



## TABLE OF CONTENTS

### Chapter 8: Materials Testing, Sampling, Acceptance

#### **Section 8-10 Materials - General**

- [8-10.1..... Control of Materials](#)
- [8-10.2..... Approval of Materials](#)
- [8-10.3..... Quality Management Program](#)
- [8-10.4..... Nonconforming Materials](#)
- [8-10.5..... Noncontractual Price Reduction Guidelines](#)

#### **Section 8-13 Weighed Materials**

- [8-13.1..... General](#)
- [8-13.2..... Truck Scales](#)
- [8-13.3..... Conveyor Scales](#)
- [8-13.4..... Storage Hopper Scales](#)
- [8-13.5..... Plant Scales](#)
- [8-13.6..... Loader Scales](#)

#### **Section 8-15 Density Testing**

- [8-15.1..... General](#)
- [8-15.2..... Nuclear Gauges](#)
- [8-15.3..... Nuclear Density Gauge Safety](#)
- [8-15.4..... Annual Bureau of Technical Services Gauge Block Calibration Procedures](#)
- [8-15.5..... Nuclear Density Testing HMA](#)
- [8-15.6..... Project Nuclear Density Testing](#)
- [8-15.7..... QMP QC and QV Nuclear Density Gauge Comparison](#)
- [8-15.8..... HMA QMP Reference Site Monitoring](#)
- [8-15.9..... Non QMP HMA Nuclear Density Reference Site Monitoring](#)
- [8-15.10... Use of Nuclear Moisture/Density Gauges on HMA](#)
- [8-15.11... Procedure for Determining Limits of Unacceptable Material](#)
- [8-15.12... Soils Reference Site Monitoring](#)
- [8-15.13... Test Strip Requirements for Stone Matrix Asphalt \(SMA\) and Coarse \(Gap-graded\) mixes](#)
- [8-15.14... Reports Forms](#)
- [8-15.15... Acceptance and Incentive/Disincentive](#)
- [8-15.16... Density Data Submittal](#)

#### **Section 8-20 Independent Assurance Program**

- [8-20.1..... General](#)

#### **Section 8-30 QMP - General**

- [8-30.1..... Scope](#)
- [8-30.2..... Quality Management Program](#)
- [8-30.3..... Highway Technician Certification Program \(HTCP\)](#)
- [8-30.4..... Verification and Quality Assurance](#)
- [8-30.5..... Contractor Quality Control](#)
- [8-30.6..... Quality Control Laboratory and Equipment](#)
- [8-30.7..... Quality Control Start Up Activities](#)
- [8-30.8..... Inspection](#)
- [8-30.9..... Sampling and Testing](#)
- [8-30.10... Corrective Action](#)
- [8-30.11... Testing Precision](#)
- [8-30.12... Dispute Resolution](#)

[8-30.13](#)...Contractor Non-Performance of QMP Sampling & Testing

**Section 8-32 QMP - Subgrade**

- [8-32.1](#).....Quality Management Plan Description
- [8-32.2](#).....Contract Quality Control Plan
- [8-32.3](#).....Pre-Startup Activities
- [8-32.4](#).....Excavations Below Subgrade
- [8-32.5](#).....Field Density/Moisture Control Testing
- [8-32.6](#).....Documentation
- [8-32.7](#).....Corrective Action
- [8-32.8](#).....Quality Assurance Aspects for the Contractor

**Section 8-34 QMP - Aggregate**

- [8-34.1](#).....Sampling and Testing
- [8-34.2](#).....Department Testing
- [8-34.3](#).....Dispute Resolution
- [8-34.4](#).....Aggregate for Concrete Pavement
- [Attachment 1](#).....Pooled t-Test Procedure

**Section 8-35 QMP - Concrete**

- [8-35.1](#).....Concrete Pavement and Concrete Structures
- [8-35.2](#).....Ancillary Concrete

**Section 8-36 QMP - HMA**

- [8-36.1](#).....General
- [8-36.2](#).....Personnel Requirements (Through HTCP)
- [8-36.3](#).....Laboratory Requirements
- [8-36.4](#).....Sampling Hot Mix Asphalt
- [8-36.5](#).....Sample Identification
- [8-36.6](#).....Required Testing and Calculated Properties
- [8-36.7](#).....HMA Quality Management Program Documentation
- [8-36.8](#).....Documentation
- [8-36.9](#).....Quality Verification Program
- [8-36.10](#)...Example Worksheet

**Section 8-38 Ride Quality**

- [8-38.1](#).....Profile Testing for Ride Quality
- [8-38.2](#).....Equipment and Personnel
- [8-38.3](#).....Testing
- [8-38.4](#).....Pavement Categories
- [8-38.5](#).....Localized Roughness
- [8-38.6](#).....Segment IRI Pay Adjustments
- [8-38.7](#).....Documentation and Reporting
- [8-38.8](#).....Diamond Grinding

**Section 8-40 Materials Sampling**

- [8-40.1](#).....General
- [8-40.2](#).....Sampling Responsibility
- [8-40.3](#).....Personnel
- [8-40.4](#).....Selection of Sampling Method
- [8-40.5](#).....Submittal of Samples to Central Materials Laboratory
- [8-40.6](#).....Source of Materials Report, Department Form DT1349
- [8-40.7](#).....Material Specifications Transition Period

**Section 8-45 Materials Testing and Acceptance - General**

- [8-45.1](#).....Material Testing and Acceptance - General
- [8-45.2](#).....Material Requirement References
- [8-45.3](#).....Approval Methods
- [8-45.4](#).....Material Inspection

[8-45.5](#).....Documentation - General

[Attachment 1](#).....Materials Documentation Location Guide

**Section 8-46 *Materials Data Collection and Reporting Software System***

[8-46.1](#).....General

[8-46.2](#).....System Component Overview

[8-46.3](#).....Electronic Reporting System Operations

[8-46.4](#).....System Version Updates

[8-46.5](#).....Troubleshooting System Malfunctions or Inconsistencies

[8-46.6](#).....Support and Contacts List

[8-46.7](#).....Top FAQs

[8-46.8](#).....Appendix

**Section 8-50 *Materials Testing and Acceptance Guide***

[Exhibit 1](#).....Materials Testing and Acceptance Guide

**Section 8-55 *Materials Testing and Acceptance - Earthwork***

[8-55.1](#).....Field Test Procedures for Moisture-Density Relationship of Gravelly Soils

[8-55.2](#).....Field Determination of Density for Embankments

**Section 8-60 *Materials Testing and Acceptance - Aggregates***

[8-60.1](#).....General

[8-60.2](#).....Aggregate Source Approval

[8-60.3](#).....Aggregate Acceptance

[8-60.4](#).....Marginal Source Testing

[8-60.5](#).....Sampling Aggregates

[8-60.6](#).....Reducing Samples of Aggregate to Test Size

[8-60.7](#).....Aggregate Particle Shape

[8-60.8](#).....Field Determination of Moisture Content of Fine and Coarse Aggregates

[8-60.9](#).....Field Test Procedures for Sieve Analysis of Aggregates

[8-60.10](#)...Aggregate Acceptance Tests

[8-60.11](#)...Field Determination of Density for Aggregate Courses

[8-60.12](#)...Field Density Testing by the Sand Cone Method Part 1

[8-60.13](#)...Field Density Testing by the Sand Cone Method Part 2

**Section 8-65 *Asphaltic Binder Materials***

[8-65.1](#).....General

[8-65.2](#).....Sampling Asphaltic Materials

[8-65.3](#).....Certification Method of Acceptance for Asphalt Binders

**Section 8-66 *Asphalt Mixture Design***

[8-66.1](#).....Asphaltic Mixture Design

[8-66.2](#).....Laboratory Standard Method of Asphaltic Mix Design (previously called WisDOT Test Method 1559)

[8-66.3](#).....Mixture Design Life

[8-66.4](#).....Amended JMF Reports and JMF Report Reviews

[8-66.5](#).....Non Traditional or Non-Standard Mixture Design Reports

**Section 8-70 *Materials Testing and Acceptance - Concrete***

[8-70.1](#).....General

[8-70.2](#).....Concrete Mixtures and Materials

[8-70.3](#).....Concrete Production and Equipment

[8-70.4](#).....Concrete Sampling and Testing

[8-70.5](#).....Acceptance

[Attachment 1](#).....Field Check Test of Air Meters Using a Calibration Canister

[Attachment 2](#).....Field Determination of Concrete Pavement Thickness by Magnetic Image Tomography (MIT Scan)

[Attachment 3](#).....Certification Method of Acceptance for Portland Cement

[Attachment 4](#).....Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential Pressure Method (Super Air Meter (SAM))

**Section 8-75 Materials Testing and Acceptance - Structures**

[8-75.1](#).....Plant Certification Program for Fabrication of Prestressed Concrete Members

[8-75.2](#).....Approved Fabricators for Primary Steel Bridge Members

[8-75.3](#).....Approved Fabricators for Steel Sign Bridges and Overhead Sign Supports

[8-75.4](#).....Approved Fabricators for Fabricated Bridge Components

[8-75.5](#).....Pile Driving Data, Form DT1924

[8-75.6](#).....Piling Record, Form DT1315

[8-75.7](#).....Bridge Inventory Report, DT 2006 and Bridge Inspection Report, DT 2007 and DT 2008

[Attachment 1](#).....Department Plant Certification Program Requirements

[Attachment 2](#).....Schedule of Tests

[Attachment 3](#).....Plant Inspection Fabrication Forms