.

STUDY REVIEW

The Project Manager will receive a report within two weeks following the study. The Project Manager should then distribute the VE Study Report and recommendations to the Project's final design team for review and concurrence. After consulting the final design team and within two weeks of receipt of the VE study report, the Project Manager shall provide a written response to the VE Section with a courtesy copy to the FHWA Area Engineer documenting final disposition of the approved recommendations. The written response should include:

- Approved recommendations to be implemented
- Approved recommendations that were modified – provide details of change
- Approved recommendations not adopted – provide reason(s)

VALUE ENGINEERING STUDY COSTS

The VE Section's goal is to keep an approximate accounting of significant program costs. At the end of the review period, the Project Manager should provide a reasonable estimate of costs for Items 1, 2, and 3 below to the Value Engineering Section. Any implementation costs (Item 5) will normally be estimated during the review, in order to facilitate decision-making.

The costs which we would like to identify are as follows:

1. **Consultant Preparation**, including Design Presentation.
2. **Consultant Participation**, in cases where the design consultant is a team member, or spends a significant amount of time with the team.

3. **Consultant Review**, as required and coordinated by the ADOT Project Manager. (Note: **ADOT** review costs are not tracked).
4. **Team Member Costs** - ADOT or VE consultant - are tracked by the Value Engineering Section.
5. **Cost to implement** accepted VE recommendations - consultant projects only. These costs are normally “netted-out” against the cost-saving resulting from the recommendation.

IMPLEMENTATION

In some cases, the implementation of approved recommendations takes place over a significant period of time. It is also possible that a change of conditions in the future may increase or decrease the acceptability and effect of a VE study recommendation. The Project Manager shall alert the VE Section to any events which may affect the outcome of the study.

The Project Manager shall ensure that the VE study is conducted and all approved recommendations are included in the project’s plans, specifications and estimates prior to authorizing the project for construction. For projects delivered using the CMAR contracting method, the Project Manager shall ensure that a VE study is completed and approved recommendations incorporated into the project plans prior to requesting a construction price proposal from the CMAR contractor.