

11. Sampling and Testing the Contractor's Work

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11.1. Materials Acceptance

The Project Engineer is responsible for the acceptability of all material incorporated into the project. The contract, the project's Materials Testing Summary, and the Materials Certification List show the tests or certifications required to determine a material's acceptability. Materials, with few exceptions, must meet the contracts' quality requirements before they can be accepted and paid for; one notable exception is pay items that specify statistical quality level analysis to determine the estimated percentage of a material that falls outside the established specification limits as input into a pay factor equation used to advance payment to the contractor. Statistical quality level evaluation methods are used as an incentive to produce uniform quality materials for incorporation into the project. There are three general categories of materials that are incorporated into projects: (1) materials manufactured or fabricated off-site, which are accepted based on manufacturer's inspections, certifications, and independent laboratory test results; (2) materials produced off-site or on-site that the project materials staff test for acceptability at the point of incorporation into the project; (3) materials incorporated directly into the project without any processing, which the project materials staff test for acceptance at the point of incorporation.

The first category includes items typically found on the Qualified Products List (QPL). Acceptance of these items is based on the review and approval of materials submittals (Section 8.3). The second category is typified by processed aggregates and aggregate-based products, while the third category includes unprocessed materials such as soils, sands, or aggregates. On-site testing is the basis of acceptance of the last two categories of pay items.

11.2. Materials Testing Summary & Modifying MSTF Tables

During the course of the project, the Project Engineer uses the project's Materials Testing Summary to determine the frequency of tests to perform on each pay item. As the Project Engineer completes each type of test on a pay item, he/she should summarize the results of all those tests on the final Materials Testing Summary (Section 5.4). The Project Engineer is responsible for keeping the summary current as the project progresses toward completion. At project completion, the regional quality assurance/materials unit and the Project Engineer will review the completed summary prior to co-signing the Project Materials Certification.

The Materials Testing Summary is prepared by project staff and quality assurance staff. If it is prepared by project staff it should be reviewed by quality assurance staff. It provides the Project Engineer with a complete list of material tests and testing frequencies for all testable materials included under each pay item in the contract. The Materials Testing Summary is developed from the frequencies in the airport or highway Material Sampling & Testing Frequency (MSTF) tables, and the material quantities in the contract. The project staff will update the Materials Testing Summary if items are added by change documents or quantities change.

The Materials Testing Summary is provided to the contractor.

The Project Engineer uses the Materials Testing Summary as a baseline for scheduling project staff and material tests for acceptance. Complete a final Materials Testing Summary by the end of the project. See Section 5.4 for more information.

11.2.1. MSTF Tables

The non-project specific MSTF tables are on the D&ES Statewide Materials website at:

http://www.dot.state.ak.us/stwddes/desmaterials/mat_resource.shtml.

On FAA projects, modifying the Materials Sampling & Testing Frequency Table requires FAA approval if it reduces the frequency or type of testing.

For FHWA projects on NHS routes, modification of the Materials Sampling & Testing Frequency Table requires FHWA approval if it reduces the frequency or type of testing.

For FHWA projects on non-NHS routes and other non-FHWA highway projects, the Project Engineer may request a project specific modification to the testing frequency based on local conditions. The regional materials engineer/quality assurance engineer must approve any modification.

11.3. Mix Designs

11.3.1. Asphalt Paving

On projects containing asphalt paving, the contract specifies the design parameters of the mixture. The Department must approve the mix design before the contractor uses mix on the project. All mix designs, including transfers from previously approved mix designs on other projects, require the approval of the regional quality assurance or regional materials engineer (RQE or RME).

11.3.2. Department Furnished Mix Design

The contractor must submit samples of aggregate, asphalt, and anti-stripping agent, along with information on aggregate stockpile gradations, proposed blend ratios of stockpiles, and proposed gradation of final mix, to the Project Engineer. The samples must be submitted at least 30 days before production of hot mix asphalt.

The Project Engineer will transfer the contractor's samples and proposed aggregate gradations to the RQE or RME. The Department's materials lab will develop the job mix design in conjunction with RQE or RME and send test results and approved oil content in a lab report to the Project Engineer.

The Project Engineer will transmit the lab report to the contractor.

11.3.3. Contractor Furnished Mix Design

When the contractor is responsible for the job mix design, they must use an AASHTO accredited laboratory to prepare the contractor's mix design and an Alaska-licensed professional engineer must seal it (12 AAC 36.190). At least 30 days prior to the start of paving, the contractor must submit the sealed proposed mix design, along with laboratory test results from the design, to the Project Engineer at the time specified in the contract. The Project Engineer

will transfer copies of the mix design to the RQE or RME.

The RQE or RME will review the mix design, and may require the contractor to submit materials for verification.

When the mix design is approved, the Project Engineer will notify the contractor.

11.3.4. Concrete

On projects containing structural concrete or concrete pavement, the contract specifies the requirements for the mix design. The Contractor will submit a written mix design, signed and sealed by a Professional Engineer registered in the State of Alaska, for each specified class of concrete and for each Specified Compressive Strength, to the Engineer at least 45 days prior to scheduled production. The mix design is to be submitted on Form 25D-203. All mix designs except prestressed concrete, including transfers from previously approved mix designs on other projects, require the approval of the RQE or RME. The RQE or RME may require the contractor to submit materials for verification. Mix designs for prestressed concrete members require the approval of the state materials engineer.

When the mix design is approved, the Project Engineer will notify the contractor.

11.4. Sampling, Testing and Transmitting Materials

The five broad categories of tests performed on project materials are:

- Contractor Quality Control
- Source Quality Testing
- Acceptance
- Independent Assurance
- Information

11.4.1. Contractor Quality Control (QC) – Contractor Testing and Process Control

The Contractor is responsible for the quality of construction and materials used in the work. Quality control is also process control, and includes all activities that ensure the construction and materials meet contract requirements. All QC work is performed by the contractor.

Contractor QC testing involves inspection, sampling and testing of materials, data analysis, and specific action to maintain the specified overall quality of the construction and materials. It requires the expertise to make timely corrective adjustments in order to achieve and maintain acceptable levels of quality or service. The contractor or supplier must maintain control of the manufacturing processes. In addition, QC work performed by the manufacturers or service provider includes inspection and adequate testing to ensure that manufactured items meet the contract requirements.

When the contract requires the Department to review a QC plan, the contractor must submit their QC plan to the Project Engineer, prior to the preconstruction conference. The Project Engineer or Regional Quality Assurance staff will review the submittal. When the QC plan is found to meet contract requirements, the Project Engineer will notify the contractor in writing.

QC elements may include, but are not limited to:

- Schedule for permits, working drawing submittals, materials submittals, and mix design submittals
- QC personnel and qualifications
- Methods for producing and controlling the materials
- Regularly sampling and testing the materials
- Evaluating test results including action and suspension limit charts
- Adjusting the control process when needed, to produce materials within specifications
- Monitoring trends making refinements when needed
- A corrective action plan describing the action that will be taken when a process is out of control
- Inspection (plant, materials, and construction techniques)

11.4.2. Source Quality Testing

Usually the Department performs tests on aggregate material sources prior to the contractor developing the material source or prior to transporting aggregate to a project. Aggregate material is tested to determine soundness, wear, deleterious substances, and physical and chemical properties. The project staff is responsible for taking representative samples and shipping them to the regional lab for testing.

The contractor may also sample source material in the presence of project staff.

The project staff should be aware that sources may have variability.

11.4.3. Acceptance Testing

The Department is responsible for performing acceptance sampling and testing. The contractor QC test results are not allowed for use in acceptance testing determination.

Acceptance tests determine the acceptability of a particular lot of material incorporated into the project. The contract spells out the particular tests required. The Alaska Test Methods Manual describes most of the required test procedures for earthwork, bases and aggregates, asphalt, and concrete.

Technician Qualifications and Certifications

Material Acceptance (Section 11.1) and Independent Assurance (IA) sampling and testing (Section 11.4.7) shall be performed using WAQTC certified technicians who have been qualified in those modules they have been assigned to perform. Technicians, whom having been trained and formally qualified to be proficient in those methods/protocols not covered under the Department's WAQTC field technician-training program, are qualified to perform sampling and testing specific to their training and qualification.

Note: When a material is required to be sampled by others (i.e. hot asphalt at the plant), a Department representative shall be present as a witness and to immediately take the sample into custody for testing.

A list of WAQTC Certified Technician's and their qualification status can be found at the following link: www.dot.state.ak.us/stwddes/desmaterials/mat_resource.shtml.

Active Materials Testing Technician

A WAQTC certified and qualified technician achieves Active Materials Testing Technician (ATT) Status when, within a specific reporting period, they are actively performing project material acceptance sampling and testing.

Laboratories and Equipment

Per 23 CFR 637.209 Consultant Laboratories used in the material acceptance decisions, Independent Assurance program, or for dispute resolution testing shall be accredited by AASHTO's Accreditation Program (AAP), or a comparable laboratory program approved by FHWA. Accredited laboratories are exempt from the Department's Independent Assurance (IA) program.

Qualified Field Laboratory

A Qualified Field Laboratory is minimally defined as meeting three primary requirements:

1. A building, or mobile, structure that meets all applicable building codes, and is clean, weatherproof, and well secured (lockable and free of vibrations), adequate in size, having a local exhaust system, and the ability to maintain ambient air temperature between 59°-77°F.
2. Staffed with certified, and or qualified, material sampling and testing technicians, and
3. Equipped with properly maintained, calibrated, and checked test equipment.

Laboratory test equipment shall conform to AASHTO R 18, Annex A-EQUIPMENT CALIBRATION, STANDARDIZATION, CHECK, AND MAINTENANCE TABLES, the ATMM, and when applicable the manufactures recommendations. Qualified field laboratories and technicians are subject to the Department's Independent Assurance (IA) program.

11.4.4. Acceptance Test

The two categories of acceptance tests for pay items are:

- Pass/fail sampling and testing,
- Quality level analysis (QLA) sampling and testing, used when specifications include price adjustments

Pass/Fail

The Project Engineer or the materials inspector select the time and place of pass/fail sampling and testing.

In obtaining a representative sample, it is important to eliminate sampling bias by: (a) following a standardized sampling procedure associated with the testing protocol being used, and (b) when numerous samples are required for testing and evaluation, by following a reliable randomized sampling system specific to the material being tested.

Follow ATMM sampling procedures.

A passing test result allows full payment for that lot of material, assuming that the contract requirements for the pay item are met.

Failing test results require the following actions:

- Notify the Contractor as soon as possible.
- Determine conformity per the governing contract specification; Section 105-1.03 or GCP 50-03:

If the material is deemed unacceptable: the material should be removed and replaced, or corrective action taken to bring the material into conformance (and workmanship) to meet contract requirements.

If the material is deemed reasonably acceptable but at a reduced price: then sign a change order establishing the new price, and document with further explanation according to ACM 16.12 for Project Closeout.

If corrective action is performed in response to a failed test, retest the material and cross reference the new test to the original failed test.

Quality Level Analysis

The Project Engineer uses the project's Materials Testing Summary to determine the frequency of tests to perform on each pay item. A stratified random sampling program determines sampling points for QLA testing. The test results are statistically analyzed to determine the overall quality level of the material and construction. The amount paid to the contractor is adjusted for the pay item to account for the quality level using a specified table or formula. The contractor may request a retest, if allowed by the contract.

11.4.5. Signing and Releasing Test Results

Project staff shall make every reasonable effort to sample and test material in a timely manner. The testing technician shall provide the Project Engineer with test results as soon as practicable after the test is complete.

The Project Engineer shall provide the contractor with acceptance test results as soon as practicable after the acceptance tests are complete and the results are available.

For acceptance testing the person performing the test and the person checking the results must both sign the test report.

Upon request from the contractor the Project Engineer (including consultants) will provide hot mix asphalt draft test results. This is with the understanding that the test results are not checked and they may contain errors. All such tests results should be marked "DRAFT".

11.4.6. Off-Site Laboratories

Samples sent to an off-site laboratory must have a transmittal sheet identifying the sample. Retain a copy of the transmittal sheet for the field lab records. Include the following information in the transmittal sheet to help the receiving lab positively identify the sample (see SP 12 in Alaska Test Methods Manual or Table VII in the ACM Appendix):

- Department, project name, and number
- Type of sample and sample number
- Tests required
- Source the material came from
- Location where the sample was taken indicated by station, offset, and layer or depth; or by GPS coordinates
- Specification pay item and quantity represented by the sample
- Description of the sample
- Date of the sample and the name of the sampler with WAQTC qualification number
- Do not write information on sample lids.

11.4.7. Independent Assurance Program

The Department's Independent Assurance (IA) Review Program serves to assure an unbiased and objective evaluation of the equipment, sampling and testing procedures, and reliability of the test results used in the acceptance program.

The IA Program is defined as activities that form an unbiased and independent evaluation of all the sampling and testing procedures and equipment used in the project materials acceptance program.

The IA Program is a distinctly separate audit process maintained by personnel other than project personnel. IA Test results are not to be used for acceptance decisions, and the contractor may not request a retest of the IA test results.

There are two methods to IA: the Project Approach and the System Approach. The RQE will select either the Project or System approach to be used on each project.

IA Inspectors (Quality Assurance Rovers or agency designated representatives) perform IA evaluations.

All test procedures used in the IA Program can be found in *The Alaska Test Methods Manual* (ATMM), AASHTO Standard Specifications for Transportation Materials and Methods of Sampling and Testing, and Provisional Standards, or ASTM Standards & Publications.

The IA tests and frequencies listed in the MSTF Table are minimums, additional evaluations and testing may be performed at the discretion of the Project Engineer, RQE or IA Inspectors.

When acceptance testing is performed in the Department's Regional Laboratories that are accredited in the specified test method, IA testing is not required

Project Approach

The Project Approach evaluates project test equipment as well as the project testing personnel sampling and testing procedures being used in the acceptance decision. The Project Approach requires IA personnel evaluations frequencies on a per pay item, per project basis, as detailed in the MSTF tables.

The Project Engineer must provide advanced IA evaluation testing notice to the RQE for scheduling project IA inspectors. The RQE is responsible for planning, coordinating, and initiate RQE IA personnel's time and travel so as to meet the MSTF IA frequency demands as required by the Project's Materials Testing Summary.

Lab Tests

To perform acceptance/IA laboratory testing (e.g. split sample for aggregates, soils, HMA) the technician shall:

1. Sample the material
2. Split the acceptance/assurance sample in the presence of the IA Inspector, when possible.
3. Test the acceptance portion (or split) in the field lab
4. Submit the assurance portion through the IA inspector to the Regional Materials Lab
5. Report acceptance test results through the IA inspector to the Regional Materials Lab

Using Table 11-1, the Regional Materials Lab reports the comparison of IA and field acceptance test results, to the Project Engineer and the IA inspector. The IA Inspector will investigate, report, and correct findings that have resulted in the out-of-tolerance variances between the acceptance and IA test results.

Field Tests

To perform acceptance/IA field testing (e.g. concrete, densities) the technician shall:

1. Sample in presence of the IA Inspector
2. Test concurrently with or while being observed by, the IA Inspector
3. Report acceptance test results to the IA Inspector
4. Obtain the report from the IA Inspector that compares the acceptance and IA test results

The IA Inspector will investigate out-of-tolerance variances in the test results and report findings to the RQE and Project Engineer.

Use Table 11-1 when comparing acceptance and independent assurance test results. The RME, RQE, or designee must validate that a comparative analysis has been made.

System Approach

The System Approach evaluates Active Testing Technicians (ATT) and acceptance testing equipment on an annual basis.

ATTs will be evaluated, at a minimum, once per calendar year for each test method the technician performs. IA evaluations will be performed by an IA Inspector using a standard checklist of sampling and testing performance criteria. Additional evaluations may be performed at the discretion of the project engineer, RQE or IA Inspector.

The goal is to perform at least 90% of the IA evaluations during the reporting period.

ATTs are required to report to the RQE, within 7 days of testing, when they become an Active Testing Technician in a Test Method.

ATTs will be evaluated using one or more of the following methods:

- Observation of test method performance
- Concurrent tests
- Split sample comparisons according to Table 11-1
- Proficiency sample comparisons according to guidelines established by the regional lab

Equipment will be evaluated once per project per calendar year using one or more of the following methods:

- Verification of calibration
- Verification of critical dimensions
- Concurrent tests
- Split sample comparisons according to Table 11-1

Table 11-1
Guidelines for Comparing Independent Assurance and Acceptance Test Results

Type of Test	Maximum Difference
Sieve Analysis	
Sieves with Openings -	
Greater than 3"	7%
2" to 3"	6%
3/8" to 1-1/2"	5%
No. 50 to No. 4	4%
No. 100	3%
No. 200	2.0%
Liquid Limits	3%
Plasticity Index	4%
Fracture	10%
Flat and Elongated	2%
Sand Equivalent	8
Moistures Content of Soils and Aggregates	1.0%
Densities of Soils, Gravels, Sands, and Combinations -	
Standard Density	4 pcf
In-Place Field Density	4 pcf
Asphalt Content -	
Ignition oven	0.4%
Nuclear Content Gauge	0.4%
Maximum Specific Gravity	0.020
Percent Compaction of Asphalt Pavements	1.5%
Portland Cement Concrete -	
Slump: less than 3"	3/4"
Slump: 3" to 5"	1"
Slump: Greater than 5"	1-1/2"
Unit Weight	2 pcf
Air Content	1.0%
Compressive and Flexural Strength	15%
Grout Cubes – Comp. Strength	20%

- Proficiency sample comparisons according to guidelines established by the regional lab

At the conclusion of the IA evaluation, the ATT and supervisor will be provided with an evaluation of the results.

Unsatisfactory performance or deficient equipment will result in a failing evaluation. Deficient equipment shall be repaired or replaced, and the repaired or replaced equipment must be calibrated or verified prior to use.

After a failing evaluation, the IA Inspector will schedule a re-evaluation of the technician to occur as soon as possible, but no later than 30 days after the initial evaluation. Upon request, the re-evaluation may be performed by a different IA Inspector. The re-evaluation should be performed in the same manner as the initial evaluation.

An ATT, who refuses to participate in an evaluation, will be considered to have failed the evaluation and may be barred from acceptance testing.

An ATT who fails three evaluations of the same test method in a single reporting period will be referred to the RQE to determine if the failures warrant action; up to being barred from acceptance testing.

IA-Systems Approach Reports

By January 31, each Region using the IA-Systems Approach will report regional findings to D&ES for the previous calendar year. An annual report will be prepared by D&ES and transmitted to FHWA and FAA Division Offices for those evaluations performed in the System Approach.

The report will include:

1. The number of:
 - a. Statewide certified technicians
 - b. active technicians in the System Approach
 - c. technicians evaluated by IA in the System Approach
 - d. percentage of evaluated technicians/active technicians
 - e. IA reported deviations
2. Summarize corrective actions, by test method, describing how deviations from allowable tolerances and ATMM procedures were addressed
3. Potential systematic solutions to recurring deficiencies

11.4.8. Informational Testing

The Project Engineer has the discretion to take tests for information. These tests may be used for, but are not limited to:

- Evaluate materials placed in a stockpile prior to making stockpile payment
- Evaluate early concrete strength
- Provide helpful information in reviewing changes in materials sources

11.5. Dispute Resolution

At the first level of dispute between test results, accredited laboratories with certified technicians will have precedence over non-accredited laboratories. AASHTO-accredited laboratories will have precedence over other laboratories.

11.6. Structural Welding

Structural welding is a critical item of work that requires close coordination between the Project Engineer, Group Chief/PM, the contractor, the design engineer of record (DER), the technical welding advisor (TWA), the state quality assurance consultant (when used) and the state materials engineer (SME). Close coordination is required prior to and during construction. The administrative requirements for structural welding are complex and may often involve all of the aforementioned project team members. This Section describes areas of responsibility and procedures specific to structural welding (e.g. AWS D1.5, D1.1, etc), unless otherwise stated in the contract.

11.6.1. General

The contractor is responsible for quality control (QC) welding submittals, inspections, and testing. The Department has the prerogative to conduct quality assurance (QA) and acceptance inspection and testing.

The chief bridge engineer may designate a staff member to be a technical welding advisor (TWA). The primary responsibilities of the TWA are:

1. Assist the DER in developing the scope of QC inspection required for the plans and specifications;
2. Review or develop the scope of services for contracting the quality assurance welding inspection and nondestructive examination (NDE) when required; and

3. Review the contractor's welding plan and inspection reports when QA consultants are not utilized.

The Statewide Materials Section maintains a consultant term contract for QA welding inspection and NDE conducted on materials fabricated outside of Alaska.

If the project involves structural welding, the Project Engineer shall contact the TWA during the initial review of the project plans and specifications. The TWA will review specifications, plans, NDE requirements, and in conjunction with the DER and Project Engineer, determine if a QA consultant is required to inspect the welding and/or fabrication. If a QA consultant is required, the Project Engineer must follow the Term Contracts and Job Order Procedures in Section 11.7.

11.6.2. Shop Welds

The fabricator (that is, the contractor) is responsible for the QC welding submittals, welding inspection, and testing.

All shop welding is subject to QA inspection at the Department's discretion. When QA is required, the Project Engineer will forward the fabricator's welding submittal and plan to the QA consultant. The QA consultant will review the required Welding Procedure Specifications (WPSs), the Procedure Qualification Records (PQRs), Welder Performance Qualification Records (WPQRs), fabricator's QC inspector qualifications, fabricator's NDE technician qualifications, and the fabrication quality control (QC) program.

Once the contractor's welding submittal and plan satisfies contract requirements, the QA consultant forwards the documents to the Project Engineer with a recommendation for approval. The QA consultant will monitor fabrication and/or welding and conduct/supervise NDE testing as required by the contract project scope of services. The QA consultant will forward post-fabrication inspection/NDE reports to the Project Engineer. During the welding fabrication process the QA consultant will keep the Project Engineer advised as to whether or not the welding fabrication is maintaining conformance to the project's contract requirements.

When the QA consultant is not used, the Project Engineer will submit the fabricator's welding plan to the TWA. The TWA will review the contractor's

welding plan and advise the Project Engineer on whether or not the welding plan satisfies contract requirements. The TWA's points of contact would be the Project Engineer and the DER for all welding matters concerning the structure.

11.6.3. Field Welds

The contractor is responsible for QC welding submittals, welding inspections, and testing.

All field welding is subject to QA inspection at the Department's discretion. When QA is required, the Project Engineer forwards the contractor's welding submittal and plan to the QA consultant. The QA consultant will review the required WPSs, the PQRs, WPQRs, qualifications of the contractor's QC inspector, and the contractor's NDE technician qualifications. The QA consultant will also review materials certifications and statements of origin. Once the contractor's welding submittal and plan is found to be in conformance with the contract requirements, the QA consultant forwards the documents to the Project Engineer with a recommendation to approve.

The QA consultant will inspect the field welding and conduct/supervise NDE testing as required by the contract. If the QA consultant recommends a field weld NDE inspection and testing, it is the Project Engineer's responsibility to coordinate and schedule the inspection with the contractor. If the QA consultant determines that field welding is not in conformance with the contract, the QA consultant will, as soon as possible, notify the Project Engineer and the TWA. The QA consultant will forward post-welding/NDE reports to the Project Engineer.

If the quality assurance consultant is not used, the Project Engineer submits the contractor's welding plan to the TWA. The TWA will review the contractor's welding plan and advise the Project Engineer on whether or not the welding plan satisfies contract requirements. The TWA's points of contact would be the Project Engineer and the DER for all welding matters concerning the structure.

11.7. Term Contracts and Job Order Procedures

Statewide Materials manages six QA term contracts. The State Materials Engineer is the contracting officer and will assign a contract manager to each term contract. The Project Engineer oversees the work of the term contractor or consultant.

At this writing, term contracts are available for:

- Pre-stressed and precast concrete inspection, sampling & testing (2 contracts).
- Field welding and coating inspection (2 contracts).
- Soils, aggregate, asphalt and concrete inspection, sampling, and testing (2 contracts).
- Out-of-state fabrication, inspection, sampling, and testing.

For each of the Term Contracts a Regional Notice to Proceed (NTP) is prepared for each regional Construction Section, for the purpose of issuing Job Orders for work not exceeding \$60,000. A project specific NTP will be issued for all project related work that will exceed \$60,000.

11.7.1. Procedures

At a minimum of 30 calendar days prior to fabrication, contact the Statewide Materials contract manager to request services. The Statewide Materials contract manager will coordinate with the Group Chief/PM or Project Engineer to:

- develop a Request For Proposal (RFP)
- contact the term contractor with the RFP for cost estimate,
- prepare pre-proposal estimate (required for work over \$60,000)
- negotiate the scope & budget with term contractor
- get approval to issue the job order or NTP

The Statewide Materials contract manager will prepare the NTP (or job order) documents, prepare a Record of Negotiations (if required), acquire approval/acceptance signatures, encumber the funds, issue the approved NTP or job order, and maintain an accurate log of job order activity.

The Statewide Materials contracting officer approves each NTP for work over \$60,000.

Work that is less than \$60,000 will be issued as a Job Order under a Regional NTP. Only the Regional Construction Engineer or the Statewide Materials contracting officer may approve a job order.

When time is of the essence, the, Group Chief/PM or Project Engineer or the Statewide Materials contract manager may conduct the request for proposal and negotiation process orally. Following these negotiations, the Statewide Materials contracting officer may orally authorize a NTP, and will follow it

with a written confirmation, generally within two working days of the verbal Notice To Proceed.

Authorization for overtime may be included in the job order/NTP; or in a written directive by the Group Chief/PM or Project Engineer. Amendments to the term contract are by the contract manager and approved by the contracting officer. Authority to issue verbal notice to proceed is given only to the contracting officer.

Total job orders may not exceed the total of the regional NTP for that term contract. A new job order is required if there is a change in:

- Performance period
- Scope of services and/or
- Compensation amount

11.7.2. Payments

On FAA projects, the payment method shall be cost plus a fixed fee or fixed price. Payment on the basis of time and materials is allowed with prior approval from FAA project manager. At the time of this writing FAA must also give approval to hire consultants to perform contract inspection work for each specific project. Usually Department project managers seek FAA approval via email.

On FHWA projects, allowable payment methods are: time and materials, cost plus fixed fee, fixed price, or fixed price plus expenses.

The term contractor shall not perform any services or incur billable expense without receipt of an approved NTP or job order or a verbal NTP. The term contractor may only work overtime on a project when given written authorization in advance.

All invoices on Inspection Term Agreements will be processed through the Statewide Materials Contract Managers desk and approved by their Contracting Officer.

Inspection services performed by non-approved QA inspectors will not be acceptable, and the Department will not reimburse associated costs. The Department reserves the right to withdraw approval of any inspector by written notice to the term contractor.

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