

MEMORANDUM

TO: Users of the Material Quality Assurance Processes Manual
Users of the Materials Management System

FROM: *Eric Frempong*
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Office of Materials Technology

DATE: May 24, 2022

SUBJECT: Updates to the Material Quality Assurance Processes Manual and Materials
Management System

The following changes have been made to the Material Quality Assurance Processes Manual and the Materials Management System.

Soils and Aggregates Technology Division Items

- The parent material category of “Soil Cement” is now removed and replaced with “Cement Treated Base/Cement Treated Subgrade” with material subcategories of “Graded Aggregate Base – Cement Treated” and “Select or Capping Borrow”.
- The Quality Assurance (QA) Requirement details of the newly added parent material category of “Cement Treated Base/Cement Treated Subgrade” have been added for the QA phases of “Plant or Product Qualification”, “Source Approval”, “Material Production” and “Project Construction”.

Plant or Product Qualification

- I. The frequency of “1 per 1 8 Hour Shift” and “1 per 1,000 Ton” has been added as gradation and moisture checks to be performed by the producer
- II. The frequency of “1 per 10 Production Day” has been added to “Production Quality Assurance”.
- III. The frequency of “1 per 1 Prior to Source Request” has been included under “Quality Control Plan of Production Facility for state projects”.

Source Approval

- I. The frequency of “1 per 1 Prior to Usage on Project” has been added to “Source of Supply Processing”
- II. The frequency of “1 per 1 Prior to Usage of Project” and “1 per 1 Material or Treatment Change” has been added to “Design Mix”.

Material Production

- I. The frequency of “1 per 1 Prior to Usage on Project” and “1 per 1 Prior to Usage on Project” has been added to “Materials to be sampled at its place of origin and Project Engineer to contact SATD to schedule”.

- II. The frequency of “1 per 1 Project” has been added to “Construct a 500-foot long control strip onsite according to section 502.03.05”.
- III. The frequency of “1 per 1 Cement Treated Base” and “1 per 1 Cement Modified Subgrade” has been added to “Acceptance of the control strip will be based on performing Falling Weight Deflectometer (FWD) testing and analysis per Section 3.10 of the Pavement Performance Specifications and the Pavement and Geotechnical Design Guide”.
- IV. The frequency of “1 per 1 Truck Load” has been added to “Application Rate Verification by weight of cement”.
- V. The frequency of “3 per 1 Placement Day” has been added to “Project Engineer to submit FM 14 for Depth and Pulverization check”.
- VI. The frequencies of “1 per 1 Placement Day” and “2 per 2 Lane Mile per Lift” have been added to “Compaction and Moisture Analysis performed by Project Engineer. Submit compaction report to MMD for clearance”.

Structural Materials and Pavement Markings Division Items

Structural Materials Group updates

- Three subcategories of materials (source level) have been moved from the parent material category of “SM Group 1 – General Approval” to “SM Group 3 – Evaluation Before Shipment”. They are:
 - I. “Metal Hand Box and Components”
 - II. “Tubular Steel Anchor Base”
 - III. “Tubular Steel Sign Post”
- Seven subcategories of materials (source level) have been moved from the parent material category of “SM Group 2 – General Approval with Certification” to “SM Group 3 – Evaluation Before Shipment”. They are:
 - I. “HDPE”
 - II. “High Strength Bolts, Nuts and Washers”
 - III. “Metal Pipe”
 - IV. “Misc. Metal Materials”
 - V. “Misc. Metal Poles and Posts”
 - VI. “Stay-in-Place Form”
 - VII. “Wire for Gabions/Baskets”
- The email address metals@sha.state.md.us has been updated to metals@mdot.maryland.gov
- “...or an Authorized Representative” was added to mentions of “Structural Materials”, “Structural Materials team”, and “The Metals team”.
- The statement “All Material Test Results (MTRs) for steel and iron products must include a statement that material was produced (Melted and Manufactured in the United States) and sent to metals@mdot.maryland.gov for review and approval. If acceptable, the documents will be stamped and returned to the vendor to accompany the delivery.”

was added under the Material Production QA requirements of “SM Group 7 – Qualified Facilities, Cert Review”.

Pavement Marking Group updates

- The parent material category of “Pavement Marking Material: Liquid Applied” has been renamed to “Liquid Pavement Marking” and the frequency of “1 per 24 months” for a Pavement Marking Facility Review has been updated to “1 per 36 months”
- The parent material category of “Pavement Marking Material: Non-Liquid and Preformed” has been removed and replaced with three distinct parent material categories namely “Pavement Markers”, “Pavement Marking Tape” and “Pavement Marking Preformed Thermoplastic”.
- All QA requirements from the former parent material category of “ Pavement Marking Material: Liquid Applied” have been applied to the three new parent categories, with the exception of one revision: The frequency of “1 per 36 months” for a Pavement Marking Facility Review has been changed to “1 per 24 months” for each of the new categories.
- The following 5 material subcategories (source level) have been moved to the newly introduced parent material category of “Pavement Marker”.
 - I. Lens with SRPM with Holders
 - II. Lens for SRPM with holders
 - III. Recessed Pavement Marker Casting
 - IV. SRPM Holders
 - V. Temporary Raised Pavement Markers
- The following 3 material subcategories (source level) have been moved to the newly introduced parent material category of “Pavement Marking Tape”
 - I. Blackout Tape Pavement Markings
 - II. White Tape Pavement Markings
 - III. Yellow Tape Pavement Markings
- The following 2 material subcategories (source level) have been moved to the newly introduced parent material category of “Pavement Marking Preformed Thermoplastic”.
 - I. White Preformed Thermoplastic Pavement Markings
 - II. Yellow Preformed Thermoplastic Pavement Markings

The Material Quality Assurance Manual may be found through the “Material Quality Resources” internet page at: <https://www.roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=284>

If you have any questions or comments regarding these updates, please contact Evroc Goocharan at egoocharan@mdot.maryland.gov or (443)572–5230 or Mesgana Ayele at meyele@mdot.maryland.gov or (443)572-5021.