

SECTION 845 Materials Testing and Acceptance - General

845.1 Material Testing and Acceptance - General

All materials must meet contract specifications. Guidance under 845 is for personnel and project material coordinators who inspect, sample, test, approve, document, and report on materials incorporated WisDOT highway projects. Independent assurance sampling and testing program requirements are in [CMM 820](#).

Closely observe produced materials for visual evidence of changes in quality. It may be appropriate to increase the frequency and scope of both testing and acceptance activities to assure material compliance.

Consult the department regional materials representative regarding doubts pertaining to compliance of source inspected materials, field inspection reports, waivers of testing, unlisted items, evaluation of certifications, or other questions regarding acceptance procedures.

845.2 Material Requirement References

845.2.1 Material Testing and Acceptance Guide

In addition to the standard specifications, the Materials Testing and Acceptance Guide, [CMM 850](#), details many of the sampling, testing, and documentation requirements for various materials, mobilized into the contract via [standard spec 106.3](#). Minimum requirements are provided in the guide, as well as direction for additional testing on some materials when test results demonstrate nonconformance.

845.2.1.1 Acceptance of Small Quantities

The project engineer may waive field sampling, testing, or source inspection for small quantities of some materials that are supplied by a known manufacturer or producer. [CMM 850](#), defines the items that qualify for small quantity acceptance as well as the quantity thresholds. Sampling and testing cannot be waived for structurally critical items or for materials/products that affect the safety of the traveling public.

Small quantities of materials that qualify, may be accepted by the project engineer based on one or more of the following methods:

1. Visual inspection provided the producer or manufacturer has recently furnished similar material found to be acceptable.
2. Certification by the producer or manufacturer stating that the material conforms to the specification requirements.
3. Material is on a WisDOT approved (pre-qualified) list.

845.2.2 E-Guide

E-Guide is an automated system that produces a handy sampling, testing, and documentation guide for material requirements on a project. The program generates guidance automatically based on the bid items included in a project and it also allows for manual input of non-standard special provision (SPV) items. The documents that are input into the E-Guide system are created by an E-Guide committee. The committee reviews the standard specifications and [CMM 850](#) to compile the information into a succinct guide of specific material requirements.

The WisDOT project material coordinator prepares an E-Guide and provides a copy to the contractor's material coordinator. Consult the department's regional materials representative for guidance when developing the E-Guide. [CMM 850](#) should be cross-referenced with the E-Guide since it contains detailed information for specific materials. Contact the regional materials engineer if any information within the documents is inconsistent. The materials engineers will work with the BTS, Quality Assurance Unit to resolve any issues. The E-Guide program can be accessed through the 'Log in' tab on Atwood Systems website at:

<http://www.atwoodsystems.com/>

The E-Guide does not supersede material requirements in the standard specifications, CMM, or contract special provisions.

845.2.3 Conditionally Preapproved-Shop or Source Inspected

Certain materials are conditionally preapproved at the manufacturing plant or source of supply based on inspection and review of relevant test results. Those materials will typically bear tags, stamps, or other markings that indicate that they have been preapproved. These materials may be incorporated into the work if the materials appear to be in acceptable condition based on a job-site examination.

Documentation of the markings, stamps and physical condition should be included in the material diary entry under the basis for acceptance (BFA). Reference the original shop inspection and laboratory test reports in the Inspector's Daily Report and electronically in a MIT/MTS prefix 905 report.

If materials that require inspections and preapproval at the source are delivered to a project site without any appropriate markings indicating preapproval, they may be rejected by the project engineer. Or, the materials can be approved and incorporated into the work based on acceptable job-site examination and testing. Contact the department's regional materials representative to verify acceptance of the material.

845.3 Approval Methods

845.3.1 Approval Methods - General

Project staff will approve materials for use on the project. Method of required material approval is defined in the standard specifications, contract documents, and CMM. Primary approval methods are one or a combination of the following:

- Visual inspection.
- Manufacturer certificate of compliance.
- Certified report of test or analysis.
- Buy America certification.
- Product data sheets.
- Approved product lists.
- Material sampling.
- Material testing results.
- Bill of lading.
- On-site material photos.
- Shop drawings.
- DT forms.
- Shop/plant inspections.
- Source approvals.
- Field inspection.
- Other documentation as appropriate.

Note: [Standard spec 106.3.2](#) stipulates that the department reserves the right to retest or re-inspect plant-inspected and other pre-approved materials after delivery to the project site and to reject materials that are found not to comply with the contract requirements.

If a material fails to meet specification requirements of the contract, document the specifics including disposition of the material within the remarks box of the applicable MIT/MTS certification of materials report. Refer to chapter 5.13 of the "MTS and MIT User Guide" found under the "Materials Reporting" heading on the QMP website.

<https://wisconsin.gov/Documents/doing-business/eng-consultants/cnslt-rsrcs/tools/qmp/mtguide.pdf#dt1310>

845.3.2 Approval Methods - Materials

845.3.2.1 Visual Inspection

Project staff is to document the properties inspected and record any necessary details regarding the approval of the material.

845.3.2.2 Manufacturer Certification

Manufactured products or assemblies may be approved based on tests performed by the manufacturer when certified. Some products only need a product certification, while others require a product certification and a production plant certification.

Manufactured products may be accepted by a certification of compliance or a certified report of test or analysis either as sole documentation for acceptance or as supplemental documentation (see [standard spec 106.3](#)).

Products that are from certified sources are approved by verifying that the source, manufacturer, or plant is on the appropriate approved list and provides a certification of product compliance showing that the product meets the pertinent specification and contract requirements. Or, by submittal of test results in meeting the same specification requirements.

845.3.2.2.1 Certificate of Compliance

A manufacturer's certificate of compliance must include:

1. Name of the manufacturer or of the supplier.
2. Name and use of the product.


3. Statement of the specification that the product meets, such as AASHTO and ASTM and the specification number, or when applicable, the contract special provisions. In some cases, it may be the manufacturer's specifications.
4. Signature and job of a person in responsible charge of certifying the product who can bind the company and the signer's job title.

An example of a correct certification of compliance is shown in figure 845-1. Project staff should be reminded to, upon review, sign and date the certificate.

FIGURE 845-1 Example of Certificate of Compliance

Axalta Coating Systems, LLC ✓
9800 Genard Rd.
Houston, Texas 77041

O 832 955 0200
F 832 955 0562
Info.powder@axaltacs.com
www.axalta.us/powder



CERTIFICATE OF COMPLIANCE

Material: Nap-Gard® 7-2750 Green Rebar Fusion Bonded-Epoxy powder coating for concrete reinforced steel bar. ✓

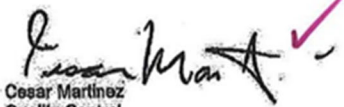
This is to certify that the batch number of Nap-Gard® 7-2750 Green Rebar FBE listed below is chemically the same material that was tested by Valley Forge Laboratories Inc. of Devon, Pennsylvania to A775. I certify that it meets the requirements of Annex A1 of A775/A775M A884/A884M. Nap-Gard 7-2750 Rebar also meets the requirements of ASTM D3963-83a, ASTM-A-1078, AASHTO M284-95 and AASHTO M254-08 Type B.

The following batch was manufactured in the United States.

Batch Number	Lot Number	Date of Manufacture	Date of Expiration	Batch Size (Lbs)
✓ 3804647	✓ 3804647	October 30, 2017	April 30, 2018	30,000

Shelf Life: 6 Months < 80°F, 50% Humidity


Sincerely,

 ✓


Handwritten: 11/6/17

Cesar Martinez
Quality Control

WARRANTY POLICY: Axalta Coating Systems, LLC ("Seller") certifies that all coatings delivered to Customer in unopened factory sealed containers meet all pertinent quality standards presented in Seller's current published literature. Since matters of surface preparation, application procedures, curing procedures and other local factors that affect coating performance are beyond Seller's control, Seller assumes no liability for coating failure other than to supply replacement material for coating material proven to be defective. Customer will determine suitability of this product for its use and thereby assumes all risks and liabilities in connection herewith. Seller will not be liable for any injuries, damages or other losses derived, directly or indirectly, from or as a consequence of Customer's use of the product. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, RELATING TO ITS PRODUCTS AND THEIR APPLICATION, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES.



ISO 9001:2008



845.3.2.2.2 Certified Report of Test or Analysis

A manufacturer's certified report of test or analysis must include the following:

1. Name of the manufacturer or of the supplier.
2. Name and use of the product.
3. Statement of the specification that the product meets such as AASHTO and ASTM and the specification number, or when applicable, the contract special provisions. In some cases, it may be the manufacturer's specifications.

4. Lot, batch, heat numbers, etc., applicable to the material delivered.
5. Test results for both physical and chemical test requirements as specified.
6. Signature and title of a person in responsible charge of the testing facility.

An example of a correct certified report of test or analysis is shown in figure 845-2. Certifications of compliance and certified reports of test or analysis must be provided to the project engineer for material to be accepted. All certifications must be evaluated promptly for adequacy, completeness, and compliance with applicable specifications. Include proper notations on all certificates.

FIGURE 845-2 Example of Certified Report of Test or Analysis

SOLD ABC COATING CO INC
TO: PO BOX 9693
TULSA, OK 74157-

SHIP ABC COATING CO - IL
TO: 1160 BOUDREAU RD
MANTENO, IL 60950-

NUCOR ✓
NUCOR STEEL KANKAKEE, INC.

CERTIFIED MILL TEST REPORT

Ship from:
MTR #: 0000219757
Nucor Steel Kankakee, Inc.
One Nucor Way
Bourbonnais, IL 60914
815-937-3131

Date: 27-Feb-2018
B.L. Number: 554074
Load Number: 295160

Page: 1

Material Safety Data Sheets are available at www.nucorbar.com or by contacting your inside sales representative. NSMG-08 January 1, 2012

LOT # HEAT #	DESCRIPTION	PHYSICAL TESTS					CHEMICAL TESTS										C.E.
		YIELD P.S.I.	TENSILE P.S.I.	ELONG % IN 8"	BEND	WT% DEF	C	Mn	P	S	Si	Cu	Sn				
PO# => ✓ KN1810107001 ✓ KN18101070	IL-1067 Nucor Steel - Kankakee Inc 19#6 Rebar ✓ 60' A615M GR420 (Gr60) ✓ 42013 - ASTM A615/A615M-16 GR 60 ✓ AASHTO M31-15 ✓ Melted 02/14/18 Rolled 02/20/18	66,690 460MPa	103,841 716MPa	15.0%	OK	-4.1% .051	.40 .21	.99 .13	.014 .072	.048 .009	.17 .001	.37 .025					
PO# => ✓ KN1810107101 ✓ KN18101071	IL-1067 Nucor Steel - Kankakee Inc 19#6 Rebar ✓ 60' A615M GR420 (Gr60) ✓ 42013 - ASTM A615/A615M-16 GR 60 ✓ AASHTO M31-15 ✓ Melted 02/14/18 Rolled 02/20/18	66,375 458MPa	103,119 711MPa	16.5%	OK	-4.4% .052	.38 .18	1.00 .17	.016 .058	.040 .009	.18 .001	.35 .022					
PO# => ✓ KN1810107201 ✓ KN18101072	IL-1067 Nucor Steel - Kankakee Inc 19#6 Rebar ✓ 60' A615M GR420 (Gr60) ✓ 42013 - ASTM A615/A615M-16 GR 60 ✓ AASHTO M31-15 ✓ Melted 02/15/18 Rolled 02/19/18	65,753 453MPa	102,675 708MPa	15.9%	OK	-4.1% .048	.37 .21	.98 .15	.016 .065	.040 .010	.18 .001	.36 .019					

Handwritten: 2/16/18

Signature: Caitlin Widdicombe ✓

QUALITY ASSURANCE: Caitlin Widdicombe

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.
 1.) Weld repair was not performed on this material.
 2.) Melted and manufactured in the United States.
 3.) Mercury, Radium, or Alpha source materials in any form have not been used in the production of this material.

845.3.2.3 Buy America

Buy America certification is required for all steel, iron, and construction materials permanently incorporated into the project. [CMM 228.5](#) provides additional guidance on the Buy America provision.

845.3.2.4 Product Data

Product data sheets provide basic information on a material. It includes the material name, product definition, applicable uses of the product and in some cases model numbers.

845.3.2.5 Approved Product/Supplier/Manufacturer/Fabricator/Plant Lists

Some products are approved for use based on previous testing and an acceptable performance history within the department. These products are on the [APL](#).

The approved lists are maintained and updated regularly by BTS. Certain materials including, but not limited to; asphalt binder, portland cement, prestressed concrete, precast concrete, fabricated components for bridges, guardrail, barrier systems, and proprietary retaining walls must come from a certified supplier, manufacturer or plant.

These materials may be accepted after project staff verifies that the products and suppliers are included in the appropriate approved list and inspection upon delivery. Document the material acceptance and relevant inspection information in the IDR and electronically in a MIT/MTS prefix 905 report. Reference any applicable test reports or certifications.

If products or materials from an approved list exhibit lower than expected performance when placed in service, or if project-level testing indicates non-conformance of an approved product with the relevant specification, field staff should immediately contact the technical sponsor identified on the applicable published list for that material.

845.3.2.6 Field Sampling and Testing

Some materials are sampled and tested onsite during production and placement. Others are sampled at the source or during placement and tested in a laboratory. All sampling and testing personnel must be qualified under a department-accepted program for the materials they are working with and testing is performed in qualified laboratories. Test types and frequencies are in accordance with the governing specification or the department recognized common practices. Sampling and testing procedures are performed as prescribed in [CMM 800](#) and WisDOT Manual of Test Procedures (MOTP) (<https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrcs/tools/qmp/motp.pdf>).

When the testing frequency of a material is determined by the quantity used, it is necessary to report the actual quantity used. When testing and subsequent acceptance requirements of a material do not depend upon quantity, it is necessary to provide detailed information within the remarks section of the applicable MIT/MTS report that will confirm that all of the materials incorporated into the work were thoroughly tested and within the specification requirements.

845.3.2.6.1 QC and QV Field Sampling and Testing (QMP)

Under WisDOT's QMP specifications, materials are approved based on the contractor's quality control (QC) sampling and testing when they conform to specifications and when the results are validated by department quality verification (QV) sampling and testing. Contractor QC test results are reported in the materials reporting system (MRS). department QV test results are documented in the appropriate MIT/MTS prefix report. QV testers must compare their test results to the appropriate QC test results to validate the material quality. Approval is based on acceptable QC and QV test results.

845.3.2.6.2 Central Office Laboratory Quality Assurance (QA) Testing

Some materials and products require testing by the department's central office (CO). Acceptance of these materials are typically reserved pending acceptable laboratory test results. Obtain representative samples of the materials from the job site or at the source of supply. Package and bind the material appropriately and securely attach an appropriate label that includes all pertinent or required information. Materials for CO laboratory testing are to be delivered to the region laboratory. Region Laboratory Coordinator will log and deliver to CO laboratory. Prompt submittal of properly bound and labeled samples will help ensure timely test results. Laboratory testers document the test results in the pertinent MIT/MTS prefix report(s). Test results are available to the project staff in MTS and in the Highway Quality Management System (HQMS) website.

845.3.2.7 Other Approval Methods

Other documents used to approve materials include but are not limited to:

1. Bill of Lading (BOL)
2. On-Site Material Photos
3. Shop Drawings
4. DT Forms
5. Shop/Plant Inspection Reports.

845.4 Material Inspection

Manufactured products, including conditionally approved products previously inspected and tested at the source, must be inspected as soon as possible after delivery to the job site for any evidence of damage or noncompliance.

The project engineer should follow these steps as a minimum for inspection of materials delivered to the project.

1. Inspect manufactured and pre-qualified products as soon as possible after delivery.
 - Including materials on approved lists, from certified sources, and conditionally approved products.
 - Record relevant inspection information in the material record.
2. Verify that products delivered match the certifications, approved lists, etc.

3. Review certificates of compliance and certified reports of test or analysis. As part of the review process, assure the documents are dated within two years of the project LET date. Older documentation may be acceptable for raw hot-rolled materials, such as piling or black reinforcement steel; the contractor must furnish additional written verification from the source or mill validating the data on certifications older than two years. Project staff is encouraged to contact sources directly if verification cannot be obtained by other means.
4. Ensure that the manufacturer/supplier name, product name, and appropriate ASTM/AASHTO reference, and signature and title of the person certifying the product for the company is included. Reviewer initials and dates certificates. Refer to [CMM 845.3.2.2](#) for additional details regarding approval by certification.

845.5 Documentation - General

Final material records and affiliated documents are compiled by project staff and retained according to state law. In the event of an early failure, product recall/evaluation, in-kind replacement, or fulfillment of an open records request, the department will reference this documentation.

845.5.1 Documentation - Records

Documentation and reporting for material acceptance is essential and required on all WisDOT projects.

The final material record documents are separated into two categories:

1. Materials Project Records.
2. Materials Archive.

Materials Documentation Location Guide defines if the item belongs in Materials Archive, Materials Project Records, or has no documentation requirements.

Material Documentation Location Guide			
Section	Description	Archive, Materials Project Records, or No Requirements	Details
106	Control of Materials	Materials Project Records*	*Source of Materials
201	Clearing and Grubbing	No Requirements	
202	Roadside Clearing	No Requirements	
203	Removing Old Culverts and Bridges	No Requirements	
204	Removing or Abandoning Miscellaneous Structures	No Requirements	
205	Roadway and Drainage Excavation	No Requirements	
206	Excavation for Structures	Materials Project Records	
207	Embankment	No Requirements*	*No Bid Item associated with Section 207. Documentation will be recorded with applicable Bid Item.
208	Borrow	Archive	
209	Granular Backfill	Archive	
210	Structure Backfill	Archive	
211	Preparing the Foundation	Archive	
213	Finishing Roadway	No Requirements	
214	Obliterating Old Road	No Requirements	
301	Base, Subbase and Subgrade Aggregate	No Requirements*	*No Bid Item associated with Section 301. Documentation will be recorded with applicable Bid Item.
305	Dense-Graded Base	Archive	
310	Open-Graded Base	Archive	
311	Breaker Run	Archive	
312	Select Crushed Material	Archive	
313	Pit Run	Archive	
315	Asphaltic Base	Archive	
320	Concrete Base	Archive	
325	Pulverized and Re-laid Pavement	No Requirements	
330	Milled and Re-laid Pavement	No Requirements	
335	Rubblized Pavement	Archive	
340	Cracked and Seated Pavement	No Requirements	
350	Subbase	Archive	
390	Base Patching	Archive	
405	Coloring and Stamping Concrete	Archive	
415	Concrete Pavement	Archive	
416	Concrete Pavement - Appurtenant Construction	Archive	
420	Diamond Grinding	No Requirements	
450	General Requirements for Asphaltic Pavements	Archive*	*Cold Weather Paving Plan
455	Asphaltic Materials	Archive	
460	Hot Mix Asphalt Pavement	Archive	
465	Asphaltic Surface	Archive	
475	Seal Coat	Archive	

Material Documentation Location Guide			
Section	Description	Archive, Materials Project Records, or No Requirements	Details
501	Concrete	Archive*	*Information will be recorded in archive according to Region guidance.
502	Concrete Bridges	Archive	
503	Prestressed Concrete Members	Archive	
504	Culverts, Retaining Walls, and Endwalls	Archive	
505	Steel Reinforcement	Archive	
506	Steel Bridges	Archive	
507	Timber Structures	Archive	
509	Concrete Overlay and Structure Repair	Archive	
511	Temporary Shoring	Materials Project Records	
512	Steel Sheet Piling	Archive	
513	Railing	Archive	
514	Floor Drains, Deck Drains, and Downspouts	Archive	
515	Steel Grid Floors	Archive	
516	Waterproofing	Archive	
517	Paint and Painting	Archive	
519	Brick Masonry and Concrete Brick or Block Masonry	No Requirements*	*No Bid Item associated with Section 519. Documentation will be recorded with applicable Bid Item.
520	Pipe Culverts	Archive	
521	Corrugated Steel Culverts	Archive	
522	Reinforced Concrete Culverts	Archive	
524	Salvaged Culverts	Archive	
525	Corrugated Aluminum Culverts	Archive	
526	Temporary Structures	Materials Project Records	
527	Structural Plate Pipe and Pipe Arches	Archive	
530	Corrugated Plastic Pipe Culverts	Archive	
550	Driven Piles	Archive	
601	Concrete Curb & Gutter	Archive	
602	Concrete Sidewalks, Loading Zones, Safety Islands, and Steps	Archive	
603	Concrete Barrier	Archive	
604	Slope Paving	Archive	
606	Riprap	Archive	
608	Storm Sewer	Archive	
611	Catch Basins, Manholes, and Inlets	Archive	
612	Underdrains	Archive	
614	Semi-rigid Barrier Systems and End Treatments	Archive	
615	Treated Rustic Timber Items and Historical Markers	Archive	
616	Property and Right-of-Way Fence	Archive	

Material Documentation Location Guide			
Section	Description	Archive, Materials Project Records, or No Requirements	Details
617	Hauling	No Requirements	
618	Maintenance and Repair of Haul Roads	Materials Project Records	
619	Mobilization	No Requirements	
620	Concrete Corrugated Median and Concrete Median Nose	Archive	
621	Landmark Reference Monuments	Archive	
623	Dust Control Surface Treatment	Materials Project Records	
624	Water	Materials Project Records	
625	Topsoil and Salvaged Topsoil	Materials Project Records	
626	Peat Humus	Materials Project Records	
627	Mulching	Materials Project Records	
628	Erosion Control	Materials Project Records	
629	Fertilizer and Agricultural Limestone	Materials Project Records	
630	Seeding	Materials Project Records	
631	Sodding	Materials Project Records	
632	Furnishing and Planting Plant Materials	Materials Project Records	
633	Delineators and Markers	Archive	
634	Wood and Tubular Steel Sign Posts	Archive	
635	Structural Steel Sign Supports	Archive	
636	Concrete Sign Supports	Archive	
637	Signing	Archive	
638	State Owned Signs and Supports	Materials Project Records	
639	Drilling Wells	Archive	
641	Sign Bridges and Overhead Sign Supports	Archive	
642	Field Facilities	No Requirements	
643	Traffic Control	Materials Project Records	
645	Geosynthetics	Archive	
646	Pavement Marking	Archive	
648	Locating No-passing Zones	Materials Project Records	
649	Temporary Pavement Marking	Materials Project Records	
650	Construction Staking	No Requirements	
651	General Requirements for Electrical Work	No Requirements*	*No Bid Item associated with Section 651. Documentation will be recorded with applicable Bid Item.
652	Electrical Conduit	Archive	
653	Pull Boxes and Junction Boxes	Archive	
654	Bases	Archive	

Material Documentation Location Guide			
Section	Description	Archive, Materials Project Records, or No Requirements	Details
655	Electrical Wiring	Archive	
656	Electrical Service	Archive	
657	Poles, Arms, Standards, and Bases	Archive	
658	Traffic Signals	Archive	
659	Lighting	Archive	
660	High Mast Lighting	Archive	
661	Temporary Traffic Signals and Temporary Ramp Meters	Materials Project Records	
670	General Requirements for Intelligent Transportation Systems (ITS)	Archive	
671	Intelligent Transportation Systems - Conduit	Archive	
673	Communication Vaults	Archive	
674	Intelligent Transportation Systems - Cable	Archive	
675	Controllers and Detectors	Archive	
677	Cameras	Archive	
678	Communications Systems	Archive	
690	Sawing	No Requirements	
701	General QMP Requirement	Archive*	*Information will be recorded in archive according to Region guidance.
710	General Concrete QMP	Archive*	*Information will be recorded in archive according to Region guidance.
715	QMP Concrete Pavement and Structures	Archive	
716	QMP Ancillary Concrete	Archive	
730	QMP Base Aggregate	Archive	
740	QMP Ride	Archive	

845.5.1.1 Materials Project Records

Materials Project Records need to have all necessary documentation for the project staff to justify approval of the material for use. Any documentation project staff obtains or records on these materials should be kept in the construction field records (ie: construction diary, electronic field file, separate hardcopy folder, etc.). These material records will be kept with the construction field records and will follow the same Highway Construction Project Records Retention/Disposition Authorization (RDA) for record retention. Materials Project Records are not reviewed by the Region's Materials Unit and are not entered into the Materials Data Collection and Reporting Software System explained in [CMM 846](#). All exceptions to the contract for these items are to be noted on Materials Project Records Deviation Log ([DT1345](#)) and not documented on Certification of Materials Report, DT1310. Keep (DT1345) with Materials Project Records.

Source of Materials Report ([DT1349](#)) should also be kept with the Materials Project Records.

845.5.1.2 Materials Archive

The Materials Archive requires entry in the Materials Data Collection and Reporting Software System ([CMM 846](#)), review of documents for compliance by Region Material Reviewer and completion of the Material Certification (DT1310). Each contract is required to have an entry in a MIT/MTS prefix 905 report for each bid item or bid item group, including bid items in the contract at the time of letting or items added to the contract but not used; those items should be reflected in the individual entry as "Not Used." The

Materials Archive is maintained for long term storage per the Materials Management Program RDA. Note all exceptions to the contract requirements for Materials Archive items on the DT1310.

Documents in Materials Archive are to be submitted to the region in a clearly labeled box, folder, binder or electronic submission format.

At a minimum, the following items are to be included in the Material Archive:

1. Certification of Materials Report (DT1310)
2. [DT4567](#) Buy America Certification
 - Buy America Exemption Log (if used)
 - Material invoices
3. Materials Diary - MIT/MTS prefix 905 Report
4. E-Guide
5. QMP and Miscellaneous Summary Reports - MIT/MTS prefix 155 Report(s)
6. Approval Documents
7. QMP Documentation

845.5.1.2.1 Certification of Materials (23 CFR §637.207 (3)) - DT1310

The DT1310 or Certification of Materials is used to document all material deviations from contract specifications and is required for all LET contracts. The completed form is used for reference by FHWA and department staff that were not involved on the project. All nonconformance issues, nonperformance issues, and disincentives are documented individually in an entry on the DT1310 report. Also, any material logged under the allowable Buy America Exemption amount needs an entry on the DT1310.

This form is only available electronically in MIT/MTS software. The project engineer or WDMC enters information electronically in MIT/MTS and must ensure the latest version of the software is being used before sending the DT1310.

An example of an unsigned cover page of a DT1310 is shown in figure 845-3.

FIGURE 845-3 Example DT1310 - Certificate of Materials Report

Wisconsin Department of Transportation					11/07/2016	
Certification of Materials Used on Highway Project						
To: Director, Bureau of Technical Services						
Contract Id	Federal Project ID	Region	County	Highway / Route	Date Let	Proposal #
20140610017	N/A	NC	Dane	Sth 64	06/10/14	017
Contractor				Outagamie		
				Waukesha		
				Waushara		
Project Id	Project Description					
9000-13-70	Merrill - Antigo					

EXCEPTIONS NOTED

Project Leader or WisDOT Project
Materials Coordinator (Print):

Matt Erial

This is to certify that:

The results of the tests on acceptance samples indicate that the materials incorporated in the construction work, and the construction operations controlled by the sampling and testing, were in conformity with the approved plans and specifications; and such results compare favorably with the results of the independent assurance sampling and testing.

Company Name: Ayres Associates

Project Leader or WisDOT Project
Materials Coordinator (Signature): _____

Date Signed: _____

Regional Materials Engineer or
Materials Specialist (Print):

Regional Materials Engineer or
Materials Specialist (Signature): _____

Date Signed: _____

Project Manager (Print):

Project Manager (Signature): _____

Date Signed: _____

When entering deviations into a report, include detailed explanations by completing all the data fields, as shown in figure 845-4. Also, be diligent in ensuring that the issue has not already been entered. The electronic DT1310 can be sorted by any of the columns to help ensure that data information isn't duplicated. A DT1310 entry created by project staff cannot be deleted. If an entry is made in error, contact the region materials section for assistance.

The certification must be approved and signed by the project construction engineer or WPMC. Include a copy of the final, signed DT1310 in the material archive. After the region reviews the material records, the region material engineer/reviewer and region project manager will sign the DT1310. For federal oversight projects, a signed copy of the DT1310 must be sent via email to FHWA at:

FHWAMaterialsWisconsin@dot.gov

FIGURE 845-4 Certificate of Materials Deviation Data Entry Fields

Explanation of Deviation for 20080408009

<p>Contract: 20080408009</p> <p>Material Description: 460.1101 HMA Pavement, Typ E-1</p> <p>Quantity Involved: 837</p> <p>Units: TON(S)</p> <p>Test Results: 4 pt running avg's gradation 3/8" scr.: qv 2-1: 81.4% & qv 2-2: 81.3%</p> <p>Spec Requirements: 3/8-in screen jmf: 77.0%, jmf warning limit jmf +/- 4.0% (73-81%)</p> <p>Disposition Explanation:</p>	<p>Placement Date: 00/00/00</p> <p>Sample Date: 00/00/00</p> <p>Sample Location:</p> <p>Usage: asphalt pavement, surface lift</p> <p>Usage Location: ax. sta 153+18 to sta 165+12, full road width (44-ft)</p>
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* QC 2-1 at 199 tons daily production in Warning Band (81.4%)
 * QC 2-2 at 611 tons daily production in Warning Band (81.3%)
 * Production for project end on this day at 1,036 tons

837 tons was produced between QC 2-1 and end of day. WIDOT Std. Specs 460.2.8.2.1.7 Corrective action (6) Gradations produced in Warning Band to be paid at 90% of the contract unit price for both the HMA Pavement & Asphaltic Material bid items. Product accepted on satisfactory performance at reduced cost.

845.5.1.2.1.1 Non-Conformance Entry

There are different types of nonconformance entries:

1. Material not meeting testing specifications
 - If material fails specification and is not incorporated into the work or is removed, an entry on the DT1310 is required.
2. Material not meeting test methods (ie: utilizing different ASTM or AASHTO method than specified)

If a credit is not applied to the nonconformance, the disposition description should include a sentence stating that a credit was not taken and title of who allowed the nonconforming material to remain without a credit.

If a credit is applied to the nonconformance, a DT1310 entry needs to include the basic information required in figure 845-4, as well as:

1. Credit percentage/amount applied to the contract.
2. Contract Modification number used to apply the credit.
3. Standard specifications or CMM reference used to apply the credit.

845.5.1.2.1.2 Non-Performance Entry

Nonperformance of QMP is described in detail in [CMM 830.13](#). All nonperformance of QMP by Quality Control (QC) or Quality Verification (QV) requires an entry in the DT1310 report. Each entry should have, at a minimum, the following information in the disposition explanation:

1. Description of non-performance (Non-Performance of QMP form, found in statewide pantry)
2. Problem encountered from [CMM 830.13](#), table 830-2 and include percentage deducted from bid item
3. Total credit applied with written out calculation
4. Contract modification number used to apply the credit

845.5.1.2.1.3 Disincentive Entry

Disincentives that are applied to an item require a DT1310 entry. A schedule of administrative items used to assess disincentives is found in [CMM 238.2.11](#), table 238-1.

Disincentives calculated in the Highway Quality Management System (HQMS) should include:

1. Reference to the specific HQMS module and Lot/Sublot
2. Total disincentive applied
3. Contract Modification number used to apply the disincentive

Disincentives not reported in HQMS should include:

1. Lot/Sublot, station etc. where disincentive is applied
2. Test result(s)
3. Specification reference of disincentive amount
4. Percentage of disincentive
5. Total disincentive applied
6. Contract Modification number used to apply the disincentive

845.5.1.2.1.4 Buy America Exception Entry

Buy America exemptions are allowed under the Buy America contract special provision. Additional information on Buy America can be found in [CMM 228.5](#). If a project utilizes any part of the exemption amount, an entry in the DT1310 report is required. The entry needs to list:

1. Material being exempted
2. Amount being logged under exemption
3. Allowable exemption amount

FIGURE 845-5 Example DT1310 Buy America Exception Entry

Bid Item Name:			Usage:
Various			Project Wide
Placement Date: 02/01/18	Qty: 0	Units: N/A	Location:
Sample Date:	Sample Location:		Project Wide
Disposition Explanation:			Spec Requirements:
637.22XX Type 2 Sign - Mounting Hardware			All steel/iron needs Buy America certification.
3/8" 3 1/4" Bolt (\$35.49)			
3/8" Nut (\$5.50)			
4" Lag Screw (\$16.22)			
3" Lag Screw (\$59.16)			
Washer (\$26.76)			
416.1010 Concrete Surface Drain			Test Results:
Wire Mesh (\$112.80)			Buy America Documentation not provided.
634.0810 Posts Tubular Steel			
2"x2"x10' Post (\$1,024.40)			
3"x2 1/4" Square Tube (\$312.00)			
18"x2 1/2" Square Tube (\$598.00)			
Total allowable exemption amount = \$6,335.70			
Total amount logged under exemption = \$2,190.33			
All items are logged on Buy America Exemption Report and have material invoice documentation. Documents are located in material archive with WS4567 Buy America Certification Form.			

845.5.1.2.2 Buy America Certification

Buy America certification [DT4567](#) and the Buy America Exemption Log can be found online in the statewide pantry at:

<https://awpkb.dot.wi.gov/Content/constr/Pantry/StatewideForms.htm>

Any material that is logged under the allowable Buy America Exemption needs to be accompanied by material invoices showing the cost of the material as it is delivered to the project.

Additional information on Buy America is located in [CMM 845.3.2.3](#).

Buy America exemptions need to be logged on the DT1310 according to [CMM 845.5.1.2.1](#).

845.5.1.2.3 Materials Diary - MIT/MTS Prefix 905 Report

A diary entry must be made in a MIT/MTS prefix 905 Materials Diary Inspection report for every material required in the material archive. Materials Diary Inspection entries are made to document visual field

inspections, test results, and to reference all external materials approval documents described in [CMM 845.3.2](#).

[CMM 845.4](#) provides a list of inspection steps that should be performed on all materials delivered to a project. When performing the material inspection, document in the MIT/MTS prefix 905 report basis for acceptance (BFA) what was physically done to approve the material for use. Some examples include: verified steel certification heat numbers with tags on rebar or confirmed source of base aggregate stockpile by visiting the pit/quarry.

Diary entries must include the following:

- Description: brand, model, type, system, species, markings, size, dimensions, lot/batch, heat number, application rate, etc.
- Quantity.
- Manufacturer, source and vendor.
- Evaluation and basis for acceptance - visual inspection remarks, product condition, compliance to specifications, etc.

An example of the format for diary entries is shown in table 845-1. Several similar materials may be included on a single report entry when appropriate.

Note: In special cases, when field inspection is specifically requested by the BOS Bridge Fabrication Unit, a copy of the report must be sent to them immediately after inspection. Copies of all reports of field inspection of material must be included with the Test Report Record when the project is completed.

TABLE 845-1 Example of Materials Diary Inspection Entries

Date of Inspection	Bid Item Description	Product Name	Manufacturer Name / Location	Evaluation / Basis for Acceptance (BFA)
3/11/2006	Tack Coat	CSS-1H	Koch- Dubuque	Type acceptable per specifications. Asphalt Emulsion for tack coat, diluted with 50% water. Application Rate - 0.07 Gals/SY on milled surface and 0.05 Gals/SY on paved surface. 455.0600b: Bill of Lading
3/12/2006	St Sewer Pipe Reinf Conc Class III xx-Inch - PIPE	18" / 24" / 36"	County Materials Corp Marathon, WI	Pipe was new and undamaged. Pipe Markings: CMC M170 C-76 Dated 5/23/05
4/1/2006	Bar Couplers - THREADED BAR COUPLER	No 8	Nucor Steel Charlotte, NC	No. 8 Lot #154449 (Heat #MM16106574, MM17103616) Supplier: Dayton Superior Corp., Allentown, PA. Fabricator: Plymouth Tube Co., Winamac, IN. Conforms to standard spec 505 and exceeds 125% of the specified yield strength of the grade 60 bar steel being spliced. See DT1310 for acceptance based on 2 tests/type instead of 3 tests. All lot/heat numbers recorded in the field match mill test reports/shipping documents.
4/1/2006	Bar Couplers - EPOXY	Greenbar 720A009	Valspar Corp Charlotte, NC	Batch #: 7V96026105 (Lot #15449), 7V96026237 (Lot #158012.) Coated by B.L. Downey Co., Broadview, IL. Acceptable visual inspection of coating not being damaged. Conforms to standard spec 505 and meets ASTM A775. Epoxy batch numbers accounted for and correspond with all steel coupler lot/heat numbers.
3/30/2006	Structural Steel HS - HIGH STRENGTH BOLTS	7/8" HS Bolts	CMC Steel SC Cayce, SC	Heat No: 7501468 Fabricated by Veritas Steel, Wausau, WI Galvanized by: Rodgers Brothers, Rockford IL - Type A325, Lot 4321 Supplied by: Uny-Tite Fastners Fort Bolt, MO

845.5.1.2.4 QMP and Miscellaneous Summary Reports - MIT/MTS Prefix 155 Report(s)

Prefix 155 reports, titled Miscellaneous Materials, are used to report activities and test results that aren't covered by other standard prefix-numbered reports. A prefix 155 is also used for QMP Summary reports to summarize all QMP activities that were performed for each individual QMP specification involved in a project. Department personnel should create a 155 report in MIT or MTS by using an appropriate QMP summary template(s).

QMP Summary templates are available for most QMP specifications to help standardize reporting and to ensure that all relevant information is captured. QMP Summary templates can be accessed by all department personnel in pantry under WisDOT Statewide Forms.

Due to the format of the QMP Summary templates, more than one QMP summary report may be required for a certain QMP specification. For example, the QMP Base Aggregate special provision requires a QMP Summary for each nominal aggregate size; 3/4", 1-1/4", and 3".

Examples of individual QMP summaries can be found in the online pantry under QMP form templates, located at:

<https://awpkb.dot.wi.gov/Content/constr/Pantry/StatewideForms.htm>

845.5.1.2.5 Approved Documents

All approval documents are to be assigned a document ID and recorded in MIT/MTS prefix 905 report under the appropriate material diary entry. See [CMM 845.3](#) for types and descriptions of approval documents.

845.5.1.2.6 QMP Documentation

All required QMP documentation needs to be included in the material archive. The individual specification or special provision will state the required documents. Ensure that source documents are also included in the QMP records.