

CONSTRUCTION TIP: Change Orders



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A change order is defined in the 2014 Standard Specifications as a "Written order to the Contractor detailing changes to the specified work, item quantities or any other modification to the Contract."

This document is intended to provide guidance for understanding, developing, and negotiating change orders.

REASONS FOR CHANGE ORDERS

Changes and additions to the work specified in the contract may be necessary.

Article 4.4, "Changes in the Work," states that a significant change has occurred when:

- *the character of the work for any item as altered differs materially in kind or nature from that in the Contract, or*
- *a major item of work varies by more than 25% from the original Contract quantity, except for non-site specific Contracts.*

Common reasons for initiating change orders include, but are not limited to:

- addition of requirements for and compensation to a contractor for additional work (outside the variances allowed by the specifications)
- compensation to the contractor for costs associated with differing site conditions, resolving disputes, etc.
- changes in the character or scope of the work
- changes in design

Form 2146-RC Change Order Reason Codes contains the current list of change order reason codes to use in SiteManager.

DEVELOPING AND PROCESSING CHANGE ORDERS

Change Order Agreement Clause

A change order documents the agreement between the department and the contractor for changes in the contract. Do not allow strikeouts on the change order document or on any related correspondence that indicates a disagreement regarding the language contained on the change order. Instead, include these statements in the description area of the change order.

Timeliness

Change orders must be processed in a timely manner. Make every attempt to involve appropriate individuals as early as possible in the change order review and approval process. For change orders that include significant changes in scope and/or extension of project limits where a Public Interest Finding (PIF) is required, coordinate with the CST Construction Support team early in the change order negotiations, or with the CST FHWA Liaison for questions and guidance.

In most instances, the work involved in a change order is a matter of urgency for the contractor and the department. To establish the price of additional work associated with a change order, coordinate with the contractor in a timely fashion to ensure all information needed is provided as soon as possible. This time frame can vary from a day to a few months.

Non-Participating Change Order Reason Codes

The information below indicates non-participating change order reason codes.

1. Error or Omission –
 - 1D Design error or omission that resulted in delay, rework or inefficiencies (TxDOT Design)
 - 1E Design error or omission that resulted in delay, rework or inefficiencies (Consultant Design)
2. TxDOT Convenience –
 - 3A Dispute resolution
 - 3K Addition of stock account or when TxDOT supplies material to the contractor that is incorporated into the project.
3. Third-Party Accommodation –
 - 4A Failure of 3rd party To Meet Commitment.
 - 4B 3rd Party Request For Additional Work
 - 4D 3rd Party Accommodation
4. ROW and Utilities –
 - 6A ROW Not Clear 3rd party responsible
 - 6B ROW Not Clear TxDOT responsible
 - 6E Untimely ROW
 - 6F Joint Bid Utilities
 - 6G Known Unadjusted Utilities
 - 6H Unknown Unadjusted Utilities

Change Order Pricing

Change order prices should be reasonable and justified. Supporting documentation of the negotiated prices is to be developed and retained with the change order records. Unit prices that are comparable to recent bid prices for the same character of work are acceptable without additional justification.

Changes in the Work

Article 4.4 states, "If the changes in quantities or the alterations do not significantly change the character of the work under the Contract, the altered work should be paid for at the Contract unit price." Payment for the quantities will simply overrun the amounts established in the contract.

When a major work item varies by more than 25% of the original quantity, price adjustments may be made in the unit costs according to Article 4.4. and a change order should be executed to document the adjustment. For 25% major item overruns, price adjustments are applicable only to those quantities that exceed the 25% threshold. The 25% variance for non-major items is not addressed by the specifications and, therefore, adjustments are left to the engineer's discretion (addressed further below).

Article 4.4 also states, "When the quantity of work to be done under any major item of the Contract is less than 75% of the original quantity stated in the Contract, then either party to the Contract may request an adjustment to the unit price. Adjust the unit price by multiplying the Contract unit price by the factor shown below.

Quantity-Based Price Adjustment Factors

	% of Original Quantity – Factor
• ≥ 50 and > 75	Factor 1.05
• ≥ 25 and < 50	Factor 1.15
• < 25	Factor 1.25

The department is not obligated to adjust prices when a contractor's bids are very low (unbalanced negatively). Do not execute change orders to adjust unit prices for overruns when the contractor unbalanced their bid with an unusually low unit price. Adjustments should not be made to negatively unbalanced bids (e.g., penny bids), based solely on the fact that the price is negatively unbalanced.

For the same reason, the engineer should not take advantage of a non-major item with a negatively unbalanced price by adding scope.

The engineer should use the quantities necessary to complete the original scope of the contract. If a negatively unbalanced item is a major item, the 25% variance applies, and appropriate price adjustments may be made in accordance with the guidelines outlined in the 2014 Standard Specifications.

The department is not obligated to use excessively high (unbalanced positively) bid prices when an overrun occurs due to plan errors, additional work, or other similar reasons. Prices may be adjusted for significant changes in the character of the work when the quantities for major items exceed the 25% threshold as specified in Article 4.4.

For non-major items, the price should be adjusted when the engineer determines the cost to the state far exceeds the cost of the work, materials, and overhead plus a reasonable profit. Use good judgment and consider fairness to the contractor and the public. For instance, when excessive unit prices exist or when plan errors create an overpayment for the item, prices may be adjusted down. Adjustments to existing unit prices must be accompanied by an appropriate justification and meet the conditions provided in Article 4.4. If the contractor does not agree to lower the price, consider removing, changing the bid items, or reducing scope to fit the project budget. Alternately if the cost of the change order is substantial, the district is to consider terminating the project in the best interest of the state and re-letting the project later.

Escalation

Adjustments to prices for escalation are allowed when:

- a delay occurs (due to an issue the department is responsible for)
- there are overruns or
- scope is added

For delay escalations, the contractor must establish they were unable, or it was impractical, to order materials or add work prior to the impact of the delay. For example, when contractor purchase agreements are voided due to a delay or when the purchasing agreements include escalation factors and delay occurs, the department can participate in escalation. In all cases, the delay must be due to an issue the department is responsible for (e.g., utilities, ROW).

For overruns and added scope, contractor justification is needed to show actual increases to adjust prices for the overruns in accordance with the specification (as discussed in Quantity Over- and Under-Runs above). Overruns and added scope escalations can also apply to such things as subcontractor work, labor, equipment, and fuel.

Remobilization

There could be additional costs, such as contractor re-mobilization, to accomplish the change order work. If mobilization is requested, the amount must be justified; it should not be a set percent of either the change order or the original mobilization costs. The request should identify what must be mobilized with specific associated costs.

Modification of Existing Items

If the proposed change affects only a component of the overall cost of an existing item, then revise the cost only for the affected component.

New Items

When new items of work are added, prices for the new items must be established. Obtain unit prices with justification for the new items from the contractor. When new items are comparable to bid prices for existing items of the same character of work, no additional justification is needed. Compare the contractor unit prices to the current district-wide or statewide bid prices and/or similar projects in the area to determine if the proposed prices are reasonable. In making this comparison, consider specific situations, such as remote work locations, difficult site access, small quantities, etc.

Added Scope Considerations

Low bid prices suffer when we fail to consider escalating prices when adding scope to projects. Also, we need to be careful adding scope to projects that incur financial increases beyond the AE signature authority. This can require a PIF be submitted for CST concurrence to justify the expense; especially if extension of project limits is included.

Force Account

The force account agreement specifies the labor rates, material costs, and equipment rates to be used. Avoid disputes by agreeing to personnel, overtime rates, and equipment needed prior to beginning the work. Force account work is not a preferred option due to the increased level of monitoring required. It is suitable in cases when an agreement cannot be reached regarding the scope of work and the amount of payment. In these situations, the contractor must submit specific price information for the materials, labor, and equipment required to perform the work.

Use the following in conjunction with provisions in Article 9.7, "Payment for Extra Work and Force Account Method," to determine the cost of force account work:

- Carefully track and review Contractor's documented quantities of work, actual labor, materials, and equipment used to complete the task.
- Use the documented information to determine the costs associated with the work.
- Add correct mark-ups to the labor, material, and equipment costs as listed in Article 9.7
- Verify equipment rental rates by referring to Equipment Watch (Rental Rate Blue Book) located on the CST's website

Verify labor rates in payrolls and interviews.

In accordance with Article 9.7, the allowable markups are listed below:

Mark up Item

1. **Labor -25%** Overhead (unspecified – combination of project and home office overhead), superintendence, profit, and small tools.
2. **Additional Insurance and Tax- 55% (35% for delay claims** Labor (without the 25% markup) for cost of premiums on public liability and workers' compensation insurance, Social Security, and unemployment insurance taxes.
3. **Materials - 25%** Overhead (unspecified) and profit.
4. **Equipment - 15%; Overhead** (unspecified) and profit not included in the equipment rates.
5. **Subcontracted Work – One 5% markup is allowed to total subcontracted amount proposed by the prime contractor. Be aware that each subcontractor might add a markup to each lower tier subcontractor's submitted pricing prior to submitting to the prime contractor** Administration and profit on exclusive subcontracted work. Markup applies only to the prime contractor and addresses all subcontracted work, regardless of the number of tiers of subcontractors performing the work. No other administrative markups are allowed. Department staff should consider whether the total unit cost proposed by the subcontractor is reasonable.

6. **Law Enforcement - 5%** Administration costs, superintendence, and profit.

7. **Costs of Bonds - 1%** For the cost of contractor bonds computed on the total of all items.

When markups are used to develop unit prices, compare the resulting unit prices to prices found through other means, such as recent bid prices for “like” work or department derived cost-based estimates (opposed to the department’s usual historical based estimates). Markups can create payments that are beyond the cost of the work plus a reasonable profit. This is due to the overestimation of time required for labor and equipment compounded by the standard add-ons that do not reflect contractor pricing methods.

The force account method of tracking project changes requires inspectors to verify the materials used, the number of workers used, the exact type of equipment used, and the hours of both workers and equipment. A cursory review should be made to ensure the pay rates being claimed match the certified payrolls of the contractor.

Use of Force Account Add-ons for Delays and Inefficiencies (Damages)

In some situations when compensation for delays or inefficiencies is sought by contractors, it is common for the contractor to request compensation using the mark-ups under the force account procedures in the specifications. When compensation for a delay or inefficiency is justified, do not apply mark-ups. For damages, labor burden will be reimbursed at 35% unless the contractor can justify a higher rate. When a contractor obtains a Certified Public Accountant (CPA) prepared labor burden rate higher than 35%, it is to be sent directly to CST for approval.

Unilateral Change Orders

By using a unilateral change order, the district engineer establishes the unit price(s). This authority cannot be delegated. The difficulties of monitoring the force account method for complicated work (or work that involves other items with established prices) justify the use of a unilateral change order. After the work is complete, the amount in the change order may be adjusted, if appropriate. Overhead may be paid out as shown in Article 4.6, “Requests for Additional Compensation and Damages.”

Do not use a unilateral change order for work that is outside the scope of the project or for dispute resolution. Work outside the limits, excluding end of project transition areas or added work outside the original intent of the project, should not be forced on a contractor using a unilateral change order. The District Engineer approves unilateral change orders. Coordinate unilateral change orders with the CST Construction Support team.

Special Items to Consider when Developing Change Orders

Compensation in the change order for interest (borrowing) or anticipated profit on reduced or eliminated work is not allowed.

- Overtime pay is generally allowed; however, overcharges can occur when added change order work carries the full burden of the overtime. For example, when establishing labor payments, a calculation factor for regularly scheduled overtime work may be used rather than the standard calculation for hours worked more than a 40-hour workweek to address overtime. Question the appropriateness of the

overtime billings. Contact the CST Construction Support team for additional guidance.

- Compensation for anticipated risk should be strictly limited. While there are cases when change orders cover long periods of time, most change orders have small risk. These risks include, but are not limited to, items such as:
 - encountering unknown obstacles
 - utility issues
 - labor, material, and fuel escalation
- Project overhead costs incurred onsite in support of the work may be compensated when the project duration is extended. These costs may include items such as:
 - jobsite facilities (including, but not limited to office trailers, storage facilities, property leases, or testing facilities)
 - superintendence
 - office equipment and supplies
 - utilities
 - employee per diem (applies only in those instances where the project location is remote enough to warrant payment of per diem)

Note: Extra work items containing markups include overhead compensation.

Sales Tax

Generally, materials incorporated into a project, such as concrete, rebar, asphalt, etc., are tax exempt. Other items not incorporated into the project may be subject to sales tax. Sales tax expenses for items that are not incorporated into the project, such as barricades and equipment rental, are considered a reimbursable expense. Contractors should include these sales tax expenses in the total cost of the item rather than listing these costs separately.

Advise contractors to contact their tax consultant or the Texas Office of the Comptroller with any questions related to the payment of sales tax. There may be cases when contractors pay sales tax outside of the invoice; the sales tax is paid by a supplier directly to the Comptroller's office. In such cases, they may wish to include an add-on for reimbursement for the sales tax separately. TxDOT does not provide a Tax-Exempt form for construction projects. Contact the CST Construction Support team for assistance with questions about sales tax.

Requesting CST Concurrence to Proceed with the Development of a Change Order

Districts may wish to add significant scope, use proprietary items, or add limits to a contract. The work to develop this type of change order is extensive and may require environmental clearance and a project agreement modification, prior to FHWA participation.

Federal participation may be limited or denied if the proposed work extends beyond the project boundaries, adversely impacts work already under way, or work should be put out to contract. However, the FHWA allows certain exceptions. These exceptions can be justified with a Public Interest Finding (PIF), certifications, or findings of cost effectiveness.

If a PIF is determined to be applicable, prepare a memorandum describing the findings and address it to CST through the appropriate division for concurrence. Before a great deal of time and effort are invested in the development of this type of change order, it is

recommended that districts consult with the CST FHWA Liaison to determine if the change order qualifies for federal participation.

If the change order does not qualify for federal participation, CST will provide guidance on state funding alternatives.

The district should also secure concurrence from the appropriate FHWA Area Engineer for the "concept" on non-exempt TxDIP and/or Major Projects. Following CST's and FHWA's concurrence, a change order can be developed and submitted for review with all the required information prior to beginning any work. CST and FHWA concurrence of the change order "concept" does not constitute change order or change order price approval.

Transition Work and Short Extensions of Work

Districts may extend or add project limits without CST concurrence only if all the following conditions are met:

- transition or tie-in work is less than 1,500 feet
- no changes made to unit bid prices
- the scope of work remains the same
- the funding category remains the same
- no new CSJs are required

Mandatory Information for Change Orders Submitted for CST Concurrence and/or ADM approval

Early coordination should be made with CST on change orders that require CST concurrence and/or ADM approval. This will aid in timely processing. For change orders that require CST concurrence and/or ADM approval, provide the following information in the transmittal memorandum via email:

- identify who prepared the plans, TxDOT or consultant
- status of the change order work
- explanation of the necessity for the work or change order
- cost breakdown and price justification for newly added items
- a work program identifying a funding category
- third party funding and agreement with the change order
- a statement on the status of the work area's environmental approvals, including air quality conformance clearance for added capacity change orders in non-attainment areas
- attach the change order form that clearly describes the scope of work
- attach the PIF if required.

Resolution of Disputes through Change Orders

The CST Construction Support team may provide guidance and assistance on the development of change orders for disputes. Dispute resolution must be done in accordance with the project escalation ladder. With assistance in dispute resolution, please contact your director of construction.

Contract Terminations

Do not use a change order to terminate a contract. Only the individuals delegated the authority to terminate a contract may sign a contract termination letter.

The district will prepare a CO by adding only the acceptable costs for termination and work performed since the last progress estimate, if any. Do not zero-out the contract. The CO should include the applicable reason code for Termination (7A-7G) as the primary CO reason. Do not include anticipated profits. Include reasonable and verifiable termination costs as provided in Article 8.8, "Termination of the Contract." Then process the final estimate to release the project from further SiteManager actions.

Conclusion

In administering change orders, the department strives to be fair to contractors while protecting the public interest.

For additional guidance, refer to Construction Contract Administration Manual (CCAM) and Article 4.4 of the 2014 Standard Specifications. Contact the CST Construction Support team for additional assistance.