

109 MEASUREMENT AND PAYMENT

109.01 Measurement of Quantities

Method of Measurement

Highway construction work is divided into separate pay items. Each pay item represents a unique construction element of the project (i.e., guardrail, culvert pipe, roadway excavation, etc.).

Each pay item has a method of measurement. A *method of measurement* is a procedure used to determine the quantity of work eligible for payment under each pay item. Usually the method of measurement measures the quantity of a key material for each pay item (i.e., cubic meters of structural concrete) or measures the completed work as a unit (i.e., each catch basin or a lump sum structure).

Each pay item has a method of measurement clause or subsection, which can be found in either the Standard Specifications or the Special Provisions. The clause will describe exactly how the item is to be measured for payment. Subsection 109.01 more fully describes the method of measurement for pay items that have an undefined or incomplete description of how to measure the work for payment.

A method of measurement may or may not represent the actual quantities of materials used. For example, structure backfill is measured based on Standard Drawing B-19.40, which shows vertical fill limits adjacent to the structure. In reality, excavations are sloped next to structures so that the volume of structure backfill placed will always exceed the amount measured for payment.

Carefully review “Method of Measurement” and “Basis of Payment” sections in the Standard Specifications / Special Provisions to know exactly what is included in a pay item.

Measuring and Documenting Pay Quantities

The accurate measurement of pay quantities is a very important task for the Inspector. Field measurements for pay items are converted directly into dollars for the Contractor. Because there is a direct relationship between what the Inspector measures and what the Department pays out, inaccuracies in measurements lead to underpayments or overpayments to the Contractor.

ADOT has a manual to help Inspectors in this area. The manual is titled *Pay Item Documentation for Inspectors*. This is an excellent guide for all Inspectors on how to accurately measure and document pay quantities on ADOT projects.

Scales

Scale Operator

For many pay items involving bulk materials (i.e., aggregate base, asphalt, and mineral admixture), payment to the Contractor is based on the weight of the material. Unlike other methods of measurement, measuring by weight can be a concern for the Department.

When paying for material by weight, ADOT has very little direct control or involvement in the weighing process. The material is weighed for payment on scales either owned or leased by the Contractor or Material Supplier. The material is entirely handled by the Contractor or Material Supplier before it is placed at the project site. Only when the material arrives at the project site does the Department exercise some control over it. As a result, the Department must rely on the accuracy of the Contractor’s scales and the honesty of the Contractor’s scale operators and trucking staff when this method of measurement is used.

To help ensure the integrity of this process, the Department requires a scale operator to monitor the weighing of materials for payment. When manually operated platform scales are used, a scale operator shall be assigned full-time to monitor weighing. When automatic scales are used (weights are automatically displayed and printed), the monitoring can be done part-time.

Regardless of whether scale monitoring is done on a part- or full-time basis, the scale operator has several important duties related to the weighing of materials.

- Ensuring the scales are properly certified.
- Ensuring the scales are being operated correctly and within their prescribed limits.
- Verifying the vehicle tare weights are correct if there is doubt about their accuracy (this could include weighing empty trucks on another scale).
- Verifying that the weight being measured is the same as the weight being recorded (more of an issue on manually operated scales).
- Tracking the accumulated amount of material used on a daily basis.
- Ensuring the Contractor's weigh tickets are completed correctly.

The Resident Engineer or Project Supervisor may assign other duties to the scale operator to keep the person busy full-time. However, it is important that the scale operator has sufficient time to fully carry out the duties listed above so they can competently oversee the weighing process.

Scale Accuracy and Calibration

Like a tape measure, a scale needs to measure accurately and consistently according to accepted standards. A scale's accuracy directly reflects how accurately ADOT pays the Contractor for work measured by weight.

To measure weight accurately, two things must occur.

1. The scale must be calibrated correctly.
2. The tare weight of the container holding the material must be accurately known.

Even when the scale weighs accurately and the correct tare weights are used, weights still need to be accurately recorded so payment can be made.

Policy on Scales

1. Truck scales must be sealed by the State Inspector of Weights & Measures or a registered service agency (RSA) within a period of 12 months preceding the date of weighing.
2. The original setup of scales and all moves of scales should be licensed and certified by Weights & Measures or an RSA before the scales are to be used.
3. In the event ADOT personnel cannot satisfy themselves as to the proper accuracy of the scales, at any time prior to or during the weighing operations, weighing operations should cease and the State Inspector of Weights & Measures or a registered service person or agency should be called by the Contractor to inspect the scales.
4. ADOT personnel should not repair scales. An adjustment of the balance bar to maintain zero balance of the beam is the only adjustment that should be made by ADOT personnel. All other adjustments or repairs must be performed by a registered service agency.
5. Scale certifications are good for 12 months. No grace period for recertification should be allowed. Commercial scales are required to be recertified by Weights & Measures or an RSA within 45 days prior to expiration of the 12-month period.
6. Responsibility for scale set-up, operation, maintenance, adjustment, and repair lies with the Contractor.
7. The Construction & Materials Group and the Department of Weights & Measures maintains a list of

current Registered Service Agencies. Please ensure the RSA is currently certified.

Weighing Requirements

1. An acceptable load invoice or ticket should include truck number, time, source, date, type of material, and net pounds or tons. Each invoice should be signed by the ADOT scale operator and collected by the Inspector calculating the spread, who in turn should make a notation of station limits of the spread on the front of the invoice and initial. At the completion of the shift, the spread person should deliver the invoices to the project office for checking and totaling.
2. In the event loads or portions of loads are rejected, notes explaining the reason should be made on the respective invoice, initialed, and dated by state and Contractor representatives.
3. Each day's totals and accumulated totals should be recorded on ADOT Pen Form - Truck Weight Record. Documentation, such as moisture deductions, should be shown on this form. Each weigh record will be signed daily by the scale operator or their deputy.
4. The daily weigh record should be attached to the daily invoices and tapes. The invoices, checked tapes, and weigh sheet should be retained at the project office and kept with the project files.
5. Spot checks of weighing operations and tare weights should be made. The frequency of these checks is dependent on the quantity of material being weighed daily, so the frequency of checking should be at the Resident Engineer's discretion.

109.02 Scope of Payment

Even though the Department pays for completed work on a monthly basis as the job progresses, this does not mean the work has been accepted. The Department has the right, until final acceptance (see Subsection 105.20), to require defective work to be corrected by the Contractor, even after the Department has paid for that work.

109.03 Compensation for Altered Quantities

The quantities shown in the bidding schedule are just estimates of the amount of work required to complete the contract. In reality, the actual quantities are going to be different than the estimated ones. Contractors often ask for unit price adjustments when quantities run under the estimated amounts, items are deleted, or when work is added. Regardless of the reason, Resident Engineers should stay within the guidelines of 104.02 when making unit price adjustments.

As a Department, consistency is needed when allowing unit price adjustments. This ensures fairness to all our Contractors, Subcontractors and materials suppliers. Consult with the District Engineer when you feel a unit price adjustment is warranted outside the scope of 109.03, 104.02, or related subsections (see Subsection 104.02 of this manual).

109.04 Adjustments in the Contract Price

General

Supplemental agreements are used to make changes to ADOT construction contracts. They change work in the contract and adjust the contract cost accordingly. They CREATE new pay items or INCREASE, or DECREASE existing pay items or quantities. Supplemental agreements, specifically Change Orders, may also be used to change or waive specifications or ADD days to contract time, even when there is no effect on contract costs. Bid Items are never deleted; quantities are adjusted to zero.

When signed by the Contractor and the Resident Engineer, supplemental agreements are binding legal documents that supplement the original contract.

Three different types of supplemental agreements may be used to amend ADOT construction contracts:

1. A *Letter of Agreement* is used if the cost of the extra work is less than \$10,000. This is the simplest Supplemental Agreement. It describes the change and creates lump sum Item No. 9240101, Miscellaneous Work (Resident Engineer Use Only), for payment. The Letter of Agreement is signed/authorized by the Resident Engineer and signed by the Contractor. A Letter of Agreement is not to be used to change, add or delete plans or a specification or to add time.
2. A *Change Order* uses existing items and unit prices in the bidding schedule or establishes new items and unit prices to pay for extra work. A Supplemental Agreement form is sent to the Contractor describing the change and listing the pay items and unit prices affected by the change. Much supporting documentation such as a detailed cost analysis, revised design details, and plan sheets are contained in a Change Order package.

A Change Order is also used to extend contract time, adding additional days to complete a project.

3. A *Force Account* compensates the Contractor for extra work based on the actual hours worked, equipment and materials used (time and materials). It is the most cumbersome and administratively complex Supplemental Agreement. It contains all the supporting documents found in a Change Order, plus additional record keeping requirements once the Force Account work begins.

The type of Supplemental Agreement used depends on the cost and complexity of the contract change. Simpler changes can be done by Letter of Agreement, while the more complex changes, for which costs are difficult to quantify, may need to be done by Force Account. The order of increasing complexity is:

1. Letter of Agreement, 109.04(A),
2. quantity adjustments by Change Order using existing pay items, 109.04(B),
3. detailed estimate (cost analysis) by Change Order, 109.04(C), and finally
4. Force Account, 109.04(D).

The Letter of Agreement (LOA)

The Letter of Agreement is best suited when the changes are simple, can be easily identified and estimated, and cost \$10,000 or less. A Letter of Agreement is the easiest for the Department to administer and does not require an extensive approval process. The Letter of Agreement can also be used to credit the Department for cost savings that result when the RE relaxes minor specification requirements. The intent shouldn't be to nickel-and-dime the Contractor, but to recover legitimate cost savings when the Contractor is clearly realizing a quantifiable economic benefit as the result of a change. A LOA can also be used to recover costs such as Partnering Workshop expenses.

The Change Order (CO)

A more formal documentation and approval process is needed for this type of Supplemental Agreement. If the change cannot be handled by adjusting the quantities of existing contract items—109.04(B), then a detailed cost analysis of the extra work must be performed—109.04(C). The Change Order is best suited when the work can be quantified ahead of time. Since Change Order prices are generally agreed on before the extra work begins, Contractors may include many contingencies in their cost estimates to offset any perceived risks.

A Change Order is also used to add time to a contract. The Contractor initiates this using the [“Request for Extension of Time”](#) form which categorizes the total time requested as a compensatory and/or non-compensatory (see Construction Manual 108.08). The Resident Engineer reviews the Contractor's request and recommends, to the District Engineer, the number of additional days to be added. In the recommendation, the Resident Engineer includes whether or not any time in compensatory. All Change Orders to extend contract time with compensation requires an analysis of the 'per day' rate of compensation. This analysis is prepared with the assistance of the

Assistant State Engineer for Construction & Materials, who reviews all compensatory time requests for guidance in price negotiations. Contract line item 1080800 Contract Time Extended Overhead with an Each-Day unit price is created. The District Engineer grants final approval for time extensions.

The authorization levels for time extension compensation remain unchanged. After the Contractor signs the form, agreeing with the District Engineer's decision, the Resident Engineer prepares a Change Order. If the Contractor does not agree with the District Engineer's decision, the Resident Engineer prepares an Escalation to the State Engineer.

Time Extensions add days to Working Day & Calendar Day contracts. Changes to FIXED DATE Contracts require that the contract's completion date be deleted and a new Fixed Date established for completion.

All Change Orders adjusting contract time shall be signed by the District Engineer.

Change Orders adjusting contract time can be combined with other contract changes as long as you do not lump different types of contract changes within one change order.

A Procedural Change Order is used when the cost of the change is zero – generally for additions or deletions to plans or specifications, or to extend contract time without compensation.

The Force Account (FA)

The Force Account should be the Supplemental Agreement of last resort because it is the most expensive and administratively tedious. The Force Account is used for contract changes in which the amount of work is difficult to quantify (such as an emergency situation) or the financial risks of performing the work are too high for the Contractor. The RE estimates ahead of time what he or she believes the extra work will cost and gets the necessary approvals to establish the force account. Once the work begins, daily records are kept of the labor, materials, and equipment used to accomplish the extra work. The Contractor takes these daily records and invoices the Department for the work, based upon section 109.04(D) of the applicable Standard Specifications using the [Prime Contractor Force Account Weekly Detail](#). The field office reviews and approves these details before paying the Contractor.

To sum up, the Force Account is best used when:

1. defining the work clearly and accurately enough for a change order is too difficult,
2. the extra work needs to begin right away, or
3. the RE and the Contractor cannot agree on costs.

Investigation and Preparation

Subsection 104.02, Revisions to the Contract, in the Construction Manual, describes the different types of contract changes and the process for analyzing any contract change. In 104.02 we said that the Resident Engineer must basically answer these four questions when analyzing a contract change:

1. Was there a contract change? (What was the change?)
2. Who caused the change?
3. What are the impacts of the change?
4. What are the costs?

Subsection 104.02 should be referred to when investigating and analyzing any contract change.

The results of analyzing a contract change are documented in the supplemental agreement. See section on "Documentation" that follows.

Cost Analysis

An RE's cost analysis is required for all Supplemental Agreements including Force Accounts, Letters of Agreement and Change Orders (including Time Extensions). Cost analysis for time extension Change Orders with Compensatory time require consultation with the Assistant State Engineer for Construction & Materials. Cost analyses for extra work are best done by carefully examining the impacts of the change first, then looking at costs last.

Here is a rudimentary procedure that can be used on any cost analysis that will keep you focused on analyzing the impacts first before you are ready to examine costs:

1. Quantify the Extra Work

This means calculating the amount of work that has to be performed: such as cubic yards (cubic meters) of dirt to move, linear feet (meters) of guardrail to install, or pounds (kilograms) of rebar to eliminate. The trick here is not only calculating the quantity correctly, but also selecting the correct unit of measurement. Your selection should be based on industry practice and what unit of measurement best represents how the work will be performed. For example, excavation work is usually done on a cubic yard (cubic meter) basis because excavation work involves moving volumes of material. On the other hand, structural concrete is usually estimated on a square yard (square meter) basis and not by the cubic yard (cubic meter) basis ADOT uses to measure it for payment. Most of the expense in structural concrete is in the formwork and not in the amount of concrete used. Selecting the correct unit of measurement is an important element in producing an accurate analysis.

2. Analyze the Construction of the Work

Construct the work in your mind. Write down all the different steps that have to be followed (continuously ask yourself who will do what, where, when, and how?). This is where your analytical thinking as a technician or engineer is of prime importance. One reason project supervisors' estimates are usually less than the Contractor's on extra work is that Project Supervisors fail to take into account all the little hidden extras that add to the cost of the work (e.g., additional crane time may be needed to lift extra rebar from a delivery truck to a bridge deck).

3. Select the Crew Size, Equipment and Materials Needed to Complete the Work

Once you have decided how you're going to build the work and have broken it down into smaller, definable units, then it is simply a matter of selecting the appropriate resources for the work. This selection is based on judgment as well as availability of the needed resources.

4. Estimate Production Rates

Here a lot of judgment is involved and often historical data can be used. Some of the more experienced inspectors may be able to help estimate how long the work will take. Sometimes you just have to assume a rate. Two things to remember are that no one works a 60-minute hour or less than half a shift.

5. Calculate Direct Costs

Up to this point, we haven't even mentioned costs and yet a lot of analysis has already been done. Good cost estimates are often the result of understanding how to build the work (steps 1 through 4) more than having accurate numbers on costs. On the other hand, don't be afraid to call material suppliers and to use the Contractor's payrolls to improve your accuracy.

Another source of historical cost information is *Means Heavy Construction Cost Data*. This cost guide is

published yearly and contains unit cost information as well as information on production rates and crew sizes.

Direct costs usually include project overhead, but not home office overhead. Don't forget incidental costs for things like haul roads, water, and waste disposal.

Add up all costs:

- Labor which includes burden and fringes. The use of Certified Payrolls for actual employees' pay data and fringe amount is preferred. The labor plus burden is calculated on Wages x 1.35. Labor burden is the total of all indirect labor costs necessary for an employee to perform the work that they are hired to do. It includes Social Security and Medicare Tax, Worker's Comp (Insurance the employer must purchase), State and Federal Unemployment Insurance, training, paid holidays, use of vehicles, computers, PPE, office, office furniture, equipment, supplies, etc. Fringes are the non-take home portion of wages which include Pension/401K, paid vacation and sick leave, contributions to health insurance, etc. ADOT verifies Fringe benefit rates from certified payrolls.
- Equipment costs: Here the Blue Book is invaluable
- Materials: The delivered cost of AB, pipe, concrete, etc.

6. Add Markups and Arrive at a Grand Total or Unit Price

Profit and overhead is calculated as 15% of the total of all Labor, Equipment and Material costs for work done by the prime contractor. Work done by subcontractors is calculated as 20% of the total (assume a proposal from subcontractor already includes his 15% P & OH mark up, whether stated or not. The prime contractor receives an additional 5% to make the total 20% only on the portion of the work done by the subcontractor.

This is cost estimating in its most general form. Think of it as a central theme with many variations since the type of work and the needs of the estimator often have a great influence on the way in which the estimate is carried out. Applying these basic steps in order, for even the most complex analysis, will improve your accuracy by keeping you focused on the cost analysis process rather than on the bottom-line result.

Negotiating

Subsection 104.03 and the partnering process should be viewed as a valuable tool to negotiate the contract change amount, if any. If the extra work is not covered by an existing item, the Resident Engineer and the Contractor may be able to negotiate a new unit price for the work and establish a new item or items in the supplemental agreement. If the Contractor proposes a new item or unit price, a detailed cost analysis must be provided as directed in Subsection 109.04(C). The cost analysis should include a breakdown of the estimated time for labor (including labor classifications) and the estimated costs of materials and equipment. The total cost of the extra work is divided by the units of work to arrive at a unit price for the work.

The Contractor's cost proposal must be analyzed by a thorough review by the RE. The Contractor's analysis should be compared with the RE's analysis. The RE should be completely satisfied that the Contractor's cost analysis is equitable and fair before accepting it as part of the supplemental agreement. Both the Contractor's and the RE's cost analysis must accompany the supplemental agreement package.

Some REs think that Contractors try to take advantage of the Department when a change order arises. This is usually not the case. Contractors are no longer in a competitive bid situation after they're awarded the project, so there is no reason for them to assume unnecessary risk. This lack of risk taking is simply reflected in Contractors' change order prices.

Authorization

Authorization Levels

1. Resident Engineers: REs are authorized to approve changes to the contract that do not exceed \$75,000. This authorization will include changes in contract specifications, design and unit price adjustments. Contact and consensus with the both the Project Manager and project designer will be required on design changes that are greater than \$25,000. Project Managers should also be kept informed of all other significant changes. If the RE cannot reach a consensus with the Project Manager and designer on a change, then the issue should be immediately escalated.
2. District Engineer: The DE will have authority to approve changes to the contract that equal or exceed \$75,000 but are less than or equal to \$350,000. This authorization will include changes in specifications, design, and unit price adjustments. Concurrence from the Project Manager and the designer will be needed on all design related changes. The approval of the Assistant State Engineer for Construction & Materials is required for all Specification changes. In the absence of the District Engineer, the Assistant State Engineer for Construction & Materials has this authority.
3. Deputy State Engineer: The Deputy State Engineer will have authority to approve all supplemental agreements that exceed \$350,000 but are less than \$750,000. This authorization will include changes in specifications, design, and unit price adjustments. Concurrence from the Project Manager and designer will be needed on all design related changes.
4. State Engineer: The State Engineer will have the authority to approve all supplemental agreements that exceed \$750,000 but do not exceed \$10,000,000. This authorization will include changes in specifications, design, and unit price adjustments.

When an individual change exceeds 2% of the contract amount, a Resident Engineer or District Engineer may not approve any supplemental agreement without the approval of the Assistant State Engineer for Construction & Materials. The RE is responsible for monitoring the cumulative value of all changes to the original contract amount. The RE must verify the project budget can accommodate all supplemental agreement amounts by referencing the Finance Card found in the Contract Card of your FAST Desktop. If not, a Request for Additional Project Funds exhibit 109.04-7 must be submitted and approved by the Assistant State Engineer for Construction & Materials.

Signatures

The person approving for the State of Arizona (below the line) coincides with the dollar amount authorized. RE's sign below the line when the CO does not exceed \$75,000, because they are approving for the State of Arizona.

RE's sign above the line when the CO is over \$75,000 because the DE, Assistant DE, Deputy State Engineer, or the State Engineer sign below the line (according to their authority level), approving for the State of Arizona.

The RE only signs the CO once. They do not sign both above and below the line.

If a supplemental agreement is greater than one page, all responsible parties should sign on the same page, preferably the last page of the supplemental agreement. However, the page being signed should include the total supplemental agreement dollar amount and/or number of contract days being extended.

Contacts For Supplemental Agreements

The authorization levels discussed previously apply to the financial approval of a supplemental agreement. Changes that require alterations to the specifications, ADOT design policy or design details have to be agreed upon by the appropriate ADOT technical section. A change must receive technical authorization before the cost of the change can be approved. The contact must be documented in the Supplemental Agreement Tracking System (SATS) Contract Revision Notification (CRN) screen.

The ADOT technical managers include Valley Project Management, Statewide Project Management, Value Analysis, Materials, Roadway, Environmental, Traffic Engineering, Engineering Technical Group, Right of Way and Bridge.

If any technical manager does not agree with the proposed Supplemental Agreement, the agreement must be escalated to the applicable Deputy State Engineer(s) for resolution and approval.

FHWA APPROVAL is required for all FHWA Full Oversight projects. FHWA Full Oversight projects can be identified by the last letter in the Project Number. N or S (National Highway System – NHS). X or F (non NHS). Project numbers that end in an A, T, or D are in the Certification Acceptance program. See the 2010 [FHWA and ADOT Stewardship and Oversight Agreement for Arizona](#) which was revised April 2013.

The District Engineer has authority to approve supplemental agreements for federal-aid projects in the certification acceptance program. Although FHWA does not need to approve these supplemental agreements, they do need to be advised that the supplemental agreement is being processed. FHWA contacts are required on all federal-aid projects not in the certification acceptance program. Any local government or agency participating on a project must also be contacted.

The responsible Local Public Agency (LPA) should sign all supplemental agreements for contract changes they have agreed to pay for.

Escalation of Supplemental Agreements

Should there be an internal lack of consensus on any proposed supplemental agreement, the DE, RE, Project Manager, and the project management team should make every effort to reach a satisfactory solution. If necessary, the issue may be escalated to the Assistant State Engineer for Construction & Materials or the Deputy State Engineer, who will then attempt to resolve the issue to the satisfaction of all concerned.

Documentation

Alternative Delivery Projects

For all Supplemental Agreements written on CMAR or Design-Build projects the approval process begins with the Resident Engineer initiating an [Alternative Delivery Contract Modification Request](#) form.

Contract Revision Notification Requirements for Supplemental Agreements (see Exhibit 109.04-1 *Contract Revision Notification*)

The purpose of Contract Revision Notification Documents is to provide documentation that details ADOT approvals and Contractor acceptance of contract changes. No payment can be generated until all required approval dates have been entered into the Contract Revision Notification Approvals SATS screen (and saved). This document shall be prepared and distributed within 48 hours of the Emergency Authorization date. The Emergency Authorization date is the Resident Engineer reaches an agreement with the Contractor to begin work, or directs the work to be done by Force Account. (See block “C” on the Time Line for Contract Modification diagram). The Contract Revision Notification is important because it documents that authorized approvals for contract changes have been obtained so that work and payment can proceed before a detailed Supplemental Agreement is signed as the official contract document. In cases where exact costs cannot be determined, the Contractor and the Resident Engineer shall prepare a cost estimate and the Resident Engineer shall document the work as if it were a force account until an exact cost can be agreed upon. However, if the exact cost cannot be determined within 10 calendar days, the Contractor and the Resident Engineer shall document the work as a force account. A force account (supplemental agreement) cannot be converted to a change order after the supplemental agreement has been created in SATS and/or payment has been made. A completed formal detailed Supplemental Agreement with exact cost shall be processed within 45 calendar days following the Emergency Authorization date on the Contract Revision Notification.

The Resident Engineer or his designee shall use the SATS program in the FAST Data Base to prepare the Contract Revision Notification Document. The following contacts will be made.

1. The person authorizing the change (see “Authorization Levels” above).
2. The Assistant State Engineer for Construction & Materials and the Project Manager if the Supplemental Agreement cost warrants (see “Authorization Levels” above).
3. If the design was modified, the name of the registrant that was contacted as specified under “Sealing Change Orders” below.
4. The person contacted within the appropriate ADOT technical section if ADOT Standard Specifications, Special Provisions, or Standard Drawings were altered (see “Contacts for Supplemental Agreements” above).
5. Contractor’s Agent.
6. Federal Highway Administration and local government contacts. FHWA approval needed for all Full Oversight projects either N or S for on NHS or X or F for off NHS (project numbers ending in N, S, X, or F).

The original will be filed in the project files, with additional copies distributed to the:

1. Contractor.
2. Field Reports.
3. Local Government and/or FHWA as applicable.
4. All other contacts specified in the Contract Revision Notification.

Office Procedure For Contract Revision Notification

1. Start the coordination for the Contract Revision Notification as soon as you know that a contract change will occur. [Construction Bulletin 04-01](#) will help you identify whom you should contact. A guide to assist in creating CRN’s & SA’s can be found in the [SATS User Guide](#).
2. As soon as you feel the document is complete, advise the RE for a final edit and for his approval.
3. Print a hard copy of the completed document to place in the file.
4. Send the document to your District Engineer.
5. When the supplemental agreement document is complete attach a hard copy of the Contract Revision Notification document as the cover sheet. If the cost has changed modify the cost on the Contract Revision Notification document before attaching it to the Supplemental Agreement.

Supplemental Agreement Forms

Immediately following distribution of the Contract Revision Notification Documents, the RE or his designee should proceed with the preparation of the formal supplemental agreement. The completed formal supplemental agreement will be submitted **45 calendar days** following the Emergency Approval date on the Contract Revision Notification.

The text of a change order (see Exhibit 109.04-2 *Change Order Agreement for Non-Compensatory Time*) consists of:

- the Request (a list of the work items Increased, Decreased, or Created);
- the Reason for the work;
- Specifications/Stipulations added, modified, or deleted to the contract. They can either be attached or referenced;
- Pay item adjustments (Increased, Decreased, or Created item list with unit of measure and cost effects of the work.

The text of a Change Order for an extension of contract time (see Exhibit 109.04-3 *Procedural Change Order [Non-Compensatory]* and Exhibit 109.04-4 *Change Order w/Compensatory & Non-Compensatory Time Extension*) consists of:

- The Request – an extension of contract time;
- The Reason for the additional time;
- Specifications/Stipulations added, modified, or deleted to the contract. They can be either attached or referenced;
- Pay item adjustment for a compensatory time extension only (establish Pay Item 1080800 Contract Time Extended Overhead at EACH/DAY cost established in agreement)
- The signed “Request for Extension of Time” form must be attached. If compensatory time is granted, then an analysis of the overhead per day cost, prepared in consultation with the Assistant State Engineer for Construction & Materials must be included.

Similarly, the text of a force account work request (see Exhibit 109.04-5 *Force Account Agreement*) consists of:

- the Request (a description of the extra work);
- the Reason for the work;
- the cost breakdown of the estimated labor, materials, and equipment required to perform the extra work.

The RE should also consider using drawings, photographs, and quotations from the specifications or developing unique provisions to make supplemental agreements clearer and more authoritative.

An explanation of rate establishment may also be required on a force account work request if the hourly rate for a particular type of equipment is not covered in the Rental Rate Blue Book for Construction Equipment.

A Supplemental Agreement is usually signed first by the RE, then sent to the Contractor for signature. Once returned from the Contractor, the supplemental agreement is sent to the District office for approval and signature (if needed). The supplemental agreement and all attachments are then forwarded to Field Reports for processing.

Use the Supplemental Agreement exactly as it is printed from SATS! Do not modify it by clipping, cutting & pasting, or montaging. All printed pages must be signed (executed) by all parties to the Supplemental Agreement.

Each letter agreement of authorization will include the following information (see Exhibit 109.04-6 *Letter Agreement*):

- The TRACS number, project number and date of authorization;
- A description of the work;
- Reason for the work authorized;
- The Lump Sum cost of the alteration.

The Resident Engineer must make a thorough analysis of the Contractor’s cost proposal and be completely satisfied that it is equitable before negotiating the cost of the Supplemental Agreement.

The Resident Engineer’s review will be in the form of a completely independent cost analysis, which will be attached to the Letter of Agreement package and forwarded to Field Reports with a copy retained in the project office.

The person signing for the contractor for all Supplemental Agreements must be listed on the Authorized Signature Form.

The [Supplemental Agreements Workbook](#) (TCH 3039) which consolidates Standard Specifications and this manual, is a useful reference in the preparation of all Supplemental Agreements.



Arizona Department of Transportation

Intermodal Transportation Division

Contract Revision Notification

03/27/2015

Approval Date: 1/22/2015 (em)

To: Tom Jones
District Engineer
From: Richard Smith
Resident Engineer

Tracs #	Project #	Project Name			
H615501C	STP 188-A(001)B	WHEATFIELDS - US 60			
Contractor		Contract Amt	Contingency %	Contingency Adjustment %	Contingency Amt
FNF CONSTRUCTION, INC.		\$9,753,469.85	5 %	0 %	\$487,673.49
Original Amt	Percentage of Contract		Accumulated Amt	Accumulated % of Contract	
\$266,222.22	2.73 %		\$343,828.00	3.53 %	
Agreement Type	Document Num	SATS Doc Num	Emergency Approval Date		
Change Order		12	01/22/2015		
Reason Code	Plans, Revisions, and Oversights				

Brief Description

University off-ramp gore area modified, plus a Five (5) day non-compensatory time extension

SA Description

The University off-ramp gore area was modified by the designer to improve the grades and safety at

Prime Designer

JLK Engineers

Sub Designer(s)

DMJM Harris

Contacts

Name	Title	Date Contacted	Comments
Bahram Dariush	ADOT Project Manager	05/01/2015	Concurred
Jim Delton	State Materials Engineer	01/06/2015	Approved
Julie Kiewer	Asst State Engineer, Constr	01/22/2015	Concurred with CO
Ken Davis	FHWA	01/18/2015	Concurred with CO

Exhibit 109.04-1 Contract Revision Notification



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Change Order No. 12

Approval Date: 1/22/2015 (em)

Tracts No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

☐ Federal Aid
☒ Non-Federal Aid

Request:

To extend contract time by Five (5) Non-Compensatory Working Days

To Create new Non-Federal Aid Section No. 9

To Create Bid Items:

4010012 - Portland Cement Concrete Pavement (12")
4010016 - Portland Cement Concrete Pavement (16")
4060021 - Asphaltic Concrete (Base Mix)
7015042 - Temporary Painted Markings (Stripe)
7015052 - Obliterate Pavement Markings (Stripe)

Reason:

The University off-ramp gore area was modified by the designer to improve the grades and safety at

Date: _____ Date: _____ Date: _____ Date: _____

Resident Engineer

City/County Engineer

Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____

Date: _____

Date: _____

Approved for:
FNF CONSTRUCTION, INC.
Contractor

Approved for State of Arizona

☐ Approved without Federal participation
☐ Approved with Federal participation

By: _____

By: _____
District Engineer

By: _____



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Change Order No. 12

Approval Date: 1/22/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

Specifications/Stipulations:

Attachment A - Request for Extension of Time form signed by the District and the Contractor.

This Change Order constitutes full and final compensation related to this extension of contract time as agreed to in the attached Request for Extension of Time form as described herein. By executing this Change Order, Contractor expressly waives the right to pursue any further claims or requests for compensation related to this contract modification, including, but not limited to, materials, labor, services, overhead, profit and damages.

Pay Item Adjustments						
Sec	Item Nbr	Description	Unit	Unit Price	Quantity	Amount
9	4010012	PORTLAND CEMENT CONCRETE PAVEMENT (12")	SQ.YD.	55.00	1,800.000	\$99,000.00
9	4010016	PORTLAND CEMENT CONCRETE PAVEMENT (16")	SQ.YD.	77.91	1,800.000	\$140,238.00
9	4080021	ASPHALTIC CONCRETE (BASE MIX)	TON	40.00	492.000	\$19,680.00
9	7015042	TEMPORARY PAINTED MARKING (STRIPE)	L.FT.	14	10,125.000	\$1,417.50
9	7015052	OBLITERATE PAVEMENT MARKING (STRIPE)	L.FT.	48	12,264.000	\$5,886.72
Total						\$266,222.22

Total Difference: **Plus \$266,222.22** Minus

Date: _____ Date: _____ Date: _____ Date: _____

Resident Engineer

City/County Engineer

Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____ Date: _____ Date: _____

Approved for:
FNF CONSTRUCTION, INC.
Contractor

Approved for State of Arizona

Approved without Federal participation
Approved with Federal participation

By: _____

By: _____
District Engineer

By: _____



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Change Order No. 12

Approval Date: 1/22/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

An Extension of Contract Time is Authorized for 5 days as a result of this Supplemental Agreement.

Date: _____ Date: _____ Date: _____ Date: _____

Resident Engineer City/County Engineer _____ Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____ Date: _____ Date: _____
Approved for: _____ Approved for State of Arizona _____ Approved without Federal participation
FNF CONSTRUCTION, INC. _____ Approved with Federal participation
Contractor
By: _____ By: _____ By: _____
District Engineer

ADOT		ARIZONA DEPARTMENT OF TRANSPORTATION	
REQUEST FOR EXTENSION OF TIME			
Project No. <u>STP188-A-(001)B</u>		TRACS No. <u>H615501C</u>	Request No. <u>1</u>
Project Name <u>Claypool Lakes Corner Hwy (11560)</u>		Contractor <u>FNF Construction, Inc.</u>	
		Working Days <input checked="" type="checkbox"/>	
		Calendar Days <input type="checkbox"/>	
Total Days Requested <u>5</u>	Fixed Date <input type="checkbox"/>	Requested Amended Fixed Date <input type="text"/>	
<p>The work has been impacted for the following attached reasons. Include a schedule (CPM if applicable) detailing the impact to the contract. ALL ATTACHED JUSTIFICATION DOCUMENTS MUST SHOW TRACS NUMBER, REQUEST NUMBER AND CONTRACTOR.</p>			
Compensatory Days Requested <input type="checkbox"/>		Non-Compensatory Days Requested <u>5</u>	
<u>Contractor Signature</u>		<u>Date of Signature</u>	
Contractor Signature		Date	
<u>Contractor Printed Name</u>			
Contractor Printed Name			
<p>The days claimed and reasons thereof have been studied. If fewer days are recommended than claimed, attach explanation.</p>			
Compensatory Days Recommended <input type="checkbox"/>		Non-Compensatory Days Recommended <u>5</u>	
<p>NOTE: If compensatory days are requested, attach the consultation e-mail FROM the Assistant State Engineer for Construction.</p>			
<u>Senior RE Signature</u>		<u>Date of Signature</u>	
Sr./Resident Engineer		Date	
<p>NOTE: This recommendation must be sent to the District Engineer for approval.</p>			
Compensatory Days Approved <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Non-Compensatory Days Approved <u>5</u>
	Daily Rate	Total Approved	
<u>District Engineer Signature</u>		<u>Date of Signature</u>	
District Engineer		Date	
<p>NOTE: If approved date differs from Contractor's request, return for concurrence.</p>			
<u>Contractor Concurrence Signature</u>		<u>Date</u>	
Contractor Concurrence Signature		Date	
<u>Contractor Concurrence Printed Name</u>			
Contractor Concurrence Printed Name			
<p>IF THE CONTRACTOR DOES NOT AGREE THE ESCALATION PROCESS MUST BE FOLLOWED.</p>			
<p>After a review of the facts, an additional _____ Compensatory Days and _____ Non-Compensatory Days are approved.</p>			
<u>Federal Highway Administration</u>		<u>Date</u>	
Federal Highway Administration		Date	
<p>After Signatures, a Change Order must be executed in accordance with Standard Specification 108.08. The Request for Extension of Time and all documentation must be attached to completed Change Order. 05/2013</p>			



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Procedural Change Order No. 13

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 80

Contractor: FNF CONSTRUCTION, INC.

☒ Federal Aid
☐ Non-Federal Aid

Request:

To extend contract time by Thirty (30) Non-Compensable Working Days

Reason:

Avery Big Construction Company requested Thirty (30) Non-Compensatory Working Days be added to the contract time because of (put a short synopsis of reason here: e.g.: flooding in bridge foundation work area) as detailed in the attached Request for Extension of Time form and attached documents. The Department agrees with Avery Big Construction Company and will allow Thirty (30) Non-Compensatory Working Days be added to contract time.

Specifications/Stipulations:

Attachment A - Request for Extension of Time form signed by the District Engineer and Contractor.

This Change Order constitutes full and final compensation related to this extension of contract time as agreed to in the attached Request for Extension of Time form as described herein. By executing this Change Order, Contractor expressly waives the right to pursue any further claims or requests for compensation related to this contract modification, including, but not limited to, materials, labor, services, overhead, profit and damages.

Date: _____ Date: _____ Date: _____ Date: _____

Resident Engineer

City/County Engineer

Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____

Date: _____

Date: _____

Approved for:
FNF CONSTRUCTION, INC.
Contractor

Approved for State of Arizona

☐ Approved without Federal participation
☐ Approved with Federal participation

By: _____

By: _____
District Engineer

By: _____

Exhibit 109.04-3a Procedural Change Order (Non-Compensatory)



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Procedural Change Order No. 13

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

An Extension of Contract Time is Authorized for 30 days as a result of this Supplemental Agreement.

Date: _____ Date: _____ Date: _____ Date: _____

Resident Engineer

City/County Engineer

Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____

Date: _____

Date: _____

Approved for:
FNF CONSTRUCTION, INC.
Contractor

Approved for State of Arizona

____ Approved without Federal participation
____ Approved with Federal participation

By _____

By _____
District Engineer

By _____

Exhibit 109.04-3b Procedural Change Order (Non-Compensatory)

ARIZONA DEPARTMENT OF TRANSPORTATION REQUEST FOR EXTENSION OF TIME	
Project No. <u>STP 188-A (001)B</u> TRACS No. <u>H615501C</u> Request No. <u>2</u>	
Project Name <u>Wheatfields - US60</u> Contractor <u>FNF Construction, Inc.</u>	
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Working Days <input checked="" type="checkbox"/> </div> <div style="text-align: center;"> Calendar Days <input type="checkbox"/> </div> <div style="text-align: center;"> Fixed Date <input type="checkbox"/> </div> </div>	
Total Days Requested <u>3</u>	Requested Amended Fixed Date
The work has been impacted for the following attached reasons. Include a schedule (CPM if applicable) detailing the impact to the contract. ALL ATTACHED JUSTIFICATION DOCUMENTS MUST SHOW TRACS NUMBER, REQUEST NUMBER AND CONTRACTOR.	
Compensatory Days Requested <input type="checkbox"/>	Non-Compensatory Days Requested <u>30</u>
<u>Contractors Signature</u> Contractor Signature	<u>Contractors Title</u> Title
<u>Contractors Printed Signature</u> Contractor Printed Name	
The days claimed and reasons thereof have been studied. If fewer days are recommended than claimed, attach explanation.	
Compensatory Days Recommended <input type="checkbox"/>	Non-Compensatory Days Recommended <u>30</u>
NOTE: If compensatory days are requested, attach the consultation e-mail FROM the Assistant State Engineer for Construction.	
<u>RE's Signature</u> Sr./Resident Engineer	<u>Date of Signature</u> Date
NOTE: This recommendation must be sent to the District Engineer for approval.	
Compensatory Days Approved <input type="checkbox"/>	Non-Compensatory Days Approved <u>30</u>
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <input type="checkbox"/> Daily Rate </div> <div style="text-align: center;"> <input type="checkbox"/> Total Approved </div> </div>	
<u>District Engineer's Signature</u> District Engineer	<u>Date of Signature</u> Date
NOTE: If approved date differs from Contractor's request, return for concurrence.	
<u>Contractor Concurrence Signature</u> Contractor Concurrence Printed Name	<u>Title</u> Title
<u>Date</u> Date	
IF THE CONTRACTOR DOES NOT AGREE THE ESCALATION PROCESS MUST BE FOLLOWED.	
After a review of the facts, an additional _____ Compensatory Days and _____ Non-Compensatory Days are approved.	
Federal Highway Administration	Date
After Signatures, a Change Order must be executed in accordance with Standard Specification 108.08. The Request for Extension of Time and all documentation must be attached to completed Change Order.	
05/2013	

Exhibit 109.04-3c Procedural Change Order (Non-Compensatory)



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Change Order No. 14

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

☒ Federal Aid
☐ Non-Federal Aid

Request:

To extend contract time by Forty (40) Working Days

To Create Bid Item:

1080800 - Contract Time Extended Overhead

Reason:

Avery Big Construction Company requested Compensatory Working Days be added to the contract time because of (put a short synopsis of reason here: e.g.: ADOT redesign of bridge foundation) as detailed in the attached Request for Extension form and attached documentation. The Department reached an agreement with Avery Big Construction Company to extend contract time by Forty (40) Working Days: Ten (10) Compensatory and Thirty (30) Non-Compensatory. Compensatory Time per Each/Day costs were reviewed and approved by the Assistant State Engineer for Construction on 1/21/2015.

Date: _____ Date: _____ Date: _____ Date: _____

Resident Engineer

City/County Engineer

Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____ Date: _____ Date: _____

Approved for:
FNF CONSTRUCTION, INC.
Contractor

Approved for State of Arizona

☐ Approved without Federal participation
☐ Approved with Federal participation

By: _____

By: _____
District Engineer

By: _____



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Change Order No. 14

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

Specifications/Stipulations:

Attachment A - Request for Extension of Time form signed by the District Engineer and the Contractor.

This Change Order constitutes full and final compensation related to this extension of contract time as agreed to in the attached Request for Extension of Time form as described herein. By executing this Change Order, Contractor expressly waives the right to pursue any further claims or requests for compensation related to this contract modification, including, but not limited to, materials, labor, services, overhead, profit, and damages.

Pay Item Adjustments		Description	Unit	Unit Price	Quantity	Amount
Sec	Item Nbr					
1	1080800	CONTRACT TIME EXTENDED OVERHEAD	EACH-DAY	2,605.92	10.000	\$26,059.20
					Total	\$26,059.20

Date: _____ Date: _____ Date: _____ Date: _____

Resident Engineer

City/County Engineer

Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____

Date: _____

Date: _____

Approved for:
FNF CONSTRUCTION, INC.
Contractor

Approved for State of Arizona

___ Approved without Federal participation
___ Approved with Federal participation

By: _____

By: _____
District Engineer

By: _____



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Change Order No. 14

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

	Plus	Minus
Total Difference:	\$26,059.20	

An Extension of Contract Time is Authorized for 40 days as a result of this Supplemental Agreement.

Date: _____	Date: _____	Date: _____	Date: _____
_____ Resident Engineer	_____ City/County Engineer	_____ Field Reports	

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____	Date: _____	Date: _____
Approved for: FNF CONSTRUCTION, INC. Contractor	Approved for State of Arizona	_____ Approved without Federal participation _____ Approved with Federal participation
By: _____	By: _____ District Engineer	By: _____

Page 3 of 3

Exhibit 109.04-4c Change Order w/Compensatory & Non-Compensatory Time Extension

ARIZONA DEPARTMENT OF TRANSPORTATION REQUEST FOR EXTENSION OF TIME		
Project No. <u>STP188-A(001)B</u>	TRACS No. <u>H615501C</u>	Request No. <u>3</u>
Project Name <u>Claypool Lakes Corner Hwy US60</u> Contractor <u>FNF Construction, Inc</u>		
<div style="display: flex; justify-content: space-between;"> <div> Total Days Requested <u>40</u> </div> <div> Working Days <input checked="" type="checkbox"/> Calendar Days <input type="checkbox"/> Fixed Date <input type="checkbox"/> </div> <div> Requested Amended Fixed Date <input type="text"/> </div> </div>		
<p>The work has been impacted for the following attached reasons. Include a schedule (CPM if applicable) detailing the impact to the contract. ALL ATTACHED JUSTIFICATION DOCUMENTS MUST SHOW TRACS NUMBER, REQUEST NUMBER AND CONTRACTOR.</p>		
<div style="display: flex; justify-content: space-between;"> <div>Compensatory Days Requested <u>10</u></div> <div>Non-Compensatory Days Requested <u>30</u></div> </div>		
<div style="display: flex; justify-content: space-between;"> <div> <u>Contractor Signature</u> Contractor Signature </div> <div> <u>Contractor Title</u> Title </div> <div> <u>Date of Signature</u> Date </div> </div>		
<u>Contractor Printed Name</u> Contractor Printed Name		
<p>The days claimed and reasons thereof have been studied. If fewer days are recommended than claimed, attach explanation.</p>		
<div style="display: flex; justify-content: space-between;"> <div>Compensatory Days Recommended <u>10</u></div> <div>Non-Compensatory Days Recommended <u>30</u></div> </div>		
NOTE: If compensatory days are requested, attach the consultation e-mail FROM the Assistant State Engineer for Construction.		
<div style="display: flex; justify-content: space-between;"> <div> <u>RESignature</u> Sr./Resident Engineer </div> <div> <u>Date of Signature</u> Date </div> </div>		
<p>NOTE: This recommendation must be sent to the District Engineer for approval.</p>		
<div style="display: flex; justify-content: space-between;"> <div> Compensatory Days Approved <u>10</u> <u>\$260.92</u> <small>Daily Rate</small> </div> <div> <u>\$26,092.40</u> <small>Total Approved</small> </div> <div> Non-Compensatory Days Approved <u>30</u> </div> </div>		
<div style="display: flex; justify-content: space-between;"> <div> <u>District Engineer Signature</u> District Engineer </div> <div> <u>Date of Signature</u> Date </div> </div>		
<p>NOTE: If approved date differs from Contractor's request, return for concurrence.</p>		
<div style="display: flex; justify-content: space-between;"> <div> <u>Contractor Concurrence Signature</u> Contractor Concurrence Printed Name </div> <div> <u>Title</u> Title </div> <div> <u>Date</u> Date </div> </div>		
<p>IF THE CONTRACTOR DOES NOT AGREE THE ESCALATION PROCESS MUST BE FOLLOWED.</p>		
<p>After a review of the facts, an additional _____ Compensatory Days and _____ Non-Compensatory Days are approved.</p>		
<div style="display: flex; justify-content: space-between;"> <div> <u>Federal Highway Administration</u> After Signatures, a Change Order must be executed in accordance with Standard Specification 108.08. The Request for Extension of Time and all documentation must be attached to completed Change Order. </div> <div> <u>Date</u> 05/2013 </div> </div>		

Exhibit 109.04-4d Change Order w/Compensatory & Non-Compensatory Time Extension



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Force Account No. 3

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

☒ Federal Aid
☐ Non-Federal Aid

Request:

To compensate the Contractor for extra work necessary to remove and replace unsuitable material

Reason:

After milling off the existing AC from WB I-10 the Contractor started preparation of the subgrade for placement of the 50% AB - 50 millings mix. The large hauling vehicles started to break down the existing subgrade causing it to pump badly. The subsurface is randomly saturated in both small and large areas and is at optimum moisture. After an inspection by ADOT's Geotech Engineer it was determined that the existing material would have to be removed up to 2' in depth and replaced with suitable material.

Force Account Adjustments:

Section: 1	Labor:	20,000.00	
	Equipment:	40,000.00	
	Materials:	15,000.00	
	Fa Amount:	75,000.00	Original Request Amount 75,000.00
		Plus	Minus
	Total Difference:	\$75,000.00	

No Extension of Contract Time is Authorized for this Supplemental Agreement.

Date: _____	Date: _____	Date: _____	Date: _____
Resident Engineer	City/County Engineer	Senior Resident Engineer	Field Reports

For valuable considerations, it is mutually agreed that the matter detailed above shall be done and payment made as shown herein for a Supplemental Agreement Change Order, all in accordance with the terms of the contract. For work being performed as a Supplemental Agreement Force Account Work Order, final payment shall be made as stipulated in the Standard Specifications and its supplements upon completion of said work.

Date: _____	Date: _____	Date: _____
Approved for: FNF CONSTRUCTION, INC. Contractor	Approved for State of Arizona	<input type="checkbox"/> Approved without Federal participation <input type="checkbox"/> Approved with Federal participation
By: _____	By: _____ District Engineer	By: _____

Exhibit 109.04-5 Force Account Agreement



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Letter of Agreement No. 16

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

☒ Federal Aid
☐ Non-Federal Aid

Request:

To Compensate the Contractor for removal of reinforced concrete curb from the top ends of Overpass

Reason:

This work is necessary to accommodate the roadway section and is not identified in the plans as a removal item.
This curb required the use of jackhammers and compressors for removal.

Pay Item Adjustments						
Sec	Item Nbr	Description	Unit	Unit Price	Quantity	Amount
1	9240101	MISCELLANEOUS WORK (RESIDENT ENGINEER USE ONLY)	L SUM	1.00	.000	\$.00
		Subitem: 16 - Removal of Reinforced Concrete Curb		1.00	761.580	\$761.58
					Total	\$761.58

Approved for ADOT

Matt Moul

Date

Approved for: FNF CONSTRUCTION, INC.

Contractor Signature

Date

Cc: Field Reports

Page 1 of 2

Exhibit 109.04-6a Letter Agreement



Arizona Department of Transportation
Intermodal Transportation Division
Supplemental Agreement
03/27/2015

Letter of Agreement No. 16

Approval Date: 1/16/2015 (em)

Tracs No: H615501C
Globe

Project No: STP 188-A(001)B

Org: 1111

Project Name: WHEATFIELDS - US 60

Contractor: FNF CONSTRUCTION, INC.

	Plus	Minus
Total Difference:	\$761.58	

No Extension of Contract Time is Authorized for this Supplemental Agreement.

Approved for ADOT

Matt Moul

Date

Approved for: FNF CONSTRUCTION, INC.

Contractor Signature

Date

Cc: Field Reports

Page 2 of 2

Exhibit 109.04-6b Letter Agreement

ARIZONA DEPARTMENT OF TRANSPORTATION

OFFICE MEMO

January 5, 2015

TO: JULIE E. KLIEWER, Ph.D, P.E.
Assistant State Engineer, Construction-Materials Group
MD 172A

FROM: Resident Engineer Name
Title
Mail Drop

THRU: District Engineer Name
District
Mail Drop

TRACS #, Project #
Project Name
Project Location
Org #

The referenced project requires additional work in order to adequately address the construction needs at this location. Pertinent fiscal information is as follows:

Original Contract Amount:	1,637,003.74	
Five Percent Contingency:	81,850.19	
14% CE:	229,180.52	
Incentives:	21,000.00	
Post Design:	16,370.04	
DPS:	20,000.00	
Original Available:	\$ 2,005,404.49	
Actual Construction Costs:	1,507,501.85	
Actual CE:	218,005.48	14.46%
Actual Post Design:	15,400.00	
Contract Work Remaining:	450,000.00	
Additional Supplemental Agreements:	38,000.00	
Additional CE:	50,000.00	3.32%
Additional Costs:	1,497.16	
Proposed New Total Needed:	2,280,404.49	
Less Previous Increases:	-	
Requested Amount:	275,000.00	

Reason for Increase: Be Specific, do not use abbreviations. If Local Government Project submit any written documentation from Local agreeing to cover increase.

I recommend that the budget for this project be increased to accommodate this additional work. Please indicate your approval on this memo and return a copy to this office.

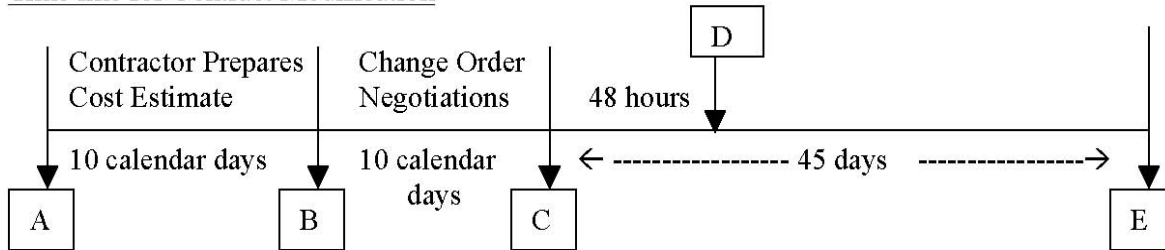
RESIDENT ENGINEER DATE

The budget will be increased accordingly.

DISTRICT ENGINEER DATE

Funding Source: Be Specific

XX:xx

Time line for Contract Modification

- A. Contractor or ADOT identifies additional work that is not included in the contract.
 - 1. Contractor is asked to prepare a detailed cost estimate or unit prices for the work, and ADOT specifies a reasonable time for the Contractor to complete the estimate. Std Spec 109.04C specifies 10 calendar days for the Contractor to prepare a cost estimate.
 - 2. If work is required to start prior to “C”, ADOT starts documenting the work as if it were Force Account.
- B. Cost Estimate is received from the Contractor.
 - 1. Start Change Order negotiations [see 109.04(C)].
 - 2. If the cost estimate is not received from the Contractor on time or if a contract price adjustment cannot be agreed upon, the work is processed as a Force Account and the Resident Engineer will prepare the Force Account request. [see 109.04(D)].
- C. Emergency Authorization Date
ADOT and Contractor agree to proceed as either a Change Order or Force Account.
If Force Account then ADOT estimate is required.
- D. Contract Revision Notification Document completed for a Force Account or a Change Order.
- E. Change Order is completed and signed as the official contract document.

Sealing Change Orders

Resident Engineers are responsible for sealing Change Orders only when they have been in responsible supervisory charge of a design issue. Design issues include changes to or the creation of drawings or technical specifications covering the quality or performance of the finished construction work. For example, seals are not required for contract administrative issues such as quantity, cost, and time adjustments.

When the change is to a plan sheet/drawing sealed by a Professional Engineer or Landscape Architect, the RE shall coordinate with the registrant. When consulting designers develop changes, they shall send sealed drawings or specifications to the RE for inclusion with the Change Order. When a value engineering proposal requiring new drawings is submitted, it shall be sealed by the Contractor’s registered engineer prior to final approval of the proposal. When an issue has been escalated beyond the Resident Engineer, it shall be sealed by the responsible registrant making the final decision. Drawings and specification must be sealed in accordance with Article R4-30-304(A)(3) of the Code & Rules of the Arizona State Board of Technical Registration.

All Change Order forms must originate from and be tracked by the RE in the same manner as all other Change Orders. Any new or revised sealed drawings or specifications shall be attached to the Supplemental Agreement forms or referenced on the first page of the form.

Force Account WorkProcedures

On a Force Account the Department has a right to direct the work. In other words, Inspectors, Project Supervisors, and the Resident Engineer can control how the work is performed and what labor, materials and equipment the

Contractor uses. They can also decide what to include and exclude on a Force Account. The Contractor's foreman or forewoman should still retain day-to-day supervisory control over the labor and equipment to ensure their efficient and economical use.

Inspectors must track daily the Contractor's labor and equipment hours as well as the materials used for Force Account work. The Force Account Daily Report form is used to track Force Account work. The Force Account Daily Report is found in PEN on the Daily Diary screen or in the Forms section of this manual.

A copy of the ADOT Inspectors Force Account Daily Report is given to the contractor. The contractor prepares the Contractors Force Account Weekly Detail which is located on the Contractors Website under Forms. Once completed the detail is submitted to the field office along with certified payrolls, Equipment Watch RRBB for each piece of equipment used, equipment rental invoices, and material invoices. The field office reviews the detail and back-up documentation attached. If there are charges on the detail that are not accompanied by the proper documentation or if information is incorrect on the detail, note the discrepancies and notify the contractor. Do not make the payment until the detail is accurate and complete.

Partial payments are not allowed on force accounts.

Force Account details are to be submitted to field reports within 5 days after the payments is made.

Force Account Markups

Hourly payroll labor rates (including the hourly fringe benefit amount) are multiplied by 1.5 to arrive at a gross regular pay rate for labor used on a Force Account. This 50 percent markup on labor is intended to cover the Contractor's expenses for:

1. payroll taxes,
2. FICA,
3. social security,
4. Medicare,
5. workers compensation,
6. liability insurance, and
7. project overhead and profit (including the administrative overhead for the Force Account).

No additional markups are allowed for the Contractor's labor costs, even if the Contractor can prove that actual costs for the expenses listed above are greater than the 50 percent markup.

Subsistence and travel allowances paid to the worker are not allowed this 50 percent markup.

Subcontractor work and the costs of materials supplied to a force account are also marked up to offset the Contractor's administrative and handling costs. See Subsections 109.04(D)(7).

Outside rented equipment is eligible for reimbursement at the invoiced rate plus a 10 percent markup, plus the hourly operating cost (HOC). $[(\text{Rental Invoice} \times 1.10) + \text{HOC}]$. No stand-by time is reimbursed to the contractor for outside rented equipment.

Should the Force Account have an owner-operator, the owner of a truck or water truck can be treated as an owner-operator only when the person who owns the truck is the one driving it. For example, if the Contractor hires Steven Red of Big Red's Trucking to haul material, then Steven Red has to be the driver of the truck. The truck must be registered to Steven Red and a subcontract will be required. Steven Red cannot hire Joe Smith to drive Steven Red's truck and be considered an owner-operator. .

Administering Force Accounts

Refer to ADOT's Force Accounting (TCH 3042) course for information on documenting and processing Force Account work. To register for TCH 3042 contact [ITD Technical Training](#) at (602)712-4050.

The [Rental Rate Blue Book](#) is available on the ADOTNet located on the Construction & Materials Group's intranet.

109.05 Eliminated Items

Both 109.05 and 102.06 allow the Department to eliminate contract items (item not used – quantities reduced to zero). If items are not used by the Department, the Contractor may request an equitable adjustment in the contract amount in accordance with Subsection 108.11.

It is very important for the Resident Engineer to notify the Contractor in writing as soon as possible about an eliminated item. This ensures the Contractor will stop any further work on the item. It is important for the Contractor to immediately notify any Subcontractors or materials suppliers affected by the elimination so they can stop any related work.

Under 108.11, the Department allows the Contractor, Subcontractors, and affected Material Suppliers to recover any direct expenses related to an eliminated item up to the notification date. Such expenses may include:

- materials already fabricated that cannot be returned or used elsewhere (i.e., custom cut and bent rebar);
- re-stocking fees for materials already delivered to the Contractor;
- labor time used in producing shop drawings, cut sheets, and other preparation costs directly related to the eliminated item;
- charges for delivering or picking up materials;
- plant setup or mobilization efforts for the eliminated item; and
- reasonable profit and direct overhead for expenses incurred to date.

Lost profit, lost home office overhead, and any other money lost due to the eliminated item cannot be recovered. Even if the Contractor claims the eliminated item contains a disproportionate amount of overhead, profit, or uncut subcontract work, the item should be eliminated at its contract unit price (see Subsection 109.03). Only actual expenses directly related to the eliminated work should be added back into the contract.

109.06 Progress Payments (to Contractor)

Monthly Progress Payments

Payment Procedures

Construction progress estimates are prepared monthly, compensating the Contractor for work performed and materials furnished each month. The monthly cutoff date is 10 business days (excluding state holidays) prior to the third Wednesday of the month. The progress estimates are due at Field Reports Section by noon on the 5th working day after cutoff date. Contractors are paid on the third Wednesday of the month. The MONTHLY ESTIMATE and CONTRACTOR PAY dates are shown on the ADOT calendar.

The Department does have the right to withhold part or all of the monthly progress payments if the project work or project progress is unsatisfactory. If the Resident Engineer is suspicious of the Contractor's ability to complete the project, a meeting with the Contractor and the District Engineer should be held to discuss the issue before any payments are withheld (also refer to Subsection 108.04 of this manual on project delays).

Work performed under a supplemental agreement cannot be paid for until a pay item is established in CPE. Force

account documentation shall be submitted to Field Reports in the same month payment is made. If the documents are not received, payment will be removed from the monthly estimate. Please ensure that all documents are submitted to Field Reports in a timely manner. Payment may be made if emergency approval has been obtained in accordance with Subsection 109.04 of this manual.

Under current requirements with the ADOT/FHWA Agreement, FHWA personnel shall be kept informed of all changes to projects over \$1 million on the interstate highway system. The District Engineer has the authority to approve supplemental agreements for federal-aid projects in the certification acceptance program. Although FHWA does not need to approve these supplemental agreements, they do need to be advised that the supplemental agreement is being processed. FHWA contacts are required on all federal-aid projects not in the certification acceptance program. Any local government or agency participation on a project must also be contacted.

If a supplemental agreement is considered “not eligible” for federal assistance, then the items included in the agreement must be shown in the non-FA portion of the monthly estimate.

Prescribed penalties for work items failing to meet specification requirements (i.e., PCCP smoothness or compaction on end-product AC) do not require a supplemental agreement. The Resident Engineer creates a separate pay item found on the [Spec. Pay Item List](#) and may notify the Contractor by letter of the penalty adjustments. The same procedure applies to contract bonuses.

Lump sum items in the original contract may be paid for on the monthly estimates if the amount of work, in the opinion of the Resident Engineer, is of sufficient magnitude to warrant partial payment. For lump sum structures, the Contractor should submit an estimate of the quantities desired for partial payment at least two days prior to the cut-off date (see Subsection 109.10).

When the monthly progress payment is zero, do not transmit an estimate to Field Reports. If the monthly progress payment is a negative amount, you must verify that there is another positive payment being made to that contractor to offset the negative amount. The easiest way to verify this is to go into contract card

1. Contract Card
2. Reports
3. Estimates
4. Next to Estimates, select the current estimate cycle month
5. Scroll through Contractor's to find the Contractor that you are working with
6. If the contractor is receiving enough money to offset the negative estimate, then the negative estimate can be saved
7. Notify Field Reports that you have verified this information
8. Never save a negative estimate if not enough positive money to offset

HOWEVER for negative estimate for Project Finals, please refer to [Construction Bulletin 12-02](#).

Documenting Payment

Quantities developed for the monthly progress estimate should be based on sound engineering procedures rather than on arbitrary selection of quantities that help expedite payment. See Subsection 109.01 of this manual and the Pay Item Documentation for Inspectors cited in the references at the end of this chapter for further information on documenting pay quantities.

The monthly pay estimates are prepared on a computer program titled, *Construction Progress Estimate*. Pay item quantities taken from the Inspectors' diaries are entered into the program, which prepares a pay estimate for the Department.

As the pay estimate is prepared, the importance of entering only quantities documented in a daily diary cannot be overemphasized. Pay quantity entries and other entries should not just appear on the progress estimate. Sufficient backup documentation (i.e., diaries, supplemental agreements, invoices, and others) needs to support each entry.

If corrections need to be made for previously paid quantities that are incorrect, the corrections need to be documented (typically in a diary). All payment documentation must be kept as part of the project records and may be subject to periodic audit.

When preparing the monthly progress estimate, the Resident Engineer and the Contractor's superintendent should review all quantities of work completed. Should there be pay item quantities on which the two parties disagree, the disagreement needs to be resolved (through escalation if needed) prior to transmittal of the next month's estimate. Before transmitting the estimate to Field Reports, the RE must assure there are enough funds to process. A supplemental monthly payment estimate may be transmitted if resolution occurs early within the next monthly payment period and considerable payment is involved (over \$500). Subcontractors and Material Suppliers should be supplied with copies of the monthly progress estimate and/or MPT Traffic Control Sheets upon request.

ADOT has the largest ongoing construction program in the state. Our construction projects employ thousands of people and hundreds of small businesses, both on and off the project site. Our construction progress estimates pay out millions of dollars into the state's economy, and during periods of economic slowdown, we are the mainstay of the state's construction industry. ADOT Field Offices have a duty to contribute to this positive economic impact by producing timely and accurate pay estimates.

Supplemental Estimates

Contact Field Reports for further instruction if there is a need to produce a supplemental estimate.

109.07 Partial Payment for Material on Hand

Subsection 109.07 provides a list of contract items that are eligible for a partial payment when the materials needed to construct those items are stockpiled by the Contractor or a materials supplier. The partial payment factor is applied to the unit price of the item.

To qualify for a partial payment on stockpiled materials, the following conditions must be met.

1. The Resident Engineer must be satisfied with the progress of the project.
2. When applicable, the stockpiled material should have been tested and the material must have passed the test(s).
3. When applicable, acceptable certificates of compliance for the material have been received by the Department.
4. The material is stockpiled on the project, or if stockpiled off the project (including a commercial material sources), the material is located in a separate area away from the main inventory.

The purpose of this partial payment is to promptly compensate the Material Suppliers for materials produced for the project. The intent is not to finance their inventory. Once a partial payment is made, the Material Supplier should not be allowed to sell the material to other customers.

Resident Engineers have the authority to deny partial payment for material stockpiled at commercial sources if the material cannot reasonably be separated from the main inventory, or if the Resident Engineer suspects the Material Supplier is in financial trouble. In either case, the material should be delivered to the project site or the Contractor's yard before a partial payment is made.

When material is being produced or stockpiled on private property, the Contractor must submit a letter to the Resident Engineer from the private property owner granting permission to produce or stockpile the material (refer to Subsection 107.11 of this manual).

Partial payments for materials not listed in the table can be made without the need for a supplemental agreement. The previous conditions for partial payment eligibility must be met, and both the Resident Engineer and Contractor must agree on a partial payment factor. Partial payment for lump sum items or items measured individually (each) are to be based on Material Supplier's invoices or actual cost records.

109.09 Acceptance and Final Payment

Once a final acceptance letter has been written for the project (see Subsection 105.20 of this manual), the Field Office can begin to close out the project.

Closing out a project involves verifying that all paperwork is complete for the project and preparing the final estimate.

Final Documentation

The Field Office will prepare the final estimate after the following documents have been submitted and the final actions have been completed:

1. Final acceptance letter has been sent to the Contractor (105.20).
2. All Supplemental Agreements (Change Orders, Force Accounts, Letters of Agreement, and Time Extension requests) have been signed and executed copies are in the project files (109.04).
3. Verify SATS report to supplemental agreement documentation.
4. All force account invoices have been received and paid (109.04).
5. Field office, Contractor and the Subcontractor agree on final quantities.
6. Incentive and disincentive payments have been substantiated with detailed calculations, drawings, daily diary reports, or other supporting documents.
7. All weekly time charges have been approved by the Resident Engineer and reviewed by the Contractor (108.04 and 108.08).
8. Record drawings (as-built plans) have been reviewed and accepted by the Resident Engineer. Memo has been received from Statewide Project Management indicating the date they received their set of As-Built Plans.
9. Materials checklist has been reviewed by the Resident Engineer and submitted to the Regional Materials Engineer for approval.
10. Memo has been sent to Field Reports informing them of the assessment of liquidated damages, when applicable (108.09).
11. Verification and submission to Field Reports of all certified payrolls for federal aid projects.
12. Verify that all subcontracts have been sent to Field Reports.
13. Final EEO compliance reports for the last working month and year are on file at ADOT's Business Engagement & Compliance Office (BECO) (Forms 10-9405 and PR-1391, federal aid projects only).
14. Certification of Payments to DBE Firms Affidavit are on file at ADOT's BECO Office, for federal aid projects only (Form 320-2301-1/88).
15. Contractor's weekly training reports have been sent to ADOT's BECO Office
16. Final trainee report completed by Contractor and on file at ADOT's BECO Office for federal aid projects only.
17. For specific pay items, the completion of:
 - asphaltic concrete related documentation (416-9),
 - bituminous treatments documentation (404-5), and
 - bituminous material price adjustment documentation (404-5, 1005-3.01).

- incentives/disincentive payments.
 - diesel fuel price adjustments.
18. ADOT furnished material, included in a bid item, have been approved by the State Engineer and accompanied by supplemental agreements
 19. Roadside Development notice of intent submitted.
 20. Roadside Development notice of termination submitted.

Semi-Final Estimate

As the Field Office closes out a project and finalizes the documentation, additional payments may need to be made to the Contractor as quantities are checked and documents received. For an estimate to be considered final, it must entail no more than \$500 in payments to the Contractor. Any estimate that is submitted after project acceptance that exceeds \$500 is called a “semi-final estimate.”

Prior to transmitting a semifinal, notify Field Reports. Semi-finals should be generated with an SF after the estimate number. The Field Office may submit as many semi-final estimates as needed to pay for remaining quantities.

Final Estimate and Support Documentation

The final estimate shows the total as-built quantities of all contract items. All quantities shall be reviewed and approved by the Resident Engineer on a transaction detail log before submitting the final estimate.

A final balance report accompanies the final estimate. This report compares the as-built quantities with the original bid quantities.

The final estimate is not transmitted electronically. The Resident Engineer signs it, certifying that the quantities reported are final and correct. Deliver the final estimate to Field Reports. For guidance, see the [Final Estimate Checklist](#) (See Exhibit 109.09-1 *Final Estimate Checklist*). To expedite final processing and payment to the Contractor, final estimates must be delivered to Field Reports no later than 45 days after the date of acceptance of the project. If delays are anticipated, the Resident Engineer must notify Field Reports explaining the reason for the delay and providing an expected delivery date. Quantity calculations and other project records (payrolls, certifications, Force Account details, etc.) should be kept up-to-date throughout the life of the project so the final estimate can be submitted promptly.



FINAL ESTIMATE CHECKLIST

Project: _____ TRACS: _____ Opened to Traffic Date: _____ Ending MP: _____

Documentation to be sent to Field Reports

- ☐ Final Estimate (Original only, with Resident Engineer's signature, must be under \$500.00)
- ☐ Submit the Contractor's concurrence letter if the Final Estimate is a negative amount (Per CB 12-02)
- ☐ Final Balance Report (Original only, with Resident Engineer's signature). Shall match the estimate amount
- ☐ Include all sections of the transaction detail log signed by the Resident Engineer
- ☐ *Notice to Proceed, Start and Completion Memos signed by the Resident Engineer
- ☐ Final Acceptance letter signed by District Engineer
- ☐ Time Reports, first and last, for each phase signed by the Resident Engineer
- ☐ Request for extension of time, liquidated damages letter and stop/resume work orders
- ☐ *Copies of Contractor's Invoices, Purchase Orders and Receivers
- ☐ Submit supporting documentation for all types of AC Material paid by the ton from AC Forms:
 - * Inspector's Verification of Materials Report
 - * Hot Plant and Rubber Plant Reports
 - * ADOT Mix and Compaction Lab Reports
 - * AM / PM Spread Determination Reports
 - * Bituminous Material Delivery Invoices
 - * Mineral Admixture: Reports and Delivery Invoices
 - * For RAP - Ignition Oven Lab Reports
- ☐ AC Forms Invoice Summary (for bituminous material deliveries)
- ☐ Bituminous Material (Tack Coat, Fog Coat, etc.) - Summary page, Project Asphalt Reports, BOL's and Weigh backs
- ☐ Submit Bituminous Price Adjustment Report; verify total paid in CPE vs. Report
- ☐ Submit Diesel Fuel Price Adjustment Report; verify total paid in CPE vs. Report
- ☐ Submit supporting documentation for 404 Cover & Aggregate Material (Form, last delivery ticket/day, lab reports for moisture)
- ☐ Submit supporting documentation for Blotter Material (last delivery ticket per day)
- ☐ Submit documentation for all incentives and disincentives

Verifications

- ☐ Verify in Contract Card that all Subcontracts have been received in Field Reports
- ☐ Verify all dates have been entered and that all supplemental agreements have been received by Field Reports.
- *Ensure Procurement has written all necessary Contract Amendments for any supplemental agreements
- ☐ Verify all Lump Sum items paid to 100% (except line item force accounts and MPT)
- ☐ Verify Lump Sum Structures are paid to 100% per Std. Spec. 109.10
- ☐ Verify that 203 (Borrow, Drainage Ex, Roadway Ex) are paid @ 100%
- ☐ Verify that 2080001 Geotextile Fabric and 3060001 Geogrid Base Reinforcement SY qty's match and are paid to the nearest SY
- ☐ Verify that 4040116 Apply Tack Coat was paid only for Tack Coat and not Fog Coat
- ☐ Verify rounding is done on 607 and 608 items, per the Standard Specs.
- ☐ Verify items with a unit of "Each" are paid to a whole number
- ☐ Verify there are no Partial Payments left in inventory
- ☐ Verify there are no Duplicate Payments
- ☐ Verify there are no MPT payments past substantial completion date
- ☐ Verify 45 Day Seeding Establishment period was noted in contract time
- ☐ *Verify each contractor's invoice is mathematically correct and sales tax has been calculated correctly
- ☐ *Verify 3-way match for payments. (CPE, Advantage and Contractor's Invoices)
- ☐ OJT Hours paid in CPE should be tracked per trainee and per week and should match the OJT hours in LCP Tracker

Reminder of Other Submittals

- ☐ Mail Materials Checklist directly to Materials - 068R (see Finance Card for verification)
- ☐ Follow CB 09-04 regarding Record Drawing procedures. RE to send email to FReports@azdot.gov when Red Lines are submitted to Project Management
- ☐ Send DBE Affidavits, Certification of Payments and Training Reports to Civil Rights Office
- ☐ On Federal Projects, Certified Payroll Issues should be Resolved, Finalized and Closed

(*If awarded through Procurement*)

Submitted By: _____ Org: _____ Date: _____

11.12.15

Exhibit 109.09-1 Final Estimate Checklist

109.10 Lump Sum Payment for Structures

(A) General

Measuring quantities for a large structure can become a very tedious and time-consuming undertaking. The intent of paying for structures on a lump sum basis is to minimize measurement and record keeping requirements. When significant quantity variations ($\pm 5\%$ or more) do occur in structural concrete, structural steel, rebar, structural excavation, and structure backfill, the Department does allow measurement for payment. However, the burden of proof is on the Contractor, who must substantiate the variation.

In allowing compensation for significant quantity variations, the Department is purposely trying to discourage contingencies in Contractors' bids. This protects the Contractor from unexpected quantity variations because the Department is willing to take that risk.

(B) Adjustments Due To Quantity Variations

The Inspector should be aware that there are differences between the documented quantities of steel and concrete versus the actual quantities used. These differences are caused by:

- the yield effect of batched concrete;
- imperfections and deflections of formwork;
- concrete spillage and waste;
- rebar and steel that may be shown on cut sheets but are not needed in the structure or used as placement aids; and
- approximations made by the Designers in calculating quantities.

With this in mind, it is a good idea for the Inspectors to track the amount of concrete and steel that go into a structure not only for partial payment purposes, but in case significant quantity variations do occur. Inspectors should collect copies of all steel cut sheets and concrete tickets for future reference.

The Contractor may use cut sheets and concrete tickets to substantiate quantity variations. When this occurs, the Resident Engineer should involve the Designer of the structure, who should verify the original quantity calculations and make any adjustment due to as-built conditions. If the Designers cannot find more than a 5 percent variation, then it is up to the Contractor to produce detailed calculations showing the variations. Cut sheets and concrete tickets cannot be used alone in determining quantity variations. Instead, the Contractor should use as-built dimensions and the plan sheets to calculate any quantity changes.

The Department's review of the Contractor's calculations should be to ensure that sound engineering and mathematical procedures are used. The intent is not to do the calculations for the Contractor, but to verify the accuracy of the calculations.

Variations in structural excavation and structure backfill quantities should be limited to changes in pay limits shown in Standard Details B-19.30, .40 and .50. A change in pay limits would occur only if the original ground line is different than the one used by the Designers, or if the Designers had made some type of calculation error or incorrect assumption when computing the pay quantities. Differences due to the Contractor exceeding the pay limits for constructability reasons (i.e., sloping the excavation) do not qualify for quantity adjustments.

(C) Adjustments Due to Revisions Ordered By The Engineer

When Designers make changes to a structure, any bid item affected by the change is treated as a major item. As a result, the item should be increased or decreased up to 25 percent before an adjustment in the unit price is required, see Subsection 104.02(D)(4)(b). However, since the structure is paid for on a lump sum basis, a change

order will be needed to adjust both the quantity of the affected item(s) and the lump sum structure price. Typically, any quantity adjustments are shown as a separate line item on a change order. The original lump sum structure item is deleted, and a new lump sum structure item is added.

(D) Payment

Partial payments for lump sum structures are usually made by collecting delivery tickets for materials incorporated into the structure. This includes concrete tickets, steel cut-sheets, weigh tickets for structure backfill, and invoices for girders and bearing devices. As mentioned in Subsection 109.10(B) of this manual, delivery tickets do not represent the actual amount of material used in a structure. However, for partial payment purposes, delivery tickets and invoices are a close approximation. The Contractor is required to turn in a list of quantities for each structure before the monthly cutoff date. The Inspector or Project Supervisor should review this list with the structures foreperson and get an agreement on quantities before the Field Office processes the monthly pay estimate.

Final payment for a lump sum structure is based on the lump sum amount. The total of the extended amounts for all the quantities must equal the lump sum amount. The total cannot be higher or lower, regardless of their summation. If the Resident Engineer or the Contractor believes there is an error in the bid quantities, then adjustments are handled under Subsection 109.10(B) or (C).

109.12 Fuel Cost Adjustments

General

When the Fuel Cost Adjustment is part of the contract, the Department will adjust the monthly progress payments up or down as appropriate for cost fluctuations in diesel fuel as determined in accordance with (109FUEL, 02/10/12).

If the 109.12 Fuel Cost Adjustment specification is not in the contract, Field Reports will check the “Excl Diesel” marker on the contract card when setting up the project. This will keep the Diesel Fuel Price Adjustments report from automatically generating.

The Diesel Fuel Price Adjustments Report is automatically generated per project, in FAST, Price Adjustment Program, after each monthly progress estimate is saved. The report will continue generating the adjusted fuel cost until substantial completion has been given.

The adjusted fuel cost is the monthly payment amount due to the contractor for the month prior.

After you have saved the first monthly progress estimate, you will go into the FAST, Price Adjustment program. Under the subtitle Tax Rates, choose Tax Rate Entry and enter the tax rate for your project. When entering the tax rate you will also be required to enter an “As of Date”; this will be the Date Bids Opened. If the tax rate for your project changes during the course of the project, you will go in and add the new tax rate. The “As of Date” will be the effective date of the new tax rate. If your project is on Tribal Land your Contractor may be required to pay Tribal Tax. If applicable, you will enter the Tribal Tax as Other.

Go to the Office Managers web page, [Price Adjustments Instructions](#) for assistance.

For each month following the monthly progress estimate, go into the Price Adjustment Program and generate a Diesel Fuel Price Adjustments Report. If the total Adjusted Fuel Cost for that Monthly Estimate exceeds zero dollars plus or minus, this is the dollar amount of diesel fuel adjustment for the month.

To pay for these adjustments, the field office needs to create Pay Item 1090001, Diesel Fuel Price Adjustment. This

Item should be created for a Unit Price of \$1.00 and a Quantity of 0. This should be a lump sum open account where the price adjustments can be made. The field office shall also build Subitems for each pay estimate in which a price adjustment will be made per [Construction Bulletin 09-03](#).