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Final Project Materials Certification

Final Project Materials Certification

- The Materials Acceptance and **Certification** system, MAC, is designed around the requirements for Final Project Materials Certification.



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Agenda

- How to get the MC Review started
 - Standard JGS & Non-Standard JGS

- How MC Review handles project issues
 - Findings

- How PAs respond to the findings
 - Exclude, MC Resolve, or Promote to MAR



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Let's get started:

Topic No. 700-000-000
Construction Project Administration Manual
Project Documentation

Effective: July 1, 2002
Revised: October 3, 2019

5.8.6 Method of Acceptance

There are three methods of material acceptance: 1) certification; 2) visual inspection; and 3) sampling and testing.

- This is accomplished with the Job Guide Schedule (JGS)



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- JGS is just a report
- MoA is from the contract documents
- JGS is a guide of the contract requirements
- When there is a contradiction, contract rules



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- MAC has two types of JGS
 - Standard JGS
 - Non-standard JGS



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- Standard JGS
 - Let date logic
 - Project Specific requirements



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- We are only concerned with project specific requirements that change the standard method of acceptance



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MILLING OF EXISTING ASPHALT PAVEMENT.

(REV 8-31-99) (FA 2-14-00) (1-16)

ARTICLE 327-1. The third paragraph is deleted and the following substituted:

For this Contract, the Department will retain ownership of of the milled material. Haul and stockpile the material to remain the property of the Department at the location shown on the plans. The Contractor will take ownership of any milled material not to be retained by the Department.

ARTICLE 327-6. The text is deleted and the following substituted:

Price and payment will be full compensation for all work specified in this Section, including hauling and stockpiling the material at the location shown on the plans, and hauling off or otherwise disposing of any milled material not to be retained by the Department.

Payment will be made under:

Item No. 327- 70- Milling Existing Asphalt Pavement - per square yard.



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457-2.3.1 Portland Cement Grout: Use a mix design of portland cement, fine aggregate, water and an admixture containing a minimum of 940 pounds of cementitious material per cubic yard. Up to 30%, by weight of cement, may be replaced by fly ash for standard pile jackets. Do not use fly ash, slag, or silica fume for cathodic protection jackets.

Use silica sand fine aggregate meeting the requirements of Section 902.

Use portland cement meeting the requirements of Section 921.

Use admixtures meeting the requirements of Section 924, ASHTO M194, Types A and D.

Use air-entraining admixtures meeting the requirements of Section 924 and containing no chlorides or other salts corrosive to metals.

Use fly ash meeting the requirements of Section 929, ASTM C618, Type F, except that loss on ignition shall not exceed 4%.

Provide a grout filler mix with a minimum compressive strength of 5,000 psi at 28 days and a slump of 7 inches to 9 inches. Submit the design mix to the Engineer for approval by the Department before placing any grout filler.

457-2.3.2 Class IV Concrete: Use Class IV Concrete meeting the requirements of Section 346 with an adjusted slump of 7 inches to 9 inches. Reduced size coarse aggregate may be used as approved by the Engineer. Do not use fly ash, slag, or silica fume for cathodic protection jackets.

Submit the design mix to the Engineer for approval by the Department before placing any concrete filler.

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- Non-Standard JGS
 - Created by QC data entry (or Contractor)
 - LS/DB/LAP On-system
 - Let Date Logic

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- Non-Standard JGS
 - Reviewed by PA
 - Project Specific Requirements

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- JGS
 - If it's not on the JGS, you can't log in a sample!!!



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PA Responsibilities

- Make sure samples are being taken and processed
- Tracking sample status
- Finalize samples and build comparison packages as the samples progress

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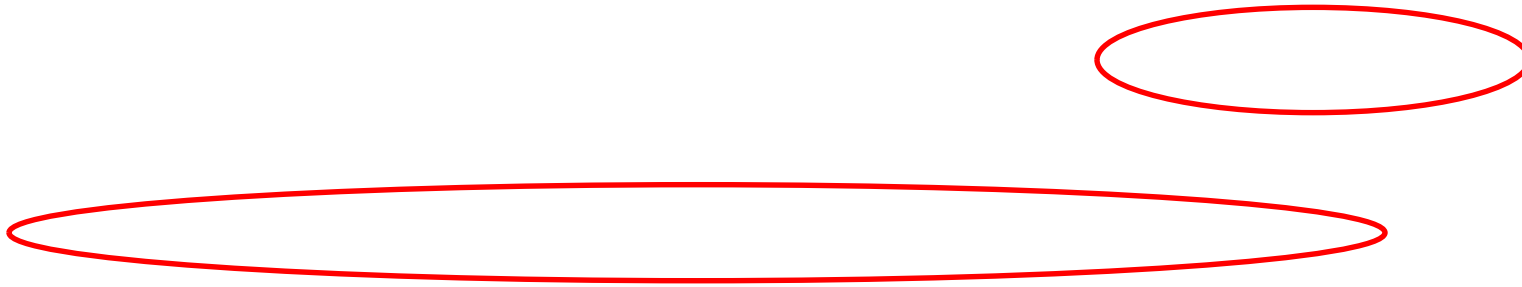


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- MC Reviewer needs to initiate review when project begins
- MAC sends findings to the MC Review process



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- Automatic Findings & Manual Findings (MAR Issues)
 - Based on MC Exceptions
 - What is an MC Exception?



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- Exception 1 = Non-Standard Material
 - Failing Test Results
 - Missing Reports



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- Exception 2 = Minimum Frequency
 - Required tests not performed
 - Required Comparison not performed
 - Required Resolution not performed
 - Not enough samples



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Or, a missing Sample (QC or VT)



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Project	
Active Contract Details	A summary of contracts that are active in MAC. These have a Contractor QCP initiated but do not have a completed MC Review.
Asphalt Control Chart	Provides Gradation, Air Voids, & Asphalt Content results in a graph. The graph also plots the spec limits & targets.
Asphalt Sample Number – Lot Number Report	Lists all asphalt mix design samples on a specific project(s).
Asphalt Segregation Report	Provides test results for Segregation samples the have been Finalized or Pending Finalization statuses with various parameters.
Concrete Mix Design Targets	Contract Specific Concrete Mix Design Specific Targets Report
Concrete Pavement Core-out Averages	Summary of the measurements of cores taken for concrete pavement on a given project.
Concrete Project Mix	Lists the results of approved concrete strength samples for a given Financial Project Id and Mix design between a given date range.
Concrete Project Test Results	Test result summary of the finalized concrete samples on a project
Concrete Sample Number – Lot Number Report	Lists all concrete mix design samples on a specific project(s).
Contractor QC Plan Print Report	View the Contractor QC Plan
Earthwork Maximum Density Report	Summary of the soils maximum density reports for a specific project.
Earthwork Non-Compliance	List of all samples in MAC where QC and VT have inconsistent comparison data.
Earthwork Sample Analysis	Detailed earthwork sample analysis report with test and comparison package results.
Earthwork Sample and LOT #	List of all samples for a specific contract by LOT number.
Earthwork Summary of Proctors	Summary of Proctor Samples for the Earthwork Records System (ERS).
Exceptions Report	Material Certifications by Contract and/or District Report.
Gradation Control Chart	Provides a Graph to visualize performance of gradation values for a specific Project and specific Mix Design. Includes the Upper and Lower Specification limits and the Mix Design Target.



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Concrete Sample Number – Lot Number Report

Lot #	FDOT Sample #	Level	Production Facility ID	Sample ID	Date Sample Taken	Sample Status	Comparison Package Id	Comparison Status	Quantity Represented
Mix Design: 01-1188-03			Category: Class II Bridge Deck (4500 PSI) / Conventional						
Financial Project ID: [REDACTED]									
Material ID: 346									
29	CC20029Q	QC	13-489	1600017858	10/19/2016	Finalized	4429	Compares	40 Cubic Yard(s)
30	CC20030Q	QC	13-489	1600017860	10/19/2016	Finalized	4429	Compares	30 Cubic Yard(s)
31	CC20031Q	QC	13-489	1600020470	10/27/2016	Finalized	4429	Compares	50 Cubic Yard(s)
29-32	CC20031v	VT	13-489	1600020508	10/27/2016	Finalized	4429	Compares	50 Cubic Yard(s)
32	CC20032Q	QC	13-489	1600020472	10/27/2016	Finalized	4429	Compares	20 Cubic Yard(s)
33	CC20033Q	QC	13-489	1600023564	11/3/2016	Finalized	8478	Compares	26 Cubic Yard(s)
34	CC20034Q	QC	13-489	1600024225	11/4/2016	Finalized	8478	Compares	26 Cubic Yard(s)
35	CC20035Q	QC	13-489	1700072239	3/11/2017	Finalized	8478	Compares	50 Cubic Yard(s)
33-36	CC20035v	VT	13-489	1700072251	3/11/2017	Finalized	8478	Compares	50 Cubic Yard(s)
36	CC20036Q	QC	13-489	1700072240	3/11/2017	Finalized	8478	Compares	50 Cubic Yard(s)
37	CC20037Q	QC	13-489	1700072241	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
38	CC20038Q	QC	13-489	1700072242	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
37-40	CC20038v	VT	13-489	1700072260	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
39	CC20039Q	QC	13-489	1700072243	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
40	CC20040Q	QC	13-489	1700072245	3/11/2017	Finalized	8479	Compares	41 Cubic Yard(s)
41	CC20041Q	QC	13-489	1700074639	3/16/2017	Finalized	8480	Compares	50 Cubic Yard(s)
42	CC20042Q	QC	13-489	1700074642	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
41-44	CC20042v	VT	13-489	1700074359	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
43	CC20043Q	QC	13-489	1700074644	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
44	CC20044Q	QC	13-489	1700074646	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
45	CC20045Q	QC	13-489	1700074649	3/17/2017	Finalized			50 Cubic Yard(s)
46	CC20046Q	QC	13-489	1700074651	3/17/2017	Finalized	9766	Incomplete Package	40 Cubic Yard(s)



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- Exception Category 3 = Qualifications
 - Technicians
 - Laboratories
 - Production Facilities
 - Manual Findings



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Special Programing:

- Straightedge Deficiencies
- Materials that allow Delineation

These two automatic findings trigger specific functionality with the MAR process that you will not get when creating a manual finding

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- MC Review in MAC
 - Responding to Findings
 - Processing MARs



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5.8.7 Materials Acceptance Resolution

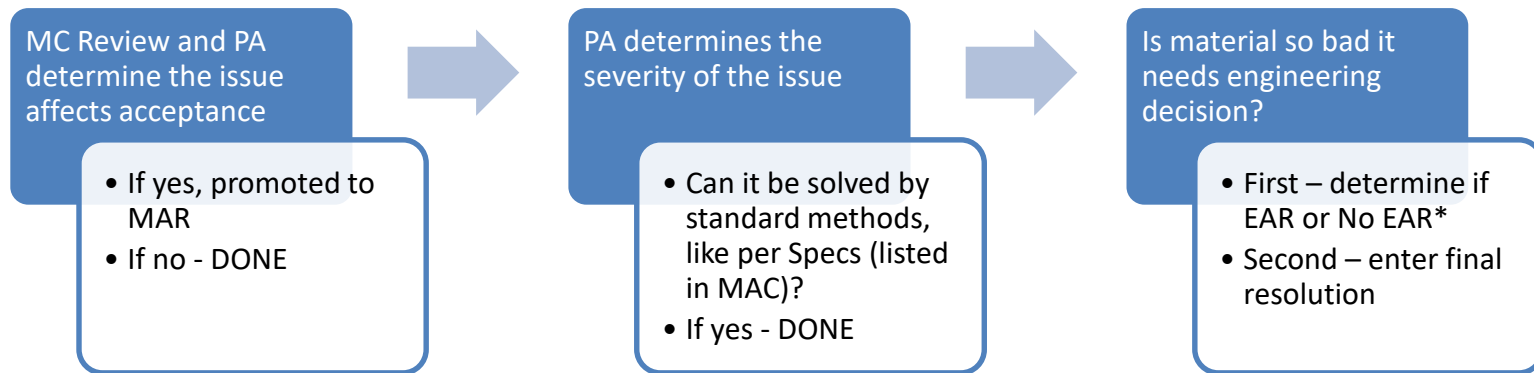
If a material is designated by the Materials Certification Review personnel to require resolution of the material acceptance, it will be promoted to the Materials Acceptance Resolution (MAR) process in MAC. All materials with acceptance issues will be promoted to MAR and final resolution determined. The life cycle of the issue will depend on the original issue and the nature of the material acceptance needing resolution. Some issues can be resolved directly by the PA without additional input. Some issues will require input from the District Materials and Research Engineer (DMRE), the District Construction Engineer (DCE), and the Director, Office of Construction (DOC). This procedure is outlined in the *Material Acceptance Resolution Flow Chart* ([Attachment 5.8-1](#)).

Control of Materials

5.8-4

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Overview of the MAR Process





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Findings [70] [Click to Collapse](#)

[Return to List](#) [Update](#)

Finding Type	Description	Sample	FDOT Sample Number	Sample Package Test	Status
System Generated	Tester [F12345678] on Sample 1600013594/Test ASTM C39 Compressive Strength is not Qualified	1600013594 QC	CC40001Q	ASTM C39 Compressive Strength	Promoted to MAR

Current Recommendation
Recommendation has not yet been made by District Materials Research Engineer

Pay Items

- [Sample Info](#) [Click to Expand](#)
- [Responses \[1\]](#) [Click to Expand](#)
- [Recommendations \[2\]](#) [Click to Expand](#)
- [Resolutions \[0\]](#) [Click to Expand](#)
- [Locations \[0\]](#) [Click to Expand](#)
- [Documents \[0\]](#) [Click to Expand](#)
- [Comments \[0\]](#) [Click to Expand](#)

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- Let's take a moment to look at the difference between a recommendation and a resolution?

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- There are seven (7) recommendations
- Five (5) are also final resolutions that can be made by the PA



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- If EAR or No EAR is selected, 2nd process is needed to determine final resolution
 - Or No EAR Delineation if the Specification allows resolution by delineation



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- Resolution options:



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- Resolution options:

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- Straightedge Deficiencies
 - Has a different flow with different roles based on CPAM Chapter 11
 - Resident Engineer instead of PA
 - District Bituminous Engineer instead District Materials and Research Engineer
 - Recommendation is Final Resolution

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- Materials that allow Delineation
 - Has the same flow with the same roles as other MARs except for Straightedge
 - The difference is the option for No EAR – Delineation will not show up for a manual finding



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- Location Information
 - PA fills it out
 - After the resolution



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- PA needs to ensure the location information is correct and complete
- For Complete Removal and Replacement & Leave in Place – one set of entries

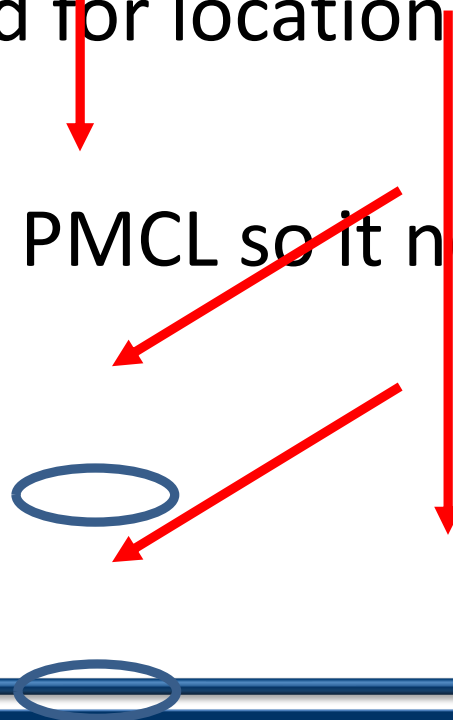


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- For Partial Removal and Replacement, enter sub-locations for material that was removed and material that was replaced

Project Administrators and MAC

- MC Reviewer will notify PA if additional information is needed for location information
- This gets used on the PMCL so it needs to be right





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RAQs (Recently Asked Questions)

- ***When should we notify MC Reviewers about the project?*** At the beginning, let them know when work begins so they can begin the MC Review in MAC. Then at 75% and 90% completion.
- ***Are you reviewing exceptions statewide for common issues?*** Yes. We are in the early stages but we are beginning to compile this data.
- ***How important is the NSJGS?*** Extremely. This is a big item on the audit list from FHWA so it needs to be completed monthly, and it needs to be accurate.



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- Questions?



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List of MCs per District

- D1/7 – Mark Conley
 - 881-4233
- D1/7 - James Stricklin
 - 881-4257
- D2 - Curtis Becker
 - 882-7724
- D2 - Mystery Easter
 - 882-7808
- D3 – Anthony Mosier
 - 883-1373
- D4/6 - Wismith Voltaire
 - 884-7047
- D5 - Jeanie Kozak
 - 885-3489
- D5 - Jodi Johnson
 - 885-3504
- TP – Brad Biery
 - 888-1147