

SECTION 109 -- MEASUREMENT AND PAYMENT

109.01 -- Measurement of Quantities

1. a. (1) After the work is completed and before final payment is made for the contract, the Engineer will make final measurements, if required, to determine the quantities of various items of work performed.

(2) When the work is performed according to the lines, grades, dimensions, and at the locations shown in the plans, the Engineer may elect to pay the plan quantity and not take actual field measurements.

(3) The Contractor will be paid for the actual quantity of work performed in accordance with these *Specifications* as shown by the plan quantities or the final measurements.

(4) All measurements made by the Engineer shall be according to the metric system of measurements.

b. Unless otherwise specified, all longitudinal measurements will not consider the slope of the measured item but will measure the horizontal distance between end points. Deductions will be made for individual fixtures in the roadway having an area greater than 1 m².

c. On all transverse measurements for area of base courses and flexible or rigid surface courses, the dimensions to be used in calculating the pay area shall be the neat dimensions shown in the plans or ordered in writing by the Engineer.

d. When requested by the Contractor and approved by the Engineer, material specified to be measured by the cubic meter may be measured by determining the mass on approved scales, the mass then being converted to cubic meters for payment purposes. Below are factors for conversion from dry mass measurement to volume measurement. The mass of any water in the aggregate shall be deducted before using the conversion factor.

<u>To Convert Megagrams of Material to Cubic Meters</u>	<u>Divide By</u>
Crushed Sand Gravel	1.30 Mg/m ³
Fine Aggregate for Concrete	1.54 Mg/m ³
Coarse Aggregate (Limestone) for Concrete	1.48 Mg/m ³
Sand-Gravel for Concrete; Surfacing Gravel or Crushed Rock	1.60 Mg/m ³
Crushed Rock for Base Course	1.48 Mg/m ³
Crushed Rock for Base Course Screenings	1.48 Mg/m ³
Mineral Filler and Soil Binder	1.06 Mg/m ³

e. When requested by the Contractor and approved by the Engineer, any material specified to be measured by the cubic meter in the vehicle at the point of delivery may be struck off to a predetermined height in the truck boxes in lieu of the specified top of boxes. Wood or metal attachments to the truck boxes may be required to delineate the predetermined height and must have sufficient rigidity to remain stable during strike-off procedures.

f. When requested by the Contractor and approved by the Engineer, material specified to be measured by the kilogram may be measured on scales equipped with an automatic device which signals or stops the flow of material when a predetermined net mass, set on the scales, is reached. This procedure

must produce a total net mass for each load at least equal to the predetermined net mass. The quantity to be measured for payment will be the predetermined net mass.

2. If the proposal provides that payment is to be made on established quantities, final measurements will not be made unless authorized alterations are made. If no alterations are made, the Contractor will be paid for the established quantities in accordance with these *Specifications*. If alterations are authorized, final measurements will be made over the affected sections or areas of the project in accordance with the relevant Section of the *Specifications*.

3. Groups of work tied by the Department shall allow items from these groups to be performed as part of the work for any of the groups that are tied.

109.02 -- Scope of Payment

The Contractor shall accept the Department's compensation as full payment for:

1. Furnishing all materials, labor, tools, and equipment necessary to complete the work and for performing all work included in the contract.

2. Loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the Engineer.

3. For all risks of every description, except as noted, connected with the prosecution of the work.

4. For all expenses incurred in consequence of the suspension or discontinuance of the work as herein specified.

5. For any use or infringement of patented, trademarked, or copyrighted items.

109.03 -- Responsibility for Payment

Payment for the contracted work will be made by the State of Nebraska from the State and Federal-aid highway funds. A county or other agency may provide the Department funds for any portion of a project.

109.04 -- Compensation for Altered Quantities

1. When the accepted quantities of work vary from the quantities in the contract, the Contractor shall accept payment at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased cost except as provided in Section 104 or as negotiated.

2. When the contract is modified by a supplemental agreement, the Contractor shall accept payment in full for the work as modified by the supplemental agreement.

3. Except as allowed in Sections 104 and 108, the Department will make no pay adjustment or allowance for the Contractor's:

- a. Increased operating expense.
- b. Loss of expected reimbursement.
- c. Loss of anticipated profit.

109.05 -- Payment for Extra Work

1. Payment for extra work shall be made in accordance with one of the following procedures:

a. A supplemental agreement will be issued to incorporate the agreed unit prices established in the DR Form 188, "Work Order".

b. A supplemental agreement will be completed following completion of the work to pay for labor, materials, and equipment specified in the Work Order. The payment for labor, materials, and equipment will be determined in accordance with Paragraphs 6., 7., and 8. of this Subsection.

c. A DR Form 58, "Force Account Agreement" will be completed before the work begins to provide for the labor, materials, and equipment necessary to complete the work specified in the DR Form 188, "Work Order"; and DR Form 204, "Weekly Force Account Statements", will be prepared during the course of the work. The payment for labor, materials, and equipment will be determined in accordance with Paragraphs 6., 7., and 8. of this Subsection.

2. No "extra work" will be paid for unless unit prices, wages, material costs, and rental rates (or the method used to determine them) have been agreed upon in writing before such work is started.

3. When payment is accomplished according to the procedures shown in Paragraphs 1.b. and 1.c. of this Subsection, the Engineer and the Contractor shall compare records of labor, equipment, and material used on a daily basis and promptly reconcile any differences between them.

4. The Contractor shall accept the compensation provided in Paragraphs 6., 7., and 8. of this Subsection as full payment for "extra work" done, including any amounts for overhead, profit, administration, and the use of tools and equipment not specifically identified in the DR Form 188, "Work Order."

5. When "extra work" is performed by an approved Subcontractor, the Prime Contractor shall receive a negotiated amount not to exceed five percent of the total compensation for the extra work as compensation for the administrative costs.

6. a. For all labor, including the foreperson in direct charge of the extra work, the Contractor shall receive 120 percent of the amount paid for the following:

- (1) Wages.
- (2) Property damage insurance.
- (3) Liability insurance.
- (4) Worker's compensation insurance premiums.
- (5) Unemployment insurance contributions.
- (6) Social security taxes.
- (7) Health and welfare benefits.
- (8) Pension fund benefits.
- (9) Other benefits.

(Benefits (7), (8), and (9) must be required by a collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.)

b. The wages for any foreperson employed on both "extra work" and other work shall be prorated between the two classes of work.

7. For all material entering permanently into the work and for specialty items of work not performed by the Contractor's or Subcontractor's own forces, the Contractor shall receive 115 percent of the actual cost, as evidenced by receipted bills, of such materials (including freight and hauling charges) or specialty items of work.

8. a. For specific machinery, special equipment, or tools (including fuel and lubricants) identified in the DR Form 188, "Work Order", and deemed necessary to complete the "extra work", the Contractor shall be allowed 115 percent of the rental price established by applying the prevailing Departmental policies and formulas to the rates established in the *Rental Rate Blue Book for Construction Equipment* published by Dataquest, Inc.

b. When it is necessary for the Contractor to rent such equipment, the Contractor shall be allowed 115 percent of the actual rental price, if reasonable and substantiated by a receipted bill.

9. a. In any case where the Contractor feels that additional compensation is due for "extra work" or material neither clearly covered in the contract nor ordered in writing by the Engineer, the Contractor shall give written notice of his/her intention to make a claim for such additional compensation before the work begins.

b. If such notification is not given or if the Engineer is not afforded an opportunity to keep an account of the actual costs incurred by the Contractor, the Contractor's claim for such extra compensation will not be allowed.

c. Notification by the Contractor and the fact that the Engineer has had an opportunity to keep an account of the costs incurred shall not be construed as providing the validity of the claim. The validity of the claim shall be determined by the Engineer.

109.06 -- Cancelled Items

1. The Department shall have the right to cancel the portions of the contract relating to the construction of any item therein by the payment to the Contractor of a fair and equitable amount covering all items of cost incurred before the date of cancellation or suspension of the work by order of the Engineer.

2. If the Contractor chooses, material ordered for the cancelled work and delivered to the location of the work (or such other location designated by the Engineer) shall be retained by the Department. The Contractor shall be compensated for the actual cost of the material plus ten percent to cover overhead, handling, other costs, and profit.

109.07 -- Partial Payment

1.
 - a. When his/her progress meets or exceeds his/her approved progress schedule, the Contractor will receive monthly progress payments based on the quantities of work completed during the preceding month.
 - b. The Engineer will not include on any progress estimate payment for any item for which required materials certifications have not been received.
 - c. The Engineer will prepare and submit progress estimates to reflect the amounts earned, but the actual payments of these estimates may be deferred.
 - d. The Department may delay making progress estimate payments for any work performed before the "tentative starting date" shown in the contract until the normal anticipated payments would be made if the work had commenced on that date.
2. When the value of the work completed during a semi-monthly period exceeds \$10,000, the Contractor will receive semi-monthly progress estimates in which the Department shall make the prescribed retentions, provided that the nature and quality of the completed work are satisfactory and provided further that the progress of the work conforms to the requirements of Subsection 108.07.
3.
 - a. Retentions of the total estimate amounts earned will be made in accordance with the requirements of the contract on all progress estimates.
 - b. The Department shall retain one percent, up to a maximum of \$25,000, of the estimated amounts earned. The Department reserves the right to retain additional amounts for material deficiencies, anticipated liquidated damages, unpaid borrow, and for other reasons to protect the Department's interests.
 - c. The Contractor will receive monthly progress estimates based on the quantities of plant material, including trees, shrubs, and vines, properly planted, and on which satisfactory establishment procedures are being made. See Subsection 802.05 for payment schedule.
4.
 - a. Upon presentation by the Contractor of receipted bills, payments may also be allowed for acceptable nonperishable materials purchased expressly to be incorporated into the work and delivered in the vicinity of the project or stored in acceptable storage places within Nebraska.
 - b. The amount to be included in the payment will be determined by the Engineer, but in no case shall it exceed 100 percent of the value of the materials as shown by the receipted bills. This value may not exceed the appropriate portion of the value of the contract item or items in which such materials are to be incorporated, nor shall the quantity in any case exceed the total estimated quantity required to complete the project.
 - c. Payment will not be approved when the value of such materials, as determined by the Engineer, amounts to less than \$2,000.00, when the progress of the work is not in accordance with the requirements set forth in Subsection 108.07, or when the material can reasonably be expected to be incorporated into the work within 30 days.
 - d. Deductions at rates and in amounts which are equal to the payments will be made from estimates as the materials are incorporated in the work.

e. Payment for the materials shall not in itself constitute acceptance, and any materials which do not conform to the specifications shall be rejected in accordance with Subsection 106.05.

f. The Contractor shall be responsible for all damages and material losses. The Contractor is responsible until the material is incorporated into the work and the work is accepted.

g. Partial payment will not include payment for fuels, supplies, form lumber, falsework, other materials, or temporary structures of any kind which will not become an integral part of the finished construction.

h. No partial payments will be made on living or perishable plant materials until planted.

5. The Department will withhold partial payments if the Contractor or Subcontractor does not submit and maintain the required insurance certificates.

6. When payrolls must be submitted, the Department may withhold partial payments if the Contractor does not provide all payrolls (including Subcontractor payrolls) within 14 days of each payroll ending date.

7. Before the final acceptance of the work, the Department will withhold payment for any defective or questionable work until the defect is corrected.

8. a. If the Contractor has furnished all known required records and reports to the Department, interest will be paid to the Contractor at the rate provided in Nebraska Statute No. 39-1349 on the amount retained and on final payment due. Commonly required records and reports include, but are not limited to:

(1) Certifications of materials incorporated into the project.

(2) UI Form 16, "Certification As To Contribution Status" (secured from the State Department of Labor for the most recently completed calendar quarter).

(3) Form FHWA-47, "Statement of Materials and Labor Used by Contractors On Highway Construction Involving Federal Funds" (federally funded projects on the National Highway System in which the contract is more than \$1,000,000).

(4) Contractor's weekly payroll reports with form WH-348, "Statement of Compliance" (Federally funded projects only).

(5) When applicable, a DR Form 441, "Identification of DBE Goal Achievement," and a DR Form 442, "Identification of Work Performed."

b. Interest will be computed beginning on the 61st day after completion of work as evidenced by the Department's letter of tentative acceptance. Should it become necessary for the Contractor to do additional work after tentative acceptance, the tentative acceptance date will be adjusted accordingly. The interest period will run continuously until the date final payment is tendered to the Contractor provided that the time interval stated in in Paragraph 8.c. of this Subsection is not exceeded.

c. The Contractor is allowed 14 calendar days from the date of notice to:

(1) Reply to the project manager's written notification of optioned pit material quantities and costs involved in a project (such reply shall be directed to the Department's Right-of-Way Division).

(2) Provide signed records or documents, such as Change Order-Supplemental Agreements, requested in writing by the Department.

(3) Provide all required records and reports, such as payrolls, materials certifications, etc., requested in writing by the Department.

d. In the event the time interval stated in Paragraph 8.c. of this Subsection is exceeded, deductions to the interest time period will be made for the actual number of days taken to provide the documentation beyond the first 60 days following tentative project acceptance.

109.08 -- Acceptance, Final Payment, and Termination of Contractor's Responsibility

1. When a final inspection verifies all work is complete, the Engineer shall tentatively accept the work. The Engineer will send the Contractor a letter relieving him/her of further responsibility for the care and maintenance of the completed work. In addition, the letter shall also relieve the Contractor of further public liability provided that all equipment and materials have been removed from the right-of-way.

2. As soon as possible after tentative acceptance of all the work, the Engineer shall measure the completed work and/or compute the quantities of work for which payment is to be made. Before final settlement is made, the Department shall be satisfied with the completed work.

3. When the Engineer is satisfied that all items of the work have been found to be consistent with the terms of the contract, a final estimate including the retained percentage due the Contractor shall be released for payment. Release of the final estimate shall constitute final acceptance of the work and completion of the contract subject to the provisions and requirements of the bond.

4. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.