Construction
Quality Assurance Program
For
LA DOTD
Design-Build Program

December 2016

APPROVED: Date: 12-19-2016

Jamie P. Williams

Louisiana Department of
Transportation and Development

APPROVED: Date: 01-04-17

Federal Highway Administration

DOTD
LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

Table of Contents

SECTION 1 - INTRODUCTION

1.1 General

The Construction Quality Assurance Program (CQAP) for Design-Build Projects established by the Louisiana Department of Transportation and Development (LA DOTD) ensures that materials and workmanship incorporated into the highway construction project are in reasonable conformance with the accepted plans and specifications, including any accepted changes. Prior to the commencement of any construction activities, the Design-Builder shall develop and implement a Construction Quality Management Plan (CQMP) for all phases of construction.

This program is developed based on CFR Title 23 637.207(b) and Federal Highway Administration (FHWA) Technical Advisory T6120.3, which are available at the following links:

23 CFR 637.207(b) -
http://www.access.gpo.gov/nara/cfr/waisidx_03/23cfr637_03.html

TA 6120.3 - http://www.fhwa.dot.gov/construction/t61203.cfm

The purpose of this program is to provide statewide consistency and a programmatic approach to quality assurance for design-build projects where the Design Builder's CQAF test results are used in the acceptance of the materials and Work in conjunction with the OVF test results. It clarifies federal requirements relating to quality assurance and mathematical analysis procedures.

Acronyms and definitions for terms used in the CQAP are provided in Appendix A Acronyms and Definitions.

1.2 Roles and Responsibilities under the Construction Quality Assurance Program (CQAP)

The Construction Quality Assurance Program (CQAP) consists of a Quality Control (QC) Program, an Acceptance Program (CQAF and OVF) and an Independent Assurance (IA) Program. Additional elements of CQAP are Dispute Resolution, Personnel Qualification, and Laboratory Accreditation/Qualification. The CQAP's components and the roles and relationships between the parties are shown in Figure 1.1.

Unlike Design Bid Build Projects, the Quality Assurance responsibilities are as follows:

- Quality Control testing and inspection is performed by the Design Builder.
- Quality acceptance testing and inspection is performed by the Design Builder's Construction Quality Acceptance Firm (CQAF).
- Acceptance verification testing and inspection is performed by the LA DOTD or its representative.
- Independent Assurance testing is performed by the LA DOTD laboratory.

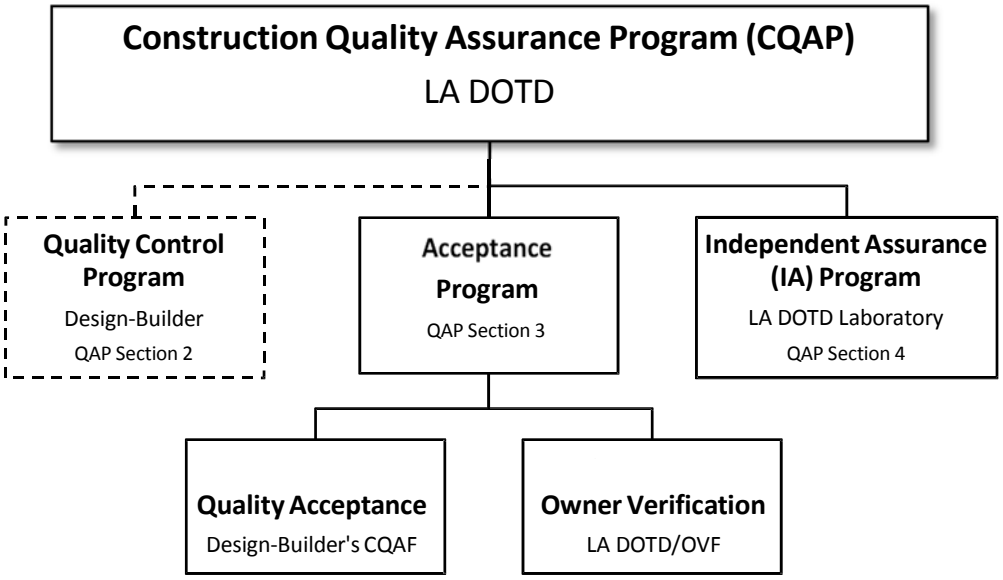


Figure 1.1 – Components and Relationship in the Construction Quality Assurance Plan (CQAP)

1.2.1 Quality Control

The Design-Builder is responsible for the Quality Control (QC) Program. The QC Program consist of internal procedures used by the Design-Builder that will ensure that the materials and the Work is delivered in accordance with the released for construction plans, accepted shop drawings, working drawings, specifications and accepted Change Orders. The Design-Builder's QC is one of the critical elements of the CQAP and as such it comprises an important aspect of LA DOTD's determination of the quality of the product as specified in the contract requirements.

1.2.2 Quality Acceptance

The Design - Builder's Construction Quality Acceptance Firm (CQAF) is responsible for the Quality Acceptance (QA) testing and inspection. The CQAF provides the frontline material acceptance sampling and testing and inspection of the Work. The CQAP's Acceptance Program allows for the use of Design-Builder's performed Quality Acceptance (QA) test results as part of the acceptance decision by LA DOTD. LA DOTD may use Design- Builder's performed QA test results for acceptance when they are mathematically validated and/or verified by the Owner Verification t e s t results. Owner Verification tests (OV) and Quality Acceptance tests (QA) together are the basis for the acceptance decision by LA DOTD.

1.2.3 Construction Quality Management Plan

The Design-Builder shall develop a Construction Quality Management Plan (CQMP) to include Quality Control and Quality Acceptance (CQAF) procedures addressing the requirements of this CQAP and the Contract

1.2.4 Owner Verification Testing and Inspection Plan

LA DOTD or its representative (Owner Verification Firm) will develop an Owner Verification Testing and Inspection Plan (OVTIP) addressing the requirements of this CQAP and the contract. The Owner Verification Firm (OVF) is responsible for oversight inspection and material acceptance validation/verification sampling and testing.

1.2.5 Independent Assurance Program

The Independent Assurance (IA) Program will be implemented by the LA DOTD District Laboratories. The IA Program evaluates all sampling and testing procedures, personnel, and equipment used as part of an acceptance decision.

1.3 Construction Quality Management Plan (CQMP)

The Design-Builder's Construction Quality Management Plan (CQMP) will be a living stand-alone document describing how the Design-Builder will comply with the obligations outlined in this document and the Contract Documents. The CQMP will be revised throughout the project for corrections, omissions and any changes at the discretion of the LA DOTD or it representative. The CQMP shall consist of both the Design-Builder's Quality Control (QC) and Quality Acceptance (QA) responsibilities with respect to performance of the Work. Requirements for the QC portion of the CQMP are described in Section 2 – Quality Control Program. Requirements for the QA portion of the CQMP are described in Section 3 – Acceptance Program. The CQMP shall establish a clear distinction between QC and QA activities and the personnel performing each function. The CQMP shall be developed by the Design-Builder as described in the contract documents in coordination with the Construction Quality Acceptance Firm. The CQMP shall present information clearly and concisely. Where procedures are requested, the expectations are to provide the actual procedures to be used with appropriate hold points. Hold points should include cursory inspection at the beginning of a major construction item so that all will develop an understanding of what will be considered acceptable to the CQAM and to the OVM.

The components and the relationships between the parties and functions responsible for the CQMP are shown in Figure 1.2. See Contract DB Sections 112 & 113 for additional details of the CQMP. Failure by the Design-Builder to follow the CQMP will result in suspension of work activity, which is noncompliant with the CQMP, by the Construction Quality Acceptance Firm (CQAF), Owner Verification Firm (OVF), or LA DOTD.

1.3.1 CQMP Review and Acceptance Process

Within 30 calendar days of the execution of the contract, or soon thereafter at a time agreed to by the DOTD Project Manager, the Design-Builder shall schedule a CQMP Workshop to clarify any questions on the CQAP requirements, roles, and responsibilities with LA DOTD's and FHWA's personnel. The QM, CQCM and the Construction Quality Assurance Firm (CQAF) shall participate in the workshop. The LA DOTD and Design- Builder will jointly develop the agenda for the workshop. The intent of the workshop is to provide early guidance to the Design-Builder when developing the CQMP and reduce the need for lengthy review cycles.

A draft CQMP shall be submitted no later than 60 days prior to construction. Thirty (30) days before construction may begin, the Design-Builder shall obtain acceptance of the CQMP from LA DOTD, and provide a copy to FHWA.

Updates and changes submitted by the Design-Builder or recommended by OVR following initial acceptance of the CQMP shall be accepted by LA DOTD before its implementation. Any modifications to the accepted CQMP will be performed via addenda.

1.3.2 CQMP Format Requirements

The Design-Builder shall submit a CQMP following the organization and format requirements in this Section. Failure to submit the CQMP as described in this Section and that of the contract documents will result in rejection of the CQMP.

A. The CQMP shall include numbered sections and subsections.
B. The CQMP shall number each page in each section consecutively (i.e., 1-1, 1-2, 2- 1, 2-2).
C. The CQMP shall be organized in accordance with Sections 2.3 and 3.4 including all Subsections. All requirements shall be addressed under the pertinent Sections and Subsections.
D. During CQMP development and review phase, the Design-Builder shall submit a revised CQMP and a copy of the revised CQMP with “track-changes”.

1.4 Owner Verification Testing and Inspection Plan (OVTIP)

LA DOTD’s Owner Verification Testing and Inspection Plan (OVTIP) shall describe LA DOTD’s commitments to perform owner verification (OV) of the Design-Builder’s QA testing and inspection. Requirements for the OVTIP are described in Section 3 – Acceptance Program and must be completed prior to beginning of construction of permanent work or incorporation of permanent materials.

1.4.1 OVTIP Format Requirements

The Owner Verification (OVF) Firm shall submit an OVTIP following the organization and format requirements in this Section. Failure to submit the OVTIP as described in this Section will result in rejection of the OVTIP.

A. The OVTIP shall include numbered sections and subsections.
B. The OVTIP shall number each page in each section consecutively (i.e., 1-1, 1-2, 2- 1, 2-2).
C. The OVTIP shall be organized in accordance with Sections 3.6 including all Subsections. All requirements shall be addressed under the pertinent Sections and Subsections.
D. During OVTIP development and review phase, the OVF shall submit a revised OVTIP and a copy of the revised OVTIP with “track-changes”.

1.5 Conflict of Interest

To avoid an appearance of a conflict of interest, any independent qualified laboratory shall perform only one of the following types of testing on the same project:

A. Quality control testing;
B. Quality acceptance testing;
C. Owner verification testing*;
D. Independent assurance testing*; or
E. Referee testing*.

* LA DOTD may perform OV, IA, and referee testing as long as separate equipment and personnel are performing tests unless variance has been approved per Section 4 – Independent Assurance (IA) Program.

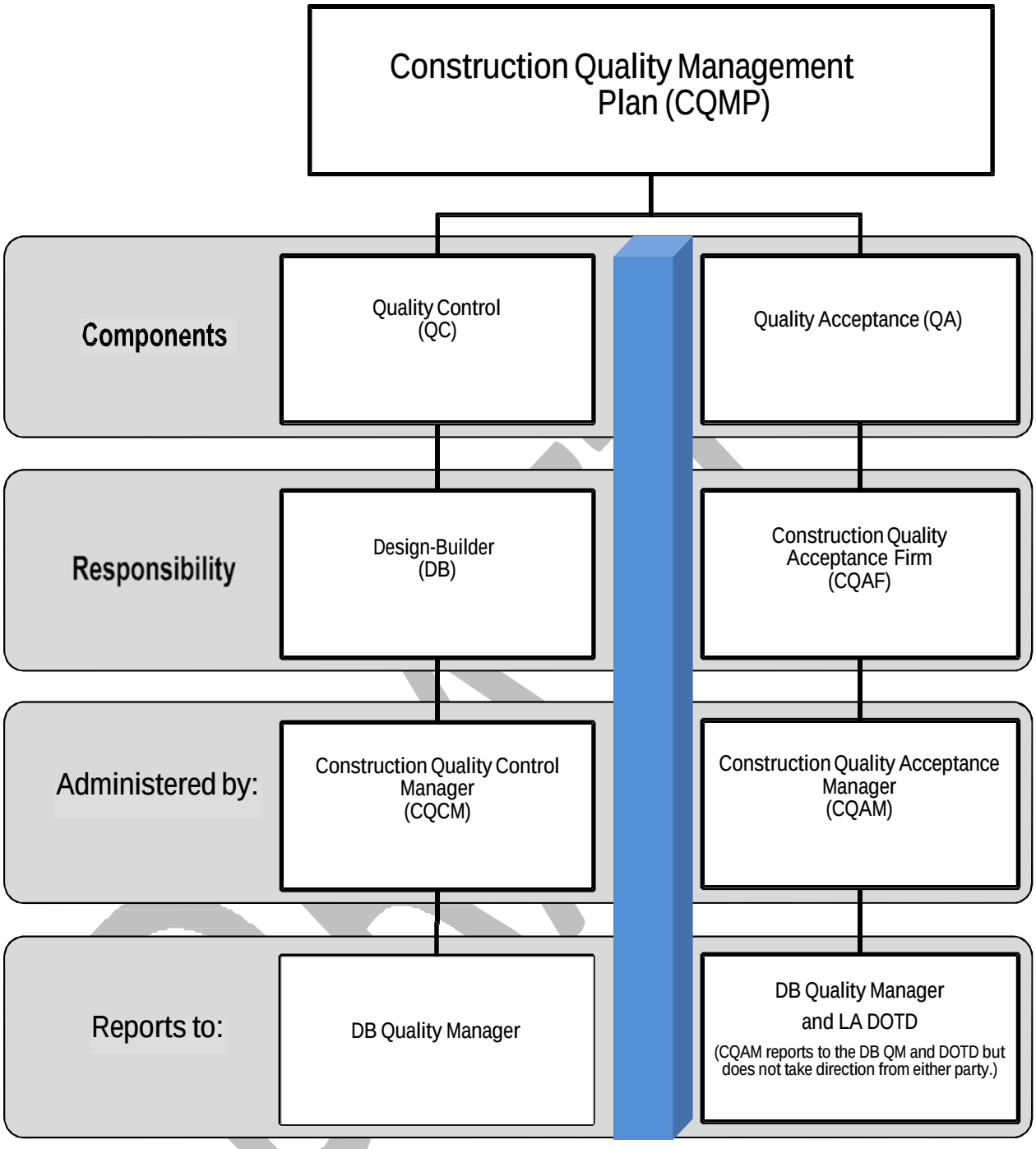


Figure 1.2 – Construction Quality Management Plan (CQMP) Components and Relationships

SECTION 2 - QUALITY CONTROL (QC) PROGRAM

2.1 General

The Design-Builder is responsible for the quality of material and of the Work. Project quality is the responsibility of all the workers involved with the Work, guided by the Design-Builder's Construction Quality Management Plan (CQMP). Design-Builder's Quality Control (QC) portion of the CQMP shall include the internal procedures used by the Design-Builder to ensure that the Work is delivered in accordance with the released for construction plans, accepted shop drawings, working drawings, specifications and accepted change orders. This involves the active participation of the entire work force in working to achieve "quality" initially and to minimize/eliminate re-work.

The Design-Builder's QC is the first single most critical element of Construction Quality Assurance Program (CQAP). As such, it comprises an important aspect of LA DOTD's determination as the first line of defense in the quality of the product as specified in the contract requirements and specifications. The Design-Builder shall perform the QC activities outlined in the accepted CQMP and they shall not be replaced or substituted by the activities performed by the CQAF as part of the Acceptance Program.

In addition, LA DOTD or its designated representative (OVF) may observe any sampling and testing activities performed by the Design-Builder's Quality Control staff. If any deviation is observed from the specified sampling or testing procedures, LA DOTD or its designated representative (OVF) will verbally describe the observed deviation immediately to the QA representative on site and inform within one working day to the Design-Builder's CQAM, followed by a written Non-Conformance Report (NCR) covering the deviation as necessary to the Design-Builder's CQAM and the Design-Builder's Quality Manager.

2.2 Design-Builder's Quality Control (QC) Requirements

The Design-Builder shall establish a systematic approach to define the processes, methods, procedures, and documentation for delivery of Quality Control (QC) on the Project. These methods and procedures s all clearly define the authority and responsibility for the administration of the Design-Builder's QC plan as outlined in the accepted CQMP.

2.2.1 Staffing

The Design-Builder shall assign an on-site Construction Quality Control Manager (CQCM) who shall be responsible for management of the quality control aspect of the CQMP. The CQCM shall attend all pre-activity meetings, shall be on the jobsite during the startup of all activities, and always available on the project site upon four (4) hours' notice at all other times to administer the CQMP, unless otherwise accepted by the LA DOTD within the CQMP. The CQCM shall not be involved with scheduling or production activities, and shall report directly to the Design-Builder's Quality Manager. The CQCM shall ensure that the methods and procedures contained in the accepted CQMP are implemented and followed by the Design- Builder, Subcontractors, Fabricators, Suppliers, and Vendors both on-site and off-site in the performance of the Work. The CQCM shall be a Louisiana-

Licensed Professional Engineer.

Design-Builder's and Subcontractors' construction work force are all considered to be members of Design-Builder's quality control staff as each and every one is responsible for the quality of the Work. Personnel responsible for performing the quality control inspection shall be knowledgeable and trained to perform their quality control duties and given the authority to over the project foremen when quality is in question.

2.2.2 Sampling, Testing, and Inspection

Personnel performing quality control sampling, testing, and inspection shall be knowledgeable in the testing methods and procedures. QC testing and inspection shall ensure quality has been incorporated into all elements of work prior to requesting acceptance testing and inspection by the Construction Quality Assurance Firm (CQAF).

QC sampling and testing of all materials must be performed during the production or manufacturing processes so that only materials meeting the specification are supplied for ultimate incorporation into the Work. Testing frequency must follow the accepted frequencies on the CQMP. Additional testing may be required to ensure quality is met. Actual sampling and testing frequencies that vary from those in Appendix G – Required Minimum Sampling and Testing must be identified for each test. If the Design Builder's Quality Assurance Firm (CQAF) opts to use a lesser frequency than that stated herein, the Design-Builder must get the approval of the LA DOTD for their proposed frequency. If chosen frequency results in repetitive failures of QA testing, then the OVF reserves the right to increase the Design-Builder's QA sampling and testing frequency.

2.2.3 Continuous Quality Improvement Requirements

The QC program should be sufficient in scope to prevent non-conformant work by those performing acceptance inspection and testing. Repeated observations of QC quality shortfalls shall be considered a breakdown of the QC program and shall be cause for stopping production and required corrective action prior to commencement of work areas affected. Corrective action may include the addition of new QC procedures, revision to existing QC procedures, re-training of QC personnel, removal and replacement of QC personnel, or other such actions which will restore the effectiveness of the QC program.

2.2.4 Reporting, Record Keeping, and Documentation

Design-Builder (QC) shall maintain construction workmanship and materials quality records of all inspections and tests performed per the accepted CQMP. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken. These records shall cover both conforming and defective or deficient features, and shall include a statement that all supplies and materials incorporated in the Work are in full compliance with the terms of the Contract Documents. These records shall be available for review and audit to CQAF and to LADOTD/OVF.

2.2.5 Notifications

The Design-Builder shall, on a weekly basis, provide the CQAF and LA DOTD with a three-week look-ahead schedule of planned activities (including pre-construction activities such as pit/source samples, plant activities, etc.) to include all anticipated material quantities for sampling, testing, and IA preparations. The three week look a-head schedule shall in include the CPM activity number. The Design-Builder shall also, on a daily basis, communicate changes to the scheduled work, for each current day to the CQAF and LA DOTD/OVF, and shall notify the CQAF, OVF, and LA DOTD when materials are ready for sampling and testing.

2.3 CQMP's Quality Control Structure and Documentation Requirements

Design-Builder's CQMP's Quality Control Section is typically comprised of various components and shall clearly address, at the minimum, how the Design-Builder's QC staff will address the requirements set in this Section. The CQMP shall address Quality Control requirements clearly and concisely. Where procedures are requested, the expectations are to provide the actual procedures to be used. The procedure shall describe who, how and when, including hold points. The components of the CQMP's QC Section are summarized in Table 2.1.

The CQMP must include all applicable materials such as: Hot Mix Asphalt, Portland Cement Concrete (Structural), Earthwork, Cementitious Materials, Timber, Steel and Miscellaneous Metals, Galvanized Metal Products, Prestressed and/or Precast Concrete Products, and Drainage Products. For all applicable materials included in the Contract, a QC Plan must be prepared in accordance with the requirements of this Section. This includes all fabricated materials in which LADOTD or its representative may perform the QA inspection.

Steel and Miscellaneous Metal products, including aluminum, are defined as the metal components of bridges, including pedestrian and moveable bridges, overhead and cantilevered sign supports, ladders and platforms, bearings, end wall grates, roadway gratings, drainage items, expansion joints, roadway decking, shear connectors, handrails, galvanized products, fencing, guardrail, light poles, high mast light poles, standard mast arm assemblies and Monotube assemblies, stay in-place forms, casing pipe, strain poles, fasteners, connectors, and other hardware.

Table 2.1: Components of the CQMP's Quality Control Section

CQMP's Quality Control Sections	CQAP's Reference
General	Section 2.3.1
Personnel	Section 2.3.2
Raw Materials	Section 2.3.3
Production Equipment	Section 2.3.4
Plant Requirements	Section 2.3.5
Final Manufactured Product - Plant Operations	Section 2.3.6
Final Manufactured Product - Field Operations	Section 2.3.7
Testing Laboratories	Section 2.3.8
Miscellaneous	Section 2.3.9

2.3.1 General

Address the following under this Section:

A. Introduction**:** The Design-Builder shall provide a brief description of the systematic approach in which they plan to deliver the QC program on the Project.

B. Parties Involved**:** Provide a description of the Contractors and Subcontractors, including Suppliers and Fabricators, participating in the delivery of the project. Include a description of the extent of involvement in the project for each party.

C. Communication and Enforcement of QC Responsibilities among all Parties Involved**:** Provide a plan for communicating the Quality Control responsibilities included in the accepted CQMP to all the Design-Builder's and Subcontractors' construction work force performing work on the project. Identify procedures to ensure adherence with the CQMP by members of the Design-Builder's and Subcontractors' construction work force. Provide means to ensure that repeated discoveries of Nonconformance are addressed and remedial actions are taken during the duration of the project.

2.3.2 Personnel

Address the following under this Section:

A. Qualifications**:** Submit a copy of all QC Inspectors and Technicians including those with LA DOTD Inspector/Technician certifications and the experience/knowledge/skill level of each staff member. Include employed and subcontracted technicians. Include procedures to ensure that education, training, and Qualification of personnel performing CQMP activities are achieved and maintained and that all work is performed in accordance with the approved designs, plans, and specifications. This list is to be update yearly when the CQMP is reviewed and revisions made.

B. Level of Responsibility**:** Identify the primary contact to the LA DOTD. Identify roles and responsibilities of various positions involved in the QC process, including an organizational chart and period of time that the QC staff members will be present on the site. Provide contact information for each employee.

2.3.3 Raw Materials

For each individual material, address:

A. Source**:** Identify the sources of raw materials. Provide locations and plant or mine numbers when applicable. Pertaining to material pits, provide plat maps with each acre subdivided with established base line and corner markers.

B. Approval**:** Describe methods of verifying compliance of Monthly Certification (see Appendix E) with the specifications. Provide procedures detailing sampling and testing of all materials during the production or manufacturing processes so that only materials meeting the specification are supplied for ultimate incorporation

into the Work at the frequency defined in Appendix G. Actual sampling and testing frequencies that vary from those in Appendix G must be identified for each test; if chosen frequency results in the failure of a QA test, then the OVF reserves the right to increase the QA sampling and testing frequency. Procedures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests (passing and failing) performed upon individual materials so that material is not used until test results have been reviewed and approved.

C. Disposition of Failing Materials**:** Procedures to ensure that materials, equipment or elements of the work that do not conform to requirements of the applicable law, specification, or the design documents are not used or installed. These procedures shall include identification, isolation, disposition and notification to CQAF and OVF.

D. Storage Facilities for Raw Materials**:** Describe measures and methods, including bedding details for preventing ponding of water, segregation, contamination, and degradation. Describe methods of identifying individual materials. Where applicable, submit a site plan showing the locations of various materials. Provide procedures to control the handling, storage, shipping, cleaning, and preservation of materials and equipment to prevent damage or deterioration.

2.3.4 Production Equipment

Address the following under this Section:

A. Certification of Equipment**:** If equipment that requires LA DOTD certification by specification and does not hold a current LA DOTD certification, provide procedures for certification of all profilographs, paving equipment, scales, meters, haul trucks, concrete trucks and all other equipment affecting quality including recertification schedules, dissemination of documentation and proposed checklists or forms to be used.

2.3.5 Plant Requirements

For each individual Fabrication or Production Plant that produces materials for the project (Concrete, Precast, HMA, Steel, Earthwork, drainage, etc.), address the following:

A. Plant Identification**:** Provide the mailing address, physical address, telephone and fax numbers, E-mail address, primary contact at the plant, responsible person in charge, facility number provided by the LA DOTD, owner information and Vendor number, and other information as required.

B. Process Control System**:** Describe the methods and measures established to ensure Contract compliance for the produced materials. These methods and measures will include, but are not limited to, equipment calibration, inspection schedule, sampling and testing, maintenance schedule, etc. Actual sampling and testing frequencies that vary from those in Appendix G must be identified for each test; if chosen frequency results in the failure of a QA test, then the OVF reserves the right to increase the QA sampling and testing frequency. (This applies to materials in which LADOTD or its representative does not perform the QA.)

C. Loading and Shipping Control**:** Describe QC's methods and measures for preventing segregation, contamination, and degradation during loading and shipping operations. Describe the methods established for materials to be in compliance with the specifications at the point of use. (Example 1: Explain how a concrete supplier will prevent segregation, contamination and degradation of concrete from the time of batching to the point of delivery at the project. Example 2: Explain how a precast plant will prevent damage of the precast element during loading at the plant and during shipping.)

D. Types of Products Generated**:** Describe the products the plant is approved to produce under LA DOTD guidelines. Include any additional processes required to submit a mix, which has been designed by personnel holding the required certifications as specified in Appendix C, such as trial batches and Head of Hydration testing. Additionally, the designs shall be reviewed and signed by a Louisiana-Licensed Professional Engineer attesting that the design meets LA DOTD requirements, Project Special Provisions or Specifications, for the specified class or grade for which it was prepared. This does not apply to plants at which LADOTD or its representative is performing the QA inspection.

E. Information on Producers on LA DOTD AML**:** Identify the Producers of materials that are on the LA DOTD Approved Materials List (AML). Include the LA DOTD's List and Producer number as part of the identification. Producer must provide a Certificate of Analysis of the material for acceptance on the project; if an analysis does not show that material meets or exceeds project specifications, then QC and QA independent sampling and testing per Appendix G will be required if the D-B desires to use the material. Any material used based on a Certification of Analysis is subject to verification testing by LADOTD.

F. Describing Documentation Procedure**:** Identify location and name of custodian of document storage to enable LA DOTD review. Include QC charts, qualification/accreditation records, inspection reports, and other pertinent/supporting documents.

G. Mix Design Submittals**:** Submit procedures for developing all Portland cement concrete (CIP and Precast), soil-lime treatment, soil-cement treatment, and hot mix asphaltic concrete mix designs for submission to the CQAF for review and approval. The mix design shall be approved by a Louisiana Licensed Professional Engineer. Trial batches will be required for new mix designs. In lieu of trial batches, historical data may be submitted by the Design-Builder to the CQAF for acceptance of mix designs used elsewhere in the State. All trial batches are to be witnessed and verified by the CQAF.

2.3.6 Final Manufactured Product - Plant Operations

Once the Plant has manufactured the product for project use but prior to delivery to the project, address the following for each type of manufactured product:

A. Inspection**:** Describe inspection schedule and methods for identifying defects and

Nonconformance with the specifications. Describe corrective actions and methods to resolve them. Provide detailed inspection checklists for each activity of manufacturing including hold points. Describe sampling and testing of all materials during the production or manufacturing processes so that only materials meeting the specification are supplied for ultimate incorporation into the Work at the frequency defined in Appendix G.

B. Storage**:** When storage of the produced materials is required and it is not defined in the Contract Documents, describe the methods and duration for storage. Include measures and methods for preventing segregation, contamination and degradation during storage. (Example: Explain how a precast element will be stored in the precast yard, such as dunnage, tie downs, stacking.)

C. Disposition of Failing Materials**:** When not described in the specifications, describe the methods and measures for identifying and controlling the failing materials. Include preventive and corrective measures. Describe disposition of failing materials. Provide procedures to ensure that materials, equipment or elements of the Work that do not conform to requirements of the applicable law or the design documents are not used or installed. These procedures shall include identification, documentation, segregation, disposition and notification to LA DOTD and it representative and, if appropriate, Governmental Entities and other affected third parties, as well as procedures for LA DOTD to review Nonconforming work. Procedures are to ensure that condition adverse to quality such as failures, malfunctions, deficiencies, defective material and equipment; adverse weather conditions (hot, cold, rain, etc.), deviations and other Nonconforming Work are promptly identified and corrected. The procedures shall ensure that the cause of the condition is determined and all corrective action(s) taken shall be documented and reported in writing to LA DOTD/OVF and to appropriate levels of the Design-Builder's management to ensure corrective action is promptly taken.

D. Identification and Control of Materials**:** Provide procedures to ensure that identification of an item is maintained by appropriate means, either on the item or on records traceable to the item, as necessary, throughout fabrication and delivery of the item. Procedures are to control the handling, storage, shipping, cleaning, and preservation of materials and equipment to prevent damage or deterioration.

2.3.7 Final Manufactured Product - Field Operations

Address the following for each manufactured product from delivery to placement, including verification of materials left in place:

A. Receiving**:** Describe the method of delivery from the point of production/storage to the point of placement. Provide procedures that transported material are inspected for damage caused during transporting. This inspection shall be performed at the time of delivery at the site and prior to incorporation of material in the project. Include measures taken to prevent damage. (Example 1: Describe the type of vehicle needed to haul a precast element, and any permits necessary to get the element to the project, include a work plan for placement. Example 2: Describe how plastic concrete will be delivered, including type of delivery truck,

conveyors, concrete pumps, or buckets to be used to place concrete.)

B. Identification and Control of Materials: Procedures to ensure that identification of an item is maintained by appropriate means, either on the item or on records traceable to the item, as necessary, throughout transportation, erection, installation, and use of the item. Describe sampling and testing of all materials during the placement so that only materials meeting the specification are used for incorporation into the Work at the frequency defined in Appendix G.

C. Mix Design**:** Procedures to ensure that preparation of all mix designs mixed on site, such as soil-lime and soil-cement treatment are designed by personnel who hold the required certifications as specified in Appendix C. Additionally, the designs shall be reviewed and signed by a Louisiana-Licensed Professional Engineer attesting that the design meets LA DOTD requirements, Project Special Provisions or Specifications.

D. Storage**:** When storage of the produced materials is required and it is not defined in the Contract Documents, describe the methods and duration for storage. Include measures and methods for preventing segregation, contamination and degradation during storage. (Example 1: Explain how delivered rebar will be stored prior to use to prevent contamination and degradation. Example 2: Explain how precast pile will be stored on site, dunnage placement, and stacking allowances.)

E. Placement**:** Describe the methods and identify the type of equipment used in incorporation of the materials into the project. Include the following in procedures:
   1) Checking and verifying the accuracy and adequacy of construction stakes, lines, and grades established by the Design-Builder. As-built records for piling, deck grades, etc. is to be provided to QA and OV when requested.
   2) Inspecting, checking, and documenting the work. Inspection, examinations and measurements shall be performed for each operation of the work to assure quality and ensure that construction alignment and grades are in accordance with the Contract documents.
   3) All tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly maintained, controlled, calibrated, certified, and adjusted at specified period to maintain accuracy within industry standards.
   4) Ensure that elements of work are not started or continued without QA personnel on site for acceptance inspection and testing. Inspection, hold points and procedures to proceed beyond inspection or hold points shall be developed and identified.
   5) Indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed (passing and failing) upon individual items of the work.
   6) Program to ensure performance of all testing required to demonstrate that all materials, equipment, and elements of Work will perform satisfactorily for the purpose intended and meet the standards specified in the Contract Documents. The program shall specify written test procedures which include provisions for ensuring that all prerequisites for the given test have been met and adequate

test instrumentation is available and used. Actual sampling and testing frequencies that vary from those in Appendix G must be identified for each test; if chosen frequency results in the failure of a QA test, then the OVF reserves the right to increase the QA sampling and testing frequency.

F. Disposition of Failing Materials**:** When not described in the specifications, describe the following:
   1) Methods and measures for identifying and controlling the failing materials. Include preventive and corrective measures. Describe disposition of failing materials.
   2) Procedures to ensure that materials, equipment, or elements of the work that do not conform to requirements of the applicable law or the design documents are not used or installed. These procedures shall include identification, documentation, segregation, disposition, and notification to LA DOTD and, if appropriate, Governmental Entities and other affected third parties, as well as procedures for LA DOTD/OVF to review Nonconforming work.
   3) Procedures to ensure that those conditions adverse to quality such as failures, malfunctions, deficiencies, defective material and equipment, adverse weather conditions (hot, cold, rain, etc.), deviations and other causes are promptly identified and corrected. The procedures shall ensure that the cause of the condition is determined and corrective action taken shall be documented and reported in writing to LA DOTD/OVF and to appropriate levels of the Design-Builder's management to ensure corrective action is promptly taken.

G. Documentation**:** Procedures to ensure that the Design-Builder, Suppliers, and Subcontractors designate individuals on each crew responsible for performing daily field inspections of their own work and for preparing a daily QC report to document the inspection performed and applicable Progress Check Point code. Report forms to be used by the responsible QC personnel shall be included in the Design-Builder's CQMP. All test results must be documented and reviewed by the CQCM to ensure test requirements have been met.

2.3.8 Testing Laboratories

Identify the laboratories performing testing. Ensure that the testing laboratories comply with the laboratory qualification requirements of Section 4.3 – Laboratory Qualifications.

2.3.9 Miscellaneous

Address the following under this Section:

A. Request for Information**:** Procedures for processing a request for information to resolve discrepancies and/or questions in the plans and specifications so that all changes are documented and approved by the Design-Builder's design engineers and accepted by LA DOTD. RFI's are to be requested and accepted prior to performing the Work in question.

B. Receipt and Issuance of Documents**:** Measures to control the receipt and issuance of documents, such as instructions, procedures, training manuals and drawings, including change thereto which prescribe activities affecting quality. These measures shall ensure that approved documents, including authorized changes thereto are reviewed for adequacy and approved for release by authorized personnel of the Design-Builder and are distributed to and used at the location where the prescribed activity is performed. Changes to documents shall be reviewed and approved by the same Design Engineer that stamped the original work drawings unless LA DOTD consents, in writing to another responsible Design Engineer. Requirements and methods for controlling documents (such as Certificates of Delivery (CD), mill certs, batch certifications, dailies, test results, etc.).

C. Utility Coordination**:** Provide procedures, including coordinating with LA DOTD Districts, to ensure all operational permits are identified for coordination of all QC inspections and testing with Governmental Entities and Utility Owners.

SECTION 3 - ACCEPTANCE PROGRAM

3.1 General

Under Design-Builder Performed Acceptance, both the Quality Acceptance (QA) and Owner Verification (OV) testing make up the acceptance decision as part of the Acceptance Program. The Construction Quality Acceptance Firm (CQAF) provides the frontline acceptance testing and inspection. Acceptance validation/verification is performed by LA DOTD or its representative (Owner Verification Firm (OVF)).

Design-Builder's Quality Acceptance (QA) portion of the Construction Quality Management Plan (CQMP) shall include the internal procedures used by the Design-Builder's CQAF to ensure that the Work is inspected and tested to verify compliance with the released for construction plans, accepted shop drawings, working drawings, specifications and accepted Change Orders. The Construction QA Sampling and Testing shall meet the requirements in Appendix G– Required Minimum Sampling and Testing. The Construction QA Inspections must include the observations, measurements, and documentation specified in the Appendix F – Minimum CQAF Construction Quality Acceptance Inspection.

LA DOTD's Owner Verification (OV) Program shall be documented in the Owner Verification Testing and Inspection Plan (OVTIP). The OVTIP shall include internal procedures used by LA DOTD or its representative (Owner Verification Firm (OVF)) to ensure that the Design- Builder's frontline acceptance is performed in ac dance with the accepted CQMP and to verify the Design-Builder's QA testing and inspection. The OV Sampling and Testing must meet the requirements in Appendix G – Required Minimum Sampling and Testing. The OV Inspections must ensure it provides enough independent inspection to ensure the CQAF is meeting the requirements in Appendix F – Minimum CQAF Construction Quality Acceptance Inspection.

3.2 Sampling and Testing

This Section describes the acceptance sampling and testing requirements for both the CQAF and LADOTD or its representative (OVF) used in the acceptance decision.

References in the Contract to a Louisiana test method or test designation of the American Association of State Highway and Transportation Officials (AASHTO), The American Society for Testing and Materials (ASTM), or any other recognized national organization means the latest revision of that test method or specification for the work in effect on the Proposal due date.

3.2.1 Design-Builder's Requirements

The Design-Builder's CQAF shall perform acceptance sampling and testing as defined by Appendix G – Required Minimum Sampling and Testing. Materials which are monitored or pre-accepted by LA DOTD under the Approved Materials List (AML) are subject to QA and OV sampling and testing as part of Design-Builder performed acceptance, unless otherwise specified by this document.

The Design-Builder's CQAF must not be owned by or be an affiliate of the Design-Builder, any principal participant, or construction Subcontractor (see Design-Build Contract Sections 101 and 112). Design-Builder's Quality Acceptance (QA) Program shall be separate from the Design-Builder's Quality Control (QC) Program.

3.2.2 LA DOTD's Requirements

LA DOTD or its designated representative (OVF) will perform verification sampling and testing as part of this Construction Quality Assurance Program (CQAP). The purpose of the verification sampling and testing is to validate the quality of the product, including the sampling and testing performed by the CQAF, as part of the Acceptance Program. Only CQAF's test results that are verified by the OV program will be used in the acceptance decision.

In addition, LA DOTD or its designated representative (OVF) may observe any sampling and testing activities performed by the Design-Builder's CQAF. If any deviation is observed from the specified sampling or testing procedures, LA DOTD or its designated representative (OVF) will verbally describe the observed deviation immediately to the QA representative on site and inform within one working day to the Design-Builder's CQAM, followed by a written Non-Conformance Report (NCR) covering the deviation to the Design-Builder's Quality Manager (QM), and copy the Design-Builder PM, LADOTD PM, and D-B's CQAM.

3.2.3 Sample Types and Uses

Sampling is either random or fixed, depending on whether the location was selected randomly (random) or if a specific location was subjectively identified (fixed). Sampling is also either independent or dependent, based on whether the location was independently selected (independent) or whether is based on the location of another sample (dependent/split).

However, split samples may be used outside of the mathematical analysis for owner verification of Design-Builder's performed acceptance tests under LA DOTD's Owner Verification Program. A comparison process for performing and analyzing split samples between LA DOTD and CQAF is necessary during the startup operation of the CQAP as described in Appendix B – OVT Levels for Material Testing and Validation. These samples will be analyzed by LA DOTD and the results discussed with the CQAF to assure laboratory and technician test results compare favorably. When the acceptable tolerance limits in Section 4 – Table 4.2 Schedule of Allowable Deviation Values between Split Samples are exceeded, corrective actions for either or both parties will be identified and corrective actions will be incorporated as appropriate. This process will help provide initial alignment of the LA DOTD and CQAF laboratories and testing procedures.

Split samples may also be performed throughout the life of the project as deemed necessary by either party to investigate non-validating material categories and verify or realign testing equipment and personnel.

3.2.4 Pre-stressed Plants Sampling and Testing Requirements

Within a Pre-stressed Plant, the LA DOTD Fabrication Unit, or its representative, will perform all QA and OV requirements. LA DOTD may require the OVF to perform material sampling and testing on behalf of LA DOTD. In the event that LA DOTD Fabrication Unit does not have personnel at the chosen pre-stress plant, the CQAF and the OVF will be responsible for providing acceptance and verification inspection respectively. The CQAF and the OVF's staff performing fabrication inspection must meet the certification requirements in Appendix C - LA DOTD Inspector/Technician Certification.

3.2.5 LA DOTD's Turnaround Timeframe for Acceptance Testing

When LA DOTD performs sampling and testing for the Acceptance Program, the timeframe for turnaround is the same as those timeframes (typical handling time) listed in the latest LA DOTD Material Sampling Manual. When these timeframes do not coincide with the Design-Builder's schedule, the D-B at their option can elect to have the CQAF perform the test at no additional cost to LA DOTD.

3.2.6 Notification

The CQAF shall provide the OVF with sufficient notification prior to any hold point inspections, sampling, testing, source approvals, or plant inspections.

The OVF shall provide the LA DOTD District Laboratory the three (3) week look ahead provided by the Design-Builder at the weekly progress meetings when there are materials being placed on the look-ahead that require IA testing. The OVF is responsible for coordination with the LA DOTD District Laboratory for IA testing a minimum of prior work day notification of anticipated testing requirement so the LA DOTD District can schedule accordingly.

3.2.7 Quantities and Testing Frequency

The CQAF shall continuously track and record the quantity (in the same units and lots/lift/zones/etc. as identified in Appendix G for testing frequency) of material incorporated into the Project. Generate a weekly report to ensure CQAF compliance with Appendix G – Required Minimum Sampling and Testing. Manufacturers' warranties, guarantees, Certificate of Compliance, Certificate of Analysis, Certificate of Delivery, instruction sheets, parts list, and other materials that are furnished with articles or materials incorporated into the Work, shall be made available to LA DOTD with the weekly report.

At a minimum, the CQAF shall perform material sampling and testing at locations and frequency defined in Appendix G – Required Minimum Sampling and Testing. This minimum testing frequency must be met with random independent samples as defined in Section 3.2.3 – Sample Types and Uses. During the start-up of new categories of work or when there are any concerns over the quality of material, the CQAF and OVF shall conduct testing at the frequency required by Appendix B.

While the testing of random independent samples are required to meet the guide schedule testing requirements, the CQAF shall perform additional (fixed) tests when the quality of material is questionable at a location other than the randomly selected location. This fixed test shall constitute an acceptance test and a failing result shall be addressed in a similar manner to a failing random independent test. Fixed tests shall not count towards meeting minimum CQAF testing frequencies.

LA DOTD or their designated representative (OVF) will perform oversight inspection and material verification sampling and testing. To verify QA test results, OV testing shall be performed at a frequency shown in Appendix G – Required Minimum Sampling and Testing. Split sample testing defined in Appendix D does not replace or relieve the requirements found in Section 4.0 – Independent Assurance Program. Frequency will be based on each job mix formula source or class of concrete.

3.3 Design-Builder’s Quality Acceptance (QA) Requirements

Design-Builder’s Construction Quality Acceptance Firm (CQAF) shall establish a systematic approach to define the processes, methods, procedures, and documentation for delivery of Quality Acceptance (QA) on the Project. These methods and procedures shall clearly define the authority and responsibility for the administration of the Design-Builder's Construction Quality Management Plan (CQMP).

3.3.1 Staffing

Design-Builder's CQAF shall assign an on-site Construction Quality Acceptance Manager (CQAM) who shall be responsible for management of the quality acceptance aspect of the CQMP. The CQAM shall attend all pre-activity meetings, shall be on the jobsite during the startup of all activities, and always available on the project site upon four (4) hours’ notice at all other times to administer the CQMP, unless otherwise accepted by the LA DOTD within the CQMP. The CQAM shall be a Louisiana-licensed Professional Engineer and shall be an employee of the CQAF. The CQAM shall report directly to the Design-Builder's Quality Manager and simultaneously to the LA DOTD. The CQAM shall not report to any

person or party directly responsible for design or construction production.

The size of the CQAF's quality acceptance staff shall reflect the volume of quality acceptance activities necessary for the Work in progress and shall be maintained in accordance with the accepted CQMP. Testers and samplers will be allowed 90 working days from execution of the Contract to obtain the certifications. The CQAF must maintain a list of construction QA staff that indicates what test certifications each person currently holds.

3.3.2 Sampling, Testing, and Inspection

A QA inspection and material sampling/testing staff shall be provided under the direction of the CQAM to perform inspection and material sampling/testing of all Work performed and materials incorporated into the Project by any member of the Design-Builder's group. If accepted in writing in advance by LA DOTD, qualified individuals who are employees of or retained by manufacturers, Vendors or Suppliers may inspect certain portions of Work.

The QA inspection staff shall be employees of the CQAF and shall be certified in the applicable inspection and material sampling and testing procedures. The QA staff shall be experienced in highway inspection and material testing. The training and experience of the QA staff shall be commensurate with the scope, complexity, and nature of the activity to be inspected and tested. Qualifications shall include appropriate LA DOTD certifications for testing and inspection listed in Appendix C. Documentation of the training and certification shall be maintained by the CQAF and available for review and audit.

The CQAF's staffing requirements shall be updated as necessary throughout the term of the Work to reflect changes in the actual construction schedule. Design-Builder shall ensure that adequate CQAF staff is available and that CQMP activities are undertaken in a manner consistent with the Project Schedule and in a manner that will enable the Design-Builder to achieve the Final Acceptance deadline.

3.3.3 Quality Acceptance Facilities and Equipment

Certification must also be obtained for AASHTO and ASTM test methods that are modified or referenced by Louisiana test methods. Unless otherwise accepted by LA DOTD, the laboratory shall be located on site or within thirty (30) miles of the Project. The field laboratory should be on site or within a mile.

3.3.4 Reporting, Record Keeping, and Documentation

The Design-Builder shall document and maintain documentation showing how the CQAF has complied with the CQMP requirements in Section 3.4 – CQMP's Quality Acceptance (QA) Structure and Documentation Requirements.

The Design-Builder's CQAF shall maintain electronically and transmit to LA DOTD/OVF daily inspection reports within one working day. The daily inspection reports must be in narrative form and shall document the day's events, activities, materials and quantities placed, identify inspections conducted, results of inspections, location and nature of

defects found, causes for rejection, and remedial or corrective actions taken or proposed, weather conditions, asserted occurrences, events and conditions causing or threatening to cause any significant delay or disruption or interference with the progress or any or the work, significant injuries to person or property, a listing of each Progress Check Points (PCP) activity depicted on the current monthly plan updated which is being actively prosecuted, and traffic accidents in the project area as well as lane closures in effect at the time of the accident. The responsible inspector and supervisor shall sign the daily inspection reports.

The CQAF shall be responsible for entering Quality Acceptance materials test data into the LA DOTD's CQAP Documentation Database. The responsible technician and his/her supervisor shall sign the daily test reports and the results of the daily tests shall be entered into the database and electronically signed within one working day of test completion. This electronic reporting is intended to allow the Design-Builder and LA DOTD/OVF to make timely and accurate decisions on workmanship and material quality issues.

The CQAF inspection and material test results shall be simultaneously transmitted to both LA DOTD/OVF and the Design-Builder. The Design-Builder shall not receive the CQAF inspection or material test results prior to LA DOTD/OVF.

The Design-Builder's Project Manager will provide information to the LA DOTD's representative to verify that PCP are met as per the Design-Builder's Schedule of PCPs. A monthly audit of PCPs will be performed and any required correction will be made to the subsequent progress payment. The LA DOTD's designated representative's review and audit will assure that the PCP achievement and correct quantities are shown. The documentation for payment of Change Orders must also contain sufficient information to satisfy an audit. Documents for the closure of each Change Order will be reviewed and included in the final payment. Additionally, in accordance with the Design-build Contract Sections 105 and 109, the LA DOTD's Project Manager will have the authority to suspend the work if at any time the Manager determines that the Design-Builder is not in conformance with the contract requirements.

A. Engineering Judgment List: Engineering Judgements can be made on material test results that indicate reasonable conformance with specification requirements, but did not meet the minimum specification requirements that may be adequate for their intended use. There are two ways the CQAM may exercise engineering judgement; pre-approval of common construction issues, or post approval through the NCR process.

   For pre-approval, the Design-Builder must provide a proposed list of Engineering Judgments, including tolerances, remedial actions for LA DOTD, and frequency that would require stop work (i.e., concrete truck out of time by *'x'* minutes but still workable, slump out of tolerance by *'x'* inches, aggregate sieve out of specification by *'x'%,* etc.). All proposed Engineering Judgments shall be stamped by the applicable Engineer of Record, or Materials Engineer, and approved by the Design-Builder's Quality Manager prior to submitting to LA DOTD for acceptance. Once LA DOTD accepts the proposed list, the CQAM may exercise pre-approved Engineering Judgments to accept such material(s) without requiring the NCR process. Each time a pre-approved Engineering Judgment is used, the CQAF shall properly

document each occurrence on the non-conformance log. Documentation shall include the location where the material is incorporated, the specification requirement, the recorded test value, and the pre-approved Engineering Judgment applied to allow use of that material. If the CQAM does not choose to exercise any of the pre-approved Engineering Judgments or LA DOTD does not accept a proposed Engineering Judgment to accept material failing specifications, the material in question may still be accepted through the NCR process, brought into conformance with specifications, or removed from the project.

The availability of the pre-approved Engineering Judgment does not release the responsibility of the Design-Builder for the quality of the Work. Consistently failing the specification requirements and subsequent acceptance of the material with a pre-approved Engineering Judgment may require the development of an NCR. The CQAF or the OVF may initiate the NCR process to investigate the reasons of the QC failure and to bring the production process back under control.

Post approval thru the NCR process would follow Section 3.3.4.2, and the resolution would indicate that it would be included in the Engineering Judgement List. The resolution would need to satisfy all the requirements as the pre-approval (including tolerances, remedial actions for LA DOTD, and frequency that would require stop work).

B. Non-Conformance Process: Materials that do not meet the minimum specification requirements are subject to the review, approval, and acceptance by the Design-Build Engineer with the appropriate discipline; however, LA DOTD has final acceptance decision on the incorporation of this material. The acceptance decision process has to be documented through the Non-Conformance Report (NCR) process.

The CQAM shall identify, document, and report to LA DOTD or their representative (OVF) all instances of Work that have not been constructed with the strictest adherence to the accepted drawings and specifications and with the requirements of the Contract Documents, the Governmental Approvals, and applicable Law. This reporting shall be in the form of an NCR as described below and shall be submitted to the Design-Builders Quality Manager (QM) in writing within one working day of the Design-Builder obtaining knowledge of the same. The CQAM shall simultaneously copy each NCR to the LA DOTD Project Manager, the Design-Builder's Project Manager and the Owner Verification Manager.

The NCR shall clearly describe the element of Work that is non-conforming and the reason(s) for the Nonconformance. The D-B Quality Manager will be responsible for the NCR resolution review and development process. The QM will submit the NCR to the appropriate engineer who stamped and sealed the drawings for the Work the NCR represents. That design engineer shall evaluate the effect of the Nonconformance on the performance, safety, durability, and effect of the long- term maintenance of the project and the specific element affected.

An NCR issued for material or geotechnical reasons that does not meet minimum specification shall be evaluated as described above by a Qualified Engineer within

that discipline. If the reviewing engineer determines remedial actions are necessary, the proposed remedial action shall be documented and bear the stamp of t h e Registered Professional Engineer that made the review. It is understood that any design changes should be made by the designer who originally stamped the Ready for Construction drawings when possible. Justification must be provided if the Engineer of Record or the reviewing engineer determines that no remedial actions are required. The NCR will then be submitted by the Quality Manager to LA DOTD for review and final acceptance. The Design-Builder will be responsible for the cost of the remedial actions.

C. Monthly CQAM Material Certification: The Construction Quality Acceptance Manager (CQAM) shall provide a monthly written material certification, delivered to LA DOTD Project Manager and the Design-Builder's Quality Manager with each payment request, indicating that the Construction Quality Management Plan (CQMP) and all of the measures and procedures provided therein are being fully complied with and are functioning properly (see Appendix E – Material Certification Format Example). The CQAF shall maintain and submit records monthly that include factual evidence that required activities and tests have been performed, including the following:

(i) Nature of Nonconforming Work and causes for rejection;
(ii) Proposed corrective action for Nonconforming Work;
(iii) Corrective actions taken with respect to Nonconforming Work;
(iv) Results of such corrective actions; and
(v) Follow up to unresolved NCR's.

The monthly material certification must include a list of unresolved NCR's until they are completely closed out. The list must include a status of the NCRs and must include the PCP's affected by them.

At the completion of the Project, the Design-Builder shall submit with the final invoice a certificate of compliance signed by the Design-Builder's Project Manager and CQAM indicating that all material incorporated in the Project conform to Contract requirements with all exceptions listed and with disposition of all failing tests.

3.4 CQMP's Quality Acceptance (QA) Structure and Documentation Requirements

The CQMP shall address Quality Acceptance (QA) requirements clearly and concisely. Where procedures are requested, the expectations are to provide the actual procedures to be used including hold points. The components of the CQMP's QA Section are summarized in Table 3.1.

The CQMP must include all applicable materials such as: hot mix asphalt, Portland cement concrete (structural), earthwork, cementitious materials, timber, steel and miscellaneous metals, galvanized metal products, prestressed and/or precast concrete products and drainage products.

Steel and miscellaneous metal products, including aluminum, are defined as the metal components of bridges, including pedestrian and moveable bridges, overhead and cantilevered sign supports, ladders and platforms, bearings, end wall grates, roadway

gratings, drainage items, expansion joints, roadway decking, shear connectors, handrails, galvanized products, fencing, guardrail, light poles, high mast light poles, standard mast arm assemblies and Monotube assemblies, stay in-place forms, casing pipe, strain poles, fasteners, connectors, and other hardware.

Table 3.1: Components of the CQMP's Quality Acceptance Section

CQMP's Quality Acceptance Sections	CQAP's Reference
General	Section 3.4.1
Personnel	Section 3.4.2
Raw Materials	Section 3.4.3
Production Equipment	Section 3.4.4
Plant Requirements	Section 3.4.5
Manufactured Product - Plant Operations	Section 3.4.6
Manufactured Product - Field Operations	Section 3.4.7
Field Operations	Section 3.4.8
Testing Laboratories	Section 3.4.9
Document Control	Section 3.4.10
Miscellaneous	Section 3.5.11

3.4.1 General

Address the following under this Section:

A. Introduction**:** The CQAF shall provide a brief description of the systematic approach in which it plans to deliver their Quality Acceptance responsibilities on the project.

B. Parties Involved**:** Provide a description of the inspection firms, including testing laboratories and specialized inspection firms, participating in the delivery of the project. Include a description of the extent of involvement in the project for each party.

C. Communication and Enforcement of QA Responsibilities among all Parties Involved**:** Provide a plan for communicating the Quality Acceptance responsibilities included in the accepted CQMP to all CQAF's work force performing testing, sampling and inspection on the project. Identify procedures to ensure adherence with the CQMP by members of the CQAF work force. Provide procedures to ensure that repeated discoveries of Nonconformance are addressed and remedial actions are taken during the duration of the project.

3.4.2 Personnel

Address the following under this Section:

A. Qualifications**:** Submit a copy of all CQAF's Inspectors and Technicians including those with LA DOTD Inspector/Technician, PCI, TCT, TCS, or any other certifications, years of experience, and skill level specific to inspection activities of each staff member. Include laboratory technicians. Include employed and

subcontracted technicians. Summarize on a spreadsheet showing individual, certification, date certification received and expiration date. Submit new certifications as they become updated.

B. Level of Responsibility: Identify the primary contact for the LA DOTD. Identify roles and responsibilities for the oversight of the Design-Builder's CQMP, including an organizational chart for those individuals on the project and in the laboratory.

3.4.3 Raw Materials

For each individual material, address:

A. Approval**:** Describe methods of verifying compliance of certification with the specifications. Provide procedures detailing inspection (stockpile, storage, etc.), sampling and testing of all materials for source approval as well as during the production or manufacturing processes so that only materials meeting the specification are supplied for ultimate incorporation into the Work. Provide procedures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests (passing and failing) performed upon individual materials so that only those marked as tested and approved are used, and those marked as failing are removed from the project. Materials may only be accepted for use once the test data has been entered into the LA DOTD's CQAP Documentation Database, reviewed and accepted by the LA DOTD or the OVF.

B. Disposition of Failing Materials**:** Describe the system for controlling non- conforming materials, including procedures for identification, isolation and disposition. Failing test of raw materials that will not be incorporated into the project need not to be entered into the LA DOTD's CQAP Documentation Database; only those failing materials that remain incorporated thru use of an NCR or Engineering Judgment will be required to be entered into the Documentation Database.

C. Information on Producers with Accepted Quality Control Programs**:** Identify the Producers of materials that utilize LA DOTD Approved Materials Listing (such as admixtures and asphaltic material, etc.); provide procedure for securing a material analysis from manufacturer. If an analysis of the material cannot be provided by the manufacturer, then the CQAF is expected to perform the test method listed in the Appendix G at no additional cost to LA DOTD. Procedures for ensuring that pre-approved materials used on the project maintain their approved status on the Listing; Materials that do not maintain listing approval shall be sampled and tested by the CQAF on a project level basis for acceptance by LA DOTD.

3.4.4 Production Equipment

Address the following under this Section:

A. Certification of Equipment**:** Procedures to ensure that all profilographs, paving equipment, scales, meters, haul trucks, concrete trucks and all other equipment

affecting quality are certified in accordance with the appropriate recertification schedules.

B. Equipment Calibration**:** Procedures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly maintained, controlled, calibrated, certified, and adjusted at specified periods to maintain accuracy within industry standards.

3.4.5 Plant Requirements

For each individual Plant that produces materials for the project (Concrete, HMA, Pug mill material, etc.), address the following (Does not include plants at which LADOTD will perform the acceptance inspection):

A. Process Control System**:** Describe the methods and measures established for inspecting, checking, and documenting the Work for acceptance for each operation of Work to assure Quality. Address the requirements for additional certifications of technicians, equipment calibration, inspection schedule, sampling and testing, maintenance schedule, coordination of inspections and sampling, etc.

B. Loading and Shipping Control**:** Describe the inspection methods to assess segregation, contamination, degradation and damage during loading and shipping operations. Describe the methods established for materials/products to be in compliance with the specifications at the point of use, to include covering trucks, water meter readings, and support locations, etc.

C. Documentation Procedures**:** Provide procedures to ensure that documentation from inspections performed by the CQAF at the Plant is stored with the field inspection and testing records on site for the zone/lot that the material will be incorporated. All sampling and testing identified by Appendix G will be entered into the LA DOTD's CQAP Documentation Database. In addition, all remaining Plant documentation required by specification will be transmitted to the OVF for acceptance (i.e., batch certificates, etc.).

D. Mix Design Approvals**:** Procedures for the review and approval of all Portland cement concrete (CIP and Precast), soil-lime treatment, soil-cement treatment, and hot mix asphaltic concrete mix designs by a Louisiana Registered Professional Engineer prior to submission to the LA DOTD/OVF for acceptance via the LA DOTD's CQAP Documentation Database. The CQAF shall approve based on trial batches or historical data.

3.4.6 Manufactured Product - Plant Operations

For each material that is produced off site (i.e., precast elements, steel girders, any specialized product as detailed by the contract, etc.) provide measures to ensure that purchased materials, equipment, and services conform to the Contract Documents, the Government Approvals, applicable Laws, Rules and the Design Documents. These measures shall include provisions for source evaluation and selection (as detailed under raw materials), objective evidence of quality furnished by Subcontractors and Suppliers,

inspection/sampling/testing at the manufacture or Vendor source and examination of products prior to delivery. From the manufacture of the product up to delivery to the project, address the following for each type of manufactured product: (Does not include plans at which LA DOTD will perform acceptance inspection)

A. Process Control**:** Establish procedures for verifying the most current approved set of "Released for Construction" plans or shop drawings are being utilized; communication protocol between the CQAF, Design-Builder's QC, OVF, and the project site for inspections required; provide all additional necessary certifications to meet contract requirements (such as PCI, welding, etc.).

B. Inspection**:** Describe inspection schedule and methods for identifying defects and non-compliance with the specifications. Describe verification of corrective actions and methods and documentation of each. Provide detailed inspection checklists for each activity of manufacturing including hold points. Document that the Work has been constructed in conformance with the released for construction plans, approved shop drawings, approved change orders, specifications, and approved working drawings by recording drawing numbers and drawing dates on inspection report. Provide procedures on how the quality acceptance material sampling and testing will be performed including the process for generating random test locations, tracking material samples, processing material samples, review and approval of test records, tracking compliance with material testing frequency, identification of PCP for each test and LA DOTD/OVF concurrence.

   Tests for material incorporated in manufactured products shall be according to Appendix G and documented within the LA DOTD's CQAP Documentation Database. Additional tests (i.e. prestressing) as required by project supplemental specifications will be tested and transmitted for acceptance to the LA DOTD/OVF.

C. Disposition of Failing Materials**:** Describe the methods and measures for identifying and controlling failing materials. Describe disposition and maintain log of failing materials. Procedures for documenting and tracking the disposition of an identified noncompliance and any applicable Progress Check Points. These procedures shall include a clearly defined process for communicating identified non-compliance to LA DOTD and the Design-Builder Quality Manager.

D. Storage**:** When storage of the produced materials is required, provide procedures to ensure that the Design-Builder complies with the accepted methods for preventing segregation, contamination, and degradation during storage.

E. Shipping**:** Prior to shipping manufactured products, assemble documentation for all raw materials, material components, inspections (including dimensions, pour record, heat numbers, stressing record, certifications, etc.), repairs and test results for the CQAM approval and LA DOTD/OVF acceptance. Provide procedures to ensure that once the CQAM has approved all records the qualified CQAF's technician performs visual inspection for any damage from storage or loading of the product, verifies that the product is handled and braced acceptably, and stamps the product for CQAF approval to ship.

3.4.7 Manufactured Product - Field Operations

Address the following for each manufactured product from delivery to placement.

A. Receiving**:** Provide procedures to ensure that transported material is inspected for damage caused during transporting. This inspection shall be performed at the time of delivery at the site and prior to incorporation of material in the project.

B. Storage**:** Provide procedures to ensure that produced materials meet the approved methods and duration for storage to prevent degradation or damage during storage.

C. Inspection**:** Document inspection upon arrival, including dimensions, damage, repair, inserts, and all other items detailed in the approved plan or shop drawing. Document inspection for damage and degradation after storage if manufactured product is required to be stored on site prior to incorporating into work.

3.4.8 Field Operations

A. Placement Inspection (raw material, material from a plant or manufactured)**:** Describe the procedures for inspecting, checking, and documenting the Work for acceptance. Inspection, examinations, measurements, sampling, and testing shall be performed for each operation of the Work to assure quality.
   1) Provide procedures to verify that QC inspections have been performed and meet the requirements of the accepted CQMP.
   2) Check and verify the adequacy of construction stakes, lines, and grades established by the Design-Builder.
   3) Inspect all work to verify and document that the work has been constructed in conformance with the Released for Construction plans, approved change orders, specifications or special provisions, and approved working and shop drawings.
   4) Provide procedures on how QA material sampling and testing will be performed including the process for generating random test locations, tracking material samples, processing material samples, review and approval of records, tracking compliance with material testing frequency, and identification of PCP for each test. Material must be traceable from "cradle to grave" (i.e. from specified acre in a pit to a specified zone/lift on site) for each lot or zone and for each material.
   5) Provide procedures for reviewing QA test results for compliance with naming conventions established in Appendix G to ensure data integrity for accurate mathematical analysis.
   6) Provide procedures for ensuring QA testing is performed at the frequency stipulated in this document.
   7) Provide procedures for ensuring the size of CQAF's staff shall reflect the volume of QA activities necessary to provide oversight and perform audits of the quality control inspection and material sampling/testing operation.

B. Disposition of Failing Materials**:** When not described in the specifications, provide methods and measures for identifying and controlling the failing materials. Include

plans for documenting preventive and corrective measures. Describe disposition of failing materials.

1) Procedures to document and track the disposition of an identified noncompliance with the plans and specifications and applicable PCP. These procedures shall include a clearly defined process for communicating identified non-compliance to LA DOTD and the Design-Builder Quality Manager.
2) Procedures for addressing failed tests. For a failed random independent test, a fixed test at the original failing test location and a new random independent test at a new location in the same lot are required. For a failed fixed test, a new fixed test is required at the original failing test location.
3) Provide flow charts addressing the disposition of materials through the NCR process for NCRs created by the CQAF and the OVF.

3.4.9 Testing Laboratories

Identify the laboratories performing testing for both field activities and any manufacturing activities. Ensure that all testing laboratories comply with the laboratory qualification requirements of Section 4.3 – Laboratory Qualifications.

3.4.10 Document Control

The Design-Builders' CQAF must develop a document control system for construction inspections, NCRs, erosion control reports, etc. which is acceptable to LA DOTD. A copy of all remaining inspection, sampling and testing data identified by the CQMP, Specification, or special provision shall be transmitted to LA DOTD/OVF for review and acceptance (such as boring logs, stressing reports, erosion control, traffic control, etc.). The CQAF shall utilize the LA DOTD's CQAP Documentation Database (SharePoint) for submittal of all QA material sampling and testing required by Appendix G – Required Minimum Sampling and Testing.

3.4.11 Miscellaneous

Utility Coordination**:** Provide procedures to ensure that the Design-Builder identifies all operational permits for coordination of all QC inspection and testing with Governmental Entities and Utility Owners.

3.5 LA DOTD's Owner Verification Requirements

LA DOTD has the final responsibility for verifying that the Project is designed and constructed in compliance with the Contract Documents. As such, LA DOTD or the Owner Verification Firm (OVF) will perform Owner Verification (OV) sampling, testing and inspection, and conduct audits to verify the Design-Builder's compliance with the accepted CQMP. **Owner Verification requirements as discussed in this Section are only applicable to LA DOTD and the OVF.**

LA DOTD has established a system for managing the materials acceptance and verification process. This system includes the performance and approval of OV tests at the stipulated

test frequency, review of QA test results, performance of mathematical analysis on OV and QA test results, and any associated tasks arising out of the mathematical analysis.

Owner Verification laboratory shall meet the requirements described in Section 4.3 – Laboratory Qualifications.

3.5.1 Material Validation Reporting

The OVF shall submit quarterly reports to LA DOTD and FHWA to show compliance with the Construction Quality Assurance Program (CQAP) and the accepted Construction Quality Management Plan (CQMP). The report will be submitted three (3) weeks after the Design-Builder has provided all quarterly inspection and testing documentation. Accepted reports shall be distributed to the CQAF after receiving FHWA concurrence. The reporting period for specific pay items or materials is dependent on the pace of construction and the number of tests performed in each analysis category, the time period of the sampling, and the specification and quality requirements. Each report shall cover a period of construction not greater than three (3) months.

The Material Validation Report shall address the following areas:

1. Mathematical Validation Results, to include specification requirements and status of validation process during start-up and completion of an item;
2. Non-validation Investigation;
3. Nonconformance Log;
4. Engineering Judgment Log;
5. Monthly Construction Quality Acceptance Manager (CQAM) Material Certification; and
6. Visual inspection.

A. Mathematical Validation Results

The OV firm will perform a comparative analysis of the OV and QA data of Level 1 materials. The analysis will be used to determine if the QA data is mathematically validated. In addition, independent verification and observation verification will also be used the validate the QA test results. This type of analysis is described in Appendix B – OVT Levels for Material Testing Validation.

B. Non-Validation Investigation

If the OV test results do not validate the QA test results, the Design-Builder may proceed working at their own risk until an investigation shall be conducted to determine the reason for not verifying. Assuming that the analysis categories were established appropriately, other areas for investigation include data integrity and accuracy, testing equipment and procedures, sampling variability and material variability. Material quality when non-validation occurs is further discussed in Section 3.7 – Dispute Resolution. Results of the investigation should be reported for the non-validating categories.

C. Engineering Judgment Log

When the CQAM is allowed to exercise the pre-approved Engineering Judgments, a copy

of the latest Design-Builder's Engineering Judgment Log must be submitted as part of the OVF quarterly reports to LA DOTD and FHWA. This list includes each occurrence in which the Engineering Judgment has been applied, including the location where the material is incorporated, the specification requirement, the recorded test value, and the reference to the approved Engineering Judgment applied to allow the use of that material. In addition, a list of approved Engineering Judgments, including tolerances and remedial actions must be included.

D. Non-Conformance Process

Materials that do not meet the minimum specification requirements are subject to the review and approval by the Engineer with the appropriate discipline per section 108 App A of the Contract; however, LA DOTD has final acceptance decision on the incorporation of this material. The acceptance decision process has to be documented through the Non-Conformance Report (NCR) process.

In addition to the CQAF, the OVF may identify, document, and report to LA DOTD all instances of Work that have not been constructed with the strictest adherence to the accepted drawings and specifications and with the requirements of the Contract Documents, the Governmental Approvals and applicable Law.

This reporting shall be through the NCR process as described below and shall be submitted to the Design-Builder's Quality Manager (QM) in writing within one working day of the Design-Builder obtaining knowledge of the same. The OVF shall simultaneously copy each NCR to the LADOTD Project Manager, the Design-Builder's Project Manager and the CQAM.

The NCR shall clearly describe the element of Work that is non-conforming and the reason(s) for the Nonconformance. The D-B Quality Manager will be responsible for the NCR resolution review and development process. The QM will submit the NCR to the appropriate engineer who stamped and sealed the drawings for the Work the NCR represents. That design engineer shall evaluate the effect of the Nonconformance on the performance, safety, durability, and effect of the long-term maintenance of the project and the specific element affected.

An NCR issued for material or geotechnical reasons that do not meet minimum specification shall be evaluated as described above by a Qualified Engineer within that discipline. If the reviewing engineer determines if remedial actions are necessary, the proposed remedial action shall be documented and bear the stamp of t h e Registered Professional Engineer that made the review. It is understood that any design changes should be made by the designer who originally stamped the Ready for Construction drawings when possible. Justification must be provided if the Engineer of Record or the reviewing engineer determines that no remedial actions are required. The NCR will then be submitted by the Quality Manager to LA DOTD for review and final acceptance.

Each NCR shall be numbered sequentially, given a brief description, a status and, if it is not closed, an expected date for closure. All NCRs must be closed with the stamp of the Design Firm's qualified engineer in charge or the responsible Registered Professional

Engineer from the same firm assigned to replace the original one and LA DOTD approval.

The OVF will maintain the official NCR Log which will include NCRs issued by the CQAF and the OVF. A copy of the latest NCRs log must be submitted as part of the OVF quarterly reports to LA DOTD and FHWA.

E. Monthly CQAM Material Certification

Copies of the CQAM's monthly written material certification for the reporting period shall be provided as part of the quarterly reports to LA DOTD and FHWA. At the completion of the Project, a certificate of compliance must be included with the final copy of the Material Validation Report. The certificate of compliance must be signed by the Design-Builder's Project Manager and CQAM indicating that all material incorporated in the Project conform to Contract requirements with all exceptions listed.

3.6 Owner Verification Testing and Inspection Plan (OVTIP) Structure and Documentation Requirements

The OVTIP shall address the Owner Verification Firm (OVF) requirements as described in this Section. This plan shall establish the system for managing the materials acceptance process. This process shall include the performance and approval of Owner Verification (OV) tests at the stipulated test frequency, review of QA test results, performance of mathematical analysis on OV and QA test results, and any associated tasks arising out of the mathematical analysis. The OVTIP shall address Verification requirements clearly and concisely. Where procedures are requested, the expectations are to provide the actual procedures to be used. The components of the OVTIP Section are summarized in Table 3.2.

Table 3.2: Components of the OVTIP

OVTIP's Sections	CQAP's Reference
General	Section 3.6.1
Personnel	Section 3.6.1
Mix Designs	Section 3.6.1
Field Operations	Section 3.6.1
Audits	Section 3.6.1
Coordination	Section 3.6.1

3.6.1 General

Address the following under this Section:

A. Introduction**:** The OVF shall provide a brief description of the systematic approach in which it plans to deliver the OV responsibilities on the project.

B. Parties Involved**:** Provide a description of the inspection firms, including testing laboratories and specialized inspection firms, participating in the delivery of the project. Include a description of the extent of involvement in the project for each

party.

C. Communication and Enforcement of Owner Verification Responsibilities among all Parties Involved**:** Provide a plan for communicating the OV responsibilities included in the approved OVTIP to all OVF's work force performing testing, sampling, and inspection on the project. Identify procedures to ensure adherence with the OVTIP by members of the OVF's work force. Provide means to ensure that repeated discoveries of Nonconformance are addressed and remedial actions are taken during the duration of the project.

3.6.2 Personnel

A. Qualifications**:** Procedures to ensure that the education, training, and certification of personnel performing OV activities are achieved and maintained and that all Work is performed in accordance with the approved OVTIP.
   1) Provide copies of current certifications, a log for reference to each inspector, and plans for maintaining recertification.

B. Level of Responsibility: Clearly define the authority and responsibility for the administration of the OVTIP.
   1) Define Inspector responsibilities and duties, including inspection, sampling, and testing on-site, at material sources and precast fabricators. Define what authority will be given to the inspectors. Establish who the inspectors report to. Provide documentation requirements for inspections, sampling and testing and the time frame the documentation must be completed.
   2) Define the Owner Verification Manager's (OVM) authority, responsibilities, and duties (including field issues, Design-Builder payments, engineering judgments, NCRs, verification of testing results and disputes, etc.). Define the process of disseminating documentation to CQAF, Design-Builder and LA DOTD (such as NCRs).
   3) Define the Assistant Owner Verification Manager's (AOVM) authority, responsibilities, and duties. Define who the AOVM reports to. Define flow of documentation that is conducted by the AOVM (such as NCRs).
   4) Define any other positions held by OVF's staff as it relates to the project, such as admins to track sampling and testing results on the LA DOTD's CQAP Documentation Database, those creating the quarterly reports, maintenance of personnel and equipment certification dates.

3.6.3 Mix Designs

A. Review and Acceptance**:** Procedures for reviewing PCC, soil-lime treatment, soil-cement treatment, and HMA concrete mix designs. The procedures shall include the process for documenting the acceptance of the mix designs through the LA DOTD's CQAP Documentation Database.

3.6.4 Field Operations

A. Inspection**:** Provide detailed procedures for the overseeing, inspecting, sampling and testing of each work component identified by the contract (including on-site and off-site work, such as precast or steel fabrication).
   1) Include verification of compliance of work with the Design Builder's CQMP.
   2) Include verification of the CQAF's acceptance inspection requirements included in Appendix F – Minimum CQAF Construction Quality Acceptance Inspection. Verify that the CQAF has performed work in compliance with the RFC plans, approved change orders, specifications, and approved working and shop drawings. The procedure should identify a target oversight inspection rate, methods for performing verification inspections for all QC and CQAF inspectors.
   3) Include procedures for performing periodic inspection of all Work components at the time of placement or installation, including workmanship and quality of the finished product.

B. Sampling and Testing**:** Procedures on how OV material sampling and testing will be performed including the process for generating random test locations, tracking material samples, processing material samples, review and approval of test records, and tracking compliance with material testing frequency.
   1) Provide random number generator for sample locations.
   2) Provide a template for tracking material sampling and testing frequency.
   3) Provide a flow chart for review and acceptance of material testing, including non-validating samples.
   4) Provide procedures for ensuring the OV testing is performed at the frequencies required in the CQAP.

C. Mathematical Analysis Requirements**:** Include procedures to communicate the material description and sub-description to ensure data integrity for accurate mathematical analysis. (It is critical that both the OV and QA enter sample data into the LA DOTD's CQAP Documentation Database under the exact same Section/Description/Sub-description for the database to calculate the analyses correctly).
   1) Procedures to ensure that the continuous mathematical analysis is performed in accordance with the CQAP.

D. Disposition of Failing Materials**:** Procedures to oversee the status and disposition of any identified noncompliance with the plans and specifications.
   1) Include procedures for Nonconformance identified by CQAF and a procedure for Nonconformance identified by OVF.
   2) Include NCR Log template.

E. Equipment Calibration**:** Measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly maintained, controlled, calibrated, certified, and adjusted at specific periods to maintain accuracy within industry standards.
    1) Include a log of all equipment, their last calibration date, and calibration expiration date, including certifications/calibrations for nuclear equipment.

3.6.5 Audits

A. Periodic Audits**:** Procedures for a system of planned and periodic audits.
    1) Include audit of Design-Builder's procedures and processes to determine adherence to and the effectiveness of the CQMP QC Plan. Include reviewing of QC records and documentation.
    2) Include audit of CQAF procedures and processes to determine adherence to and the effectiveness of the CQMP QA Plan. Include reviewing QA records and documentation. Include observing and reviewing the CQAF's initial start- up testing operations and periodically during ongoing production operations verifying compliance with test procedures. Include procedures to verify that the CQAF testing is performed at the frequencies required in the CQAP. Procedures for ensuring that only tests performed by qualified CQAF testing personnel are submitted to LA DOTD.
    3) Include independent audit of OVF to determine adherence to and the effectiveness of the OVTIP.
    4) Audit results shall be documented, reviewed, sent to LA DOTD and FHWA. Follow-up action, including re-audit of deficient areas following corrective action, shall be taken where indicated.

3.6.6 Coordination

A. LA DOTD District Laboratory**:** Procedures for notifying the LA DOTD's District Laboratory when construction activities requiring IA sampling and testing will be in progress in accordance with Section 4 – Independent Assurance Program.

B. Materials Laboratory**:** Procedures for coordinating with LA DOTD's Materials Laboratory, when construction activities requiring testing by the LA DOTD's Material Laboratory are performed. The procedure must include details of how the material samples will be handled by the OVF and transported to LA DOTD's Materials Laboratory.

3.7 Dispute Resolution

Through the life of the Project, there may be differences in material test results or mathematical sample populations between the Construction Quality Acceptance Firm (CQAF) and the Owner Verification (OV) Firm. Due to the natural variability in construction materials testing and unavoidable biases in sampling and testing, these differences are often difficult to avoid. It is important to recognize the difference between material quality and mathematical validation.

Material quality is measured by whether a test passes or fails and is an indication of whether material will perform its intended purpose. Engineering judgment may be used to substantiate the use of material failing to meet the specification if the material still meets the intended purpose and does not affect the service life equivalent to design service life. Mathematical validation is a measure of whether the OV and Quality Acceptance (QA) populations are mathematically equal. It does not represent the quality of material being incorporated into the Project. Table 3.3 includes a summary of the validation and material Quality Acceptance decision.

3.7.1 Non-Validation and Status of Material Quality

When OV test results do not mathematically validate the Quality Acceptance (QA) test results as outlined in Section – 3.5.1.1 Mathematical Analysis Results, LA DOTD District Laboratory Engineer will investigate the source of non-validation. The OV Firm and CQAF will assist in the investigation. The LA DOTD District Laboratory Engineer, or an independent laboratory, will provide the LA DOTD Project Manager with a probable cause of the non-validation and a resolution recommendation. If the non-validation persists over two consecutive analyses as required in Appendix B, a NCR process shall be issued by LA DOTD to formally document and seek resolution to the non- validation.

In addition to the need to investigate the non-validation, the material in question has to be immediately evaluated to determine if it can be left in place or has to be removed, reworked, or repaired. The material in question will be evaluated using the process described in this Section. The LA DOTD may exercise Engineering Judgment to determine that the material will perform its intended purpose. There are four possible combinations of passing and failing results between the QA and OV test results.

1. Both the QA and OV test results pass specification limits:

   Although mathematical validation has not occurred, both the CQAF and OV Firm test results are passing the established specification limits. Thus, material quality in question is considered acceptable.

2. QA test results fail and OV test results pass specification limits, the acceptance of material is subject to one of the two scenarios below.

   a. CQAM may exercise accepted Engineering Judgment to accept the material if results from all other levels of related OV material testing, within the same

lot, pass specification limits.

b. For those materials not on the Accepted Engineering Judgment Log, the CQAF needs to provide OVF an explanation of error and/or proposed correction for acceptance of materials thru the NCR process.

3. Both the QA and OV test results fail the specification limits:
   Material may be left in place if the LA DOTD determines that Engineering Judgment may be used to accept the material or if the material is accepted through the NCR process. Results from all other levels of related OV material testing, within the questionable area, will be included in Judgment decision. The acceptance of material is subject to one of the two scenarios below.

   a. OV test result indicates reasonable conformance with specification requirements for the lot in question, the CQAF shall provide to the OVF an explanation of error and/or proposed correction for acceptance of material thru the NCR process.
   b. OV test result and/or the results of other levels of related OV testing does not indicate reasonable conformance with specification requirement for the lot in question, the CQAF must perform additional testing within the lot in question to identify the problem area. Based on the results of CQAF testing, all local OV testing of related materials and subsequent investigation discussions between LA DOTD and the Design-Builder, a determination of the material disposition is made and documented through the NCR process.

4. QA test results pass but OV test results fail specification limits:

   Material may be left in place if the LA DOTD determines that Engineering Judgment may be used to accept the material or if the material is accepted through the NCR process. Results from all other levels of related OV material testing, within the questionable area, will be included in Judgment decision. This is subject to LA DOTD response in the two scenarios below.

   a. OV test result indicates reasonable conformance with specification requirements for the lot in question, the CQAF shall provide to the OVF an explanation of error and/or proposed correction for acceptance of material thru the NCR process.
   b. OV test result and/or the results of other levels of related OV testing does not indicate reasonable conformance with specification requirement for the lot in question, the CQAF must perform additional testing within the lot in question to identify the problem area. Based on the results of CQAF testing, all local OV testing of related materials and subsequent investigation discussions between LA DOTD and the Design-Builder, a determination of the material disposition is made and documented through the NCR process.

3.7.2 Referee Testing

Disputes over specific test results may be resolved in a reliable, unbiased manner by referee testing and evaluation performed by a referee laboratory. The referee laboratory shall be the LA DOTD Materials and Testing Laboratory or a testing laboratory qualified according to Section 3.3.3 – Quality Acceptance Facilities and Equipment, and accepted by LA DOTD. The decision by the referee laboratory shall be final and binding on both parties and not subject to dispute resolution under Design-Build Contract Section 107-28. The party whose sampling and testing results are not confirmed and/or supported by the referee laboratory will be responsible for payment for the referee services. If the Design-Builder is the unsuccessful party, the cost of the referee laboratory services will be deducted from payments otherwise due and the LA DOTD ill make payment to the referee laboratory on behalf of the Design-Builder.

Table 3.3: Validation and Material Quality Acceptance Decision Matrix

	Material Quality		Mathematical Validation$^{\Delta}$
	CQAF	OV	
Material is considered mathematical validated and acceptable. No additional investigation needed.	Pass	Pass	Pass
Both the QA and OV test results pass specification limits: Although mathematical validation has not occurred, both the CQAF and OV Firm test results are passing the established specification limits. Thus, material quality in question is considered acceptable.	Pass	Pass	Fail*
QA test results fail and OV test results pass specification limits: The acceptance of material is subject to one of the two scenarios below: 1. CQAM may exercise approved Engineering Judgment to accept the material if results from all other levels of related OV material testing, within the same lot, pass specification limits. 2. For those materials not on the Approved Engineering Judgment Log, the CQAF needs to provide OVF an explanation of error and/or proposed correction for acceptance of materials thru the NCR process.	Fail	Pass	Pass/Fail*
Both the QA and OV test results fail the specification limits*: The acceptance of material is subject to one of the two scenarios below: 1. OV test result indicates reasonable conformance with specification requirements for the lot in question, the CQAF shall provide to the OVF an explanation of error and/or proposed correction for acceptance of material thru the NCR process. 2. OV test result and/or the results of other levels of related OV testing does not indicate reasonable conformance with specification requirement for the lot in question, the CQAF must perform additional testing within the lot in question to identify the problem area. Based on the results of CQAF testing, all local OV testing of related materials and subsequent investigation discussions between LA DOTD and the Design-Builder, a determination of the material disposition is made and documented through the NCR process.	Fail	Fail	Pass/Fail*
QA test results pass but OV test results fail specification limits*: The acceptance of material is subject to one of the two scenarios below: 1. OV test result indicates reasonable conformance with specification requirements for the lot in question, the CQAF shall provide to the OVF an explanation of error and/or proposed correction for acceptance of material thru the NCR process. 2. OV test result and/or the results of other levels of related OV testing does not indicate reasonable conformance with specification requirement for the lot in question, the CQAF must perform additional testing within the lot in question to identify the problem area. Based on the results of CQAF testing, all local OV testing of related materials and subsequent investigation discussions between LA DOTD and the Design-Builder, a determination of the material disposition is made and documented through the NCR process.	Pass	Fail	Pass/Fail*

*Material may be left in place if the LA DOTD determines that Engineering Judgment may be used to accept the material or if the material is accepted through the NCR process. Results from all other levels of related OV material testing, within the questionable area, will be included in Judgment decision.

$^{\Delta}$If the non-validation persists over two consecutive analyses as required in Appendix B, a NCR process shall be issued by LA DOTD to formally document and seek resolution to the non-validation.$^{+}$LA DOTD District Materials Engineer or its designee will investigate the source of non-validation. The OV Firm and CQAF will assist in the investigation. The LA DOTD District Materials Engineer or its designee will provide the LA DOTD Project Manager with a probable cause of the non-validation and a resolution recommendation.

SECTION 4 - INDEPENDENT ASSURANCE (IA) PROGRAM

4.1 General

LA DOTD District Laboratories shall implement the Independent Assurance (IA) program. This IA program evaluates all sampling and testing procedures, personnel, and equipment used as part of an acceptance decision. The IA Program is required by the Federal Highway Administration (FHWA) and conducted for projects constructed on the National Highway System (NHS). The Louisiana NHS may be viewed at:

http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/louisiana/index.cfm

This chapter establishes the administration of this program, including lines of responsibility, uniform reporting procedures, and the minimum number of samples and tests required.

Samples and test results from this program are used to independently analyze the reliability of acceptance program by ensuring that tests are performed by qualified personnel and that laboratory facilities and equipment are adequate to perform the required sampling and testing methods.

Personnel designated to conduct IA sampling and testing are not to be directly involved in QA and OV program sampling and testing. In addition, the IA test samples are not to be tested with the same equipment as QA and OV program samples, except when accepted by the Materials Engineer Administrator.

4.2 Personnel Qualifications

All personnel performing sampling and testing for the QA, OV, or IA program for the project must be qualified in the appropriate test method in accordance with Appendix C – LA DOTD Inspector/Technician Certification. Sampling and testing personnel must obtain and keep current their certifications during the time they a e involved for this project.

4.3 Laboratory Qualifications

Laboratories where IA tests l be performed must be qualified in accordance with this Section.

4.3.1 Laboratory Qualification Responsibility

The LA DOTD Central Laboratory will be accredited under the American Association of State Highway and Transportation Officials (AASHTO) Laboratory Accreditation Program.

LA DOTD Central Laboratory is responsible for overseeing the statewide Laboratory Qualification Program and for qualifying the IA laboratory and the LA DOTD District Laboratory for use of OV testing.

4.3.2 Accreditation

In addition to LA DOTD laboratory qualification, QA, OV (when a laboratory other than a LA DOTD District Laboratory is utilized) and referee laboratories shall be accredited under the AASHTO Accreditation Program (AAP). The accreditation must be maintained throughout the life of the project. The laboratory must also participate in the AASHTO Materials Reference Laboratory /Concrete and Cement Reference Laboratory (AMRL/CCRL) proficiency programs, or CMEC for HMA. A copy of AAP accreditation certificate(s) shall be transmitted to LA DOTD upon their receipt by the testing laboratory. Certification must also be obtained for AASHTO and ASTM test methods that are modified or referenced by Louisiana test methods.

4.4 Sampling and Testing

The samples for the IA program shall be taken by the LA DOTD District Laboratory personnel. In order to ensure that the IA program evaluates the sampling procedures, testing, and the testing equipment the samples taken by this program shall be either split sample or independent samples in close proximity to QA or OV samples.

Split samples shall be split or quartered in accordance with DOTD TR 108 and one portion randomly selected as the IA sample. The splitting or quartering of the sample will be observed by district laboratory personnel.

Independent samples shall be taken at the same time as the acceptance sample when practical in order to evaluate the sampling procedure.

The testing of IA samples shall be performed by the LA DOTD District Laboratory, with the exception of reinforcing steel which will be submitted to the Materials and Testing Section for testing. All the equipment use by the IA program will not be the same as that used for the QA and OV program samples.

The quantities and testing frequency for the IA program is listed in Table 4.1 Schedule of Independent Assurance Sampling and Testing. The frequencies listed in the schedule are minimums and are to be used as a general guide. The LA DOTD District Laboratory Engineer may increase these values as construction procedures and/or conditions warrant.

4.5 Responsibility of the LA DOTD's District Laboratory

The LA DOTD District Laboratory will be responsible for the implementation and administration of the Independent Assurance Sampling and Testing Program in each district. The LA DOTD District Laboratory shall address, at the minimum the following requirements:

A. At the beginning of construction of the Project, the LA DOTD District Laboratory Engineer will use Table 4.1 Schedule of Independent Assurance Sampling and Testing to establish the minimum required IA sampling and testing for the project. The LA DOTD District Laboratory Engineer will notify the CQAF and OV Firm of the anticipated IA sampling and testing by a Memorandum of Anticipated

Independent Assurance Sampling and Testing (Figure 4.1). This memorandum will list each phase of construction for which sampling and testing is anticipated and the number and types of samples required for each phase.

B. The LA DOTD District Laboratory personnel will review the QA and OV sampling & testing procedures when split samples or independent samples are part of the independent assurance program. The District Laboratory personnel will observe the sampling and testing procedures and compare them to the LA DOTD's standard procedures.

C. The LA DOTD District Laboratory personnel will compare the IA test results for the independent or split sample with the appropriate QA and OV test results. Table 4.2 Schedule of Allowable Deviation Values between Split Samples Test Results will be used to identify discrepancies. The LA DOTD District Laboratory Engineer shall report the IA test results to the Materials Engineer Administrator and the LA DOTD's Project Manager as soon as they are completed. Any discrepancies in procedures or test results shall be identified and explanations included on the test report.

D. The LA DOTD District Laboratory Engineer may adjust the sampling and testing schedule at any time during the construction. The LA DOTD District Laboratory personnel may take additional IA tests or samples to resolve concerns about the reliability of acceptance sampling and testing results. Any discrepancies will be resolved prior to the signing of the Independent Assurance Certification referenced in 4.8 D.

4.6 Responsibility of the CQAF and OV Firm

4.6.1 CQAF and OVF Responsibilities:

The CQAF and OV Firm will be responsible for:

1. Assisting the LA DOTD District Laboratory Engineer in resolving discrepancies between IA sampling and testing and acceptance sampling and testing. This assistance will include co-investigation, taking additional samples, performing additional tests, checking equipment, checking procedures, checking the qualifications of personnel performing sampling and testing, and other cooperative activities necessary to resolve any discrepancies in procedures or results.

4.6.2 OVF Responsibilities:

The OV will be responsible for:

1. Notifying the District Laboratory Engineer when construction activities requiring IA sampling and testing in accordance with the Memorandum of Anticipated Independent Assurance Sampling and Testing will be in progress. This notification is imperative due to the number of IA samples that require split sampling.
2. If the IA sampling was not accomplished due to the lack of notification by the CQAF or the OV Firm, they shall provide a written explanation to the District Laboratory Engineer of the causes and corrective actions implemented

to prevent a recurrence.

3. Notifying the District Laboratory Engineer of plan changes which will affect anticipated IA sampling and testing.

4.7 Responsibility of Materials and Testing Section

The Materials and Testing Section will monitor and review the IA program statewide to ensure standardization. Additionally, the Materials and Testing Section will implement modifications or updates to the program, as needed. The Materials and Testing Section is responsible for direct IA testing of reinforcing steel and identifying discrepancies between IA and acceptance results. The LA DOTD District Laboratory Engineer will be notified of these results.

4.8 Reporting

4.8.1 Documentation

The Independent Assurance Documentation will be maintained in the LA DOTD's CQAP Documentation Database. Exception reports, which may include copies of screens showing test results (Purpose Code 8, Spec Code 3) are to be used for reporting purposes. Each IA test report will reference the date and time of the sample along with the district and project number represented.

4.8.2 Test Reports

The review of the IA sampling and testing procedures and the test results will be documented on an IA test report as illustrated in Submittal 4.1. The report will include all explanations of discrepancies and corrective actions taken. If there are no discrepancies, the word "Verifies" is to be entered into Remarks. If there are discrepancies, the words "Does not verify" are to be entered into Remarks. Each person who reviews any portion of the report or makes comments will sign the reviewed section or comment.

The identification number (laboratory number, lot number, zone and test number, log number, etc.) of the acceptance test report will be referenced on the IA report. A copy of this acceptance report will be attached to the IA report. These documents will be placed in the LA DOTD District Laboratory IA file for the project, but will not be included in the certification or otherwise distributed. When discrepancies occur, the information from this review will be included with the Supplement to the Certification at the completion of a phase of construction.

4.8.3 Supplement to the Certification

At the completion of the IA sampling and testing of a phase of construction, all data is to be compiled and checked for accuracy and completeness. When discrepancies occur, the data is to be reported by a memorandum to the Materials Engineer Administrator. A Supplement to the Certification which will include explanations of discrepancies between IA and acceptance test results (Submittal 4.1) will be attached to this memorandum. If

there are no discrepancies, a memorandum and Supplement to the Certification will not be required for this phase of construction, but the data will be included with memoranda for other phases of construction.

4.8.4 Independent Assurance Certification

After IA sampling and testing has been completed for a project, an Independent Assurance Certification (with a listing of all memoranda reporting completed phases of construction) will be completed and forwarded by memorandum to the Materials Engineer Administrator (Submittal 4.2). Any Supplement to the Certification and all memoranda will be attached to the Independent Assurance Certification.

When the Memorandum of Anticipated Sampling and Testing indicates there are no samples to be taken on a project, the Independent Assurance Certification will not be required.

4.8.5 Distribution

The distribution for the test reports and memoranda mentioned in this step and in step 4.4 shall be as outlined below

1. Memorandum of Anticipated Independent Assurance Sampling and Testing

   Directed to: OVF who is to advise CQAF
   Copies to: District Engineer Administrator
   Materials Engineer Admin
   District Area Engineer providing oversite
   FHWA Area Engineer

2. Independent Assurance Test Reports

   With Test Results (Review and Comment)
   Directed to: OVF who is to advise CQAF
   Copies to: District Area Engineer providing oversite
   DOTD Project Manager

   With Review and Comments (No Test Reports Included) - Placed in District Laboratory IA file with no distribution.

3. Supplement to the Certification

   Directed to: Materials Engineer Administrator
   Copies to: District Engineer Admin
   District Area Engineer providing over site
   OVF
   FHWA Area Engineer

4. Independent Assurance Certification

   Directed to: Materials Engineer Administrator
   Copies to: District Engineer Admin
   District Area engineer providing oversite
   OVF
   FHWA Area Engineer

4.9 Disqualification

If a concern arises as to the competence of any certified individual on this project, this concern must be documented in writing by the LA DOTD District Laboratory Engineer to the Materials Engineer Administrator and the LA DOTD's Project Manager. The concern will be investigated as deemed necessary by the LA DOTD. If this investigation substantiates the concern, corrective action, or decertification will be implemented in accordance with the procedures established by the LA DOTD. See also Design-Build Contract Section 108.

Table 4.1: Schedule of Independent Assurance Sampling and Testing

TYPE OF CONSTRUCTION	MATERIAL		TEST	FREQUENCY	REMARKS
EMBANKMENT	Non-Plastic Embankment		Gradation, PI, Foreign Matter	1/10,000 lin ft/rdwy/lift	
	All Embankments		Density	1/2 weeks of construction activity	
BASE OR SUBBASE	Soil, Aggregate, or Granular Material[1]		Classification and/or Gradation	1/10,000 lin ft/rdwy 1/20,000 lin ft/shoulder	Check % cement for stabilization or treatment if required
			Density	1/10,000 lin ft/rdwy	
ASPHALTIC CONCRETE WEARING AND BINDER COURSES	502 SUPERPAVE	Mixture[1]	G_{mm}	1/15,000 tons	
		Briquette	Voids, VMA	1/15,000 tons	
		Cores	Density		
CONCRETE PAVEMENT	601 Portland Cement Concrete Pavement	Flexural Beams	Flexural Strength; When used to reduce standard design thickness.	1 set of three flexural beams per zone	
STRUCTURAL PORTLAND CEMENT CONCRETE[2]	Fresh Concrete		Compressive Strength	1 set of 3/2,000 yd^3	
			Air (when used), Slump	1/2,000 yd^3	
	Aggregate: Fine and Coarse		Gradation	1/2,000 yd^3 of concrete	

[1]Split samples of acceptance samples will be taken at random location and used for Independent Assurance testing.
[2]Includes precast items. OVF coordinates with testing laboratories for testing.

Table 4.2: Schedule of Allowable Deviation Values between Split Samples

TYPE OF CONSTRUCTION	MATERIAL	TEST	TEST VARIATION
EMBANKMENT	Non-Plastic Embankment	Gradation PI Foreign Matter	No. 4 +- 5%; No. 200 +-2% passing +2 +-2%
	All Embankments	Density	+-3 lb/ft^3
BASE OR SUBBASE	Soil	Classificatio n Gradation PI Density	Subgroup +-1 No. 4 & larger +-5%; No. 10 +-4%; No. 40 +-4%; No. 200 +-3% passing +-3 +-3 lb/ft^3
	Aggregate or Granular Material	Gradation PI Density	No. 4 & larger +-5%; No. 10 +-4%; No. 40 +-4%; No. 200 +-2% passing +-3 +-3 lb/ft^3
ASPHALTIC CONCRETE WEARING, BINDER & BASE COURSES	Mixture	G_{mm} [1,2,3] Gradation[1,3] % Crushed[1,3] A.C. Content[1,3]	+-0.015% No. 4 & larger +-5%; smaller than No. 4 +-2% passing +-7% +-0.4%
	Briquette	Air Voids[1,2,3] VMA[1,2,3]	+-1.0% +-0.5% +-500 lb
	Core	Density (Pavement)[1,2,3]	+-0.7% of individual core
STRUCTURAL PORTLAND CEMENT CONCRETE	Fresh Concrete	Compressive Strength, 28 days. Slump Air	+-7% of average of set +-0.5 in. +-0.5%
	Aggregates Fine Coarse	Gradation Gradation	No. 4 & larger +-5%; No. 16 +-4%; No. 50 +-4%; No. 100 +-1% passing No. 4 & larger +-5%; No.8 +-4% passing

[1] Applies to Marshall.
[2] Applies to Superpave.
[3] Applies to SMA.

Figure 4.1

July 1, 1991
STATE PROJECT NO. 024-05-0031
F.A.P. NO. F-01-02(031)
LA 26 DERIDDER HIGHWAY - (SEC 2) ROUTE LA-US 171
BEAUREGARD PARISH

MEMORANDUM TO:

Owner Verification Firm (OVF)
&
Construction Quality Acceptance Firm (CQAF)

This is to advise you of the anticipated independent assurance sampling and testing schedule for the above captioned project. Independent assurance samples will be taken and tests performed representing the following phases of construction:

EMBANKMENT:
A. One density test will be taken per two weeks of construction activity. (Please advise the District Laboratory Engineer at commencement of construction activity.)

SUBBASE (6" LIME OR CEMENT TREATED SUBGRADE LAYER):
A. Two density tests; one per roadway.

ASPHALTIC CONCRETE BASE COURSE (ROADWAY):
A. One loose mix sample for gradation and AC content.
B. Two cores for density; one per roadway.

ASPHALTIC CONCRETE WEARING OR BINDER COURSE (ROADWAY):
A. One loose mix sample for gradation and AC content.
B. Two cores for density; one per roadway.

STRUCTURAL PORTLAND CEMENT CONCRETE:
A. One set of concrete cylinders.
B. One slump test.
C. One fine aggregate sample for gradation.
D. One coarse aggregate sample for gradation.
E. One reinforcing steel sample.

Advise this office of any plan changes or work orders affecting quantities or material requirements. Note that this anticipated independent assurance sampling and testing schedule is only the minimum Independent Assurance tests required.

If additional information is needed, please advise this office.

NAME
DISTRICT ENGINEER ADMINISTRATOR

NAME - SIGNATURE
DISTRICT LABORATORY ENGINEER

cc: District Administrator
Materials Engineer Administrator
FHWA
District Area Engineer providing oversite

SUBMITTAL 4.1
July 21, 1991
STATE PROJECT NO. 024-05-0031
F.A.P. NO. F-01-02(031)
LA 26 DERIDDER HIGHWAY - (SEC 2) ROUTE LA-US 171
BEAUREGARD PARISH

MEMORANDUM TO:

NAME
MATERIALS ENGINEER ADMINISTRATOR

This is to report results of the Independent Assurance Sampling and Testing performed on the project referenced above.

EMBANKMENT:

A. One density test, zone and test number 07-801.

SUBBASE (6" LIME OR CEMENT TREATED SUBGRADE LAYER):

A. Two density tests, zone and test numbers 07-802 and 07-803.

ASPHALTIC CONCRETE BASE COURSE (ROADWAY):

A. One test of loose mix for gradation and asphalt content, Lab. No. 07-341051.
B. Two tests of cores for density, Lab. Nos. 07-341071 and 07-341072.

All IA test results verify except asphaltic concrete base course gradation test Lab. No. 07- 341051. See attached "Supplement to Certification" for explanation of non-verifying test.

This is the initial report. Additional reports will be submitted as phases of construction are completed.

NAME
DISTRICT ENGINEER ADMINISTRATOR

NAME - SIGNATURE
DISTRICT LABORATORY ENGINEER

cc: District Administrator
OVF
FHWA
District Area Engineer providing oversite

SUBMITTAL 4.1

STATE PROJECT NO.

F.A.P. NO. F-01-02(031)

SUPPLEMENT TO THE CERTIFICATION

The Independent Assurance loose mix sample (Lab. No. 07-341051) test does not verify the acceptance sample (Lab. No. 07-341021). The amount of material passing the No. 10 sieve for the independent assurance sample is 7% less than that for the acceptance sample. The allowable deviation is ±5%. To determine the cause of this deviation, the testing equipment and procedures used were checked. Procedures used were acceptable; however, the No. 10 sieve of the acceptance sample was found to be badly worn. The No. 10 sieve of the IA sample was found to be acceptable. The acceptance sample was retested using a new No. 10 sieve. The amount of material passing the No. 10 sieve was 51%. Thus, the independent assurance sample test results verified acceptance test results.

Gradation 341051	- 07-	
Marshall Test 341052	- 07-	NAME - SIGNATURE DISTRICT LABORATORY ENGINEER

These test results do not verify acceptance test results, Lab. No. 07341021. On the acceptance sample, the material passing the No. 10 was 54%. The allowable deviation value is ±5%.

COMMENT: Procedures used in sampling, splitting and sieving the acceptance and IA samples were done correctly. Both No. 10 sieves were checked. The No. 10 sieve of the acceptance sample was found to be badly worn. The No. 10 sieve of the IA sample was found to be OK. The acceptance sample was retested using a new No. 10 sieve checked by me. The amount of material passing the No. 10 sieve was 51%.

IA sample test results verified acceptance test results.

NAME - SIGNATURE
ENGINEERING TECHNICIAN

SUBMITTAL 4.2
September 1, 1991

STATE PROJECT NO.
F.A.P. NO. F-01-02(031)
LA 26 DERIDDER HIGHWAY - (SEC 2) ROUTE LA-US 171
BEAUREGARD PARISH

MEMORANDUM TO:

NAME
MATERIALS ENGINEER ADMINISTRATOR

This is to report results of the Independent Assurance Sampling and Testing performed on the project referenced above.

ASPHALTIC CONCRETE WEARING OR BINDER COURSE (ROADWAY):

A. One test of loose mix for gradation, % crushed and asphalt content, Lab. No. 07341115.
B. Two tests of cores for density, Lab. Nos. 07-341125 and 07-341126. STRUCTURAL PORTLAND CEMENT CONCRETE:

A. Tests on one set of concrete cylinders, Lab. Nos. 07-341480, 07-341481 and 07-341482.
B. One slump test (See above referenced reports).
C. One test of fine aggregate for gradation, Lab. No. 07-341381.
D. One test of course aggregate for gradation, Lab. No. 07-341382.
E. One test of reinforcing steel, Lab. No. 22-512400.

The above Independent Assurance tests verify with the corresponding acceptance tests.

This is the final report to be submitted by this office, unless additional information is requested.

An Independent Assurance report was previously sent by memorandum, dated July 21, 1991, as follows:

EMBANKMENT
SUBBASE (6" LIME OR CEMENT TREATED SUBGRADE LAYER)
ASPHALTIC CONCRETE BASE COURSE (ROADWAY)

NAME
DISTRICT ENGINEER ADMINISTRATOR

NAME - SIGNATURE
DISTRICT LABORATORY ENGINEER

cc: District Administrator
OVF
FHWA
District Area Engineer providing oversite

SUBMITTAL 4.2
DOTD 03-22-1033 Rev 1/92
State of Louisiana
Department of Transportation and
Development

INDEPENDENT ASSURANCE CERTIFICATION

DISTRICT 07

DATE Sept.1, 1991
STATE PROJECT NO. 024050031

FEDERAL AID PROJECT NO. F-01-02(031)

PROJECT NAME LA 26-DeRidder Highway

ROUTE LA-US 171

PARISH Beauregard

CERTIFICATION
All independent assurance samples and test are within tolerance limits to the samples and tests that are used in the acceptance program, except as noted as supplement to this certification.

July 21, 1991	Embankment Subbase Asphaltic Concrete Base Course
September 1, 1991	Asphaltic Concrete Wearing or Binder Course Structural Portland Cement Concrete

DISTRICT ENGINEER ADMINISTRATOR

BY:

Independent assurance reports sent by memoranda listed below are attached:

DISTRICT LABORATORY ENGINEER

REMARKS: See attached supplement to this certification in memo dated July 21, 1991.

cc: District Administrator
Material Engineer Administrator
OVF
FHWA
District Area Engineer providing

APPENDIX A – ACRONYMS AND DEFINITIONS

The following terms and definitions are referenced in this manual and have the meanings set forth below:

AAP	AASHTO Accreditation Program
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AML	Approved Materials List
AMRL	AASHTO Materials Reference Laboratory
AOVM	Assistant Owner Verification Manager's
CA	Certificate of Analysis
CC	Certificate of Conformance
CD	Certificate of Delivery
CQAP	Construction Quality Assurance Program
CCRL	Concrete and Cement Reference Laboratory
CQAF	Construction Quality Acceptance Firm
CQAM	Construction Quality Acceptance Manager
CQCM	Construction Quality Control Manager
CQMP	Construction Quality Management Plan
DB	Design-Build
FHWA	Federal Highway Administration, United States Department of Transportation
HMA	Hot Mix Asphalt
IA	Independent Assurance
LA DOTD	Louisiana Department of Transportation and Development
NCR	Non-Conformance R e p o r t
OV	Owner Verification
OVF	Owner Verification Firm
OVM	Owner Verification Manager
OVT	Owner Verification Test
OVTIP	Owner Verification Testing and Inspection Plan
PCC	Portland Cement Concrete
QA	Quality Acceptance
QC	Quality Control
RFI	Request for Information

Acceptance Program shall mean all factors that comprise the Louisiana Department of Transportation and Development's (LA DOTD) Construction Quality Assurance Program (CQAP) to determine quality of the product as specified in the contract requirements. These factors include the Design-Builder's acceptance and the Owner's verification sampling, testing, and inspection.

Construction Quality Acceptance Firm shall mean an independent engineering/testing firm employed by the Design-Builder responsible for administering and managing the construction QA inspection, sampling, and testing. The CQAF and any Subcontractors

or subconsultants thereto must not be owned or controlled by the Design-Builder, any Principal Participant of the Design-Builder, any Affiliate of any Principal Participant, any Construction subcontractor, the Designer, a firm associated with or subsidiary to the Designer, or any design subcontractor or subconsultant of any tier to the Design-Builder.

Construction Quality Assurance Program shall mean the overall quality program and associated activities including the LA DOTD's Owner Verification, the Design-Builder's internal QC and independent Quality Acceptance Firm's QA, the Contract quality requirements, and the Design-Builder's Construction Quality Management Plan.

Construction Quality Management Plan shall mean the Design-Builder's plan for complying with its obligations for construction quality control/process control and quality acceptance as required by the Construction Quality Assurance Program for LA DOTD Design-Build projects. This plan will be written as a stand-alone document, but will also be a part of the Design-Builder's overall Quality Plan required by the Contract documents. The plan must be provided and maintained in accordance with the Contract following Consultation and Written Comment thereof by the LA DOTD's Project Manager. The CQMP will be revised throughout the project for corrections, omissions and any changes at the discretion of the LA DOTD.

Design Firm shall mean the qualified Registered Professional Engineer's firm responsible for the design of the Project.

Design Documents shall mean all drawings (including plans, profiles, cross-sections, notes, elevations, sections, details, and diagrams), specifications, reports, studies, calculations, electronic files, records and submittals necessary for, or related to, the design of the Project and/or the Utility Adjustments in accordance with the Contract Documents, the Governmental Approvals and applicable Law.

Design Builder shall mean the entity contractually responsible for delivering the Project design and construction.

Engineering Judgment shall mean determinations as to whether a material failing to meet specification requirements and or not within applicable tolerances should be accepted, or not accepted for use. It shall be based upon sound engineering principles, experience, and/or related results of applicable material tests, and be made by a Louisiana Licensed Professional Engineer.

Final Acceptance shall mean the acceptance of the Work by the LA DOTD's designated representative upon the completion of the Work as defined in the Contract and through Oversight and Design Acceptance of that Work by the LA DOTD. Final Acceptance does not relieve the Design-Builder's obligations pursuant to any guaranty or warranty under the terms of the Contract.

Governmental Approval shall mean any permit, license, consent, concession, grant, franchise, authorization, waiver, variance or other approval, guidance, protocol, mitigation agreement, or memoranda of agreement/understanding, and any amendment or modification of any of them provided by Governmental Entities, including State, local, or federal regulatory agencies, agents, or employees, which authorize or pertain to the

Work or the Project, but excluding any such approvals given by or required from any Governmental Entity in its capacity as a Utility Owner.

Governmental Entities shall mean any federal, State, or local government and any political subdivision or any governmental, quasi-governmental, judicial, public or statutory instrumentality, administrative agency, authority, body, or entity other than LA DOTD.

Independent Assurance Program shall mean all activities that are included in an unbiased and independent (of the Design-Builder or Project staff) evaluation program for all the design, sampling, and testing procedures, equipment calibration, and qualifications or personnel (Design-Builder's or LA DOTD's) used in the Acceptance Program, including the Design-Builder's Quality Control (QC) and acceptance (QA), as well as Verification Sampling (OV) and Testing. The LA DOTD, or the designated Consultant retained by the LA DOTD, will perform Independent Assurance (IA).

LA DOTD Project Manager shall mean the LA DOTD primary point of contact for the Design-Build Project. All correspondence to/from LA DOTD shall be through this contact.

LA DOTD Representative shall mean the any designee acting for LA DOTD through delegated authority for the duration of the project.

LA DOTD Standard Specifications shall mean the Louisiana Department of Transportation and Development Standard Specifications for Construction of Highways, Streets and Bridges, adopted by the Louisiana Department of Transportation and Development including all revisions/Supplemental specifications thereto applicable on the effective date of the agreement.

Law or Laws means (a) any statute, law, code, regulation, ordinance, rule, or common law; (b) any binding judgment (other than regarding a Claim or Dispute); (c) any binding judicial or administrative order or decree (other than regarding a Claim or Dispute); (d) any written directive, guideline, policy requirement, or other governmental restriction (including those resulting from the initiative or referendum process, but excluding those by LA DOTD within the scope of its administration of the Contract Documents); or (e) any similar form of decision of or determination by, or any written interpretation or administration of any of the foregoing by, any Governmental Entity, in each case which is applicable to or has an impact on the Project or the Work, whether taking effect before or after the Effective Date, including Environmental Laws. "Laws", however, excludes Governmental Approvals.

Level of Significance (α) shall mean the probability of erroneously rejecting the null hypothesis when it should have been accepted.

Nonconforming Work (Nonconformance) shall mean Work that has not been constructed with the strictest adherence to the accepted drawings and specifications and with the requirements of the Contract Documents, the Governmental Approvals, and applicable Law.

Non-Conformance Report (NCR) shall mean a record of Nonconforming Work and the final resolution or action.

Owner Verification Firm shall mean the engineering/testing firm employed by LA DOTD

to perform the owner's verification inspection, sampling and testing, and conducting audits to verify the Design-Builder's compliance with the approved CQMP.

Proficiency Samples shall mean homogenous samples that are distributed and tested by two or more laboratories and/or personnel. The test results are compared to assure that the laboratories and/or personnel are obtaining the same results.

Project shall mean the improvements to be designed and constructed by the Design-Builder and all other Work product to be provided by the Design-Builder in accordance with the Contract Documents.

Qualification shall mean a quality, ability, or accomplishment that makes a person technically competent for a particular position or task.

Quality Acceptance (QA) shall mean all planned and systematic actions performed by the CQAF and LA DOTD's Representative including design reviews and checks; inspection of material handling and construction; calibration and maintenance of sampling and testing equipment; working plan review; document control; and any inspection, sampling, and testing done for the LA DOTD's Acceptance Decision. The Design-Builder's QA test results will be used as part of the LA DOTD's Acceptance Decision.

Quality Assurance shall mean all planned and systematic actions performed by the CQAF, Design-Builder, OVF, and IA necessary to provide confidence that a product or service will satisfy given requirements for quality including, Design-Builder's Quality Control, LA DOTD Acceptance, LA DOTD Independence Assurance, Dispute Resolution, Laboratory Accreditation and Qualification, and personnel Qualification/Certification.

Quality Control (QC) shall mean all Design-Builder process control and operational techniques/activities that are performed or conducted to fulfill the contract requirements.

Random Sampling shall mean a process whereby each element of the population has an equal chance of being selected.

Registered Professional Engineer shall mean a person who is duly licensed and registered by the Louisiana Board of Professional Engineers to engage in the practice of engineering in the State.

Rules shall mean Louisiana Administrative Code.

Split Samples are taken to compare the results obtain by different parties against an allowable degree of test result difference attributable to sampling and testing variability. The comparison is only valid for the specific procedure and equipment and does not identify discrepancies in the overall population.

Subcontractor shall mean an individual, partnership, corporation, or any other legal entity or any acceptable combination thereof, or JV or LLC, to which the Design-Builder sublets part of the Work. Any individual, partnership, corporation, or any other legal entity will not be considered to be a Subcontractor if it is a subsidiary which is wholly-owned or majority-owned by the Design-Builder or the Principal Participants of the Design-Builder, or an Affiliate of the Design-Builder, or affiliated or otherwise controlled by the Design-Builder

or Principal Participants of the Design-Builder such that a true and independent Subcontractor- Design-Builder relationship reached by bidding or arms- length negotiation does not result therefrom.

Supplier shall mean any Person/Vendor not performing work at or on the Site which supplies machinery, equipment, materials, hardware, software, systems, or any other appurtenance to the Project to Design Builder or to any Subcontractor in connection with the performance of the Work. Persons who merely transport, pick up, and deliver or carry materials, personnel, parts or equipment or any other items or persons to or from the Site shall not be deemed to be performing Work at the Site.

Utility shall mean a public, private, cooperative, municipal and/or government line, facility or system used for the carriage, transmission and/or distribution of cable television, electric power, telephone, telegraph, water, gas, oil, petroleum products, steam, chemicals, hydrocarbons, telecommunications, sewage, storm water not connected with the drainage of the Project, and similar substances that directly or indirectly serve the public.

Utility Owner shall mean the owner or operator of any Utility (including both privately held and publicly held entities, cooperative utilities, and municipalities and other governmental agencies).

Vendor shall mean a supplier of project-produced material that is not the Design-Builder.

Verification Testing shall mean sampling and testing performed to validate the quality of the product. The sampling and testing are to be performed by qualified testing personnel employed by the LA DOTD or its designated agent, excluding the Design-Builder.

Work shall mean the labor, materials, services, equipment, and incidentals necessary for successful completion of the Project and the carrying out of all obligations imposed by the Contract prior to Final Acceptance and excluding any warranty or guaranty work included under the Contract.

APPENDIX B – OVT LEVELS FOR MATERIALS TESTING VALIDATION

OV testing levels (Level 1, 2, and 3) are identified in Appendix G - Required Minimum Sampling and Testing

B.1 Start-Up Requirements

During start-up operations, the CQAF (Construction Quality Acceptance Firm) and OV (owner verification) firm will perform split sample testing for all tests listed as Level 1 and Level 2. The OV firm will evaluate split sample results against LA DOTD's split sample tolerance limits contained in Section 4 – Table 4.2 Schedule of Allowable Deviation Values between Split Samples, and split sampling may be discontinued after 5 consecutive results meet within tolerance limits.

For those test methods that do not validate during start-up operations, both the CQAF and OV firm will collaborate to determine the cause(s) of the non-validation and will both take appropriate corrective actions during the early phases of material production to align the testing operations. When there is a failure to validate, the Design-Builder shall not proceed until appropriate action has been taken. For tests listed as Level 3, the OV firm will observe and review the CQAF's initial start-up testing operations.

Start-up split sampling procedures shall be repeated if requested by OV Manager due to phasing or other project circumstances.

NOTE: OV Use of QA Proctors:

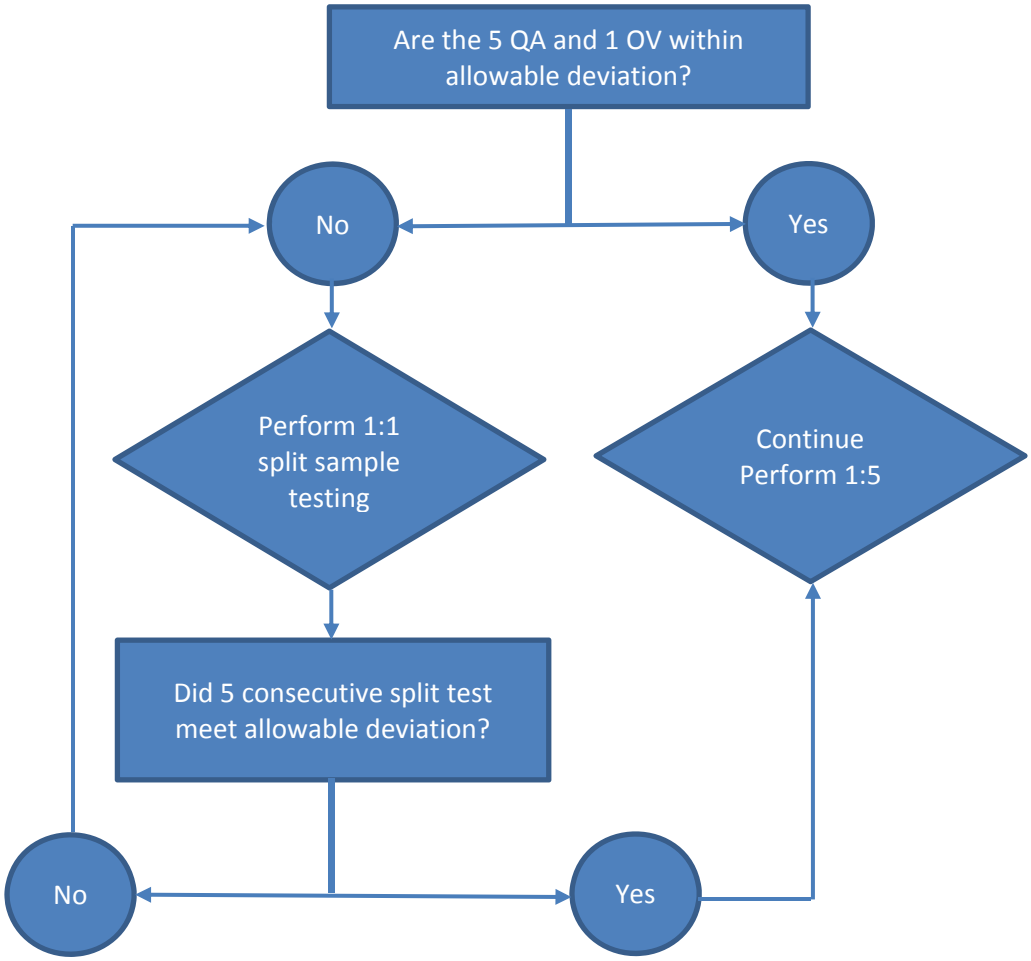
- During startup operations, test 5 split samples with the QA and ensure that all values are within the split sample tolerance, as specified in Section 4 – Table 4.2.
- The QA must provide OV laboratory with complete curve data for all proctor tests. Prior to testing in-place densities, QA shall furnish the selected curve for each in- place density point.
- The OV either agrees that the QA proctor is representative of the material being tested or the OV will obtain in-place density values and sample the material to conduct a one-point proctor to ensure that proctor values are within 3.0 pcf of curve estimates.

B.2 Level 1: Owner Verification Sampling and Testing

The OV firm will perform a comparative analyses on Level 1 tests with the Random OV testing frequency of one to five (1:5) ratio of the QA testing frequency for each Material Validation reporting quarter. This analysis shall be performed by comparing the OV test results with a group of corresponding QA test results.

Any time the Random OV test and respective 5 QA tests are not within the allowable deviation identified in Section 4-Table 4.2, split sampling per B.1 shall resume until 5 consecutive tests are within the allowable deviation, see Validation Procedure in Figure B.1.

Figure B.1 Validation Procedure



B.3 Level 2: Owner Verification Sampling and Testing

The OV firm will perform a comparative analysis on Level 2 tests with the Random OV testing frequency once per quarter with lower frequency tests missed during one quarter being specifically targeted the next quarter, or at a frequency specified by LA DOTD. This analysis shall be performed by comparing the OV test results with a group of corresponding QA test results.

B.4 Level 3: Observation Verification

The OV firm will observe and review the CQAF's initial start-up testing operations and periodically during ongoing production operations to verify compliance with test procedures.

B.5 Validation of QA Data

The following describes the procedure for the mathematical validation of the Level 1 QA test data compared to the Level 1 OV test results.

B.5.1 Quarterly Validation

After each quarter of construction operations, the OV Manager will compare the mean of all Level 1 QA tests conducted within the last 90 days to the mean of all corresponding Level 1 OV tests during the same period. If the means are within the limits shown in Table B1 then the material is considered to be mathematically validated. The results of the comparison should be addressed as shown in Table 3.3.

B.5.2 Categorizing for Analysis

When a test sample is added, the first step is to assign it to any applicable analysis categories. A test sample must have Sample Type “Random” or “Non-Random” to be associated with any category. Assignment to a category is done immediately when the sample is taken, and will correspond with Appendix G of this Manual. The sample will not be included in any analyses until the test results for the sample had been accepted for analysis (i.e., it is Accepted or intermediate break data is reviewed).

Note: A new version of an existing sample can actually belong to a different analysis category than a previous version if the header values were changed. This is not a problem, as an analysis run represents a snapshot of the current data in the system at the time the analysis was done.

B.5.3 Finding Categories to Analyze

Every time there is a new OV test, the LA DOTD’s CQAP Documentation Database system will scan data in the system for categories that need to be analyzed. A category is triggered for analysis whenever a new OV sample appears. A sample is new if it had been accepted for analysis and has never been analyzed before. Some examples of new OV samples are:

- A test was added and accepted today.
- A test was added a month ago and accepted/reviewed today.
- A test that was added and analyzed last week was revised and reaccepted. This new version has never been analyzed, so it will trigger an analysis the same as if it were the first version of the sample.

B.5.4 Analyzing a Category

The date range of the Analysis Period shall mimic the OV quarterly reporting period, extending further to include any unanalyzed or revised tests older than the current quarterly reporting period.

The OV Manager shall compare OV test results for each sample within a category against the corresponding QA test results. Those samples that compare are to be considered validated. Those samples that do not validate, the Design-Builder shall not proceed until appropriate action has been taken.

Table B.1: Acceptable Variance of QA and OV Means for Quarterly Validation

MATERIAL CATEGORY	TEST FOR	MEAN VARIATION (%)
Embankment Cut and Fill	In Place Density	2%
Non-Plastic Embankment	In Place Density	2%
Select Soils	In Place Density	2%
Base Materials on Roadway	In Place Density	2%
Soils on Roadway for Soils Cement	In Place Density	2%
Mixture with Cement on Roadway (soil cement)	In Place Density	2%
Asphaltic Concrete (Loose Material)	Gmm	2%
	In Place Density	2%
Concrete Pavement	Compressive Strength	20%
Backfill (Pipe)	In Place Density	20%
Structural Concrete	Compressive Strength	20%
Precast Concrete	Compressive Strength	20%

APPENDIX C – LA DOTD INSPECTOR/ TECHNICIAN CERTIFICATION

Testers and samplers will be allowed 90 working days from execution of the Contract to obtain the certifications. The CQAF must maintain a list of construction Quality Acceptance staff that indicates what test certifications each person currently holds.

Embankment and Base Course

Qualifies inspectors to perform complete inspection and acceptance on embankment and base course projects, excluding base courses constructed of hot mix or PCC.

Asphaltic Concrete Plant

Qualifies technicians and inspectors to design mixes and perform QC and Acceptance operations at Asphalt Concrete Plant.

Asphaltic Concrete Paving

Qualifies inspectors to perform complete inspection and acceptance on asphaltic concrete paving projects.

PCC Paving

Qualifies inspectors to perform complete inspection and acceptance on PCC paving projects.

Structural Concrete

Qualifies inspectors to perform complete inspection and acceptance on structural project using concrete as prime building material.

PCC Technician – Non Department Only

Qualifies technicians to design mixes and perform QC operations at a Portland Cement Concrete Plant.

PCC Field Tester – Non Department Only

Qualifies technicians to perform QC testing for PCC materials. Is reasonably equivalent to ACI – Level 1

Certified Welding Inspector (CWI)

Qualifies a technician or inspector to perform steel fabrication inspection. CWI as defined by the American Welding Society.

Prestressed Fabrication Inspector (when plant inspection is not performed by DOTD)

Lead Fabrication Inspector must meet one of the following requirements:

- PCI (Precast/Prestressed Concrete Institute) – Level III and minimum 1 year of prestress supervisory experience[1], or
- PCI – Level II and 5 years of prestress experience of which a minimum of 5 years must be supervisory experience[1], or
- Independent state certification and 5 years of prestress experience of which a minimum of 4 years must be supervisory experience[1], or
- Individual application approved by the DOTD Fabrication Engineer.

All other Fabrication Inspectors must meet a minimum of a PCI Level II or equivalent at the discretion of the LA DOTD.

[1]***NOTE:*** *For post tensioned operations or fabrication, additional requirements will be needed. Supervisory experience consists of the following:*

1) *Responsible charge for the daily inspection, material sampling and personnel scheduling of a prestress fabrication yard.*
2) *Capacity to read, interpret and enforce specifications, plans, associated shop drawings and other pertinent requirements for complicated pieces.*
3) *Familiarity with normal industry repair procedures and an ability to provide recommendations when appropriate.*

APPENDIX D – TEST METHODS FOR SPLIT / PROFICIENCY EVALUATION

The following chart is a list of test methods LA DOTD uses for Independent Assurance Testing. Results must compare to the IA test results to within the established tolerance as described in Section 4 – Table 4.2 Schedule of Allowable Deviation Values between Split Samples.

MATERIAL	TEST PROCEDURE	DESCRIPTION
Embankment	DOTD TR 407	Gradation
	DOTD TR 428	Plasticity Index
	DOTD TR 119	Foreign Matter
	DOTD TR 401	Density
Base or Sub-Base	DOTD TR 423	Classification
	DOTD TR 113	Gradation
	DOTD TR 401	Density
Asphalt	DOTD TR 327	Gmm
	DOTD TR 309	Gradation
	DOTD TR 306	Percent Crushed
	DOTD TR 303	AC Content
	DOTD TR 304	Voids
	DOTD TR 304	VMA
	DOTD TR 304	Density
Structural Concrete	DOTD TR 230	Compressive Strength
	DOTD TR 202	Air
	DOTD TR 207	Slump
	DOTD TR 113	Gradation

APPENDIX E – MATERIAL CERTIFICATION FORMAT EXAMPLE

The intent of the material certification is to ensure that the quality of all materials incorporated into the project is in conformance with the plans and specifications, thus ensuring a service life equivalent to the design life. Any material represented by an acceptance test that does not meet the criteria contained in the plans and specifications is considered an exception. Exceptions should be investigated to determine if in fact the material is in reasonably close conformity with the plans and specifications. Nonconforming materials and workmanship will be tracked, monitored and appropriately addressed.

Submit a monthly CQAM Material Certification Letter. Include monthly CQAM Material Certification Letters in the quarterly Material Validation Report for the months covered on the quarterly report. Additional information regarding this certification can be found in Section 3.3.4.3 Monthly CQAM Material Certification. An example follows.

Date_____To_
_____ From_

Project
No._____
RE: Monthly CQAM Material
Certification

This is to certify that:
The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and the construction operations controlled by sampling and testing, were conformity with the accepted plan and specifications.

Exceptions to the plans and specifications are as follows:

1. Nonconforming Work Item # 1
    a) Nature of Nonconforming Work and Causes for Rejection.
    b) Proposed Corrective Action for Nonconforming Work.
    c) Corrective Actions taken with respect to Nonconforming Work.
    d) Results of such Corrective Actions.
2. Nonconforming Work Item #
    a) Nature of Nonconforming Work and Causes for Rejection.
    b) Proposed Corrective Action for Nonconforming Work.
    c) Corrective Actions taken with respect to Nonconforming Work.
    d) Results of such Corrective Actions.

List of unresolved NCR's this report:

1. Unresolved NCR # 1
    a) Status of the NCR
    b) PCP's affected by NCR
2. Unresolved NCR # 2
    a) Status of the NCR
    b) PCP's affected by NCR

_____

CQAM Signature Block

APPENDIX F– MINIMUM CQAF CONSTRUCTION QUALITY ACCEPTANCE INSPECTION

*All Documentation Forms for Sampling and DOTD Testing Procedures (TR's) can be found on the LA DOTD's CQAP Documentation Database unless otherwise noted herein.

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
All	Location and type of work Personnel and Equipment Weather and Site Conditions Checks for compliance with Design Plans and Project Specifications Extent of Work Problems Encountered	DOTD Form 03403093, Project Diary
Signs and Barricades	Location, stationing and distance from edge of road Visibility, height above road, condition of signs Daily to ensure condition Night inspections initial and periodic for reflectivity	
Clearing and Grubbing	Clearing and grubbing limits Disposal Protection of surroundings from damage Removal of large roots and stumps Blading the site to ensure drainage Temporary Erosion Control - Mulch - Seeding - Slope Drains - Silt Fencing - Hay Bales	
Removals	Ensure that only designated structures, facilities, or obstructions are removed or relocated. Obtain certificates of release Proper notifications given for removal of Underground Storage Tanks and other hazardous materials. Disposal of materials	DOTD Form 03400671, Certificate of Release
Utility Relocation	Location clear of Construction Backfills adequately compacted	

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
Culverts and Storm Drains	Adequate structure Backfill material, bedding material, and fabrics sampled and accepted Damage in transit Certificate of Delivery (CD) Excavation Laying Pipe Bedding and backfill Joints closed and wrapped Compaction and compactive effort Check pipe for acceptance (flaws)	Certificate of Delivery- Culverts
Earthwork	Area preparation Soils sampled and accepted Lift Thickness Compaction and compactive effort Slope and Grade	
Trench, Culvert, and Structural Excavation	Safety width Support and protective system Disposal of excavated material	
Geotextile	Brand name and type Protection of material Material acceptance	
Cement Stabilized Base and Sub-base Course	Subgrade accepted Select soils sampled and accepted Cement accepted Pulverization and moisture content Spread rate Shaping and finishing Time limitations Curing	Certificate of Delivery- Cement

Lime Treatment	Area preparation Lime accepted Equipment used Compaction and compactive effort Spread rate Shaping and finishing Curing	Certificate of Delivery – Lime

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
Stone Base	Area preparation Material Sampled and accepted Compaction and compactive effort Curing membrane	
Asphaltic Concrete	Surface prepared Materials sampled and accepted Plant and Equipment calibrated and accepted Temporary traffic tape Signing and flagging Certified technicians Weather Conditions Mix design submitted and accepted Plant operation Temperature of mix Spreading and finishing Compaction/pavement density Joints Surface tolerances	Certificate of Delivery – Asphaltic Materials Asphaltic Concrete Plant Report
Portland Cement Concrete Paving	Surface prepared Materials sampled and accepted Plant and Equipment calibrated and accepted Forms Dowels and load transfer devices Mix design submitted and accepted Placing and spreading concrete Finishing and texturing Joints Surface tolerance Slump and air Curing Removing forms (fixed form paving) Protection of pavement Sealing joints	DOTD Form 03224028, Batch Certification

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
Aggregate Surface Course	Surface prepared Materials sampled and accepted Equipment accepted Compaction and compactive effort	
Incidental Concrete Work – Sidewalks and Drives	Surface prepared Forms Mix design submitted and accepted Depth Cylinders Curing	
Driven Piles	Type, size, and length of pile Test piles driven and loaded Pile lengths accepted Installation plan and equipment accepted Location of piles Storing, handling, and damage to piles before and during driving. Adequate bearing capacity achieved	
Drilled Shafts	Installation Plan Safety Excavation methods Casings – temporary and/or permanent Slurry Location, size, and alignment Reinforcing steel Concrete placement and finishing Verification of integrity of shafts	
Structural Concrete	Forms, re-steel and equipment Weather Ambient Temperature Slump and Air tests Placement and vibrating Cylinders Surface finish Curing	

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
Reinforcing Steel	Storing and handling Sampled and accepted Placement and fastening Splices	
Prestressed Concrete Units	Fabrication (When acceptance testing is not performed by DOTD) - Equipment approval - Concrete mix design - Concrete placement and vibration - Accepted forms - Curing - Tensioning - Storage and Transportation When receiving units - Inspector's stamp of approval - Certificate of Delivery - Damage during shipment - Dimensional tolerance and camber - Visual defects Erection Repair of defects	
Structural Steel	Fabrication (When acceptance inspection is not performed by DOTD.) - Shop drawings - Mill test reports - Storage of materials and fabricated items - Shop assembly - Certified test reports for bolts and nuts	
Bridge Bearings	Materials Fabrication (When acceptance is not performed by DOTD)	

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
Structural Steel Paint Systems	Materials - Abrasive - Paint - Paint Inspection Equipment Cleaning Paint application methods Shop painting Field painting	
Superstructure Slabs and Approach Slabs	Forming - Forms - Support systems - Haunch depths - Joints - Drainage Placing and fastening reinforcing steel Concrete Operations - Prior to placing - Placing sequence - Adequacy of personnel and equipment - Concrete supply - Curing materials - Admixtures - Weather and temperature - Placing - Finishing - Curing	
Permanent Erosion Control	Final dressing of area Area determinations Spread rate for seed and fertilizer Watering Soil tested grass	

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
Maintenance and Protection of Traffic	Materials Surface condition Intersecting traffic Dust Control and spillages Flaggers Delineation and guiding devices Construction signs, temporary barriers, barricades and lighting Pavement markings Pavement drop-off protection	
Signs	Materials Fabrication (When not when inspected by DOTD) Sign face construction Work sequence Location Erection Transporting, handling, and storage	
Traffic Signals	Materials Underground facilities Schedule Excavation Pole excavation and concrete foundations Poles Grounding Conduit and direct burial cable Pull boxes Signal control cable and shielded communications cable Cable splices Span wire assemblies Messenger assemblies Buy assemblies Signal heads	

ACTIVITY	INSPECTION REQUIREMENT	DOCUMENTATION FORM(S)*
Traffic Signals- continued	Wiring color code Concrete base for controller assembly Power meter base Overhead traffic signs	
Pavement Markings	Atmospheric conditions General requirements Materials Surface cleaning and preparation Equipment Application of markings	

APPENDIX G: REQUIRED MINIMUM SAMPLING AND TESTING

SECTION 201 CLEARING & GRUBBING

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL SOIL (HOLES)	Usable Soil	201.03	Quality Control / Accept.	-----	**REFER TO SECTION 203 OF THIS APPENDIX**							
	Density	201.03	Quality Control / Accept.	-----	**REFER TO SECTION 203 OF THIS APPENDIX**							
EROSION CONTROL MATERIALS		201.01	Quality Control / Accept.	-----	**REFER TO SECTION 203 OF THIS APPENDIX**							

SECTION 202 REMOVING OR RELOCATING STRUCTURES AND OBSTRUCTIONS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL	Usable Soil	202.02	Quality Control	-----	REFER TO SECTION 203 OF THIS APPENDIX							
	Density	202.02	Accept.									
FRIABLE ASBESTOS		202.05(b) QC	Quality Control	-----	-----	1 ADVF/ structure	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	DEQ to provide Confirmation Letter & Asbestos Disposal Verification Form (ADVF). QC to submit a copy to CQAF. Documents added to CQAP Documentation Database by CQAF.
			Accept.		-----	-----	-----	-----	-----	-----		
UST'S	Environmentally Regulated Material	202.05(c) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Chain of Custody Record to become part of Permanent Project Records. QC to submit a copy to CQAF. Documents added to CQAP Documentation Database by CQAF.
			Accept.		-----	-----	-----	-----	-----	-----		
	Tank Fill Material	205.05(c) QC	Quality Control	-----	-----	1/tank	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Fill material test report provided by Design Builder. QC to submit a copy to CQAF. Documents added to CQAP Documentation Database by CQAF.
			Accept.		-----	-----	-----	-----	-----	-----		
CONTAMINATED SOIL		202.05(d) QC	Quality Control	-----	-----	1/site	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Certificate of Disposal to become part of Permanent Project Records. QC to submit a copy to CQAF. Documents added to CQAP Documentation Database by CQAF.
			Accept.		-----	-----	-----	-----	-----	-----		
		202.05(d) QC	Quality Control	-----	-----	1/site	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Chain of Custody Record to become part of Permanent Project Records. QC to submit a copy to CQF. Documents added to CQAP Documentation Database by CQAF.
			Accept.		-----	-----	-----	-----	-----	-----		
CONTAMINATED FLUIDS		202.05(d) QC	Quality Control	-----	-----	1/site	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Chain of Custody Record to become part of Permanent Project Records. QC to submit a copy to CQAF. Documents added to CQAP Documentation Database by CQAF.
			Accept.		-----	-----	-----	-----	-----	-----		
PAINT & TIMBER		202.05(f)(g) QC	Quality Control	-----	-----	1/site	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Certificate of Disposal to become part of Permanent Project Records. QC to submit a copy to CQAF. Documents added to CQAP Documentation Database by CQAF.
			Accept.		-----	-----	-----	-----	-----	-----		

SECTION 203 EXCAVATION & EMBANKMENT

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
EMBANKMENT, CUT & FILL AREAS	Density	203.12 QC	Quality Control	In-Place Density TR 401 In-Test Method Field Max Density TR 415 or TR 418	-----	1/500 lin ft./ 2-lane rdwy /lift*	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met. Visual inspection to be performed prior to taking density test. Visual inspection include proof rolling with equipment acceptable to CQAF/OVF.
		203.06 203.07 203.08 CQAF	Accept.	In-Place Density TR 401 In-Test Method Field Max Density TR 415 or TR 418	-----	1/1,000 lin ft./ 2-lane rdwy /lift*	-----	-----	-----	1/2 hr.	1 2 for TR415 or TR418	Visual inspection to be performed prior to taking density test. Visual inspection include proof rolling with equipment acceptable to CQAF/OVF.
	Embankment lift (Uncompacted Thickness) or Subgrade Preparation	203.12 QC	Quality Control	-----	-----	1/500 lin ft./ 2-lane rdwy /lift*	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. QC to check lift thickness during placement & thickness of top layer during preparation.
		203.07 203.08 CQAF	Accept.	-----	-----	1/1,000 lin ft./ 2-lane rdwy /lift*	-----	-----	-----	-----	3	CQAF to verify thickness.
	Moisture Content @ time of compaction	203.12 QC	Quality Control	In-Place Moisture TR 403	QC S 401	1/500 lin ft./ 2-lane rdwy /lift*	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		203.07 203.08 CQAF	Accept.	In-Place Moisture TR 403	CQAF S 401	1/1,000 lin ft./ 2-lane rdwy /lift*	-----	-----	-----	1 hr.	1	Test taken during or just prior to compaction operation.
	Soil on Cut Slope (for pH and PI)	203.06 QC	Quality Control	PI TR 428 ph TR 430	QC S 401	1/500 lin ft./ slope/soil type	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		203.06 CQAF	Accept.	PI TR 428 ph TR 430	CQAF S 401	1/1,000 lin ft./ slope/soil type	1 full sample sack	-----	-----	5 days	-----	To determine the need for plastic soil blanket or soil modification option.

SECTION 203 EXCAVATION & EMBANKMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GEOTEXTILE FABRIC		203.11 1019.01	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF. Visual inspection by QC. Visually inspect seams & UV damage. Seams other than 401 or "J" shall be approved by the Material & Testing Section.
		203.11 1019.01 Mat. Lab	Accept.	Table 1019-1	CQAF S 601	1/type/ shipment/ source	3 lin ft. of full width of fabric roll*			10 days	3 OVF to submit to Mat. Lab for CQAF. OVF to verifies if document is in the system.	AML Visually inspect seams & UV damage. Seams other than 401 or "J" shall be approved by the Materials & Testing Section. Sample only when questionable. * Sample a minimum of 18 ft^2. Avoid sampling at end of roll. Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
LIME	Agricultural	203.06 1018.17	Quality Control	**REFER TO SECTION 718 OF THIS APPENDIX**								
			Accept.									
	Hydrated or Quick Lime	203.06 1018.03	Quality Control	**REFER TO SECTION 304 OF THIS APPENDIX**								
			Accept.									
NON-PLASTIC EMBANKMENT	Density	203.12 QC	Quality Control	In-Place Density TR 401 In-Test Method Field Max Density TR 415 or TR 418	QC S401	1/500 lin ft./ 2 lane rdwy/ lift *	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. Visual inspection to be performed prior to taking density test. Visual inspection includes proof rolling with equipment acceptable to CQAF/OVF.
		203.07 CQAF	Accept.	In-Place Density TR 401 In-Test Method Field Max Density TR 415 or TR 418	CQAF S401	1/1,000 lin ft./ 2 lane rdwy/ lift *	-----	-----	-----	1/2 hr.	1 2 for TR415 or TR418	Visual inspection to performed prior to taking density test. Visual inspection includes proof rolling with equipment acceptable to CQAF/OVF.
	Embankment Lift (Uncompacted Thickness)	203.12 QC	Quality Control	-----	-----	1/500 lin ft./ 2 lane rdwy/ lift *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met. *Check lift thickness during placement.
		203.07 CQAF	Accept.	-----	-----	1/1,000 lin ft./ 2 lane rdwy/ lift *	-----	-----	-----	-----	3	* Check lift thickness during placement.
	Moisture Content @ Time of Compaction	203.12 QC	Quality Control	In-Place Moisture TR 403	QC S401	1/500 lin ft./ 2 lane rdwy/ lift *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.07 CQAF	Accept.	In-Place Moisture TR 403	CQAF S401	1/1,000 lin ft./ 2 lane rdwy/ lift	1 gal Friction top can	-----	-----	1 hr.	1	-----

SECTION 203 EXCAVATION & EMBANKMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
NON-PLASTIC EMBANKMENT (Cont'd)	Blended Calcium Sulfate	203.12 QC	Quality Control	pH TR430 Gradation TR113 % Organic TR413	QC S 101	1/2,000 yd^3 *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met. Source shall be approved by the Materials and Testing Lab prior to use.
		203.09 1003.09 CQAF	Accept.	pH TR430 Gradation TR113 % Organic TR413	CQAF S 101	1/2,000 yd^3 *	1 full sample sack	-----	500 yd^3	4 days	2 for TR113 and TR413 3 for TR430	* Source shall be approved by the Materials and Testing Lab prior to use. Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
	Sand	203.12 QC	Quality Control	PI TR428 Gradation TR112/TR113 % Organic TR413	QC S 401	1/2,000 yd^3 *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.09 1003.09 CQAF	Accept.	PI TR428 Gradation TR112/TR113 % Organic TR413	CQAF* S 401	1/2,000 yd^3 *	1 full sample sack	-----	500 yd^3	4 days	2	Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
	Stone	203.12 QC	Quality Control	Gradation TR113 % Organic TR413 Dry Rod Unit Weight AASHTO T19	QC S 101	1/2,000 yd^3 *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met. QC to verify material is on the AML.
		203.09 1003.09 CQAF	Accept.	Gradation TR113 % Organic TR413 Dry Rod Unit Weight AASHTO T19	CQAF S 101	1/2,000 yd^3 *	6 full sample sack	-----	500 yd^3	4 days	2	AML * Design Build may propose a lower frequency after 8 consecutive passing tests and provided QC maintains their minimum sampling & testing frequency.
PLASTIC SOIL BLANKET	Thickness (Compacted)	203.12 QC	Quality Control	-----	-----	1/500 lin ft. /slope *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.10 CQAF	Accept.	-----	-----	1/1,000 lin ft. /slope	-----	-----	-----	-----	2	-----

SECTION 203 EXCAVATION & EMBANKMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PLASTIC SOIL BLANKET (Cont'd)	Plastic Soil	203.12 QC	Quality Control	PI TR428 % Silt TR407 pH TR430 % Organic TR413	QC S 401	1/1,000 yd^3*	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.10 CQAF	Accept.**	PI TR428 % Silt TR407 pH TR430 % Organic TR413	CQAF S 401	1/1,000 yd^3*	1 full sample sack	-----	300 yd^3	5 days	3	* Not required if tested & approved as excavation or borrow pit material. Pit approval allowed if identifiable strata can be isolated. **Shall support a satisfactory stand of grass in accordance with Sections 714 or 717. Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency
SELECTED SOIL	In-Place on Roadway	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	1/500 lin ft./ 2-lane rdwy or 1/2,000 lin ft. / shoulder *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.06 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	1/1,000 lin ft./ 2-lane rdwy or 1/2,000 lin ft. / shoulder	1 full sample sack	-----		5 days	2-TR 428 2-TR 413 2-TR 407	-----
	Stockpile	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	1/1,000 yd3 *	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		203.06 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	1/1,000 yd3 *	-----	-----	-----	5 days	2-TR 428 2-TR 413 2-TR 407	* Design Build may propose a lower frequency after 8 consecutive passing tests and provided QC maintains their minimum sampling & testing frequency.
USABLE SOIL	Borrow Pits	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	1/strata/ boring/ acre*	-----	-----	-----	-----	-----	* Results shall be submitted with boring log & sketch to the CQAF prior to CQAF boring the pit.
		203.05 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	1/strata/ boring/ acre	1/2 sample sack*	-----	100 yd^3	6 days	3	CQAF results shall be submitted with boring log and sketch to OVF.

SECTION 203 EXCAVATION & EMBANKMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
USABLE SOIL (Cont'd)	Excavation	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	as required*	1 full sample sack	-----	-----	-----	-----	May be accepted by subgrade soil survey upon approval of the CQAF. *Sample full depth of excavation.
		203.06 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	as required*	1 full sample sack	-----	-----	5 days	3	May be accepted by subgrade soil survey upon approval of the CQAF. * Sample full depth of excavation.
	Stockpile	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	1/1000 yd^{3} *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.06 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	1/1,000 yd^{3} *	1 full sample sack	-----	-----	5 days	3	Will be approved in stockpile before placing on project. * Design Build may propose a lower frequency after 8 consecutive passing tests and provided QC maintains their minimum sampling & testing frequency.
USABLE SOIL FOR HEADERS	Borrow Pits	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	1/strata/ boring/ acre*	-----	-----	-----	-----	-----	* Results shall be submitted with boring log & sketch to the CQAF prior to CQAF boring the pit.
		203.05 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	1/strata/ boring/ acre*	1/2 sample sack	-----	-----	6 days	3	CQAF results shall be submitted with boring log and sketch to OVF.
	Excavation	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	as required*	1 full sample sack	-----	-----	-----	-----	May be accepted by subgrade soil survey upon approval of the CQAF. *Sample full depth of excavation.
		203.06 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	as required*	1 full sample sack	-----	-----	5 days	3	May be accepted by subgrade soil survey upon approval of the CQAF. * Sample full depth of excavation.

SECTION 203 EXCAVATION & EMBANKMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
USABLE SOIL FOR HEADERS (Cont'd)	Stockpile	203.12 QC	Quality Control	PI TR428 % Silt TR407 % Organic TR413	QC S 401	1/1000 yd3 *	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.06 CQAF	Accept.	PI TR428 % Silt TR407 % Organic TR413	CQAF S 401	1/1,000 yd^{3} **	1 full sample sack	-----	-----	5 days	3	Will be approved in stockpile before placing on project. * Design Build may propose a lower frequency after 8 consecutive passing tests and provided QC maintains their minimum sampling & testing frequency.
Water		1018.01 QC	Quality Control	-----	QC S 303	1/source	1 qt plastic bottle	-----	-----	-----	-----	Drinkable water need not be sampled
		1018.01 Mat. Lab	Accept.	-----	CQAF S 303	1/source	1 qt plastic bottle	-----	-----	21 days	3 OVF to submit to Mat. Lab for CQAF.	Drinkable water need not be sampled

SECTION 204 TEMPORARY EROSION CONTROL

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BURLAP		204.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Replace as necessary.
		204.03 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Replace as necessary.
FERTILIZER		1018.16 QC	Quality Control	REFER TO SECTION 718 OF THIS APPENDIX								
		1018.16 CQAF	Accept.									
HAY BALES		204.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Replace as necessary.
		204.03 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Replace as necessary.
SILT FENCE	Geotextile Fabric (Wire Supported)	204.03 1019 Class F CQAF	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. Replace as necessary.
			Accept.	*	-----	-----	-----	-----	-----	-----	-----	AML *Visual inspection by CQAF. Replace as necessary.
	Geotextile Fabric (Self Supported)	204.03 1019 Class G CQAF	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. Replace as necessary.
			Accept.	*	-----	-----	-----	-----	-----	-----	3	AML *Visual inspection by CQAF. Replace as necessary.
JUTE FABRIC		204.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Replace as necessary.
		204.03 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Replace as necessary.
LIME (Agricultural)		1018.17 QC	Quality Control	REFER TO SECTION 718 OF THIS APPENDIX								
		1018.17 Mat. Lab	Accept.									
LIVESTOCK WIRE		204.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Replace as necessary.
		204.03 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Replace as necessary.
TEMPORARY CONSTRUCTION ENTRANCE	Geotextile Fabric	204.03 1019 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. Replace as necessary.
		204.03 1019 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	AML *Visual inspection by CQAF. Replace as necessary.
	Recycled PCC	204.03 711.02 1003.01 QC	Quality Control	-----	VISUAL INSPECTION AND/OR GRADATION CHECK (SOURCE, PROJECT SITE, OR BOTH, AT CQAF'S OPTION.)*			-----	-----	-----	-----	Visual inspection by QC. QC to verify material is an approved source.
		204.03 711.02 1003.01 CQAF	Accept.	*				-----	-----	-----	3	*Visual inspection by CQAF. Sample size and unit weight determined by CQAF.

T 204 - 1/2

SECTION 204 TEMPORARY EROSION CONTROL (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
TEMPORARY CONSTRUCTION ENTRANCE (Cont'd)	Stone	204.03 711.02 1003.01 QC	Quality Control	-----	VISUAL INSPECTION AND/OR GRADATION CHECK (SOURCE, PROJECT SITE, OR BOTH, AT CQAF'S OPTION.)*			-----	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML.
		204.03 711.02 1003.01 CQAF	Accept.	*				-----	-----	-----	3	AML*Visual inspection by CQAF. Sample size and unit weight determined by CQAF.
MULCH	Emulsified Asphalt	204.03 1002.01	Quality Control	REFER TO SECTION 716 OF THIS APPENDIX								
		204.03 1002.01	Accept.									
	Fiber Mulch	204.03 1018.19	Quality Control	REFER TO SECTION 716 OF THIS APPENDIX								
		204.03 1018.19	Accept.									
	Tacking Agent	204.03 1018.19	Quality Control	REFER TO SECTION 716 OF THIS APPENDIX								
		204.03 1018.19	Accept.									
	Hay or Straw	204.03	Quality Control	REFER TO SECTION 716 OF THIS APPENDIX								
		204.03	Accept.									
POSTS	Wood or Steel	204.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Replace as necessary.
		204.03 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Replace as necessary.
SEED		204.03 QC	Quality Control	REFER TO SECTION 717 OF THIS APPENDIX								
		204.03 CQAF	Accept.									
SLOPE DRAINS	Fiber Mats	204.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		204.03 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Replace as necessary.
	Pipe	204.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Replace as necessary.
		204.03 CQAF	Accept.	*	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Replace as necessary.

SECTION 301 CLASS I BASE COURSE

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANTITY CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATE BASES (DEDICATED STOCKPILE)	Recycled PC Concrete	301.07 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101 & S 801	1/ 1000 yd³ *	-----	-----	-----	-----	-----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the CQAF. QC to verify material is an approved source.
		301.02 1003.03 CQAF	Design*	Max Density TR 418	CQAF S 101	**1/source	6 full sample sacks	-----	-----	4 days	2	Material must be source approved. For moisture-density relationships **and as the material changes. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
		301.02 1003.03 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/ 1000 yd³	1 full sample sack	-----	-----	4 days	2	Material must be source approved. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
	Sand-Clay-Gravel	301.07 QC	Quality Control	Gradation TR 113 PI TR 427	QC S 101 or S 401	1/ 1000 yd³ *	-----	-----	-----	-----	-----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the CQAF.
		301.02 1003.03 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101 or S 401	1/ 1000 yd³ **	1 full sample sack	-----	-----	5 days	2	Must be accepted prior to mixing with cement. If individual components are to be mixed in the pugmill, approval procedure shall be approved by the Materials Engineer Administrator. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
		301.02 1003.03 CQAF	Design*	Max Density TR 418	CQAF S 101 or S 401	**1/source	6 full sample sacks	-----	-----	10 days	2	Moisture-Density Relationship **and as the material changes.

SECTION 301 CLASS I BASE COURSE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANTITY CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATE BASES (DEDICATED STOCKPILE) (Cont'd)	Stone or Crushed Slag	301.07 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101	1/ 1000 yd³ *	-----	-----	-----	-----	-----	*Must be controlled so that materials placed in stockpile will conform to specifications when tested by the CQAF. QC to verify material is on the AML
		301.02 1003.03 CQAF	Design*	Max Density TR 418	CQAF S 101	**1/source	6 full sample sacks	-----	-----	4 days	2	AML For moisture-density relationships **and as the material changes.
		301.02 1003.03 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/ 1000 yd³	1 full sample sack	-----	-----	4 days	2	AML Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency
ASPHALTIC CONCRETE BASES			Quality Control / Accept.	FOR ALL RELATED MATERIALS, REFER TO SECTION 502 OF THIS APPENDIX.								
ASPHALTIC MATERIAL	Curing Membrane		Quality Control / Accept.	REFER TO SECTION 506 OF THIS APPENDIX.								
	Prime Coat		Quality Control / Accept.	REFER TO SECTION 505 OF THIS APPENDIX.								
CEMENT (HYDRAULIC)	Types I, II & IP	301.02 1001.01 QC	Quality Control	-----	-----	1/shipment	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		301.02 1001.01 CQAF	Accept.	-----	-----	1/shipment	-----		-----	-----	3 OVF verifies if the document is in the system	AML Documents added to CQAP Documentation Data base by CQAF.
PORTLAND CEMENT CONCRETE BASES		301.01 301.16	Quality Control / Accept.	REFER TO SECTION 706 & 901 OF THIS APPENDIX.								
MIXTURE WITH CEMENT AT CENTRAL MIX PLANT	Percent Cement	301.07 QC	Quality Control	% Cement TR 436	QC S 101	2/half day*	-----	-----	-----	-----	-----	*In addition to start-up of plant each day and after each shut down.
		301.16 CQAF	Accept.	% Cement TR 436	CQAF S 101	1/half day	-----	-----	-----	1 hr	3	-----
	Gradation	301.07 QC	Quality Control	Gradation TR 113	QC S 101	1/half day*	1 full sample sack	-----	-----	-----	-----	*When gradation is a requirement of specifications.
		301.16 CQAF	Accept.	Gradation TR 113	CQAF S 101	1/day*	1 full sample sack	-----	-----	4 hr.	3	*Gradation will be run when questionable or individual components of SCG are mixed in a pugmill.
	Moisture Content	301.07 QC	Quality Control	Moisture Content TR 403	QC S 101 S 401	1/half day*	-----	-----	-----	-----	-----	*In addition to start-up of plant each day and after each shut down.

T 301 - 2/4

SECTION 301 CLASS I BASE COURSE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANTITY CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
MIXTURE WITH CEMENT AT CENTRAL MIX PLANT (Cont'd)	Proportions	301.07 QC	Quality Control	-----	-----	*	-----	-----	-----	-----	-----	*Shall be monitored continuously.
		301.16 CQAF	Accept.	-----	-----	1/half day	-----	-----	-----	1 hr.	3	-----
	Pulverization	301.07 QC	Quality Control	% Pulverization TR 431	QC S 401	1/half day	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		301.16 CQAF	Accept.	% Pulverization TR 431	CQAF S 401	2/half day	-----	-----	-----	1/2 hr.	3	-----
BASE MATERIAL ON ROADWAY	Density	301.11 QC	Quality Control	In-Place Density TR 401	-----	1/ 500 lin ft/ 2 lane rdwy or 1/ 1000 lin. ft/ shoulder*	-----	-----	-----	-----	-----	*Shall test sufficiently to ensure specifications will be met.
		301.16 CQAF	Accept.	In-Place Density TR 401	-----	1/ 1000 lin ft/ 2 lane rdwy or 1/ 2000 lin. ft/ shoulder	-----	-----	-----	1/2 hr.	1	-----
	Cross Slope & Grade	301.11 QC	Quality Control	-----	-----	2/half day*	-----	-----	-----	-----	-----	*Shall take measurements sufficient to ensure specifications are met.
		301.16 CQAF	Accept.	-----	-----	1/half day	-----	-----	-----	1/4 hr.	3	Use an approved 10-ft metal static straightedge or other approved device.
	Moisture Content (For Soil Cement or Cement Stabilized Mixtures)	301.11 QC	Quality Control	% Moisture TR 403	QC S 101 S 401	2/half day*	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		301.16 CQAF	Accept.	% Moisture TR 403	CQAF S 101 S 401	1/half day	-----	-----	-----	1 hr.	3	-----
	Thickness & Width	301.11 QC	Quality Control	Thickness/ Width TR 602	QC	1/ 500 lin. ft./ 2-lane rdwy or 1/ 1000 lin. Ft./ shoulder*	-----	-----	-----	-----	-----	*Shall take measurements sufficient to ensure specifications are met.
		301.16 CQAF	Monitor	Thickness/ Width TR 602	CQAF	1/half day	-----	-----	-----	1/4 hr.	3	During construction of section.
		301.16 CQAF	Accept.**	Thickness/ Width TR 602	CQAF	1/ 1000 lin. ft./ 2-lane rdwy or 1/ 2000 lin. Ft./ shoulder*	-----	-----	300 lin ft per location	3 days	3	*REFER TO DOTD TR 602. For small quantity, CQAF Documents in field book. ** When Section is Completed.

SECTION 301 CLASS I BASE COURSE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANTITY CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
SOIL (RAW)	Dedicated Stockpile	301.11 QC	Quality Control	Classify TR 423 PI TR 428 % Silt TR 407 % Organic Content TR 413	QC S 401	1/500 yd^3*	-----	-----	-----	-----	-----	*Control uniformity of moisture and soil type while stockpile is being built.
		301.02 301.05 CQAF	Accept.	Classify TR 423 PI TR 428 % Silt TR 407 % Organic Content TR 413	CQAF S 401	1/1000 yd^3	1 full sample sack**	-----	-----	21 days max	2	**When soils are to be blended, each component must meet specifications before blending. Design and final acceptance will be conducted on the blend.
		301.02 301.05 CQAF	Design*	Max Density TR 418 % Cement TR 432	CQAF S 401	1/source*	6 full sample sacks	-----	-----	-----	3	*For cement content & moisture-density relationships. Design and final acceptance will be conducted on the blend.
WATER		1018.01 Mat. Lab	Quality Control	-----	QC S 303	1/source*	1 qt plastic bottle	-----	-----	-----	-----	*Drinkable water need not be sampled.
			Accept.		CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	21 days	3 OVF to submit to Mat. Lab for CQAF	*Drinkable water need not be sampled.

SECTION 302 CLASS II BASE COURSE

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
NOTE: WHEN A CLASS II BASE COURSE IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS APPENDIX.												
AGGREGATE BASES/ SOILS/ SOIL AGGREGATE	Recycled PC Concrete	302.02 302.08 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101	1/1000 yd^3	-----	-----	-----	-----	-----	*Must test sufficient to ensure materials being delivered meet specification requirements. QC to verify material is an approved source.
		302.02 CQAF	Design*	Max Density TR 418	CQAF S 101	**1/source	6 full sample sacks	-----	-----	4 days	2	Material must be source approved. For moisture-density relationships **and as the material changes.
		302.02 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/1000 yd^3	1 full sample sack	-----	-----	4 days	2	Material must be source approved. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
	Sand-Clay-Gravel	302.01 302.02 302.08 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101 or S 401	1/1000 lin ft./ 2-lane rdwy or 1/2000 lin ft./ shoulder*	-----	-----	-----	-----	-----	*Must test sufficient to ensure materials being delivered meet specification requirements. *For stockpiles, ramps, turnouts, etc. minimum frequency shall be 1 per 1000 yd^3.
		302.02 CQAF	Design*	Max Density TR 418 or TR 415	CQAF S 101	1/1000 yd^{3*}	**1/source	-----	-----	10 days	2	**For moisture-density relationships **and as the material changes.
		302.02 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/1000 lin ft./ 2-lane rdwy or 1/2000 lin ft./ shoulder*	1 full sample sack	-----	-----	5 days	2	*For stockpiles, ramps, turnouts, etc. minimum frequency shall be 1 per 1000 yd^3. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
	Stone or Crushed Slag	302.01 302.02 302.08 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101	1/1000 yd^{3*}	-----	-----	-----	-----	-----	*Must test sufficient to ensure materials being delivered meet specification requirements. QC to verify material is on the AML
		302.02 CQAF	Design*	Max Density TR 418	CQAF S 101	**1/1000 yd^3	6 full sample sacks	-----	-----	10 days	2	*For moisture-density relationships ** and as material source changes.
		302.02 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/1000 yd^3	1 full sample sack	-----	-----	4 days	2	AML Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.

T 302 - 1/6

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
NOTE: WHEN A CLASS II BASE COURSE IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS APPENDIX.												
AGGREGATE BASES/ SOILS/ SOIL AGGREGATE (Cont'd)	BLENDED CALCUM SULFATE	302.01 302.02 302.08	Quality Control	Gradation TR 113 PI TR 428 Organic TR 413 pH TR 430	QC S 101	1/1000 yd^3	-----	-----	-----	-----	-----	QC to verify material is an approved source. Shall check sufficient to ensure specifications are met.
			Design*	-----	CQAF S 101	**1/source	6 full sample sacks	-----	-----	10 Days	2	For moisture/ density relationship **and as material changes.
			Accept.	Gradation TR 113 PI TR 428 Organic TR 413 pH TR 430	CQAF S 101	1/1000 yd^3	1 full sample sacks	-----	-----	4 Days	2	Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
	Soil/ Soil Aggregate on Roadway	302.01 302.05 302.08 QC	Quality Control	Classify TR 423 PI TR 428 % Silt TR 407 % Organic TR 413	QC S 401	1/1000 linear ft. for roadway or 1/2000 linear ft. for shoulder	-----	-----	-----	-----	-----	Control uniformity of moisture and soil type while stockpile is being built. For central plant mixing the frequency is 1/ 1000 yd^3.
		301.02 301.05 CQAF	Accept.	Classify TR 423 PI TR 428 % Silt TR 407 % Organic TR 413 % Cement TR 432	CQAF S 401	1/1000 linear ft. for roadway or 1/2000 linear ft. for shoulder	1 full sample sack**	-----	-----	5 Days	2	**When soils are to be blended, each component must meet specifications before blending. Design and final acceptance will be conducted on the blend. For central plant mixing the frequency is 1/ 1000 yd^3. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
		301.02 301.05 CQAF	Design*	Max Density TR 418 or TR 415 % Cement TR 432	CQAF S 401	1/1000 linear ft. for roadway or 1/2000 linear ft. for shoulder	6 full sample sacks	-----	-----	21 days See note	3	*For cement content and moisture-density relationships. Design and final acceptance will be conducted on the blend. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency. For central plant mixing the frequency is 1/ 1000 yd^3.

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
NOTE: WHEN A CLASS II BASE COURSE IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS APPENDIX.												
AGGREGATE BASES/ SOILS/ SOIL AGGREGATE (Cont'd)	Soils (Raw) in Stockpile for Soil Cement	302.01 302.05 302.08 QC	Quality Control	Classify TR 423 PI TR 428 % Silt TR 407 % Organic TR 413	QC S 401	1/1000 linear ft. for roadway or 1/2000 linear ft. for shoulder	-----	-----	-----	-----	-----	Control uniformity of moisture and soil type while stockpile is being built. For central plant mixing the frequency is 1/ 1000 yd³.
		301.02 301.05 CQAF	Accept.	Classify TR 423 PI TR 428 % Silt TR 407 % Organic TR 413 % Cement TR 432	CQAF S 401	1/1000 linear ft. for roadway or 1/2000 linear ft. for shoulder	1 full sample sack**	-----	-----	5 Days	2	**When soils are to be blended, each component must meet specifications before blending. Design and final acceptance will be conducted on the blend. For central plant mixing the frequency is 1/ 1000 yd³. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
		301.02 301.05 CQAF	Design*	Max Density TR 418 or TR 415 % Cement TR 432	CQAF S 401	1/1000 linear ft. for roadway or 1/2000 linear ft. for shoulder	6 full sample sacks	-----	-----	21 days See note	3	*For cement content and moisture-density relationships. Design and final acceptance will be conducted on the blend. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency. For central plant mixing the frequency is 1/ 1000 yd³.
ASPHALTIC CONCRETE			Quality Control Accept.	FOR ALL MATERIALS, REFER TO 502 OF THIS APPENDIX.								
ASPHALTIC MATERIALS	Curing Membrane		Quality Control Accept.	REFER TO SECTION 506 0F THIS APPENDIX.								
	Prime Coat		Quality Control Accept.	REFER TO SECTION 505 0F THIS APPENDIX.								

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
NOTE: WHEN A CLASS II BASE COURSE IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS APPENDIX.												
CEMENT (Hydraulic)	Types I, II & IP	301.02 1001.01 QC	Quality Control		-----	1/shipment	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		301.02 1001.01 CQAF	Accept.		-----	1/shipment	-----				3 OVF verifies if the document is in the system	AML Documents added to CQAP. Documentation Data base by CQAF.
CONCRETE, PORTLAND CEMENT, BASE		302.01 302.12	Quality Control / Accept.	REFER TO SECTION 706 & 901 OF THIS APPENDIX.								
BASE MATERIAL ON ROADWAY	Cement Spread Rate (For soil cement or cement treated bases only, Blended Calcium Sulfate)	302.01 302.08 QC	Quality Control	Spread Length	QC	each transport*	-----	-----	-----	-----	-----	*The QC shall determine the length of spread prior to mixing. Use an approved sampling device.
				Spread Rate TR 437		1/5 transports	-----	-----	-----	-----	-----	At the discretion of the CQAF additional testing shall be performed when cement content changes. Use an approved sampling device.
		302.12 CQAF	Accept.	Spread Length	CQAF	each transport	-----	-----	-----	1/2 hr.	2	*The CQAF. will verify the length of spread prior to mixing.
				Spread Rate TR 437		1/ day/ % cement	-----	-----	-----	-----	-----	Use approved sampling device.
	Cross Slope & Grade	301.01 302.08 QC	Quality Control		-----	2/half day*	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		302.12(d) CQAF	Accept.		-----	1/half day	-----	-----	-----	1/4 hr.	3	Use an approved 10 ft. metal static straightedge or other approved device.
	Density	302.01 302.08 QC	Quality Control	Density TR 401	-----	1/500 lin ft./ 2-lane rdwy or 1/1000 lin ft./ shoulder	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		302.12 CQAF	Accept.	Density TR 401	-----	1/1000 lin ft./ 2-lane rdwy or 1/2000 lin ft./ shoulder*	-----	-----	-----	1/2 hr.	1	-----

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BASE MATERIAL ON ROADWAY (Cont'd)	Moisture Content (For Soil Cement or treated Sand-Clay-Gravel only, and Blended Calcium Sulfate)	302.01 302.08 QC	Quality Control	Moisture TR 403	QC S 101	1/500 lin ft./ 2-lane rdwy or 1/1000 lin ft./ shoulder	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		302.05 302.07 302.12 CQAF	Accept.	Moisture TR 403	CQAF S 101	1/1000 lin ft./ 2-lane rdwy or 1/2000 lin ft./ shoulder	1 gal friction top can*	-----	-----	1 hr.	1	*May be obtained by M.C. % determined during application of TR 415 B, if available on in-place moisture at the time of compaction (TR 403).
	Pulverization (For soil-cement only)	302.01 302.08 QC	Quality Control	Pulver. TR 431	QC S 401	1/500 lin ft./ 2-lane rdwy or 1/1000 lin ft./ shoulder*	-----	-----	-----	-----	-----	*Soil cement shall be tested sufficiently to ensure specifications are met.
		302.05 302.12 CQAF	Accept.	Pulver. TR 431	CQAF S 401	1/500 lin ft./ 2-lane rdwy or 1/1000 lin ft./ shoulder	1 gal friction top can	-----	-----	1/2 hr.	3	-----
	Thickness & Width	302.01 302.08 QC	Quality Control	Thickness & Width TR 602	QC	1/500 lin ft./ 2-lane rdwy or 1/1000 lin ft./ shoulder	-----	-----	-----	-----	-----	*Shall be measured sufficiently to ensure specifications are met.
		302.12 CQAF	Monitor	Thickness & Width TR 602	CQAF	1/half day	-----	-----	-----	1/4 hr.	-----	During construction of section.
		302.12 CQAF	Accept.	Thickness & Width TR 602	CQAF	1/1000 lin ft./ 2-lane rdwy or 1/2000 lin ft./ shoulder	-----	-----	-----	3 days	2	REFER TO DOTD TR 602. For small quantity, CQAF documents in field book. When section is complete.
GEOTEXTILE SEPARATOR FABRIC*	Class D	203.11 302.04 1019 Mat. Lab	Quality Control Accept.	REFER TO SECTION 203 OF THIS APPENDIX.								*Only required when aggregate base course placed on un-treated or lime-treated soils or with Blended Calcium

SECTION 302 CLASS II BASE COURSE (cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
SOILS/ SAND-CL	Density (93%) (In-Place Mixing)	302.05 302.08 QC	Quality Control	In-Place Density TR 401 Max. Density TR 418 or TR 415	QC	1/half day*	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met. Minimum density is required on roadway prior to spreading cement. Check M.C. % before mixing with cement (TR 403).
		302.05 CQAF	Accept.	In-Place Density TR 401 Max. Density TR 418 or TR 415	CQAF	1/half day	-----	-----	-----	1/2 hr.	1	-----
Water		QC	Quality Control	AASHTO T 26	QC S 303	1/source*	1 qt plastic bottle	-----	-----	-----	-----	*Drinkable water need not be sampled.
		1018.01 Mat. Lab CQAF	Accept.	AASHTO T 26	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	21 days	3 OVF to submit to Mat. Lab. for CQAF	*Drinkable water need not be sampled.

SECTION 303 IN-PLACE CEMENT STABILIZED BASE COURSE

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
MATERIAL FOR BASE PRIOR TO SPREADING CEMENT (Existing or Furnished Soils/ Soil-Aggregate)	Design Builder Furnished Soil	303.07 QC	Quality Control	% Silt TR 407 % Organic TR 413 Classify TR 423 PI TR 428	QC S 401	*1/1000 yd^3	-----	-----	-----	-----	*	*Must test sufficient to ensure material will meet specification requirements before placing on roadway. Check M.C.% on all materials before spreading cement.
		303.02 CQAF	Accept.	% Silt TR 407 % Organic TR 413 Classify TR 423 PI TR 428	CQAF S 401	1/1000 yd^3	1 full sample sack	-----	-----	4 days	3	DB furnished material will be approved before incorporation into existing material. Furnished material not meeting the requirement of specification Subsection 302.02(a) will not be incorporated in the base. Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
	Raw Soil Density (93%)	303.04 303.07 QC	Quality Control	In-Place Density TR 401 Max Density TR 418 or TR 415	-----	2/half day*	-----	-----	-----	-----	-----	*Shall be tested frequently enough to ensure specifications are met. Minimum density is required on roadway prior to mixture with cement. All blending of soils materials will be accomplished before testing.
		303.04 CQAF	Accept.	In-Place Density TR 401 Max Density TR 418 or TR 415	-----	1/half day	-----	-----	-----	30 min.	1	-----

SECTION 303 IN-PLACE CEMENT STABILIZED BASE COURSE (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
MATERIAL FOR BASE PRIOR TO SPREADING CEMENT (Existing or Furnished Soils/ Soil-Aggregate) (Cont'd)	In-Place Material on Roadway	303.04 303.05	Quality Control	Max Density TR 418 or TR 415	QC S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	-----	-----	-----
		303.04 303.05 CQAF	Design	Max Density TR 418 or TR 415 % Cement TR 432	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	6 full sample sacks	-----	-----	14 days	2	*For cement content and moisture-density relationships (if needed). Design will be conducted on the final blend.
			Accept.	Classify TR 423 PI TR 428 % Silt TR407 Organic TR 413	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	1 hours	2	Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
	Pulverization	303.04 303.07 QC	Quality Control	Pulverization TR 431	QC S 401	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder*	-----	-----	-----	-----	-----	*Shall be tested frequently enough to ensure specifications are met.
		303.04 303.11 CQAF	Accept.	Pulverization TR 431	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	1/2 hr.	3	Shall be obtained after blending of any DB furnished material. Pulverization shall be approved prior to spreading cement.

SECTION 303 IN-PLACE CEMENT STABILIZED BASE COURSE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 501,501 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
MIXTURE WITH CEMENT ON ROADWAY	Cement Spread	303.07 QC	Quality Control	Spread Length	-----	each transport*	-----	-----	-----	-----	-----	*The QC shall determine the length of spread prior to mixing. Use an approved sampling device.
				Spread Rate TR 436	-----	1/5 transports**	-----	-----	-----	-----	-----	**Use an approved sampling device. At the discretion of the CQAF additional testing shall be performed when cement content changes.
		303.11 CQAF	Accept.	Spread Length	-----	each transport*	-----	-----	-----	-----	-----	*The CQAF. will verify the length of spread prior to mixing. Use an approved sampling device.
				Spread Rate TR 436	-----	1/ day	-----	-----	-----	1/2 hr.	2	Use an approved sampling device.
	Cross Slope & Grade	303.07 QC	Quality Control	-----	-----	2/half day*	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met. Use an approved 10 ft metal static straightedge
		303.11 CQAF	Accept.	-----	-----	1/half day	-----	-----	-----	1/4 hr.	-----	Use an approved 10 ft. metal static straightedge or other approved device.
	Density	303.07 QC	Quality Control	In-Place Density TR 401	-----	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder*	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		303.11 CQAF	Accept.	In-Place Density TR 401	-----	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	1/2 hr.	1	-----

SECTION 303 IN-PLACE CEMENT STABILIZED BASE COURSE (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
MIXTURE WITH CEMENT ON ROADWAY (Cont'd)	Moisture Content	303.05 303.07 QC	Quality Control	Moisture TR 403	QC S 401	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder*	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met. (DOTD TR 403)
		303.05 303.11 CQAF	Accept.	Moisture TR 403	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	1 gal friction top can*	-----	-----	1 hr.	1	*May be obtained by M.C.% determined during application of TR 415 B, if available on in-place moisture at the time of compaction (TR 403)
	Thickness & Width	303.07 QC	Quality Control	Thickness TR 602	QC	2/half day*	-----	-----	-----	-----	-----	*Shall be measured sufficiently to ensure specifications are met.
		303.11 CQAF	Monitor	Thickness TR 602	CQAF	1/half day	-----	-----	-----	1/4 day	-----	During construction of section.
		303.11 CQAF	Accept.	Thickness TR 602	CQAF	*1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	3 days	3	*REFER TO DOTD TR 602. For small quantity, CQAF documents in field book. When section is complete.

SECTION 304 LIME TREATMENT

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
CURING MEMBRANE	Type B (only)	304.05 1002.01 Mat. Lab.	Quality Control / Acceptance	REFER TO SECTION 506 OF THIS APPENDIX.								
LIME (Hydrated and Quicklime)		304.02 1018.03 QC	Quality Control	-----	-----	1/shipment	-----	CD	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		304.02 1018.03 Mat. Lab	Accept.	-----	-----	1/shipment	-----		-----	-----	3 OVF verifies if the document is in the system	AML Documents added to CQAP Documentation Data base by CQAF.
MIXTURE ON ROADWAY	Density- (Type B)	304.08 QC	Quality Control	Density TR 401 Max Density TR 418 or TR 415	-----	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder*	-----	-----	-----	-----	-----	*Shall Check sufficient to ensure specifications are met. % Moisture Content checked sufficient to satisfaction of CQAF.
		304.07 CQAF	Accept.	Density TR 401 Max Density TR 418 or TR 415	-----	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	30 min	1 TR 401 3 TR 415 or TR418	-----
	Density- (Type C & D)	304.08 QC	Quality Control	Density TR 401	QC	-----	-----	-----	-----	-----	-----	Compact to the satisfaction of the CQAF
		304.07 CQAF	Accept.	Density TR 401	CQAF	-----	-----	-----	-----	-----	3	Compact to the satisfaction of the CQAF
	Density- (Type E)	304.08 QC	Quality Control	REFER TO SECTION 203 OF THIS APPENDIX.								
		304.07 CQAF	Accept.									
	Lime Spread	304.08 QC	Quality Control	Spread Length	QC*	Each transport	**	-----	-----	30 min.	-----	*The QC shall determine the length of spread.
				Spread Rate TR 436		1/5 transports	-----	-----	-----	-----	-----	**Use an approved sampling device.
			Accept.	Spread Length	CQAF	Each transport	-----	-----	-----	-----	3	The CQAF will verify the length of spread prior to mixing.
				Spread Rate TR 436		1/day % cement	-----	-----	-----	30 min	3	At the discretion of the CQAF additional testing shall be performed when % lime content changes.

SECTION 304 LIME TREATMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
MIXTURE ON ROADWAY (cont'd)	Pulverization (Type B & C)	304.08 QC	Quality Control	Pulverization TR 431	QC S 101	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder*	-----	-----	-----	-----	-----	*Shall Check sufficient to ensure specifications are met.
		304.06 CQAF	Accept.	Pulverization TR 431	CQAF S 101	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	1 gal friction top can	-----	-----	1/2 hr.	2	
	Pulverization (Type D & E)	304.08 QC	Quality Control	Pulverization TR 431	QC	*	-----	-----	-----	-----	-----	*QC to check sufficient to ensure it meets CQAF satisfaction. To the satisfaction of CQAF.
		304.06 CQAF	Accept.	Pulverization TR 431	CQAF	*	-----	-----	-----	-----	-----	*To the satisfaction of CQAF
	Thickness & Width (Type B)	304.08 QC	Quality Control	Thickness TR 602	QC	2/half day*	-----	-----	-----	-----	-----	*Shall be measured sufficiently to ensure specifications are met.
		304.11 CQAF	Monitor	Thickness TR 602	CQAF	1/half day	-----	-----	-----	1/4 hr.	-----	During construction of section.
		304.11 CQAF	Accept.	Thickness TR 602	CQAF	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder*	-----	-----	-----	3 days	3	REFER TO DOTD TR 602 for small quantity. CQAF documents in field book when section is complete.
	Thickness & Width (Type C & D)	304.08 QC	Quality Control	Thickness TR 602	QC	1/half day	-----	-----	-----	-----	-----	*Shall be measured sufficiently to ensure specifications are met. To the satisfaction of CQAF.
		304.11 CQAF	Accept.	Thickness TR 602	CQAF	*	-----	-----	-----	-----		*To the satisfaction of CQAF. Document results in field book.
	Thickness & Width (Type E)		Quality Control / Accept.	FOR LIFT THICKNESS REQUIREMENTS REFER TO SECTION 203 OF THIS APPENDIX.								
SOIL OR SOIL-AGGREGATE	% Lime* (Type B & E)	304.04 304.05 CQAF	Design	% Lime TR 416	CQAF S 101 or S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder*	6 full sample sacks	-----	-----	10 days	3	*Not required when percent lime is specified in plans or project specifications.
Water		QC	Quality Control	-----	QC S 303	1/source*	-----	-----	-----	-----	-----	*Drinkable water need not be sampled.
		304.02 1018.01 Mat Lab	Accept.	-----	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	21 days	3 OVF to submit to Mat. Lab for CQAF	*Drinkable water need not be sampled.

SECTION 305 SUBGRADE LAYER

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANTITY / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
NOTE: WHEN A SUBGRADE LAYER IS PRODUCED BY CENTRAL PLANT MIXING, USE THE SAMPLING SCHEDULES IN SECTION 301 OF THIS APPENDIX. FOR PLACEMENT AND CONSTRUCTION REFER TO APPLICABLE SECTIONS OF THIS APPENDIX.												
AGGREGATES/ SUBGRADE LAYER	Stone, Recycled PC Concrete, Crushed Slag		Quality Control / Accept.	REFER TO SECTION 302 OF THIS APPENDIX								
	Blended Calcium Sulfate	1003.10 QC	Quality Control	Gradation TR 113 PI TR 428 % Organic TR 413 pH TR 430	QC S 101	1/1000 yd^3	-----	-----	-----	-----	-----	*Must test sufficiently to ensure materials being delivered meet specification requirements. QC to verify material is an approved source.
		1003.10 QC		In-Place Density TR 401 Max Density TR 415 or TR 418		1/1000 Linear ft for 2 Lanes*						*Shall check sufficient specification requirements. QC to verify material is an approved source.
				Thickness/ Width TR 602**	REFER TO SECTION 304 OF THIS APPENDIX.							
		1003.10 CQAF	Design*	Max Density TR 415 or TR 418	CQAF S 101	1/source**	6 full sample sacks	-----	-----	4 days	3	*For moisture-density relationships. Must be source approved. **As material changes,
		1003.10 QC	Accept.	Gradation TR 113 PI TR 428 % Organic TR 413 pH TR 430	QC S 101	1/1000 yd^3	1 full sample sack	-----	-----	4 days	2	*Must test sufficiently to ensure materials being delivered meet specification requirements. DB note frequency can adjust, but pH will be performed every 1000 yd^3. Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
		1003.10 QC		In-Place Density TR 401 Max Density TR 415 or TR 418		1/1000 linear ft 2/half day	-----	-----	-----	4 days	1	
			Accept./Monitor	Thickness/ Width TR 602	REFER TO SECTION 304 OF THIS APPENDIX.							

T305 - 1/2

SECTION 305 SUBGRADE LAYER (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANTITY CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE		-----	Quality Control	REFER TO SECTION 502 OF THIS APPENDIX.								
		-----	Accept.									
ASPHALTIC MATERIALS	Curing	-----	Quality Control	REFER TO SECTION 506 OF THIS APPENDIX.								
		-----	Accept.									
	Prime Coat	-----	Quality Control	REFER TO SECTION 505 OF THIS APPENDIX.								
		-----	Accept.									
CEMENT		-----	Quality Control	REFER TO SECTION 302 OF THIS APPENDIX.								
		-----	Accept.									
GEOTEXTILE FABRIC		305.02 1018.19 Mat. Lab.	Quality Control	REFER TO SECTION 203 OF THIS APPENDIX								
			Accept.									
LIME (Hydrated		-----	Quality Control	REFER TO SECTION 304 OF THIS APPENDIX.								
		-----	Accept.									
MIXTURE WITH LIME AND/OR CEMENT ON ROADWAY	Pulverization*	305.04 QC	Quality Control	Pulveriz. TR 431	QC S 401	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/shoulder	-----	-----	-----	1/2 hr.		*For soil after mixing with cement and / or lime.
		305.04 CQAF	Accept.	Pulveriz. TR 431	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	-----	-----	-----	1/2 hr.		*For soil after mixing with cement and / or lime.
	Thickness & Width		Quality Control	REFER TO SECTION 302, 303 and 304 OF THIS APPENDIX. TR 602 MEASUREMENT NOT REQUIRED.								
			Accept.									
	Density		Quality Control	REFER TO SECTION 302 AND 308 OF THIS APPENDIX.								
			Accept.									
SOIL		305.04	Quality Control	% Silt TR 407 PI TR 428		1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/shoulder	-----	-----	-----	-----	-----	
		305.04 CQAF	Design*	Max. Density TR 418 or TR 415	CQAF S 401	1/source	6 full sample sacks	-----	-----	10 days		*For Moisture Density relationships.
		305.04 CQAF	Accept.*	% Silt TR 407 PI TR 428	CQAF TR 602	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/shoulder	1 full sample sack	-----	-----	4 days		*When soils are to be blended, each component must meet specifications before blending. Design and final acceptance will be conducted on the blend.
WATER		QC	Quality Control	-----	QC S 303	*1/source	-----	-----	-----	-----	-----	*Drinkable water need not be sampled.
		305.02 1018.01 Mat. Lab	Accept.	-----	CQAF S 303	*1/source	1 qt plastic bottle	-----	-----	21 days	3 OVF to submit to Mat. Lab. for CQAF	*Drinkable water need not be sampled.

T305 - 2/2

SECTION 306 SCARIFYING & COMPACTING ROADBED

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
EXISTING MATERIAL	Density	306.02 QC	Quality Control	In-Place Density TR 401 Max Density TR 418 or TR 415	QC	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. Section shall be proof rolled prior to taking Density Test. CQAF and OVF to approve equipment used to proof roll.
		306.02 CQAF	Accept.	In-Place Density TR 401 Max Density TR 418 or TR 415	CQAF	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	1/2 hr.	1	Section shall be proof rolled prior to taking Density Test. CQAF and OVF to approve equipment used to proof roll.
ASPHALTIC MATERIAL	Prime Coat	306.02	Quality Control	REFER TO SECTION 505 TO THIS APPENDIX								
		306.02	Accept.									

SECTION 307 PERMEABLE BASES

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATE	Stone	307.02 1003.06 QC	Quality Control	Gradation TR 113	QC S 101, S 201,S 601	1/1000 yd^3	1 full sample sack	-----	-----	4 days	-----	Shall check sufficient to ensure specifications are met. QC to verify material is on the AML
		307.02 1003.06 CQAF	Accept.	Gradation TR 113	CQAF S 101	1/1000 yd^3	1 full sample sack	-----	-----	4 days	3	AML Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
ASPHALTIC MATERIALS	Asphalt Cement		Quality Control	REFER TO SECTION 502 OF THIS APPENDIX								
		307.02 1002 CQAF	Accept.									AML
ANTI-STRIP			Quality Control	REFER TO SECTION 502 OF THIS APPENDIX								
		307.02 1002.02 CQAF	Accept.									AML
ADMIXTURE			Quality Control	REFER TO SECTION 901 OF THIS APPENDIX								
		307.02 1011.02 CQAF	Accept.									AML
CEMENT (HYDRAULIC)			Quality Control	REFER TO SECTION 901 OF THIS APPENDIX								
		307.02 1001 CQAF	Accept.									AML
CURING COMPOUND			Quality Control	REFER TO SECTION 601 OF THIS APPENDIX								
		307.03 601.10 1011.01 CQAF	Accept.									AML

T 307 - 1/3

SECTION 307 PERMEABLE BASES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PERMEABLE ASPHALT BASE (PLANT)	JMF	307.02 QC	Design*	-----	QC S 101, S 201, S 601	1/ mix/ plant	-----	-----	-----	-----	-----	*QC shall submit to the CQAF Engr. the proposed job mix formula with supporting design data. Approval from CQAF and OVF is required prior to starting work.
		307.02 CQAF	Accept.	-----	CQAF S101, S201, S601	1/ JMF	-----	-----	-----	-----	3 OVF verifies if the document is in the system	CQAF verifies % retained coating in accordance with TR 317. Approval from CQAF and OVF is required prior to starting work. Documents added to CQAP Documentation Data base by CQAF.
	Anti-Strip Additive %	307.02 QC	Quality Control	-----	QC	*	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		307.02 CQAF	*Accept.	-----	CQAF	1/ 2500 tons	-----	-----	-----	-----	3	*% AS from meter.
	Asphalt Cement	307.02 QC	Quality Control	-----	QC	*	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		307.02 CQAF	*Accept.	-----	CQAF	1/ 2500 tons	-----	-----	-----	-----	3	*% AC from meter.
	Loose Mixture (Gradation, % AC, & % Crushed	307.02 QC	Quality Control	-----	QC S 203 & S 605	1/ 1000 tons	suitable sampling bucket	-----	-----	-----		Shall check sufficient to ensure specifications are met.
		307.02 CQAF	Monitoring	-----	CQAF S 203 and S 605	1/ 5000 tons	1 gal friction top can	-----	-----	3 days	3	-----

SECTION 307 PERMEABLE BASES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PERMEABLE CONCRETE BASE (PLANT)	Mix Design	307.02 QC	Design	-----	*	1/ mix/ plant	-----	-----	-----	3 days	-----	*QC shall submit to the CQAF Engr. the proposed job mix formula with supporting data. Approval from CQAF and OVF is required prior to starting work.
		307.02 CQAF	Monitoring	-----	*	1/ truck	-----	-----	-----	-----	3 OVF verifies if the document is in the system	Obtain "batch tickets" to verify quantities from mix design. Approval from CQAF and OVF is required prior to starting work. Documents added to CQAP Documentation Data base by CQAF.
PERMEABLE BASES	Cross Slope & Grade	307.05 QC	Quality Control	-----	QC	2/ day*	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. Grade shall not vary more than 0.05 ft. Cross slope shall not vary by more more than 0.003 ft / ft
		307.05 CQAF	Accept.	-----	CQAF*	1/ day	-----	-----	-----	-----	3	*Use 10 ft metal static straight edge or approved device.
	Thickness & Width	307 QC	Quality Control	Thickness TR 602	QC	1/ 1000 linear ft	-----	-----	-----	-----	-----	*Shall measure sufficiently to ensure specifications are met.
		307.06 CQAF	Accept.	Thickness TR 602	CQAF	1/ 2000 linear ft	-----	-----	-----	-----	3	-----
	Temperature	307.03 QC	Quality Control	-----	-----	1/ 1000 tons	-----	-----	-----	-----	-----	*Required for Asphaltic Concrete only.
		307.03 CQAF	Accept.*	-----	CQAF	1/ 5000 tons	-----	-----	-----	-----	3	*Required for Asphaltic Concrete only.
WATER		1018.01 QC	Quality Control	-----	QC S 303	1/ source*	1 qt plastic bottle	-----	-----	21 days	-----	*Drinkable water need not be sampled.
		1018.01 CQAF	Accept.	-----	CQAF S 303	1/ source*	1 qt plastic bottle	-----	-----	21 days	3 OVF to submit to Material Lab for	*Drinkable water need not be sampled.

SECTION 308 IN-PLACE CEMENT TREATED BASE COURSE

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
MATERIAL FOR BASE PRIOR TO SPREADING CEMENT (Existing or Furnished Soils/Soil-Aggregate)	Design Builder Furnished Soil	308.07 QC	Quality Control	% Silt TR 407 % Organic TR 413 Classify. TR 423 PI TR 428 % Cement TR 432	QC S 101	1/1000 yd³*	-----	-----	-----	-----	-----	*Must test sufficient to ensure material will meet specification requirements before placing on roadway. Check M.C.% on all materials before spreading cement. DB furnished material will be approved before incorporation into existing material. Furnished material not meeting the requirement of specification Subsection 302.02(a) will not be incorporated in the base. Material must be source approved. Design Builder may propose a lower frequency after 8 consecutive passing tests provided QC maintain their minimum sampling testing
		308.02 CQAF	Accept.	Soil Analysis TR 407 % Organic TR 413 Classify. TR 423 PI TR 428 % Cement TR 432	CQAF S 101	1/1000 yd³	1 full sample sack	-----	-----	4 days	3	DB furnished material will be approved before incorporation into existing material. Furnished material not meeting the requirement of specification Subsection 302.02(a) will not be incorporated in the base. Material must be source approved. Design Builder may propose a lower frequency after 8 consecutive passing tests provided QC maintain their minimum sampling testing
	Raw Soil Density (93%)	308.07 303.04 QC	Quality Control	In-Place Density TR 401 Moisture/ Density TR 415 or TR 418	QC S 401	2/half day*	-----	-----	-----	-----	-----	*Shall be tested frequently enough to ensure specifications are met. Minimum density is required on roadway prior to mixture with cement. All blending of soils materials will be accomplished before testing.
		308.04 303.04 CQAF	Accept.	In-Place Density TR 401 Moisture/ Density TR 415 or TR 418	CQAF S 401	1/half day	-----	-----	-----	30 min.	1	All blending of soils materials will be accomplished before testing.

SECTION 308 IN-PLACE CEMENT TREATED BASE COURSE (Con'td)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
MATERIAL FOR BASE PRIOR TO SPREADING CEMENT (Existing or Furnished Soils/ Soil-Aggregate) (Cont'd)	In-Place Material on Roadway	308.05 303.04 303.05 CQAF	Design*	% Cement TR 432 Classify Soil TR 423 % Silt TR 407 PI TR 428 Organic	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	6 full sample sacks	-----	-----	14 days	3	*For cement content and moisture-density relationships (if needed). Design will be conducted on the final blend.
	Pulverization	303.04 308.07 QC	Quality Control	Pulverization TR 431	QC	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder	-----	-----	-----	-----	-----	*Shall be tested frequently enough to ensure specifications are met. Pulverization shall be approved prior to spreading cement.
		303.04 308.11 CQAF	Accept.	Pulverization TR 431	CQAF	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	1/2 hr.	3	Shall be obtained after blending of any Design Building furnished material. Pulverization shall be approved prior to spreading cement.
MIXTURE WITH CEMENT ON ROADWAY	Cement Spread	303.07 QC	Quality Control	Spread Length	-----	each transport*	-----	-----	-----	-----	-----	*The QC shall determine the length of spread prior to mixing. Use an approved sampling device.
				Spread Rate TR 436	-----	1/5 transports**	-----	-----	-----	-----	-----	**Use an approved sampling device. At the discretion of the CQAF additional testing shall be performed when cement content changes.
		303.11 CQAF	Accept.	Spread Length	-----	each transport*	-----	-----	-----	-----	-----	*The CQAF. will verify the length of spread prior to mixing. Use an approved sampling device.
				Spread Rate TR 436	-----	1/ day*	-----	-----	-----	1/2 hr.	2	Use an approved sampling device.
	Cross Slope & Grade	308.07 QC	Quality Control	-----	-----	2 per 1/half day	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met. Use an approved 10 ft metal static straightedge.
		308.01 CQAF	Monitor	-----	-----	1 per 1/half day	-----	-----	-----	1/4 hr.	-----	Use an approved 10 ft. metal static straightedge or other approved device.

SECTION 308 IN-PLACE CEMENT TREATED BASE COURSE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON HYDRAULIC CEMENT AND WATER, REFER TO SECTION 301 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CURING MEMBRANE, REFER TO SECTION 506 OF THIS APPENDIX. FOR DETAILS ON ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE, REFER TO SECTIONS 502 AND 901 OF THIS APPENDIX, AS APPLICABLE.												
MIXTURE WITH CEMENT ON ROADWAY	Density	308.07 QC	Quality Control	In-Place Density TR 401 Moisture/ Density TR 415 or TR 418	QC S 401	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		308.05 308.11 CQAF	Accept.	In-Place Density TR 401 Moisture/ Density TR 415 or TR 418	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	1/2 hr.	1	-----
	Moisture Content	308.07 QC	Quality Control	Moisture TR 403	QC S 101 or S 401	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met. (DOTD TR 403)
		308.05 308.11 CQAF	Accept.	Moisture TR 403	CQAF S 101 or S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	1 gal friction top can*	-----	-----	1 hr.	1	*May be obtained by M.C.% determined during application of TR 415 B, if available on in-place moisture at the time of compaction (TR 403)
	Thickness & Width	308.07 QC	Quality Control	Thickness TR 602	QC	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft/ shoulder	-----	-----	-----	-----	-----	*Shall be measured sufficiently to ensure specifications are met.
		308.11 CQAF	Monitor	Thickness TR 602	CQAF	1/half day	-----	-----	-----	1/4 day	-----	During construction of section.
		308.11 CQAF	Accept.	Thickness TR 602	CQAF	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft/ shoulder	-----	-----	-----	3 days	3	*REFER TO DOTD TR 602. For small quantity, CQAF documents in field book. When section is complete

SECTION 401 AGGREGATE SURFACE COURSE

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES	Sand- Clay- Gravel (Lime-treated), Stone, Recycled Portland Cement Concrete, Reclaimed Asphaltic Pavement, Crushed Slag	401.02 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101	1/1000 yd^3*	-----	-----	-----	-----	-----	QC to verify stone is on the AML and RPCC shall be from an approved source. *For sampling on roadway, minimum frequency shall be 1 per 1,000 lin ft per two lanes of roadway or 1 per 2,000 lin ft per shoulder. Shall test sufficient to ensure specifications are met.
		401.02 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/1000 yd^3 dedicated stockpile*	1 full sample sack	-----	-----	5 days 5 weeks for Recycled PCC)	2	AML (RPCC shall be from an approved source) *For sampling on roadway, minimum frequency shall be 1 per 1,000 lin ft per two lanes of roadway or 1 per 2,000 linear ft per shoulder. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
AGGREGATES ON ROADWAY	Thickness & Width	401.08 QC	Quality Control	-----	QC	*1/500 lin ft/2 lane roadway or 1/1000 lin ft of shoulders	-----	-----	-----	-----	-----	*Shall test sufficient to ensure specifications are met.
		401.08 CQAF	Accept.	Thickness TR 602*	CQAF	1/1000 lin ft/2 lane roadway or 1/2000 lin ft of shoulders	-----	-----	-----	3 days	3	-----
LIME (Hydrated and Quicklime)		401.02 1018.03 QC	Quality Control	-----	-----	1/ shipment	-----	CD	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		401.02 1018.03 CQAF	Accept.	-----	-----	1/ shipment	-----		-----	-----	3 OVF verifies if the document is in the system	AML Documents added to CQAP Documentation Data base by CQAF.

T401 - 1/2

SECTION 401 AGGREGATE SURFACE COURSE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
SUBGRADE SOIL (New or Reconstructed)	Usable Soil*	401.04(b),(c) 203.06 QC	Quality Control	Silt Content TR 407 PI TR 428 % Organic TR 413	QC S 401	*1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft shoulder**	-----	-----	-----	-----	-----	**Shall check sufficient to ensure specifications are met. *For existing shoulder or roadway, no sample is required.
		401.04(b),(c) 203.06 CQAF	Accept.	Silt Content TR 407 PI TR 428 % Organic TR 413	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft shoulder	1 full sample sack	-----	-----	5 days	2	*For existing shoulder or roadway, no sample is required. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
	Density*	401.04(b),(c) QC	Quality Control	Density TR 401 % Moisture TR 403 Max. Density TR 415 or TR 418	QC S 401	1/500 lin ft/ 2-lane rdwy or 1/1000 lin ft shoulder**	-----	-----	-----	-----	-----	**Shall check sufficient to ensure specifications are met. For existing shoulders and roadway, compact to the satisfaction of the CQAF. Visual inspection to performed prior to taking density. Visual inspection includes proof rolling with equipment acceptable to CQAF/OVF.
		401.04(b),(c) CQAF	Accept.	Density TR 401 % Moisture TR 403 Max. Density TR 415 or TR 418	CQAF S 401	1/1000 lin ft/ 2-lane rdwy or 1/2000 lin ft shoulder*	-----	-----	-----	1/2 hr.	1	*For existing shoulders or roadway, compaction will be to the satisfaction of the CQAF.
WATER		QC	Quality Control	-----	QC S 303	1/source*	-----	-----	-----	-----	-----	*Drinkable water need not be sampled.
		401.02 1018.01 Mat. Lab	Accept.	-----	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	21 days	3 OVF to submit to Mat. Lab for CQAF.	*Drinkable water need not be sampled.

T401 - 2/2

SECTION 402 TRAFFIC MAINTENANCE AGGREGATE

T402 - 1/1

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES		402.02 QC	Quality Control			*	-----	-----	-----	-----	-----	*Visual inspection to the satisfaction of the CQAF.
		402.02 CQAF	Accept.			-----	-----	-----	-----	-----	3	Test when questionable. Visual inspection.

SECTION 403 AGGREGATE ROADWAY SURFACING

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES	Gravel, Stone, Recycled Portland Concrete Cement	403.02 1003.08(c)(1) 1003.04 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101	1/1000 yd^3/ dedicated stockpile	1 full sample sack	-----	-----	-----	-----	QC to verify material is on the AML. RPCC must be from approved source. Shaped & compacted to the satisfaction of the CQAF.
		403.02 1003.08(c)(1) 1003.04 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/1000 yd^3/ dedicated stockpile	1 full sample sack	-----	-----	3 days	3	AML RPCC must be from approved source. Shaped & compacted to the satisfaction of the CQAF. Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.

T403 - 1/1

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
			Quality Control / Accept.	**FOR PROJECTS, OR SEPARATE LOCATIONS WITHIN A PROJECT, REQUIRING LESS THAN 250 TONS, THE JMF, MATERIALS, AND PLANT AND PAVING OPERATIONS SHALL BE SATISFACTORY TO CQAF. REFER TO SUBSECTION 502.14 FOR FURTHER DETAILS.**								
ADDITIVES	Anti-Stripping	502.02 1002.02(a)	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		502.02 1002.02(a) Mat. Lab	Accept.	-----	QC with CQAF S 601	1/shipment	1 pt friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by CD or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Hydrated Lime	502.02 1018.03(a)	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		502.02 1018.03(a) Mat. Lab	Accept.	-----	QC with CQAF S 601	1/shipment*	1 gallon friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by CD or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Waste Tire Crumb Rubber	502.02 1002.02.2 QC	Quality Control	-----	QC	1/shipment	1 gallon friction top can	CA	-----	-----	-----	Shipment must be accompanied by CA. Sample only when questionable. QC to provide document to CQAF.
		502.02 1002.02.2 CQAF	Accept.	Gradation	CQAF S 601	1/shipment	1 gallon friction top can		-----	30 days	3 OVF verifies if the document is in the system.	Shipment must be accompanied by CA. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ADDITIVES (Cont'd)	Latex	502.02	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Shipment must be accompanies by a CA. QC to provide document to CQAF.
		508.02 Mat. Lab	Accept.	-----	QC with CQAF S 601	1/shipment	1 gallon friction top can		-----	30 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Shipment must be accompanied by a CA. Sample on when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Fiber	502.02 508.02 1002.02	Quality Control	-----	-----	1/shipment	-----	CA	-----	-----	-----	Shipment must be accompanied by a CA. QC to provide document to CQAF. QC to verify material is from a pre-approved source. Design-Builder to provide sample to CQAF.
		502.02 508.02 1002.02 Mat. Lab	Accept.	-----	QC with CQAF S 102	1/shipment	1 gallon friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Shipment must be accompanied by a CA. Sample only when questionable. Documents added to CQAF Documentation Data base by CQAF. CQAF to verify material is from a pre-approved source.

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ADDITIVES (Cont'd)	Warm Mix Additives	-----	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Shipment must be accompanied by a CA. QC to verify material is on the AML. QC to provide document to CQAF. When this material is used in the blending process, the process must be accepted by DOTD/OVF prior to use.
		50202 1002.02 Mat. Lab	Accept.	QC with CQAF S 601	1/shipment /plant	-----	1 pt friction top can		-----	10 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Shipment must be accompanied by a CA. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF. When this material is used in the blending process, the process must be accepted by DOTD/OVF prior to use.
AGGREGATES	Combined Aggregates (Moisture Content)	503.03 c QC	Quality Control	Moisture TR 106	QC	1/day/plant	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		503.03 c	Accept.	Moisture TR 106	-----	-----	-----	-----	-----	-----	3	CQAF to review QC results for use.
	All Aggregates	502.02 1003.06(1) QC	Quality Control	T-84 T-85 Gradation TR 113	QC S 101	1/source/ plant/size	3 full sample sack	-----	-----	-----	-----	QC to verify material is on the AML. Results submitted to CQAF/OVF upon request.
		502.02 1003.06(1) CQAF	Monitor	T-84 T-85 Gradation TR 113	CQAF S 101	1/source/ plant/size	3 full sample sack	-----	-----	10 days	3	AML Bulk Specific Gravity Gsb. CQAF may elect to use Dist. Lab results.
	Coarse Aggregate (+ No. 4)	502.02 1003.06 QC	Quality Control	CAA TR 306 F & E ASTM D-4791	QC S 101	1/source/ plant/ size	1 full sample sack	-----	-----	-----	-----	QC to verify material is on the AML.
		502.02 1003.06 CQAF	Monitor	CAA TR 306 F & E ASTM D-4791	CQAF S 101	1/source/ plant/ size	1 full sample sack	-----	-----	10 days	3	AML CQAF may elect to use Dist. Lab results.

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES (Cont'd)	Fine Aggregate (- No. 4)	502.02 1003.06 QC	Quality Control	FAA TR 121	QC S 101	1/source/ plant/ size	1 full sample sack	-----	-----	-----	-----	-----
		502.02 1003.06 CQAF	Monitor	FAA TR 121	CQAF S 101	1/source/ plant/ size	1 full sample sack	-----	-----	10 days	3	CQAF may elect to use Dist. Lab results.
	Natural Sand	502.02 1003.06 QC	Quality Control	Deleterious Materials TR 119 FAA TR 121 PI TR 428 Gradation TR 113 Sand Equivalent TR 120	QC S 101	1/source/ plant/ size	1 full sample sack	-----	-----	-----	-----	-----
		502.02 1003.06 CQAF	Monitor	Deleterious Materials TR 119 FAA TR 121 PI TR 428 Gradation TR 113 Sand Equivalent TR 120	CQAF S 101	1/source/ plant/ size	1 full sample sack	-----	-----	10 days	3	CQAF may elect to use Dist. Lab results.

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES (Cont'd)	Reclaimed Asphaltic Pavement (RAP)	502.02(c)(2) 1003.06 QC	Quality Control	GMM TR 327 % AC TR 323 Gradation TR 309 % Crushed TR 306 (G_{SB}) (T-84, T-85)	QC	1/stockpile	3 full sample sacks	-----	-----	-----	-----	QC to verify material is on AML. G_{SE} (or G_{SB})as required by specifications.
		502.02(c)(2) 1003.06 CQAF	Monitor	GMM TR 327 % AC TR 323 Gradation TR 309 % Crushed TR 306 (G_{SB}) (T-84, T-85)	CQAF	1/stockpile	3 full sample sacks	-----	-----	10 days	3	AML G_{SE} (or G_{SB}) as required by specifications. CQAF may elect to use Dist. Lab results.
ASPHALT MIX RELEASE AGENT		1018.25 502.02	Quality Control	-----	-----	continuously	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		1018.25 502.02	Monitor	-----	-----	continuously	-----	-----	-----	-----	3	AML Visual inspection for performance by CQAF.

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (PLANT)	Anti-Strip Additive, %	502.01	Quality Control	-----	-----	1/1000 tons	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		502.01	Accept.* (------)	-----	-----	1/half lot (-----)	-----	-----	-----	-----	3	*% AS from meter. (-----)
	Asphalt Cement, %	502.01	Quality Control	-----	-----	1/1000 tons	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		502.01	Accept.* (------)	-----	-----	1/half lot (-----)	-----	-----	-----	-----	3	*% AC from meter. (-----)
	Gyratory Specimens TSR or LWT	502.03 QC	Quality Control	LWT AASHTO T-324 TSR T-322	QC	1set/JMF	6 briquettes/ set for TSR (4 briquettes/set for LWT)	-----	-----	-----	-----	Results submitted with JMF. TSR or LWT as required by specifications.
		502.04 Dist. Lab	Validation	TSR TR 322 LWT T-324	CQAF	1set/JMF	6 briquettes/ set for TSR (4 briquettes/set for LWT)	-----	-----	2 days	OVF to submit sample to Dist. Lab for CQAF	Sampled on first production day after validation. TSR or LWT as required by specifications.
	Gyratory Specimens (Volumetric)	502.05 QC	Quality Control	Volumetric TR 304	QC	*2/1000 tons (1/1000 tons)	-----	-----	-----	-----		Aged or unaged N_{max}. * 1 N_{design} and 1 N_{max} Briquette
		502.06 CQAF	Accept. (Monitor)	Volumetric TR 304	CQAF	*1/1000 tons *(1/month)	-----	-----	-----	-----	3	Aged or unaged N_{max}. *As required by specifications.
		502.04 QC/ CQAF	Validation	Volumetric TR 304	QC with CQAF	----- 1/JMF)	----- (6 briquettes)	-----	-----	-----	-----	-----

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (PLANT) (Cont'd)	Job Mix Formula (JMF)	502.03 Design-Builder	Quality Control	-----	-----	1/mix type/ Blend of material	-----	-----	-----	-----	-----	Design-Builder shall submit to the CQAF the LAPAVE mix design form indicating the intended source of all materials and mix design for proposal approval. Acceptance by District Lab. Engineer required prior to starting work.
		502.03 CQAF	Accept.	-----	-----	1/mix type/ Blend of material	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	CQAF shall submit to the OVF the proposed job mix formula with supporting design data. Acceptance by Dist. Lab Engineer s required before starting work. Documents added to CQAP Documentation Data base by CQAF.
		502.08 QC/ CQAF	Validation	Gmm TR 327 % AC TR 323 Gradation TR 309 % Crushed TR 306 Volumetric TR304	QC/ CQAF	*5/ validation lot	suitable sampling bucket	-----	-----	-----	3	Five (5) samples on 1st day's production or a max. of 2000 tons for validation. *Includes 2 Briquettes per sample (1 Ndesign and 1 Ninitial)
	Loose Mixture	502.05 QC	Quality Control	Gmm TR 327	QC	2/1000 tons	-----	-----	-----	-----	-----	-----
		502.08 CQAF	Accept (Monitor)	Gmm TR 327	CQAF	1/1000 tons *(1/month)	suitable sampling bucket	-----	-----	-----	1 (3)	*When required by specifications.
		502.08 QC	Quality Control	Particle Coating TR 328	QC	1/job mix	1 gal friction top can	-----	-----	-----	3	Also sample when coating is questionable.
		502.05 QC	Quality Control	Gradation TR 309	QC	1/1000 tons	suitable sampling bucket	-----	-----	-----	3	-----
				% AC TR 323	QC			-----	-----	-----	3	-----
				% Crushed TR 306	QC			-----	-----	-----	3	-----

T 502 - 7/11

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (PLANT) (Cont'd)	Loose Mixture (Cont'd)	502.05 QC	Quality Control	Moisture Content TR 319	QC	1/lot (1/1000 tons)	1 gal friction top can	-----	-----	-----	3	Shall check sufficient to ensure specifications are met.
		502.08 QC	Quality Control	Temperature*	QC	2/1000 tons	-----	-----	-----	-----	3	*Temperature of mixture at discharge chute. Shall check sufficient to ensure specifications are met.
ASPHALTIC CONCRETE (IN-PLACE)	Roadway Cores (Mainline Roadway)	502.05 QC	Quality Control	TR 304	QC with CQAF **	(1/7500 Linear lane feet)*	4 or (6)* in. diameter core	-----	-----	-----		QC to use nuclear gauge to establish rolling pattern that produces required density. Core should be taken to ensure calibration of density gauge. **As required by specifications. Shall check sufficient to ensure specifications are met. *When required by specifications.
		502.11(a) CQAF	Accept.	TR 304	QC with CQAF	+3/sublot* (1/2500 Linear lane feet)	4 or (6) in. diameter core	-----	-----	3 days	1	+For different mix uses, take 1 additional core/mix use. For validation lots take, 1 core/validation sublot, 5 total. *as required by specifications. (For projects with less than 2500 linear feet will required 3 cores. 4 fold testing shall not apply. For projects between 2500 and 5000 Linear feet take 2 cores/sublot)

T 502 8/11

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

Roadway) (Cont'd)		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (IN-PLACE) (Cont'd)	Roadway Cores (Mainline Roadway) (Cont'd)	Dist. Lab	*(Conflict Resolution)	(Gmm TR 327)	QC	(5/37,500 linear lane feet)	(6 in. diameter core)	-----	-----	-----	OVF to submit to Dist. Lab for CQAF.	*To be tested for dispute resolution when necessary. CQAF to provide sample to QVF.
		(CQAF)	(Verify.)	(Gmm TR 327)	(QC)	(1/37,500 ft/lane ft*3/37,500 linear lane feet)	(6 in. diameter core)	-----	-----	-----	3	(One acceptance core selected at random for purpose of Gmm JMF verification. *For samples outside of tolerance, 2 additional core to be selected and their results averaged for comparison to JMF.)
	Roadway Core, Minor with Density Requirement	QC	Quality Control	-----	-----	Continuous	-----	-----	-----	-----	-----	QC to use the nuclear gauge to establish rolling pattern that produces required density. Core should be taken to ensure calibration of density gauge.
		502.11 CQAF	Accept.	TR 304	QC with CQAF	3/1000 tons/ mix type)	(6" diameter core)	-----	-----	2 days	2	4 fold testing does not apply.
	Roadway Core, Minor without Density Requirement	502.11 CQAF	Verify	Gmm TR 327	QC with CQAF	* (3/1000 tons)	(6" diameter core)	-----	-----	5 days	3	To the satisfaction of the CQAF. When compactive effort is questioned, additional cores to be tested for density.
	Joint Density	Design-Builder/ CQAF		Non-destructive density reading	QC	(1/2500 ft/ lane/paving edge)					3	3 readings per acceptance core taken at corresponding paving edge and extracted core location must be within 2% of adjacent wheel path. Reading to be taken in the presence of CQAF and documented by QC. Copy to be given to CQAF/OVF.

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (IN-PLACE) (Cont'd)	Longitudinal Surface Tolerance Ride Quality	502.10(b) QC	Quality Control	-----	QC	each wheelpath segment*	-----	-----	-----	-----	-----	*Applies to travel lane wearing and binder.
		502.11(b)/ QC with CQAF	Accept.	TR 644	QC	*Each wheel path for entire project	-----	-----	-----	-----	3	*Applies to travel lane wearing and binder.
	Loose Mixture* (Temperature)	502.08 QC	Quality Control	-----	-----	2/1000 lin ft	-----	-----	-----	-----	-----	*At paver hopper or on roadway. Shall check sufficient to ensure specifications are met.
		502.08 CQAF	Accept.	-----	-----	2/1000 lin ft	-----	-----	-----	-----	3	*At paver hopper or on roadway.
	Transverse Surface Tolerance, Cross Slope and *Longitudinal Surface Tolerance	502.10(b) QC	Quality Control	10' Metal static straightedge	QC	2/half day	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. *(For bike paths, detour roads, parking lots and shoulders)
		502.11(b) CQAF	Accept.	10' Metal static straightedge	CQAF	2/day	-----	-----	-----	1 day	2	Results to be documented. *(For bike paths, detour roads, parking lots and shoulders)
	Depth	502.08 QC	Quality Control	-----	-----	1/300 lin.ft.	-----	-----	-----	-----	-----	Shall check sufficient to ensure plan thickness is met.
		502.08	Monitor	-----	-----	1/1000 ft	-----	-----	-----	-----	3	Results to be documented
	Thickness & Width	502.1 CQAF	Accept.	-----	QC with CQAF	1/1000 linear lane feet	-----	-----	-----	-----	3	Width to be measured at the same location of the cores. If differences are noted, TR 602 will be used to isolate area. Results to be documented and submitted to OVF.

SECTION 502 SUPERPAVE ASPHALTIC CONCRETE MIXTURES (Cont'd)

(Parentheses denotes proposed 2015 specifications)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC MATERIAL	Asphalt Cement	1002	Quality Control		QC	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		1002 Dist. Lab	Accept.	T 315	QC with CQAF S 201	(1/month) 1/plant working tank/ day of production	(Plant/working tank/month) 2 qt friction top can		-----	5 days	3 OVF to submit to Dist. Lab for CQAF. OVF verifies if the document is in the system	AML Test original binder DSR, including phase angle. If same does not meet criteria, the plant will be investigated and the Dist. Lab will notify the OVF, the HMA producer and the Mat. Lab. A record of results will be kept on file. Documents added to CQAP Documentation Data base by CQAF.
	Plant Produced Modified Asphalt Cement	Mat. Lab1002	Validation	T 315	QC/ CQAF S - 201	5/2000 tons/ source/ Base AC/ Plant/ Not required if blending process has been validated within 6 months	2 qt friction top can	-----	-----	30 days	3 OVF to submit to Mat. Lab for CQAF.	CQAF to provide sample to OVF. Blending process must be accepted by DOTD prior to validation. After validation sampling, production is to be suspended until passing results are obtained.
	Curing Membrane			**REFER TO SECTION 506 OF THIS APPENDIX.**								
	Prime Coat			**REFER TO SECTION 505 OF THIS APPENDIX.**								
	Tack Coat			**REFER TO SECTION 504 OF THIS APPENDIX.**								

SECTION 504 ASPHALTIC TACK COAT

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 504 OF THIS APPENDIX.												
ASPHALTIC TACK COAT	Emulsified Asphalt	1002	Quality Control	-----	QC	1/shipment	-----	CD No CD required if less that 250 gal.	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1002 Mat. Lab	Accept.	-----	QC with CQAF	1/shipment	1 gal plastic bottle		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab. for CQAF.	AML Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Rate of Application	504.06	Quality Control	-----	-----	1/day	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		504.06	Accept.	-----	-----	1/day	-----	-----	-----	-----	2	To the satisfaction of the CQAF.

T 504 - 1/1

SECTION 505 ASPHALTIC PRIME COAT

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 504 OF THIS APPENDIX.												
ASPHALTIC TACK COAT	Emulsified Asphalt/ Cutback	1002	Quality Control	-----	QC	1/shipment	-----	CD No CD required if less that 250 gal.	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1002 Mat. Lab	Accept.	-----	QC with CQAF	1/shipment	1 gal plastic bottle for Emulsion 1 qt. screw top can for Cutback		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab. for CQAF	AML Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Rate of Application	504.06	Quality Control	-----	-----	1/day	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		504.06	Accept.	-----	-----	1/day	-----	-----	-----	-----	2	To the satisfaction of the CQAF.

SECTION 506 ASPHALTIC CURING MEMBRANE

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 506 OF THIS APPENDIX.												
ASPHALTIC CURING MEMBRANE	Emulsified Petroleum Resin/ Emulsified Asphalt	1002 506.02	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide documentation to CQAF. Visual inspection by QC.
		1002 506.02 Mat. Lab	Accept.	-----	QC with CQAF S 201	1/shipment	1 gal plastic bottle		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Visual inspection by CQAF. Sample only when questionable. Documents added to CQAF Documentation Data base by CQAF.
	Rate of Application	506.06	Quality Control	-----	-----	1 day	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		506.06	Accept.	-----	-----	1 day	-----	-----	-----	-----	2	To the satisfaction of the CQAF.
	Water	506.06 1018.01	Quality Control	AASHTO T26	-----	1/source	1 qt plastic bottle	-----	-----	-----	-----	Drinkable water need not be sampled.
		506.02 1018.01 Mat. Lab	Accept.	AASHTO T26	-----	1/source	1 qt plastic bottle	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	Drinkable water need not be sampled.

T-506 1/1

SECTION 507 ASPHALTIC SURFACE TREATMENT

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES	Rate of Application	507.06(b)	Quality Control	-----	-----	First pass of aggregate spreader*	-----	-----	-----	-----		*Must check sufficient to ensure materials being applied meet specification requirements for rate of application.
		507.06(b) CQAF	Accept.	-----	-----	First pass of aggregate spreader*	-----	-----	-----	1 day	3	*Must check sufficient to ensure materials being applied meet specification requirements for rate of application.
	Size 1,2,3 (for cold application)	507.01 1003.05	Quality Control	Gradation TR 113 Deleterious Material TR 119	-----	1/1000yd^3/ size	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. QC to verify material is on the AML.
		507.01 1003.05	Accept.	Gradation TR 113 Deleterious Material TR 119	-----	1/1000yd^3/ size	1 full sample sack	-----	-----		3	AML Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
	Size 1,2,3 (for hot application)	507.01 1003.05 QC	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Certification from supplier for asphalt coating & gradation. QC to verify material is on the AML. QC to provide document to CQAF. Visual inspection by QC.
		507.01 1003.05 CQAF	Accept.	-----	-----	-----	-----			-----	3 OVF verifies if the document is in the system.	AML Certification from supplier for asphalt coating & gradation. Documents added to CQAP Documentation Data base by CQAF.
		507.01 1003.05 QC	Monitor	Gradation TR 113 Deleterious TR 119	QC S 101	*1/Project	1 full sample sack	-----	-----	5 day	-----	*Prior to beginning of operation.

T 507 - 1/2

SECTION 507 ASPHALTIC SURFACE TREATMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC MATERIAL	Emulsified Asphalt	1002 507.02	Quality Control	-----	-----	1/transport or storage tank	-----	CD	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1002 507.02 Dist. Lab	Accept.	T 59	QC with CQAF S 201	1/transport or storage tank	2-1 gal plastic bottles		-----	3 days	3 OVF verifies if the document is in the system. OVF to submit to Dist. Lab for CQAF.	AML Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency. Documents added to CQAP Documentation Data base by CQAF.
		1002 507.02 Mat. Lab	Accept.	T 59	QC with CQAF S 201	1/type/project	2 gal plastic bottle**	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML For complete analysis.
	Asphalt Cement	507.02 1002	Quality Control	-----	-----	1/shipment	-----	CD	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		507.02 1002 Mat. Lab	Accept.	-----	QC with CQAF S 201	1/shipment	1 qt friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF.
	Rate of Application	507.06(a) QC	Quality Control	-----	-----	1/each pass of distributor	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		507.06(a) CQAF	Accept.	-----	-----	1/half day	-----	-----	-----	-----	2	-----

SECTION 508 STONE MATRIX ASPHALT (2006 Edition Only)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ADDITIVES	Anti-Stripping	508.02(C)(1) 1002.02(a) Mat. Lab	Quality Control	-----	-----	1/shipment/ plant	-----	CD	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		508.02(c)(1) 1002.02(a) Mat. Lab	Accept.	-----	-----	1/shipment/ plant*	1 pt friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by CD or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Waste Tire Crumb Rubber	502.02 1002.02.2 QC	Quality Control	-----	QC	1/shipment	2 qts friction top can	CA	-----	-----	-----	Shipment must be accompanied by CA. QC to provide document to CQAF.
		502.02 1002.02.2 CQAF	Accept.	Gradation	CQAF S 102	1/shipment	2 qts friction top can		-----	30 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Shipment must be accompanied by CA. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Mineral Filler	508.02(c)(2) 1003.06(a)(6)	Quality Control	-----	QC	-----	-----	CD*	-----	-----	-----	Sampling not required for Portland cement or hydrated lime when accompanied by CD. QC to verify material is on the AML. QC to provide document to CQAF.
		508.02(c)(2) 1003.06(a)(6) Mat. Lab	Accept.	-----	QC with CQAF	1/500 tons*	1 gal friction top can		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML *Sampling not required for Portland cement or hydrated lime when accompanied by CD. Documents added to CQAP Documentation Data base by CQAF.

SECTION 508 STONE MATRIX ASPHALT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ADDITIVES (Cont'd)	Fibers (Mineral or Cellulose)	502.02 508.02 1002.02	Quality Control	-----	-----	1/shipment	-----	CA	-----	-----	-----	Shipment must be accompanied by a CA. Sample only when questionable. QC to provide document to CQAF. QC to verify material is from a pre-approved source. Design-Builder to provide sample to CQAF.
		502.02 508.02 1002.02 Mat. Lab	Accept.	-----	QC with CQAF S 102	1/shipment	1 gallon friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Shipment must be accompanied by a CA. Sample only when questionable. Documents added to CQAF Documentation Data base by CQAF. CQAF to verify material is from a pre-approved source.
AGGREGATES	Combined Aggregates (Moisture Content)	503.03 c QC	Quality Control	Moisture TR 106	QC	1/day/plant	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		503.03 c	Accept.	Moisture TR 106	-----	-----	-----	-----	-----	-----	3	CQAF to review QC results for use.
	All Aggregates	508.01 1003.06(1) QC	Quality Control	T-84 T-85 Gradation TR 113	QC S 101	1/source/ plant/size	3 full sample sack	-----	-----	-----	-----	QC to verify material is on the AML. Results submitted to CQAF/OVF upon request.
		508.01 1003.06(1) CQAF	Monitor	T-84 T-85 Gradation TR 113	CQAF S 101	1/source/ plant/size*	3 full sample sack	-----	-----	10 days	3	AML Bulk Specific Gravity Gsb. *CQAF may elect to use Dist. Lab results.
	Coarse Aggregate (+ No. 4)	1003.06 QC	Quality Control	CAA TR 306 F & E ASTM D-4791	QC S 101	1/source/ plant/size	1 full sample sack	-----	-----	-----	-----	QC to verify material is on the AML.
		1003.06 CQAF	Monitor	CAA TR 306 F & E ASTM D-4791	CQAF S 101	1/source/ plant/size*	1 full sample sack	-----	-----	10 days	3	AML *CQAF may elect to use Dist. Lab results.
	Fine Aggregate (- No. 4)	1003.06 QC	Quality Control	FAA TR 121	QC S 101	1/source/ plant/size	1 full sample sack	-----	-----	-----	-----	-----
		1003.06 CQAF	Monitor	FAA TR 121	CQAF S 101	1/source/ plant/size*	1 full sample sack	-----	-----	10 days	3	*CQAF may elect to use Dist. Lab results.

SECTION 508 STONE MATRIX ASPHALT (Cont'd) (2006 Edition Only)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALT MIX RELEASE AGENT		503.13 1018.25	Quality Control	-----	-----	continuously	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		503.13 1018.25	Monitor	-----	-----	continuously	-----	-----	-----	-----	3	AML Visual inspection for performance by CQAF.
ASPHALTIC CONCRETE (PLANT)	Anti-Strip Additive, %	508.03 508.04 508.06 QC	Quality Control		QC	2/sublot						*Range given on JMF, % AS from meter.
		508.03 508.04 508.06 CQAF	Accept.		CQAF	1/sublot	*	-----	-----	-----	3	*Range given on JMF, % AS from meter. See QA Manual.
	Asphalt Cement, %	508.05 503.09 QC	Quality Control		QC	2/sublot	*	-----	-----	-----		*% AC from meter or scales. See QA Manual.
		508.05 503.09 CQAF	Accept.		CQAF	1/sublot					3	*% AC from meter or scales. See QA Manual.
	Gyratory Specimens (Moisture Sensitivity) (TSR)	508.03 QC	Design	TSR TR 322	QC S 203	1 set/JMF	6 briquettes/ set	-----	-----	-----		Results submitted with JMF.
		508.04 QC with CQAF	Valid.	TSR TR 322	QC S 203	1 set/JMF	6 briquettes/ set	-----	-----	-----	3	Sampled on first production day after validation witnessed by CQAF.
	Gyratory Specimens Volumetric	508.05 QC	Quality Control	Volumetric TR 304	QC S 203	2/sublot	-----	-----	-----	-----		Aged or unaged$_{max}$.
		508.06 CQAF	Accept.	Volumetric TR 304	CQAF S 203 & S 605	1/sublot	suitable sampling bucket	-----	-----	1 day	3	Aged N_{design}.

SECTION 508 STONE MATRIX ASPHALT (Cont'd) (2006 Edition Only)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (PLANT) (cont'd)	Job Mix Formula (JMF)	508.03 Design-Builder	Design		-----	1/mix type/plant				10 days		Contractor shall submit to the Design-Builder the proposed job mix formula with supporting design data. Acceptance by the Dist. Lab Engr. is required prior to starting work.
		508.04 QC & CQAF	Valid.	Gmm TR327 Draindown ASTM D6390 % Asphalt TR 323 Gradation TR 309 Volumetric TR 304 TSR TR 322	QC & CQAF	1/JMF	-----	-----	-----	-----	3	Three (3) samples on 1st days production for a maximum of 1,000 tons for validation.
	Loose Mixture (Maximum Theoretical Specific Gravity) G_{mm}	508.05 QC	Quality Control	Gmm TR 327	QC S 203	2/sublot	suitable sampling bucket	-----	-----	1 day		Aged or Unaged.
		508.06(a) CQAF	Accept.	Gmm TR 327	CQAF S 203	1/sublot	suitable sampling bucket	-----	-----	1 day	1	4 fold testing does not apply.
	Loose Mixture (Asphalt Coating)	503.08 QC	Design/ Quality Control	Ross Count TR 328	QC S 203	1/JMF*	1 gal friction top can	-----	-----	-----		*Sample only when coating is questionable.
		503.08 CQAF	Accept.	Ross Count TR 328	CQAF S 203	1/JMF*	1 gal friction top can	-----	-----	1 day	3	4 fold testing does not apply. *Sample only when coating is questionable.
	Loose Mixture (Asphalt Draindown)	503.08 QC	Design	Draindown ASTM D6390	QC S 203	1/JMF	1 gal friction top can	-----	-----	-----		-----
		508.06(c) CQAF	Accept.	Draindown ASTM D6390	CQAF S 203	1/lot	1 gal friction top can	-----	-----	-----	3	-----

SECTION 508 STONE MATRIX ASPHALT (Cont'd) (2006 Edition Only)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (PLANT) (Cont'd)	Loose Mixture (Gradation)	508.05 QC	Quality Control	Gradation TR 309 % Asphalt TR 323	QC S 203 & S 605	1/sublot	suitable sampling bucket	-----	-----	-----		-----
		508.06 CQAF	Accept.	Gradation TR 309 % Asphalt TR 323	CQAF S 203 & S 605	1/sublot	-----	-----	-----	1 day	3	-----
	Loose Mixture* (Temperature)	503.08 508.08 QC	Quality Control	-----	QC S 605	2/sublot	-----	-----	-----	-----		*Temperature of mixture at discharge chute. Shall check sufficient to ensure specifications are met.
		503.03 508.08 CQAF	Accept.	-----	CQAF 605	1/sublot	-----	-----	-----	1 day	3	*Temperature of mixture in truck at plant.
	Density	508.06(d)	Quality Control	-----	QC S 203 & S 605	1/1000 tons	4 or 6 in. diameter core	-----	-----	1 day		QC to use the nuclear gauge to establish rolling pattern that produces require density. Core should be taken to ensure calibration of density gauge. Discontinue rolling once matt has cooled to 220°F.
		508.06(d) CQAF	Accept.	-----	CQAF S 203 & S 605	3/sublot	4 or 6 in. diameter core	-----	-----	5 days	1	4 fold testing does not apply.
ASPHALTIC CONCRETE (IN-PLACE)	Longitudinal Surface Tolerance	508.05 502.10(b) CQ	Quality Control	TR 644	QC TR 644	each wheelpath segment	-----	-----	-----	-----		Applies to travel lane wearing and binder. Applies to shoulder, parking, airport runway and taxiway wearing.
		508.06(e) 502.11(b) QC with CQAF	Accept.	TR 644	QC with CQAF TR 644	each sublot	-----	-----	-----	2 days	3	Applies to travel lane, wearing and center two lanes for airport.

SECTION 508 STONE MATRIX ASPHALT (Cont'd) (2006 Edition Only)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE (IN-PLACE) (Cont'd)	Temperature of Mixture	508.08 QC	Quality Control	-----	QC	2/sublot						Shall check sufficient to ensure specifications are met. Discontinue rolling once the matt has reached 220°F.
		508.08 CQAF	Accept.	-----	CQAF	2/sublot	-----	-----	-----	1 day		*Temperature of mixture at entry of MTV. Discontinue rolling once the matt has reached 220°F.
	Transverse Surface Tolerance, Cross Slope and *Longitudinal Surface Tolerance	508.05 QC	Quality Control	10' Metal static straightedge	QC	2/half day	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. *(For bike paths, detour roads, parking lots and shoulders)
		508.05 CQAF	Accept.	10' Metal static straightedge	CQAF	2/day	-----	-----	-----	1 day	2	Results to be documented. *(For bike paths, detour roads, parking lots and shoulders)
	Depth	502.08 QC	Quality Control	-----	-----	1/300 lin.ft.	-----	-----	-----	-----	-----	Shall check sufficient to ensure plan thickness is met.
		502.08	Monitor	-----	-----	1/1000 ft	-----	-----	-----	-----	3	Results to be documented
	Thickness & Width	502.12	Quality Control	-----		-----	Continuously	-----	-----	-----	-----	Width to be measured at the same location of the cores. If differences are noted, TR 602 will be used to isolate area. Results to documented and submitted to OVF.
		502.12 508.01 CQAF	Accept.		QC with CQAF	1/1000 Linear lane feet	-----	-----	-----	-----	3	
ASPHALTIC MATERIAL	Asphalt Cement (PG 76-22M)	1002 QC	Quality Control	-----	-----	-----	-----	CD	-----	-----		QC to verify material is on the AML. QC to provide document to CQAF. One CD to accompany each transport.

SECTION 508 STONE MATRIX ASPHALT (Cont'd) (2006 Edition Only)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC MATERIAL (Cont'd)	Asphalt Cement (PG 76-22M) (Cont'd)	1002 Dist. Lab	Accept.	DSR T-315	QC with CQAF S 201	1/plant working tank/day of production	1 qt friction top can	-----	-----	5 days	3 OVF verifies if the document is in the system. OVF to submit to Dist. Lab for CQAF.	AML Test original binder DSR, including Phase Angle. If sample does not meet criteria, the plant will investigated and the Dist. Lab will notify the CQAF/OVF, the HMA Producer, and the Mat. Lab. Documents added to CQAP Documentation Data base by CQAF.
	Plant Produced Modified Asphalt Cement	1002	Validation	T 315	QC/ CQAF S - 201	5/2000 tons/ source/ Base AC/ Plant/ 6 months	2 qt friction top can	-----	-----	30 days	3 OVF to submit to Mat. Lab for CQAF.	CQAF to provide sample to OVF. Blending process must be accepted by DOTD prior to validation. After validation sampling, production is to be suspended until passing results are obtained.
	Tack Coat	REFER TO SECTION 504 OF THIS APPENDIX										

SECTION 509 COLD PLANING ASPHALTIC PAVEMENT

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
COLD PLANED SURFACE	Longitudinal Surface Tolerance (for single lift overlays only)	502.10(b) 509.03(b)	Quality Control	TR 644	QC	each wheelpath segment	-----	-----	-----	-----	-----	When a single lift is to be placed over the cold planed surface it must meet the requirements of binder course in Section 502 of this Appendix. See table 502-8b. IRI to be witnessed by CQAF and documentation provided to CQAF/OVF.
		502.10(b) 509.03(b)	Monitor	-----	QC with CQAF	-----	-----	-----	-----	-----	3	
	Transverse Surface Tolerance, Cross Slope	502.10(b)	Quality Control	-----	-----	2/ half day*	-----	-----	-----	-----	-----	*As needed to meet requirements of binder. See table 502-4
		502.10(b)	Accept.	-----	-----	2/ half day*	-----	-----	-----	-----	3	*As needed to meet requirements of binder. See table 502-4
TEMPORARY PAVEMENT MARKING			Quality Control	**REFER TO SECTION 713 OF THIS APPENDIX.**								
			Acceptance									

T 509 - 1/1

SECTION 510 ASPHALTIC CONCRETE PAVEMENT PATCHING, WIDENING AND JOINT REPAIR

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE			Quality Control / Accept.	**For details on Additives, Aggregates, Asphalt Cements, Asphaltic Concrete, Asphaltic Tack Coat, Asphalt Mix Release Agent and Mineral Filler, Refer to Section 502 of this Appendix.**								
	Density	502.11(a) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to use nuclear gauge to ensure specifications are met.
		502.11(a) CQAF	Accept.	TR 304	QC with CQAF	3/sublot	4 or (6) in. diameter core	-----	-----	1 day	3	Top 4 inches of finished section.

T 510 - 1/1

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE MIX DESIGNS, TESTS AND MATERIALS, REFER TO SECTION 901 OF THIS APPENDIX.												
ADHESIVE-LUBRICANT	For Preformed Elastomeric Compression Joint Seal	1005.03(b) Mat. Lab	Quality Control	ASTM D4070	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		1005.03(b) Mat. Lab	Accept.	ASTM D4070	CQAF S 601	1/lot or shipment	1 qt friction top can	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML Mix well before sampling. Seal can tightly.
BOLSTER BLOCKS	Concrete	601.09(h)	Quality Control / Acceptance	**REFER TO SECTION 901 OF THIS APPENDIX. (CLASS A STRUCTURAL OR PAVEMENT TYPE)**								
CONCRETE-CURED	Cores - Thickness & Compressive Strength	601.18	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	*QC shall notify the CQAF at least five (5) days prior to the start of coring operations. Coring to be witnessed by CQAF. For pavement plan thickness 10.0 inches (250 mm) or less, 4" diameter (nominal) cores may be used. Alternative non-destructive method of verifying thickness for DOTD acceptance when used in conjunction with Flexural Strength Beams.
		601.18 CQAF	Accept.	Core Testing TR 225	QC with CQAF	5/lot 5/1500 lin ft of 2 lane pavement or 3/1500 lin ft of shoulder	5 cores*	-----	For less than 1500 lin ft, 1 core per 500 lin ft	dependent upon completion of lot & curing min. 3 days	2	See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details. For pavement plan thickness 10.0 inches (250 mm) or less, 4" diameter (nominal) cores may be used.
	Beams-Flexural Strength/ Thickness	601.07	Quality Control	Concrete Test T-140	QC	1/500 lin ft	-----	-----	-----	-----	-----	Non-destructive testing required for testing acceptance measurement. Design-Builder to submit plan with frequency for DOTD/OVF Acceptance.
		CQAF	Accept.	-----	CQAF	1/1000 lin ft	-----	-----	-----	-----	2	
	Surface Tolerance	601.11 QC	Quality Control	Surface Tolerance TR 644	-----	Each day/each wheel path	-----	-----	-----	-----	-----	QC must furnish an approved profiler and an approved 10 ft. metal static straightedge. To be tested as soon as concrete has hardened.
		601.11 QC	Accept.	Surface Tolerance TR 644	-----	Entire Project	-----	-----	-----	-----	3	*Refer to QA manual for details. CQAF to witness testing. **Shoulders, turnouts and crossovers shall be checked with an approved 10 ft. metal static straightedge at 1 location/300 ft. *Testing to be performed after QC testing and all corrective work is complete.

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE-CURED (Cont'd)	Tine Texturing	601.08(h) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		601.08(h) CQAF	Accept.	Surface Texture TR 229	CQAF	2/1500 lin ft of 2 lane roadway or 1/1000 lin ft of shoulder	-----	-----	-----	1 day	3	-----
CONCRETE-PLASTIC	Compressive Strength	601.17	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		601.07 601.17 CQAF	Early Break	Concrete Test TR 230	CQAF S 301	*1 set of 3 cyl/location/ day	4 in. x 8 in. cylinder mold	-----	-----	1 day	-----	*Used to determine early opening date for traffic or construction equipment.
	Rate of Application for Curing Compound	601.10 QC	Quality Control	Rate Check	-----	2/half day*	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. Visual inspection by QC. *(Check gallon/sq. yd.)
		601.10 CQAF	Accept.	Rate Check	-----	1/day	*	-----	-----	1 day	3	Coverage to the satisfaction of the CQAF. *(Check gallon/sq. yd.)
	Surface Finish (Straight Edge)	601.08(f) QC	Quality Control	-----		*entire surface area	-----	-----	-----	-----	-----	*Tested for trueness with an approved 10 ft. metal static straightedge. Shall check sufficient to ensure specifications are met.
		601.08(f) CQAF	Monitor	-----		*entire surface area	-----	-----	-----	-----	3	*CQAF to randomly witness QC testing.
	Thickness	601.19 QC	Quality Control	Depth Check	QC	* 2/ lane/100 lin ft	-----	-----	-----	-----		*Shall test sufficient to ensure specifications are met.
		601.18(b)(3) CQAF	Accept.	Depth Check	CQAF	* 1/ lane/100 lin ft	-----	-----	-----	-----	3	-----

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE-PLASTIC (Cont'd)	Tine Texturing	601.08(h) QC	Quality Control	Surface Texture TR 229	QC	* 1/100/ lin ft of roadway /lane or shoulder	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		601.08(h) CQAF	Monitor	Surface Texture TR 229	CQAF	* 1/500 Ft.	-----	-----	-----	-----	3	CQAF to continuously monitor QC testing.
CURING MATERIALS	Burlap Cloth/ Burlap/ White Polyethylene Sheeting/ Waterproof Paper	601.02 601.10 1011.01(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. For cold weather protection.
		601.02 601.10 1011.01(b) Mat. Lab	Accept.	AASHTO M182 Class 3 S-601	CQAF	1/shipment*	36 in. x 36 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. For cold weather protection.
	Liquid Membrane Forming Compound	601.02 1011.01(a)	Quality Control	-----				CC	-----	-----	-----	QC to verify material is on the AML Visual inspection by QC. QC to provide document to CQAF.
		601.02 1011.01(a) Mat. Lab	Accept.	-----	CQAF S 601	1/shipment*	1 qt friction top can		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML *Visual inspection by CQAF Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.
	White Polyethylene Sheeting	601.02 1011.01(d)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. For rain protection.
		601.02 1011.01(d) Mat. Lab	Accept.	AASHTO T171	CQAF S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. For rain protection. Sample only when questionable.
EPOXY RESIN SYSTEMS	Type I, Grade C	601.02 1017.02	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		601.02 1017.02 Mat. Lab	Accept.	-----	CQAF S 601	1/lot or shipment	1 qt each component friction top can		-----	11 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAF Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GEOTEXTILE FABRIC		601.02 1019	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		601.02 1019 Mat. Lab	Accept.	-----	CQAF S 601	1/type/ source/ shipment	3 lin ft/roll width of fabric (minimum of 18 Sq. Ft.)		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF.
JOINT FILLERS	Preformed Polyurethane Foam/ Wood	601.02 1005.02	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		601.02 1005.02 Mat. Lab	Accept.	-----	CQAF S 601	1/5000 lin ft/ type	36 in. length	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	
JOINT FORMER/ SEALER (Combination)	Preformed Joint Former/ Sealer	1005.04	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		1005.04 Mat. Lab	Accept.	-----	CQAF S 601	1/5000 lin ft/ type	6 ft. length	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	-----

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
JOINT SEALANT (Extruded)/ (Hot Poured)	Silicone Polymer (single or two-component rapid cure)/ Rubberized Asphaltic Type	1005.02(a) (c)(d)	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		1005.02(c), (d) Mat. Lab	Accept.	-----	CQAF S 611	1/batch/ shipment	1 gal friction top can		-----	30 days/ 11 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by a certificate or when questionable. Documents added to CQAF Documentation Data base by CQAF.
JOINT SEALANT (Backing Material)	Rods	1005.02(a) (c) (d)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. For Hot poured joint sealants, use heat resistant rods. For use with polyurethane silicone polymer joint seals.
		1005.02(a) (c) (d) Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML For use with polyurethane silicone polymer joint seals. For Hot poured joint sealants, use heat resistant rods. Visual inspection by CQAF.
JOINT SEALANTS (Primer)		1005.02(b), (c),(d)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		1005.02(b), (c),(d) CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML Visual inspection by CQAF

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
JOINT SEAL (Preformed)	Elastomeric Compression	1005.03(a)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		1005.03(a) Mat. Lab CQAF	Accept.	-----	CQAF S 601	1/lot or shipment	8 ft. length		750 lin ft	14 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML CQAF forwards CA with sample to OVF. Documents added to CQAP Documentation Data base by CQAF.
LIME	Hydrated	1018.03	Quality Control	-----	-----	1/shipment	-----	CD	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1018.03	Accept.	-----	-----	1/shipment	-----		-----	-----	3 OVF verifies if the document is in the system.	AML Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
LUBRICANT-ADHESIVE		1005.03(b) 1005.07	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		1005.03(b) 1005.07	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML For use with preformed polyurethane foam joint seal. Visual inspection by CQAF.
NON-SHRINK PATCHING SYSTEM	Non-Shrink Grout	601.13(a) 1018.26	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Design-Builder to provide sample.
		601.13(a) 1018.26 Mat. Lab	Accept. / Early Breaks	-----	CQAF S 601	1/source	1 sack	-----	-----	16 days	3 OVF to submit to Mat. Lab for CQAF.	AML Sample shall be submitted in an unbroken moisture proof sack. To be tested for early strength when required.
REINFORCEMENT	Adhesive Anchor System	601.09	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		601.09 Mat. Lab	Accept.	-----	CQAP S 501	1/type	-----			12 days	3 OVF to submit to Mat. Lab for CQAF.	AML
	Dowel Bars	601.09 1009.04	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Basket assemblies checked for dimensional conformance by QC. Shall check sufficient to ensure specifications are met.

SECTION 601 PORTLAND CEMENT CONCRETE PAVEMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
REINFORCEMENT (Cont'd)	Dowel Bars (Cont'd)	601.09 1009.04 Mat. Lab	Accept.	-----	CQAF S 501	1/shipment	2 bars *	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	*For mechanical placement, only one dowel bar required. Basket assemblies checked for dimensional conformance by CQAF
	Mechanical Butt Splicing Devices	806.07	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		806.07 Mat. Lab	Accept.	-----	CQAF	1/size/ shipment	-----	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	AML
	Tie Bars	1009.03	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1009.03 Mat. Lab	Accept.		CQAF S 501	1/size/grade/ 150,000lb/ source	2 bars		-----	9 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.
TAR PAPER		601.09 (b),(h)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		601.09 (b),(h) Mat. Lab	Accept.	-----	CQAF	1/source*	2 ft. x 2 ft.	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	For Bolster Blocks. *Visual inspection by CQAF. Sample only when questionable.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE MIX DESIGNS, TESTS AND MATERIALS, REFER TO SECTION 901 OF THIS APPENDIX.												
ADHESIVE-LUBRICIANT	For Preformed Elastomeric Compression Joint Seal	1005.03(b) Mat. Lab QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		1005.03(b) Mat. Lab	Accept.	-----	CQAF S 601	1/lot or shipment	1 qt. friction top can	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML Mix well before sampling. Seal can tightly.
BOLSTER BLOCKS	Concrete	601.09(h)	Quality Control / Acceptance		**REFER TO SECTION 901 OF THIS APPENDIX. (CLASS A STRUCTURAL OR PAVEMENT TYPE)**							
CONCRETE-CURED	Surface Tolerance (Grinding)	601.11 602.11 QC	Quality Control	Surface Tolerance TR 644	-----	Each lane/each wheel path	-----	-----	-----	-----	-----	QC must furnish a DOTD approved profiler and an approved 10 ft. metal static straightedge. To be tested as soon as concrete has hardened. To be tested prior to, as well as after corrective work completed by Design-Builder. For patching, test each patched area.
		601.11 602.11 CQAF	Accept.	Surface Tolerance TR 644	-----	1/location/ 300 ft.**	-----	-----	-----	-----	3	*See QA manual for details. **Shoulders, turnouts and crossovers shall be checked with an approved 10 ft. metal static straightedge. To be tested prior to, as well as after corrective work complete by Design-Builder. For patching, test each patched area.
		601.11 602.11 QC	Accept.	Surface Tolerance TR 644	-----	Each lane/each wheel path	-----	-----	-----	2 days	3 OVF verifies if the document is in the system	Travel lane and associated pavement will be tested after quality control testing and corrective work completed by Design-Builder. CQAF will be present for the final test run and will immediately receive a copy of the test result. For patching, test each patched area. Documents added to COAP
	Tine Texturing (Patching)	602.07 602.08 602.09 602.10 QC	Quality Control	Surface Texture TR 229	-----	2 for each patched area	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. Match texture of adjoining pavements.
		602.07 602.08 602.09 602.10 CQAF	Accept.	Surface Texture TR 229	-----	For each patched area	-----	-----	-----	1 day	3	Match texture of adjoining pavements.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE-PLASTIC	Compressive Strength	602.07 to 607.10 901.12	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		602.07 to 602.10 901.12 CQAF	Accept.	Compressive Strength TR 230	CQAF S 301	3 cyl/pour/ 100yd^3 max.	4 in. x 8 in. cylinder mold	-----	-----	-----	-----	-----
		602.07 to 602.10 CQAF	Early Break	Compressive Strength TR 230	CQAF S 301	*1 set of 3 cyl/ day	4 in. x 8 in. cylinder mold	-----	-----	1 day	-----	*Used to determine early opening date for traffic or construction equipment.
	Rate of Application for Curing Compound	601.10 QC	Quality Control	-----	QC	2/half day	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. Visual inspection by QC. Check Gal/sq. yd.
		601.10 CQAF	Accept.	-----	CQAF	1/day	-----	-----	-----	-----	3	To the satisfaction of the CQAF.
	Surface Finish (Patching)	602.11 QC	Quality Control	-----	QC	2/Each patched area	-----	-----	-----	-----	-----	Tested for trueness with an approved 10 ft. metal static straightedge. Be witnessed by CQAF.
		602.11 CQAF	Accept.	-----	CQAF		-----	-----	-----	-----	3	
	Thickness	601.19 QC	Quality Control	Depth Check of Excavated Area	QC	*Each patched area	-----	-----	-----	-----		*Shall test sufficient to ensure specifications are met.
		601.18(b)(3) CQAF	Accept.	Depth Check of Excavated Area	CQAF	Each patched area	-----	-----	-----	-----	3	Shall test sufficient to ensure specifications are met. Design-Builder may propose a lower frequency after 8 consecutive matching test results provided QC maintains minimum sampling and testing frequency.
	Tine Texturing	601.08(h) QC	Quality Control	Surface Texture TR 229	QC	Each patched area	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		601.08(h) CQAF	Monitor	Surface Texture TR 229	CQAF	* 1/500 Sq. Ft.	-----	-----	-----	-----	3	CQAF to continuously monitor QC testing.
CURING MATERIALS	Burlap Cloth/ Burlap/ White Polyethylene Sheeting/ Waterproof Paper	601.02 1011.01(b) 601.10	Quality Control	AASHTO M182 Class 3	-----	-----		-----	-----	-----	-----	Visual inspection by QC. For cold weather protection.
		601.02 601.10 1011.01(b) Mat. Lab	Accept.	-----	CQAF	1/shipment*	36 in. x 36 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. For cold weather protection.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CURING MATERIALS (Cont'd)	Liquid Membrane Forming Compound	601.02 1011.01(a)	Quality Control	-----				CC	-----	-----	-----	QC to verify material is on the AML Visual inspection by QC. QC to provide document to CQAF.
		601.02 1011.01(a) Mat. Lab	Accept.	-----	CQAF S 601	1/shipment*	1 qt friction top can		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML *Visual inspection by CQAF Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.
	White Polyethylene Sheeting	601.02 1011.01(d)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. For rain protection.
		601.02 1011.01(d) Mat. Lab	Accept.	-----	CQAF S 601	1/shipment*	36 in. x 36 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. For rain protection. Sample only when questionable.
EPOXY RESIN SYSTEMS	Type I, Grade C	602.02 1017.02	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		602.02 1017.02 Mat. Lab	Accept.	-----	CQAF S 601	1/lot or shipment	-----		-----	11 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAF Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
JOINT FILLERS	Preformed Polyurethane Foam/ Wood	601.02 1005	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		601.02 1005 Mat. Lab	Accept.	-----	CQAF S 601	1/5000 lin ft/ type	36 in. length	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	
JOINT FORMER/ SEALER (Combination)	Preformed Joint Former/ Sealer	1005.04	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		1005.04 Mat. Lab	Accept.	-----	CQAF S 601	1/5000 lin ft/ type	6 ft. length	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	-----
JOINT SEALANT (Extruded)/ (Hot Poured)	Silicone Polymer (single or two-component rapid cure)/ Rubberized Asphaltic Type	1005.02(a) (c)(d)	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		1005.02(c), (d) Mat. Lab	Accept.	-----	CQAF S 611	1/batch/ shipment	1 gal friction top can		-----	30 days/ 11 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by a certificate or when questionable. Documents added to CQAF Documentation Data base by CQAF.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
JOINT SEALANT (Backing Material)	Rods	1005.02(a) (c) (d)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. For Hot poured joint sealants, use heat resistant rods. For use with polyurethane silicone polymer joint seals.
		1005.02(a)(c)(d) Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML For use with polyurethane silicone polymer joint seals. For Hot poured joint sealants, use heat resistant rods. Visual inspection by CQAF.
JOINT SEALANTS (Primer)		1005.02(b)(c)(d))	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		1005.02(b)(c)(d)) CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML Visual inspection by CQAF
JOINT SEAL (Preformed)	Elastomeric Compression	1005.03(a)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		1005.03(a) Mat. Lab	Accept.	-----	CQAF S 601	1/lot or shipment	8 ft. length		-----	14 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML CQAF forwards CA with sample to OVF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
LIME	Hydrated	1018.03	Quality Control	-----	-----	1/shipment	-----	CD	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1018.03	Accept.	-----	-----	1/shipment	-----		-----	-----	3 OVF verifies if the document is in the system.	AML Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
LUBRICANT-ADHESIVE		1005.03(b) 1005.07	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. For use with preformed polyurethane foam joint seal.
		1005.03(b) 1005.07	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML For use with preformed polyurethane foam joint seal. Visual inspection by CQAF.
LOW-SHRINK PATCHING MATERIAL	Rapid Set Compressive Strength/ Shrinkage	602.15 Mat. Lab	Quality Control	-----	-----	1/source	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF. Design-Builder to submit proposed water content value to be used at job site with sample.
			Accept.	Compressive Strength C 109 Shrinkage ASTM C157	-----	1/source	1 bag Sample shall be submitted in unbroken moisture proof sack.		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. Design-Builder to submit proposed water content value to be used at job site with sample.
	Compressive Strength	602.15 Dist. Lab	Accept./ Monitor	Compress. Strength ASTM C109	CQAF	1/1st day production for acceptance	6 cubes	-----	-----	-----	3 OVF to submit to Dist. Lab for CQAF.	For preapproval of design. Tested at 3 and 24 hours.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
REINFORCEMENT	Adhesive Anchor System	601.09	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		601.09 Mat. Lab	Accept.	-----	CQAF	1/type	-----	-----		12 days	3 OVF to submit to Mat. Lab for CQAF.	AML
	Dowel Bars	1009.04	Quality Control	-----	QC S 501	2/shipment	-----	-----	-----	-----	-----	Visual inspection by QC. Basket assemblies checked for dimensional conformance by QC. Shall check sufficient to ensure specifications are met.
		1009.04 Mat. Lab	Accept.	-----	CQAF S 501	1/shipment	2 bars *	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	*For mechanical placement, only one dowel bar required. Basket assemblies checked for dimensional conformance by CQAF
	Tie Bars	1009.03	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1009.03 Mat. Lab	Accept.		CQAF S 501	1/size/grade/ 150,000lb/ source	2 bars		-----	9 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.

SECTION 602 PORTLAND CEMENT CONCRETE PAVEMENT REHABILITATION (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
REINFORCEMENT (Cont'd)	Steel Fibers	609.09	Quality Control	-----	QC	1/shipment	1 qt. can	CC	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC.
		602.09 Mat. Lab*	Accept.		CQAF	1/shipment	1 qt. can				3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	*Visual inspection by CQAF. Sample when questionable. Documents added to CQAP Documentation Data base by CQAF.
TAR PAPER		601.09(b)(h)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		601.09(b)(h)	Accept.	S 601	CQAF	1/source*	2 ft x 2 ft	-----	-----	9 days	3 OVF to submit CQAF sample to DOTD Mat. Lab.	For Bolster Blocks. *Visual inspection by CQAF Sample only if questionable.
POWERED AMMONIUM LIGNIN SULPHONATE		QC 602.14	Quality Control	QC	1/lot or batch	-----	CC	-----	-----	-----	-----	QC to provide document to CQAF.
		CQAF 602.14	Accept.	CQAF	1/lot or batch	-----		-----	-----	-----	3 OVF verifies if the document is in the system	Documents added to CQAP Documentation Data base by CQAF.
SURRY	Time of Efflux	QC 602.14	Quality Control	Efflux	QC/COAF TR 633	2/half day	-----	-----	-----	-----	-----	-----
		CQAF 602.14	Accept.	Efflux			3 gal. suitable container	-----	-----	1/2 hr	3 OVF verifies if the document is in the system	To be witnessed and documented by CQAF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 701 CULVERTS & STORM DRAINS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL	Density, when required by specifications (Other than Type A)	701.08 QC	Quality Control	In-Place Density TR 401	-----	*1/100 lin ft Pipe/Location/ Lift	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		701.08 CQAF	Accept.	In-Place Density TR 401	-----	1/200 Ln. Ft. Pipe/Location/ Lift	-----	-----	-----	-----	1	-----
	Density (Non-Paved Areas)	701.08 QC	Quality Control	In-Place Density TR 401	-----	1/pipe/ location/ *days operation	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met to the satisfaction of the CQAF.
		701.08 CQAF	Accept.	In-Place Density TR 401	-----	1/pipe/ location	-----	-----	-----	-----	-----	*Visual inspection & compaction to the density of the surrounding soil to the satisfaction of the CQAF.
	Flowable Fill	701.08(1)	Quality Control Accept.	**REFER TO SECTION 710 OF THIS APPENDIX.**								
	Moisture Content	701.08 QC	Quality Control	Moisture Content TR 403	QC S 401	*1/100 lin ft Pipe/Location/ Lift	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		701.08 CQAF	Accept.	Moisture Content TR 403	CQAF S 401	*1/200 lin ft Pipe/Location/ Lift	-----	-----	-----	-----	1	*Test taken during or just prior to compaction.
		701.08 CQAF	Design	Max. Density TR 415 or TR 418	CQAF S 401	*1/source	6 sacks	-----	-----	-----	3	*Required as material changes.

SECTION 701 CULVERTS & STORM DRAINS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL (Cont'd)	Selected Soil*	203.06 701.02 QC	Quality Control	Liquid Limit, Plastic Limit, PI TR 428 Hydrometer TR 407 %Organic TR 413 pH TR 430** Resistivity TR 429**	QC S 403	*1/1,000 yd^3	1 full sample sack	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. **pH and resistivity for metal pipe.
		203.06 701.02 CQAF	Accept.	Liquid Limit, Plastic Limit, PI TR 428 Hydrometer TR 407 %Organic TR 413 pH TR 430* Resistivity TR 429*	CQAF S 403	1/1,000 yd^3	1 full sample sack	-----	-----	10 days	3	*pH and resistivity required for metal pipe. Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
	Type A Backfill (Stone, RPCC, RAP)	701.02 QC	Quality Control	Gradation TR 113 PI TR 428	QC	1/1,000 yd^3	1 full sample sack	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		701.02 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF	1/1,000 yd^3	1 full sample sack	-----	-----	-----	2	AML RPCC must be from an approved source. TR 428 is not required for RAP. Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
BEDDING MATERIAL			Quality Control Accept.	**REFER TO SECTION 726 OF THIS APPENDIX.**								

SECTION 701 CULVERTS & STORM DRAINS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE PIPE AND PIPE ARCH	Non-Reinforced (Concrete Sewer Pipe)	701.02 1006	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab. Insp.
		701.02 1006	Accept.	-----					-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CD to include lot number for gasket materials. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
	Reinforced	701.02 1006	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify material is on the AML. QC to verify stamp by DOTD Const. Fab. Insp.
		701.02 1006	Accept.	-----					-----	-----	3 OVF verifies if the document is in the system.	L
CONDUIT PLUG & COLLARS	Concrete (Class R)		Quality Control Accept.	**REFER TO SECTION 901 OF THIS APPENDIX.**								
GASKET MATERIAL (For Pipe)	Flexible Plastic Gasket	701.02 1006.06(b)	Quality Control	-----	-----	-----	-----	CC*	-----	-----	-----	Visual Inspection by QC. QC to provide document to CQAF. *Gasket lot no. listed on pipe CC. Primer used according to gasket manufacturer's recommendation, sample not required. QC to verify material is on the AML.
		701.02 1006.06(b)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	AML *Gasket lot no. listed on pipe CC. Primer used according to gasket manufacturer's recommendation; sample not required. Documents added to CQAP Documentation Data base by CQAF.
	Rubber Gaskets	701.02 1006.06(b)	Quality Control	-----	-----	-----	-----	CC*	-----	-----	-----	*Gasket lot no. listed on pipe CC. Visual inspection by QC. QC to verify material is on the AML.
		701.02 1006.06(a)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	AML *Gasket lot no. listed on pipe CC. Lubricant used according to gasket manufacturer's recommendation; sample not required. Documents added to CQAP Documentation Data base by CQAF.

SECTION 701 CULVERTS & STORM DRAINS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GEOTEXTILE FABRIC		701.02 1019.01	Quality Control	-----	-----	1/type/source/ shipment	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify material is on the AML.
		701.02 1019.01 Mat. Lab	Accept.	-----	CQAF S 601	1/type/source/ shipment	3 Ln. Ft./roll width of fabric (min 18 ft^2)		-----	11 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML For pipe wrap visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.
METAL PIPE	Bituminous Coated Corrugated Steel Pipe & Pipe Arch	701.02 1007.02	Quality Control	-----	**Inspected, approved and marked by MFR. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. CD includes gage, diameter, coupling bands, gasket materials and hardware.
		701.02 1007.02	Accept.	-----	**Inspected, approved and marked by MFR. prior to use.**				-----	10 days	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CD includes gage, diameter, coupling bands, gasket materials and hardware. Documents added to CQAP Documentation Data base by CQAF.
	Corrugated. Aluminum Pipe & Pipe Arch	701.02 1007.05	Quality Control	-----	**Inspected, approved and marked by MFR. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. CD includes gage, diameter, coupling bands, gasket materials and hardware.
		701.02 1007.05	Accept.	-----	**Inspected, approved and marked by MFR. prior to use.**				-----	11 days	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CD includes gage, diameter, coupling bands, gasket materials and hardware. Documents added to CQAP Documentation Data base by CQAF.
	Structural Plate For Pipe & Pipe Arch	701.02 1007.04	Quality Control	-----	**Inspected, approved and marked by MFR. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. CD includes gage, diameter, coupling bands, gasket materials and hardware
		701.02 1007.04	Accept.	-----	**Inspected, approved and marked by MFR prior to use.**				-----	11 days	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CD includes gage, diameter, coupling bands, gasket materials and hardware. Documents added to CQAP Documentation Data base by CQAF.
	Galvanizing Repair Compound	1007.01 1008.05	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML.
		1007.01 1008.05	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML Visual inspection by CQAF.

SECTION 701 CULVERTS & STORM DRAINS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
MORTAR	Cement, Sand & Water	701.02 702.02	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		701.02 702.02	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF.
PLASTIC CULVERT PIPE		701.02 1006.07	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	CC includes split coupling bands, straps and gasket material. Visual inspection by QC. QC to provide document to CQAF. QC to verify material is on the AML.
		701.02 1006.07	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	AML Visual inspection by CQAF. CC includes split coupling bands, straps and gasket material.
	Mandrel Test	701.09(a)	Accept.	-----	QC	1/line of pipe	-----	-----	-----	-----	3	For 36 in. diameter or less. CQAF to observe and approve. For pipe larger than 36 inches in diameter deflection shall be determine by a method approved by the Design Builder.
PLASTIC YARD DRAIN PIPE & JOINTS		701.02 1006.09	Quality Control	-----	QC	1/type/size/ shipment	-----	CA	-----	-----	-----	*For corrugated Polyethylene 4 pieces 5 ft. length. Visual inspection by QC. QC to provide document to CQAF. QC to verify material is in the AML.
		701.02 1006.09 Mat. Lab	Accept.	-----	CQAF S 601	1/type/size/ shipment	6 ft length		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system	AML For corrugated Polyethylene 4 pieces 5 ft. length. Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
FITTINGS FOR PLASTIC YARD DRAIN PIPE & JOINTS		701.02 1006.09 QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		701.02 1006.09 Mat. Lab	Accept.	-----	CQAF S 601	1/type/size/ shipment	1 item		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	Sample when not accompanied by certificate or when questionable. Document added to CQAP Documentation Data base by CQAF.

SECTION 701 CULVERTS & STORM DRAINS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PLASTIC SOIL BLANKET	Thickness (Compacted)	203.12 QC	Quality Control			1/500 lin ft. /slope	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		203.10 CQAF	Accept.			1/1,000 lin ft. /slope	-----	-----	-----	-----	2	-----
	Plastic Soil	203.12 QC	Quality Control	PI TR428 % Silt TR407 pH TR430 % Organic TR413	QC S 401	1/1,000 yd^3*	-----	-----	-----	-----	-----	* Shall check sufficient to ensure specifications are met.
		203.10 CQAF	Accept.**	PI TR428 % Silt TR407 pH TR430 % Organic TR413	CQAF S 401	1/1,000 yd^3*	1 full sample sack	-----	-----	5 days	3	*Not required if tested & approved as excavation or borrow pit material. Pit approval allowed if identifiable strata can be isolated. **Shall support a satisfactory stand of grass in accordance with Sections 714 or 717. Design-Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.

SECTION 702 MANHOLES, JUNCTION BOXES, CATCH BASINS & END TREATMENTS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE TEST, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) REFER TO SECTION 901 OF THIS APPENDIX. (CLASS M)												
BACKFILL	Density	702.04 701.08(c) CQAF QC	Quality Control Accept.	**REFER TO SECTION 701 OF THIS APPENDIX.**								
	Flowable Fill	701.08(c) 702.04 CQAF QC	Quality Control Accept.	**REFER TO SECTION 710 OF THIS APPENDIX.**								
	Granular Material	702.04 701.08(c) CQAF QC	Quality Control Accept.	**REFER TO SECTION 701 OF THIS APPENDIX.**								
	Selected Soil	702.04 701.08(c) CQAF QC	Quality Control Accept.	**REFER TO SECTION 701 OF THIS APPENDIX.**								
BRICK	Sewer	702.04 1004.01 QC	Quality Control	ASTM C139 or AASHTO M91	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		702.04 1004.01 Mat. Lab.	Accept.	ASTM C139 or AASHTO M91	CQAF S 601	*1/25,000/ type	5 bricks	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
COVERS, FRAMES & GRATES		702.02 1018.04 QC	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		702.02 1018.04 Mat. Lab	Accept.	-----	-----	*1 bar	-----		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to receive form 4148 and CA for physical and chemical properties, from the QC. Documents added to CQAP Documentation Data base by CQAF. When questioned by CQAF; one tension test bar, ASTM A 48, specimen B, (threaded) representing lot of material from which item is cast to be submitted to Const. Fab.

SECTION 702 MANHOLES, JUNCTION BOXES, CATCH BASINS & END TREATMENTS (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE TEST, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) REFER TO SECTION 901 OF THIS APPENDIX. (CLASS M)												
CULVERT SAFETY ENDS	Pipe Runners & Hardware	702.04(c)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		702.04(c)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. document added to CQAP Documentation Data base by CQAF.
	Epoxy Resin Systems	702.04(c) 1017.02 QC	Quality Control	Table 1017-1 and 2	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC QC to provide document to CQAF QC to verify material is on the AML
		702.04(c) 1017.02 Mat. Lab	Accept.	Table 1017-1 and 2	CQAF S 601	1/lot or shipment*	1 qt each component friction top can		1 gal	11 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML *Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.
	Adhesive Anchor Systems	702.04(c) 1017.02 QC	Quality Control	Table 1017-1 and 2	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML Visual inspection by QC
		702.04(c) 1017.02 Mat. Lab	Accept.	Table 1017-1 and 2	CQAF S 601	1/lot or shipment	1 qt each component friction top can	-----	1 gal	11 days	3 OVF to submit to Mat. Lab for CQAF.	AML Visual inspection by CQAF. Sample only when questionable.
DRY-BATCHED SACKED CONCRETE	Compressive Strength	702.04(b) 712.02(e) QC	Quality Control	*Compressive Strength TR 230	QC	-----	1 sack 6 in. x 12 in. cylinder mold*	CC**	-----	-----	-----	AML *Cylinders made by DB from contents of sack mixed with water to produce a slump of 2 to 5 inches. **CC should show mix proportions. QC to verify material is on the AML Visual inspection by QC QC to provide document to CQAF
		702.04(b) 712.02(e) CQAF	Accept.	Compressive Strength TR 230	CQAF	1 set/1,000 sacks 3 cyl/set	1 sack 6 in. x 12 in. cylinder mold*		-----	-----	3 OVF verifies if the document is in the system.	AML *Cylinders made by DB from contents of sack mixed with water to produce a slump of 2 to 5 inches. **CC should show mix proportions. Documents added to CQAF Documentation Data base by CQAF.

SECTION 702 MANHOLES, JUNCTION BOXES, CATCH BASINS & END TREATMENTS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE TEST, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) REFER TO SECTION 901 OF THIS APPENDIX. (CLASS M)												
GASKET MATERIALS	Flexible Plastic Gasket	702.04 1006.06(b) QC	Quality Control	AASHTO M198	QC	-----	-----	CC**	-----	-----	-----	QC to verify material is on the AML Visual inspection by QC QC to provide document to CQAF **Gasket Lot no. listed on precast unit CC.
		702.04 1006.06(b) Mat. Lab	Accept.	AASHTO M198	CQAF	-----	3 ft length		-----	-----	3 OVF verifies if the document is in the system.	AML *Visual inspection by CQAF Sample only if questionable. **Gasket Lot no. listed on precast unit CC. document added to CQAP Documentation Data base by CQAF.
GEOTEXTILE FABRIC		702.02 1019.01 QC	Quality Control	Table 1019-1	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		702.02 1019.01 Mat. Lab	Accept.	Table 1019-1	CQAF S 601	1/type/ source/ shipment	3 lin ft/roll width of fabric* (min 18 ft^2)		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML Documents added to CQAP Documentation Data base by CQAF. For wrap, visual inspection by CQAF. Sample when not accompanied by certificate or when questionable.
JOINT FILLER		702.04 1005.01(c) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		702.04 1005.01(c)	Accept.	-----	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Sample only when questionable.
METAL WORK COATINGS	Metal Work Paint	1005.01(c)	Quality Control	ASTM B117	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		702.04(a) 702.02 1008.05 Mat. Lab	Accept.	ASTM B117	CQAF	1/batch	1 qt friction top can	-----	-----	10 days	3	-----
	Asphaltic Varnish	702.02 1008.03 QC	Quality Control	ASTM D1640	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		702.02 1008.03 Mat. Lab	Accept.	ASTM D1640	CQAF S 601	1/batch	1 qt friction top can	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.

SECTION 702 MANHOLES, JUNCTION BOXES, CATCH BASINS & END TREATMENTS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE TEST, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) REFER TO SECTION 901 OF THIS APPENDIX. (CLASS M)												
MORTAR	Cement, Sand & Water	702.02	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		702.02	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF. Sample only when questionable.
PRECAST REINFORCED CONCRETE UNITS												-----
		702.02 1016	Quality Control	Inspected approved and stamped by MFR. prior to use.				CD			-----	QC to verify material is on the AML Visual inspection by QC QC to provide document to CQAF CC to include lot number for Gasket
		702.02 1016	Accept.	Inspected approved and stamped by MFR. prior to use.					-----	-----	3 OVF verifies if the document is in the system.	AML Visual inspection by CQAF. CC to include lot number for Gasket Materials. Documents added to CQAP Documentation Data base by CQAF.
REINFORCEMENT	Bars	702.02 1009 QC	Quality Control	ASTM A615	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML Visual inspection by QC QC to provide document to CQAF
		702.02 1009 Mat. Lab	Accept.	ASTM A615	CQAF S 501	1/size/grade/ 150,000 lb/ source*	48 in. length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Chairs	702.04 805 806.06 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Metal chairs in contact with exterior surfaces of concrete shall be hot-dipped galvanized electroplated with zinc (GS Grades), plastic coated or stainless steel.
		702.04 805 806.06 Mat. Lab	Accept.	-----	CQAF S 501	1/type	1 chair	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. Chairs with plastic coated tips need not be sampled. Metal chairs in contact with exterior surfaces of concrete shall be hot-dipped galvanized electroplated with zinc (GS Grades), plastic coated or stainless steel.

SECTION 702 MANHOLES, JUNCTION BOXES, CATCH BASINS & END TREATMENTS (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE TEST, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) REFER TO SECTION 901 OF THIS APPENDIX. (CLASS M)												
REINFORCEMENT (Cont'd)	Wire Fabric	702.02 702.04 1009.01(d) QC	Quality Control	ASTM D185	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		702.02 702.04 1009.01(d) Mat. Lab	Accept.	ASTM D185	CQAF* S 501	1/shipment	48 in. x 48 in.	-----	-----	11 days	3	*Sampled by Const. Fab. for precast items. Except for MSEW and other non-typical pre-cast items.
SACKS		702.04(b) 1018.20 QC	Quality Control	AASHTO M182	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		702.04(b) 1018.20 Mat. Lab	Accept.	AASHTO M182	CQAF S 501	1/type/ source	1 sack	-----	-----	9 days	3 OVF to submit to Dist. Lab for CQAF.	*Visual inspection by CQAF. Sample only when if questionable.
STONE		702.04(b) 712.02(d) QC	Quality Control	Visual inspection and/or gradation check (at source, Proj. Site, or both)				-----	-----	-----	-----	QC to verify material is on the AML
		702.04(b) 712.02(d) CQAF	Accept.	Visual inspection and/or gradation check (at source, Proj. Site, or both, at CQAF's option).*				-----	-----	-----	-----	AML *Materials Lab available for assistance prior to use.

SECTION 703 UNDERDRAIN SYSTEMS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CONCRETE BASE COURSE & SURFACING		-----	Quality Control	REFER TO SECTIONS 502 AND 510 OF THIS APPENDIX.								
		-----	Accept.									
BACKFILL	Aggregate (Size 3)	703.02 1003.05 QC	Quality Control	%Crushed TR 306 Gradation TR113 Deleterious TR 119	QC S 101	1/1,000 yd^3	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		703.02 1003.05 CQAF	Accept.	%Crushed TR 306 Gradation TR113 Deleterious TR 119	CQAF S 101	1/1,000 yd^3	1 full sample sack	-----	-----	4 days	2	Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency.
	Granular Material	703.02 1003.07 QC	Quality Control	Gradation TR 113 PI TR 428	QC S 101	1/1,000 yd^3	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		703.02 1003.07 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/1,000 yd^3	1 full sample sack	-----	-----	4 days	2	Design Builder may propose a lower frequency after 8 consecutive passing test and provided QC maintain their minimum sampling testing frequency
GEOCOMPOSITE WALL DRAINS		703.02 1019.02 QC	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual Inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		703.02 1019.02 Mat. Lab	Accept.	-----	CQAF S 601	1/ type/ lot or fittings: 1/ type/ shipment	4 ft^2		-----	11 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML Documents added to CQAP Documentation Data base by CQAF.
GEOTEXTILE FABRIC		703.02 1019.01 QC	Quality Control	Table 1019-1	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF. Visual inspection by QC.
		703.02 1019.01 Mat. Lab	Accept.	Table 1019-1	CQAF S 614	1/type/ source/ shipment	3 lin ft/roll width of fabric*		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML *Sample a minimum of 18 ft^2. Documents added to CQAP Documentation Data base by CQAF.

SECTION 703 UNDERDRAIN SYSTEMS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
HARDWARE CLOTH	Rodent Screen	703.02 1018.21 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		703.02 1018.21 Mat. Lab	Accept.	-----	CQAF S 601	1/shipment*	1 screen	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF	*Visual inspection by CQAF. Sample only when questionable.
METAL PIPE	Perforated Bituminous Coated Corrugated Steel	703.02 1018.22 QC	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		703.02 1018.22 CQAF	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. CD includes gage, diameter, coupling bands, gasket material and hardware. Documents added to CQAP Documentation Data base by CQAF.
	Perforated Corrugated Aluminum	703.02 1007.06 QC	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		703.02 1007.06 CQAF	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CD includes gage, diameter, coupling bands, gasket material and hardware. Documents added to CQAP Documentation Data base by CQAF.
PLASTIC PIPE		703.02 1006.08 QC	Quality Control	-----	QC	-----	-----	CA	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. QC to verify material is on the AML.
		703.02 1006.08 Mat. Lab	Accept.	-----	CQAF S 601	1/type/size/ shipment	6 ft. length*		less than 1,000 ft	10 days	3 OVF to submit Mat. Lab. for CQAF. OVF verifies if the document is in the system.	AML *For corrugated Polyethylene 4 pieces 5 ft. length. Documents added to CQAP Documentation Data base by CQAF.
PLASTIC PIPE FITTINGS		703.02 1006.08 QC	Quality Control	-----	QC	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML.
		703.02 1006.08 Mat. Lab	Accept.	-----	CQAF S 601	3/type/size/ shipment	-----		less than 1,000 ft	10 days	3 OVF to submit Mat. Lab. for CQAF. OVF verifies if the document is in the system.	AML Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 703 UNDERDRAIN SYSTEMS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PORTLAND CEMENT CONCRETE	Headwalls (Class M)	703.03(b) QC	Quality Control	REFER TO SECTION 901 OF THIS APPENDIX.								
		703.03(b) CQAF	Accept.									
PRECAST CONCRETE HEADWALLS		703.02 1016.03 QC	Quality Control	-----	Inspected, stamped and approved by MFR prior to use.			CD	-----	-----	-----	Visual inspection by QC. QC to verify stamp. QC to provide document to CQAF.
		703.02 1016.03 CQAF	Accept.	-----	Inspected, stamped and approved by MFR prior to use.				-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to verify stamp. When questionable, contact Const. Fab. Unit prior to use. Documents added to CQAP Documentation Data base by CQAF.
REINFORCING STEEL	Bars	1009.01 QC	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1009.01 Mat. Lab	Accept.	-----	CQAF S 501	1/source*	48 in. length		-----	10 days	3 OVF to submit Mat. Lab for CQAF. OVF verifies if the document is in the system.	*If listed on AML material with CA need not be sampled. Sample for verification when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Wire Fabric	1009.01(d)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		1009.01(d) Mat. Lab	Accept.	ASTM A185	CQAF S 501	1/shipment	48 in. X 48 in.	-----	-----	11 days	3 OVF to submit Mat. Lab for CQAF.	Visual inspection by CQAF. Sample only when questionable.

SECTION 704 GUARD RAIL

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Class M)	Mix Designs, Materials & Tests	704.02	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
GALVANIZING REPAIR COMPOUND		704.03(b) 811.12	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML
		704.03(b) 811.12 Mat. Lab	Accept.	-----	CQAF S 601	1/type	1 can	-----	-----	-----	3 OVF to submit to Mat. Lab for CQAF.	AML Visual inspection by CQAF. Sample only when questionable.
HARDWARE	Accessories, Bolts, End Anchor Rods, Fittings, Nuts and Washers	704.02 1010.10	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by CQ. QC to verify material is on the AML. QC to provide document to CQAF.
		704.02 1010.10 Mat. Lab	Accept.	-----	CQAF S 501	1/size/type/ shipment*	1 of each item		-----	12 days	3 OVF to submit to Mat. Lab for CQAF.	Visual inspection sample by CQAF only if not listed on CC or when questionable. Documents added to CQAP Documentation Data base by CQAF.
METAL BEAM RAIL AND END TREATMENTS		704.02 1010.08	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by CQ. QC to verify material is on the AML. Rail shall be stamped with the name or brand of manufacturer, ID symbol or code for heat, no. and coating of lot, AASHTO spec. no., and class and type.
		704.02 1010.08	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	AML Visual inspection by CQAF. Rail shall be stamped with the name or brand of manufacturer, ID symbol or code for heat, no. and coating of lot, AASHTO spec. no., and class and type. Documents added to CQAP Documentation Data base by CQAF.
POSTS AND SPACER BLOCKS	Steel	704.02 1010.09(b)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		704.02 1010.09(b)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
	Timber	704.02 1010.09(a)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		704.02 1010.09(a)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 704 GUARD RAIL (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
REINFORCEMENT	Wire Fabric	1009.01(d)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		1009.01(d) Mat. Lab	Accept.	ASTM A185	CQAF S 501	1/shipment	48 in. x 48 in.	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Sample only when questionable.
WIRE ROPE & FITTINGS		1010.11	Quality Control	-----	-----	-----	-----	CC*	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		1010.11 Mat. Lab	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	*Wire rope only. CQAF visually inspects fittings. Documents added to CQAP Documentation Data base by CQAF.
WELDING		704.02	Quality Control	REFER TO SECTION 815 OF THIS APPENDIX.								
			Accept.									

SECTION 705 FENCES

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CHAIN LINK FENCE, GATES AND APPURTENANCES	Fabric (Wire)	705.02 1010.07 Standard Plans	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		705.02 1010.07 Standard Plans Mat. Lab	Accept.	AASHTO M 181	CQAF S 501	1/lot or shipment	36 in. length	-----	1,000 lin ft of fence*	11 days	3 OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Sample only when questionable.
	Fittings and Misc. Hardware	705.02 1010.07 Standard Plans	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		705.02 1010.07 Standard Plans Mat. Lab	Accept.	AASHTO M 181	CQAF S 501	1/type/size*	1 of each item**	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. **One piece of each type of fitting or hardware used is to be submitted.
	Gate Frames, Posts, Rails	705.02 1010.07 Standard Plans	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		705.02 1010.07 Standard Plans Mat. Lab	Accept.	AASHTO M 181	CQAF S 501	1/type/lot or shipment	1 post or 7 ft section	-----	1,000 lin ft of fence*	11 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Hog Rings, Tension Wire, Wire Fabric Ties, & Wire Ties	705.02 1010.07 Standard Plans	Quality Control	-----								Visual inspection by QC.
		705.02 1010.07 Standard Plans Mat. Lab	Accept.	AASHTO M 181	CQAF S 501	1/type/lot or shipment	48 in. length or 3 pieces*	-----	1,000 lin ft of fence**	11 days	3 OVF to submit to Mat. Lab for CQAF.	*Wire ties, wire fabric ties and hog rings require only 3 precut pieces for samples. **Visual inspection by CQAF. Sample only when questionable.
CONCRETE (Class R)	Mix Designs, Materials & Tests	705.02	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
FIELD & LINE TYPE FENCE	Barbed Wire	705.02 1010.01(a) Standard Plans	Quality Control	-----	-----	-----	-----	CC or MFR Label	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		705.02 1010.01(a) Standard Plans Mat. Lab	Accept.	-----	CQAF S 501	1/lot or shipment*	30 ft length		1,000 lin ft of fence	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 705 FENCES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FIELD & LINE TYPE FENCE (Cont'd)	Gates	705.02 1010.06(a) Standard Plans	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual Inspection and dimensional check by QC. QC to provide document to CQAF.
		705.02 1010.06(a) Standard Plans	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection and dimensional check by CQAF. Documents added to CQAP Documentation Data base by CQAF.
	Gate Hardware	705.02 1010.06(c) Standard Plans QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual Inspection by QC.
		705.02 1010.06(c) Standard Plans Mat. Lab	Accept.	-----	CQAF S 501	1/ type*	1 of each item	-----	1,000 lin ft of fence	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Metal Fasteners	705.02 1010.05 Standard Plans	Quality Control	ASTM A 90	-----	-----	-----	-----	-----	-----	-----	Visual Inspection by QC.
		705.02 1010.05 Standard Plans Mat. Lab	Accept.	ASTM A 90	CQAF S 501	1/ type/ shipment*	12 fasteners	-----	1,000 lin ft of fence	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Staples & Nails	705.02 1010.04 Standard Plans	Quality Control	ASTM A 90	-----	-----	-----	-----	-----	-----	-----	Visual Inspection by QC.
		705.02 1010.04 Standard Plans Mat. Lab	Accept.	ASTM A 90	CQAF S 501	1/ size/ shipment*	12 staples	-----	1,000 lin ft of fence	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Steel Braces	705.02 1010.06(b)(2) Standard Plans	Quality Control	ASTM A 53	-----	-----	-----	-----	-----	-----	-----	Visual Inspection by QC.
		705.02 1010.06(b)(2) Standard Plans Mat. Lab	Accept.	ASTM A 53	CQAF S 501	1/ type/ lot or shipment*	1 brace	-----	1,000 lin ft of fence	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.

SECTION 705 FENCES (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FIELD & LINE TYPE FENCE (Cont'd)	Steel Gate Posts	705.02 1010.06(b)(2) Standard Plans	Quality Control	ASTM A 53	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		705.02 1010.06(b)(2) Standard Plans Mat. Lab	Accept.	ASTM A 53	CQAF S 501	1/ type/ lot or shipment*	1 post	-----	1,000 lin ft of fence	-----	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Steel Gate Stops	705.02 1010.06(d)(2) Standard Plans	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		705.02 1010.06(d)(2) Standard Plans Mat. Lab	Accept.	-----	CQAF S 501	1/ type/ lot or shipment*	1 stop	-----	1,000 lin ft of fence	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Steel Posts with Anchor Plates	705.02 1010.03(b) Standard Plans	Quality Control	-----	-----	-----	-----	CC or MFR Label	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		705.02 1010.03(b) Standard Plans Mat. Lab	Accept.	-----	CQAF S 501	1/ type/ lot or shipment*	1 post with plate		1,000 lin ft of fence	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Timber Posts	705.02 1010.03(a) QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		705.02 1010.03(a) Mat. Lab.	Accept.	-----	CQAF S 501	-----	-----		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Woven Wire	705.02 1010.02	Quality Control	-----	-----	-----	-----	CC or MFR Label	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		705.02 1010.02 Mat. Lab	Accept.	-----	CQAF S 501	1/lot or shipment*	36 in. length		1,000 lin ft of fence	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 705 FENCES (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FIELD & LINE TYPE FENCE (Cont'd)	Timber Gate Posts, Timber Gate Stops, Timber Stop Posts	705.02 1010.06(b)(1)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		705.02 1010.06(b)(1) Mat. Lab.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	*Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
GALVANIZING REPAIR COMPOUND		705.06(d) 1008.05	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		705.06(d) 1008.05 Mat. Lab.	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	AML Visual inspection by CQAF.
GROUND ROD ASSEMBLY	Ground Rod, Wire & Clamp	705.02 1018.05	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. (NOTE: Coated steel hardware is not permitted.)
		705.02 1018.05 Mat. Lab	Accept.	-----	CQAF S 501	1/ item*	1 of each item Wire 18 in. length	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. (NOTE: Coated steel hardware is not permitted.) Sample only when questionable.

SECTION 706 CONCRETE WALKS, DRIVES AND INCIDENTAL PAVING

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Class M)	Mix Designs, Materials &	706.02	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
CURING MATERIALS		706.02 1011.01 Mat. Lab	Quality Control Accept.	REFER TO SECTION 601 OF THIS APPENDIX.								
JOINT FILLER	Preformed Bituminous Type	706.02 706.03(e)(1)	Quality Control		-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		706.02 706.03(e)(1) 1005.01(c) Mat. Lab	Accept.		CQAF S 501	-----	36 in. length	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
REINFORCING STEEL		706.03(g) QC	Quality Control	REFER TO SECTION 601 OF THIS APPENDIX.								
		706.02 1009.01 Mat. Lab	Accept.									
DETECTABLE WARNING SURFACE FOR HANDICAP RAMPS (Truncated Domes)		706.03(g) QC	Quality Control		-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		706.03(g) Mat. Lab	Accept.		CQAF S 501	-----	1 section		-----	-----	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.

T 706 - 1/1

SECTION 707 CURBS AND GUTTERS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ASPHALTIC CURB			Quality Control	For details on Additives, Aggregates, Asphalt Cement, Asphaltic Concrete, Asphaltic Tack Coat, Asphalt Mix Release Agent and Mineral Filler, REFER TO SECTION 502 of this Appendix.								Visual inspection by QC.
			Accept.									Visual inspection by and to the satisfaction of the CQAF.
BACKFILL	Usable Soil	707.02 203.06(a) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		707.02 203.06(a) CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by CQAF.
CONCRETE (Class M)	Mix Designs, Materials &	707.02	Quality Control	REFER TO SECTION 901 OF THIS APPENDIX.								
			Accept.									
CURING MATERIALS		707.02 1011.01	Quality Control	REFER TO SECTION 601 OF THIS APPENDIX.								
			Accept.									
FORM RELEASE AGENT		707.02 1018.24	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		707.02 1018.24 Mat. Lab	Accept.	-----	CQAF S 601	1/lot	1 qt plastic bottle	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	AML Visual inspection by CQAF. Sample only when questionable.
JOINT MATERIALS (Sealants, Filler, & Seals)		707.02 1005	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		707.02 1005 Mat. Lab	Accept.	-----	CQAF S 601	1/5,000 lin ft*	35 in. length or 1 gal	-----	-----	17 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
REINFORCEMENT	Tie Bars	1009.03	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. OC to verify material is on the AML.
		1009.03 Mat. Lab	Accept.	-----	CQAF S 501	1/size/ source*	1 bar	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML *Visual inspection by CQAF. Sample only when questionable.

T 707 - 1/1

SECTION 708 RIGHT-OF-WAY MONUMENTS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
RIGHT-OF-WAY MONUMENTS	Monuments, Steel Stakes & Witness Posts	708.02 QC	Quality Control	-----	Type as shown on plans or approved by the DOTD Location & Survey Section Administrator.			-----	-----	-----	-----	Visual inspection by QC. DB to provide document to CQAF.
		708.02 Mat. Lab/ Const. Fab.	Accept.	-----	Type as shown on plans or approved by the DOTD Location & Survey Section Administrator.			-----	-----	-----	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	DB to obtain approval letter from DOTD Location & Survey Section Administrator for substitutions. Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.

T 708 - 1/1

SECTION 709 STEEL CATTLE GUARDS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL	Density	709.03 QC	Quality Control	-----	QC	1/location	-----	-----	-----	-----	-----	Six (6) inch layer to the density of surrounding soil, if in roadway REFER TO SECTION 203.07.
		709.03 CQAF	Accept.	-----	CQAF	1/location	-----	-----	-----	-----	-----	Six (6) inch layer to the density of surrounding soil, if in roadway REFER TO SECTION 203.07.
CONCRETE (Class M)	Mix Designs, Materials &	709.02	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
HARDWARE	Bolts, Nuts and Washers	709.02	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		709.02 Mat. Lab	Accept.	ASTM A 307 and 536	CQAF S 501	1/size/type/ shipment*	1 of each item**	-----	-----	12 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. **One piece of each size and type of hardware used is be submitted.
PAINT PROTECTIVE		709.02	Quality Control Accept.	REFER TO SECTION 811 OF THIS APPENDIX.								
REINFORCING STEEL	Bars	709.02 1009.01	Quality Control	-----	QC	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		709.02 1009.01 Mat. Lab	Accept.	-----	CQAF S 501	1/size/ source*	48 in. length	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML *Visual inspection by CQAF. Sample only when questionable.
STEEL CATTLE GUARD	Rails & Pipe Wings	709.02 1007.13 Std. Pl. KG-01 Const. Fab.	Quality Control	-----	Inspected by DOTD Const. Fab. Insp. prior to use.			-----	-----	-----	-----	QC to receive inspection report from DOTD Const. Fab. Insp. QC to provide document to CQAF.
			Accept.	-----				-----	-----	-----	3 OVF verifies if the document is in the system	CQAF to receive inspection report form DOTD Const. Fab. Engr. Documents added to CQAP Documentation Data base by CQAF.
TREATED TIMBER		1014.01 QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC.
		1014.01 Mat. Lab/ Const. Fab.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	Visual inspection at project site by CQAF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 710 FLOWABLE FILL

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ALL MATERIALS USED MUST MEET THE APPROPRATE REQUIREMENTS OF SECTION 901												
ADMIXTURES		710.02 1011.02	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
PORTLAND CEMENT		710.02 1001.01 Mat. Lab.	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
FLOWABLE FILL	Mix Design	710.02 QC	Design	-----	*	1/mix design	-----	-----	-----	3 days		AML DB to submit mix design to CQAF for acceptance. Trial batch required by design builder & witnessed by CQAF
		710.02 CQAF	Accept.	-----	-----	1/ mix design	-----	-----	-----	3 days	3 OVF verifies if the document is in the system	Documents added to CQAP Documentation Data base by CQAF. Acceptance by the OVF is required prior to starting work.
FLY ASH		710.02 1018.15	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
SAND		710.02 1003.02	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX.								
WATER		710.02 1018.01	Quality Control	-----	QC S 303	1/source*						*Drinkable water need not be sampled.
			Accept.	-----	CQAF S 303	1/source*	1 qt. plastic bottle	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	*Drinkable water need not be sampled.

SECTION 711 RIPRAP

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GEOTEXTILE FABRIC		711.02 1019.01	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		711.02 1019.01 Mat. Lab	Accept.	Table 1019-1	CQAF S 601	1/type/ source/ shipment	3 lin ft/roll width of fabric*		-----	10 days	3 OVF to submit to Material Lab for CQAF. OVF verifies if the document is in the system.	AML *Sample a minimum of 18 ft^2. Documents added to CQAP Documentation Data base by CQAF.
RECYCLED CONCRETE		711.02 1003.01 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Gradation and unit weight provided by suppliers. Must be from an approved source.
		711.02 1003.01 CQAF	Accept.	-----	**Visual inspection and/or gradation check (at source, project site, or both, at CQAF's option.)**			-----	-----	-----	3	Gradation and unit weight provided suppliers. Must be from an approved source.
STONE		711.02 1003.01 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		711.02 1003.01 CQAF	Accept.	-----	**Visual inspection and/or gradation check (at source, project site, or both, at CQAF's option.)**			-----	-----	-----	3	AML

SECTION 712 REVETMENTS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL	Usable Soil	712.03 QC	Quality Control	Classification TR 423	QC	*1/1,000 yd^3	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		712.03 CQAF	Accept.	Classification TR 423	CQAF S 401	1/1,000 yd^3	1 full sample sack	-----	-----	10 days	3	-----
CONCRETE (Class R)	Mix Designs, Materials &	712.02	Quality Control Accept.	**REFER TO SECTION 901 0F THIS APPENDIX.**								
CURING MATERIALS		1011.01 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 601 0F THIS APPENDIX.**								
DRY-BATCHED PREPACKAGED SACKED CONCRETE	Compressive Strength	712.02(e)	Quality Control	Compress. Strength TR 226 or TR 230	QC S 601	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF. Cylinders made from contents of sack mixed by DB. Water to produce a slump of 2 to 5 inches. CC should show proportions. QC to provide document to CQAF.
		712.02(e) CQAF	Accept.	Compress. Strength TR 226 or TR 230	CQAF S601	1 set of 3 cy/set/1,000 sacks*	1 sack 4 in. x 8 in. cylinder mold		-----	-----	3 OVF verifies if the document is in the system	AML *Cylinders made from contents of sack mixed by QC. Water to produce a slump of 2 to 5 inches. CC should show mix proportions. Documents added to CQAP Documentation Data base by CQAF.
GEOTEXTILE FABRIC		1019.01	Quality Control	Table 1019-1	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		1019.01 Mat. Lab	Accept.	Table 1019-1	CQAF S 601	1/type/source/ shipment	3 lin ft/roll width of fabric*		-----	10 days	3 OVF to submit to Material Lab for CQAF. OVF verifies if the document is in the system.	AML *Sample a minimum of 18 ft^2. Documents added to CQAP Documentation Data base by CQAF.

SECTION 712 REVETMENTS (cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
JOINT FILLER		1005.01	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		1005.01 Mat. Lab	Accept.	-----	CQAF S 601	1/5,000 lin ft/ type*	36 in. length	-----	-----	11 days	3 OVF to submit to Material Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
RECYCLED CONCRETE & STONE		712.02(d)	Quality Control / Accept.	**REFER TO SECTION 711 OF THIS APPENDIX.**								
SACKS		1018.2	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		1018.20 Mat. Lab	Accept.	-----	CQAF S 601	1/type/ source*	1 sack	-----	-----	9 days	3 OVF to submit to Material Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
USABLE SOIL		712.02(F)	Quality Control / Accept.	**REFER TO SECTION 203 OF THIS APPENDIX.**								

SECTION 713 TEMPORARY TRAFFIC CONTROL

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PORTABLE WORK ZONE DEVICES			Quality Control Accept.	REFER TO SPECIFICATIONS FOR DETAILS ON NCHRP 350 REQUIREMENTS FOR PORTABLE WORK ZONE DEVICES								
ADVANCE WARNING ARROW PANEL		713.04(b)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. Required documentation is detailed in 713.07.
		713.04(b) CQAF	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. Required documentation is detailed in 713.07.
BARRICADE WARNING LIGHTS		713.02 1018.12	Quality Control	-----	-----	-----	-----	CC*	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF. *See Specification Subsection 1018.12(c) for certification requirements.
		713.02 1018.12 Mat. Lab	Accept.	-----	CQAF S 601	1/type*	1 unit		-----	-----	3 OVF verifies if the document is in the system	AML *Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. *See Specification Subsection 1018.12(c) for certification requirements. Sample only when questionable.
DRUMS, CONES, TUBULAR MARKERS, AND FLEXIBLE DELINEATORS		Std. Pl. TC Series	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF. Replace as necessary. Required documentation is detailed in 713.07.
		Std. Pl. TC Series Mat. Lab	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	AML Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF. Replace as necessary. Required documentation is detailed in 713.07.
GLASS BEADS FOR THERMOPLASTIC PAVEMENT MARKINGS AND TRAFFIC PAINT	Drop-on Application	713.06 1015.13	Quality Control	-----	-----	-----	-----	CD*	-----	-----	-----	QC to provide document to CQAF. *CD issued when presampled by Dist. Lab and preapproved.
		713.06 1015.13 Mat. Lab	Accept.	Gradation ASTM D1214	CQAF S 608	1/lot	1-50 lb bag		-----	10 days	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system	*CD issued when presampled by Dist. Lab and preapproved. Sample if not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 713 TEMPORARY TRAFFIC CONTROL (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PORTABLE FLASHER SUPPORTS		Std. Pl. TC Series	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. Required documentation is detailed in 713.07.
		Std. Pl. TC Series	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. Required documentation is detailed in 713.07.
RAISED PAVEMENT MARKERS & ADHESIVES		713.02 1015.09 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 731 OF THIS APPENDIX.**								
TEMPORARY PAVEMENT MARKING TAPE	Temporary Striping Tape (Type I & II)	1015.08 QC	Quality Control	ASTM D4592 Type I or II	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC. QC to provide document to CQAF.
		1015.08 Mat. Lab	Accept.	ASTM D4592 Type I or II	CQAF S 601	-----	-----		-----	10 days	3 OVF verifies if the document is in the system.	AML Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. Replace as necessary.
TEMPORARY SIGNS, VERTICAL PANELS & BARRICADES	Barricades, Vertical Panels & Signs	713.07* QC	Quality Control	-----	-----	-----	-----	CA/CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. Replace as necessary. Required documentation is detailed in 713.07. **CA for aluminum, CC for wood, no certification for plastic.
		MUTCD, Project Plans DOTD Const. Fab 713.07*	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. *Required documentation is detailed in 713.07 . Documents added to CQAP Documentation Data base by CQAF. Replace as necessary. CA for aluminum, CC for wood, no certification for plastic.
THERMOPLASTIC PAVEMENT MARKINGS		713.02 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 732 OF THIS APPENDIX.**								
TRAFFIC PAINT		713.02 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 737 OF THIS APPENDIX.**								

SECTION 713 TEMPORARY TRAFFIC CONTROL (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BARRIERS	Precast Concrete	713.05 DOTD Const. Fab	Quality Control Accept.	REFER TO SECTION 733 OF THIS APPENDIX.								
	Water Filled	713.07* Std. Pl. TC Series QC	Quality Control	-----	-----	-----	-----	CA/CC**	-----	-----	-----	Visual inspection by QC. CQ to provide document to CQAF. *Required documentation is detailed in 713.07. **CA for aluminum, CC for wood, no certification for plastics.
		713.07* Std. Pl. TC Series CQAF	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. *Required documentation is detailed in 713.07. **CA for aluminum, CC for wood, no certification for plastics. Documents added to CQAP Documentation Data base by CQAF

SECTION 714 SODDING

T 714 - 1/1

MATERIAL	REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGRICULTURAL LIME	714.02 1018.17 Mat. Lab	Quality Control / Accept.	REFER TO SECTION 718 OF THIS APPENDIX.								
FERTILIZER	714.02 1018.16 CQAF	Quality Control / Accept.	REFER TO SECTION 718 OF THIS APPENDIX.								
SOD	714.02* CQAF	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	*Visual inspection by QC.
	714.02* CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	*Visual inspection by CQAF or DOTD/OVF Roadside Development personnel.
WATER	714.02 1018.01 QC	Quality Control	AASHTO T26	QC S 303	1/source*	-----	-----	-----	-----	-----	*Drinkable water need not be sampled.
	714.02 1018.01 Mat. Lab	Accept.	AASHTO T26	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	11 days	OVF to submit to Mat. Lab for CQAF.	*Drinkable water need not be sampled.

SECTION 715 TOPSOIL

T 715 - 1/1

MATERIAL	REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGRICULTURAL LIME	715.02 1018.17 Mat. Lab	Quality Control / Accept.	REFER TO SECTION 718 OF THIS APPENDIX.								
TOPSOIL	715.01 715.02 QC	Quality Control	-----	-----	1/1,000 yd3	1 full sample sack	CA	-----	-----	-----	*Design Builder to provide report from established soil testing entity. QC to provide document to CQAF.
	715.02 CQAF	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 716 VEGETATIVE & FIBER MULCH

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
TACKING AGENTS	Emulsified Asphalt	716.03(a) 1002.01	Quality Control	-----	QC/CQAF	1/shipment	1 gal plastic bottle	CD	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		716.03(a) 1002.01 CQAF	Accept.	-----	-----	1/shipment			-----	4 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF	AML Visual inspection by CQAF. *Sample when not accompanied by CD or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Tacking Agent	713.03(a)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		713.03(a) CQAF	Accept.	-----	-----	-----	-----		-----	-----	OVF verifies if the document is in the system.	AML Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
VEGETATIVE MULCH		716.03(a) 1018.19(a)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		716.03(a) 1018.19(a)	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by CQAF or DOTD Roadside Development personnel.
FIBER MULCH		716.03(a) 1018.19(a)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML.
		716.03(b) 1018.19(b)	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	AML Visual inspection by CQAF or DOTD/OVF Roadside Development personnel.

SECTION 717 SEEDING

MATERIAL	REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGRICULTURAL LIME	717.02 1018.17 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 718 OF THIS APPENDIX.**								
FERTILIZER	717.02 1018.16 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 718 OF THIS APPENDIX.**								
SEED	1018.18 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Analysis tag plus test report for LA Department of Agriculture. Seed test reports from other states are acceptable provided specification requirements are met. Consult DOTD Roadside Development personnel for seed selection. QC to provide analysis test report and tags to CQAF.
	1018.18 CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Consult DOTD Roadside Development personnel for seed selection. Analysis test report only to be added to CQAP. Documents added to CQAP Documentation Data base by CQAF.
TOPSOIL	715.02	Quality Control Accept.	**REFER TO SECTION 715 OF THIS APPENDIX.**								
WATER	717.02 QC	Quality Control	AASHTO T26	QC S 303	1/source*	-----	-----	-----	-----	-----	*Drinkable water need not be sampled.
	717.02 Mat. Lab	Accept.	AASHTO T26	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	*Drinkable water need not be sampled.

SECTION 718 FERTILIZER AND AGRICULTURAL LIME

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGRICULTURAL LIME		718.03(b) 1018.17	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		718.03(b) 1018.17	Accept.	-----	-----	-----	-----		-----	-----	OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
FERTILIZER		718.03(a) 1018.16	Quality Control	-----	-----	-----	-----	CA*	-----	-----	-----	For bag shipments, visual inspection of bag markings by QC. *For bulk shipments, Design Builder to receive CA. QC to provide document to CQAF.
		718.03(a) 1018.16	Accept.	-----	-----	-----	-----		-----	-----	OVF verifies if the document is in the system	For bag shipments, visual inspection of bag markings by CQAF. *For bulk shipments, CQAF to receive CA. Documents added to CQAP Documentation Data base by CQAF.

T 718 - 1/1

SECTION 719 LANDSCAPING

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGRICULTURAL LIME		719.03 1018.17	Quality Control Accept.	**REFER TO SECTION 718 OF THIS APPENDIX.**								
BACKFILL SOIL	Mortar Sand, Pine Bark, Water Management Gel, Manure, Mycorrhizal Inoculant & Topsoil	719.03(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Design-Builder to provide proportions of mixture.
		719.03(b)	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF of all ingredients prior to mixing. Proportions of mixture verified by CQAF.
FERTILIZER		719.03 1018.16 CQAF	Quality Control Accept.	**REFER TO SECTION 718 OF THIS APPENDIX.**								
MULCHING	Other Materials	719.03	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		719.03	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF.
	Pine Bark	719.03	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		719.03	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF.
PLANTS	Containered	719.05(e) Design Builder	Quality Control Accept.	**Documented visual determination of specification compliance by Design Builder Landscape Architect at nursery source. All plants shall be legibly tagged. Acceptance is based on inspection at the end of one full growing season.**								
	Native Stock	719.05(e) Design Builder	Quality Control Accept.	**Documented visual determination of specification compliance by Design Builder Landscape Architect at nursery source. All plants shall be legibly tagged. Acceptance is based on inspection at the end of one full growing season.**								
SOIL	Planting Area	719.06(c) QC	Quality Control	-----	QC	*1/planting area	-----	CA	-----	-----	-----	*Design Builder to provide report from established soil testing entity. Visual inspection by QC. QC to provide document to CQAF.
		719.06(c)	Accept.	-----	-----	1/planting area	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.

T 719 - 1/2

SECTION 719 LANDSCAPING (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
TOPSOIL		719.03(e)	Quality Control	-----	QC*	-----	-----	CA	-----	-----	-----	*Design Builder to provide report from established soil testing entity. Visual inspection by QC. QC to provide document to CQAF
		719.03(e)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
WATER		719.03 719.06(i) QC	Quality Control	AASHTO T26	QC S 303	1/source*	-----	-----	-----	-----	-----	*Drinkable water need not be sampled.
		719.03 719.06(i) Mat. Lab	Accept.	AASHTO T26	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	11 days	3 OVF to submit to Mat.Lab for CQAF.	*Drinkable water need not be sampled.

SECTION 720 EROSION CONTROL SYSTEMS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
EROSION CONTROL SYSTEMS	Rolled Products	720.02(b) 1018.23	Quality Control	-----	-----	-----	-----	CD**	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		720.02(b) 1018.23 Mat. Lab	Accept.	-----	CQAF S 613	1/200 rolls/ Mfr.'s Lot	3 yd^2**		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*When sampling moisture sensitive material use moisture proof bag. Documents added to CQAP Documentation Data base by CQAF. **Sample when not accompanied by a CD or when questionable.
	Bagged Products	720.02(b) 1018.23	Quality Control	-----	-----	-----	-----	CD*	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		720.02(b) 1018.23 Mat. Lab	Accept.	-----	CQAF S 613	1/200 bags/ Mfr.'s Lot	1 bag		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. *Sample when not accompanied by a CD or when questionable.
	Hardware	720.02(b) 1018.23	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		720.02(b) 1018.23	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML Visual inspection by CQAF.
	Additives	720.02 1018.23	Quality Control	-----	-----	-----	-----	CD*	-----	-----	-----	QC to verify material is on the AML. *QC to provide document to CQAF.
		720.02 1018.23 Mat. Lab	Accept.	-----	CQAF S 601	1 quart/mfr's lot	1 item or 1 quart		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Documents added to CQAP Documentation Data base by CQAF. *Sample when not accompanied by a CD or when questionable.

T 720 - 1/1

SECTION 721 MOWING, TRIMMING & DEBRIS COLLECTION

T 721 - 1/1

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
HERBICIDES		721.03(e) QC	Quality Control Accept.		DOTD Dist. Roadside Development Coordinator	-----	-----	-----	-----	-----	-----	Consult the District's Roadside Development Coordinator for use, type & rate of application.

SECTION 723 GRANULAR MATERIAL

T 723 - 1/1

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GRANULAR MATERIAL		723.02 1003.07 QC	Quality Control	PI TR 428 Gradation TR 113	QC	1/1,000 yd^3*	1 full sample sack	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met.
		723.02 1003.07 CQAF	Accept.	PI TR 428 Gradation TR 113	CQAF S 101	1/1,000 yd^3	1 full sample sack	-----	-----	4 days	2	Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
MATERIAL ON ROADWAY	Density	723.03 QC	Quality Control	In-Place Density TR 401	QC	1/500 lin ft/ 2-lane rdwy or 1/1,000 lin ft/ shoulder	-----	-----	-----	-----	-----	TR 415 or TR 418 will completed for each section as need for optimum moisture content and determining % compaction. Shall check sufficient to ensure
		723.03 CQAF	Accept.	In-Place Density TR 401	CQAF	1/1,000 lin ft/ 2-lane rdwy or 1/2,000 lin ft/ shoulder	-----	-----	-----	1/2 hr.	1	TR 415 or TR 418 will completed for each section as need for optimum moisture content and determining % compaction.
	Thickness & Width	723.04 QC	Quality Control	Thickness/ Width TR 602	QC	1/500 lin ft/ 2-lane rdwy or 1/1,000 lin ft/ shoulder	-----	-----	-----	-----	-----	*'Shall check sufficient to ensure specifications are met.
		723.04 CQAF	Monitoring	Thickness/ Width TR 602	CQAF	1/half day	-----	-----	-----	-----	3	During construction of section.
		723.04 CQAF	Accept.	Thickness/ Width TR 602	CQAF	1/1,000 lin ft/ 2-lane rdwy or 1/2,000 lin ft/ shoulder	-----	-----	-----	3 days	3	When section is completed. For small quantity, CQAF documents in field book.

SECTION 725 TEMPORARY DETOUR ROADS AND BRIDGES

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
			Quality Control Accept.	**For details on Temporary Signs, Barricades and Pavement Markings, REFER TO SECTION 713 of this APPENDIX. For details on Guard Rail, REFER TO SECTION 704 of this APPENDIX. For details on Median Roadway Barriers, REFER TO SECTION 733 of this APPENDIX. For details on Seed, REFER TO SECTION 717 of this APPENDIX. For details on Fertilizer, REFER TO SECTION 718 of this APPENDIX. For details on Embankments, REFER TO SECTION 203 of this APPENDIX.**								
BASE COURSE (Roadway)			Quality Control Accept.	**REFER TO SECTION 300 OF THIS APPENDIX.**								
PILES & TIMBER		752.02 1014.01	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		752.02 1014.01	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by CQAF.
SURFACE COURSE (Roadway)			Quality Control Accept.	**REFER TO SECTIONS 400, 500, AND 600 OF THIS APPENDIX.**								
TEMPORARY CULVERT PIPE		752.02	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Should be acceptable to CQAF.
		752.02	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by CQAF.

SECTION 726 BEDDING MATERIAL

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES	Bedding Material	726.02 1003.01 1003.08 QC	Quality Control	Gradation TR 113 Plasticity Index TR 428	QC S 101	1/1,000 yd^3 stockpile*	1 full sample sack	-----	-----	-----	-----	*Each ingredient shall be sampled and approved prior to mixing. Recycled PCC must be from an approved source. QC to verify material is on the AML. Shall check sufficient to ensure specifications are met.
		726.02 1003.01 1003.08 CQAF	Accept.	Gradation TR 113 Plasticity Index TR 428	CQAF S 101	1/1,000 yd^3 stockpile*	1 full sample sack	-----	-----	4 days	2	AML *For Mixtures each ingredient shall be sampled and approved prior to mixing. Recycled PCC must be from an approved source. Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
GEOTEXTILE FABRIC		726.02 1019.01	Quality Control	Table 1019-1	QC S 601	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		726.02 1019.01 Mat. Lab	Accept.	Table 1019-1	CQAF S 601	1/type/source/ shipment	3 lin ft/roll width of fabric*	-----	-----	10 days	2 OVF to submit to Material Lab for CQAF.	AML Visual inspection by CQAF. *Sample a minimum of 18 ft^2.
PLASTIC SOIL BLANKET		726.02 203.10 CQAF	Quality Control Accept.	**REFER TO SECTION 203 OF THIS APPENDIX.**								Sampling not required if accepted for another item.

SECTION 728 JACKED OR BORED PIPE

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GROUT		728.03	Quality Control / Accept.	**REFER TO SECTION 901 OF THIS APPENDIX.**								
PIPE & JOINTS		701.02	Quality Control / Accept.	**REFER TO SECTION 701 OF THIS APPENDIX.**								

T 728 - 1/1

SECTION 729 TRAFFIC SIGNS AND DEVICES

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL (SOIL)		701.08 802.09 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		701.08 802.09 CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by CQAF.
CONCRETE	Mix Designs, Materials & Tests	729.02(g)	Quality Control	**REFER TO SECTION 901 OF THIS APPENDIX.**								
			Accept.									
DELINEATORS		713.07* 729.02(a) 1015.05 QC	Quality Control	-----	QC	-----	-----	CC	-----	-----	-----	*Required documentation is detailed in 713.07. Supplier Certification of product crashworthiness.
		713.07* 729.02(a) 1015.05 Mat. Lab	Accept.	-----	CQAF S 601	-----	-----	CC	**-----**	10 days	3 OVF verifies if the document is in the system.	*Required documentation is detailed in 713.07. Documents added to CQAP Documentation Data base by CQAF.
GALVANIZING REPAIR COMPOUND	Ferrous Metal	729.02(b) CQAF	Quality Control	**REFER TO SECTION 811 OF THIS APPENDIX.**								
			Accept.									
GROUND ROD ASSEMBLY	Ground Rod, Wire & Clamp		Quality Control	-----	QC	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Coated steel hardware is not permitted.
		Traffic Sign Plan Details Mat. Lab	Accept.	-----	CQAF S 501	1/item	1 of each item wire-10 in. length	**-----**	**-----**	9 days	3 OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Sample only when questionable. Coated steel hardware is not permitted.
DEAD END ROAD INSTALLATION	Hardware/ Steel Posts and Spacer Blocks	729.02 729.06 1010 QC	Quality Control	-----	QC	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF.
		729.02 729.06 1010 Mat. Lab	Accept.	-----	-----	-----	-----		**-----**	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mate. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF.
	Guard Rail	729.02(e) 729.06 1010.08 QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Fabricator must be file Brand Registration and guarantee with Mat. Lab. Visual inspection by QC. QC to provide document to CQAF.
		729.02(e) 729.06 1010.08 Mat. Lab	Accept.	AASHTO M180	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Fabricator must file Brand Registration and guarantee with Mat. Lab. Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 729 TRAFFIC SIGNS AND DEVICES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
DEAD END ROAD INSTALLATION (Cont'd)	Wood Posts & Spacer Blocks/ Timber	729.02 1010 QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		729.02 1010 Mat. Lab/ DOTD Const. Fab	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
HARDWARE	Bolts, Nuts & Washers	729.02(d) 1015.02(c)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		729.02(d) 1015.02(c)	Accept.	-----	-----	-----	-----		-----	11 days	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
	Mounting Bracket, Strap, Seal	729.02(d) 1015.02(c) QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		729.02(d) 1015.02(c)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 729 TRAFFIC SIGNS AND DEVICES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
PILING	Timber	729.02(f) 1014	Quality Control	**Inspected and stamped by DOTD prior to use.**				CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab. Insp.
		729.02(f) 1014	Accept.						-----	-----	OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOD Const. Fab. Insp.
POSTS (Sign, Marker & Delineator)	Flexible	729.02(h) 1015.03	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		729.02(h) 1015.03 Mat. Lab	Accept.	-----	CQAF S 501	1/shipment* (not to exceed 500 pieces)	1 post		-----	10 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Steel, U-Channel & Square Post for small signs	729.02(j) 1015.02(a)(3) QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		729.02(j) 1015.02(a)(3) Mat. Lab	Accept.	ASTM A499 Grade 60 or ASTM A576 Grade 1080	CQAF S 501	1/shipment* (not to exceed 500 pieces)	1 post		-----	11 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Aluminum, Steel, other than U-Channel & Square posts	1015.02(a)(1) 1015.02(b) 729.02(b) 729.02(c)	Quality Control Accept.	**REFER TO STRUCTURAL STEEL & ALUMINUM IN SECTION 807 OF THIS APPENDIX.**								

SECTION 729 TRAFFIC SIGNS AND DEVICES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
OBJECT MARKERS		1015	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		1015 Mat. Lab	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
REINFORCEMENT	Bars	729.02(b) 1009	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		729.02(b) 1009 Mat. Lab	Accept.	ASTM A615	CQAF S 501	1/size/source*	48 in. length		-----	10 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Stirrups	729.02(b) 1009.03	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		729.02(b) 1009.03 Mat. Lab	Accept.	ASTM A615	CQAF S 501	1/size/source*	2 stirrups		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
SIGN MOUNTING		729.02	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CA	-----	-----	-----	QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab. Insp.
		729.02 DOTD Const. Fab.	Accept.	-----					-----	-----	3 OVF verifies if the document is in the system	CQAF receives document form DOTD Const. Fab. Insp. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.

SECTION 729 TRAFFIC SIGNS AND DEVICES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
TRAFFIC SIGNS & MILEPOST MARKERS	All Permanent Signs	729.07	Quality Control		**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab. Insp.
		729.07 CQAF	Accept.						-----	10 days	3 OVF verifies if the document is in the system.	Visual inspection of all incidental Permanent Signs and Markers by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
	Sign & Marker Sheeting, Paste, Paint and Overlay Film	728.02(a) 1015.05 1015.07	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		729.02(a) 1015.05 1015.07 Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML
WELDING			Quality Control	**REFER TO SECTION 815 OF THIS APPENDIX.**								
			Accept.									

SECTION 730 ELECTRICAL SYSTEMS

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ALL ELECTRICAL COMPONENTS & MATERIALS NOT SPECIFICALLY MENTIONED IN THIS SECTION SHALL BE HANDLED IN ACCORDANCE WITH THE REQUIREMENTS FOR ELECTRICAL EQUIPMENT BELOW.												
ANCHOR BOLTS, NUTS AND WASHERS		730.02 1018.08(c) Mat. Lab	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		730.02 1018.08(c) Mat. Lab	Accept.	ASTM A193 Grade B8; ASTM A194 Grade 8 or 8A	CQAF	1/size/type	1 of each item*		-----	11 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*One of each size and type of bolt, nut and washer is to be submitted. Documents added to CQAP Documentation Data base by CQAF.
BACKFILL	Soil or Granular Material	730.02	Quality Control	**REFER TO SECTION 701 OF THIS APPENDIX.**								
		730.02	Accept.									
CONCRETE	Mix Designs, Materials & Tests	730.02	Quality Control	**REFER TO SECTION 901 OF THIS APPENDIX.**								
		730.02	Accept.									
CONDUIT		730.02 1018.09	Quality Control	**DESIGN BRIDGE APPROVES AND DISTRIBUTES TO CQAF/OVF**								
		730.02 1018.09 Bridge Design	Accept.									
ELECTRICAL CONDUCTORS		730.02	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		730.02 CQAF	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
ELECTRICAL EQUIPMENT	Brochures, Certified Dimension Sheets & Description Data	730.04 801.03 Design Bridge	Accept.		**BRIDGE DESIGN APPROVES AND DISTRIBUTES TO CQAF/OVF**							
GROUND ROD ASSEMBLY	Ground Rod, Wire & Clamp	730.02 1018.05 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Coated steel hardware is not permitted.
		730.02 1018.05 Mat. Lab	Accept.	-----	CQAF S 501	1/item	1 of each item Wire - 18 in. length	-----	-----	9 days	3	Visual inspection by CQAF. Sample only when questionable. Coated steel hardware is not permitted.
GUARANTY	QC's Guaranty	104.05 CQAF	Accept.		**OVF/CQAF AND BRIDGE DESIGN APPROVES AND FILES.**							
	Manufacturer's Standard Warranty	104.05 CQAF	Accept.		**OVF/CQAF AND BRIDGE DESIGN APPROVES AND FILES**							

SECTION 730 ELECTRICAL SYSTEMS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
HIGH MAST POLES		730.02 QC	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. Prior to use.**			CA	-----	-----		QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab. Insp.
		730.02 DOTD Const. Fab. Insp.	Accept.	-----					-----	-----	OVF verifies if the document is in the system.	Inspection report from DOTD Const. Fab. Insp.shall be sent to the CQAF/OVF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP
LIGHT POLES	Brochures, Certified Dimension Sheets & Description Data	730.04 801.03 Design Builder	Accept.	-----	**Design Builder Approves and distributes to CQAF/OVF**				-----	-----	-----	Copy sent to OVF, DOTD Project Manager and DOTD Bridge Design.
REINFORCING STEEL	Bars	730.02 1009.01 QC	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		730.02 1009.01 Mat. Lab	Accept.	-----	CQAF S 501	1/size/ source*	48 in. length		-----	11 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML *If listed on AML, material with a CA need not be sampled. Sample for verification when questionable. Documents added to CQAP Documentation Data base by CQAF.
SYSTEM TESTS		730.06 Design-Builder	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		730.06	Accept.	-----	-----	-----	-----	-----	-----	-----	OVF verifies if the document is in the system.	CQAF to observe tests and receive report of test results. Documents added to CQAP Documentation Data base by CQAF
TIMBER		730.02 1014 QC	Quality Control	-----	**Inspected stamped by DOTD Const. Fab. Insp. Prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab. Insp.
		730.02 1014 Mat. Lab/ DOTD Const. Fab. Insp.	Accept.	-----					-----	11 days	OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF

T 730 - 2/2

SECTION 731 RAISED PAVEMENT MARKERS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ADHESIVE (For Pavement Markers)	Bituminous	731.02(b)(2) 1015.09 QC	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		731.02(b)(2) 1015.09 Mat. Lab	Accept.	-----	CQAF S 606	*	0.5 gal friction top can		-----	11 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML *When not accompanied by CD, see S 606 for details. document added to CQAP Documentation Data base by CQAF.
	Epoxy	731.02(b)(1) 1017.02 QC	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		731.02(b)(1) 1017.02 Mat. Lab	Accept.	-----	CQAF S 606	*	0.5 gal friction top can		-----	11 days	OVF verifies if the document is in the system.	AML *When not accompanied by CD, see S 606 for details. Documents added to CQAP Documentation Data base by CQAF.
RAISED PAVEMENT MARKERS		731.02(a) 1015.09	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		731.02(a) 1015.09 Mat. Lab	Accept.	-----	CQAF S 607	*	20 markers		-----	10 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML *When not accompanied by CD, see S 607 for details. Documents added to CQAP Documentation Data base by CQAF.

SECTION 732 PLASTIC PAVEMENT MARKINGS

MATERIAL	REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
SURFACE PRIMER	732.02(c) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC to ensure that manufacturer recommendations are being followed.
	732.02(c) CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF to ensure that manufacturer recommendations are being followed.
GLASS BEADS	732.02(d) 1015.13 QC	Quality Control	-----	-----	-----	-----	CD*&CA CD (Physical) CA (Chemical	-----	-----	-----	QC to provide document to CQAF.
	732.02(d) 1015.13 Mat. Lab	Accept.	Gradation ASTM D1214	CQAF S 608	1/lot	1 - 50 lb bag 1 gal can	CD* & CA, CD (Physical) CA (Chemical)	-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*CD issued when presampled by CQAF and preapproved. Sample only when questionable. Use Sampling Method S 608 when glass beads are shipped in 50 lb bags. Use AASHTO TP 97-11 Section 4 when glass beads are shipped in bulk containers. Documents added to CQAP Documentation Data base by CQAF.
PREFORMED PLASTIC MARKING TAPE	732.02(b) 1015.11 QC	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. CD issued when resampled by DOTD Dist. Lab and preapproved. QC to provide document to CQAF.
	732.02(b) 1015.11 Mat. Lab	Accept.	ASTM D 4505 Type I D 4061 E 303	CQAF S 609	1/lot	2 - 6 ft lengths*		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML *Coiled and placed in a gallon can. Sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
THERMOPLASTIC MARKING (Hot Applied)	732.02(a) 1015.10	Quality Control	-----	-----	-----	-----	CD*	-----	-----	-----	QC to verify material is on the AML. *CD issued when presampled by DOTD District Lab. and preapproved. QC to provide document to CQAF.
	732.02(a) 1015.10 Mat. Lab	Accept.	AASHTO M249; ASTM D 6628	CQAF S 610	1/lot	1 gal can (app. 9 -12 lbs.)		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	

T 732 - 1/1

SECTION 733 CONCRETE ROADWAY BARRIERS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BARRIER (Precast)		733.01 733.02 QC	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CD	-----	-----	-----	Visual inspection by QC QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab. Insp.
		733.01 733.02 CQAF	Accept.	-----					-----	-----	OVF verifies if the document is in the system	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
CONCRETE	Mix Designs, Materials & Tests	733.02	Quality Control	**REFER TO SECTION 901 OF THIS APPENDIX.**								Air entrainment is required for slip forming.
		733.02	Accept.									
CURING MATERIALS		733.02 1011.01 QC	Quality Control	**REFER TO SECTION 805 OF THIS APPENDIX.**								
		733.02 1011.01 Mat. Lab	Accept.									-----
JOINT MATERIALS		733.02 1005 QC	Quality Control	**REFER TO SECTION 805 OF THIS APPENDIX.**								
		733.02 1005 Mat. Lab	Accept.									-----
REINFORCING STEEL	Deformed Steel Bars	733.02 1009.01	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	OVF to verify material is on the AML. QC to provide document to CQAF.
		733.02 1009.01 Mat. Lab	Accept.	ASTM A615	CQAF S 501	1/size/ source*	48 in. length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*If listed on AML, materials with a CA (Dist. 1) need not be sampled. Sample for verification when questionable. Documents added to CQAP Documentation Data base by CQAF.
SPECIAL SURFACE FINISH	Masonry Finish	733.02 1011.03 QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		733.02 1011.03 Mat. Lab	Accept.	-----	CQAF S 601	1/lot or shipment	1 qt friction top can		-----	11 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Sample if not accompanied by CC or when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 734 RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT

T 734 - 1/1

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL MATERIAL	Base Course Aggregate	1003.03 QC	Quality Control	Gradation TR 113 Liquid Limit and PI T 428	QC	1/1,000 yd^3	1 full sample sack	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		1003.03 CQAF	Accept.	Gradation TR 113 Liquid Limit and PI T 428	CQAF	1/1,000 yd^3	1 full sample sack	-----	-----	4 days	2	Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintains their minimum sampling testing frequency.
TEST PIT		734.03	Quality Control	-----	QC	-----	-----	-----	-----	-----	-----	Design-Builder to stake out Test Pit. For purpose of approving equipment and pattern.
		734.03 CQAF	Accept.	-----	CQAF	-----	-----	-----	-----	-----	-----	CQAF to document results in Field Book.

SECTION 735 MAILBOXES AND MAILBOX SUPPORTS

T 735 - 1/1

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
MAILBOXES AND MAILBOX SUPPORTS			Quality Control Accept.	**VISUAL INSPECTION BY CQAF. MAILBOXES TO BE IN ACCORDANCE WITH STANDARD PLANS.**								

SECTION 736 TRAFFIC SIGNALS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
ANCHOR BOLTS (Pedestal)		736.02 1020.03	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		736.02 1020.03 Mat. Lab	Accept.	-----	CQAF S 501	1/type/lot or shipment	1 bolt	-----	-----	11 days		-----
BACKFILL	Usable Soil	736.02 203.06(a)	Quality Control	**REFER TO SECTION 701 OF THIS APPENDIX.**								
			Accept.									
CONCRETE	Mix Designs, Materials & Tests	736.02	Quality Control	**REFER TO SECTION 901 OF THIS APPENDIX.**								
			Accept.									
ELECTRICAL CONDUCTORS		736.02 1018.10 QC	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		736.02 1018.10 CQAF	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. document added to CQAP Documentation Data base by CQAF.
ELECTRICAL JUNCTION BOX		736.02 1020.03(g) QC	Quality Control	-----	-----	-----	-----	CC	-----		-----	QC to provide document to CQAF.
		736.02 1020.03(g)	Accept.	-----	-----	-----	-----		-----	10 days	OVF to submit CC to Traffic Services for CQAF. OVF verifies if the document is in the system	Traffic Services will return approved copy to OVF/CQAF. Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
GROUND RODS		736.02 1018.05 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Coated steel hardware is not permitted.
		736.02 1018.05 Mat. Lab	Accept.	-----	CQAF S 501	1/item*	1 of each item Wire - 18 in. length	-----	-----	9 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable. Coated steel hardware is not permitted.
GUY COMPONENTS (Hardware)		736.02 1020.03	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		736.02 1020.03 Mat. Lab	Accept.	ASTM A123 or A153	CQAF S 501	1/type/lot or shipment	1 of each item*	-----	-----	12 days	3	*One piece of each type of hardware used is to be submitted.

SECTION 736 TRAFFIC SIGNALS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
MANHOLE FRAMES AND COVERS		736.02 1018.04 DOTD Const. Fab. Insp.	Quality Control Accept.	REFER TO SECTION 807 (CASTINGS) OF THIS APPENDIX.								
METAL POLES FOR TRAFFIC SIGNAL SYSTEMS		736.02 1020.04	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		736.02 1020.04 Traffic Services and Operations Engineer	Accept.	-----	-----	-----	-----		-----	-----	3 OVF to submit CA to Traffic Services for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. Traffic Services will return approved copy to OVF/CQAF. Documents added to CQAP Documentation Data base by CQAF.
PRECAST REINFORCED CONCRETE JUNCTION BOXES & MANHOLES		736.02 1016.03	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF.
		736.02 1016.03	Accept.	-----	-----	-----	-----		-----	-----	3 OVF to submit CC to Traffic Services for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. Traffic Services will return approved copy to OVF/CQAF. Documents added to CQAP Documentation Data base by CQAF.
REINFORCING STEEL	Bars	736.02 1009.01	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		736.02 1009.01 Mat. Lab	Accept.	-----	CQAF S 501	1/size/ source*	48 in. length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
RIGID METAL ELECTRICAL CONDUIT	Brochures, Drawings, Equipment Submittals	736.02 1018.09	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to provide document to CQAF.
		736.02 1018.09 Traffic Services and Operations Engr.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF to submit CA to Traffic Services for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. Traffic Services will return approved copy to OVF/CQAF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 736 TRAFFIC SIGNALS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
STEEL STANDARDS & MAST ARMS		736.02 1020.04(c) Traffic Services and Operations Engr.	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		736.02 1020.04(c) Traffic Services and Operations Engr.	-----	-----	-----	-----	-----		-----	-----	3 OVF to submit CC to Traffic Services for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. Traffic Services will return approved copy to OVF/CQAF. Documents added to CQAP Documentation Data base by CQAF.
SUPPORT CABLE		736.02 1020.03(d)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF.
		736.02 1020.03(d)	Accept.	-----	-----	-----	-----		-----	-----	3 OVF to submit CC to Traffic Services for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. Traffic Services will return approved copy to OVF/CQAF. Documents added to CQAP Documentation Data base by CQAF.
TIMBER POLES		736.10 1014 1020.04 QC	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp. QC to provide document to CQAF
		736.10 1014 1020.04	Accept.	-----					-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
TRAFFIC SIGNAL CABLE, SIGNAL HEADS, DETECTORS, SIGNAL HARDWARE AND EQUIPMENT	Brochures, Drawings, Equipment Submittals	736.02 1020 QC	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF
		736.02 1020 Traffic Services and Operations Engr.	-----	-----	-----	-----	-----	CC	-----	-----	3 OVF to submit CC to Traffic Services for CQAF. OVF verifies if the document is in the system.	Visual inspection by CQAF. Traffic Services will return approved copy to OVF/CQAF. Documents added to CQAP Documentation Data base by CQAF.

SECTION 737 PAINTED TRAFFIC STRIPING

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GLASS BEADS		737.02 1015.13 QC	Quality Control	-----	-----	-----	-----	CD (Physical) CA (Chemical)	-----	-----	-----	QC to provide document to CQAF. CD issued when presampled by CQAF and preapproved.
		737.02 1015.13 Mat. Lab	Accept.	-----	CQAF S 608	1/lot	1 - 50 lb bag 1 gal can	CD (Physical) CA (Chemical)	-----	10 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Sample when questionable. Use Sampling Method S 608 when glass beads are shipped in 50 lb bags. document added to CQAP Documentation Data base by CQAF. Use AASHTO TP 97-11 Section 4 when glass beads are shipped in bulk containers.
TRAFFIC PAINT	Water-based	737.02 1015.12(b) QC	Quality Control	-----	-----	-----	-----	CD*	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF. *CD issued when presampled by CQAF and preapproved.
		737.02 1015.12(b) Mat. Lab	Accept.	-----	CQAF S 608	1/lot	1 pt friction top can		-----	11 days	OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	*CD issued when presampled by CQAF and preapproved. Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 738 MULCH SODDING

MATERIAL	REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGRICULTURAL LIME	738.02 1018.17 Mat. Lab	Quality Control / Accept.		**REFER TO SECTION 718 OF THIS APPENDIX.**							
FERTILIZER	738.02 1018.16	Quality Control / Accept.		**REFER TO SECTION 718 OF THIS APPENDIX.**							
MULCH SOD	738.02*	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
	738.02* DOTD Roadside Development Personnel	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	*Visual inspection by CQAF/OVF or DOTD Roadside Development personnel prior to mulching.
WATER	738.02 QC	Quality Control	AASHTO T26	QC S 303	1/source*	1 qt plastic bottle	-----	-----	-----	-----	Drinkable water need not be sampled.
	738.02 Mat. Lab	Accept.	AASHTO T26	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	11 days	OVF to submit to Mat. Lab for CQAF.	Drinkable water need not be sampled.
TOPSOIL		Quality Control / Accept.		**REFER TO SECTION 715 OF THIS APPENDIX.**							

SECTION 739 HYDRO-SEEDING

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGRICULTURAL LIME		739.02 1018.17 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 718 OF THIS APPENDIX.**								
FERTILIZER		739.02 1018.16 Mat. Lab	Quality Control Accept.	**REFER TO SECTION 718 OF THIS APPENDIX.**								
MULCHING	Other Materials	739.03	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Must be acceptable to CQAF.
		739.03 Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Must be acceptable to CQAF.
	Wood Fiber	739.03	Quality Control	-----	-----	-----	-----	-----	-----	-----		Visual inspection by QC. Must be acceptable to CQAF.
		739.03 Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	-----	3	*Visual inspection by CQAF. Must be acceptable to CQAF.
SEED		739.03 CQAF	Quality Control Accept.	**REFER TO SECTION 717 OF THIS APPENDIX.**								
WATER		739.03 QC	Quality Control	AASHTO T26	QC S 303	1/source*	1 qt plastic bottle	-----	-----	-----	-----	*Drinkable water need not be sampled
		739.03 Mat. Lab	Accept.	AASHTO T26	CQAF S 303	1/source*	1 qt plastic bottle	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	*Drinkable water need not be sampled.
WATER MANAGEMENT GEL, POLYACRYLAMIDE TACKIFIER, AND MYCORRHIZAL INOCULUM		739.03 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection of all ingredients prior to mixing. Must be acceptable to CQAF.
		739.03 CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection of all ingredients prior to mixing. Must be acceptable to CQAF.

SECTION 802 STRUCTURAL EXCAVATION AND BACKFILL

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL	Reinforced Box Culverts	802.09(b)	Quality Control Accept.	REFER TO SECTION 701 OF THIS APPENDIX.								
	Structures other than Reinforced Box Culverts	802.09 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Material shall be of acceptable quality and uniformly compacted by approved methods to the satisfaction of the CQAF.
		802.09 CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Material shall be of acceptable quality and uniformly compacted by approved methods to the satisfaction of the CQAF
CONCRETE	Compressive Strength	802.09(e)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		809.09(e) CQAF	* Monitor	Compressive Strength TR 230	CQAF S 301	3 cyl/ location	4 in. x 8 in. cylinder mold	-----	-----	-----	3	*Used to determine earliest date for placement of backfill next to structures.

SECTION 803 SHEET PILES

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
HARDWARE		803.02 1018.08	Quality Control	Bolts-ASTM A307 Dowels-AASHTO M270	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Not to be used until passing results are received.
		803.02 1018.08 Mat. Lab	Accept.	Bolts-ASTM A307 Dowels-AASHTO M270	CQAF S 501	1/size/type/ shipment	2 of each item*	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF	*Two (2) pieces of each size and type of hardware used are to be submitted.
PAINT AND PROTECTIVE	Coal Tar Epoxy	803.02 803.06	Quality Control Accept.	**REFER TO SECTION 811 OF THIS APPENDIX.**								
SHEET PILES	Aluminum or Steel	803.02(b) 1013.10	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		803.02(b) 1013.10 DOTD Const. Fab. Insp.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Documents added to CQAP Documentation Data base by CQAF.
	Precast Concrete	803.02(a)	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp. QC to provide document to CQAF.
		803.02(a) DOTD Const. Fab. Insp.	Accept.	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**				-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
	Timber Treated & Untreated	803.02(c) 1014	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp. QC to provide document to CQAF.
		803.02(c) 1014 DOTD Const. Fab. Insp.	Accept.	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**				-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
TREATMENT OF PILE HEADS		803.05	Quality Control Accept.	**REFER TO SECTION 812 OF THIS APPENDIX.**								
WELDING			Quality Control Accept.	**REFER TO SECTION 815 OF THIS APPENDIX.**								

T 803 - 1/1

SECTION 804 DRIVEN PILES

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BACKFILL	Granular Type Material	804.08(a) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Must meet the satisfaction of the CQAF.
		804.08(a) CQAF	Accept.	Gradation TR 113	CQAF S 101	*1/1,000 yd^3	1 full sample sack	-----	-----	-----	3	*Visual inspection by CQAF Sample only when questionable.
CONCRETE PILES (Cast-in-place)	Concrete (Mix Design, Material and Test)	804.02 804.03	Quality Control Accept.	**REFER TO SECTION 901 OF THIS APPENDIX.**								
	Reinforcing Steel	804.02 804.03 1009	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide documents to CQAF. QC to verify material is on the AML.
		804.02 804.03 1009 Mat. Lab	Accept.	-----	CQAF S 501	1/size/grade/ 150,000 lb/ source	48 in. length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Steel Shell	804.03	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		804.06	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
CONCRETE PILES (Precast)	Pile	-----	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp. QC to provide document to CQAF.
		804.02 805.14 DOTD Const. Fab. Insp.	Accept.	-----	**Inspected and stamped by DOTD Const. Fab. Insp. Unit prior to use.**				-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
HYDRAULIC JACKS		804.11 (g) (3) *Design-Builder	Quality Control	-----	***Calibrated by an approved, independent calibration service**			CA	-----	-----	-----	QC to provide document to CQAF.
		804.11 (g) (3)	Accept.	-----	**Calibrated by an approved, independent calibration service and a certified lab report to CQAF/OVF for approval/acceptance.**				-----	12 days	OVF verifies if the document is in the system.	The system must be calibrated at the beginning of each project and as required. Documents added to the CQAP Documentation Data base by CQAF.
PAINT AND PROTECTIVE COATINGS	Coal Tar Epoxy	804.02 804.07(b)(3) 1008.04	Quality Control **Accept.**	**REFER TO SECTION 811 OF THIS APPENDIX.**								

SECTION 804 DRIVEN PILES (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
STEEL PILES, STEEL PIPE PILES		804.02 1013.09 1013.11	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		804.02 1013.09 1013.11 DOTD Const. Fab. Insp.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
TIMBER PILES	Treated and Untreated	804.02 1014	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use. See Section 812 of this Appendix.**			CD	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		804.02 1014 DOTD Const. Fab. Insp.	Accept.	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use. See Section 812 of this Appendix.**				-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
TREATMENT OF PILE HEADS	Canvas	804.08(I)(3) 812.06(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		804.08(I)(3) 812.06(b) Mat. Lab	Accept.	-----	CQAF S 601	1/shipment*	18 in. x 18 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF	*Visual inspection by CQAF. Sample only when questionable.
	Coal Tar Pitch, Creosote Oil, Asphalt & Copper Napthanate	804.08(I)(3) 812.06(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		804.08(I)(3) 812.06(b) Mat. Lab	Accept.	-----	CQAF S 201	1/shipment*	1 qt friction top can	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF	*Visual inspection by CQAF. Sample only when questionable.
	Fabric Covering	804.08(I)(3) 812.06(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		804.08(I)(3) 812.06(b) Mat. Lab	Accept.	ASTM D173	CQAF S 601	1/shipment*	18 in. x 18 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF	*Visual inspection by CQAF. Sample only when questionable.
	Galvanized Metal Covering	804.08(I)(3) 812.06(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		804.08(I)(3) 812.06(b) Mat. Lab	Accept.	-----	CQAF S 501	1/shipment*	6 in. x 6 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF	*Visual inspection by CQAF. Sample only when questionable.
	Galvanized Nails, Staples & Wire	812.06(c)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC
		812.06(C) Mat. Lab	Accept.	-----	CQAF S 501	1/size/type/ shipment*	**12 of each item** **wire - 24 in. length	-----		10 days	3 OVF to submit to Mat. Lab for CQAF	*Visual inspection by CQAF. Sample only if questionable. **Twelve nails and twelve staples are to be submitted.
WELDING			Quality Control	**REFER TO SECTION 815 OF THIS APPENDIX.**								
			Accept.									

SECTION 805 STRUCTURAL CONCRETE

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FOR DETAILS ON CONCRETE TESTS, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) REFER TO SECTION 901 0F THIS APPENDIX.												
BACKFILL		802.09 805.01	Quality Control Accept.	**REFER TO SECTION 802 OF THIS APPENDIX.**								
BEARING PADS	Electromeric	805.02 1018.14	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. QC to verify material is on the AML.
		805.02 1018.14 Mat. Lab	Accept.	AASHTO M251	CQAF S 601	*1/100 pads/type /lot	1 pad		-----	14 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. Plain or Laminated. Visual inspection by CQAF.
	Masonry	805.02 1018.06	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC.
		805.02 1018.06 Mat. Lab	Accept.	-----	CQAF S 601	1/type	1 pad		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Documents added to CQAP Documentation Data base by CQAF. Visual inspection by CQAF.
BOX CULVERT UNITS (Precast)	Gasket Material	805.02 1006.06(b)	Quality Control	-----	**REFER TO SECTION 701 OF THIS APPENDIX.**			CC	-----	-----	Verify	Gasket test report lab no. listed on precast unit CC. QC to provide document to CQAF. QC to verify material is on the AML. Visual inspection by QC.
		805.02 1006.06(b) Mat. Lab	Accept.	-----	**REFER TO SECTION 701 OF THIS APPENDIX.**				-----	-----	3 OVF verifies if the document is in the system.	AML Documents added to CQAP Documentation Data base by CQAF. Visual inspection by CQAF.
	Precast Concrete Unit	805.03(b) 1016.02	Quality Control	-----	**Inspected and stamped by MFR prior to use.**			CD	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. QC to verify material is on the AML. CD to include lot number for Gasket Materials. QC to verify stamp by DOTD Const. Fab. Insp.
		805.03(b) 1016.02 CQAF	Accept.		**Inspected and stamped by MFR prior to use.**				-----	-----	3 OVF verifies if the document is in the system.	AML Visual Inspection by CQAF. CD to include lot number for Gasket Materials. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BRIDGE MEMBERS	Concrete Precast	805.14	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to provide document to CQAF. For specific details see EDSM III.2.5.7. Visual inspection by QC.
		805.14	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. For specific details see EDSM III.2.5.7. Documents added to CQAP Documentation Data base by CQAF.
CONCRETE ANCHOR SYSTEMS	Anchor Bolts	805.15 1018.22 Plans	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC.
		805.15 1018.22 Plans Mat. Lab	Accept.	-----	CQAF S 601	1/size/ shipment	2 nuts and bolts	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF.
	Cartridge Systems	805.15 1018.22	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	To verify material is on the AML.
		805.15 1018.22 Mat. Lab	Accept.	-----	CQAF S 601	1/size/type/ lot or shipment**	2 of each item*	-----	-----	14 days	3 OVF to submit to Mat. Lab for CQAF.	AML *Includes bolts & nuts intended to be used with the system. *Two pieces of each size and type of item used are to be submitted. **Visual inspection by CQAF. Sample only when questionable.
	Grout Systems (Resin or Cementitious)	805.15 1018.22	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to provide document to CQAF. To verify material is on the AML.
		805.15 1018.22 Mat. Lab	Accept.	-----	CQAF S 601	1/lot or shipment	1 qt friction top can	-----	-----	14 days	3 OVF to submit to Mat. Lab for CQAF.	AML Visual inspection by CQAF. Sample only when questionable.
	Mechanical Systems	805.15 1018.22	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to provide document to CQAF. To verify material is on the AML. Visual inspection by QC.
		805.15 1018.22 Mat. Lab	Accept.	-----	CQAF S 601	1/size/type/ lot or shipment**	3 of each item*		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML *Three of each size and type of item used are to be submitted. **Visual inspection by CQAF. Sample only when questionable.

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (In-Place)	Compressive Strength	805.03(a),(c) 805.11	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		805.03(a),(c) 805.11 CQAF	* Monitor	Compress. Strength TR 230	CQAF S 301	3 cyl/ structural member	4 in. x 8 in. cylinder mold	-----	-----	10 days	1	*To determine strength for form removal or exposure to construction traffic.
	Surface Resistivity	805 QC	Quality Control	Surface Resistivity TR 233	QC	Average S.R. reading per each cylinder tested for compressive strength	-----	-----	-----	-----	-----	*For all trial batches when surface resistivity is required by specification.
		805 CQAF	*Accept.	Surface Resistivity TR 233	CQAF	Average S.R. reading per each cylinder tested for compressive strength	-----	-----	-----	-----	1	*Surface Resistivity when required by specification.
	Deck Surface Finish	805.13(d) QC	Quality Control	-----	QC*	each span	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. Surface must be checked on bridge decks using an approved 10 ft. metal static straightedge.
		805.13(d) CQAF	Monitor	-----	CQAF	each span	-----	-----	-----	-----	-----	CQAF to observe QC check bridge deck surface.
	Tine Texturing	805.13(d) QC	Quality Control	Tine Texturing TR 229	QC	* 2/span	-----	-----	-----	-----	-----	Plastic Concrete *Sufficient number of random checks to assure the required texture depth is achieved.
		805.13(d) CQAF	Monitor	Tine Texturing TR 229	CQAF	1/span/day	-----	-----	-----	-----	-----	Performed on plastic concrete.
		805.13(d) CQAF	Accept.	Tine Texturing TR 229	CQAF	1/span/day	-----	-----	-----	-----	3	Performed on hardened concrete.

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CURI NG MATERIALS	Burlap Cloth/Burlap & White Polyethylene Sheeting/ Waterproof Paper/ White Polyethylene Sheeting	805.02 1011.01	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Material to be presoaked.
		805.02 1011.01	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Material to be presoaked. Material to perform satisfactorily as determined by CQAF.
	Liquid Membrane-Forming Compounds	805.02 1011.01(a)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. QC to verify material is on the AML.
		805.02 1011.01(a) Mat. Lab	Accept.	-----	CQAF S 601	1/shipment*	1 qt friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. *Sample when not accompanied by certificate or when questionable.
EPOXY RESIN SYSTEMS	Epoxy	805.02 1017.02	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		805.02 1017.02 Mat. Lab	Accept.	Table 1017-1	-----	1/lot or shipment	1 qt each component friction top can		-----	11 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.
FORM RELEASE AGENTS		805.02 1018.24	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Product verification by QC.
		805.02 1018.24 CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	AML Product performance verification by CQAF.

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GEOTEXTILE FABRIC		805.02 1019 QC	Quality Control	Table 1019-1	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. QC to verify material is on the AML.
		805.02 1019 Mat. Lab	Accept.	Table 1019-1	CQAF S 601	1/type/ source/ shipment	3 lin ft/roll width of fabric		-----	-----	3 OVF to submit to Mat. Lab for CQAF. OVF verifies if the document is in the system.	AML Visual inspection, sample only when questionable. Documents added to CQAP Documentation Data base by CQAF.
JOINT MATERIALS	Adhesive-Lubricant	805.12(c) 1005.03(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		805.12(c) 1005.03(b) Mat. Lab	Accept.	ASTM D4070	-----	1/lot or shipment	1 qt friction top can	-----	-----	-----	3 OVF to submit to Mat. Lab for CQAF.	AML For use with preformed elastomeric compression joint seal. Visual inspection by CQAF. Sample only when questionable.
	Polyurethane Polymer	1005.02(b)	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		1005.02(b) Mat. Lab	Accept.	-----	CQAF S 611	1/shipment*	-----		-----	14 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. Sample if not accompanied by certificate or when questionable.
	Reinforced Elastomeric Joint Seal	805.02 1005.06	Quality Control	-----	-----	-----	-----	CC & CA	-----	-----	-----	Elastomeric - CA; Steel - CC. QC to provide document to CQAF. Visual inspection by QC.
		805.02 1005.06 Mat. Lab	Accept.	ASTM D3204	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Elastomeric - CA; Steel - CC. Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
	Steel Joint	805.02 805.12(f)	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. Unit prior to use.**			-----	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		805.02 805.12(f)	Accept.	-----				-----	-----	-----	3	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
JOINT MATERIALS (Cont'd)	Strip Seal Joint	805.02 805.12(d) 1005.05	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. Unit prior to use.**			-----	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		805.02 805.12(d) 1005.05	Accept.	-----				-----	-----	-----	3	Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.
NON-SHRINK GROUT		805.15 1018.26	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		805.15 1018.26 Mat. Lab	Accept. Early Break	ASTM C1107	CQAF S 601	1/source	1 full sack, 15 lb min.*	-----	-----	16 days	3 OVF to submit to Material Lab for CQAF.	AML *Sample shall be submitted in an unbroken moisture proof sack.
PRECAST CONCRETE (Non-Prestressed - Other than Bridge Members)	Precast Unit	805.03	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CD	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. CD must include lot no. for elastomeric bearing pads if applicable. QC to verify stamp by DOTD Const. Fab. Insp.
		805.03 DOTD Const. Fab. Insp.	Accept.						-----	-----	3 OVF verifies if the document is in the system.	CD must include lot no. for elastomeric bearing pads if applicable. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.
PRECAST CONCRETE (Prestressed & Non-Prestressed Bridge Members) **[**CQAF and OVF requirements only if not performed by LA DOTD Fabrication Unit]**	Precast Unit	805.03	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. prior to use.**			CD	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. CD must include lot no. for elastomeric bearing pads if applicable. QC to verify stamp by DOTD Const. Fab. Insp.
		805.03 DOTD Const. Fab. Insp.	Accept.						-----	-----	3 OVF verifies if the document is in the system.	CD must include lot no. for elastomeric bearing pads if applicable. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.
	Epoxy Resin Systems	805.02 1017.02	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
			Accept.	Table 1017-1	CQAF S 601	1/lot or shipment	1 qt/ component friction top can	-----	-----	-----	3 OVF to submit to Material Lab for CQAF.	
	Strands for Prestressing**	805.02 1009.05	Accept.	ASTM A416	CQAF S 501	1/size/ grade/ source/proj.* per heat no.	3 strands 5 ft length	-----	-----	11 days	2 OVF to submit to Material Lab for CQAF.	*Not to exceed 200 tons. Manufacturer's Load/Elongation curve to accompany sample.

	Welded Wire Fabric**	805.02 1009.01	Accept.	ASTM A185	CQAF S 601	1/shipment	48 in. x 48 in.	CA 6	-----	11 days	3 OVF to submit to Material Lab for CQAF.	Visual inspection by CQAF. Sample if questionable.
PRECAST PRESTRESSED FORMS	Bearing Strips and Adhesive	805.14(k)	Quality Control	-----	-----	-----	-----	-----	-----	-----		Visual inspection by QC
		805.14(k) CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by CQAF
	Concrete Deck Forms (Stay In Place Panels)	805.14(k)	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. Unit prior to use.**			CD	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		805.14(k) DOTD Const. Fab. Insp.	Accept.	-----					-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF For specific details see EDSM III.2.5.7. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.

SECTION 805 STRUCTURAL CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
REINFORCEMENT	Bars	805.02 1009	**Quality Control** / **Accept.**	**REFER TO SECTION 806 OF THIS APPENDIX.**								
SPECIAL SURFACE FINISH	Concrete	805.02 1011.03	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		805.02 1011.03 Mat. Lab	Accept.	-----	CQAF S 601	1/lot or shipment*	1 qt. component friction top can		-----	10 days	3 OVF verifies if the document is in the system.	AML Documents added to CQAP Documentation Data base by CQAF. *Sample if not accompanied by certificate or when questionable.
WATER STOPS	Copper	805.07 1005.08(a)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC.
		805.07 1005.08(a) Mat. Lab	Accept.	ASTM B370	CQAF S 601	*1/lot or shipment	24 in. length		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. *Sample if not accompanied by certificate or when questionable.
	Polyvinyl Chloride	805.07 1005.08(b)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC.
		805.07 1005.08(b) Mat. Lab	Accept.	CRD-C 572	CQAF S 601	1/shipment*	36 in. length		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. *Sample if not accompanied by certificate or when questionable.
	Rubber	805.07 1005.08(c)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC.
		805.07 1005.08(c) Mat. Lab	Accept.	CRD-C 572	CQAF S 601	1/lot or shipment*	36 in. length		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. *Sample if not accompanied by certificate or when questionable.

SECTION 806 REINFORCEMENT

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
REINFORCEMENT	Bars (Epoxy Coated)	806.02(b) 1009.01(f)	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		806.02(b) 1009.01(f) Mat. Lab	Accept.	ASTM A615 AASHTO M284	CQAF S 501	1/size/grade/ 150,000 lb /source	2 bars approx. 48 in. in length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Certificate of compliance provided by the applicator. Documents added to CQAP Documentation Data base by CQAF.
	Bars & Spirals	806.02 1009	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		806.02 1009 Mat. Lab	Accept.	ASTM A615	CQAF S 501	1/size/grade/ 150,000 lb /source*	48 in. length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample if not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
	Chairs or Metal Bar Supports	806.02(b) 1009.01(f)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		806.02(b) 1009.01(f) Mat. Lab	Accept.	AASHTO M284	CQAF S 501	1/type*	1 chair	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF and sample when questionable.
	Patching Material (Epoxy Coated Bars)	806.02(a) 1009.01 1009.03	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		806.02(a) 1009.01 1009.03 Mat. Lab	Accept.	AASHTO M284	CQAF S 601	1/source	1 qt friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF.

SECTION 806 REINFORCEMENT (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
REINFORCEMENT (Cont'd)	Stirrups, Tie Bars	806.02(a) 1009.03	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	QC to provide document to CQAF. Visual inspection by QC. QC to verify material is on the AML.
		806.02(a) 1009.03 Mat. Lab	Accept.	-----	CQAF S 501	1/size/ 150,000 lb.*	2 of each item		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML *Sample if not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
SPLICING	Mechanical Butt Splice	806.07 Mat. Lab	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		806.07 Mat. Lab	Design Builder Qualification	-----	CQAF S 501	1/size*	3 splices/each size	-----	-----	10 days	OVF to submit to Mat. Lab for CQAF.	AML *Separate samples per horizontal and vertical positions. Test prior to use.
		806.07 Mat. Lab	Accept.	-----	CQAF S 501	1/size/25 splices*	1 splice 3 ft length	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML May be reduced to 1 per size per 100 splices after the first hundred splices.
	Welded Butt Splice		Quality Control Accept.	**REFER TO SECTION 815 OF THIS APPENDIX.**								

SECTION 807 STRUCTURAL METALS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
BEARING & EXPANSION	Bronze	807.02 1013.07(a) QC	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		807.02 1013.07(a) DOTD Const. Fab. Insp.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
	Copper-Alloy (Rolled)	807.02 1013.07(b)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		807.02 1013.07(b) DOTD Const. Fab. Insp.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF.
	PTFE Bearing Assembly	807.46(c)	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		807.05 807.46(c) DOTD Const. Fab. Insp.	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	AML Visual inspection by CQAF. Documents added to Documentation Data base by CQAF.
BEARING PADS	Elastomeric	807.46(a) 1018.14	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		807.46(a) 1018.14 Mat. Lab	Accept.	AASHTO M251	CQAF S 601	1/100 pads/type* /lot	1 pad		-----	14 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML CQAF samples at destination if not sampled at site of source or supplier by DOTD Const. Fab. Insp. Plain or Laminated. Documents added to Documentation Data base by CQAF. Visual inspection by CQAF.
	Masonry	807.46 1018.06	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		807.46 1018.06 Mat. Lab	Accept.	MIL-C-882C	CQAF S 601	1/type/size	1 pad		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Documents added to CQAP Documentation Data base by CQAF.

SECTION 807 STRUCTURAL METALS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CASTINGS	Metal for Castings	807.02 1013.06	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. Form 4148-Certificate of Cast Iron Covers, Grates, etc., will be received by the Design-Builder.
		807.02 1013.06	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by the CQAF. Form 4148-Certificate of Cast Iron Covers, Grates, etc. will be received by the Design-Builder. Documents added to CQAP Documentation Data base by CQAF.
	Unit	807.20	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. Form 4148-Certificate of Cast Iron Covers, Grates, etc., will be received by the Design-Builder.
		807.20	Accept.	AASHTO M270 Grade 36	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by the CQAF. Form 4148-Certificate of Cast Iron Covers, Grates, etc. will be received by the Design-Builder. Documents added to CQAP Documentation Data base by CQAF.
CONCRETE ANCHOR STUDS		807.02 1013.24	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		807.02 1013.24	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system	Visual inspection by CQAF. 'Documents added to CQAP Documentation Data base by CQAF.
FASTENERS (Field Installation)	Bolts, Nuts & Washers	807.20 1013.08	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		807.20 1013.08 Mat. Lab	Accept.	ASTHM A307 Grade A	CQAF S 501	1/diameter/ shipment	2 of each item		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Copy of CC to accompany sample and ID. Documents added to CQAP Documentation Data base by CQAF.

SECTION 807 STRUCTURAL METALS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
FASTERNERS (Field Installation) (Cont'd)	High Strength Bolts, Nuts & Washers and Tension Device Indicators	807.02 807.21 1013.08	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. 'QC to provide document to CQAF. Design-Builder to provide Tension Device Indicator.
		807.02 807.21 1013.08 Mat. Lab	Accept.	ASTM A325 or A490	CQAF S 501	1/type/ diameter/ heat	2 of each item with Tension Device Indicator		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Visual inspection by CQAF. Copy of CA to accompany sample and ID. Documents added to CQAP Documentation Data base by CQAF.
	Rotational Capacity	807.21	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to assist Design Builder. QC to document test results and provide documentation to CQAF.
		807.21 Design-Builder	Accept.	ASTM A325	-----	2 assemblies/ each combination bolt lot, nut lot & washer lot	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	Test to be witnessed by CQAF. Documents added to CQAP Documentation Data base by CQAF.
	Steel Lockpins and Collars	802.02 1013.08	Quality Control	-----	-----	-----	-----	CC				Visual inspection by QC. QC to provide document to CQAF.
		802.02 1013.08 Mat. Lab	Accept.		CQAF S 501	1/lot or shipment	1 pin and collar		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Copy of CC to accompany sample ID. Documents added to CQAP Documentation Data base by CQAF.
FASTENERS (Shop Installation)	Bolts, Nuts & Washers/ High Strength Nuts and Washers and Tension Device	807.20 1013.08	Quality Control	-----	-----	-----	-----	CC/ CA for high strength	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		807.20 807.21 1013.08 Mat. Lab	Accept.	-----	-----	-----	-----		-----	10 days	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to receive inspection report from Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
	Indicators/ Steel Lockpins and Collars	807.02 1013.08	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC.
		807.02 1013.08 Mat. Lab	Accept.	-----	-----	-----	-----		-----	10 days	3 OVF verifies if the document is in the system.	Visual inspection by CQAF. CQAF to receive inspection report from Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.

SECTION 807 STRUCTURAL METALS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GROUT (Non-Shrink)			Quality Control Accept.	**REFER TO SECTION 805 OF THIS APPENDIX.**								
PAINT AND PROTECTIVE COATINGS			Quality Control Accept.	**REFER TO SECTION 811 OF THIS APPENDIX.**								
SHEAR CONNECTORS		807.02 807.42 1013.23	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		807.02 807.42 1013.23	Accept.	-----	-----	-----	-----		-----	-----	3 OVF verifies if the document is in the system.	Shop and field inspection requirements per Specification Subsection 807.42. Visual inspection by CQAF. Documents added to CQAP Documentation Data Base by CQAF. *CQAF to receive an approved copy from Const. Fab for documentation.
STEEL FORGINGS & SHAFTING		807.02 809.07	Quality Control	-----	**Inspected and stamped by the DOTD Const. Fab. Insp. Unit prior to use.**			-----	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		807.02 809.07	Accept.	-----				-----	-----	-----	3 OVF verifies if the document is in the system.	CQAF to receive inspection report from DOTD Const. Fab. Insp. Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
STRUCTURAL STEEL & ALUMINUM	Metal for Fabrication	807.02 807.05	Quality Control	-----	**Inspected and stamped by the DOTD Const. Fab. Insp. Unit prior to use.**			-----	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		807.02 807.05	Accept.	AASHTO M270				-----	-----	-----	3 OVF verifies if the document is in the system.	CQAF to receive inspection report from DOTD Const. Fab. Insp. Visual inspection by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.
WELDING			Quality Control Accept.	**REFER TO SECTION 815 OF THIS APPENDIX.**								

SECTION 807 STRUCTURAL METALS (Cont'd)

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
WRENCH	Calibrated Wrench	*807.21 Design-Builder	Quality Control	-----	-----	* For calibration frequency, see subsection 807.21 (h-k)	3 assemblies/ size	-----	-----	-----	3 OVF verifies if the document is in the system.	QC to assist Design-Builder in calibration. QC to document test result and provide documentation to CQAF. Design-Builder's calibration procedure to be witnessed by CQAF. Documents added to CQAP Documentation Data base by CQAF.
		*807.21	Accept.									
	Job Inspection Torque Wrench	*807.21 Design-Builder	Quality Control	-----	-----	* For calibration frequency, see subsection 807.21 (h-k)	5 assemblies/ size	-----	-----	-----	3 OVF verifies if the document is in the system.	QC to assist Design-Builder in calibration. QC to document test result and provide documentation to CQAF. Design-Builder's calibration procedure to be witnessed by CQAF. *See Specification Subsection 807.22(h)(2). Documents added to CQAP Documentation Data base by CQAF.
		*807.21 CQAF	Accept.									

SECTION 808 STEEL GRID FLOORING

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Structural)	Mix Designs, Materials &	808.02	Quality Control / Accept	**REFER TO SECTION 901 OF THIS APPENDIX.**								
PAINT AND PROTECTIVE COATINGS		808.13 1008 Mat. Lab	Quality Control / Accept	**REFER TO SECTION 811 OF THIS APPENDIX.**								
STRUCTURAL STEEL	Flooring	808.02 1013.21	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		808.02 1013.21	Accept	-----	**Inspected and stamped by the DOTD Const. Fab. Insp. Unit prior to use.**				-----	-----	3 OVF verifies if the document is in the system.	CQAF to receive inspection report from DOTD Const. Fab. Insp. Visual inspection by CQAF. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.
WELDING		808.12	Quality Control / Accept	**REFER TO SECTION 815 OF THIS APPENDIX.**								

T 808 - 1/1

SECTION 809 MOVABLE BRIDGES

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Structural)	Mix Designs, Materials & Tests (For Counter Weights)	809.38 Design-Builder	Quality Control	**REFER TO SECTION 901 OF THIS APPENDIX.**						-----		
			Accept.							21 days	3 OVF to submit to DOTD Bridge Design	CQAF to witness test for unit weight as per Specification Subsection 809.38 for counterweights. DOTD Bridge Design must accept mix design and calculations for determining unit weight prior to use.
ELECTRICAL EQUIPMENT	Brochures, Certified Dimension Sheets & Descriptive Data	801.03 809.04 809.05	Quality Control	**DOTD Bridge design accepts and distributes to OVF/CQAF for all items listed in Bridge Electrical Equipment List.**				-----	-----	-----	-----	Design Builder to submit to CQAF.
		801.03 809.04 809.05 Bridge Design	Accept.					-----	-----	-----	3 OVF to submit to DOTD Bridge Design	No component shall be incorporated into the work without acceptance from DOTD Bridge Design. CQAF to review and submit to OVF.
GUARANTY	Design Build's Guarantee	104.05 809.02	Quality Control	-----	**OVF and DOTD Bridge Design accepts and files.**		-----	-----	-----	-----	-----	Design Builder to submit to CQAF.
		104.05 809.02 CQAF	Accept.	-----			-----	-----	-----	-----	3 OVF to submit to DOTD Bridge Design	CQAF to review and submit to OVF. Documents added to CQAP Documentation Data base by CQAF.
	Manufacturer's Standard Warranty	104.05 809.02	Quality Control	-----	**OVF and DOTD Bridge Design accepts and files.**		-----	-----	-----	-----	-----	Design Builder to submit to CQAF.
		104.05 809.02 CQAF	Accept.	-----			-----	-----	-----	-----	3 OVF to submit to DOTD Bridge Design	CQAF to review and submit to OVF. Documents added to CQAP Documentation Data base by CQAF.
HARDWARE	Bolts, Fasteners, Fittings, Nuts, Washers & Misc. Hardware	809.07 1013.08 1018.08	Quality Control	-----			-----	-----	-----	-----	-----	Visual inspection by QC.
		809.07 1013.08 1018.08 Mat. Lab	Accept.	-----	CQAF* S 501	1/size/type/ shipment	2 of each item	-----	-----	10 days	3	*When sampled by DOTD Const. Fab. Insp. and listed on report to CQAF, project samples are not required.
MAINTENANCE & OPERATION INSTRUCTION BOOKLETS		801.03(e) 809.05	Quality Control	-----	**OVF submits to DOTD Bridge Design for acceptance, then distributes in accordance with EDSM III.2.5.6.**			-----	-----	-----	-----	Design Builder to submit to CQAF.
		801.03(e) 809.05 Bridge Design	Accept.	-----				-----	-----	-----	OVF to submit to DOTD Bridge Design	CQAF to submit to OVF.
MECHANICAL EQUIPMENT	Brochures, Certified Dimension Sheets & Descriptive Data	801.03 809.04 809.05	Quality Control	-----	**DOTD Bridge Design accepts and distributes to OVF/CQAF**				-----	-----	-----	Design Builder to submit to CQAF. QC inspects materials and components to ensure conformance.
		801.03 809.04 809.05 Bridge Design	Accept.	-----					-----	-----	OVF to submit to DOTD Bridge Design	CQAF inspects materials and components to ensure conformance. CQAF to submit to OVF.

T 809 - 1/2

SECTION 809 MOVABLE BRIDGES (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
MECHANICAL EQUIPMENT (Cont'd)	Parts List (Gears & Bearing in Gear Box)	809	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC shall verify all parts are included on list. CQAF shall monitor QC's verification of list.
		809 Bridge Design	Monitor	-----	**Bridge Design accepts and distributes to OVF/CQAF**				-----	-----	-----	Design Builder to provide document to CQAF. CQAF shall monitor QC's verification of list.
OPERATING HOUSE (All Furnishings)	Brochures	809.04 Bridge Design/ CQAF	Monitor	-----	**Bridge Design accepts and distributes to OVF/CQAF**				-----	-----	3 OVF to review and submit to DOTD	CQAF to provide documents to OVF. CQAF shall monitor QC's verification of list.
PAINT AND PROTECTIVE COATINGS		809.09 807.44 1008	Quality Control Accept.	**REFER TO SECTION 811 OF THIS APPENDIX.**								
POWER PLANT		809.36	Quality Control Accept.	**REFER TO SECTION 730 OF THIS APPENDIX.**								
STRUCTURAL METALS		809.07 1013	Quality Control Accept.	**REFER TO SECTION 807 OF THIS APPENDIX.**								
TRAFFIC BARRIERS	Drawings & Brochures	809.04 QC	Quality Control	-----	**Bridge Design accepts and distributes to OVF/CQAF.**				-----	-----	-----	Design Builder to submit to CQAF. QC inspects materials and components to ensure conformance.
		729.02 809.04 Bridge Design	Accept.	-----					-----	-----	3 OVF to review and submit to DOTD	CQAF inspects materials and components to ensure conformance. CQAF to submit to OVF.
WELDING			Quality Control Accept.	**REFER TO SECTION 815 OF THIS APPENDIX.**								
WIRE ROPE & ATTACHMENTS	Counterweight Rope Assemblies	809.08	Quality Control	-----	**Inspected and stamped by DOTD Const. Fab. Insp. Unit prior to use.**			-----	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab
		809.08 DOTD Const. Fab. Insp.	Accept.	-----				-----	-----	-----	3 OVF to distribute inspection report to Design Builder. OVF verifies if the document is in the system.	CQAF to receive inspection report on counterweight ropes and sockets from DOTD Const. Fab. Insp. and submit to OVF/CQAF. CQAF to verify stamp by DOTD Const. Fab Insp. Documents added to CQAP Documentation Data base by CQAF.
	Wire Rope	809.08 1009.10	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		809.08 1009.10 Mat. Lab	Accept.	-----	CQAF S 501	1/type or class/ shipment	6 ft. length	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	Does not include counterweight ropes.

SECTION 810 BRIDGE RAILINGS AND BARRIERS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE AND ASSOCIATED MATERIALS			Quality Control / Accept.	**REFER TO SECTIONS 805 AND 901 OF THIS APPENDIX AND SECTION 1012 OF THE STANDARD SPECIFICATIONS.**								
HARDWARE	Galvanized Steel	810.02 1012.04	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		810.02 1012.04 Mat. Lab	Accept.	-----	CQAF S 501	1/size/type/ shipment	2 of each item	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	
METAL CASTINGS, FITTINGS, POSTS & RAILINGS	Steel	810.02 1012.03	Quality Control	-----	**Inspected and stamped by the Const. Fab. Unit prior to use.**			CA	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		810.02 1012.03	Accept.	-----					-----	-----	OVF verifies if the document is in the system	CQAF to receive inspection report from DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.
	Pipe (Galvanized)	810.02 1012.04	Quality Control	-----	**Inspected and stamped by the Const. Fab. Unit prior to use.**			CA	-----	-----	-----	Visual inspection by QC. QC to verify stamp by DOTD Const. Fab. Insp.
		810.02 1012.04 DOTD Const. Fab. Insp.	Accept.	-----					-----	-----	OVF verifies if the document is in the system	CQAF to receive inspection report from DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab. Insp.
PAINT AND PROTECTIVE COATINGS		810.03 1008	Quality Control / Accept.	**REFER TO SECTION 811 OF THIS APPENDIX**								
WELDING			Quality Control / Accept.	**REFER TO SECTION 815 OF THIS APPENDIX**								
SPECIAL SURFACE FINISH	Concrete	805.13(b) 1011.03	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		805.13(b) 1011.03 Mat. Lab	Accept.	-----	CQAF S 601	1 lot or shipment*	1 each friction top can		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. Sample if not accompanied by certificate or when questionable.

SECTION 811 PAINTING AND PROTECTIVE COATINGS

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 811.												
PAINT AND PROTECTIVE COATINGS	Paint for Field Painting	811.03 811.10 1008	Quality Control	-----	-----	-----	-----	*CD	-----	-----	-----	QC to provide document to CQAF.
		811.03 811.10 1008 Mat. Lab	Accept.	SSPC SP 11	CQAF S 604	1/batch	1 pt each component friction top can		-----	14 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab. for CQAF.	*Sample when not accompanied by CD. Multiple component paints must be submitted in separate containers with the mixing proportions indicated on the sample identification and cans. Sampling technique is sensitive, contact Dist. Lab prior to sampling. Documents added to CQAP Documentation Data base by CQAF.
	Galvanizing Repair Compound	811.03(c) 1008.05	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		811.03(c) 1008.05 Mat. Lab	Accept.	-----	CQAF S 601	1/type*	1 bar, can or rod	-----	-----	-----	3 OVF to submit to Mat. Lab. for CQAF.	AML *Visual inspection by CQAF. Sample only when questionable.
	Paint for Shop Painting	811.03 811.09 1008	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		811.03 811.09 1008 Mat. Lab	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Design Builder to notify DOTD Bridge Design Engineer of the paint system to be used prior to submitting shop drawings.

T 811 - 1/1

SECTION 812 TREATED TIMBER

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONNECTORS		812.02 1018.07	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		812.02 1018.07 Mat. Lab	Accept.	ASTM A711, Grade 1015 or ASTM A47 Grade 32510	CQAF S 501	1/type/ shipment*	1 of each item	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
CASTINGS		812.02 1013.05(a)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		812.02 1013.05(a) 1013.06(a) Mat. Lab	Accept.	ASTM A27 Grade 70-26 or ASTM A148 or ASTM A743	CQAF S 501	1/type/ shipment	1 of each item	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	-----
HARDWARE & STRUCTURAL SHAPES		812.02 1018.08	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF.
		812.02 1018.08 Mat. Lab	Accept.	ASTM A307 AASHTO M270	CQAF S 501	1/type/ shipment	1 of each item		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	Documents added to CQAP Documentation Data base by CQAF. CA to accompany sample.
PAINT AND PROTECTIVE COATINGS		812.18	Quality Control Accept.	**REFER TO SECTION 811 OF THIS APPENDIX**								
ROOFING PITCH		812.02 1018.13	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. To the satisfaction of the CQAF.
		812.02 1018.13 CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by CQAF. To the satisfaction of the CQAF.
TIMBER & LUMBER (Treated)		812.02 1014	Quality Control	-----	**Inspected and stamped (Hammered) by DOTD Const. Fab. Insp. Unit prior to use.**			CD	-----	-----	-----	Visual inspection by QC and verify stamp by DOTD Const. Fab. Insp. QC to provide document to CQAF.
		812.02 1014	Accept.	-----					-----	-----	3 OVF verifies if the document is in the system.	Visual inspection by CQAF and verify stamp by DOTD Const. Fab. Insp. Documents added to CQAP Documentation Data base by CQAF.

SECTION 812 TREATED TIMBER (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
TREATMENT OF PILE HEADS	Canvas	812.06(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Must meet the approval of the CQAF.
		812.06(b) Mat. Lab	Accept.	-----	CQAF S 601	1/shipment*	18 in x 18 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Coal Tar Pitch, Creosote Oil, Asphalt & Copper Napthanate	812.06(a)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Must meet the approval of the CQAF.
		812.06(a) Mat. Lab	Accept.	-----	CQAF S 201	1/shipment*	1 qt friction top can	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Fabric Covering	812.06(c)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Must meet the approval of the CQAF.
		812.06(c) Mat. Lab	Accept.	ASTM D173	CQAF S 601	1/shipment*	18 in. x 18 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Galvanized Metal Covering	812.06(b)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Must meet the approval of the CQAF.
		812.06(b) Mat. Lab	Accept.	-----	CQAF S 501	1/shipment*	6 in. x 6 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
	Galvanized Nails, Staples & Wire	812.06(c) QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC. Must meet the approval of the CQAF.
		812.06(c) Mat. Lab	Accept.	-----	CQAF S 501	1/size/type/ shipment*	12 of each item Wire - 24 in. length	-----	-----	10 days	3 OVF to submit to Mat. Lab. for CQAF.	*Visual inspection by CQAF. Sample only when questionable.

SECTION 813 CONCRETE APPROACH SLABS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
			Quality Control / Accept.	**FOR DETAILS ON CONCRETE TESTS, MIX DESIGNS AND MATERIALS (ADMIXTURES, AGGREGATES, CEMENT AND WATER) REFER TO SECTION 901 OF THIS APPENDIX**								
AGGREGATES	Bedding Material	813.02 1003.08 QC	Quality Control	Gradation TR 113 PI TR 428	S 101	1/1,000 yd^3	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		813.02 1003.08 CQAF	Accept.	Gradation TR 113 PI TR 428	CQAF S 101	1/1,000 yd^3	1 full sample sack	-----	-----	4 days	3	Design Builder may propose a lower frequency after 8 consecutive passing tests and provided QC maintain their minimum sampling testing frequency.
BEARING PILES	Timber	813.02 813.06 1014	Quality Control	-----	**Inspected and stamped by the DOTD Const. Fab. Insp. Unit prior to use.**			CD	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify stamp by DOTD Const. Fab Insp.
		813.02 813.06 1014 CQAF	Accept.	-----					-----	-----	3 OVF verifies if the document is in the system	Visual inspection by QC. Documents added to CQAP Documentation Data base by CQAF. CQAF to verify stamp by DOTD Const. Fab Insp.
CONCRETE (In-Place)	Compressive Strength	805.03(a) 805.03(c) 813.07	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		805.03(a) 805.03(c) 813.07 CQAF	Early Break	Compress. Strength TR 230	CQAF S 301	3 cylinder/ pour	Three 4 in. x 8 in. cylinder mold	-----	-----	-----	3	*To determine strength for form removal or exposure to construction traffic.
	Surface Tolerance	813.07 QC	Quality Control	-----	-----	Each slab	entire lot	-----	-----	-----	-----	Plastic Concrete Surface must be checked using an approved 10 ft metal static straightedge. QC to check sufficient to ensure it meets CQAF satisfaction.
		805.13(d) 813.07	Accept.	-----	-----	Each slab	entire lot	-----	-----	-----	3	Straightedge testing to be witnessed by CQAF for acceptance.
	Tine Texturing	813.08 QC	Quality Control	Texturing TR 229	QC	2/slab	-----	-----	-----	-----	-----	Performed on Plastic Concrete. Shall check sufficient to ensure specifications are met.
		805.13(d) 813.08 CQAF	Monitor	Texturing TR 229	CQAF	1/slab	-----	-----	-----	-----	-----	Performed on Plastic Concrete
		805.13(d) 813.08 CQAF	Accept.	Texturing TR 229	CQAF	2/slab	-----	-----	-----	-----	3	Performed on hardened concrete.
CURING MATERIALS		813.07 1011.01 Mat. Lab	Quality Control / Accept.	**REFER TO SECTION 601 OF THIS APPENDIX**								

SECTION 813 CONCRETE APPROACH SLABS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
GEOTEXTILE FABRIC		813.03 1019.01	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		813.03 1019.01 Mat. Lab	Accept.	Table 1019-1	CQAF S 601	1/type	3 lin ft/roll width of fabric. Min. of 18 ft^2		150 yd^2	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab. For CQAF.	AML Documents added to CQAP Documentation Data base by CQAF.
HARDWARE CLOTH		813.02 1018.21	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		813.02 1018.22 Mat. Lab	Accept.	ASTM A470	CQAF S 601	1/shipment*	18 in x 18 in.	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	*Visual inspection by CQAF. Sample only when questionable.
JOINT MATERIAL	Preformed Closed Cell Polyethylene	813.02 1005.01(e)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		813.02 1005.01(e) Mat. Lab	Accept.	ASTM D7174 Type 1	CQAF S 601	1/5,000 lin ft/ Width	36 in. length	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML
JOINT SEAL (Preformed)	Elastomeric Compression	813.02 1005.03	Quality Control	-----	-----	-----	-----	CA**	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF. Visual inspection by QC.
		813.02 1005.03 Mat. Lab	Accept.	Compress. Deflection TR 612	CQAF S 601	1/lot or shipment	8 ft length* when width is over 2 in., 4 ft. length is sufficient		-----	14 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. **CA to accompany sample to lab.
ADHESIVE LUBRICANT-	For Preformed Closed Cell polyethylene Joint Filler	813.02 1005.01(e)	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML. Visual inspection by QC.
		813.02 1005.01(e) COAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3	AML Visual inspection by CQAF.
	For Preformed Elastomeric Compression Joint Seal	813.02 1005.03	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	QC to verify material is on the AML.
		813.02 1005.03 Mat. Lab	Accept.	ASTM D4070	CQAF S 601	1 Project/lot	1qt friction top can	-----	-----	10 days	3 OVF to submit to Mat. Lab for CQAF.	AML Mix well before sampling. Seal can tightly.

T 813 - 2/3

SECTION 813 CONCRETE APPROACH SLABS (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
POLYETHYLENE FILM		813.02	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		813.02	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF.
REINFORCING STEEL		813.02 1009.01	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to provide document to CQAF. QC to verify material is on the AML.
		813.02 1009.01 Mat. Lab	Accept.	ASTM A615	CQAF S 501	1/size/ source	48 in. length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF	AML Visual inspection by CQAF. Sample if not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
UNDERDRAIN PIPE		813.04	Quality Control	**REFER TO SECTION 703 OF THIS APPENDIX**								
			Accept.									

SECTION 814 DRILLED SHAFT FOUNDATIONS

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Structural)	Mix Designs, Materials & Test	814.02	Quality Control Accept.	REFER TO SECTION 901 OF THIS APPENDIX								
GRANULAR MATERIAL	Pea Gravel or Granular Material	814.02 1003.07	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Visual inspection by QC.
		814.02 1003.07 CQAF	Accept.	-----	-----	-----	-----	-----	-----	-----	3	Visual inspection by CQAF
REINFORCEMENT		814.02 1009	Quality Control	-----	-----	-----	-----	CA	-----	-----	-----	Visual inspection by QC. QC to verify material is on the AML. QC to provide document to CQAF.
		814.02 1009 Mat. Lab	Accept.	ASTM A615	CQAF S 501	1/size/ source	48 in. length		-----	10 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Visual inspection by CQAF. Sample if not accompanied by certificate or when questionable. Documents added to CQAF Documentation Data base by CQAF.
SLURRY		814.12 Design-Builder	Quality Control	-----	QC	-----	-----	-----	-----	-----	-----	Sampling and testing shall be in accordance with the Design-Builder's accepted Drilled Shaft Installation Plan.
		814.12	Accept.	-----	CQAF*	-----	-----	-----	-----	-----	3	*QC tests to be observed by the CQAF & documented in field book.
DRILLED SHAFT INSTALLATION PLAN		814.02 QC	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	Design-Builder to submit Drilled Shaft Installation Plan four weeks prior to start of construction. Must be accepted by CQAF/OVF/DOTD.
		814.05 CQAF	Accept.	-----	-----	-----	-----	-----	-----	10 days	3	

T 814 - 1/1

SECTION 815 WELDING

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 815. THERE ARE NO PAY ITEMS UNDER SECTION 815.												
WELDING QUALIFICATION AND TESTING	Field	807.50 815 .02	Quality Control	-----	**Welders and procedure qualified by licensed, bonded testing laboratory.**		-----	-----	-----	-----	-----	Design-Builder to provide document to CQAF/OVF for acceptance.
		807.50 815 .02 CQAF	Accept.	-----			-----	-----	-----	-----	3	Visual inspection by CQAF.
	Shop	807.23 815.02	Quality Control	-----	**Qualified, inspected and approved by licensed, bonded testing laboratory prior to use.**		-----	-----	-----	-----	-----	Visual inspection of visible welds upon delivery of fabricated metal work to job site.
		807.23 815.02	Accept.	-----			-----	-----	-----	-----	3 OVF verifies if the document is in the system.	CQAF receives inspection report from DOTD Const. Fab. Insp. Unit. Visual inspection of visible welds upon delivery of fabricated metal work to job site. Documents added to CQAP Documentation Data base by CQAF.

SECTION 901 PORTLAND CEMENT CONCRETE

MATERIAL		REF. / TESTED BY	PURP.	TEST METHOD	SAMPLED BY / METHOD	MIN. FREQ.	MIN. QUANT. / CONTAINER	CERT. / DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
			Quality Control / Accept.	THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 901 OF THIS APPENDIX.								
ADMIXTURES		901.02 1011.02 1018.28	Quality Control	-----	-----	-----	-----	CC	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		901.02 1011.02 1018.28 Mat. Lab	Accept.	IR TR 610 %Solids TR 524	CQAF S 601	*	1 pt. friction top can		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.
AGGREGATES (Pavement)	Fine & Coarse	901.02 1003.01 1003.02 QC	Quality Control	Gradation TR 113 Deleterious TR 119 Moisture TR 106	QC S 101	1/day/plant for moisture 2/day/plant for gradation*	1 full sample sack	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. QC to verify material is on the AML. Gradation results are plotted on control charts which are required for documentation. No sample required for type B or D Pavement Aggregate. See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and structures" for details.
		901.02 1003.01 1003.02 CQAF	Accept.	Gradation TR 113 Deleterious TR 119	CQAF S 101	1/pavement lot	-----	-----	-----	3 days	2	AML No sample required for type B or D Pavement Aggregate. Check gradation and foreign matter. See " Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and structures" for details.
	Blended Aggregate Type B & D	901.06 1003.02(c) QC	Quality Control	Gradation TR 113	QC S 101	1/stockpile /day	1 full sample sack	-----	-----	-----	-----	QC to verify material is on the AML. Shall check sufficient to ensure specifications are met. Gradation results may be used to calculate blended gradation for plotting control charts. Gradations for each component used to calculated blended gradation based on mix proportions. Report combined gradation of adjacent sieves as required by specifications.
		901.06 1003.02(c) CQAF	Monitoring	Gradation TR 113	CQAF S 101	1/aggregate size/ pavement /lot (max of 1/agg. size/day)	-----	-----	-----	3 days	2	AML Gradations for each component used to calculate blended gradation based on mix proportions. Report combined gradation of adjacent sieves as required by specifications.

SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
AGGREGATES Structural and Minor Structures	Fine & Coarse	901.02 1003.01 1003.02 QC	Quality Control	Gradation TR 113 Moisture TR 106 Deleterious TR 119	QC S 101	1/lot	1 full sample sack	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. QC to verify material is on the AML. Lot to be identifiable pour up to 200 yd3 max of concrete. Gradation results shall be plotted on control charts which are required for documentation. See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details.
		901.02 1003.01 1003.02 CQAF	Accept.	Gradation TR 113 Deleterious TR 119	CQAF S 101	1/every 5 day of production or 400 y^3 of aggregate*	1 full sample sack	-----	-----	3 days	3	AML Check gradation and foreign matter. *For structural concrete produced from non-dedicated stockpiles.
CEMENT (Hydraulic)	Types I, II,IP & IS (Pavement & Structural) Types I, II, IP, IS & III (Precast) (cont'd)	901.02 1001.01 1001.02 1001.04	Quality Control	-----	-----	-----	-----	CD	-----	-----	-----	QC to verify material is on the AML. QC to provide document to CQAF.
		901.02 1001.01 1001.02 1001.04 Mat. Lab	Accept.	-----	-----	1/shipment	1 gallon friction type can		-----	17 days	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Sample when not accompanied by certificate or when questionable. Documents added to CQAP Documentation Data base by CQAF.

SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Minor Structure)	Compressive Strength	Table 901-3	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	-----
		Table 901-3 CQAF	Accept.	Compressive Strength TR 230	CQAF S 301	3cyl/50yd^3	4 in. x 8 in. cylinder mold	-----	-----	30 days	1	-----
	Mix Design	901.06(a) QC	Quality Control	-----	-----	*1/mix class or type/material source/plant	-----	-----	-----	-----	-----	AML QC to verify materials are on the AML. *The Design-Builder shall submit to the CQAF Engr. the standard Mix Design form indicating the intended source of all materials and the mix design. Acceptance by the CQAF/OVF is required prior to starting work.
		901.06(a) CQAF	Accept.	-----	-----	1/mix class or type/material source/plant	-----	-----	-----	-----	3 OVF verifies if the document is in the system.	AML Acceptance by the CQAF/OVF is required prior to starting work. Documents added to CQAP Documentation Data base by CQAF.
	Slump and Air	Table 901-3 QC	Quality Control	Slump/Air TR 202 TR 207	QC S 301	1st/3 trucks then 1/5 trucks	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met.
		Table 901-3 CQAF	Accept.	Slump TR 207	CQAF S 301	1/50 yd^3	0.5 ft^3	-----	-----	-----	3	When required in Table 1 or individual section.
				Air TR 202	CQAF S 301	1/50 yd^3	0.5 ft^3	-----	-----	-----	2	When required in Table 1 or individual section.

SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Pavement)	Entrained Air	901.06(b) QC	Quality Control	Air TR 202	QC S 301	*1 for 1st 3 trucks then 1/5 trucks	-----	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. Test results shall be plotted on control charts which are required for documentation. Air tests will only be required when an air-entraining admixture is used.
		Table 901-3 CQAF	Accept.	Air TR 202	CQAF S 301	1/half day	0.25 ft^3	-----	-----	-----	2	Air tests will only be required when an air-entraining admixture is used.
	Mix Design	901.06(a) QC	Quality Control/ Design		-----	1/mix type/material source/plant	-----	-----	-----	-----	-----	Design-Builder shall submit to the CQAF the standard Mix Design form indicating material sources, proportions, and composite gradation calculations.
		901.06(a) CQAF	Accept.	-----	-----	1/mix type/material source/plant	-----	-----	-----	3 days	3 OVF verifies if the document is in the system.	Acceptance by the CQAF/OVF is required prior to starting work. Documents added to CQAP Documentation Data base by CQAF.
	Mix Temperature	901.06(b) 901.11 QC	Quality Control	-----	QC S 301	*1 for 1st 3 trucks then 1/5 trucks	-----	-----	-----	-----	-----	*When temperature control is needed, testing must be sufficient to prevent exceeding appropriate limits.
		901.06(b) 901.11 CQAF	Accept.	-----	-----	*1/ 5 trucks	-----	-----	-----	-----	3	*When temperature control is needed, testing must be sufficient to prevent exceeding appropriate limits.
	Slump	901.06(b) QC	Quality Control	Slump TR 207	QC S 301	*1 for 1st 3 trucks then 1/5 trucks	0.5 ft^3	-----	-----	-----	-----	*Shall check sufficient to ensure specifications are met. Test results shall be plotted on control charts which are required for documentation.
		Table 901-3 CQAF	Accept.	Slump TR 207	CQAF S 301	1/half day	0.5 ft^3	-----	-----	1/2 hr.	3	-----
	Unit Weight	901.06(b) QC	Quality Control	Unit Weight TR 201	QC S 301	2/lot	-----	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. Unit weight will be run as necessary. Test results are to be plotted on control charts which are required for documentation.
		901.06(b) *QC	Accept.	Unit Weight TR 201	QC	-----	1.5ft^3 0.5 or 1 ft^3 yield bucket	-----	-----	-----	3	*To be witnessed by CQAF.

SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Structural)	Entrained Air	901.06(b) QC	Quality Control	Air Content TR 202	QC S 301	*1 for 1st 3 trucks then 1/5 trucks	0.25 ft^3	-----	-----	-----	-----	Test results shall be plotted on control charts which are required for documentation. When pump placement is used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details. *Shall check sufficient to ensure specifications are met.
		Table 901-3 CQAF	Accept.	Air Content TR 202	CQAF S 301	1/set of compressive cylinders	0.25 ft^3	-----	-----	1 day	2	When pump placement is used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details.
	Compressive Strength/ (Surface Resistivity)	Table 901-3	Quality Control	-----	-----	-----	-----	-----	-----	-----	-----	When required by specifications, surface resistivity test to be included in trail batches.
		Table 901-3 CQAF	Accept.	Compressive Strength TR 230 (Surface Resistivity TR 233)	CQAF S 301	3 cyl/batch 2 batches/lot	4 in. x 8 in. cylinder mold	-----	-----	30 days	1	A lot is an identifiable pour not to exceed 200 yd^3. For specific details see Specification Subsection 805.17. (When required by specifications)
	Mix Design	901.06(a) QC	Quality Control / Design	-----	-----	1/mix class/material source/plant	-----	-----	-----	-----	-----	Design-Builder shall submit to the CQAF Engr. the standard Mix Design form indicating the intended source of all materials and the mix design.
		901.06(a)	Accept.	-----	-----	1/mix class/material source/plant	-----	-----	-----	3 days	3 OVF verifies if the document is in the system.	Acceptance by the CQAF/OVF Engineer is required prior to starting work. Documents added to CQAP Documentation Data base by CQAF.
	Mix Temperature	901.06(b) 901.11 QC	Quality Control	-----	QC S 301	*1 for 1st 3 trucks then 1/5 trucks	-----	-----	-----	-----	-----	*When temperature control is required, testing must be sufficient to prevent exceeding appropriate limits.
		901.06(b) 901.11 CQAF	Accept.	-----	CQAF S 301	*1/5 trucks	-----	-----	-----	-----	-----	*When temperature control is required, testing must be sufficient to prevent exceeding appropriate limits.

SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
CONCRETE (Structural) (Cont'd)	Slump	901.06(b) QC	Quality Control	Slump TR 207	QC S 301	*1 for 1st 3 trucks then 1/5 trucks	0.5 ft^3	-----	-----	-----	-----	Test results shall be plotted on control charts which are required for documentation. When pump placements used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details. Shall check sufficient to ensure specifications are met.
		Table 901-3 CQAF	Accept.	Slump TR 207	CQAF S 301	1/set of compressive cylinders	0.5 ft^3	-----	-----	1/2 hr.	3	When pump placements used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details.
	Unit Weight	901.06 QC	Quality Control	TR 201	QC S 301	1/ lot	1.5 ft^3 0.5 or 1 ft^3 yield bucket	-----	-----	-----	-----	Shall check sufficient to ensure specifications are met. Test result shall be plotted on control charts which are required for documentation. To be witnessed by CQAF.
		901.06	Accept.	TR 201	QC	-----	-----	-----	-----	-----	-----	QC test to be witnessed by CQAF.
FLY ASH	Cement Replacement	901.02 1018.15	Quality Control	-----	-----	1/shipment	-----	CD	-----	-----	-----	Shall check sufficient to ensure specifications are met. QC to verify material is on the AML.
		901.02 1018.15 Mat. Lab	Accept.	-----	-----	1/shipment	1 gallon friction top can		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.
GROUND GRANULATED BLAST-FURNACE SLAG	Cement Replacement	901.08 1018.27	Quality Control	-----	-----	1/shipment	-----	CD	-----	-----	-----	QC to provide document to CQAF. QC to verify material is on the AML.
		901.08 1018.27	Accept. Mat. Lab	-----	-----	1/shipment	1 gallon friction top can		-----	-----	3 OVF verifies if the document is in the system. OVF to submit to Mat. Lab for CQAF.	AML Documents added to CQAP Documentation Data base by CQAF. Sample when not accompanied by certificate or when questionable.

SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REF. TESTED BY	PURP.	TEST METHOD	SAMPLED BY METHOD	MIN. FREQ.	MIN. QUANT. CONTAINER	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	OVT LEVEL	REMARKS
WATER		901.02 1018.01 QC	Quality Control	-----	QC S 301	*'1/source	1 qt plastic bottle	-----	-----	-----	-----	*Drinkable water need not be sampled.
		901.02 1018.01 Mat. Lab	Accept.	-----	CQAF S 301	*1/source	1 qt plastic bottle	-----	-----	11 days	3 OVF to submit to Mat. Lab for CQAF.	*Drinkable water need not be sampled.