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UNDERSTANDING a VEP

1. What is a Value Engineering Proposal (VEP)?

A Value Engineering Proposal (VEP) is a post-award proposal made by the Contractor which includes changes to work that may result in cost or time savings, without impairing essential functions and characteristics of the project, such as: service life, safety, reliability, economy of operation, ease of maintenance, desired aesthetics, design, standardized features, and environmental.

According to <u>23 CFR 627.3(q)</u> of the Code of Federal Regulations, a VEP is "A construction contract change proposal submitted by the construction contractor based on a VEP 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."

2. What is the purpose of a VEP?

The purpose of a VEP is to encourage the use of the Contractor's and their Subcontractors' ingenuity and experience in arriving at alternative, lower cost, and/or time saving construction methods for contract requirements with the intention of sharing the resulting direct cost savings between the Department and the Contractor.

3. Where can I find the requirements for a VEP?

NCDOT Standard Specifications Section <u>104-12</u> Value Engineering Proposal.

4. What are the minimum requirements for a VEP?

- a) The Contractor must submit the VEP using the VEP Submittal Form
- b) A VEP should include any changes to work that may result in cost or time savings, without impairing essential functions and characteristics of the project.
- c) A VEP should provide a total savings of at least \$10,000 before distribution. (Depending on the complexity of evaluation and implementation, VEPs that provide for a total savings before distribution of less than \$10,000 may not be considered.)

5. Are there any exclusions to a VEP?

The following will not be considered as a VEP:

- Submittals that propose material substitutions of permanent features, such as, but not limited to, changes from rigid to flexible or flexible to rigid pavements, concrete to steel or steel to concrete bridges.
- Design alternatives in contract plans. (It may be considered in Design-Build projects.)
- Submittals that propose to correct plan errors.

INITIATION OF A VEP

6. How do I know if a Contractor idea qualifies as a VEP?

A VEP should include any changes to work that may potentially result in cost and/or time savings, without impairing essential functions and characteristics of the project in accordance with the Contract Documents (or Design-Build RFP/Technical Proposal, if applicable). If you are unsure, contact the Value Management Office at ValueManagementUnit@ncdot.gov or 919-707-6682 for assistance in determining.

7. What happens once the Contractor wants to pursue an idea for a VEP?

The Contractor submits a Preliminary VEP for consideration.

It is recommended that the Contactor bring up any ideas for a VEP with the Resident Engineer at meetings, or even hold a separate meeting/workshop for a more complex VEP, to get preliminary feedback on the concept. A meeting/workshop has also been proven helpful when there are multiple ideas for VEPs. To ensure a project's critical path and schedule are not impacted, it is important to establish and adhere to a timeline for the Department's review and approval.

VEP SUBMISSION

8. Will a time extension be granted for the time required to prepare or review a VEP?

No time extension will be granted due to the time required to prepare or review a VEP.

Pending execution of a Supplemental Agreement (SA) implementing an approved VEP, the Contractor shall remain obligated to perform all work in accordance with the terms of the existing contract.

It is recommended that the Contactor bring up any ideas for a VEP with the Resident Engineer as early as possible to allow sufficient review time and get preliminary feedback on a concept. A meeting/workshop has also been proven helpful when there are multiple ideas for VEPs; understanding when review and approval is needed by as to not impact the project's critical path helps establish prioritization and submission targets.

9. How should a VEP be submitted?

A copy of the VEP should be submitted concurrently to the Resident Engineer, the State Value Management Engineer at ValueManagementUnit@ncdot.gov, and Design-Build Unit (if applicable).

10. Can a subcontractor submit a VEP?

Not directly; a VEP must be submitted by the prime Contractor, but can be initiated by a subcontractor. The Contractor is encouraged to include NCDOT Standard Specifications Section 104-12 Value Engineering Proposal in contracts with subcontractors.

It is not mandatory that the Contractor accept or transmit to the Department VEPs proposed by subcontractors. The Contractor may choose any arrangement for the subcontractor value engineering cost sharing, provided that these payments shall not reduce the Department's share of the savings resulting from the VEP.

11. Why is there a Preliminary and Final Submission?

A Preliminary Proposal is a first step that presents the VEP concept to get preliminary feedback on the merit of a concept prior to the Contractor spending time and money developing a more detailed Final Proposal. A Final Proposal represents a fully developed VEP concept, for an alternative which will result in lower cost and/or time saving construction methods while providing the same or better improvements.

The VEP Review Process - Flowchart summarizes the review steps for both the Preliminary and Final submissions of the VEPs.

12. What are the requirements for a Preliminary and Final Submission?

The Preliminary Proposal submittal consists of the VEP Submittal Form. The following information should be included or attached, as necessary:

- Description of the proposed change and associated benefits,
- Estimate of cost savings (with a breakdown, if available), and
- Sketches or mark-ups on existing plan sheets. If plan sheet markups are not included as part of the VEP package, indicate or attach impacted plan sheets for ease of review.

The Final Proposal submittal consists of the VEP Submittal Form, with the following information included or attached:

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- Design calculations (if applicable),
- Contract plan sheet modifications,
- Contract document changes and a cost savings estimate based on contract line items. For Design-Build projects, the cost savings estimate shall include a line item break down with unit prices for each line item that will be reviewed and approved by the State Estimator.

13. Can a VEP be submitted for a Design-Build Contract?

Yes. Only a VEP, which alters the requirements of the RFP issued by the Department and/or the Technical Proposal submitted by the Design-Build Team, will be considered as a VEP. A previously submitted ATC (Alternate Technical Concept) that was not approved can be resubmitted for consideration as a VEP, if applicable.

Note: In addition to the technical review, a Design-Build VEP will be reviewed by i) the Design-Build Unit for Contractual compliance and ii) the Estimating Management Group since there are no unit prices for Design-Build projects. The Estimating Management Group will determine if the approximate savings noted by the Contractor is fair and reasonable. Additional review time may be needed and should be anticipated.

VEP REVIEW

14. What is the review/approval process for a VEP?

Note: A Preliminary Proposal is required to get preliminary feedback on the merit of a concept prior to the Contractor spending time and money developing a more detailed Final Proposal.

Preliminary Proposal

- A VEP is submitted by the Contractor to the Resident Engineer (RE), the State Value Management (VM) Engineer, and Design-Build Unit (if applicable).
- The proposal is reviewed to confirm it meets the VEP requirements. If additional information is needed, a request is made to the Contractor through the RE.
- If the VEP meets all the requirements, it is reviewed internally by the applicable disciplines/units to confirm it has technical merit and the Design Project Manager (PM) is notified of the potential design changes. The Value Management Office compiles any comments or concerns, which are discussed with the State Construction Engineer prior to distribution to the Division's contract administrator and RE (via a memo copying PM) for review and distribution to the Contractor.
- Once the comments and concerns are addressed, the Contractor resubmits the VEP as a Final Proposal (see review below) or discontinues pursuit of the VEP.

If the VEP does not meet the requirements or have technical merit, a rejection memo will be distributed to the Division and RE. Then, the RE notifies the Contractor, in writing, of the determination.

The Department in no way warrants that a favorable response to a Preliminary VEP will translate into a favorable response to a Final VEP. Likewise, a favorable response to a Preliminary VEP is not sufficient to incorporate the concept into the contract.

Final Proposal

- Once the Contractor addresses any comments or concern, the Contractor submits a Final VEP to the RE and to the State VM Engineer.
- If the VEP meets all the requirements, it is reviewed internally by the applicable disciplines/units to confirm it is technically acceptable.
- Based on the review, the Value Management Office compiles any comments or concerns, which are discussed
 with the State Construction Engineer prior to distribution to the Division's contract administrator and RE (via
 a memo copying PM) for review and distribution to the Contractor.
- If accepted, the State Construction Engineer's approval memo to the Division and RE includes authorization for a Supplemental Agreement (SA). The RE notifies the Contractor of the decision. If accepted, the RE creates a SA for the project to make the necessary changes based on the proposal, including 50% net cost savings to the Contractor. The Contractor is required to submit to the Value Management Office, RE and Design-Build Unit (if applicable) a final set of plans incorporating the approved changes.

If rejected, a rejection memo will be distributed to the Division and RE. Then, the RE notifies the Contractor, in writing, of the determination.

15. Who is the primary point of contact for a VEP submission?

A copy of the preliminary VEP shall be submitted concurrently to the Resident Engineer (RE), the State Value Management Engineer at <u>ValueManagementUnit@ncdot.gov</u>, and Design-Build Unit (if applicable).

Once submitted, the primary point of contact for the Contractor is the RE; and internally, the primary point of contact for questions or concerns related to a VEP is the Value Management Office.

16. How will I know if a VEP is approved/rejected?

For Preliminary Proposals, a memo is issued from the State Construction Engineer to the Division and Resident Engineer confirming if the VEP has merit and is conceptually approved or rejected, and the RE notifies the contractor of the status. (Next steps for conceptually approved VEPs: the Contractor develops the concept and submits a Final VEP or discontinues pursuit of the VEP.)

For Final Proposals, a memo is issued from the State Construction Engineer to the Division and Resident Engineer (RE) approving or rejecting a VEP, and the RE notifies the Contractor of the status.

17. What happens after a VEP is approved?

Once the State Construction Engineer issues a memo to the Division and Resident Engineer (RE) approving or rejecting a VEP, the RE notifies the Contractor of the status.

If a Preliminary VEP is approved, the Contractor develops the concept and submits a Final VEP or discontinues pursuit of the VEP.

If a Final VEP is approved, the necessary changes, including contract price adjustments, will be incorporated into a Supplemental Agreement (SA), which will be coordinated by the RE.

Within 10 business days after approval of a Final VEP, the Contractor shall provide, at no charge to the Department, one set of reproducible drawings of the approved design needed to implement the VEP to the Value

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Management Office, RE and Design-Build Unit (if applicable) unless otherwise permitted in writing. If required documents are not submitted within 10 business days, either party may elect to withdraw the Final VEP and not execute a SA. Pending execution of a SA implementing the approved VEP, the Contractor shall remain obligated to perform all work in accordance with the terms of the existing contract.

18. What happens after a VEP is rejected?

Once the State Construction Engineer issues a memo to the Division and Resident Engineer (RE) rejecting a VEP, the RE notifies the Contractor of the status.

If a VEP is rejected, no further action is taken by the Department. If the Contractor wants to revisit the VEP submission, it is recommended that they discuss changes to the VEP scope/concept prior to resubmitting. Only resubmissions with new information that address the previously provided comments will be reviewed.