

**106 CONTROL OF MATERIALS**

The ALDOT Materials and Tests Bureau is responsible for the effective selection and control of all materials used in road and bridge construction. ALDOT construction staff assist in ensuring that contractors meet materials-related specification requirements through inspection, sampling, testing, and verifying and processing product submittals.

In addition to specific materials sampling, testing, and certification required in the contract, the ALDOT Testing Manual is available to guide ALDOT project staff and others in areas of required materials inspection, sampling, and testing. The ALDOT Materials, Sources and Devices with Special Acceptance Requirements Manual provides construction staff with listings of approved materials, products, and sources.

ALDOT Standard Specifications for Highway Construction (SSHC) Division 800 and Division 800 of this manual also provide materials specifications and information. 800 SG-1 Sampling and Testing Guide provides guidance and checklists to assist project staff with materials inspection, sampling, and testing.

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**106-1 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS.**

Various materials originate from various sources and are incorporated into the work in different areas. Some materials are intended to be permanent elements of the constructed project and others may be used temporarily to facilitate construction.

Both federal and state-funded projects have requirements related to the source and manufacturing location of construction materials that are permanently incorporated into completed projects. There are also prohibitions related to the use of materials produced by convict labor. The Contractor must provide certification that all construction materials are domestically produced.

The ALDOT Materials, Sources and Devices with Special Acceptance Requirements Manual includes listings of materials, sources, and devices materials and products that have undergone some type of preliminary evaluation and approval. It also includes the procedures governing

the acceptance and use of these materials. The manual is updated by the various ALDOT Bureaus that are responsible for maintenance of the lists. Updates are made following the results of the monthly meetings of the Product Evaluation Board.

The approval listings in the manual should be referenced for initial acceptance of materials and products listed there. Inspectors should verify approval as materials and products are delivered to the project due to monthly updates and modifications to approval listings. Preliminary approval by ALDOT does not relieve the contractor of the responsibility for providing quality materials or the inspector's responsibility to ensure contract requirements are met.

The Build America, Buy America Act (BABAA), enacted under Division G, Title IX of the Infrastructure Investment and Jobs Act (IIJA) in 2021 applies a domestic content procurement preference requirement (Buy America Requirement) to Federally funded public "infrastructure projects." BABAA requires that all of the iron, steel, manufactured products, and construction materials used in infrastructure projects are produced in the United States.

A "construction material" as defined under BABAA includes any article, material, or supply - other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as sand, stone, or gravel; or aggregate binding agents or additives - that is, or consists primarily of the following:

- ▼ Non-ferrous metals
- ▼ Plastic and polymer-based products, including but not limited to polyvinylchloride
- ▼ composite building materials, and polymers used in fiber optic cables
- ▼ Glass (including optic glass)
- ▼ Lumber
- ▼ Drywall

Items that consist of two or more of the listed materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be considered as manufactured products rather than construction materials. For additional information or clarity, contact the Construction Bureau or Materials and Tests Bureau.

Borrow material sources have specific regulatory clearance and authorization requirements as well as operational requirements. See SSHC 106.01 and [600 SG-1 Construction Stormwater and Environmental Management](#).

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## 106-2 SAMPLES, TESTS, CITED SPECIFICATIONS.

All material used in the work must be inspected and tested in accordance with the contract requirements and the ALDOT Testing Manual. When required, the contractor must provide material samples, testing data, and certifications. Some inspection will take place at the

manufacturing plant. These inspections are typically performed by Materials and Tests or Bridge bureau personnel.

The contractor may be allowed in some circumstances to provide a materials guaranty prior to and in lieu of required sampling and testing. Form BMT 73, Materials Guaranty is available for contractor certification and agreement to bear the cost of removal and replacement if subsequent testing shows the material to be unacceptable.

The use of a materials guaranty should be rare, and should only be used when advantageous to the public, to ALDOT, or critical to the progression of the work. For example, installing sign panels prior to testing in order to meet a critical opening date for a roadway might be a reasonable use of a materials guaranty since the signs could be replaced later if found to be unacceptable through testing.

On the other hand, allowing a base layer to be installed under a materials guaranty, then covered by subsequent layers of the pavement structure, would be a significant risk since removal and replacement would involve the destruction of other in-place materials. Caution should be used when considering approval of a materials guaranty. As always, the Project Manager should consult with the Area Construction and Materials & Tests offices when a materials guaranty is being considered.

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### **106-3 FIELD LABORATORIES.**

The contractor may be required to provide field laboratories for ALDOT project or other testing personnel. These may include base, soil, and structures laboratories, concrete laboratories, and asphalt plant laboratories. The requirement for providing field labs will be indicated with the inclusion of Item 601 in the contract.

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### **106-4 CONTRACTOR'S STATEMENT OF MATERIAL SOURCES.**

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### **106-5 HANDLING AND STORAGE OF MATERIALS.**

Materials must be transported and stored in a manner that preserves the quality of the material. Materials damaged due to mishandling, improper storage methods, or lack of protection should not be paid as stored materials or later incorporated into the work.

Examples of materials damaged during transport and storage may include coated or painted materials with scratched or chipped coatings; corroded or contaminated iron and steel products; dented or bent metal products; chipped or cracked concrete products; Disfigured, crushed, or dead plants, trees, and seeds; deteriorated or degraded organic materials and

products; and contaminated aggregate or other raw materials by soils or other foreign materials.

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#### **106-6 UNACCEPTABLE MATERIALS.**

All materials not conforming to the requirements of the contract are considered unacceptable and should be rejected. Unacceptable materials should be removed immediately from the site of the work unless otherwise instructed. Materials and Tests Bureau and Area Materials and Tests personnel are available to assist in making assessments of materials suitability.

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#### **106-7 DEPARTMENT FURNISHED MATERIAL.**

ALDOT rarely furnishes material for the Contractor's use but may do so when it is advantageous to the schedule of the project or due to other beneficial or economic factors. When provided for in the contract, Department Furnished Materials will be delivered to or made available to the contractor at specified locations.

Examples include ALDOT-owned temporary bridges being made available for project detours or ALDOT purchasing products for emergency projects as designs are being finalized. These examples reduce costs and time delays associated with procurement and material testing and approval submittals.

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#### **106-8 RIGHTS IN AND USE OF MATERIALS FOUND ON THE RIGHT OF WAY.**

The contractor is expected to use all suitable materials found within the project grading limits (horizontal and vertical limits) for construction of the project. Unless approved by the Area Construction Engineer, the contractor is not allowed to excavate or remove any materials beyond the required grading limits.

This also applies when coal or other valuable minerals are encountered on the project. If the material encountered is deemed unsuitable for reuse on the project or to have an unacceptable structural capacity, Area Construction Engineer may allow the contractor to over excavate the areas of unsuitable materials up to thirty (30) inches. The Area Materials Engineer may be consulted to help assess materials suitability.

It is the contractor's responsibility to determine and respect mineral rights when valuable minerals are removed from the project.

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## 106-9 QUALITY CONTROL AND QUALITY ASSURANCE (QC/QA) REQUIREMENTS FOR HOT MIX ASPHALT (HMA) PAVEMENT.

SSHC 106.09 addresses how quality of hot mix asphalt (HMA) pavement is ensured during the construction of a project. Both ALDOT and the contractor are responsible for sampling and testing. More detailed information related to HMA Pavement and associated quality control and quality assurance is provided in [400 SG-1 Surfacing and Pavements](#).

### QUALITY TERMINOLOGY

The following terms are used to describe the roles of the Contractor and ALDOT regarding the production of HMA pavement.

**Quality Control** – the activities that are related to the production of HMA pavement which meet all the requirements of the Specifications, including mix design, process control testing, sampling and acceptance testing by the contractor (when required) for determination of pay factors, and necessary adjustments to the production process.

**Quality Assurance** – ALDOT activities related to the acceptance of HMA pavement that may include conducting assurance/verification testing, on a random basis, of independent samples obtained by the Department, at a frequency of one or more per day; periodically observing tests performed by the Contractor; and monitoring required contractor control charts exhibiting test results of control parameters.

Terminology 1.106 Quality Control and Quality Assurance.