

# OKLAHOMA DEPARTMENT OF TRANSPORTATION

## GUIDANCE FOR PREPARING CHANGE ORDERS, MAKING ADDITIONS TO CONTRACT TIME, & REVIEWING COST BREAKDOWNS SUPPORTING SUPPLEMENTAL AGREEMENTS

### CONTENTS

SUBJECT	PAGE
I. Applicable State and Federal Regulations	2
II. Preparing Change Orders	4
III. Additions to Contract Time	15
IV. Review of Cost Breakdowns	17

The purpose of this document is to provide guidance for reviewing the contractor's estimated and/or actual costs shown in the Cost Breakdown for support of supplemental agreements and to provide instructions for preparing Change Orders and making additions to contract time. This document applies to all construction projects governed by the Oklahoma Department of Transportation Standard Specifications for Highway Construction.

## **I. APPLICABLE STATE AND FEDERAL REGULATIONS**

### **a. Applicable State Regulations**

#### **(1) Oklahoma Statutes**

##### **O.S. § 61-121 Change Orders or Addendums**

Change orders or addenda to public construction contracts of One Million Dollars (\$1,000,000.00) or less will not exceed a fifteen percent (15%) cumulative increase in the original contract amount. Change orders or addenda to public construction contracts of more than One Million Dollars (\$1,000,000.00) will not exceed the greater of One Hundred Fifty-Thousand Dollars (\$150,000.00) or a ten percent (10%) cumulative increase in the original contract amount. Change orders or cumulative change orders which exceed these limits will require a re-advertising for bids on the incomplete portions of the contract. All change orders will be formally approved by the governing body of the awarding public agency and the reasons for approval recorded in the permanent records. The Transportation Commission may, by rule, authorize the Director of the Department of Transportation to approve change orders in an amount of not to exceed Five Hundred Thousand Dollars (\$500,000.00). Change orders approved by the Director will be presented to the Transportation Commission during the next regular meeting and the reasons therefor recorded in the permanent records. All change orders will contain a unit price and total for each of the following items:

- (1) All materials with cost per item;
- (2) Itemization of all labor with number of hours per operation and cost per hour;
- (3) Itemization of all equipment with the type of equipment, number of each type, cost per hour for each type, and number of hours of actual operation for each type;
- (4) Itemization of insurance cost, bond cost, social security, taxes, workers' compensation, employee fringe benefits and overhead costs; and
- (5) Profit for the contractor.

If a construction contract contains unit pricing, and the change order pertains to the unit price, the change order will not be subject to the limits described above. When the unit price change does not exceed Twenty Thousand Dollars (\$20,000.00), the unit price change order computation may be based on an acceptable unit price basis in lieu of cost itemization as required above.

When the unit price change exceeds Twenty Thousand Dollars (\$20,000.00), any unit price for a new item established at, or below the average eighteen-month-price history for the new item may be used in lieu of cost itemization as required above.

Alternates or add items bid with the original bid and contained in the awarded contract as options of the awarding public agency will not be construed as change orders under the provisions of the Public Competitive Bidding Act of 1974.

## **(2) Transportation Commission Rules**

### **730:1-5-1 Powers and Duties of Director**

The Director is hereby granted all the powers and the authority necessary for the orderly operation of the Department of Transportation, not in conflict herewith or prohibited by law, including, but not limited to the following:

(2) Contracts and agreements.

(D) To approve and execute change orders and supplemental agreements in a total amount of not to exceed Five Hundred Thousand Dollars (\$500,000.00) on a contract. The Director may further delegate to field division engineers authority to approve and execute change orders and supplemental agreements in a total amount of not to exceed Seventy Five Thousand Dollars (\$75,000.00) on a contract. In no event shall the total amount of such change orders exceed the limits set forth in 61 O.S. § 121. Change orders approved by the Director or field division engineer shall be presented to the Commission at its next regular or special business meeting stating the reasons for the change order and supplemental agreement with such other information as the Commission may require.

Effective October 9, 2006 the Department began processing change orders under the delegated approval authority granted by Commission Rule as referenced above for change orders with a cumulative total of \$50,000 or less on the project (the \$75,000 limit for authority has not been granted). Those change orders approved by the Field Division Engineer under the delegated authority will still require the approvals of Construction Administration and Central Office Administration security levels in SiteManager for administrative purposes. Change orders approved under the delegated approval authority (those change orders that result in a cumulative total of \$50,000 or less for the contract) are presented to the Commission under the consent docket for information purposes.

### **b. Applicable Federal Regulations**

#### **(1) Independent Cost Analysis**

The Code of Federal Regulations 23 CFR 635.120(e) requires that there is a separate analysis performed on each negotiated change or contract modification. It reads as follows:

“The STD (*State Transportation Department*) shall perform and adequately document a cost analysis of each negotiated contract change or negotiated extra work order. The method and degree of the cost analysis shall be subject to the approval of the Division Administrator.”

#### **(2) Contract Time Extension**

The 23 CFR 635.121(b) requires an analysis of added time to a change order and reads as follows:

“Contract time extensions granted by a STD shall be subject to the concurrence of the Division Administrator and will be considered in determining the amount of Federal participation. Contract time extensions submitted for approval to the Division Administrator shall be fully justified and adequately documented.”

## **II. PREPARING CHANGE ORDERS - SUPPLEMENTAL AGREEMENTS**

### **a. Proper Completion of Change Orders**

The change order process allows legal changes to be made to a contract. Contract change orders may include:

- (1) Adjusting quantities for existing contract items
- (2) Adding new items of work to the contract
- (3) Funding incentives or applying deductions
- (4) Revising notice to proceed date, contract time, internal milestone(s), or contract completion date
- (5) Documenting contract final quantities

All change orders, for those contracts administered in SiteManager, shall be processed through the change order function within SiteManager. For information and directions refer to Section 800 of the SiteManager Policies and Procedures, Quick Reference Guides and Training Manual.

Change orders that add new pay items to the contract or require additional appropriations must be presented to the Transportation Commission.

### **b. Preparing the Change Order**

The legal requirements for dealing with Change Orders are found in O.S. § 61-121, Change Orders or Addenda, which is found at the beginning of this document.

When a change order is contemplated, it is well to examine the funding aspect first to make sure that the proposal does not conflict with legal parameters.

Depict the change fully by attaching copies of documents that are pertinent to the change such as, drawings, copies of portions of plan and profile sheets, letters from the contractor, time extension calculations, etc.

A detailed explanation of the scope of the change and its reason must be included in the Change Order Description to properly identify the nature of the change. If the change is complex enough, you may want to add an attachment to discuss the change and the reasons for its need.

The verbiage should utilize the same terminology as the plans and specifications. This helps to fully identify the scope of the change. Avoid lumping several pay items together into one item as this complicates the comparison of prices.

### **c. FHWA Oversight Projects**

The Federal Highway Administration requires that when a Major Change is considered on a Federal oversight project, the FHWA Area Engineer must be informed prior to beginning the work for which the change is based. This action is necessary to comply with Federal regulations that prohibit retroactive approval of funds. When reviewing these changes, the FHWA will consider Federal aid eligibility, impact to the original scope, basis of payment and time adjustments. The prior approval must be documented by an approved Form 1365. Refer to Construction Control

Directive No. 19961121 for further details and for the definition of a Major Change.

All other changes are considered minor (i.e. overrun of existing pay items less than \$100,000, funding contractual incentives and price adjustments, etc.) and do not require formal documentation of prior approval. However, these change orders will ultimately require FHWA approval, and it will be mutually beneficial to keep the FHWA Area Engineer informed when considering change orders on oversight projects.

If the Area Engineer approves the work covered by the proposed change order with certain conditions (i.e. evaluation of cost data, determination of time adjustment, submittal of written supporting data, etc.) be sure that this information is provided in a timely manner.

Failure to acquire FHWA approval or to meet the conditions required may result in non-FHWA participation, in accordance with 23 CFR 635.121(b).

**d. Request for Additional Appropriations**

Change orders requiring additional appropriations that exceed a cumulative total of \$50,000 for the project must be approved by the Transportation Commission. Change orders requiring additional appropriations with a cumulative total of \$50,000 or less will be submitted to the Transportation Commission for informational purposes only.

Additional appropriations to pay for overruns of original contract items, although referred to as change orders, are actually just a request for additional funds. The same process is used as for change orders to keep it simple and minimize the number of forms.

When there have been overruns of original contract items or payments of price adjustments (asphalt binder price adjustment) and the total expenditure is nearing the contract amount, you should estimate the funds needed to complete the work and submit a request for an additional appropriation early, to avoid a suspension of payments to the contractor. It is not necessary to ascertain the exact amount needed. As soon as the final estimate is processed, whatever encumbrance remains is canceled.

**e. Supplemental Agreement**

If the change order adds new items, extends or modifies the contract time, provides for the final quantities or modifies the contract provisions, this is considered a supplemental agreement and must be signed by the contractor. If the change order is administrative in nature, or if the contractor does not agree with or refuses to sign the change order, this is considered a unilateral change order and does not require the contractor's signature. Refer to the following table:

Purpose of the Change	Contractor's Signature Required?
Increase Original Items	No
Fund Contractual Incentives or Price Adjustments	No
Add Time	Yes
Final Quantity Change Order	Yes
Add New Items	Yes
Change In Specifications	Yes

**f. Statutory Limitation**

The statutory limitation for each contract is defined in O.S. § 61-121. If the accumulated requests for supplemental agreement money exceeds these limits, the change order will be rejected and the contractor will be forced to file a claim. A quick reference guide for the interpretation of statutory limits is presented in the following table:

Type of Increase	Statutory Limitation
Overrun of Original Contract Items	None
Added Items on Projects with Contract Amount of \$1,000,000 or Less	May Not Exceed 15%
Added Items on Projects with Contract Amount Over \$1,000,000	May Not Exceed the Greater of 10% or \$150,000
Changes with Added Items and Original Contract Items	The Total of Added Items May Not Exceed the Above Limitations. Only the Net Increase is Counted Towards the Limitation. All Negative Changes are Considered Zero.

When the unit price of an existing contract item is increased (reclassified), only the difference in price is used to calculate the amount subject to statutory limitations.

**g. Earlier Supplemental Agreement Exceeded**

When a new item is established by change order (Supplemental Agreement) and the quantity is exceeded, a new change order will be required to secure approval to pay for the quantity over that requested on the original change. On contracts administered in SiteManager, this may be accomplished through the Final Quantity Change Order.

**h. Establishing New Pay Items**

**(1) Cost Analysis**

With reference to the requirements in the Code of Federal Regulations 635.120(e), it is necessary that for each negotiated contract change, an analysis be performed to verify the reasonableness of the added costs. Regardless of the dollar amount of the new item of work being added, a cost analysis must be performed and documented on the change order or in the project file.

A cost analysis examines the amount of work needed and the proposed cost when compared to the plans and contract of the specific project. Generally, a cost analysis deals with added contract items. However, even when existing contract items are overrun, there are issues to consider. For example, if it is necessary to overrun a pay item and a plan note specifies that the same item will include the cost of some other item which will not be increased by the change order, then payment of the full unit price as bid, would not be proper for the overrun amount. Often contractors will put costs into a pay item that is unrelated to the item. If the unit price appears greater than is reasonable for the work proposed, you should discuss the matter with the contractor.

As for new items, it is always advisable to compare the proposed cost with the ODOT database of actual bid prices, which are established by competitive bidding. Section 109.04 of the Standard Specifications allows the work to be based on actual costs when the contractor and the Engineer cannot readily agree.

Place the analysis in the project file with the change order or attach it to the change order in SiteManager for easy reference by FHWA personnel as well as ODOT reviewers. It is recommended that a statement in change order line item description be used to document that the analysis has been performed, such as, "the cost and the added time have been analyzed and found to be reasonable." The analysis does not have to be formal. It can be hand written but should show all the pertinent elements, such as:

- (i) Checkmarks, initial and date on the contractor's cost breakdown
- (ii) Print out of the historical price used for comparison
- (iii) Print out of the historical price used to establish the new price
- (iv) Notes on other factors considered

## **(2) Basis for Establishing New Unit Price**

O.S. § 61-121 states that when the individual change order is \$20,000 or less the unit price change order computation may be based on an acceptable unit price basis in lieu of cost itemization. This statute also states that when the individual change order is more than \$20,000 any unit price for a new item will be established either by using the average price history or by performing a cost itemization (cost breakdown) for the item. To establish a unit price for pay items added by change order use one of the three following methods:

### **1. Acceptable Unit Price Basis**

When the new pay item or the value of the change order is \$20,000 or less the unit price may be based on an acceptable unit price. Things to be considered when negotiating the new unit price:

- Review the average price history with regard to region, calendar quarter and quantity
- SiteManager ODOT Custom Panel Price History report; found on the Change Order tab for General Reports
- Unit prices previously bid by the contractor for similar work on other ODOT contracts
- Ability of the contractor or his subcontractor to perform the work in the time frame required

### **2. Average Price History**

When the new pay item or the value of the change order is more than \$20,000 the unit price may be based on the average price history report. When using this method the unit price for a new item will be established at, or below the Average Awarded Price on the most current version of the eighteen-month Weighted Average Item Price Report provided on the ODOT webpage.

The average price from the Price Report will not be adjusted for Region, Calendar Quarter, or Total Quantity.

If the pay item is not in the Price Report a cost breakdown will be required.

You are not required to use this method for establishing a unit price and a cost breakdown should be required if the average awarded price appears to be unreasonable for the work being added by the change order. Things to be considered when evaluating the average awarded price include:

- The number of occurrences is of such a small quantity as to not provide a representative value
- The quantities indicated for the occurrences shown in the report and compared to the quantity being added on the change order (if all of the occurrences on the report represent small quantity work but the change order is adding large quantity work)
- Unit prices previously bid by the contractor for similar work
- Ability of the contractor or his subcontractor to perform the work in the time frame required

If you are using the average price to establish the new unit price a copy of the page from the eighteen month report should be printed and included in the project file.



### **3. Cost Breakdown**

The Resident Engineer always has the right to require a cost breakdown to establish the new unit price for items being added by change order when unable to negotiate a reasonable price or if the average awarded price is not representative of the work being added.

When the new pay item or the value of the change order is more than \$20,000 and the average awarded price is not agreeable to the Department or the contractor, the unit price must be established by cost breakdown.

When the cost itemization method is used, the unit price for a new item will be established by means of a Cost Breakdown, and may include the following items in accordance with Section 109.04 of the Standard Specifications:

- Labor
- Materials
- Equipment
- Bond
- Insurance
- Workers' Compensation
- Unemployment Insurance Contribution
- Social Security Taxes
- Employee Fringe Benefits
- Overhead
- Profit

Things to be considered when evaluating the cost breakdown to ensure the reasonableness for the work to be performed include:

- The type and number of pieces of equipment - verify compliance with FHWA hourly rates shown in the Rental Rate Bluebook
- The labor classification and number of employees
- The type and quantity of materials

When requiring a cost breakdown, have the contractor use the form for Cost Breakdown for Support of Supplemental Agreement attached to this control directive. This form has been designed to comply with the statutes for Cost Breakdowns and will serve as a reminder of the various components. Refer to the Instructions for Review of Cost Breakdowns Supporting Supplemental Agreements section of this Guide for details. Check all the arithmetic and show check marks to verify that it has been checked.

#### **i. Overruns / Underruns of Major Items**

In accordance with Section 104.04 of the Standard Specifications, consideration of a price adjustment due to a significant overrun / underrun of a major item of work is not given until the item is increased in excess of 125% of the original contract quantity or decreased below 75% of the original contract quantity.

A major pay item is defined as a percentage of the original contract amount and may be calculated

using the following table from Section 101.05.BC of the Standard Specifications:

Contract Amount	Percent
≤\$1,000,000	≥5.0%
>\$1,000,000 to ≤\$4,000,000	≥\$50,000 + 2.0% of the contract amount over \$1,000,000
>\$4,000,000 to ≤\$8,000,000	≥\$110,000 + 1.0% of the contract amount over \$4,000,000
>\$8,000,000	≥\$150,000 + 0.5% of the contract amount over \$8,000,000

When this type of underrun occurs, the contractor may be entitled to a price adjustment which will allow the recovery of certain costs that cannot be recovered otherwise. On the other hand if ODOT is contemplating adding more than 25% to a major pay item, since the fixed costs are already paid, a reduction in the unit price should be considered.

Do not reclassify the unit price in these cases. Instead, place a new item on the change which depicts the adjustment. On the change order show the underrun of the original item and add a new item with an adjusted unit price which will be the calculated overhead rate (approximately 10% of the original unit price).

Often the designer will place a "token" amount of an item on the plans just to establish the item in case it is needed. Most contractors will bid an unusually high price due to the small amount. If the Engineer is contemplating overrunning this item significantly, he should negotiate a reduction in the form of a line item adjustment. The new item will depict the negative adjustment in this circumstance.

**j. Substitution of Original Item(s)**

When a new item is to be substituted for all or a portion of an original item, be sure to show the underrun of the original item to prevent any misrepresentation of the actual cost of the change order, and the possibility of adversely impacting the statutory limits. If you have a valid reason to not show the underrun of the original item, explain this in the change order description.

When all or a portion of an original contract item is not to be used, do not refer to the original item as being "deleted". It is better to use the term "substituted", thereby if some of the item is needed at a later stage of the project, it will be available. In any case, we do not "unencumber" money until final payment is made.

### **k. Reclassification of Items - Pay Adjustments**

When adjusting the unit price on an item which is identical except for the changed price, label the item as "Reclassified". Be sure to show the underrun of the original item to prevent any misrepresentation of the actual cost of the change order, and the possibility of adversely impacting the statutory limits. If you have a valid reason to not show the underrun of the original item, explain this in the change order description.

An option that may be used in lieu of reclassifying an item is to establish a new item for the price difference only as an "Adjustment" item. The item for the pay adjustment could be a negative or positive dollar amount. In this instance, payment would be made on the original contract pay item at its unit price in addition to payment on the "Adjustment" item. This will result in the same net effect of total payment as an item reclassification, and only the positive adjustment amount will count toward the statutory limits.

In either case, be sure to thoroughly explain the reason (i.e. significant overrun of a major pay item, etc.) and the method of determining the amount (i.e. deduction guidelines for out-of-spec beams, etc.) of the price adjustment / reclassification in the Line Item Explanation on the change order.

### **l. Material Deductions**

When materials are incorporated into the project which are not in conformity with the plans or specifications, but are not deficient to the extent that they must be removed and replaced, the work may be accepted with an appropriate pay adjustment. Be sure to contact the appropriate Design Engineer (i.e. Pavement Design Engineer, Bridge Engineer, Traffic Engineer, etc.) to verify that the proposed acceptance of these materials is acceptable and will not adversely impact the project; and document this contact in the change order and the project file.

This type of adjustment should be accomplished by Change Order which adds a lump sum item for the price reduction. If the amount of the reduction is made in accordance with the contractual documents (specification, special provisions, etc.), then a Change Order will not be required. Refer to Construction Control Directive No. 20020212 for further details

### **m. Loss of Overhead**

When a major pay item, as defined in Section 101.05 of the Standard Specifications, is deleted or reduced significantly, the contractor may be entitled to compensation for certain unrecoverable costs associated with the deletion or reduction. The consideration of compensation for the significant underrun of a major item would need to meet the criteria detailed in Section 104.04 of the Standard Specifications. In cases where there is work being added or substituted which will offset this underrun, compensation may not be appropriate.

The total dollar amount of a deletion or reduction will be calculated as the total quantity of the affected pay item multiplied by their unit price. The three major components of this expense are materials, labor and equipment which when totaled will equal the amount of the underrun.

The following cost items will be considered for reimbursement of any unrecoverable cost incurred by the contractor:

**(1) Materials**

Acceptable materials purchased by the contractor subsequent to the award of the contract and prior to the date of cancellation, alteration, or suspension of the work will be paid for at the actual cost to the contractor and shall thereupon become the property of the State. The cost of any such materials shall be documented by means of itemized invoices as prepared by the materials supplier, and will be designated as Federal aid non-participating (funding category 0900) on the change order in accordance with Construction Control Directive No. 19960508 .

For any materials which would have been used for the prosecution of the affected items of work, either already purchased or anticipated, the contractor may be compensated an amount equal to 5% of the total cost of these materials for overhead.

**(2) Labor**

The contractor may submit an amount equal to 10% of the costs incurred for labor which is directly attributable to the affected items of work as compensation for contractor's overhead. In support of this cost the contractor may be required to submit adequate documentation. The contractor should include in this item any expenses for Social Security Taxes, Unemployment Insurance, Workers' Compensation, and any Employee Fringe Benefits.

**(3) Equipment**

For any machinery or special equipment (other than small tools) which would have been used for the prosecution of the affected items of work, the contractor may be compensated an amount equal to 5% of the total cost of equipment for overhead. The cost of equipment will be computed at a rate as defined in Section 109.04 of the Standard Specifications. The contractor may be required to submit adequate documentation to support the request for compensation for equipment.

The contractor may also be compensated the full amount for any equipment rental charges which can be directly associated with the affected work.

**(4) General Liability Insurance**

For property damage and liability, the contractor may be compensated at a sum equal to 1.3% of the total amount of the underrun.

**(5) Subcontracted Work or Work of a Non-Highway Construction Nature**

When the affected items of work have been sublet by the contractor, or would have been performed by a contractor or a subcontractor not in the highway industry or by workers of a specialized trade or business, the contractor will provide documentation to support the proposed costs incurred for such services and may add an amount equal to 10% of these costs for the contractor's overhead.

**(6) Miscellaneous**

Additional allowance will be made for any other overhead and general expense costs of any kind which can be substantiated by the contractor.

In general, the amount of work not performed will be compensated at the rates defined above for each element. However, if the contractor can provide sufficient documentation of a greater overhead rate than indicated above, that rate will be used instead.

If the overhead rate is determined by performing an audit of the contractor's financial statements, the audit must be performed by a Certified Public Accountant and must comply with the requirements of the Federal Acquisition Regulations System (FAR) found in 48 CFR 31 - Contract Cost Principles and Procedures. The FAR contains cost principles and procedures for pricing and will be used in the determination, negotiation, or allowance of costs when required by a contract clause. Such an audit must be submitted to the Resident Engineer, and must include a statement that the audit complies with the requirements of the FAR.

**n. Quick Resolution for Compensation for Delay or Loss of Overhead**

The following formula may be used when the matter of Delay or Loss of Overhead can be resolved with no further considerations. If equipment and rental rates are to be included in a claim for additional compensation, a Cost Breakdown should be prepared. Refer to Section 108.07.D of the Standard Specifications for details on excusable and compensable delays.

$$\frac{(\text{Contract Amount} - \text{Mobilization}) \times 0.10}{\text{Contract Time}} = \text{Daily Overhead Rate(DOR)}$$

When a project is totally delayed the DOR would be applied in full. When the project is only partially delayed, the amount would be reduced by 10% of the amount of earnings during the period of impact. When a delay only affects a portion of the contract, apply the adjustment to those items which are impacted (or to the prime/subcontractor which is impacted).

**o. Design Changes**

When changes are made which affect the physical properties of a project (i.e. aggregate base in lieu of stabilized subgrade, prestressed beams in lieu of slab girder, video detection in lieu of loops, etc.) be sure to contact the appropriate Design Engineer (i.e. Pavement Design Engineer, Bridge Engineer, Traffic Engineer, etc.) to verify that the proposed change is acceptable and will not adversely impact the project. Document this contact in the change order and the project file.

**p. Identify Requesting Party**

When a change is requested by someone other than the Resident Engineer, please identify that party in case more information is needed. If the change was requested by letter, attach a copy of the letter to the change.

**q. Specification Change**

If the purpose of the change is to change the specification, attach a copy of the new specification to the change order in SiteManager and to the copy that is sent to the Contractor for their signature.

**r. Change in the Method of Measurement**

When the contract does not specify payment of an item to be based on the plan quantity, but it is mutually agreed between the contractor and the Resident Engineer to use the plan quantity as the basis of payment, then a change order must be executed to document that change in the item's method of measurement. The decision to make this change should be made prior to work being performed on the item. The change order must be signed by the contractor. It is not necessary to list the items and their unit prices and quantities. The items for which the method of measurement is being changed should be included in the General Change Order Description along with the reason for the change.

When the contract specifies payment of an item to be based on the plan quantity, but it is requested by either the contractor or the Resident Engineer to measure and calculate the quantity for the basis of payment, then a change order must be executed to document that change in the item's method of measurement. The decision to make this change should be made prior to work being performed on the item which would affect its accurate measurement. The change order must be signed by the contractor. The affected items do not need to be listed in the change order, unless more funds are being requested. When there is an "authorized deviation from the plans" as stated in the specifications, or payment will be different from the plan quantity for any reason, a change order must be executed to document that deviation.

### III. ADDITIONS TO CONTRACT TIME

#### a. Adding Contract Time by Change Order

When contract time is added as part of a Change Order, 23 CFR 635.121(b) requires that an analysis of added time be performed and adequately documented.

When additional time is contemplated, the actual impact to the project for the period when it occurred should be considered.

- Is the added work part of the original scope or is it an extension of the original scope?
- Does the added work fall on the critical path, or is a crew or a partial crew pulled from a critical item to do the added work, thus affecting the critical path indirectly?
- Has the contractor completed all of the original contract work and this addition is at the end?
- Is time needed for re-mobilization?

If work does not affect the critical path or if an outside crew or subcontractor is brought in to do the work simultaneously while the original work is in progress, additional time would not be proper.

A very simple approach is to compute the time based on the amount of money involved when compared to the original contract. Such as:

$$\text{Added Amount} \div \text{Contract Amount} \times \text{Original Contract Time} = \text{Added Time}$$

This simplification may not be adequate since the specifications require that the added time be commensurate with the amount and difficulty of the added work. Some tasks can be time consuming while costing very little by comparison.

Be sure to consider weekends, holidays and normal adverse weather days when calculating contract time extensions.

The analysis of time, as with the analysis of cost, is to be placed in the project file for future reference.

#### b. Complete-By Contracts

When a contract has a complete-by date, the specified date is a term of the contract. If the date is changed, it is a modification of the terms of the contract, or supplemental agreement, and must be accomplished by a Change Order with the contractor's signature.

When work is added to a complete-by date project, the only way to make the adjustment to the contract time is to move the complete-by date in an amount which is commensurate with the new work. This can only be done by Change Order and should be done at the same time as the Change Order is processed for the new work.

The adjustment of a complete-by date must be due to some condition caused by the Department or for some reason for which the contractor is not responsible. Weather may only be used as a reason when the amount of unusually severe weather is so extreme that, combined with the physical aspects of the project, render an on-time completion impossible. The contractor being “busy on another project” is not a reason to extend time.

Whatever method is used to determine added time, adequately document it and make it a part of the project file. Occasionally, you may be asked to furnish a copy of the analysis.

**c. FHWA Oversight Projects**

When the addition of time to a project is not the result of a provision of the Contract or Specifications, the FHWA Area Engineer should be notified. This includes Change Orders which add contract time. The notification can be made by e-mail, memo or with a Form-1365 as described in Construction Control Directive No. 19961121. Failure to acquire FHWA approval may result in non-FHWA participation, in accordance with 23 CFR 635.121(b).



#### **IV. REVIEW OF COST BREAKDOWNS SUPPORTING SUPPLEMENTAL AGREEMENTS**

At a minimum, the Contractor's Cost Breakdown shall be evaluated by consideration of the following required documentation and/or costing information.

The contractor must be able to support all of the data on the Cost Breakdown. The Department reserves the right to require documentation from the contractor to support this information. As a comparison of the value of the work, the Engineer might consider checking historical prices from the ODOT data-base.

The term "contract" means all of the documents associated with the contract such as plans, standard specifications, special provisions, etc.

Following is an explanation for each field in the Cost Breakdown form:

##### **Page 1 - Summary**

- (1) Contract ID**  
Department's State Contract Number (BAMS Number) which identifies the contract within SiteManager. Example: 090463.
- (2) Project Number**  
Federal / State Number assigned by Programs Division which identifies the project as to location and funding. Example: IMY-40-4(423)149.
- (3) Date**  
Date that the contractor submits the cost breakdown.
- (4) County**  
Primary County associated with this project. Example: Oklahoma.
- (5) Contractor**  
Legal name of the contracting firm as it appears on the contract documents. If the Cost Breakdown is submitted by the prime contractor's subcontractor, the subcontractor must be approved to perform work on the project. The Department's acceptance of a subcontractor's Cost Breakdown does not create a contractual relationship between the Department and the subcontractor.
- (6) Description of Work**  
Detailed description including the scope of work to be accomplished with the Supplemental Agreement.
- (7) Labor Total**  
Total cost of Labor to complete this work. From Attachment A.

- (8) **Labor Overhead & Profit**  
An additional amount equal to 25% of the Labor Total (15% for overhead and 10% for profit). For contracts governed by the 1999 Standard Specifications, use 20% of the Labor Total.
- (9) **Material Total**  
Total cost of Material to complete this work. From Attachment B.
- (10) **Material Overhead & Profit**  
An additional amount equal to 20% of the Material Total (10% for overhead and 10% for profit). For contracts governed by the 1999 Standard Specifications, use 15% of the Material Total.
- (11) **Equipment Total**  
Total cost of Equipment to complete this work. From Attachment C.
- (12) **Equipment Additional Administrative Costs & Profit**  
An additional amount equal to 20% of the Equipment Total (10% for additional administrative costs and 10% for profit). For contracts governed by the 1999 Standard Specifications, use 15% of the Equipment Total.
- (13) **Bonds**  
An additional amount, equal to 1% of the total Labor, Materials, and Equipment costs, less overhead and profit, for increases to bonding costs.
- (14) **Property Damage & Liability Insurance**  
An additional amount, equal to the actual costs incurred by the contractor for Property Damage and Liability Insurance. The following table illustrates examples of rates per \$1,000 of payroll for various categories of work performed for the Department. These factors are applied to the Total Labor Cost. If the contractor's proposed actual costs are substantially in excess of those shown in the following table, the Resident Engineer should require additional supporting documentation.

Description	Rate Per \$1,000 of Payroll
Bridge Construction	\$223.80
Carpentry	\$31.74
Concrete Construction	\$42.50
Excavation and Grading	\$104.76

**(15) Workers Compensation**

An additional amount, equal to the actual costs incurred by the contractor for Workers' Compensation coverage. The following table illustrates examples of rates per \$100 of payroll for various categories of work performed for the Department. These factors are applied to the Total Labor Cost. If the contractor's proposed actual costs are substantially in excess of those shown in the following table, the Resident Engineer should require additional supporting documentation.

Description	Rate Per \$100 of Payroll
Bridge Construction	\$21.48
Concrete Construction	\$12.83
Roadway Surfacing	\$12.66
Excavation and Grading	\$10.22
Pipeline and Conduit Construction	\$12.85
Railroad Construction	\$24.89
Fence Construction	\$15.10

**(16) Unemployment Insurance Contribution**

An additional amount, equal to 3.8% of the total Labor costs, less overhead and profit, for the additional costs of unemployment insurance contribution.

**(17) Social Security Taxes**

An additional amount, equal to 7.65% of the total Labor costs, less overhead and profit, for the additional costs of social security taxes.

**(18) Employee Fringe Benefits**

An additional amount, equal to 20% of the total Labor costs, less overhead and profit, for the additional costs of employee fringe benefits.

**(19) Subcontracted Work Total**

Total cost of work performed by an approved subcontractor. The subcontractor must be approved to perform work on the project. The Department's acceptance of a subcontractor's Cost Breakdown does not create a contractual relationship between the Department and the subcontractor.

**(20) Prime Contractor Overhead on Subcontracted Work**

An additional amount equal to 10% of the Subcontracted Work Total. For contracts governed by the 1999 Standard Specifications, use 5% of the Subcontracted Work.

**(21) Work of a Non-Highway Construction Nature**

Total cost of work performed by a contractor or a subcontractor not in the highway industry and by workers of a specialized trade or business. The contractor may submit

invoices for costs incurred for such services. For contracts governed by the 1999 Standard Specifications, use 5% of the Work of a Non-Highway Construction Nature Total.

- (22) **Prime Contractor Overhead on Work of a Non-Highway Construction Nature**  
An additional amount equal to 10% of the Work of a Non-Highway Construction Nature Work total.
- (23) **Total Cost of Work**  
The sum of the cost elements listed above. Round the amount to two decimal places before placing on the Change Order form.
- (24) **Unit Price / Quantity / Units**  
If the unit for the work is not Lump Sum, divide the Total Cost of Work by the total quantity of the work performed. Round the amount to two decimal places before placing on the Change Order form.

## **Page 2 - Attachment A - Labor Total**

- (1) **Contract ID**  
Department's State Contract Number (BAMS Number) which identifies the contract within SiteManager. Example: 090463.
- (2) **Description**  
Detailed description including the scope of work to be accomplished with the Supplemental Agreement.
- (3) **Labor Classification**  
The job title or classification for the personnel required to perform this work.
- (4) **No.**  
The number of personnel working in each Labor Classification.
- (5) **Rate/Hour**  
The hourly wage rate for each Labor Classification.
- (6) **Total Hours**  
The total number of hours of each Labor Classification.
- (7) **Total for Each Labor Class**  
The total dollar value for each Labor Classification. Multiply the Rate/Hour by the Total Hours.
- (8) **Labor Total**  
The sum of all Total for Each Labor Class. This total will be shown in the Labor Total

on Page 1 of the Cost Breakdown form.

**Page 3 - Attachment B - Material Costs**

- (1) **Contract ID**  
Department's State Contract Number (BAMS Number) which identifies the contract within SiteManager. Example: 090463.
- (2) **Description**  
Detailed description including the scope of work to be accomplished with the Supplemental Agreement.
- (3) **Material Item**  
Provide a clear description of each type of material to be used.
- (4) **Unit**  
The unit description for each Material Item.
- (5) **Contractor's Cost**  
The contractor's cost per unit for each Material Item.
- (6) **Quantity**  
The amount of each Material Item.
- (7) **Material Amount**  
The total dollar value for each Material Item. Multiply the Contractor's Cost by the Quantity.
- (8) **Materials Total**  
The sum of all Material Amount. This total will be shown in the Material Total on Page 1 of the Cost Breakdown form.

**Page 4 - Attachment C - Equipment Total**

- (1) **Contract ID**  
Department's State Contract Number (BAMS Number) which identifies the contract within SiteManager. Example: 090463.
- (2) **Description**  
Detailed description including the scope of work to be accomplished with the Supplemental Agreement.
- (3) **Equipment Type**  
Provide a detailed description of the equipment to be used. Include sufficient information (i.e., type, manufacturer, date of manufacture, model, type of fuel used, horsepower rating, attachments, etc.) to ensure proper identification of the equipment utilizing the Rental Rate Blue Book.

- (4) **No.**  
The number of each Equipment Type used.
- (5) **Cost/Hour**  
The maximum allowable rate (FHWA hourly rate) for each Equipment Type as listed in the Rental Rate Blue Book found on the ODOT intranet. Be sure to use the rate for the time period when the work was performed, and correct the rate for the age of the equipment and the region (Oklahoma). Refer to Section 109.04 of the Standard Specifications for instructions when dealing with equipment held on a standby basis.
- (6) **Total Hours**  
The total number of hours of each Equipment Type.
- (7) **Amount for Each Type**  
The total dollar value for each Equipment Type. Multiply the Cost/Hour by the Total Hours.
- (8) **Equipment Total**  
The sum of all Amount for Each Type. This total will be shown in the Equipment Total on Page 1 of the Cost Breakdown form.

Refer to Section 109.04 of the Standard Specifications for further instructions and determination of the total hourly rental rate allowed for any one piece of equipment.