



## **Value Analysis**

In keeping with the RTA's commitment to financial discipline and its voter mandate to timely delivery of roadway improvements, the RTA Board of Directors adopted a series of new policies, based upon a review of RTA project performance and best practices, to help improve project delivery performance and budget adherence. One of the policies adopted was the requirement that Value Analysis studies be conducted for all RTA Roadway Element projects having a total cost exceeding \$10 million.

### What is Value Analysis?

Value Analysis is a systematic review of a project's design from a functional perspective, with close attention to the scope of work contained in the RTA Plan approved by the voters in 2006. From this analysis, the project design is either confirmed or alternative proposals to the current design are developed to save project lifecycle costs and/or improve the mobility goals of the project.

In comparison, the Federal Government requires Value Engineering (similar to Value Analysis) for all projects on the National Highway System for all projects with an estimated cost exceeding \$25 million. 23 CFR PART 627

### When is the Value Analysis performed?

The RTA Value Analysis program applies to projects once they are at the conclusion of the planning phase (completion of the Design Concept Plan, Preliminary Geotechnical, Pavement, Traffic, Environmental and Drainage Reports, Bridge Design Selection Report (if required), and 30 percent plans). At this point, the project constraints are well understood, a preliminary design of the vertical and horizontal alignment of the roadway, and a comprehensive cost estimate are available. Since the project is not so far developed at the time of the Value Analysis, major changes will not likely result in substantial redesign expense.

### What does the Value Analysis Study consist of?

The Value Analysis Study is centered on a week-long workshop, with a team of 10-12 design professionals and an experienced Value Analysis facilitator. The team includes the project manager from the jurisdiction sponsoring the project and the design engineer. The balance of the team is made up of design professionals selected for their technical expertise in areas relevant to the project – the technical focus of the team can vary substantially from one project to the next.

The Value Analysis Team immerses itself in the details of the project and is provided all background materials in advance of the study, so they are fully versed on all aspects of the project prior to the workshop.

The workshop consists of the following elements:

- Information Phase: The project design team provides an overview of the project issues, critical decisions and takes questions from the Value Analysis Team members.
- Initial Proposal Phase: The Value Analysis Team identifies potential savings or project improvement proposals based upon their initial review of the project.
- Functional Analysis Phase: A detailed functional analysis diagram is developed, critical functions are identified and the functions which have the greatest costs associated with them are selected. The team then brainstorms about these functions and generates additional savings and project improvement proposals.
- Proposal Evaluation Phase: The Value Analysis Team reviews the various proposals generated, and discards proposals which are redundant, impractical or are already incorporated in the design. At the end of this phase, the surviving proposals are assigned to team members for development.
- Proposal Development Phase: Each of proposals is developed and the pros/cons of the proposal identified. Initial costs/savings are assessed, as well as the long term costs/savings (present worth analysis). The proposals are peer reviewed by the team and subsequently refined.
- Presentation Phase: A presentation of findings is developed and delivered.

Upon the conclusion of the Value Analysis Workshop a draft report is prepared.

The Draft Value Analysis Report includes the proposals which the Value Analysis Team believes merit consideration for cost savings or enhanced value.

The Draft Value Analysis Report is presented to the RTA Technical Management Committee's Policy Subcommittee, who then evaluates the proposals contained within the report. The subcommittee has the choice of accepting a proposal, accepting the proposal with modifications, declining the proposal or tabling it. Once all proposals have been evaluated, the Value Analysis Report is finalized, with the disposition of the proposals included in the final report.

What happens once the Value Analysis is concluded?

The Value Analysis is presented to the jurisdiction sponsoring the project. The report is meant to be a tool for use by the sponsoring jurisdiction. The accepted proposals are not mandated by the RTA. However, they are deemed appropriate by the RTA as a cost saving or value enhancing measure.

The RTA funding available for the project is limited to the amount identified on the RTA Plan, with any cost overruns becoming the exclusive responsibility of the sponsoring jurisdiction.

For further research

For information on the Federal Highway Administration's Value Engineering Requirements:

<http://www.fhwa.dot.gov/legsregs/directives/orders/13111a.htm>

<http://www.fhwa.dot.gov/ve/vereg.cfm>