

Section 109. MEASUREMENT AND PAYMENT

109.01. Measurement of Quantities. The Engineer will measure quantities of work completed under the contract according to United States standard measures, unless required otherwise.

The Engineer will determine quantities of materials furnished and of work performed under the contract by methods of measurement and computations that are generally recognized as conforming to good engineering practice.

Unless required in the contract, manufacturing tolerances established by the industries involved will be accepted.

When required by the Engineer, the Contractor must file copies of paid freight bills, trucking slips, bills of lading, and paid invoices for any material used in the work. It is the expectation of the Department that the Contractor and the Engineer will routinely review quantities during the life of the project.

A. Payments Based on Plan Quantities. If the contract requires payment of an item or part of an item on a plan quantity basis, the payments will be those quantities shown on the plans. Any changes to the quantities will result from an authorized revision to the plans.

For earthwork, the basis for changes in quantities will include any of the following:

1. Changes in original ground topography after the original survey was made;
2. Any demonstrated errors discovered in plan quantities; or
3. Any changes required by the Engineer during construction, such as grade changes, changing of cut or fill slopes, and for excavation of peat, muck, marl, and underlying very soft clay.

If a Contractor believes that a payment based on a plan quantity basis is incorrect, the Contractor may request, in writing, that the Department check the identified quantity. The request must be accompanied by the Contractor's calculations, drawings, or other evidence indicating why the plan quantity is believed to be in error. If the plan quantity is in error, the Department will pay according to the corrected plan quantity, except as otherwise provided in subsection 103.02.

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If the Department believes that the plan quantity is inaccurate, the Department may check the plan quantity. If the quantity is in error, the Department will pay according to the corrected plan quantity. If during construction, the Department finds that conditions have changed from those anticipated in design to the extent that actual measurement of a plan quantity item is warranted, the Department will measure the quantity and will base payment on the measured quantity.

B. Payments Based on Actual Quantities. Unless specified otherwise, the basis of payment for a pay item will be the actual quantity. The Engineer will measure and calculate the actual quantity of work performed, using quantities from measurements taken from the work complete and in-place or from measurements taken from delivery vehicles in accordance with the "Measurement and Payment" subsection for the relevant pay item.

The Engineer will measure the actual quantity of pay items using the following methods:

1. **Linear and Area Measurements.** A station, when used as a definition or term of measurement, will be 100 feet.

When the method of measurement specifies measurements in stations, miles or acres, the measurements will be horizontal measurements, unless specified otherwise.

When the method of measurement for a particular item specifies that it will be measured in place, linear or area measurements will be taken at the surface of the completed item, parallel to the base.

2. **Volume and Weight Measurements.** All materials specified to be measured as compacted-in-place (CIP) will be measured in the field according to the subsection that applies to that material.

All materials specified to be measured by the cubic yard, loose measure (LM) will be measured in the hauling vehicle at the point of delivery, unless specified otherwise. The Engineer's approval is required for all vehicles used for this purpose. The shape of the hauling unit must be such that the volume of the unit may be readily and accurately determined.

When material is measured by weight in tons, the unit is 2,000 pounds.

- a. **Aggregates.** The Engineer will make moisture determinations on aggregates on the dry basis using Formula 109-1.

$$Z = \frac{(X - Y) \times 100}{Y} \quad \text{Formula 109-1}$$

where:

- X = Wet weight,
 Y = Dry weight, and
 Z = Percent moisture.

Measurement of pay quantities of aggregates on a ton basis where a maximum specified amount of moisture is allowed will be calculated as follows:

- i. Where the actual moisture, including liquid admixtures, present at time of weighing does not exceed the maximum moisture content permitted, the actual scale weights will be used as pay quantities.
- ii. Where the actual moisture present at time of weighing is more than the maximum moisture content permitted, the pay quantities will be calculated using Formula 109-2.

$$A = B \frac{100 + C}{100 + D} \quad \text{Formula 109-2}$$

where:

- A = Pay quantity of aggregate (tons),
 B = Weight of wet aggregate (tons),
 C = Allowable moisture (percent), and
 D = Actual moisture (percent).

- b. **Asphaltic Materials.** The Engineer will measure asphaltic materials for payment in gallons of material at 60 °F. Material measured at temperatures other than 60 °F will be corrected to volumes at 60 °F by means of the Formula 109-3 for the calculation of volume at 60 °F from volume at observed temperature or by use of ASTM D 1250.

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$$V = \frac{V_1}{[K(T - 60) + 1]} \quad \text{Formula 109-3}$$

where:

V = Volume at 60 °F,

V_1 = Volume at observed temperature,

T = Observed temperature in °F, and

K = Coefficient of expansion of HMA material from Table 109-1.

Table 109-1 Coefficients of Expansion to Be Used in Making Volume Corrections		
Material	Specific Gravity 60/60 °F	Coefficient (K)
Asphaltic Products	0.850 – 0.966	0.00040
Asphaltic Products	>0.966	0.00035

If the Contractor furnishes asphaltic material in tank cars, the number of gallons will be determined by the Department's laboratory and this information will be supplied on the laboratory reports.

If the Contractor furnishes asphaltic material from bulk plants or from partly used tank cars, the number of gallons will be calculated by weighing each load and converting to volume in gallons at 60 °F. This measurement will be based on the weight per gallon at 60 °F as recorded on the laboratory test report for the particular material involved. If the units are equipped with a plate or chart showing the calibration of the tank equating depth to gallons, the number of gallons may be measured by the depth of the liquid in the hauling units or distributor. The plate or chart must be provided by the manufacturer or certified by a responsible testing agency. It must also be mounted in a conspicuous location on the tank and show the calibration of the tank, equating inches of depth to gallons. When the quantity is computed by weight and converted to gallons, the calculation will be based on Formula 109-4.

$$G = \frac{W}{S.G.(8.328)} \quad \text{Formula 109-4}$$

where:

G = Volume in gallons at 60 °F,

W = Weight of asphaltic material in pounds, and
 $S.G.$ = Specific gravity of asphaltic material at 60 °F.

3. **Measuring Wire and Steel Sheets and Plates.** The size of wire for electrical conductors will be measured according to ASTM B 258.

When the term gage refers to the measurement of steel wire, it will mean the wire gage specified in ASTM A 510.

The term gage, when used concerning the measurement of steel sheets and light plates, will mean the gage referenced in ASTM A 568 for uncoated sheet and in ASTM A 525 for a galvanized sheet.

4. **Measuring Depth of Reinforcement and Thickness of Concrete Pavement and Concrete Base Course.** The Engineer will core concrete pavements and concrete base courses to determine thickness of concrete. The Department will determine the depth of reinforcement in accordance with section 602 and MTM 201.
5. **Measuring Thickness of Miscellaneous Concrete Construction.** The Engineer may core to verify the thickness of concrete construction for other than pavement or structural concrete when evidence shows the thickness is not within the tolerances of the contract. The Engineer may core concrete construction on any portion or all of the work involved. Concrete pours 6 inches or more in thickness and more than 300 square yards in area will be cored according to MTM 201 and price adjustments will be as specified in subsection 602.04. The thickness of concrete pours suspected as deficient, but less than 6 inches thick or less than 300 square yards, will be determined by suitable methods, and deficiencies treated according to subsection 104.04.
6. **Measuring Weight on Scales.** Platform, belt conveyor, and surge bin scales must conform to the requirements of 1964 PA 283 Weights and Measures Act.

When a printout system is employed on a platform or a surge bin scale, it must be equipped with a printer that will print and identify all of the following information on a triplicate ticket for each truckload:

- a. Project number;
- b. Contractor's name;

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- c. Type of material being weighed;
- d. Time;
- e. Date;
- f. Sequential, non-duplicate, ticket number (may be preprinted on a ticket);
- g. Gross weight;
- h. Tare weight;
- i. Net weight; and
- j. Net accumulated jobs daily total.

The information must be labeled so that each ticket can be readily understood. The system must be interlocked to allow printing only when the scale has come to a complete rest.

109.02. Scope of Payment. The Department will pay the Contractor for accepted quantities of contract pay items at the contract unit prices, as required by the contract, except as otherwise specified in subsection 103.02.

The Contractor must agree to accept this compensation as full payment for the following:

- A. Providing the necessary materials, labor, tools, equipment, and incidentals to perform and complete the work as required by the contract; and
- B. Compensation for loss or damage arising from the nature of the work or from the action of the elements (except as specified in subsection 107.11), or from any unforeseen difficulties that may be encountered during the prosecution of the work.

109.03. Payments for Increased or Decreased Quantities. Whenever the quantity of any item of work as given in the contract is increased or decreased, payment for the item of work will be based on the quantity completed. The payment will be authorized at the unit price for the item named in the contract, except as otherwise provided in subsection 103.02.

109.04. Progress and Partial Payments. The Engineer will make progress payments for units of work completed and partial payments for fabricated or processed nonperishable materials delivered for use on the project. Payments will be made in a timely manner, however, no claim will be considered for delayed payment of estimates.

A. **Completed Work.** The Engineer will make progress payments based upon estimates prepared by the Engineer of the work items

completed. The estimates are subject to final payment in accordance with subsection 109.07. Progress payments will be made biweekly if all of the following occur:

1. The work is progressing according to the progress schedule;
2. The written orders of the Engineer have been or are being fulfilled;
3. The time for completion must not have elapsed; and
4. At least one-half the contract amount or \$1,000 has been earned during the estimate period.

The final payment will be made according to the requirements specified under subsection 109.07.

B. Delivered and Stockpiled Materials. The Engineer may pay the cost of nonperishable materials that meet the contract requirements and are produced, fabricated, or purchased for incorporation into the contract, including freight charges, when all of the following conditions are met:

1. The value of the delivered material to be used in one item of work, exceeds \$3,000 and is not scheduled to be incorporated into the work within 30 days after delivery;
2. The Contractor presents a copy of the proof of payment, authenticated by the supplier, to the Engineer. However, if the prime Contractor is the supplier, producer, or fabricator, the Engineer will base the payment on proven production cost; and
3. The Contractor stores or stockpiles the materials on the project or at locations near the project, approved by the Engineer.

For materials stockpiled at locations not included in subsection 109.04.B.3, for which partial payments are to be made, the materials must have been approved by the Department for shipment or for use.

The Engineer will base the payment for delivered or stockpiled materials on amounts paid by the Contractor for the materials. However, the Engineer will withhold a portion of the contract unit price to cover completion of the work in accordance with current Department procedures. The Engineer will not make payment for materials in excess of contract quantities. When the Engineer makes partial payment for materials, the Contractor must reserve the materials for use on the project. The Contractor is responsible for any loss or damage to the materials until the materials are incorporated in the work and the work is accepted.

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The Contractor assumes the cost of any additional testing required by partial payment for stockpiling.

The Engineer's approval of partial payment for delivered or stockpiled materials will not constitute final acceptance of such materials for use in completing items of work.

When the Contractor provides receipted bills, paid invoices, or other satisfactory evidence of payment by the fabricator for structural steel that is to be a part of the completed structure and that has been produced by the steel mill and delivered to the fabricator, the Engineer will include the value of the steel in the progress estimate. Detailed descriptions of the delivered material, including weights, dimensions, heat and unit numbers, and chemical and physical test reports, must be shown on the invoice or supplied to the Engineer. The fabricator must store the material separately and use the material only for fabricating the structural steel for this project.

The Contractor must present evidence that the producer, fabricator, or supplier of the material is fully aware of all details of the transaction.

The Contractor must immediately pay the fabricator for those materials upon receipt of payment by the Department.

If the fabricator notifies the Department that payment for materials paid for by the Department has not been received, and the fabricator's claim remains unsatisfied for more than 30 days following the Department's payment to the Contractor, the amount provided for payment to the fabricator will be deducted from the next progress estimate.

109.05. Payment for Contract Revisions.

A. **General.** The Department will pay for contract revisions, excluding those resulting from increased or decreased quantities of pay items covered by subsection 109.03, using the sequence specified in subsection 109.05.B through subsection 109.05.F. This payment covers all costs for performing the revised work, delay costs, and all other associated costs the Engineer deems reasonable and not expressly precluded in subsection 109.05.G. The Department may direct the Contractor, at anytime, to perform the revised work under force account.

If a contract revision includes an extension of time for compensable delays under subsections 108.09.B.1 through 108.09.B.4 the Department will pay for delay costs in accordance with subsection 109.05.E

If a contract revision includes direction to the Contractor to accelerate the work in accordance with subsection 104.01.C, the Department will pay for the directed acceleration in accordance with subsection 109.05.F.

B. Contract Unit Prices. The Engineer will attempt to price revised work using contract unit prices. If the Engineer and the Contractor do not agree on the use of contract unit prices, the Engineer will negotiate with the Contractor in accordance with subsection 109.05.C.

C. Negotiated Prices. The Engineer and the Contractor will negotiate the price of a contract revision if the Engineer and the Contractor cannot agree on a price using contract unit prices in accordance with subsection 109.05.B.

The Contractor must provide an estimate of the proposed unit prices or lump sum price for the contract revision that includes the cost of performing the revised work, delay costs, all other associated costs, plus a reasonable allowance for profit and applicable overhead. The Engineer may request that the Contractor justify the estimate by providing one or more of the following used in deriving the estimate:

1. Contractor's labor requirements by trade in hours for each task;
2. Contractor's equipment costs and time requirements; or
3. Contractor's material and specialty subcontractor costs.

The Contractor must provide the justification within 5 calendar days after the Department's request. The Department will respond to the estimate within 5 calendar days after receipt of the Contractor's justification. The Department and the Contractor can mutually agree to extend these 5-day requirements.

If the Department negotiates with the Contractor but does not agree on compensation, the Engineer may direct the Contractor to perform the revised work in accordance with subsection 109.05.D.

D. Force Account.

1. **General.** If the parties are unable to reach agreement using contract unit prices or negotiated prices, the Engineer may direct the

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Contractor to perform the revised work, including any required offsite work, under force account. The Contractor must submit a written proposal for the directed work, including the planned equipment, materials, labor, and schedule.

The Department will pay the Contractor for the directed work as specified in this subsection. The Contractor must accept the compensation provided in this subsection as full payment for the directed work. At the end of each workday, the Contractor's representative and the Engineer will compare records of the work done under force account.

2. **Work Plan.** Before starting the force account work, the Contractor and the Engineer will work together to develop a work plan from the Contractor's written proposal. The work plan must include, to the extent possible, a progress schedule of controlling items and their duration, equipment to be used (Contractor owned and rented), labor to be used (number of people and crafts), and a listing of material. From the work plan, the Engineer will prepare a budget recommendation for the force account work. If the conditions relative to the force account change or if the progress of the work becomes inconsistent with the original work plan, the Contractor and the Engineer will jointly revise the work plan.
3. **Labor.** The Engineer will pay the Contractor an amount equal to the sum of the following labor costs, plus 35 percent of the sum to cover the costs of field and home office overhead and to provide for a reasonable profit.

For foreman and laborers, the Contractor will receive the rate of wage (or scale) that was agreed to in writing before beginning work. This rate will be paid for the time that the foreman and laborers are engaged in the work. This will include hours required by a collective bargaining agreement or other employment contract applicable to the class of labor employed on the work, exclusive of time included in the "estimated operating costs."

The Contractor will receive the amount paid to, or on behalf of, workers for vacation benefits, health and welfare benefits, pension fund benefits, or other benefits when the amounts are required by a collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.

For the superintendent, the amount the Contractor will receive will be limited to the work hours in which the superintendent is engaged in the performance of the work done under force account.

4. **Bond Premium, Insurance, and Payroll Taxes.** Bond premium, workmen's compensation insurance, personal injury public liability and property damage public liability insurance, unemployment compensation, and federal social security levied against the Contractor will be paid at cost. The Contractor must furnish satisfactory evidence of the amounts paid for each of these required costs as related to force account work. An amount equal to 11 percent will be added to each of these costs.
5. **Materials.** For materials used and accepted by the Engineer, the Contractor will receive the cost of materials delivered, including tax and transportation charges, plus 15 percent.

If a change in the amount, or a change in the type of force account work, results in a surplus of the material ordered and delivered to the project site, the Department will reimburse the Contractor for the costs, including restocking charges, incurred in returning the surplus material to the supplier.

Discount for prompt payment or penalty for late payment will not be considered in determining the cost of materials charged to the force account work.

6. **Equipment and Plant.** The Contractor will be paid according to the following for any equipment or special equipment other than small hand or power tools, the use of which is approved by the Engineer. Exclusive of costs for the operator, the department calculates the base hourly rate for a piece of equipment by adding two distinct components - a rental rate and an operating rate. The Department defines each of these terms as follows:

Rental Rate. Includes depreciation, taxes, major overhaul and repairs, overhead, interest, regional adjustment, equipment age adjustment, insurance, and storage.

Operating Rate. Includes fuel, lubricants, labor service and maintenance, field repairs, tires, and other expendable items needed for continuous and efficient operation.

Base Hourly Rate. The sum of a piece of equipment's rental and operating rates.

Base hourly rate also includes the cost of supplies, attachments not listed separately in the *Rental Rate Blue Book for Construction Equipment*, Volume 1, 2, or 3, by Equipment Watch, Inc. (Blue Book), field and home office overhead, profit and incidentals, insurance covering the usual insurable risks, including fire and theft. The Department will not be liable for losses that can be covered by insurance.

Upon request, the Contractor must furnish to the Engineer either original bills and invoices or certification documenting the equipment's original invoice price plus improvements. Payment for equipment will not exceed the equipment's original invoice cost plus any documented improvements. Cumulative payment for multiple force accounts for any piece of equipment on a single contract will not exceed the equipment's original invoice cost plus any documented improvements.

Time elapsed while equipment is broken down and being repaired will not be considered for payment. Time elapsed after the Engineer has advised the Contractor in writing that the equipment is no longer needed to complete the force account work will not be considered for payment except for transportation costs.

- a. **Contractor-Owned Equipment.** This subsection applies to the equipment and plant owned directly by the Contractor or by entities that are divisions, affiliates, subsidiaries, or in any other way related to the Contractor or parent company.
 - i. **Equipment Listed in Blue Book.** The published monthly rental rate for each piece of Contractor-owned equipment used, including appurtenances and attachments to equipment, will be determined by using the Blue Book. The edition that is current at the time the force account work is started will apply. The rental rate will be equal to the published monthly rental rate divided by 176, modified by the rate adjustment factor and the applicable map adjustment factor. The operating rate will be equal to the published estimated operating costs per hour.

- ii. **Equipment Not Listed in Blue Book.** The monthly rental rate will be determined by using the published monthly rental rate listed for a similar piece of equipment giving proper consideration to the capacity, size, horsepower, and age of the equipment. The rental rate will then be determined by dividing the published monthly rental rate by 176, modified by the rate adjustment factor and the applicable map adjustment factor. The operating rate will be equal to the published estimated operating costs per hour. Rates must be agreed upon in writing before the equipment is used.

For equipment for which there is no comparable in the Blue Book, The Contractor will provide the monthly rental rate and operating rate and furnish cost data to support these rates. The monthly rental rate must be reasonable but not more than 5 percent of the invoiced cost of the equipment. The rental rate will be determined by dividing the monthly rental rate by 176. Rates must be agreed upon in writing before the equipment is used.

- iii. **Small Tools.** No payment will be allowed for small hand and power tools that are not listed in the Blue Book. Small hand and power tools listed in the Blue Book at a rate of less than \$1.00 per hour will not be paid for separately.
- iv. **Foreman's Transportation.** The rate for the foreman's transportation unit will be \$25.00 per hour.
- v. **Minimum Equipment Time.** The minimum time per day for equipment used productively in force account work will be two hours.
- vi. **Equipment Transportation.** Travel time to the location of the force account work will be included when the equipment is moved under its own power. When equipment is moved from one site to another by means other than its own power, the actual operating time during periods of loading and unloading equipment will be paid for at the established base hourly rate and transportation costs will be allowed.

Transportation charges for each piece of equipment to and from the work site will be paid provided:

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- Equipment is obtained from the nearest available source;
 - Return charges do not exceed the delivery charges; and
 - Charges are restricted to those units of equipment not already available and not on or near the project.
- b. **Non-Contractor-Owned Equipment.** If the Contractor is required to rent a specific type of equipment, the Contractor must inform the Engineer of the need to rent the equipment and provide a written estimate from the rental agency for that equipment before using it on the work site. The Contractor will be paid the actual rental cost plus the operating rate for the time that the equipment is used to accomplish the work, plus the cost of moving the equipment onto and away from the job. The Contractor must provide a copy of invoices for all rental expenses incurred.
- c. **Standby Rate and Allowable Hours.** For Contractor-owned equipment, the standby rate will be one-half the rental rate established in subsection 109.05.D.6.a. The standby rate will only be allowed if the Engineer specifically requires the equipment to remain on the site for later use on the force account work.

The Engineer will provide written notice when the equipment is no longer needed to complete the force account work and will not be considered for payment, except for transportation costs.

Payments for standby time will not be made on any day the equipment operates for eight or more hours. For equipment accumulating less than eight hours operating time on any normal work day, standby payment will be limited to only that number of hours that, when added to the operating time for that day, equals eight hours.

7. **Subcontracting or Hiring Services by Others.** For administration costs in connection with subcontract work or hiring services by others to perform specialized type of work that the Contractor is not qualified to do, the Contractor will receive an amount equal to five percent of the total cost of the work computed as set forth above. Prior approval by the Engineer is required.

8. **Business Taxes.** The Contractor will receive an amount equal to 3.5 percent of the total force account to compensate the Contractor for business taxes.
9. **Miscellaneous.** No additional allowance will be made for general superintendence or other costs for which no specific allowance is provided.
10. **Coordination of Records.** The Contractor's representative and the Engineer will compare records for work completed on a force account basis and bring these records into agreement at least once a week.
11. **Statements.** Payment will be made for work performed on a force account basis after the Contractor has furnished the Engineer with an itemized statement of the cost of the work. The percentage added to each of the following categories is compensation for expenses not specifically designated.

The Contractor must use a standard MDOT form or approved equal that includes the following details for reporting all force account costs.

- a. **For Each Employee.** Name, classification, dates worked, time worked each day, total time worked on the force account activity, hourly rate of pay, total wages and fringe benefits, and total earnings to date.
- b. **For Each Unit of Equipment Used.** Description, dates used, number of hours operated each day, standby hours, total hours, rental and operating rates, and total cost.
- c. **For Materials Used.** Total quantities of materials used and material costs, including transportation. Statements must be supported by invoices for all materials used and transportation charges.

If materials used on the force account work are not specifically purchased for the work but are taken from the Contractor's stock, the Contractor must give the Engineer an affidavit certifying the following:

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- i. The materials were taken from stock;
- ii. The quantity claimed was used; and
- iii. The costs including transportation represent the actual Contractor's cost.

E. Delay Costs.

1. **General.** If the Contractor incurs a delay attributable to the Department, the Department will pay for the costs specified in this section as allowed by subsection 108.09.B, unless these costs have been previously paid as allowed in subsection 109.05.D. Such payment constitutes full compensation for the delay costs.

The Department will make no payment for delays occurring during the period from November 15 to April 15 unless the Contractor's approved progress schedule depicts work on the controlling operation during this period.

The Department will not pay for delay costs until the Contractor submits an itemized statement of those costs. Provide the content specified in subsection 109.05.D.10, for the applicable items in this statement and as follows:

- a. Proof of cost of Superintendent, or other project staff salaries, wages, and payroll taxes and insurance;
 - b. Proof of cost of office rent, utilities, land rent, and office supplies;
 - c. Proof of escalated cost for labor, equipment, and material;
 - d. Proof of material storage costs; and
 - e. Proof of other increased project costs.
2. **Allowable Delay Costs.** Increases in cost for labor, equipment, and materials will be calculated as follows:
 - a. **Idle Labor.** Labor costs during delays must be calculated as specified in subsection 109.05.D.3 for all non-salaried personnel remaining on the project as required under collective bargaining agreements or for other Engineer-approved reasons.
 - b. **Escalated Labor.** For delays caused by conditions set forth in subsection 108.09.B, payments authorized for increases in labor costs will be based on the difference between old and new labor rates established by a State or Federal agency or an agreement between the employee's and the Contractor's bargaining agency which is accepted by the Department. Payment will be based on

certified payrolls. Payment will also include the increases in fringe benefit rates and increases in payroll taxes that the Contractor is required to pay.

- c. **Idle Equipment.** For delays caused by conditions set forth in subsection 108.09.B, payment may be allowed on a rental basis for the idled equipment if any one of the following criteria is met:
- i. The equipment is on the project site at the time of the delay, is required for the controlling operation, and cannot be used at other locations on the project.
 - ii. The equipment is specialized and directly related to the controlling operation, whether on or off the project site. This must be certified by the Contractor and verified by the Engineer.

The rental rate for idled leased or rented equipment will be the leased or rented rate. However, the Engineer may direct the Contractor to return equipment and take it off rental.

The rental rate for idled Contractor-owned equipment will be one-half the rate established in subsection 109.05.D.6.a. No payment will be allowed for operating costs.

Payment will be limited to the difference between the hours used and 8 hours in any one day and to the difference between the hours used and 40 hours in any one week. No additional compensation for overhead will be allowed.

Equipment demobilization and remobilization, if directed by the Engineer, will be paid in accordance with subsection 109.05.

- d. **Material Escalation or Material Storage.** For delays caused by the conditions listed in subsection 108.09.B, payment for increased cost of materials will be based on differences in the invoice costs before and after the delay period. When requesting an increase in cost of materials, the Contractor must document the increased costs due to the delay. The cost of materials storage during the delay will be the invoiced storage cost.

F. **Directed Acceleration.** If the Engineer orders the Contractor to accelerate the Work in accordance with subsection 104.01.C, prior to accelerating the work, the Engineer and the Contractor will negotiate

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compensation to the Contractor for the costs to accelerate the work. In the absence of agreed upon compensation, the Department will compensate the Contractor for performance of the accelerated work in accordance with subsection 109.05.D.

G. Unrecoverable Costs. The Contractor is not entitled to compensation for costs not specifically allowed or provided for in this subsection including, but not limited to, the following:

1. Loss of anticipated profit.
2. Consequential damages, including loss of bonding capacity, loss of bidding opportunities, insolvency, and the effects of force account work on other projects, or business interruption.
3. Indirect costs.
4. Attorneys fees, claim preparation expenses, and the costs of litigation.
5. Unabsorbed or extended field or home office overhead or any damages using an Eichleay or similar equation, except as otherwise provided in the mark ups specified in subsections 109.05.D.1 through 109.05.D.7.

109.06. Source of Supply and Carrier Rates on Materials. The following do not constitute cause for claim for extra compensation:

- A. The inability to secure satisfactory materials, for reasons beyond the Contractor's control, from the source upon which the bid was based, unless project specific single source suppliers are specified by the Department; or
- B. Changes in carrier rates or the alteration of transportation facilities for these materials during the life of the contract.

109.07. Final Inspection, Acceptance, and Final Payment.

A. Partial Acceptance. Upon completion of a portion of the work, the Contractor may request, in writing, partial acceptance of that portion of the work. Within 7 days of the Contractor's written request, the Engineer will conduct an inspection to determine if the Contractor has satisfactorily completed that portion of the work in accordance with the contract. Within 7 days of the inspection, the Engineer will provide written notice of either partial acceptance for that portion of the work, or an explanation for rejecting the Contractor's request for partial acceptance. If the Engineer grants the partial acceptance, the Engineer will designate in writing what portion of the work is partially accepted and the effective date of the partial acceptance.

Partial acceptance will relieve the Contractor of maintenance responsibility and third party damage liability for the designated portion of the work. By relieving the Contractor of maintenance and third party damage claims, the Department does not relieve the Contractor of responsibility for defective work or damages caused by the Contractor's operations. The Contractor must not construe partial acceptance to be final inspection, final acceptance of any part of the work, or waiver of any legal rights specified under section 107.

B. Delayed Acceptance. Upon completion of contract work items designated for delayed acceptance, the Contractor must notify the Engineer, in writing, of the completion of the designated work. Within 7 days of the Contractor's written request, the Engineer will conduct an inspection to determine if the Contractor has satisfactorily completed the designated portion of the work in accordance with the contract. Within 7 days of the inspection, the Engineer will notify the Contractor, in writing, of the date the delayed acceptance period begins.

Delayed acceptance will relieve the Contractor of maintenance responsibility and third party damage liability for the designated portion of the work. By relieving the Contractor of maintenance and third party damage claims, the Department does not relieve the Contractor of responsibility for defective work or damages caused by the Contractor's operations. The Contractor must not construe delayed acceptance to be final inspection, final acceptance of any part of the work, or waiver of any legal rights specified under section 107.

C. Final Inspection and Final Acceptance.

1. **Final Inspection.** The Engineer will conduct the final inspection within 7 days of receiving the Contractor's written notification that the work is completed. The Contractor must attend the final inspection.

Within 7 days of the final inspection, the Engineer will provide written notice to the Contractor of a satisfactory final inspection or will provide a list of specific defects to be remedied in order to achieve a satisfactory final inspection.

After achieving satisfactory final inspection, the Contractor is relieved of the duty of maintaining and protecting the project. In addition, the Contractor is relieved of its responsibility for third party damage claims, and for damage to the work that may occur after satisfactory final inspection.

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2. **Final Acceptance.** Within 7 days of satisfactory final inspection and submission of all required project and materials testing documentation by the Contractor, the Engineer will give the Contractor written notification of final acceptance effective on the date the Department executes Form 1120, Final Inspection/Acceptance and Certification Report.

The Contractor, without prejudice to the terms of the contract, is liable to the Department at any time, both before and after final acceptance, for latent defects, fraud, such gross mistakes as may amount to fraud, or actions affecting the Department's rights under any warranty or guarantee.

D. **Final Payment.** Within 30 calendar days after final acceptance, the Engineer will prepare a final estimate of work performed. The Contractor will have 30 calendar days of issuance of the final estimate to file a claim or objections to the quantities within the final estimate. If no claim or objections are filed within 30 calendar days, the Department will process the final estimate for approval and final payment. At that time, the Contractor will be furnished a copy of the approved final estimate.

1. The final payment will be made when the Contractor has provided the following:
 - a. All reports or documents required by the Department and the Federal Highway Administration;
 - b. The consent of the Surety for payment of the final estimate; and
 - c. Satisfactory evidence by affidavit, or other means, that all the indebtedness due to the contract has been fully paid or satisfactorily secured. If the evidence is not furnished, the Department may retain out of any amount due the Contractor sufficient sums to cover all lienable claims unpaid.
2. The Department can recover from the Contractor in the final estimate all overpayments. However, no recovery for overpayment will be made if both of the following conditions exist:
 - a. The final estimate is issued more than 6 months after the acceptance of the project; and
 - b. The overpayment was paid to a subcontractor not in existence at the time of the final estimate.