SECTION 840 Materials Sampling

840.1 General

Obtaining suitable samples of materials is the basis of materials control. Unless the sample is truly representative of material used or proposed for use, the test results are at best misleading and may result in nonconforming material being accepted and conforming material being rejected.

The following sections contain the approved sampling methods for those materials normally sampled in the field. Every effort should be made to follow these procedures as closely as possible to ensure a representative sample is obtained. There may be times when none of the sampling methods are applicable. When this occurs, the region person responsible for this area should be contacted for instructions.

840.2 Sampling Responsibility

It is the project engineer's responsibility to procure samples as often as advisable or necessary to ensure the quality of the material being incorporated into the work. To avoid any contention on the part of the contractor that samples taken by the state's inspector are non-representative, standard spec 106.3 requires that the contractor procure these samples under the observation of and in a manner approved by the project engineer. Under certain conditions, when agreeable with the project engineer and the contractor, this requirement may be waived and the sampling performed by the state's inspector.

840.3 Personnel

All personnel doing acceptance sampling and testing for all state highway improvement projects and laboratories used for the same purpose must be qualified by the Highway Technician Certification Program administered by the University of Wisconsin-Platteville and the WisDOT's Laboratory Qualification Program as required before they can be allowed to perform the work. For more information contact UW Platteville at:

https://campus.uwplatt.edu/ems/highway-technician-certification-program

840.4 Selection of Sampling Method

The place of sampling for determination of contract compliance will be determined by the project engineer. It is the intent of the specifications that conformity of materials to the specified requirements must be at the time, or just before the time, they are incorporated into the work. This should be the prime consideration when selecting a sampling method.

The sampling and testing methods described in this chapter should be used whenever possible and adhered to as closely as practical. Recognizing that certain situations may arise that these methods will not accommodate, the project engineer will devise a method suitable to the situation and make note of this in the project record. Once a sampling method has been chosen, it should be used for the duration of the project.

840.5 Submittal of Samples to Central Materials Laboratory

840.5.1 Identification

Complete information must be submitted with each sample. This should include the material, source (located to the nearest 40 acres for aggregates), project number, contract number, county, contractor, sampler, date of sampling, test(s) desired, applicable specifications or design, and any other information that will adequately and accurately identify the sample to the laboratory. If it is desirable to give the laboratory additional information regarding field gradation for asphaltic mixture or other special information, a letter of transmittal should be sent to the BTS laboratory or included with the sample.

Two accurately and completely filled out shipping tags are to be used. One tag is placed inside the sample container or securely wrapped around the sample or containers. The second tag must be securely attached to the outside of each package.

Currently there are two standard sample tags in use. DT1352 is used with samples of asphaltic materials. An example of a completed DT1352 is shown in figure 840-1. DT1499 is a tag for general use with samples of all materials except asphaltic materials or asphaltic mixtures. An example of a completed DT1499 is shown in figure 840-2.

String should preferably be used to attach the tag to samples, as tape cannot be removed from the tag without removing the surface of the tag and any information on it. If tape is used to attach sample tags to the sample or the sample container, it should be transparent type and should be applied to the ends of the tags without covering any information. Masking tape should not be used since information covered by it will likely be lost when the tape is removed.

Field personnel submitting samples for asphaltic mix design should check to see if wear and soundness tests have previously been run on the produced material (not to be confused with tests on unprocessed samples), and if so, indicate this by writing the applicable test number on the shipping tag.

The tag should also indicate the source and grade of asphalt to be used in an asphaltic mix design.

840.5.2 Packing

It is essential that the samples reach the laboratory in the same condition as when sampled. Containers must be clean and protect the samples from damage, spillage, or contamination. Fragile samples should be crated and protected by materials such as insulation against stock.

840.5.3 Shipping

Since it is more economical to ship one large package than several smaller ones, as many samples as possible should be combined into one shipment by packaging them together.

Samples should be shipped to the laboratory by the most economical mode of transportation available consistent with the time element involved. Samples of asphaltic materials (asphalt cement, cutbacks, and emulsions) should be shipped daily by special delivery parcel post or other expedient means of transportation.

840.5.4 Supplies for Sampling

The proper sample containers, identification tags, etc., are available through the BTS laboratory at 3502 Kinsman Blvd., Madison, and can be requested by contacting the region office.

FIGURE 840-1 Example Asphalt Sample Tag, DT1352

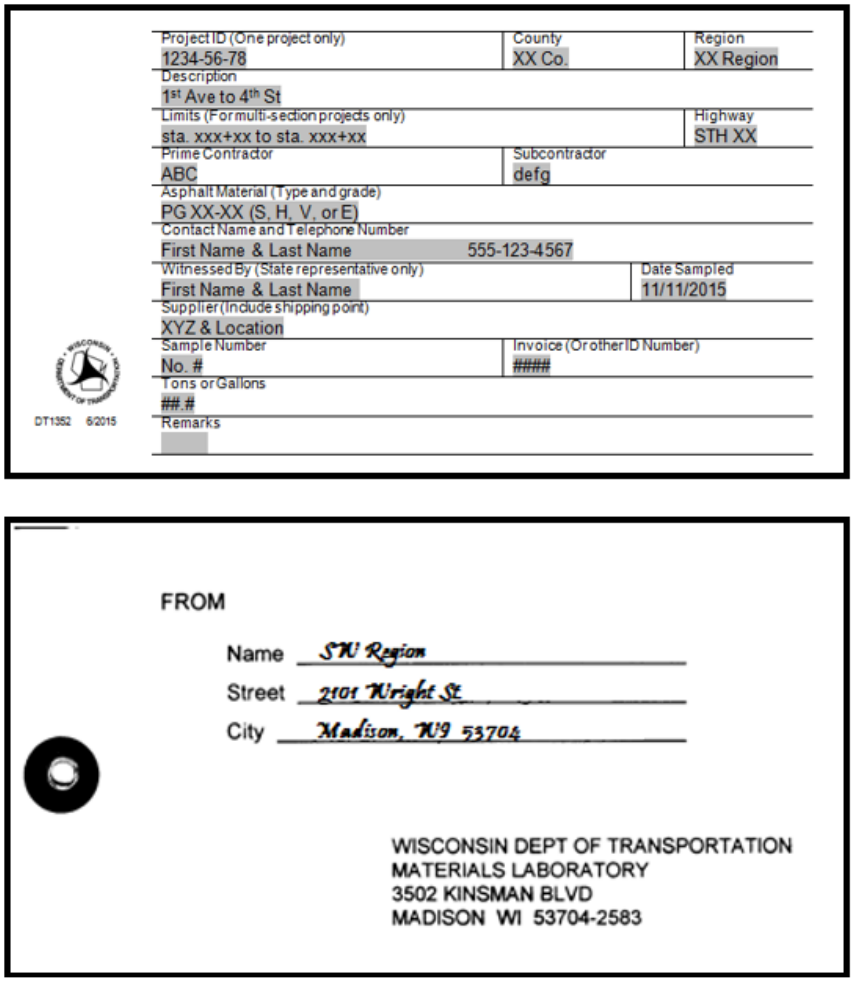
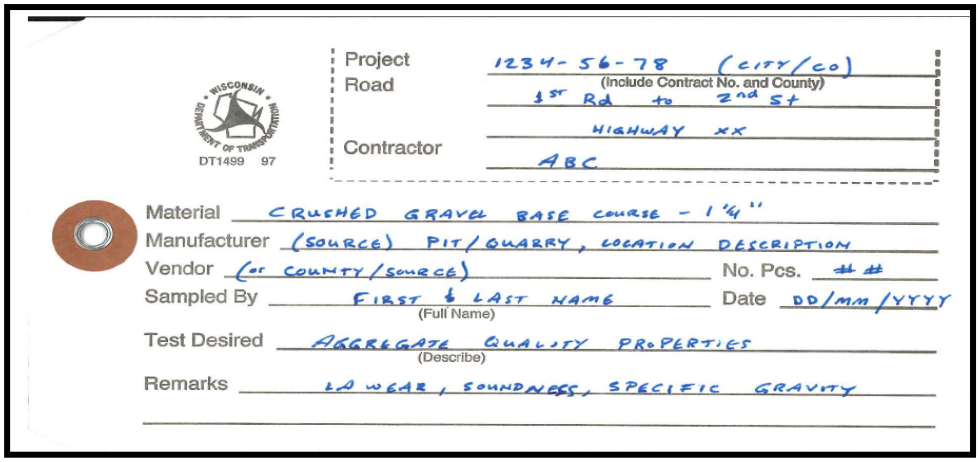


FIGURE 840-2 Example General Sample Tag, DT1499



840.6 Source of Materials Report, Department DT1349

This report provides the information that is needed before out-of-region or out-of-state tests, samplings, inspections, or procurement can be made on materials to be incorporated in the work. Tests and inspections at the source have to be authorized before they can be taken, with the authorization dependent upon submittal of DT1349.

Download DT1349, Source of Materials Report. An example of a completed DT1349 is shown below in figure 840-3.

Therefore, the contractor should provide the report as early as feasible to avoid delays in materials shipment. If the contractor has not decided on certain materials and items at the time a report is needed for other materials, the contractor can submit the initial report for the known materials and then send in supplemental reports, as other materials become known.

The contractor should submit three copies to the region office.

840.7 Material Specifications Transition Period

The possibility exists that issues of material non-conformance or availability may arise due to changes in specifications or production practices in the period between letting and procurement. In these cases, the project engineer should contact the designer to verify that the available products or materials comply with the intent of the design. Non-conforming products or materials should not be incorporated into the work without written guidance from the designer. It is understood by both parties that documented requirements may change between the time of project letting and construction, but it is the documented language at the time of letting with which the contractor must conform, unless contractual documentation clearly states otherwise.

FIGURE 840-3 Example Source of Materials Report, DT1349

SOURCE OF MATERIALS REPORT

DT1349 6/2007 (Replaces EL15L)

Wisconsin Department of Transportation

NOTE TO CONTRACTOR: Submit to Regional Office in triplicate as soon as possible to avoid delay in inspections. If all information is not known immediately, submit what is available and supplement it later.

Project ID	Federal Project Number	Contract Number	County
xxxx-xx-xx	IR xx-x(xxx)xx		Sauk/Juneau

Highway/Bridge	Project Description
B-29-19, B-56-31, 38, 40, 43, 45	Wisconsin Dells/I90 Westbound

Contractor	Type of Work
ABCD Co.	STRUCTURES

MATERIAL		DEALER AND/OR SOURCE		
AGGREGATES (Base Course)		SUB: Company ABC - Location		
AGGREGATES (Other)				
ASPHALT MIXTURE	Asphalt	SUB: Company 123 - Location		
	Principal Aggregate			
	Blending Aggr., Coarse			
	Blending Aggr., Fine			
CONCRETE JOB MIX		Brand & Type	Est. Amt.	Tons (Mg)
	Cement			
	Fine Aggregate			
	Coarse Aggregate			
CONCRETE READY MIX	Plant Name	XYZ Concrete - Location		
		Brand & Type	Est. Amt.	Tons (Mg)
	Cement			
	Fine Aggregate			
	Coarse Aggregate			
CONCRETE READY MIX	Plant Name			
		Brand & Type	Est. Amt.	Tons (Mg)
	Cement			
	Fine Aggregate			
	Coarse Aggregate			
		Brand & Type	Est. Amt.	Tons (Mg)
FLY ASH				
BAR STEEL REINFORCEMENT (Pavt.)		SUB: UVW Construction Co. - Location		
PIPE	Concrete	SUB: Another Construction Co. - Location		
	Metal			
STEEL BEAM GUARD		SUB: BCDE, Inc. - Location		
WOOD POSTS (Treated)				

(ADDITIONAL LISTINGS ON BACK)

FIGURE 840-3 Example Source of Materials Report, DT1349 (cont'd)

BAR STEEL REINFORCEMENT (Bridge)	SUB: Company Name Here - Location
BAR STEEL REINFORCEMENT (Bridge, Coated)	
STRUCTURAL STEEL (Bridge)	Appropriate Company Name - Location
FORGINGS (Bridge)	
CASTINGS (Bridge)	
RAILING (Bridge)	
LUMBER & TIMBER (Treated)	
TIMBER PILING (Treated)	
STEEL PILING	Responsible Company - Location
GEOTEXTILES	SUB: BCDE, Inc. - Location

OTHER MATERIALS

Prestressed Girder, Pavement Marking Materials, Fencing, etc. Additional materials 1, description	**DEALER AND/OR SOURCE** Company Name - Location
Mat'l 2 description	SAME
Mat'l 3 description	SAME
etc	etc