

Section 106—Control of Materials

106.01 Source of Supply and Quantity of Materials

The materials used in The Work shall meet all quality requirements of the Contract. Materials will not be considered as finally accepted until all tests, including any to be taken from the finished Work have been completed and evaluated. To expedite the inspection and testing of materials, the Contractor shall notify the Engineer in writing of his proposed sources of materials at least 2 weeks before delivery, or earlier if blend determinations or mix designs are required. When required, representative preliminary samples of the character and quality prescribed shall be submitted for examination and testing. The approval of preliminary samples does not obligate the Engineer to accept materials from the same source delivered later. If, after trial, it is found that sources of supply for previously approved materials do not produce uniform and satisfactory products, or if the product from any source proves unacceptable at any time, the Contractor shall furnish materials from other sources. The Engineer shall have the right to reject the entire output of any source from which he finds it is impractical to secure a continuous flow of uniformly satisfactory material.

Upon request by the Department, the Contractor shall furnish formal written invoices from the materials suppliers.

The invoice shall show the date shipped, the quantities, and the unit prices.

The Contractor shall purchase materials from suppliers who are willing for the Contractor to furnish the Department copies of invoices as noted herein upon request by the Department.

Materials used and operations performed under [Section 400- Hot Mix Asphaltic Concrete Construction](#), shall be controlled and tested by the Contractor. This shall be done in such a manner as to produce a uniform product that meets Specification requirements. In the event the Contractor's quality control procedures do not achieve the desired objective, operations shall be suspended until satisfactory results are obtained.

The Contractor's quality control personnel shall be properly instructed and trained to perform all tests and make calculations, and shall be competent to control all processes so that the requirements are met.

106.02 Unacceptable Material

All material not conforming to the requirements of the Specifications will be considered as unacceptable. All unacceptable materials, whether in place or not, will be rejected and shall be removed immediately from the site of The Work unless otherwise directed by the Engineer. In case of failure by the Contractor to comply promptly with any order by the Engineer to remove rejected materials, the Engineer shall have authority to have such rejected materials removed by other means and to deduct the expense of such removal from any monies due, or to become due, to the Contractor. No rejected materials, the defects of which have been corrected, shall be used until the Engineer has given approval.

106.03 Samples, Tests, Cited Specifications

All materials will be inspected, tested, and approved by the Engineer before incorporation into The Work. Samples will be taken by a qualified representative of the Department. Unless otherwise designated, tests will be made by and at the expense of the Department and in accordance with methods of AASHTO, ASTM, or the published Specifications of any other designated organization that are current on the date of advertisements for bids. Copies of all tests will be furnished to the Contractor's representative at his request. Sampling and testing by the Department will be performed in accordance with the *Sampling, Testing and Inspection Manual*.

For Work performed under [Section 400—Hot Mix Asphaltic Concrete Construction](#) all materials shall be inspected and tested by the Contractor before incorporation into the Work. The Contractor's Quality Control Technician shall sample and test all quality control samples. The Contractor's quality control tests may be used as acceptance tests at the discretion of the Engineer. Sampling and testing by the Contractor shall be performed according to the Sampling, Testing, and Inspection Manual. Copies of all tests performed by the Contractor shall be furnished to the Engineer and will become a part of the project records. The Department will be responsible only for determining the acceptability of the construction and materials

incorporated therein. The Contractor shall be responsible for the quality of the construction and materials incorporated therein. The Department will monitor the Contractor's Quality Assurance Acceptance Program to verify test accuracy.

A. Testing and Acceptance Plans

1. **A Lot:** Work will be accepted on a Lot-to-Lot basis in accordance with the requirements specified in the Acceptance Plans specified in [Section 400- Hot Mix Asphaltic Concrete Construction](#). Lot sizes will normally be specified. In the event, however, that operational conditions cause work to be interrupted, or only partially completed before the Lot size specified has been achieved, the Lot may be redefined by the Engineer as being either the amount of work accomplished within the day, or he may combine that work with the next Lot of work. A Lot is set forth in these Specifications as a defined quantity of a specified material from a single source or a measured amount of specified construction assumed to be produced by the same process.
2. **Acceptance Plans:** The Acceptance Plan for a material, product, or an Item of construction, or completed work will be as specified hereinafter in [Section 400](#) and [Section 430](#) of these Specifications. However, in addition to the following conditions, the Department reserves the right to test any additional material for Work that appears defective and to require correction if necessary prior to acceptance.
3. **Resampling of Lots:** It is the intent of these Specifications that Lots of materials, products, Items of construction, or completed construction will meet Specification requirements at the time of submission. Resampling of deficient Lots as a basis for check tests may be done by the Engineer at his option.
Non-conforming Lots, which can be corrected by reworking, will not be re-sampled before such corrective action is taken. Sampling and testing of reworked areas shall be at the expense of the Contractor.
4. **Acceptance or Rejection:** Nonconforming Lots, materials, products, or Items of construction that are not adaptable to correction by reworking shall be removed and replaced, accepted without payment, or accepted at an adjusted price as stated in the Specifications, or if not stated, as directed by the Engineer.
Following the application of the Acceptance Plan, the decision of the Engineer shall be final as to the acceptance, rejection, or acceptance at an adjusted price of the Lots unless the Contractor elects to remove and replace any deficient materials or Work at his expense.
5. **Adjusted Payment:**
 - a. **Single Deficiency:** A single deficiency is defined as a deficiency involving one characteristic of a material within a Lot. In the case of single-characteristic deficiency, it shall be used directly to determine an adjusted Contract Price.
 - b. **Multiple Deficiency:** A multiple deficiency is defined as deficiencies involving more than one characteristic of construction within a Lot. In the case of multiple deficiencies, the related adjusted percentage of Contract Price for each characteristic shall be determined and the greatest reduction in price shall be used to determine the Contract Unit Price to be paid. Should the total adjustment for any individual Lot be 50 percent or more, the Engineer will determine whether the deficient Lot should be removed and replaced or allowed to remain in place. No payment will be made for the original Lot or for its removal. Replacement of the Lot will be paid for in accordance with the provisions for the Item.

106.04 Plant Inspection

At the option of the Engineer, materials may be sampled and tested at the source of supply. In the event plant inspection is undertaken, the following conditions shall be met:

- A. The Engineer shall have the cooperation and assistance of the Contractor as well as the Contractor's material supplier.
- B. The Engineer shall have full entry at all times to such parts of the plant as may concern the manufacture or production of the materials being furnished.

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- C. If specified in the Proposal, the Contractor shall arrange for an approved building for the use of the inspector; such building to be located conveniently near the plant, independent of any building used by the material producer, and conforming to the requirements of [Subsection 106.11](#) and [Section 152](#).
- D. Adequate safety measures shall be provided and maintained. This shall include sampling valves on storage tanks for bituminous materials and safety stands for use in sampling from truck beds.
- E. It is understood that the Department reserves the right to retest all materials which, prior to incorporation into the Work, have been tested and accepted at the source of supply and after the same have been delivered. The Department further reserves the right to reject all materials which, when retested, do not meet the requirements of the Contract Specifications.

106.05 Materials Certification

For certain products, assemblies, and materials, in lieu of normal sampling and testing procedures by the Contractor and the Department, the Engineer may accept from the Contractor the manufacturer's certification with respect to the product involved, under the conditions set forth in the following paragraphs:

- A. The certification shall state that the named product conforms to the Department's requirements and that representative samples thereof have been sampled and tested as specified.
- B. The certification shall either:
 - 1. Be accompanied with a certified copy of the test results, or
 - 2. Certify that such test results are on file with the manufacturer and will be furnished to the Engineer upon demand.
- C. The certification shall give the name and address of the manufacturer and the testing agency and the date of tests, and shall set forth the means of identification which will permit field determination of the product delivered to the project as being the product covered by the certification.
- D. The certification shall be in duplicate with one copy to be sent with the shipment of the covered product to the Department's Project Engineer, and with one copy sent to the Department's Materials Engineer at Atlanta, Georgia.
No Certificate will be required for Portland Cement when furnished from a manufacturer approved by the Department.
- E. The Department will not be responsible for any costs of certification or for any costs of the sampling and testing of products in connection therewith.
- F. The Department reserves the right to require samples and to test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer. Any materials that fail to meet specification requirements will be rejected.

106.06 Agricultural Lime and Fertilizer

The sale and distribution of Fertilizers and Agricultural Lime are governed by Acts of the Georgia General Assembly and Rules and Regulations of the State Department of Agriculture.

Therefore, either of these materials may be sampled by authorized representatives of the State Commissioner of Agriculture. The Contractor may use these materials in The Work without sampling provided he notifies the Engineer 48 hours in advance of anticipated delivery to the job site. The Engineer reserves the right to request random sampling by a representative of the State Department of Agriculture.

The Contractor will not be expected to withhold application pending completion of tests, but will not be relieved of the responsibility for the quality of the material furnished. In the event a sample fails to meet the requirements of the Georgia Law as evidenced by a report furnished by the Commissioner of Agriculture, the Engineer will deduct from monies due to the Contractor a sum equal to the penalty authorized by the above referenced Act.

106.07 Sample Holes

All holes dug or drilled for the purpose of taking samples or determining thickness any time before final acceptance of The Work shall be repaired by the Contractor.

The material replaced shall be compacted and finished to the satisfaction of the Engineer. Costs of this work shall be included in the appropriate Bid Items.

106.08 Storage of Materials

Portions of the right-of-way, approved by the Engineer, may be used for material storage purposes and for the placing of the Contractor's plant and equipment. Additional space required must be provided by the Contractor at no additional expense to the Department. Private property shall not be used for storage purposes without written permission of the owner or lessee, and if requested by the Engineer, copies of such written permission shall be furnished.

Materials shall be stored to assure the preservation of their quality and fitness for The Work, and shall be located so as to facilitate their prompt inspection. Stored materials, even though approved before storage, may again be inspected before their use in The Work.

All storage sites shall be restored to their original condition by the Contractor at no additional expense to the Department.

No inflammable materials or harmful chemicals shall be stored within 200 ft (60 m) of a structure nor within 200 ft (60 m) of a roadway open to traffic. Such materials shall be stored in accordance with directions from the manufacturer.

106.09 Handling Materials

All materials shall be handled in such a manner as to preserve their quality and fitness for The Work. Aggregates, and mixtures of aggregates with other materials, shall be transported from the storage site to The Work in tight vehicles so constructed as to prevent loss or segregation of materials after loading and measuring in order that there may be no inconsistency in the qualities of the materials intended for incorporation into The Work as loaded and the qualities as actually received at the place of operation. The actual incorporation of the material in The Work shall be such that the quality and fitness of the material is retained and no segregation results.

106.10 Local Material Sources

A. Sources Shown on the Plans

Possible sources of local materials and/or disposal areas may be designated on the Plans. The quality of materials in such deposits will be acceptable in general but the Department does not warrant either the quality or the quantity of materials shown on the Plans. The Contractor shall determine the amount of equipment and work required to produce a material meeting the Specifications. Pit mixing, selective excavation, and other such operations shall be expected and the Contractor shall determine the extent of these activities. It shall be understood that it is not feasible to ascertain from samples the limits for an entire deposit and that variations in quality and quantity shall be considered as usual and are to be expected.

1. When easements to secure local materials and/or disposal areas are obtained by the Department, the Plans will show the locations of the pits or areas, the amount of royalties and other costs and conditions of acquisition of the material. In all cases where the Department has secured easements for material pits and/or disposal areas, these easements will be assigned to the Contractor who shall make prompt payment to the owners of such pits for all royalty and crop damage costs for materials and/or areas, and who shall further fulfill all of the terms of the Easement. The Department does not warrant the title or any interest of the property owner in such Easements.
2. If the Contractor elects to use only a portion of the materials or area estimated to be available in any pit or disposal area, or only clears or partially clears the pit or area, and does not remove or deposit any material, he shall make a minimum payment to the property owner of at least $33\frac{1}{3}$ percent of the estimated value of the pit or areas as shown in the Easement, plus any crop damage costs called for by the Easement.

The Contractor shall, before receiving final payment from the Department, submit to the Engineer a written statement signed by the owner stating that the owner has been paid in full and that all conditions agreed to have been fulfilled to the satisfaction of the owner. The Department will not take any separate payment to the Contractor for these material acquisition costs except that reclamation of the pit or area, if required, will be paid for in accordance with [Section 160](#).

Should the Contractor fail to pay the property owner within 60 days after ceasing to use the pit or area, the Department may pay directly to the property owner any amounts due and deduct same from any funds due the Contractor. This provision does not affect the obligation of the Contractor under his Bond or the rights of the property owner or the Department under the Bond.

B. Substitution of Sources of Materials

1. If, after the Contract is awarded, the Contractor wishes to substitute other sources for sources designated on the Plans, he may do so provided the material to be substituted conforms to the Specifications. The Contractor shall make all necessary arrangements with the property owners for removal of the material from substituted pits. Payment will be made for Clearing and Grubbing, Stripping Excavation, Pit Reclamation, and Ditch Excavation only to the extent required for pits shown in the Plans. This does not relieve the Contractor from planting a satisfactory cover crop of the type called for on the Plans or required by the Specifications on all scarred areas created by the removal of materials.

In the event the Contractor substitutes a source for soil-cement, soil-bituminous, or other material to be stabilized, and the Engineer determines that the substitute source requires more stabilizing agent than the Plan pit, no payment will be made for the additional stabilizing agent required.

2. Substitution sources will not be allowed where the resulting scars will present an unsightly appearance from any State or Federal highway.

C. Material Pits Furnished By the Contractor

When sources of any, or all, local materials are not shown on the Plans, or when location maps of possible sources of materials are shown on the Plans for information but no Easements are obtained, the Contractor shall provide sources of material meeting Contract requirements and acceptable to the Engineer. The Contractor shall make arrangements with the property owner regarding rights to remove material from the pits but prior to final acceptance by the State, the Contractor shall furnish the Engineer documentary proof of payment to the property owner for all materials as stated in [Subsection 106.10.A.2](#) above. Under these circumstances, no separate payment will be made for Clearing and Grubbing, or Reclamation of Pits. Material sources shall not be excavated at locations where the resulting scars will present an unsightly appearance from any State or Federal highway. No payment will be made for material obtained in violation of this provision.

The Contractor shall provide a survey and sketch for all contractor-furnished material pits and haul road routes in accordance with the following:

The pit boundaries and haul road routes shall be selected and staked at 200 ft (60 m) intervals or as required by the Engineer. Minimum work shall include measurement of pit boundaries and haul road routes using a chain or stadia and measurement of angles or bearings using a transit or a Brunton Compass. Pit boundaries and haul road routes shall be adequately marked and referenced to a centerline station number on the project.

D. Haul Roads

Unless specifically provided, no separate payment will be made to the Contractor for construction or maintenance of any roads constructed for hauling materials. The cost of constructing, maintaining, and revegetating, if necessary, these haul roads shall be included in the prices bid for the Pay Items pertaining to the part of The Work in which the materials are used. Other designated Haul Roads will be paid for in accordance with [Section 233](#).

106.11 Field Laboratory

The Contractor may be required to provide a field laboratory on or near the Project consisting of a suitable building in which to house and use the equipment necessary to perform the required tests. The building, if required, will meet the requirements of and be paid for in accordance with [Section 152](#).

At all permanent plants producing asphaltic concrete, Portland cement concrete or cement stabilized base course materials, a fully equipped plant laboratory shall be furnished at no expense to the Department.

106.12 Inspection for Non-Domestic Materials

A. Materials Manufactured Outside the United States

Materials which are manufactured outside the United States shall be delivered to a distribution point in the United States, where the materials shall be retained for a sufficient period of time to permit inspection, sampling, and testing. The Contractor, at no cost to the Department, shall furnish facilities and arrange for all testing as required by the Engineer to ensure that the materials comply with the Specifications. All such tests shall be made in the presence of the Engineer or his representative, and if the tests are performed outside of the boundaries of the State of Georgia and its contiguous area, the Contractor shall reimburse the Department for the expenses actually incurred by the Engineer or his representative in attending the tests.

B. Certified Mill Test Reports

Certified mill test reports shall be furnished for all materials obtained from foreign manufacturers. Such reports shall be printed in English and shall be clearly identifiable to the lot of material tested.

C. Materials from Foreign Manufacturers

Materials shall be furnished only from those foreign manufacturers who have previously established, to the satisfaction of the Engineer, the sufficiency of their in-plant quality control which will give satisfactory assurance of the manufacturer's ability to furnish material uniformly and consistently in compliance with the Specifications. Such sufficiency shall be established by detailed written evidence to the Engineer's satisfaction, or, if deemed necessary, through in-plant inspection by the Engineer or his representative; the cost of such inspection to be reimbursed by the Contractor.

D. Structural Steel Fabricated Outside the State of Georgia

In the event the Contractor elects to have items of structural steel fabricated outside the boundaries of the State of Georgia and its contiguous area, the Contractor shall reimburse the Department for the actual cost of the shop inspection of such fabrication in excess of the average inspection cost for shop inspection of fabrication within the State of Georgia and its contiguous area. Such actual costs of shop inspection may include the actual expenses incurred by the Engineer or his representative in making an in-plant inspection, arranging for an approved inspection agency to make the shop inspection, and the cost of the shop inspection by the approved inspection agency.

E. Department Reimbursement

In the event the Contractor fails to reimburse the Department promptly for any of the costs established by this provision, the Contractor agrees that the amount of such costs may be deducted from amounts of money owing to the Contractor on Monthly Estimates or Final Estimate.

F. Definitions

The following definitions shall apply to [Subsection 106.12](#).

United States: The geographical area of the United States of America excluding its territories and possessions.

State of Georgia and Contiguous Area: The geographical area within the State of Georgia and those states which share a common border with the State of Georgia.

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Average Inspection Cost: The average of the actual expenses incurred in making an inspection within the area designated as determined by the Engineer.

Foreign Manufacturer: A manufacturer of materials where the materials are manufactured outside the geographical area of the United States.

106.13 Out of State Materials Payment

Materials payments to Contractors who elect to have materials fabricated and stored outside the boundaries of the State of Georgia shall be made under the following guidelines.

The Contractor shall submit a written request to the Engineer for an inspection of out-of-state materials. This request shall state that the Contractor agrees to reimburse the Department for the actual cost of travel, subsistence, and extra expense incurred by the Department in the execution of this inspection and any subsequent inspection that may be necessary. This request shall be signed by a person legally responsible to bind the company and shall be notarized.

In the event the Contractor fails to reimburse the Department promptly for any of the costs established by this provision, the Contractor agrees that the amount of such costs may be deducted from amounts of money owing to the Contractor on Monthly Estimates or Final Estimate.

The above requirements are not applicable to the fabrication and materials payment for structural steel, prestress beams, precast bridge units, and piling for bridge construction within the states which share a common border with the State of Georgia.