



## **MATERIALS MANAGEMENT SAMPLING AND TESTING.SAMPLING INFORMATION AUTOMATION SECTION 3510**

**3510.1 SCOPE.** To establish procedure and instructions for testing and reporting of materials to contracts using SiteManager. To define field names and contents of the fields used.

**3510.2 GENERAL.** Materials Management.Sampling and Testing. Sample Information will provide for the recording of sampling and testing data for materials used by the Department. Reporting or assigning of material to a specific Item of a specific Contract is accomplished through this section of SiteManager.

**3510.2.1** Materials Management.Sampling and Testing. Sample Information is used to identify all samples shipped to the Central Laboratory for processing or processed within the districts. Basic sample information and results of all tests performed in the field are entered. The Central Laboratory will enter the results of tests performed in the Central Laboratory and authorize the sample.

**3510.2.2** Data for Materials Management.Sampling and Testing. Sample Information may be entered at any MoDOT location.

**3510.2.3** Update rights shall be given to all users with responsibility for processing samples, or reviewing and approving the results of samples processed by others. Other users whose job requires, shall be given query access. Access shall be denied all other users.

**3510.2.4** The authority to Authorize a sample is given to Central Laboratory groups as designated by the Physical Laboratory Director and the Chemical Laboratory Director, and to all district Construction and Materials groups as designated by the District Engineer or assignee. Authority to Authorize is denied to all other users. Authorization locks the sample record so no additions, deletions, or changes can be made. Authorization should be performed only after the data in the record has been reviewed and is considered correct.

**3510.2.5** The owner of the sample is identified as the individual who obtained the sample. Only the owner of the sample shall make changes, additions, or deletions to the sample record. Ownership of a sample may be transferred to another individual for testing. Ownership of any sample submitted to the Central Laboratory is passed to the Central Laboratory. Central Laboratory ownership of a sample is irrevocable when the Log Date is completed by Central Laboratory Receiving.

**3510.2.6** Samples submitted to the Central Lab shall have at a minimum, the following information printed directly on the sample, sample container, or sample tag: Sample ID Number, Material Source (where the sample is obtained), Product Name (with grade and size, when necessary to fully describe sample), and any Special Instructions.

Some specific Sample I.D. requirements:

Concrete Cylinders – ID NO.  
Date of Pour  
Cement Factor (Not water/cement ratio)  
Special Instructions such as RUSH



TEST ON (a specific date)  
Special testing information

- Steel Products – ID NO.  
Grade  
Size  
Special Instructions such as RUSH  
PHONE/FAX RESULTS  
Field information
- Bituminous Cores – ID NO.  
Mix NO.  
Special Instructions such as TEST EACH CORE SEPARATELY  
PLEASE CONTACT (user @ phone number) BEFORE TESTING
- Bituminous Loose – ID NO.  
Mix NO.  
Special Instructions such as RUSH  
SAMPLED FROM 4th TRUCK  
PHONE/FAX RESULTS  
POSSIBLE CONTAMINATION  
NEED AC CONTENT

Some special instructions can be reduced to the following key words, which are also defined and clarified when appropriate. Special Instructions go on tag and in "Remarks" section of Basic Sample Data tab.

*Absorption as Received* - For aggregates.

*Chemical Analysis* – Culvert metal sample being submitted for normal testing that also requires a chemical analysis.

*Date of Pour* – Date when concrete cylinders were made.

*DSR Only* – Daily performance graded binder sample taken at an asphalt plant.

*Due Date* – Date when test results are expected. (Used primarily with soil samples.)

*Experimental* – Material which is to be retained for an indefinite period. The submitter of this material shall inform the Central Lab when the material is no longer needed so it may be disposed.

*Initial* – Larger rock samples obtained from ledges prior to crushing.

*Material Code* – For general materials samples, first four digits of material code would be as useful as the product name.

*# of #* – for multiple bags or containers for accountability in receiving the material.

*Quantity and Length* – for bolts, the lot quantity and the length of the bolts.



*Resample* – Indication that the sample being submitted is a resample.

*Rush* – Results needed as soon as possible.

*See Remarks* – Notification to the laboratory that there are some special circumstances regarding the sample.

*Source* – Producer production approval sample obtained every year.

*Special Investigative* – A sample being submitted for special tests. Normally the laboratory has been contacted by telephone in advance for this type of testing.

*Trial Mix* – Trial mixture material is submitted for standard processing including that to be stored by the lab for future use.

The Remarks field is filled in accordingly, including special testing instructions. Identification of a sample by marking the lid, or other packaging easily separated from the sample, is not acceptable. Sample tags are available from Construction and Materials – Central Office which are made with tyvex paper. These tags are very durable. For best results, when the tag is wired or tied to the sample, use both holes in the tag. The intent of the tag is to identify the sample. Please attach the tag so the sample data is easily seen. See Exhibit A for sample tag.

### **3510.3 PROCEDURE**

**3510.3.1 BASIC SAMPLE DATA TAB.** This must be completed on each sample.

**3510.3.1.1 Sample ID.** Each sample of material taken for the Department is assigned a unique identification number by the following standard:

After January 1, 2012

*1st –2nd Position* Last two digits of the year

*3rd-4th Position* District or Division identifier. Use the two letter designations for the district (NW, NE, KC, CD, SL, SW, SE) or a letter for a sample submitted by a division (non-district) personnel. For division personnel we are suggesting that the following letters be used.

Materials	M
Construction	C
Bridge	B
Maintenance	A
General Services	G
Photo Lab	PL
Preliminary Studies	P
Research D & T	R
Risk Management	K
Non-MoDOT	X

*5th – 7th Position* The user's initials. The initials are assigned by the SiteManager Administrator to assure uniqueness. Use upper case (capitals).



MATERIALS

- 4th – 5th Position (Non-MoDOT ID)** Initials assigned to a non-MoDOT organization by the SiteManager Administrator. Use upper case (capitals).
- 8th – 10th Position** Use 3 digits, with leading zeros, which count up sequentially for each additional sample.
- 6th – 9th Position (Non-MoDOT ID)** Use 4 digits, with leading zeros, which count up sequentially for each additional sample.
- 11th Position** May be added to the Sample ID if deemed necessary. Also used to differentiate this sample from a duplicate ID where both IDs have been issued prior to entry in SiteManager.

*Examples:* 2012 + Central District + John R. Doe + 001 = 12CDJRD001  
or  
2012 + Materials + James D. Smith + 001 = 12MJDS001  
or  
2012 + Non-MoDOT + Carter Waters + 0001 = 12XCW0001

The PAL unit at headquarters is expressly permitted to use a 4 digit number in lieu of the 3 digit number indicated above, due to the number of records created in a year.

*Example:* 2012 + Materials + Sally A. Tall + 0001 = 12MSAT0001

**3510.3.1.1.1** Central Office work units have been assigned a further breakdown for sample identification at a group level.

Materials, Field Office	MFO
Materials, Physical Lab	MPL

*Example:* 2012 + Materials + Physical Lab + 0001 = 12MPL0001

**3510.3.1.1.2** District Materials, where samples have traditionally been posted to a ledger and identified on a district wide basis, are also allowed the option of submitting samples using the following format. The last two digits of the year plus a two letter designation for the district plus MA for Materials, plus 4 digits (with leading zeros).

*Example:* 2012 + Northeast District + Materials + 0001 = 12NEMA0001

Both identification options may be used by any district.

For individualized IDs, if the number reaches 999, then a new sequence is started with A01, when that reaches A99, use B01, and so on. For District wide IDs, if the number reaches 9999, then a new sequence is started with A001, when that reaches A999, use B001, etc.

**3510.3.1.2 Sample Unit.** This is a required field. The unit for materials purchased under a Non-Construction contract, or that are the sole component of a contract bid item shall be that unit of measure as indicated on the contract bid item, if a contract exists, or the unit that would apply if the material were to be used on a typical contract. Sample Unit for materials in all other



situations including the instance where the material is one of several components of a contract bid item shall be as indicated on the Materials Management.Material Information.Material Detail panel. The default units system is English. Metric units may be used only when the material is known to be part of a metric contract or when certifications are required and metric units are designated in the certification. At this time, the unit is automatically loaded by the system based on the default unit set in the Material Information window. If the unit displayed is not correct for the circumstances, the user can contact Construction Materials – Central Office.

**3510.3.1.3 Status.** This is a required field. The sample should not be authorized when this field indicates Pending. This field is used to indicate acceptance, qualified acceptance, rejection, or other sample status. The status of a sample shall be listed as follows (in alphabetical order by code, \* means sample Contract Tab quantities will not be counted in materials summary):

**CF** *Compare Favorably/Compliant (IAS only)* – for results of testing that compare within allowable range with the companion test or compares favorably with the specifications. \*

**COMP** *Accepted/Completed* – as appropriate, when all tests are completed to the satisfaction of the sample owner and specifications are met. Counts as a “test”. Complies with the specification regardless of how it got to that point (sample/resample, reconditioned, etc.) or, when the result will not cause rejection because the sample is QA and compares within limits.

**DNCF** *Not Compare Favore/Not Comply (IAS only)* – for results of testing that do not compare within the allowable tolerance with the companion sample or with the specification. \*

**FAIL** *Failed/Rejected* – as appropriate, when all tests are completed to the satisfaction of the sample owner and the material is not acceptable. The remarks will indicate the reason for rejection. \* If the disposition of the material is known, consider using the code FAIR or FAIU (below). [ Lab Only – if a resample is appropriate and requested, but the supplier or the district determine that no resample will be submitted, the sample status will be set to FAIL. If additional material is submitted and also fails testing, both sample records will be set to FAIL. ]

**FAIR** *Failed- Material Removed/Never delivered*– For example, this could be paving material that was found to be non-compliant and was removed by MoDOT or contractor choice.

**FAIU** *Failed- Matl used "as is" w-w/o deduct* - For example, this could be paving material that was used “as is” with some penalty, or with the permission of MoDOT (without deduct). (See FANC, below.) In the special case of stripe that does not meet, but is left in place until re-striped, use Failed/Rejected. Counts as a “test”.

**FANC** *Failed- QC not compare w/QA, used "as is"*. For QC portion of sample where sample results did not compare favorably with QA test, but the material is incorporated into the project anyway. This triggers additional investigation into the cause of the non-comparison (for example, the required running average of results from a specific source.). Counts as a “test”.

**FLAB** *Failed- LAB questioned sample viability*. Failed due to sample being inadequate quantity according to the test method, sample obviously contaminated, sample clearly not the indicated material, sample damaged in transit, etc.



*INFO Informational only* – as appropriate, when all tests are completed to the satisfaction of the sample owner and the test results are not used to determine acceptance of the material. \*

*OHCL On Hold/Lab (lab only)* – the sample or sample record is not currently being processed \*  
The Lab Section that sets the sample status to “On Hold...” becomes solely responsible for the final disposition of the sample, sample status, and authorization, regardless whether the sample is “shared” and whether the Lab Section is considered primary or secondary.

*PEND Pending* – until all tests on the sample are completed or it is determined that no additional testing shall be performed. \*

*RFRA Ready for review/authorization* – used primarily in the Lab \*

*SA Secondary - accepted* – used only by the Lab \*

*SPEC Pending/resample* – the Sample Information is related to material where initial testing is to be repeated and a resample has been required \*

*SR Secondary - rejected* – used only by the Lab \*

*VOID Void* – for sample records that are considered invalid. \*

Remarks are necessary to explain conditional, informational only, rejected, or void sample status.

**3510.3.1.4 Sample Dt.** This is a required field. The date when the sample was obtained. If no sample was obtained, enter the date of the inspection. If no inspection occurred, enter the date of any other activity being documented with the sample record.

**3510.3.1.5 Link To.** Use when an existing sample is related to another sample for one of the following reasons: resample, additional material submitted to the Central Laboratory, to report previously tested material to a contract with this sample, to transfer material to another contract, and when this sample is one of several components to be identified, e.g., two-size paving stone.

The second sample is "linked to" the first sample. A third sample is "linked to" the second sample.

Another example of using a Link is for transferred material. A sample record is created for the transferred material. It is linked to the original sample record (which reported the material to the contract). On the new sample record, a Contract tab positive quantity is reported to the desired contract(s) and negative quantity is entered for the contract from which the material was transferred. Include in the remarks why the material was transferred.

**3510.3.1.6 Link From.** This field is automatically filled when a future sample is linked back to this sample.

**3510.3.1.7 Log Dt.** The date the sample is received at the Central Laboratory. The district will leave this blank.



**3510.3.1.8 Sampl Type.** This is a required field. The reason the sample was taken is entered. Following are Sample Type Definitions (listed alphabetically by code): For samples processed by the district and not sent to the Central Lab, use one of the underlined sample types except that materials that will be posted to a contract must have a sample type that matches the sample type designated in the contract's Sampling and Testing Requirements:

<u>COST</u>	<u>Compaction Standard</u> – This is used to represent a sample related to the compaction standard for aggregate or base.
<u>DGEN</u>	<u>District Gen</u> – This is to be used for sample processed in the district where no contract or purchase order is involved.
<u>DPOR</u>	<u>District Pur Order</u> – This is to be used for sample processed in the district where a purchase order is involved.
<u>DPRO</u>	<u>District Proj</u> – This is to be used for sample processed in the district where a contract is involved.
<u>DPRM</u>	<u>District Permit</u> – This is for a sample record related to a Permit.
<u>ENVI</u>	<u>(Obsolete) Environmental</u> – This is to be used for petroleum and heavy metal contamination, asbestos and samples submitted that have potential environmental concerns.
<u>FAST</u>	<u>(Obsolete) Proj F.A.S.T</u> – This is used for samples obtained as part of the Departments' F.A.S.T. program
<u>GAI</u>	<u>Gen Appr Initial</u> – This is to be used for ledge stone samples submitted for initial approval testing.
<u>GAS</u>	<u>Gen Appr Source</u> – This is to be used for aggregate source approvals and for first time samples from a new producer with no project designation established for the material.
<u>GENI</u>	<u>General Investigative</u> – This is used for any special or investigative samples which are not project specific. The Lab may change the sample type to GENI for some samples submitted to the lab, in order to facilitate tracking of the sample.
<u>GPA</u>	<u>Gen Prod Absorption</u> – This is for "Absorption As Received" aggregate samples.
<u>GPK</u>	<u>Gen Prod Unit Weight</u> – This is for "Unit Weight" aggregate samples.
<u>GRI</u>	<u>Gen Res Investigative</u> – This is used for any special samples which involve RDT, or investigative samples which are not project specific.
<u>IAS</u>	<u>(Obsolete) Proj I.A.S.</u> – This is used for samples obtained as part of the Departments' I.A.S. program.



<u>IASA</u>	<u>IAS Audit</u> – This is to be used for samples representing audits of I.A.S. inspectors.
<u>INFT</u>	<u>Informational Testing</u> – This is to be used for samples when test results are required in order to determine a particular course of action.
<u>MAAS</u>	<u>Material Approval Sample</u> – This is to be used when testing and acceptance is the normal process prior to use of the material.
<u>MRPT</u>	<u>Material Report</u> –
<u>NTM</u>	<u>(Obsolete) No Test - Material for Lab</u>
<u>NWPD</u>	<u>New Product</u> – For submitting a sample of a new product through the new product process and associated testing.
<u>OFFS</u>	<u>Off System</u> - Any sample or record related to an Off-System project.
<u>PA</u>	<u>Proj Approval</u> – This is used for samples obtained for acceptance of material for a specific project. Not to be used for aggregate.
<u>PC</u>	<u>Proj Check Sample</u> – This is used for samples obtained to check the quality of material accepted for project approval. Not to be used for aggregate.
<u>PEBD</u>	<u>Prel Engr Br Dk Cond Survey</u> – This is for samples submitted for preliminary bridge deck condition surveys.
<u>PEPE</u>	<u>Prel Engr Pave Evaluation</u> – This is used to submit samples obtained from preliminary pavement evaluations.
<u>PESC</u>	<u>Prel Engr Soil Survey</u> – Complete – This is for classification and moisture density determinations.
<u>PESF</u>	<u>Prel Engr Soil Survey</u> – Fertility – This is for fertility testing.
<u>PESP</u>	<u>Prel Engr Soil Survey</u> –Partial – This is for classification only.
<u>PG</u>	<u>Proj Gen Investigative</u> – This is used for samples obtained as part of an investigation of a project.
<u>POA</u>	<u>Purchase Order Appr</u> – This is used for samples obtained to determine acceptance of material purchased by Department purchase order.
<u>POB</u>	<u>Purchase Order Bid Sample</u> – This is used prior to the award of a bid to determine that the vendor is capable of producing material on specification.
<u>POC</u>	<u>Purchase Order Check Sample</u> – This is used for samples obtained to determine quality of material accepted by Department purchase order.



<u>PROD</u>	<u>Production</u> – This is used for all aggregate production samples or other materials designated for project or general use. (This includes what used to be called an aggregate check sample.)
<u>QA</u>	<u>QA Comparison check of QC</u> - proj specific - Comparison to confirm performance of QC process (includes sampling, testing, test equipment (condition verification, calibration, etc.). record keeping, integrity/validity of results, etc.) Project specific.
<u>QALL</u>	<u>QA Sample or Facility Review</u> - not PAL - Samples and facility reviews of non-PAL facilities (pipe (CM, HDPE, PVC, RCP), precast structures)
<u>QAS</u>	<u>(Obsolete) Quality Assurance (Includes PAL)</u> – This is to be used for routine quality assurance samples and PAL Quality Assurance plant visits.
<u>QC</u>	<u>QC Material Acceptance</u> - proj specific – Initial specification compliance determination at the project level, or for a particular project.
<u>QCC</u>	<u>QC Material Acceptance</u> - contractor data – Same as QC except test result data is supplied by the contractor (and may include MoDOT data as well). Project specific.
<u>QPAL</u>	<u>Q PAL related record or sample</u> – PAL material report, or sample directly related to a PAL facility visit.
<u>SPSA</u>	<u>Quarterly Split Samples</u> – This is used when it is necessary to compare test results with another laboratory.
<u>TM</u>	<u>Trial Mix</u> – This is used for samples obtained for trial mix purposes designated for project or general use.

**3510.3.1.9 Acpt Method.** This is a required field. The method by which the sample is being accepted as indicated in the following table (alphabetically by code). Note: SATE, Sample and Test, has been selected as the default value and should be used for any newly created contracts.

APAL	Accepted on PAL (HQ or MT P.O. use only)
APQC	Approved Producer QC/QA – Material supplied by approved producer and accepted on QC/QA
CERT	Certification Review – Certification is reviewed
CETE	Certification and Testing – Certification is reviewed, material is tested.
CPIA	Concrete Plant Inspection Audit – Status used to denote an audit of record for concrete plant inspections.
LBLA	Label Analysis – Label on container is compared to specification or purchase order



PAOA	Prior Approval or Acceptance – Material approved on basis of sample taken earlier (note sample ID number)
PQOB	Pre-qualified or Brand Name – Material appears on pre-qualified or accepted brand name list
PQTS	Pre-qualification Sample – Acceptance method dependent on material pre-qualification process.
SATE	Sample and Test – Sample taken and tested
TEST	Testing – Material tested (measured) on site, no sample taken
VSUL	Visual Inspection – Material meets specification based on visual examination

**3510.3.1.10 Sampler.** This is a required field. The person who initially obtained the sample is shown here. Typically, the sampler shall also be the individual entering the sample data.

**3510.3.1.11 Material.** This is a required field. The material code and description that best fits the sample material.

**3510.3.1.12 P/S.** This is a required field. The Producer or Supplier of the material sampled. Use the Search option. If the Producer/Supplier is not shown in the list of Producer/Suppliers, it may have to be added to the system by Materials at Central Office. The association is made using the Producer/Supplier Materials function. The District can do this. Generally, the producer/supplier is not a contractor or subcontractor. For example, for Asphalt Binder taken at an Asphalt Mix Plant, the producer/supplier of the asphalt binder would be the terminal or refinery it came from, not the mix plant. A known exception is straw for erosion control. The producer/supplier can be shown as the subcontractor because the farmer will normally not be in the list and is unlikely to be a regular supplier of the material. For a PAL Quality Assurance plant sample, the Producer/Supplier should be the manufacturer of the product being tested, and will not necessarily be the same as the facility where the sample is being obtained. For example, if you are sampling black steel, the Producer/Supplier should be the mill, not the fabricator of the steel where the plant visit may take place.

**3510.3.1.13 Type.** This is automatically filled in by the system.

**3510.3.1.14 City.** This is automatically filled in by the system. This field will also show state and county for most producer/suppliers, especially aggregates.

**3510.3.1.15 Mnfctr.** The manufacturer of the material, if different from the Producer/Supplier. Contact System Administrator if manufacturer is not on list. The system is set to display the list by two different processes. Use the process you prefer.

**3510.3.1.16 Town.** The town or city where the manufacturer is located, if not automatically included in the Mnfctr field.

**3510.3.1.17 Geog Area.** This is a required field. Use the Drop Down Menu, for the MoDOT Region in which the sampler is located. Samplers from Central Support use District – Central Office.



**3510.3.1.18 Product Nm.** The brand name of the material, if applicable. If the material sampled does not have a brand name, this field should be left blank. A search lens is provided in this field. If there are no entries, then there are no product names applicable for the material selected.

**3510.3.1.19 Intended Use.** The intended use of the material should be entered. For material to be held in a supplier's stock, enter "Stock for Future Use".

**3510.3.1.20 Represented Quantity.** This is a required field. The quantity of the material represented by the sample.

**3510.3.1.21 Authorized By.** This is automatically filled in by the system when the sample is authorized. The sample is to be authorized when all testing is completed or no further testing is to be performed, and all necessary data has been entered. Authorization shall not be delayed in order to record contract data for the purpose of reporting to a contact. The person designated to authorize a sample is described in AS-3510.2.4.

**3510.3.1.22 Authorized Date.** This is automatically filled by the system when the sample is authorized. When considered appropriate by the System Administrator, a sample may be unauthorized so that changes can be made to the sample record. Lab samples, when reauthorized may have the Authorized Date set to the original date, depending on the reason for altering the sample record.

**3510.3.1.23 Sample Lock Function.** The sample lock function is used to prevent unauthorized users from making changes to a sample record. When a sample record is locked, it will appear to be authorized (all fields grayed out). A record may be only authorized, only locked, or both authorized and locked. If the Locked By and Lock Date fields are populated, the record is locked. Additional fields below the Lock Type, Locked By, and Lock Date fields will display the lock type.

**3510.3.1.23.1 Lock Type.** There are three lock types and three office levels that provide different levels of security within the sample lock function. The three different lock types are Office Lock, User Lock, and No Lock.

*Office Lock* Office Lock prevents a user, of a different or lower office level than the sample record creator, from making changes to the sample record. There are three office levels that may be displayed as a choice for Office Lock.

*Statewide* Statewide is an Office Level 1 lock and may only be used by those users with Statewide SiteManager access. This access is typically reserved for users at the Central Office. A record locked with Statewide, or Office Level 1, will not be modifiable for users in the district or project offices. The record will be modifiable for all users with Statewide access.

*District: xx* District: xx (where "xx" is the district designations NW, NE, KC, CD, SL, SW, or SE) is an Office Level 2 lock and may only be used by users with District SiteManager access. This access is typically reserved for users in the district offices. A record locked with District: XX, or Office Level 2, will not be modifiable for users in a different district office or in any of the project offices. The



record will be modifiable for users in the same district office or users with Statewide access.

*OrgCode: xxx* OrgCode: xxx (where “xxx” is the designation of the district project office) is an Office Level 3 lock and may only be used by users with OrgCode SiteManager access. This access is typically reserved for users in the project offices. A record locked with OrgCode: xxx, or Office Level 3, will not be modifiable for users with a different OrgCode (different project office) or users in other district offices (district offices in a district different than the project office). The record will be modifiable for users in the same project office, users in the district office (same district as the project office), or users with Statewide access.

*User Lock* User Lock prevents any user other than the user that applied the lock from making changes to the sample record. The user locking the record is always the logged in user and not necessarily the Sampler.

*No Lock* No Lock means that the sample record is not locked. The record may be modified by any user.

**3510.3.1.23.2** SiteManager is configured to apply an Office Lock on every sample record by default. The Lock Type must be changed if the sample record is desired to have a different Lock Type. Sample records representing material that has the potential to travel to another district should have No Lock to allow contract information to be added or modified.

**3510.3.1.23.3 Locked By.** This field will be automatically populated by the system with the User ID of the user locking the sample record when a lock is applied. The user locking the record is always the logged in user and not necessarily the Sampler.

**3510.3.1.23.4 Lock Date.** This field will be automatically populated by the system with the date that lock is applied.

**3510.3.2 ADDITIONAL SAMPLE DATA TAB.** This is completed for each sample processed.

**3510.3.2.1 Buy American.** (Obsolete – this field has been removed from the system. Depending on the material, this information is communicated by the certification, mill test report, or other means.)

**3510.3.2.2 Reqst By.** The person or entity who requested the sample, if applicable, is listed. It may be left blank if it is a routine sample, or no specific request has been made.

**3510.3.2.3 Witnessed By.** Person who witnessed the sampling process when not a routine sample.

**3510.3.2.4 Smpl Size.** The size of the sample submitted to the Central Laboratory so Laboratory Receiving can confirm full shipment. For samples processed in the district, this field may remain blank. Appropriate Sample Size Units shall be selected from the Drop Down Menu or, if the required unit is not included in the list, the unit may be typed in the field with the designated Smpl Size.



**3510.3.2.5 Dist from Grade.** The distance from the finished grade for samples taken from subgrade. Appropriate “Dist from Grade” units shall selected. Use English units unless the contract is known to be metric.

**3510.3.2.6 Station.** The station number location where the sample was taken, when applicable.

**3510.3.2.7 Offset.** The distance and direction from the reference line of where the sample was taken, when applicable.

**3510.3.2.8 Reference.** The line from which the offset is measured.

**3510.3.2.9 Smpld From.** The specific point at which the sample was taken (e.g. belt, stockpile, roadway, drum, bundle, stock, etc.).

**3510.3.2.10 Smpl Origin.** The general location from which the sample was taken (e.g. quarry, plant, project). In some instances it is necessary to include the specific quarry, or plant, or other information. If the Basic tab does not capture the information, include it here. For example, aggregate taken from a ready mix plant would have come from a quarry. On the Basic tab the quarry would be listed. In this field, the specific ready mix plant would be indicated. (Note: the instructions for Smpld From and Smpl Origin were reversed on 8/1/2008 due to the nature of the information to capture and the relative field size. They were reversed back to original configuration on 3/19/2009 after field size for sample from was increased to match Sample Origin. This was done to alleviate confusion by authors.)

**3510.3.2.11 Control Type.** The identification assigned by the Producer/Supplier (e.g. heat number, batch number, lot number), when applicable.

**3510.3.2.12 Cntrl Number.** The number associated with the Control Type which the Producer/Supplier has assigned to the material represented by this sample. If no number has been assigned and the material can be identified in lots or batches by personnel performing the sampling, the Control Number may be assigned by the sampler. When multiple numbers apply to the sample, typically for 2-part and 3-part paints or epoxies, the numbers will be separated by commas and will have an identifier added when appropriate, for example: “A:5B32WAA,B:6C43XBB” (Note the identifiers, “A” and “B”). If there is not room for all the characters assigned, the second or third series of numbers can be placed in the Seal Number field, which is adjacent to the Cntrl Number field. If the number provided by the Producer/Supplier contains special characters such as “-”, “/”, “|”, “\”, convert all such characters to a dash (“-”) as you enter the value. Example “A:7C/44G\16” would be entered as “A:7C-44G-16”. (Note: Substituting a dash for all special characters facilitates any Cognos data searches that are performed.)

**3510.3.2.13 Seal Number.** If the material represented by the Control Type and Number has been sealed to prevent modification, make note here. This function is rarely used. Seals may be found on rail cars, truck, tanks, and other similar transportation or storage devices. This field is also used for additional detail that will not fit into the Cntrl Number field.

**3510.3.2.14 Design Type.** If the material sampled is controlled by an existing mix design, select from the Drop Down Menu.



**3510.3.2.15 Mix ID.** The identification number of the mix design represented by this sample should be selected.

**3510.3.2.16 Plant ID.** For aggregates, select the appropriate source, ledge or ledge combination. If the required information is not listed, contact the system administrator.

**3510.3.2.17 Plant Type.** Automatically filled in by system.

**3510.3.2.18 External Reference Document.** This function is not working correctly at this time. When fixed, the field will be completed when information that cannot be otherwise collected using SiteManager has been captured using a commonly available application. This may include external documents such as scans of certifications or mill test reports, and non-SiteManager MoDOT reports. It is preferred that the documents be converted to .PDF format prior to saving as an External Reference Document.

**3510.3.2.19 Include Standard Remarks.** This should be checked if applicable to the material by the person with authority to Authorize the sample.

**3510.3.2.20 Last Modified User ID.** This is automatically filled by the system.

**3510.3.2.21 Last Modified Date.** This is automatically filled by the system.

**3510.3.3 CONTRACT TAB.** Information in this tab is used to associate (report) a sample to a particular Contract. The material is associated (reported) to the specific line item of a specific contract and project for which it was inspected. When the line item is unknown and several line items are shown for the contract, all the material may be posted to the first line item. Construction may transfer to other lines within a contract. More than one contract may be selected. More than one line item on each contract may be selected. When the necessary contract is not included in the list and it is confirmed that the project is not being administered using SiteManager, which may include Off-System jobs, contract may be entered on the Other Tab. See 3510.3.4.

**3510.3.3.1** The total quantity of material associated to all line items should not exceed the total represented by the sample without remarks indicating the rationale.

**3510.3.3.2 Repr Qty.** This field is the quantity of material to be associated to that line item.

**3510.3.3.3** Material reported to another district when the contract is unknown shall be posted to that district's inventory contract (Format: D# - Inventory, where the district designation is substituted for the # sign). That district materials will be notified via Lotus Notes (D#MAContacts). Any district may report material to their own "Inventory". Only the district that "owns" the inventory may transfer it to another contract.

**3510.3.4 OTHER TAB.** Select the type of work for which the material is designated, when material is to be used for a known purpose other than a Construction project. (i.e., Purchase Order, Research Project HPR). Any projects not being administered using SiteManager or otherwise not listed on the Contract Tab, including Off-System projects may be included here by selecting the appropriate type of work. Other information important to the sample record may also be entered on this Tab.



**3510.3.4.1 Type.** The type of work should be chosen from the pull-down menu under the Other Tab. Select one or more of the Types shown, as appropriate for the material. A particular Type may be selected multiples times, if necessary.

**3510.3.4.2 ID.** ID should be the identifying number, letters, or information associated with the Type.

**3510.3.4.3** The Type and ID combinations shall be provided as necessary to record all information necessary for the material associated with this sample.

**3510.3.4.3.1** Table of typical entries:

<b>OTHER TYPE</b>	<b>OTHER ID</b>
Change Order Items	040123-503
Consultant Request	J6P0672F
District Permit	5-04-0671
Federal aid Acceptance Sample and Test	J6P1471
Independent Assurance Test	J6U0132
Initial Approval Sample ID #	05XXX010
Mixing Facility (AC, PCC)	3027000020 Desloge
Non SiteManager Project	J0V0321B
PAL Material User	3050500434
Preliminary Survey	J1P0760B
Project Test	960618-X04
Purchase Order	PGQ6050X200000166
Rejected Material	J5P0484 – 2 pipes rejected at plant
Research & Development	910 SPR 1999 96 Y
SiteManager Project (No sampling req.)	03JRB008
Source Approval Sample ID#	05XXX010

**3510.3.4.4** Transfer instructions are included in 3510.3.1.5 (Link To).

**3510.3.5 TESTS TAB.** This section is completed for each sample processed by Department personnel.

**3510.3.5.1 Test Method.** Test Method is chosen by district personnel for each test to be performed on the sample by the district. Tests intended for use in the district include T27, and all Test Methods that begin with "SA". The district is not to use any Test Method that begins with "x", "y", or "z". The district will use Test Methods beginning with "C" or "P" only when informed to do so by Materials – Central Office. Test Method is chosen by the Central Laboratory for each test to be performed by the Central Laboratory. Multiple tests may be selected. Tests may be performed, and test results recorded, on a sample by both the district and the Central Laboratory. When the district requires testing to be performed by the Central Laboratory, other than that normal to the sampled material, the Central Laboratory is to be notified on the sample tag of the special instructions.

**3510.3.5.2 Lab ID.** The Laboratory where the test was performed.

**3510.3.5.3 Sample Test Nbr.** Typically, this is a sequential number starting with one (1) for each test attached to the sample. The second instance of a specific test associated with the sample would be (2), and so on. This allows the same test to be run on a sample multiple



times. If, for example, four different tests are run on the sample, each of those four tests could have a Sample Test Number of one (1). While sequentially numbering tests is generally the best option, the user may select some alternate means of uniquely identifying the tests for a given test method and sample. For example, the user may wish to number tests sequentially over a series of days, even though different sample records are required and created. Any value the field will select is acceptable as a sample test number, including letters. Characters other than letters and numbers may create problems and are discouraged.

**3510.3.5.4 Start Date.** The date the test is attached is automatically entered. This date must be before the Actual Completion Date. It should be changed prior to entering the Actual Completion Date if the Actual Completion Date is before the Start Date as automatically entered.

**3510.3.5.5 Charge Amount.** This is not used.

**3510.3.5.6 Estimated Completion Date.** This is not used.

**3510.3.5.7 Actual Completion Date.** The date the test was completed or that required information was entered, as on the Field Distribution Report. When a test is interrupted due to failure of the sample in the early stages of that test, the Actual Completion Date shall be filled. In the event of a failure of a companion test or change in the sample's circumstances, any tests for which no testing was performed shall be deleted.

**3510.3.5.8** Test results for each test are entered, completing all applicable information.

**3510.3.5.9 Reviewer ID** is completed by the reviewer, if applicable.

**3510.3.5.10 Testers ID** is entered as the person who actually performed the test.

**3510.4 Remarks.** The remarks field should contain the date and the userid of the individual entering the remarks. It is assumed that if no date or userid is entered, the remarks were entered by the creator of the sample record on the same date that the sample record was created.

**3510.5 Authorization.** When material represented by a sample is associated to a line item for a Contract, that sample shall be Authorized\* to complete the association. This authorization is necessary to allow the payment of the material on the estimate. Samples processed solely within the district shall be authorized by district personnel designated by the districts to do so. Samples submitted to the Central Laboratory shall be authorized by Central Laboratory personnel.

*\*\*Authorized" is the term used in SiteManager to indicate that all transactions with regard to the sample are finished. Normally a sample will be authorized once all testing is completed and recorded with the sample data. A sample may also be authorized once it has been determined to be an invalid sample or to contain incorrect sample data. When all data has been entered for the sample or it is known that no additional data will be entered, the sample shall be authorized.*

**3510.5.1** When a sample has been authorized, no modifications may be made to it. If an authorized sample is found to contain erroneous data, that sample should be revised and remarks entered explaining the reason for the revision.



**3510.5.2** If it becomes necessary to void a sample, it should be marked as Void and Authorized. Disposition Remarks should be made explaining the reason for marking it void. All samples which cannot otherwise be completed shall be voided as soon as it is determined that the sample, or sample data, is invalid.

**3510.5.3** After a sample is assigned and authorized to a contract, no more material may be assigned directly from that sample. If a sample represents more quantity than was assigned, the remainder may be assigned to the same or another line item. This shall be accomplished by using a new Sample Identification Number. The sample data from the sample containing the extra quantity shall be copied to the new Sample Identification Number and the association made from it.

**3510.5.4** The sampler is responsible for checking on the status of the sampler's own samples. Once the sampler notes that a sample submitted to the Laboratory has been Authorized, it is the sampler's responsibility to communicate that the sample has been authorized to the appropriate individuals as necessary to satisfy the needs of those associated with further processing the sample. If it is necessary to have a hard copy, the sampler should attach the Field Distribution Report (SAA007AA) or the Free Form Test (----) to the sample. Using either form, necessary information can be included such as the quantity plus a distribution list. The represented quantity from the **Basic Sample Data Tab** is shown at the top of the report and is not necessarily the required quantity for the intent of the report. A hard copy could be printed from this, for example, the "receiving district".

**3510.6 Sample ID Sheet.** The last page in this section is a blank sample ID sheet intended for manual collection of sample data on paper. The form is sequenced to allow direct transfer of data from the paper to SiteManager. The district shall be responsible for the input of all sample data related to samples from the district. This page is not to be used for ..the primary transmission of sample data to the Central Laboratory.

**3510.7 Portland Cement Concrete Cylinder records.** Required data is to be entered into remarks, including at a minimum, the following:

Number of Cylinders	Fine Aggregate Source
Cement Factor	Coarse Aggregate Source
Date of Pour	Yield
Cement Type & Source	Location of Pour
Fly Ash Type & Source	

**3510.7.1** When submitting a set of cylinders to the Central Lab, use one ID Number for each set of two cylinders, except when multiple sets are made the same day, as the same pour, with the same mix design, from the same plant. In that instance, multiple sets can be included under a single sample ID. Include, in remarks, the reason for multiple cylinder sets, for example; "Quantity poured today warrants 3 sets of cylinders". Assign each cylinder with its own specimen number. This is one of the few instances where the district inspector enters data on a Test form that the Central Lab completes.

**3510.7.2** The Tests tab shall have the test T22 attached. On the Description tab, enter the air, slump, concrete temperature when available, and the cement factor for the mix.

**3510.7.3** The Specimens tab shall have each specimen number entered. Specimen numbers should start with number 1 for the first cylinder made on the job and continue consecutively



though the project for each individual mix design. When changing mixes, start a new numbering group. SiteManager does not accept letters in the specimen number field. For companion cylinders, the Construction set and the Materials set may have the same specimen numbers because the cylinders are also identified by the Sample ID number, which will be different.

**3510.7.4** The Central Lab will enter actual test data after breaking the samples. The Central Lab will also authorize the sample, which locks the record, after the testing is complete.

**3510.7.5** Cylinders to be broken in the district are entered the same way however, multiple cylinders made the same day, as the same pour, with the same mix design, and broken over an extended period may be entered with a single Sample ID number. As each specimen is broken, the record is updated to indicate the compressive strength obtained.

**3510.8 District Engineer's Certification.** Construction will create a District Engineer Certification of Signal, Signs, and Lighting (SAA901AA) or Free Form Test (----) indicating that the District Engineer's Certification has been prepared. The test will certify that the lighting, signal, and signing materials, and equipment listed by the contractor, including accessories and appurtenances, as required in the applicable specifications and specifically approved by Construction and Materials, were those which were incorporated into the project. One sample will be prepared with the selected report form attached. That sample will then be posted to each line item requiring the District Engineer's Certification, with a zero quantity. This will satisfy the sampling and testing requirements for that material when properly processed.

**3510.9 Substituting One Material for Another** on a report to a contract. A sample record is created which indicates the material the user wishes to report. The sample is linked to an existing accepted sample of material which could be substituted according to specifications and the inspector's knowledge of the material. In remarks, the inspector enters the rationale for the substitution.

Example: 1007T1ABLS Type 1 Limestone for Aggregate Base is going to be substituted for 1007T5ABLS Type 5 Limestone for Aggregate Base. The new sample of Type 1 base will be linked to an existing sample of Type 5 base. The remarks will state something similar to "Material originally inspected as Type 5 base but is known to meet the required specifications for Type 1 base."

**3510.10 QC/QA data.** Data obtained by the Contractor's or Producer/Supplier's agent may be entered into SiteManager but source of the data should be clearly indicated in the remarks and by any other means that seem appropriate based on the information and where it fits in the sample record. Test results obtained for MoDOT and observed by a MoDOT inspector, such as testing performed at a private testing lab, can also be entered into SiteManager.

**3510.11 I.A.S.** IAS aggregate inspection can be done by using the test SAA106DA to capture the gradation, deleterious, and PI results. The sample type would be selected as IAS Audit. IAS comparison reporting is done by attaching the appropriate Materials Test Template to the sample record and entering the required information. The IAS templates all have template descriptions that start "NEWEST IAS - ". When the record is complete, authorize it.

**3510.12 Sample Status Rejected/Fail.**



**3510.12.1** When the material is damaged or incorrectly manufactured at a plant, a complete sample record shall be made with the status Rejected/Fail. The material shall be reported to the contract tab in accordance with AS 3510.3.3 and reasons for rejection shall be added to either the Free Form Test or the Remarks.

**3510.12.2** If material arrives on a jobsite and is damaged from mishandling or abuse, and a record was previously made for either PAL, precasting/prestressing work, etc., the original record should be marked Rejected/Fail. If material on the jobsite is damaged or unsuitable and no sample record exists, a complete sample record shall be created and the Status marked Rejected/Fail. The material shall be reported to the correct line on the contract tab in accordance with AS 3510.3.3 and reasons for rejections shall be added to either the Free Form or the Remarks.



# Missouri Department of Transportation Materials

1617 Missouri Blvd., Jefferson City, MO 65109

PENDING PENDING-

BASIC TAB

RUSH

**Sample ID** \_\_\_\_\_ **Sample Unit** \_\_\_\_\_ **Status: (select one)** PENDING-RESAMPLE

**Link to:** \_\_\_\_\_ (another sample)

**Sample Date:** \_\_\_\_\_

**Sample Type: (select one)**

**Acceptance Method (select one)**

- |                         |                               |                                    |                              |
|-------------------------|-------------------------------|------------------------------------|------------------------------|
| Compaction Standard     | IAS Audit                     | Production                         | Accepted on PAL              |
| District General        | Information Testing           | Proj Approval                      | Approved Producer QC/QA      |
| District Permit         | Material Approval             | Proj Check Sample                  | Certification Review         |
| District Project        | Material Report               | Proj Gen Investigation             | Certification & Testing      |
| District Purchase Order | New Product                   | Purchase Order Appr                | Label Analysis               |
| Gen Appr Initial        | Off System                    | Purchase Order Bid                 | Prequalified Sample          |
| Gen Appr Source         | Prel Engr BrDkCondSurvey      | Purchase Order Ck Sample           | Prequalified or Brand Name   |
| Gen Investigation       | Prel Engr Pavement Evaluation | QA Comp check QC- proj specific    | Prior Approval or Acceptance |
| Gen Prod Absorption     | Prel Engr Soil Survey-Comp    | QA Samp or Fac Review - not PAL    | Sample & Test                |
| Gen Prod. Unit Weight   | Prel Engr Soil Survey-Fert    | QC Matl Accpetance-contractor data | Testing                      |
| Gen.Res Investigation   | Prel Engr Soil Survey-Fert    | QC Matl Acceptance - proj specific | Visual Inspection            |
|                         | Prel Engr Soil Survey-Part    | Quarterly Split Samples            |                              |
|                         |                               | Trial Mix                          |                              |

**Sampled By:** \_\_\_\_\_ (User ID)

**Material:** \_\_\_\_\_ (Material Code)

**Prod/Supplier:** \_\_\_\_\_ (Facility Number)

**Manufacturer:** \_\_\_\_\_ (if different P/S) **Town:** \_\_\_\_\_

**Geographic Area:** \_\_\_\_\_ (District) **Product Name:** \_\_\_\_\_ (Brand)

**Intended Use:** \_\_\_\_\_ **Represented Quantity:** \_\_\_\_\_

ADDTL TAB

**Requested By:** \_\_\_\_\_ **Witnessed by:** \_\_\_\_\_

**Sample Size:** \_\_\_\_\_ (Quantity) \_\_\_\_\_ (Units) **Distance from Grade:** \_\_\_\_\_

**Station:** \_\_\_\_\_ **Offset:** \_\_\_\_\_ **Reference:** \_\_\_\_\_

**Sampled From:** \_\_\_\_\_

**Sample Origin:** \_\_\_\_\_

**Control Type:** \_\_\_\_\_ (Heat, Batch, Lot) **Control Number:** \_\_\_\_\_ **Seal Number** \_\_\_\_\_

**Design Type/Mix I.D.:** \_\_\_\_\_

**Plant ID:** \_\_\_\_\_

### CONTRACT

**Contract ID** \_\_\_\_\_ **Project** \_\_\_\_\_ **Line Item** \_\_\_\_\_ **Quantity** \_\_\_\_\_

**Contract ID** \_\_\_\_\_ **Project** \_\_\_\_\_ **Line Item** \_\_\_\_\_ **Quantity** \_\_\_\_\_

**Contract ID** \_\_\_\_\_ **Project** \_\_\_\_\_ **Line Item** \_\_\_\_\_ **Quantity** \_\_\_\_\_ **OTHER Type:**

\_\_\_\_\_ (P.O., HPR etc.) **ID:** \_\_\_\_\_

**Remarks:**



MATERIALS

## QUICK INSTRUCTIONS TO COMPLETE SAMPLE SHEET:

- Sample ID** – 10 characters used to make the sample unique. Special rules apply.  
See Materials Manual 3510.3.1.1
- Sample Unit** – Unit of Measure normally applied to determine quantity of material represented by the sample
- Link to** – Sample ID number of a sample that is directly related to this sample, if one exists
- Sample date** – The date the sample was obtained.
- Sample Type** – Select one. See Material Manual AS-3510.3.9
- Acceptance Method** – Select one. See Material Manual AS-3510.3.10
- Sampled by** – User ID of individual who obtained the sample.
- Material** – Material code that best represents the sample.
- Prod/Supplier** – The facility number of the producer /supplier of the material.  
Exception: the producer of asphalt binder shall be the refinery or the terminal.
- Manufacturer** – The facility number of the manufacturer when different from the prod/supplier.
- Town** – Location of manufacturer when manufacturer is filled in.
- Geographic Area** – Sampler's assigned Region. Central Office = District – Central Office.
- Product Name** – Brand name of the material when applicable.
- Intended Use** – Intended use of material.
- Represented Qty** – Quantity of the material represented by the sample.
- Requested by** – Person who requested the sample when not a routine sample.
- Witnessed by** – Person who witnessed the sampling process when not a routine sample.
- Sample Size** – Amount of material submitted to Lab. Used to confirm that a complete shipment was received.
- Distance from grade** – Distance above or below final grade when sample was taken.
- Station** – Station where sample was taken.
- Offset** – Distance and direction from reference line to place where sample was taken.
- Reference** – The line from which offset is measured.
- Sampled from** – The specific point where the sample was taken (stockpile).
- Sample origin** – The general location where the sample was taken (quarry).
- Control Type** – Term used by producer to track production (lot).
- Control number** – Value designated by producer to track production.
- Seal number** – Number on seal used to lock material container. Rarely used. May contain overflow from Control Number
- Design Type** – Type of mix design (Superpave)
- External Ref** – Used to indicate that an additional document needs to be attached to the sample record.
- Contract Data** – May be included when known.
- Other Data** – Non-contract data such as purchase order number.
- Remarks** – Include any other comments.

**Bold** - required fields

Examples in ( )



Exhibit A

Sample ID# \_\_\_\_\_  
Product w/grade&size \_\_\_\_\_  
Source/Manufacturer \_\_\_\_\_  
Special Instructions \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sample ID# \_\_\_\_\_  
Product w/grade&size \_\_\_\_\_  
Source/Manufacturer \_\_\_\_\_  
Special Instructions \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sample ID# \_\_\_\_\_  
Product w/grade&size \_\_\_\_\_  
Source/Manufacturer \_\_\_\_\_  
Special Instructions \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sample ID# \_\_\_\_\_  
Product w/grade&size \_\_\_\_\_  
Source/Manufacturer \_\_\_\_\_  
Special Instructions \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



from DISTRICT \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Missouri Dept. of Transportation  
Central Laboratory  
1617 Missouri Blvd.  
Jefferson City, MO 65109

from DISTRICT \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Missouri Dept. of Transportation  
Central Laboratory  
1617 Missouri Blvd.  
Jefferson City, MO 65109

from DISTRICT \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Missouri Dept. of Transportation  
Central Laboratory  
1617 Missouri Blvd.  
Jefferson City, MO 65109

from DISTRICT \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Missouri Dept. of Transportation  
Central Laboratory  
1617 Missouri Blvd.  
Jefferson City, MO 65109

