

2014 CDOT Field Materials Manual Introduction

The purpose of this manual is to provide an official guide to CDOT Field forces for the sampling and testing of materials on construction projects and the subsequent documentation. It is not the intent to publish a complete summary of all sampling and testing methods and procedures. Further relevant information may be found in either the applicable AASHTO or ASTM manuals. Published herein are some select AASHTO Procedures concerning materials testing that may not be readily available to Field personnel.

The Manual is published in dual units using the Standard English units and the International System of Units (SI Modernized Metric).

The testing frequency as shown in the Quality Assurance (QA) Schedule (Frequency Guide Schedule for Minimum Materials Sampling, Testing, and Inspection) is considered to be the minimum necessary to have the degree of control desired. The Sampling and Testing Procedures have in many cases been modified to make them more applicable to Field testing conditions. Further unauthorized modifications should not be attempted. If a valid reason exists, a shortage of tests can be explained and the work accepted. However, improper test procedures cannot be explained nor accepted.

The testing frequency for Independent Assurance Sampling and Testing is to be established by the Region Materials Engineer according to the Independent Assurance (IA) Schedule (Frequency Schedule for Independent Assurance Evaluation).

It is not our intention to discourage efforts to find better or faster methods of testing. Many of the Colorado Procedures are the result of suggestions from field materials personnel. However, before using a procedure other than that listed, it must be approved by the Materials Advisory Committee (MAC) and the FHWA. In addition, the procedure used must be the same as that specified in the project specifications. If this rule is not followed, the acceptance or rejection action cannot be supported and may result in legal rulings against the Division in cases of litigation.

The Frequency Guide Schedule for Minimum Materials Sampling, Testing, and Inspection current at the time of contract advertisement shall apply during the full course of that particular project.

We realize the critical importance of materials and the associated personnel, whether they are Quality Control (QC), Quality Assurance (QA), or Independent Assurance (IA) to any construction project. It is our intent to create a Field Materials Manual (FMM) that always reflects the most current and best procedures, and is as user friendly as possible. Please take the time to review and read this publication, and provide us with either the Review / Comment Form or the Comment / Correction Form at any time.



Bill Schiebel
CDOT Materials Engineer

- NOTE 1:** CDOT Internal Web Address: <http://internal/infoexchg/organizations.cfm> (see Manual /...)
CDOT External Web Address: <http://www.dot.state.co.us/DesignSupport/> (see Manuals)
- NOTE 2:** **Materials Advisory Committee (MAC) information:** <http://internal/MAC/>
- NOTE 3:** **Materials Bulletins:** Same address as Note 1 with Construction and Design Bulletins.
- NOTE 4:** General correspondence (letters and envelopes), large packages, bulk mail samples of materials, and nuclear gauges should be addressed to or delivered to:
4670 North Holly Street, Unit A, Denver, CO 80216-6408
- NOTE 5:** If you have any questions concerning this manual please contact:
Editor @ (303) 398-6566 or the Assistant Editor @ (303) 398-6563.

2014 CDOT Field Materials Manual Dedication

Front Cover: The scenes on the cover of the 2014 CDOT Field Materials Manual are from I-25 & SH 392 interchange in Windsor, a landslide project on Cameron Pass, and a Placerville bridge replacement at the junction of SH 62 & SH 145. The photographs were provided by CDOT's Aerial Reconnaissance Program.

Special Thanks to: Jim Wickland for creating the front cover design and improving our materials forms. Tony Hernandez for assisting in numerous tasks such as example replacement and page numbering complications.

FMM Documents: A special thanks are extended to the members and participants of the MAC meetings and the associated task forces who are constantly striving to improve testing methodology and CDOT specifications so that the roads in Colorado are progressively built better and are safer for the motoring public.

Listed Revisions, Additions & Deletions

Changes from the 2013 FMM: Changes of significance within a particular CP or chapter will contain a "- 14" at the end of the title to coincide with this FMM. Changes to specific text from the previous year will have a solid black side-bar in either the left or right applicable margin.

- Documentation Chapter: revised Subsection 3.1.3 and added Subsection 11.2; changes to Pages 14, 15, 17; addition of Pages 27 & 28
- Special Notice to Contractors: revised Subsection 2.1, Subsection 4.1, Subsection 7.3.c, Subsection 7.3.d
- QA Schedule and IA Schedule: as always have been revised, but black-bars in the margins are not feasible due to space constraints
- CP 10: Table 10-1, the WAQTC column heading and three rows
- CP 11, Part II, Sub-Part 2: changed from AASHTO M 284 to ASTM A 775
- CP 26: new
- CP 50: added Section 1, Scope
- CP 51: revised and added Notes after Note 1
- CP 59: added Subsection 6.4.1
- CP 69: revisions within Section 8 and added a Section 9
- CP 77: revised Method B which was added in the 2013 FMM
- CP 78: User's Manual name change in Subsections 2.1, 3.1, 6.1
- Chapter 200: some form examples were changed
- Chapter 800: changes on Pages 3 & 4
- Inspections: changes on Pages 7, 11, 12, 15, 16
- Appendix: changes to Appendix A, the MAC Charter and the FPOG Charter; changes to Appendix O

Any errors that may still exist within this manual are solely the oversight of the Editor.

2014 Field Materials Manual (FMM)

Colorado Procedure Review/Comment Form

Mail or Fax to: Colorado Department of Transportation
Materials & Geotechnical Branch
Documentation Unit
4670 North Holly Street, Unit A
Denver, Colorado 80216-6408
FAX: (303) 398-6504

Name _____ Phone No. (_____) _____ Date _____

Company or CDOT Office _____

CP No. _____ **Section No.** _____

Comments : _____

CP No. _____ **Section No.** _____

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Thank you for your help in making the CDOT Field Materials Manual a better publication by notifying us of errors or points of confusion that require clarity.

