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| REVIEW OF NEW SPECIFICATION OR SPECIFICATION CHANGE  | **Log No.**  703-10 |
| **Specification Section No.:** 401 | **Item:** Mineral Filler |
| **Originating Office:** Region 6 | **By:** Masoud Ghaeli |
| **Date Sent For Review:** September 3, 2010 | **Date Comments Due: October1, 2010** |
| Please submit response to: STANDARDS AND SPECIFICATIONS UNIT, ROOM 290, HEADQUARTERS, DENVER |
| **Reviewer** | **Concurrent Reviews – Others Commenting** | The attached Draft Specification is submitted for your review and comments. If not returned by Date Comments Due, the draft specification will be considered to be approved unless the Specification Unit of Staff Design [(303) 757-9474, (303) 757-9402] is advised otherwise.**REMARKS:** If these proposed modifications are approved, our unit will issue these in a new project special worksheet |
|  | **Spec Committee Members:** |  |
|  | Chairman: Wassenaar | X |
|  | Region 1: Cox | **X** |
|  | Region 2: Burch | **X** |
|  | Region 3: Alexander | **X** |
|  | Region 4: Frieler | **X** |
|  | Region 5: Beller | **X** |
|  | Region 6: Koenig | **X** |
|  | Project Development: Lacey | **X** |
|  | Specifications: Brinck | **X** |
|  | Bridge: Hasan | **X** |
|  | Agreements: Wassenaar | **X** |
|  | Materials: Zufall | **X** |
|  | Traffic Engineering: Matthews | **X** | REVIEWER COMMENTS:( ) Approved ( ) Disapproved ( ) ModifiedIf disapproved or modified, give reason why and show any modifications on the attached draft copy: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ Name/Signature Date |
|  | Maintenance: Mueller | **X** |
|  | FHWA: Urban | **X** |
|  | Attorney General: Spear | **X** |
|  | Attorney General: Morrow | **X** |
|  |  |  |
|  | **Others:** |  |
|  | Colorado Contractors Assoc.: Moody | **X** |
|  |  |  |
|  | **Technical Committees:** |  |
|  | Bridge |  |
|  | Culvert |  |
|  | Joint Co-op, CCA/CDOT |  |

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| SUBMITTAL OF NEW SPECIFICATION OR SPECIFICATION CHANGE  | **Log No. 703-10**(Assigned by Specification Unit) |
| **T0:** Standards & Specs Unit, Room 290 | **FROM**:  | Name: Masoud Ghaeli |
| Region, Branch, or Technical Committee: Region 6 |
| **SPECIFICATION SECTION NO.****703-10** | ITEMMineral Filler | PRIORITYRoutine [ X ] Fast [ ] |
| **Reason for this new or changed specification:**Stone Matrix asphalt (SMA) task force committee was jointly established with the industry to clarify specification requirements on (SMA) projects for uniformity in application.As a result of the task force, below specifications were revised to address the following issues:- To clarify specification requirements on stone matrix asphalt (SMA) projects for uniformity in application.- Mix design adjustments- Density Targets- Compaction Test Section |
| **New or Revised Specification:**1. Revision of Section 401, Compaction of Hot Mix Asphalt. 2. Revision of Section 401, Compaction Pavement Test Section (CTS). . 3. Revision of Section 401, Temperature Segregation. 4. Revision of Section 401 and 703, Stone Matrix Asphalt pavement. 5. Creation of new Standard Special Provision, Section 703, Mineral Filler 6. Creation of a new Standard Special Provision, Revision of Section 620, Field Office. |
| **NOTE: See Procedural Directive 513.1 for a description of appropriate specification development procedures.** |

REVISON OF SECTION 703

MINERAL FILLER

Section 703 of the Standard Specifications is hereby revised for this project as follows:

Subsection 703.06 shall include the following*:*

If mineral filler other than limestone dust is used in Stone Matrix Asphalt (SMA) it shall consist of mineral matter that meets the requirements of Table 703-7 and the following:

Alternate mineral filler shall consist of finely divided mineral matter such as rock dust, slag dust, fly ash, loess, or other suitable mineral matter. Calcium Oxide content of any mineral filler shall not exceed 22 percent.

Production will be suspended if alternate mineral filler test results fail to meet requirements. The Contractor shall submit plans to correct the mineral filler operation to the Engineer for approval prior to commencing paving.

Alternate mineral filler test data shall be provided at SMA mix design submittal and as required during production.

**Table 703-7**

**Required Testing for Alternate SMA Mineral Fillers**

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| **Type of Test** | **Testing Frequency** | **Specification Limit** | **Remarks** |
| Plasticity Index AASHTO T90 | One per 10,000 tons of SMA placed♦ | 4% Maximum | ▲ |
| Hydrometer AnalysisAASHTO T88 | One at Mix Design submittal | Report |  |
| GradationAASHTO T37 | One per 10,000 tons of SMA placed♦ |  | ▲ |
| Calcium OxideContent ASTM C25 | One at Mix Design submittal | 22% Maximum |  |
| Modified Rigden Voids – NAPA Publication IS-101 | One per 10,000 tons of SMA placed♦ | Shall not exceed 50 | ▲ |
| ♦ The minimum frequency shall be twice per project▲ Sampling of alternate mineral fillers shall be at the point of introduction to the SMA and a split sample shall be submitted to the Engineer |

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| **Alternate SMA Mineral Gradation Criteria**(AASHTO M17/ASTM D 242-95) |
| **Sieve** | **Percent Passing** |
| 600 (#30) | 100 |
| 300 (#50) | 95 - 100 |
| 75 (#200) | 70 - 100 |