

HiCAMS User Guide

Chapter 3: Contract Adjustments

Section 6A: Review Supplemental Agreements - Entering Value Engineering Proposals (VEPs)

Contents

About Value Engineering Proposals (VEPs)
Entering Supplemental Agreements for VEPs

Revision History

Comments or concerns with this document should be directed to the NCDOT Construction Unit at 919-707-2400.

Date	Version	Description	Author
May 2014	1.0	Initial Version	Marie Novello

About Value Engineering Proposals (VEPs)

Section 104-12 of the Standard Specifications for Roadways and Structures encourages the Contractor to

initiate, develop and present to the Department for consideration, any cost reduction proposals conceived by him involving changes to the contract.

The section details what types of Value Engineering Proposals (VEPs) may be considered, how the VEPs will be evaluated and reviewed, and the requirements for a proper VEP submission.

If a VEP is approved, the necessary changes will be effected by supplemental agreement. Included as a part of the supplemental agreement will be requirements for price adjustment giving the Contractor 50% of the net savings to the project resulting from the modifications.

The final net savings to be distributed will be the difference in cost between the existing contract cost for the involved unit bid items and actual final cost occurring as a result of the modification. Only those unit bid items directly affected by the supplemental agreement will be considered in making the final determination of net savings.

The net savings will be prorated, 50% to the Contractor and 50% to the Department, for all accepted VEPs.

The User Guide will detail the preferred method for entering the Line Items for a Value Engineering Proposals. Instructions for making adjustments to the Contract Times are available in the main Supplemental Agreement User Guide.

For additional information on Value Engineering Proposal handling, please contact the Construction Unit.

Entering Supplemental Agreements for VEPs

Much of the Supplemental Agreement (SA) process occurs outside of HiCAMS. HiCAMS creates the documents that detail the changes and provides a way of tracking the approval process.

Value Engineering Proposals can be added to either Bid Build or Design Build contracts.

To work with the Supplemental Agreement window, go to **Functions > Contract Adjustments > Review Supplemental Agreements**. The Review Supplemental Agreements window opens.

Enter the Contract Number for which you wish to enter a VEP Supplemental Agreement.

***Note:** For information on ways to enter your contract number, see the User Guide "Getting Started" in the User Guides section of the HiCAMS home page.*

Click the **New** button to open the Review Supplemental Agreement Details window and begin entry of the VEP Supplemental Agreement.

General Tab

- Step 1:** Select the Type of Work from the drop down list.
- Step 2:** Select the Authority for Change based on the Standard Specifications.
- Step 3:** Enter a summary description of Value Engineering Proposal. If necessary, incorporate the actual proposal by reference as an attachment.

***TIP:** It is helpful to begin the description with a few words that identify the purpose of the Supplemental Agreement so that anyone reviewing them is able to easily determine the SA's purpose.*

- Step 4:** Enter a summary Justification. The Justification prints on the Negotiation for Negotiated Prices and Contract Time Extensions
- Step 5:** Save the Supplemental Agreement. The SA status is New.
- Step 6:** A Notification is sent to the Area Roadway and/or Bridge Engineer (depends on Type of Work selected). The comment can be updated if desired.

Below is an example of the General Tab after being completed.

The screenshot shows the HiCAMS software interface. The main window is titled "Review Supplemental Agreement Detail". At the top, it displays contract information: "Contract: C203423", "Description (nickname): US 17 - Milling and Resurfacing-Midway", "Contract Adjustment: SA 3.0", "Description: VALUE ENGINEERING PROPOSAL (VEP) - This supplemental agreement is written", "Status: New", and "Total Amount: \$0.00". Below this is a tabbed interface with tabs for "General", "Contract Times", "Line Items", "WBS Detail", "Approval", and "History". The "General" tab is active and contains the following fields:

- Type Of Work:** Roadway (dropdown menu)
- Authority for Change:** 104-3 Altered Work (dropdown menu)
- Verbal Approval:**
- Description:** VALUE ENGINEERING PROPOSAL (VEP) - This supplemental agreement is written in accordance with Article 104-12 of the Standards and Specifications and documents the Contractor's revised Value Engineering Proposal submitted via letter dated March 3, 2010. This VEP involves milling and filling 1.5" of S9.5B asphalt in the travel lanes only, in lieu of the 2" overlay on the travel lanes and shoulders as previously called for in the contract. Therefore this agreement establishes line item 17 Value Engineering Proposal, which grants the Contractor 50% of the final cost.
- Justification:** Article 104-12 of the Standards and Specifications allows the Contractor to submit cost reduction proposals to the Department for review. NCDOT Pavement Design Unit and the Construction Unit have reviewed and approved the VEP on this project. The total cost savings from this VEP is \$623,388.02. The total Department savings is \$311,694.01.
- Comment:** (empty text box)

At the bottom of the window, there are four buttons: "Activate", "Indicators", "Process Approval", and "Void". The status bar at the very bottom shows "Ready".

Contract Times Tab

If the Supplemental Agreement will be impacting the Contract Times, or creating a new Contract Time, click on the Contract Times tab. Instructions for making adjustments to the Contract Times are available in the main Supplemental Agreement User Guide.

Line Items Tab

Because the final net savings to be distributed will be the difference in cost between the existing contract cost for the involved unit bid items and actual final cost occurring as a result of the modification, contract line items being modified or deleted need to be accounted for in the Supplemental Agreement.

Here are some VEP scenarios and how to enter the Supplemental Agreement for them in HiCAMS. Notice that the Contractor's Share of Cost Savings is the same as the net Underrun shown on the Supplemental Agreement.

Scenario One

On a Bid-Build contract for resurfacing of a major US route, the contractor proposed milling and filling 1.5" of S9.5B asphalt in the travel lanes only, in lieu of the 2" overlay on the travel lanes and shoulders as previously called for in the contract.

Line items for the work being replaced were deducted to show the cost savings, and Line Items for the new work and the VEP payment were added.

Below is an example of the Line Items portion of the Supplemental Agreement. Notice that the Line Item "Value Engineering Proposal" has a Unit Price of \$1.00.

2. Estimate of quantities of work resulting from change and the basis for payment:

Line Item	Description	Unit of Measure	Price	Contract Quantity	Negotiated Quantity	Net Change Quantity	Net Change Amount
2	SHOULDER RECONSTRUCTION	Shoulder Mile	\$3,000.0000	0.000	-52.000	-52.000	\$-156,000.00
3	INCIDENTAL MILLING	Square Yards	\$10.0000	0.000	-300.000	-300.000	\$-3,000.00
4	ASP CONC SURF CRS S9.5B	Tons	\$32.0000	0.000	-13561.860	-13561.860	\$-433,979.52
5	ASP FOR PLANT MIX PG64-22	Tons	\$350.0000	0.000	-813.710	-813.710	\$-284,798.50
6	MILLED RUMBLE STRIPS	Linear Feet	\$0.0500	0.000	-272600.000	-272600.000	\$-13,630.00
16	SEEDING AND MULCHING	Acres	\$1,388.0000	0.000	-25.000	-25.000	\$-34,700.00
17	VALUE ENGINEERING PROPOSAL	Dollars	\$1.0000	0.000	311694.010	311694.010	\$311,694.01
18	MILLING 1.5" DEPTH	Square Yards	\$8.0000	0.000	378400.000	378400.000	\$302,720.00

Supplemental Agreement Net Underrun: \$311,694.01

It is best to also use "Contractor's Share of Savings" in the Line Item description. The full description should read

VEP #1 - Contractor's Share of Cost Savings

The contractor's share was calculated by totaling the planned cost of the modified or eliminated line items, then subtracting the planned cost of the replacement line item(s), and dividing that amount by two.

Cost of existing LI 2 - 6, and 16	\$926,108.02
Estimated Cost of new LI 18	302,720.00
Difference	623,388.02
divide by	2
50% share of savings	311,694.01

When the work is completed, a final calculation of the Actual Cost of the new Line Item work will be made, and the Contractor's Share of the Savings will be adjusted based on the revised calculation. This amount may be less than, the same as, or greater than the original Supplemental Agreement amount. This is the reason that the VEP Line Item is entered with a unit price of \$1.00.

Scenario Two

On a Design-Build contract for Bridge Replacement and Roadway widening on a major US route, the contractor proposed an Alternate Pedestrian Facility for the Diverging Diamond Interchange, providing 5 foot sidewalks on each side in lieu of a 10 foot wide path in the median.

A credit Line item for the cost savings, and a Payment Line Item for the Contractor's share of the VEP were added.

Below is an example of the Line Items portion of the Supplemental Agreement. Notice that the Line Items have Unit Price based on Dollars.

2. Estimate of quantities of work resulting from change and the basis for payment:

Line Item	Description	Unit of Measure	Price	Contract Quantity	Negotiated Quantity	Net Change Quantity	Net Change Amount
4	VEP #1 - Cost Savings to Contract	Dollars	\$-1.0000	0.000	86120.750	86120.750	\$-86,120.75
5	VEP #1 - Contractor's Share of Cost Savings	Dollars	\$1.0000	0.000	43060.380	43060.380	\$43,060.38
Supplemental Agreement Net Underrun:							\$43,060.37

When the work is completed, a final calculation of the actual value of the Contractor's share of the cost savings will be made, and the payment adjusted based on the revised calculation. This amount may be less than, the same as, or greater than the original Supplemental Agreement amount. This is the reason that the VEP Line Items are entered with a unit price in positive and negative dollars.

Scenario Three

On an Express Design-Build contract for multiple Bridge Replacements with some lump sum line items and some measured line items, the contractor proposed a single span bridge instead of the double span bridge in the bid documents.

Line items for the work being replaced and the value of the design work for the bridge were deducted to show the cost savings, and a Line Items for the VEP payment was added.

Below is an example of the Line Items portion of the Supplemental Agreement. Notice that the two VEP Line Items have a Unit Price in dollars.

2. Estimate of quantities of work resulting from change and the basis for payment:

Line Item	Description	Unit of Measure	Price	Contract Quantity	Negotiated Quantity	Net Change Quantity	Net Change Amount
20	INTERIOR BENT CAPS STRUCTURE #470025	Each	\$1,000.0000	1.000	0.000	-1.000	\$-1,000.00
41	AVE FOUNDATION LENGTH AT IN- BENT #1 STRUCTURE #470025	Linear Feet	\$5.0000	65.000	0.000	-65.000	\$-325.00
49	BRIDGE LENGTH STRUCTURE #470025	Linear Feet	\$100.0000	80.000	70.000	-10.000	\$-1,000.00
61	VEP #4 - Cost Savings to Contract - Design	Dollars	\$-1.0000	0.000	57634.680	57634.680	\$-57,634.68
62	VEP #4 - Contractor's Share of Cost Savings	Dollars	\$1.0000	0.000	29979.840	29979.840	\$29,979.84
Supplemental Agreement Net Underrun:							\$29,979.84

When the work is completed, a final calculation of the actual value of the Contractor's share of the cost savings will be made, and the payment adjusted based on the revised calculation. This amount may be less than, the same as, or greater than the original Supplemental Agreement amount.

Remember

1. Most of the Value Engineering process occurs outside of HiCAMS. HiCAMS documents the changes to the contract quantities.
2. Payments cannot be made on Line Items with Negative Quantities. If a Credit to the contract is involved, a Unit Price of -\$1.00 must be used and the quantity set to the number of dollars to be credited.
3. For specific help with entering Value Engineering Supplemental Agreements on your project, please contact the Construction Unit at 919-707-2400.