



## **Appendix C – Frequency Guide, All Phases**

# Material Quality Assurance Processes

## Admixtures for Concrete

### Plant or Product Qualification

Evaluation of Production Facility for CTD Materials			Facility Qualification
Production facility data maintained to provide a basis for qualified products.	1	per 1	Prior to Usage on Project
Evaluation of Material Product for CTD Materials			Product Qualification
Qualification of Material Product for use on State Projects.	1	per 1	Prior to Usage on Project
Material Product QC			Product Qualification
Concrete Technology Laboratory to collect and evaluate Admixture Material Samples. 1 Quart in a Screw Top Can	1	per 1	Months

## Aggregate Materials, Controlled Mixtures

### Plant or Product Qualification

Evaluation of Production Facility for SATD Materials			Facility Qualification
Qualification of Production Facility for state projects.	1	per 1	Prior to Source Request
.	1	per 2	Year
Evaluation of Material Product for SATD Materials			Product Qualification
Qualification of Material Product. 75 Lbs, Each Component in a Soils Bag	1	per 1	Prior to Source Request
	1	per 2	Year
Routine SATD Production QA			Product QC/QA
Production Quality Assurance	1	per 10	Production Day
.			
SATD Material Product QC			Product QC/QA
Producer to perform daily gradations and moisture checks on aggregate materials. 75 Lbs in a Soils Bag	1	per 1	8 Hour Shift
	1	per 1000	Ton

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Project Construction

Material Verification for SATD Materials			Material Verification
Project Engineer to verify load ticket for correct JMF.	1	per 1	Placement Day
Project Site Testing			Material Sampling and Testing
Compaction and Moisture analysis performed by Project Engineer. Submit compaction report to MMD for clearance.	1	per 1	Placement Day
	2	per 2	Lane Mile per Lift

# Material Quality Assurance Processes

## Aggregate Materials, Crushed Gradations

### Plant or Product Qualification

Evaluation of Production Facility for SATD Materials			Facility Qualification
Evaluation of Crushed Aggregate producers that wish to be placed on the Aggregate Bulletin.	1	per 1	Prior to Usage on Project
Evaluation of Crushed Aggregate producers that do NOT require to be listed in the Aggregate Bulletin.	1	per 1	Prior to Usage on Project

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Material Production

SATD Material Review			Material Certification for Project Usage
Material to be sampled as Common Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	1	per 1	Prior to Usage on Project
Material to be sampled as Capping Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	2	per 1	Prior to Usage on Project
Material to be sampled as Modified Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	2	per 1	Prior to Usage on Project
Material to be sampled as Select Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	2	per 1	Prior to Usage on Project

### Project Construction

Material Verification for SATD Materials			Material Verification
Project Engineer to verify material product, submit Form 14.	1	per 1	Placement Day
Project Engineer to submit verification samples of Common Borrow material. 35 LBS in a Soils Bag	1	per 15000	Cubic Yard
Project Engineer to submit verification samples of Modified Borrow material. 35 LBS in a Soils Bag	1	per 15000	Cubic Yard
Project Engineer to submit verification samples of material of Select Borrow. 35 LBS in a Soils Bag	1	per 15000	Cubic Yard
Project Site Testing			Material Sampling and Testing
Compaction and Moisture analysis of Common Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.	4	per 1	Lane Mile per Lift
35 LBS in a Soils Bag	1	per 2000	Cubic Yard

# Material Quality Assurance Processes

<p><b>Compaction and Moisture analysis of Capping Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.</b></p> <p>35 LBS in a Soils Bag</p>	<p>4 <b>per</b> 1</p> <p>1 <b>per</b> 2000</p>	<p>Lane Mile per Lift</p> <p>Cubic Yard</p>
<p><b>Compaction and Moisture analysis of Modified Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.</b></p> <p>35 LBS. in a Soils Bag</p>	<p>4 <b>per</b> 1</p> <p>1 <b>per</b> 2000</p>	<p>Lane Mile per Lift</p> <p>Cubic Yard</p>
<p><b>Compaction and Moisture analysis of Select Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.</b></p> <p>35 LBS in a Soils Bag</p>	<p>4 <b>per</b> 1</p> <p>1 <b>per</b> 2000</p>	<p>Lane Mile per Lift</p> <p>Cubic Yard</p>
<p><b>Compaction and Moisture analysis of Select Borrow for Trench Backfill to be performed by Project Engineer. Submit Compaction report to MMD for clearance.</b></p>	<p>1 <b>per</b> 150</p>	<p>Linear Feet per 3 Foot Lift</p>

## Aggregate Materials, Other Stone and Sand

### Plant or Product Qualification

Evaluation of Production Facility for SATD Materials		Facility Qualification	
Evaluation of Crushed Aggregate producers that wish to be placed on the Aggregate Bulletin.	1 <b>per</b> 1	Prior to Usage on Project	
Evaluation of Crushed Aggregate producers that do NOT require to be listed in the Aggregate Bulletin.	1 <b>per</b> 1	Prior to Usage on Project	

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 <b>per</b> 1	Prior to Usage on Project	

### Project Construction

Material Verification for SATD Materials		Material Verification	
Project Engineer to verify material, Submit form 14 for clearance	1 <b>per</b> 1	Item Completion	

## Aggregate Materials, Recycled PCC Gradations

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 <b>per</b> 1	Prior to Source Request	

### Material Production

SATD Certification Review		Material Certification for Project Usage	
Material Certification to be provided by material supplier during facility visit.	1 <b>per</b> 1	Prior to Usage on Project	
SATD Material Review		Material Certification for Project Usage	
Material to be sampled as Common Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling.	2 <b>per</b> 1	Prior to Usage on Project	
35 LBS in a Soils Bag			

# Material Quality Assurance Processes

Material to be sampled as Modified Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 2 per 1 Prior to Usage on Project

35 LBS in a Soils Bag

Material to be sampled as Select Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 2 per 1 Prior to Usage on Project

35 LBS in a Soils Bag

## Project Construction

### Project Sampling and Lab Testing of SATD Material *Material Verification*

Project Engineer to submit verification samples of Common Borrow material. 1 per 15000 Cubic Yard

35 LBS in a Soils Bag

Project Engineer to submit verification samples of material of Modified Borrow. 1 per 15000 Cubic Yard

35 LBS in a Soils Bag

Project Engineer to submit verification samples of Select Borrow material. 1 per 15000 Cubic Yard

35 LBS in a Soils Bag

### Project Site Testing *Material Sampling and Testing*

Project Engineer to verify pH of placed recycled materials. 1 per 1 Project Completion

Project Engineer to verify pH of placed material, and perform Compaction and Moisture analysis of Common Borrow. Submit Compaction report to MMD for clearance. 4 per 1 Lane Mile per Lift  
1 per 2000 Cubic Yard

Project Engineer to verify pH of placed recycled material, and perform Compaction and Moisture analysis of Modified Borrow. 4 per 1 Lane Mile per Lift  
1 per 2000 Cubic Yard

Project Engineer to verify pH of placed material, and perform Compaction and Moisture analysis of Select Borrow. Submit Compaction report to MMD for clearance. 4 per 1 Lane Mile per Lift  
1 per 2000 Cubic Yard

## Aggregate Materials, Source Material

### Plant or Product Qualification

#### Evaluation of Production Facility for SATD Materials *Facility Qualification*

Qualification of Quarry 1 per 1 Prior to Source Request

#### Review of Aggregate Quality *Product Qualification*

Annual Quality of Coarse Aggregates 1 per 1 Prior to Source Request

50 Lbs (or 35 Lbs for lightweight) in a Soils Bag 1 per 1 Year

Annual Quality of Fine Aggregates. 1 per 1 Prior to Source Request

50 Lbs (40 lbs for lightweight) in a Soils Bag 1 per 1 Year

## Asphalt Additives

### Plant or Product Qualification

# Material Quality Assurance Processes

Evaluation of Production Facility for ATD Materials			Facility Qualification
Production facility data maintained to track the material supply chain and provide a basis for qualified products.	1	per 1	Prior to Usage on Project

Evaluation of Material Product for ATD Materials			Product Qualification
Qualification of Material Product for use on State Projects	1	per 1	Prior to Usage on Project

## Asphalt Mixtures

### Plant or Product Qualification

Evaluation of Production Facility for ATD Materials			Facility Qualification
Production facility to be certified to produce material for State projects.	1	per 12	Months

Evaluation of Material Product for ATD Materials			Product Qualification
Review and Qualification of Asphalt Mixture Material Product.	1	per 1	Prior to Source Request

SHA Acceptance Facility Visit for Asphalt Mix Production			Product QC/QA
Production Quality Assurance	1	per 6000	Ton
	1	per 10	Production Day

SHA Acceptance of Binder Component			Product QC/QA
Asphalt Technology representative to witness and take possession of material sample. 1 Quart in a Friction Top Can	1	per 10	Production Day
	1	per 1	Project Completion
	1	per 6000	Ton

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Material Production

Notification of Production for ATD materials			Production Notification
Producer to notify the Asphalt Technology Division 1 day prior to production.	1	per 1	Placement Day

### Project Construction

Core Sampling for Asphalt Mix Density Analysis			Material Sampling and Testing
Project Engineer shall verify that the contractor takes QC and QA Density Cores at random locations in the pavement. (1 Sample = 5 Cores Min. See Material QA Manual for more information)	2	per 1	Production Day
1 Sample = 5 - 6" Dia. Cores (min)			

Density Gauge testing for Patches or Small Quantities			Material Sampling and Testing
Patch density measured at random locations with an asphalt density gauge, recorded on a Form 73-1P and submitted to OMT. See specification 505.03.14 for additional details.	1	per 1	Lift of each Patch
2 Readings per test			

Box Sampling for Asphalt Mixture			Material Sampling and Testing
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# Material Quality Assurance Processes

Project Engineer shall verify that the contractor takes QC and QA Mix Box at random intervals during placement of asphalt mixture.

2 per 1000 Ton  
2 per 1 Production Day

1 Sample = 1-50 LB Box (2-50 LB for 25.0mm Mix, 2-50 LB for 37.5mm Mix)

## Box Sampling for Patches or Small Daily Quantities of Asphalt Mixture Material Sampling and Testing

Project Engineer shall verify that the contractor takes QC and QA Box Samples at random intervals at least once per mix for every 1000 tons or once per mix weekly, whichever yields the greater frequency. See 505.03.12 for additional details.

2 per 5 Placement Day  
2 per 1000 Ton

1 Sample = 1-50 LB Box (2-50 LB for 25.0mm Mix, 2-50 LB for 37.5mm Mix)

## Asphalt Mix Density Pay Factor Analysis Sample Analysis

Density QA and QC results are to be processed by the Asphalt Technology Division to develop a recommended "Density Pay Factor".

1 per 1 Sample Set

## Asphalt Mix Pay Factor Analysis Sample Analysis

Mixture QA and QC results are to be processed by the Asphalt Technology Division to develop a recommended "Mixture Pay Factor".

1 per 1 Project Completion  
1 per 6000 Ton

## Evaluation of Pavement Surface Profile Project Wide Testing

Surface profiling will be completed as indicated in Section 535 of the Special Provisions.

1 per 1 Item Completion

## Asphalt Release

### Plant or Product Qualification

#### Evaluation of Production Facility for ATD Materials Facility Qualification

Production facility data maintained to provide a basis for qualified products.

1 per 1 Prior to Usage on Project

#### Evaluation of Material Product for ATD Materials Product Qualification

Qualification of Material Product.

1 per 1 Prior to Usage on Project

## Cement Materials and Bagged Mixtures, Group 1

### Plant or Product Qualification

#### Evaluation of Production Facility for CTD Materials Facility Qualification

Production facility data maintained to provide a basis for qualified products.

1 per 1 Prior to Source Request

#### Evaluation of Material Product for CTD Materials Product Qualification

Qualification of Material Product for use on State Projects

1 per 1 Prior to Source Request

### Source Approval

#### Source Submission Source of Supply Submittal

Source of Supply Processing

1 per 1 Prior to Usage on Project

### Project Construction

#### CTD Material Verification Material Verification

# Material Quality Assurance Processes

Project Engineer to collect certifications (TC 1.03 w/o test data) and submit to OMT for clearance.

1 per 1

Delivery to Project

## Cement Materials and Bagged Mixtures, Group 2

### Plant or Product Qualification

Review of Misc Production Location	Limited Producer Check			
Production facility data maintained to track the material supply chain.	1	per	1	Prior to Source Request

### Source Approval

Source Submission	Source of Supply Submittal			
Source of Supply Processing	1	per	1	Prior to Usage on Project

### Material Production

CTD Material Review and Acceptance	Material Certification for Project Usage			
Submit sample of material accompanied by a Form 88 and Material certification (1.03 w/o test data) to OMT for job specific approval. 1 Factory Sealed Container in a Factory Sealed Container	1	per	1	Prior to Usage on Project

### Project Construction

CTD Material Verification	Material Verification			
Project Engineer to collect certifications (TC 1.03 w/o test data) and a material sample. Submit to OMT for verification and clearance	1	per	1	Delivery to Project

## Cement Materials and Bagged Mixtures, Group 3

### Plant or Product Qualification

Review of Misc Production Location	Limited Producer Check			
Production facility data maintained to track the material supply chain.	1	per	1	Prior to Source Request

### Source Approval

Source Submission	Source of Supply Submittal			
Source of Supply Processing	1	per	1	Prior to Usage on Project

### Material Production

CTD Material Review and Acceptance	Material Certification for Project Usage			
Submit sample of material accompanied by a Form 88 and Material Certification (1.03 w/o test data) to OMT for job specific approval.	1	per	1	Prior to Usage on Project

### Project Construction

CTD Material Verification	Material Verification			
Project Engineer to verify approval stamp.	1	per	1	Delivery to Project

## Cement Materials and Bagged Mixtures, Group 4

### Plant or Product Qualification



# Material Quality Assurance Processes

Evaluation of Production Facility for CTD Materials			Facility Qualification
Material Specific Qualification of Material Producer	1	per 1	Prior to Source Request

## Compost Materials

### Plant or Product Qualification

Evaluation of Material Producer for LPD Materials			Facility Qualification
Qualification of Compost Supplier for use on State projects	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Project Construction

LPD Material Verification			Material Verification
Project Engineer to verify LPD or MDE approval stamp.	1	per 1	Delivery to Project

## Concrete Deck Protection

### Plant or Product Qualification

Review of Misc Production Location			Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Project Construction

CTD Material Verification			Material Verification
Project Engineer to collect certifications (TC 1.03 w/o test data) and submit to OMT for clearance.	1	per 1	Delivery to Project

## Contract Specified Material Systems

### Plant or Product Qualification

Review of Misc Production Location			Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Project Construction

LPD Material/Product verification			Material Verification
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# Material Quality Assurance Processes

Project Engineer to collect manufacturers certification (TC 1.03 w/o test results) and fill out Form 14 indicating material was placed in accordance with documents. Submit certification and Form 14 to OMT for clearance. 1 per 1 Item Completion

## Curing Compounds (Liquid Membrane)

### Plant or Product Qualification

#### Evaluation of Production Facility for CTD Materials *Facility Qualification*

Production facility data maintained to provide a basis for qualified products. 1 per 1 Prior to Usage on Project

#### Evaluation of Material Product for CTD Materials *Product Qualification*

Qualification of Material Product for use on State Projects. 1 per 1 Prior to Source Request

### Source Approval

#### Source Submission *Source of Supply Submittal*

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

#### CTD Material Verification *Material Verification*

Project Engineer to collect certifications (TC 1.03 w/ test data) and submit to OMT for clearance. 1 per 1 Delivery to Project

## Decorative Concrete Finish, Horizontal Surface

### Plant or Product Qualification

#### Evaluation of Production Facility for CTD Materials *Facility Qualification*

Material Specific Qualification of Material Producer 1 per 1 Prior to Source Request

### Source Approval

#### Source Submission *Source of Supply Submittal*

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

#### CTD Material Verification *Material Verification*

Project Engineer to inspect placed materials and submit Form 14 to MMD for clearance. 1 per 1 Item Completion

## Decorative Concrete Stains, Vertical Surface

### Plant or Product Qualification

#### Evaluation of Production Facility for CTD Materials *Facility Qualification*

Production facility data maintained to provide a basis for qualified products. 1 per 1 Prior to Source Request

#### Evaluation of Material Product for CTD Materials *Product Qualification*

Qualification of Material Product for use on State Projects. 1 per 1 Prior to Source Request

### Source Approval

# Material Quality Assurance Processes

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	Prior to Usage on Project	

## Project Construction

CTD Material Verification		Material Verification	
Project Engineer to collect manufacturer's material certifications (TC 1.03 w/ test data) and submit to MMD for clearance.	1 per 1	Delivery to Project	

## Decorative Reinforced Thermoplastic

### Plant or Product Qualification

Evaluation of Material Product for LPD Materials		Product Qualification	
Product Qualification	1 per 5	Year	

### Source Approval

Source Submission		Source of Supply Submittal	
Sources of Supply Processing	1 per 1	Prior to Source Approval	

### Project Construction

LPD Material/Product verification		Material Verification	
Material/Product Verification at Project Site	1 per 1	Item Completion	
	1 per 1	Prior to Usage on Project	

## Electrical Accessories

### Plant or Product Qualification

Review of Misc Production Location		Limited Producer Check	
Production facility data maintained to track the material supply chain.	1 per 1	Prior to Source Request	

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	Prior to Usage on Project	

### Material Production

Approval of Material Prior to Shipment		Material Certification for Project Usage	
Producer to submit Catalog Cuts to the Office of Traffic and Safety.	1 per 1	Prior to Usage on Project	

### Project Construction

OOTS Material Verification		Material Verification	
Project Engineer to verify material product, submit Form 14.	1 per 1	Delivery to Project	

## Emulsified Asphalts, Other

### Plant or Product Qualification

Evaluation of Production Facility for ATD Materials		Facility Qualification	
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# Material Quality Assurance Processes

Production facility to be certified to produce material for State projects. 1 per 12 Months

## Evaluation of Material Product for ATD Materials Product Qualification

Qualification of Material Product for use on State Projects. 1 per 1 Prior to Usage on Project

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

## ATD Material Verification Material Verification

Project Engineer to collect certifications (TC 1.03 w/ test data), FORM 88, and material samples. Submit items to OMT for testing and clearance. 1 per 1 Item Completion  
1 Gallon in a Widemouth Plastic Jar

## Emulsified Asphalts, Tack Coat

### Plant or Product Qualification

## Evaluation of Production Facility for ATD Materials Facility Qualification

Production facility to be certified to produce material for State projects. 1 per 12 Months

## Evaluation of Material Product for ATD Materials Product Qualification

Qualification of Material Product for use on State Projects 1 per 1 Prior to Source Request

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

## ATD Material Verification Material Verification

Project Engineer to collect certifications (TC 1.03 w/ test data), FORM 88, and material samples. Submit items to OMT for testing and clearance. 1 per 1 Item Completion  
1 Gallon in a Widemouth Plastic Jar

## Fertilizers

### Plant or Product Qualification

## Evaluation of Material Producer for LPD Materials Facility Qualification

Qualification of Fertilizer producer for use on State projects 1 per 1 Prior to Source Request

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

## LPD Material Verification Material Verification

# Material Quality Assurance Processes

Project Engineer to collect certifications (TC 1.03 w/o test data) and submit to OMT for clearance.

1 per 1

Delivery to Project

## Foamed Asphalt Stabilized Base Course

### Plant or Product Qualification

Review of Misc Production Location			Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

## Form Release

### Plant or Product Qualification

Evaluation of Production Facility for CTD Materials			Facility Qualification
Production facility data maintained to provide a basis for qualified products.	1	per 1	Prior to Source Request

Evaluation of Material Product for CTD Materials			Product Qualification
Qualification of Material Product for use on State Projects.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Project Construction

CTD Material Verification			Material Verification
Project Engineer to inspect placed material and submit Form 14.	1	per 1	Delivery to Project

## Geosynthetic Materials, Geotextiles

### Plant or Product Qualification

Evaluation of Production Facility for SATD Materials			Facility Qualification
Cursory Plant data record review, required for qualified products.	1	per 1	Prior to Source Request

Evaluation of Material Product for SATD Materials			Product Qualification
Qualification of Material Product.	1	per 1	Prior to Source Request
	1	per 24	Months

Material Product QA for SATD Materials			Product QC/QA
Quality Assurance of Delivered Products	1	per 3	Months

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

# Material Quality Assurance Processes

## Project Construction

Material Verification for SATD Materials				Material Verification
Project Engineer to receive certified roll data (TC1.03 w/ test data) and submit to MMD for clearance.	1	per	1	Delivery to Project

## Geosynthetic Materials, Other

### Plant or Product Qualification

Review of Misc Production Location				Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per	1	Prior to Source Request

### Source Approval

Source Submission				Source of Supply Submittal
Source of Supply Processing	1	per	1	Prior to Usage on Project

## Project Construction

Material Verification for SATD Materials				Material Verification
Project Engineer to verify material.	1	per	1	Delivery to Project

## Latex Emulsion

### Plant or Product Qualification

Evaluation of Production Facility for CTD Materials				Facility Qualification
Production facility data maintained to provide a basis for qualified products.	1	per	1	Prior to Usage on Project

Evaluation of Material Product for CTD Materials				Product Qualification
Qualification of Material Product for use on State Projects.	1	per	1	Prior to Usage on Project

## Miscellaneous Chemical Materials

### Project Construction

CTD Material Verification				Material Verification
Project Engineer to collect certifications (TC 1.03 w/ test data) and submit certs and Form 14 to OMT for clearance.	1	per	1	Delivery to Project

## Miscellaneous Landscape Materials

### Plant or Product Qualification

Review of Misc Production Location				Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per	1	Prior to Source Request

### Source Approval

Source Submission				Source of Supply Submittal
Source of Supply Processing	1	per	1	Prior to Usage on Project

## Project Construction

Visual Inspection of Placed Material				Material Sampling and Testing
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# Material Quality Assurance Processes

Project Engineer to inspect placed material and submit Form 14.

1 per 1

Delivery to Project

## Miscellaneous Materials

### Plant or Product Qualification

Review of Misc Production Location	Limited Producer Check		
Production facility data maintained to track the material supply chain.	1	per	1
			Prior to Source Request

### Source Approval

Source Submission	Source of Supply Submittal		
Source of Supply Processing.	1	per	1
			Prior to Usage on Project

### Project Construction

LPD Material/Product verification	Material Verification		
Project Engineer to inspect placed material and submit Form 14.	1	per	1
			Delivery to Project
Project Engineer to collect certifications (TC 1.03 w/ test data) and submit certs to OMT for clearance.	1	per	1
			Delivery to Project

## Mulch

### Plant or Product Qualification

Review of Misc Production Location	Limited Producer Check		
Production facility data maintained to track the material supply chain.	1	per	1
			Prior to Source Request

### Source Approval

Source Submission	Source of Supply Submittal		
Source of Supply Processing	1	per	1
			Prior to Usage on Project

### Project Construction

Visual Inspection of Placed Material	Material Sampling and Testing		
Project Engineer to inspect placed material and submit Form 14.	1	per	1
			Delivery to Project

## Pavement Marking Mat'l: Liquid Applied

### Plant or Product Qualification

Pavement Marking Facility Review	Facility Qualification		
Inspection of Production Facility	1	per	24
			Months
Pavement Marking Product Review	Product Qualification		
Qualification of Material Product.	1	per	1
			Prior to Source Request
Pavement Marking Product Acceptance	Product QC/QA		
Material sample to be taken by SHA and Producer to provide material certification conforming to TC 1.03 w/ test data to SHA for review, testing, and stamping. The stamped certification will be returned to the producer.	1	per	1
			Batch, Lot or Heat

# Material Quality Assurance Processes

## Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1 per	1	Prior to Usage on Project

## Project Construction

Pavement Marking Material Verification at Project Site			Material Verification
Project Engineer to collect manufacture's certifications (TC 1.03 w/ test data) and OMT stamped documentation approving the material batch, submit to MMD for clearance.	1 per	1	Delivery to Project
Post Placement Project Wide Testing			Project Wide Testing
Field Testing at Project Site by the Pavement Marking Team as per MSMT 729.	1 per	1	Item Completion

## Pavement Marking Mat'l: Non-Liquid and Preformed

### Plant or Product Qualification

Pavement Marking Facility Review			Facility Qualification
Inspection of Production Facility	1 per	36	Months
Pavement Marking Product Review			Product Qualification
Qualification of Material Product	1 per	1	Prior to Source Request

## Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1 per	1	Prior to Usage on Project

## Project Construction

Pavement Marking Material Verification at Project Site			Material Verification
Project Engineer to collect manufacturer's Certification (TC 1.03 w/o test data), and submit certifications to MMD for clearance.	1 per	1	Delivery to Project
Post Placement Project Wide Testing			Project Wide Testing
Field Testing at Project Site by the Pavement Marking Team as per MSMT 729.	1 per	1	Item Completion

## Pavement Marking Mat'l: Other

### Plant or Product Qualification

Pavement Marking Facility Review			Facility Qualification
Inspection of Production Facility	1 per	12	Months
Pavement Marking Product Review			Product Qualification
Evaluate new material products through the MPEL process	1 per	1	Prior to Usage on Project
Pavement Marking Product Acceptance			Product QC/QA
Producer to submit material certification conforming to TC 1.03 w/ test data to OMT's Pavement Marking team for review, stamping, and return.	1 per	1	Batch, Lot or Heat



# Material Quality Assurance Processes

## Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	Prior to Usage on Project	

## Project Construction

Pavement Marking Material Verification at Project Site		Material Verification	
Project Engineer to collect OMT stamped manufacturer's certification (TC 1.03 w/ test data) and submit them to MMD for clearance.	1 per 1	Delivery to Project	

## Pavement Repair Materials

### Plant or Product Qualification

Review of Producer (QPL)		Facility Qualification	
Production facility data maintained to provide basis for qualified products.	1 per 1	Prior to Source Request	

Review of Product (QPL)		Product Qualification	
Qualification of Material Product for use on State Projects.	1 per 1	Prior to Source Request	

## Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	Prior to Usage on Project	

## Project Construction

ATD Material Verification		Material Verification	
Project Engineer to collect certifications (TC 1.03 w/o test data) and submit certs to OMT for clearance.	1 per 1	Delivery to Project	

## Performance Graded Asphalt Binder

### Plant or Product Qualification

Evaluation of Production Facility for ATD Materials		Facility Qualification	
Qualification of Binder Supplier for use on State projects	1 per 1	Prior to Usage on Project	

Evaluation of Material Product for ATD Materials		Product Qualification	
Qualification of Material Product.	1 per 1	Batch, Lot or Heat	

## Pesticides

### Plant or Product Qualification

Review of Misc Production Location		Limited Producer Check	
Production facility data maintained to track the material supply chain.	1 per 1	Prior to Source Request	

## Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	Prior to Usage on Project	

## Material Production

# Material Quality Assurance Processes

LPD Material Review		Material Certification for Project Usage	
Project Engineer to contact LPD to schedule site visit and develop pesticide placement plan.	1	per	1
			Prior to Usage on Project

## Project Construction

Visual Inspection of Placed Material		Material Sampling and Testing	
Project Engineer to inspect material placement and submit Form 14 to OMT for clearance.	1	per	1
			Item Completion

## Plant Materials

### Plant or Product Qualification

Review of Misc Production Location		Limited Producer Check	
Production facility data maintained to track the material supply chain.	1	per	1
			Prior to Source Request

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1	per	1
			Prior to Usage on Project

### Material Production

LPD Material Review		Material Certification for Project Usage	
Approval of Material for Project Use, Facility Visit.	1	per	1
			Prior to Usage on Project

## Portland Cement Concrete Mixtures

### Plant or Product Qualification

Evaluation of Production Facility for CTD Materials		Facility Qualification	
Production facility to be certified to produce material for State projects.	1	per	1
	1	per	12
			Months

SHA Acceptance Facility Visit for CTD Material Production		Facility Qualification	
OMT Personnel to perform Quality Assurance on concrete production processes.	1	per	10
75 Lbs in a Soils Bag			Production Day

Evaluation of Material Product for CTD Materials		Product Qualification	
Review and Qualification of Portland Cement Concrete Mixture Material Product.	1	per	1
			Prior to Source Request

Material Product QC		Product Qualification	
Producer to perform daily gradations and moisture tests on aggregate materials.	2	per	1
10 LBS - Fine Agg, 35 LBS Lt. wt., 50 LBS Coarse. in a Soils Bag			Production Day

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1	per	1
			Prior to Usage on Project

### Material Production

Notification of Production for CTD materials		Production Notification	
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# Material Quality Assurance Processes

Producer to notify OMT one working day prior to production at concrete@sha.state.md.us 1 per 1 Production Day

## Project Construction

### CTD Material Verification Material Verification

Project Engineer to conduct field tests. (Air Entrainment, Slump, etc.). 1 per 1 Delivery to Project

Project Engineer to collect certifications (TC 1.03 w/ test data) and submit to OMT for clearance. 1 per 1 Delivery to Project

### Concrete Sampling and Testing Material Sampling and Testing

Project Engineer to mold acceptance cylinders, Prime Contractor to cure and transport cylinders to OMT for testing. 1 per 50 Cubic Yard  
1 per 1 Production Day

2 Cylinders = 1 Sample

Mix 7 -Project Engineer to mold acceptance cylinders, Prime Contractor to cure and transport cylinders to OMT for testing. 3 per 1 Placement Day

2 Cylinders = 1 Sample

### Pay Factor Calculation Sample Analysis

OMT to perform statistical analysis on all acceptance concrete cylinder tests for project. 1 per 1 Item Completion

## Portland Cement Concrete Mixtures, Latex Modified

### Plant or Product Qualification

#### Review of Misc Production Location Limited Producer Check

Production facility data maintained to track the material supply chain. 1 per 1 Prior to Source Request

#### Evaluation of Production Facility for CTD Materials Facility Qualification

Detailed Qualification of Production Facility. 1 per 1 Prior to Usage on Project

### Source Approval

#### Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

## Project Construction

### CTD Material Verification Material Verification

Project Engineer to perform concrete plastic tests. 1 per 1 Delivery to Project  
Typically one slump and one air entrainment.

### Chemical Tests Material Sampling and Testing

Submit a sample or certification (TC 1.03 w/ test data) of each component to OMT for verification. 1 per 1 Lot / Production Day

2 Quarts - Latex, 1 Quart Each Admixture in a Plastic Jug

### Concrete Sampling and Testing Material Sampling and Testing

Submit sample to OMT for testing. 2 per 1 Truck

### Pay Factor Calculation Sample Analysis

# Material Quality Assurance Processes

OMT to perform statistical analysis on all acceptance concrete cylinder tests for project.

1 per 1

Item Completion

## Precast Concrete, Drainage Structures

### Plant or Product Qualification

#### Evaluation of Production Facility for CTD Materials Facility Qualification

Facility to be qualified (and re-qualified annually) for state projects before it is sourced to a project. 1 per 12 Months

#### Quality Control for Aggregate Material Gradation Facility QA/QC

Producer to perform gradation quality control as per AASHTO T27. 1 per 7 Production Day  
17 lbs for coarse; 500 grams for fine

#### SHA Acceptance Review for Aggregate Material Gradation. Facility QA/QC

Concrete Technology representative to witness gradation quality control process of producer. 1 per 30 Production Day

#### Quality Control for Aggregate Moisture Content Facility QA/QC

Producer to perform moisture quality control as per MSMT 251. 1 per 1 Production Day  
17 lbs for coarse; 500 grams for fine

#### SHA Acceptance Review of Aggregate Moisture Content Facility QA/QC

Concrete Technology representative to witness moisture quality control 1 per 30 Production Day

#### SHA Acceptance Review for Steel Reinforcing Facility QA/QC

Deformed Steel bars to be sampled by producer. A Concrete Technology representative will witness the sampling, fill out Form 88, and deliver sample to the OMT laboratory. 1 per 90 Production Day  
3 - 2 foot lengths

#### SHA Acceptance Review for Admixture Materials Facility QA/QC

Producer to sample all admixture materials and provide to Concrete Technology for evaluation. 1 per 30 Production Day  
1 Quart in a Screw Top Can

#### SHA Acceptance Review for Cementitious Materials. Facility QA/QC

Producer to sample all cementitious materials and provide to Concrete Technology for evaluation, as per 902.03. 1 per 3 Months  
10 lbs in a Plastic Jug

### Source Approval

#### Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Material Production

#### Notification of Production for CTD materials Production Notification

Producer to notify the Concrete Technology Division prior to production at concrete@sha.state.md.us. Please provide the design standard with the notification. 1 per 1 Prior to Usage on Project

# Material Quality Assurance Processes

CTD Material Review and Acceptance		Material Certification for Project Usage	
Submit copies of any shop drawings, specifications, or plan sheets to the designer as per the Invitation for Bids document.	1 per 1	Prior to Usage on Project	

## Project Construction

CTD Material Verification		Material Verification	
Project Engineer to visually inspect precast elements, record all QC stamps on a Form 14, and verify stamp matches the certification. Collect manufacture's certification and submit it along with the Form 14 to MMD for clearance.	1 per 1	Delivery to Project	

## Precast Concrete, Miscellaneous

### Plant or Product Qualification

Evaluation of Production Facility for CTD Materials		Facility Qualification	
Facility to be qualified (and re-qualified annually) for state projects before it is sourced to a project.	1 per 3	Year	

Quality Control for Aggregate Material Gradation		Facility QA/QC	
Producer to perform gradation quality control as per AASHTO T27 17 lbs for coarse; 500 grams for fine	1 per 7	Production Day	

SHA Acceptance Review for Aggregate Material Gradation.		Facility QA/QC	
Concrete Technology representative to witness gradation quality control process of producer.	1 per 2	Year	

Quality Control for Aggregate Moisture Content		Facility QA/QC	
Producer to perform moisture quality control as per MSMT 251. 17 lbs for coarse; 500 grams for fine	1 per 1	Production Day	

SHA Acceptance Review of Aggregate Moisture Content		Facility QA/QC	
Concrete Technology representative to witness moisture quality control	1 per 2	Year	

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	Prior to Usage on Project	

### Material Production

Notification of Production for CTD materials		Production Notification	
Producer to notify the Concrete Technology Division between 48 hours prior to shipment and end of shipping day at <a href="mailto:concrete@sha.state.md.us">concrete@sha.state.md.us</a> .	1 per 1	Prior to Usage on Project	

### Project Construction

CTD Material Verification		Material Verification	
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# Material Quality Assurance Processes

Project Engineer to visually inspect precast elements, record all QC stamps on a Form 14, and verify stamp matches the certification. Collect manufacture's Certification and submit it along with the Form 14 to MMD for clearance.

1 per 1

Delivery to Project

## Precast Concrete, Pipe

### Plant or Product Qualification

#### Evaluation of Production Facility for CTD Materials Facility Qualification

Facility to be qualified (and re-qualified annually) for state projects before it is sourced to a project.	1 per	1	Prior to Source Request
	1 per	12	Months

#### SHA Acceptance Facility Visit for CTD Material Production Facility Qualification

Quality Assurance of Pipe Production	1 per	1000	Each
	1 per	30	Production Day

#### Quality Control for Aggregate Material Gradation Facility QA/QC

Producer to perform gradation quality control as per AASHTO T27	1 per	7	Production Day
17 lbs for coarse; 500 grams for fine			

#### SHA Acceptance Review for Aggregate Material Gradation. Facility QA/QC

Concrete Technology representative to witness gradation quality control process of producer.	1 per	30	Production Day
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#### Quality Control for Aggregate Moisture Content Facility QA/QC

Producer to perform moisture quality control as per MSMT 251.	1 per	1	Production Day
17 lbs for coarse; 500 grams for fine			

#### SHA Acceptance Review of Aggregate Moisture Content Facility QA/QC

Concrete Technology representative to witness moisture quality control	1 per	30	Production Day
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#### SHA Acceptance Review for Admixture Materials Facility QA/QC

Producer to sample all admixture materials and provide to Concrete Technology for evaluation.	1 per	30	Production Day
1 Quart in a Screw Top Can			

#### SHA Acceptance Review for Cementitious Materials. Facility QA/QC

Producer to sample all cementitious materials and provide to Concrete Technology for evaluation, as per 902.03.	1 per	1	Months
	1 per	10	Production Day
10 lbs in a Plastic Jug			

### Source Approval

#### Source Submission Source of Supply Submittal

Source of Supply Processing	1 per	1	Prior to Usage on Project
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### Material Production

#### Notification of Production for CTD materials Production Notification

# Material Quality Assurance Processes

Producer to notify the Concrete Technology Division between 48 hours prior to shipment and end of shipping day at [concrete@sha.state.md.us](mailto:concrete@sha.state.md.us). 1 per 1 Prior to Usage on Project

<b>CTD Material Review and Acceptance</b>		<i>Material Certification for Project Usage</i>
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Plant QC Personnel to perform lot inspection	1 per 1	Prior to Usage on Project
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## Project Construction

<b>CTD Material Verification</b>		<i>Material Verification</i>
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Project Engineer to visually inspect pipe, record all QC Stamps from pipe on a Form 14, and verify a pipe stamp matches the certification. Collect manufacture's Certification and submit it along with the Form 14 to MMD for Clearance.	1 per 1	Delivery to Project
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## Precast Concrete, Prestressed and Structural

### Plant or Product Qualification

<b>Evaluation of Production Facility for CTD Materials</b>		<i>Facility Qualification</i>
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Facility to be qualified (and re-qualified annually) for state projects before it is sourced to a project.	1 per 12	Months
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<b>Quality Control for Aggregate Material Gradation</b>		<i>Facility QA/QC</i>
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Producer to perform gradation quality control as per AASHTO T27. 17 lbs for coarse; 500 grams for fine	1 per 7	Production Day
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<b>SHA Acceptance Review for Aggregate Material Gradation.</b>		<i>Facility QA/QC</i>
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Concrete Technology representative to witness gradation quality control process of producer.	1 per 30	Production Day
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<b>Quality Control for Aggregate Moisture Content</b>		<i>Facility QA/QC</i>
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Producer to perform moisture quality control as per MSMT 251. 17 lbs for coarse; 500 grams for fine	1 per 1	Production Day
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<b>SHA Acceptance Review of Aggregate Moisture Content</b>		<i>Facility QA/QC</i>
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Concrete Technology representative to witness moisture quality control	1 per 30	Production Day
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<b>SHA Acceptance Review for Steel Reinforcing</b>		<i>Facility QA/QC</i>
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Deformed Steel bars to be sampled by producer. A Concrete Technology representative will witness the sampling, fill out Form 88 and deliver sample to the OMT laboratory. 3 - 2 foot lengths	1 per 90	Production Day
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<b>SHA Acceptance Review for Admixture Materials</b>		<i>Facility QA/QC</i>
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Producer to sample all admixture materials and provide to Concrete Technology for evaluation. 1 Quart in a Screw Top Can	1 per 30	Production Day
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<b>SHA Acceptance Review for Cementitious Materials.</b>		<i>Facility QA/QC</i>
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# Material Quality Assurance Processes

Producer to sample all cementitious materials and provide to Concrete Technology for evaluation.

1 per 1  
1 per 10

Months  
Production Day

## Source Approval

Source Submission	Source of Supply Submittal		
Source of Supply Processing	1 per 1		Prior to Usage on Project

## Material Production

Notification of Production for CTD materials	Production Notification		
Producer to submit Shop Drawings and provide Production Notice to the Concrete Technology Division (concrete@sha.state.md.us) 30 business days before commencing production of any prestressed or other structural concrete items.	1 per 1		Prior to Usage on Project
CTD Material Review and Acceptance	Material Certification for Project Usage		
Direct Inspection at Facility during Casting, Approval of Material for Project Use.	1 per 1		Prior to Usage on Project

## Project Construction

CTD Material Verification	Material Verification		
Project Engineer to visually inspect precast elements, record all stamps on a Form 14, and verify stamps match the certification. Collect manufacture's certification and submit it along with the Form 14 to MMD for clearance.	1 per 1		Delivery to Project

## Precast Concrete, Walls

### Plant or Product Qualification

Evaluation of Production Facility for CTD Materials	Facility Qualification		
Facility to be qualified (and re-qualified annually) for state projects before it is sourced to a project.	1 per 1 1 per 12		Prior to Usage on Project Months
Quality Control for Aggregate Material Gradation	Facility QA/QC		
Producer to perform gradation quality control as per AASHTO T27 17 lbs for coarse; 500 grams for fine	1 per 7		Production Day
SHA Acceptance Review for Aggregate Material Gradation.	Facility QA/QC		
Concrete Technology representative to witness gradation quality control process of producer.	1 per 30		Production Day
Quality Control for Aggregate Moisture Content	Facility QA/QC		
Producer to perform moisture quality control as per MSMT 251. 17 lbs for coarse; 500 grams for fine	1 per 1		Production Day
SHA Acceptance Review of Aggregate Moisture Content	Facility QA/QC		
Concrete Technology representative to witness moisture quality control	1 per 30		Production Day
SHA Acceptance Review for Admixture Materials	Facility QA/QC		



# Material Quality Assurance Processes

Producer to sample all admixture materials and provide to Concrete Technology for evaluation. 1 per 30 Production Day  
 1 Quart in a Screw Top Can

## SHA Acceptance Review for Cementitious Materials. Facility QA/QC

Producer to sample all cementitious materials and provide to Concrete Technology for evaluation. 1 per 1 Months  
 1 per 10 Production Day  
 10 lbs in a Plastic Jug

### Source Approval

#### Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Material Production

#### Notification of Production for CTD materials Production Notification

Producer to submit Shop Drawings and provide Production Notice to the Concrete Technology Division (concrete@sha.state.md.us) 30 business days before commencing production of any precast MSE or Noise Barrier components. 1 per 1 Prior to Usage on Project

#### CTD Material Review and Acceptance Material Certification for Project Usage

Direct Inspection at Facility during Casting, Approval of Material for Project Use. 1 per 1 Prior to Usage on Project

#### Test Panel Verification Material Certification for Project Usage

Test panel to be evaluated by OMT, LOD and OOS. 1 per 1 Prior to Usage on Project

### Project Construction

#### CTD Material Verification Material Verification

Project Engineer to visually inspect precast elements, record all stamps on a Form 14, and verify stamps match the certification. Collect manufacture's certification and submit it along with the Form 14 to MMD for clearance. 1 per 1 Delivery to Project

## Recycled Materials for HMA Mixtures

### Plant or Product Qualification

#### Evaluation of Production Facility for ATD Materials Facility Qualification

Joint Qualification with Asphalt Mix production facility. 1 per 1 Prior to Source Request

#### Evaluation of Material Product for ATD Materials Product Qualification

Qualification of Material Product. 1 per 1 Prior to Source Request

### Source Approval

#### Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

#### ATD Material Verification Material Verification

Project Engineer to visually inspect placed material and submit Form 14 to OMT for clearance. 1 per 1 Item Completion

## Reflective Sheeting

# Material Quality Assurance Processes

## Plant or Product Qualification

### Review Producer (OOTS) *Facility Qualification*

Qualification of Production Facility 1 per 1 Prior to Source Request

### SM Production QA *Facility Qualification*

Production Quality Assurance. 1 per 1 Prior to Usage on Project  
1 per 12 Months

### Review Product (OOTS) *Product Qualification*

Qualification of Material Product 1 per 1 Prior to Source Request

## Source Approval

### Source Submission *Source of Supply Submittal*

Source of Supply Processing 1 per 1 Prior to Usage on Project

## Project Construction

### OOTS Material Verification *Material Verification*

See source response for "Aluminum Signs" for this item for acceptance 1 per 1 Delivery to Project

## Sealers: Qualified Liquid Materials

## Plant or Product Qualification

### Review of Producer (QPL) *Facility Qualification*

Production facility data maintained to provide a basis for qualified products. 1 per 1 Prior to Source Request

### Review of Product (QPL) *Product Qualification*

Qualification of Material Product for use on State Projects. 1 per 1 Prior to Source Request

## Source Approval

### Source Submission *Source of Supply Submittal*

Source of Supply Processing 1 per 1 Prior to Usage on Project

## Project Construction

### LPD Material/Product verification *Material Verification*

Project Engineer to collect certifications (TC1.03 w/ test data) and submit certifications to OMT for clearance. 1 per 1 Delivery to Project

## Seed and Sod, Specialty Mixtures

## Plant or Product Qualification

### Review of Misc Production Location *Limited Producer Check*

Production facility data maintained to track the material supply chain. 1 per 1 Prior to Source Request

## Source Approval

### Source Submission *Source of Supply Submittal*

Source of Supply Processing 1 per 1 Prior to Usage on Project

# Material Quality Assurance Processes

## Project Construction

LPD Material Verification			Material Verification
Project Engineer to verify seed or sod mixture. Submit Form 14 to OMT for clearance.	1	per 1	Item Completion

## Seed and Sod, Standard Mixtures

### Plant or Product Qualification

Evaluation of Material Producer for LPD Materials			Facility Qualification
Qualification of Material Product by a representative of the Landscape Programs Division or the Maryland Department of Agriculture.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

## Project Construction

LPD Material Verification			Material Verification
Project Engineer to verify state approved seed mix/sod tickets (LPD or MDE). Copies shall be submitted to OMT for material clearance.	1	per 1	Delivery to Project

## SM Group 1 - General Approval

### Plant or Product Qualification

Review of Misc Production Location			Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

## Project Construction

Material Verification at Project Site, Structural Materials			Material Verification
Project Engineer to submit Form 14 to the Materials Management Division confirming the material and its placement are acceptable and conform to specifications.	1	per 1	Delivery to Project

## SM Group 2 - General Approval with Certification

### Plant or Product Qualification

Review of Misc Production Location			Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

# Material Quality Assurance Processes

## Project Construction

Material Verification at Project Site, Structural Materials			Material Verification
Project Engineer to collect manufacturer's certification (TC 1.03 w/o test data) indicating the specification to which the material conforms. Submit certification with Form 14 Stamp to the Materials Management Division for clearance.	1	per 1	Delivery to Project
Project Engineer to collect manufacturer's certification (TC 1.03 with test data) indicating the specification to which the material conforms. Submit certification with Form 14 Stamp to the Materials Management Division for clearance.	1	per 1	Delivery to Project

## SM Group 3 - Evaluation Before Shipment

### Plant or Product Qualification

Review of Misc Production Location			Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Material Production

OMT approval of material for shipment, Structural Materials			Material Certification for Project Usage
Submit Material Certification (TC 1.03 w/ Batch Specific Test Data) to metals@sha.state.md.us for review prior to delivery. If acceptable the document will be stamped by OMT and returned to the supplier to accompany the material to the project site.	1	per 1	Prior to Usage on Project
The Structural Materials team will inspect the material, all relevant certifications, and may take material samples at the production facility. Please contact metals@sha.state.md.us to schedule an inspection.	1	per 1	Prior to Usage on Project
Submit Material Certification (TC 1.03 w/o test data) for timber preservatives to metals@sha.state.md.us. If acceptable the document will be stamped by OMT and returned to the source of supply to accompany the material to the project site.	1	per 1	Prior to Usage on Project
Submit Sample, Form 88 and Material Certification (TC 1.03 w/o test data) for clay brick materials to OMT for evaluation. Form 88 will be returned to PE. Alternate sampling may be requested by contacting metals@sha.state.md.us 3 weeks prior to delivery. 10 Bricks	1	per 50000	Each
Submit Sample, Form 88 and Material Certification (TC 1.03 w/o test data) for concrete block to OMT for evaluation. Form 88 will be returned to PE. Alternate sampling may be requested by contacting metals@sha.state.md.us 3 weeks prior to delivery. 6 Blocks	1	per 6000	Each

# Material Quality Assurance Processes

## Project Construction

Material Verification at Project Site, Structural Materials			Material Verification
Project Engineer to collect OMT stamped documentation indicating review and approval of material. Submit document to the Materials Management Division for materials clearance.	1	per 1	Delivery to Project

## SM Group 4 - Detectable Warning Surfaces

### Plant or Product Qualification

Review of Producer (SM)			Facility Qualification
Production facility data maintained to track the material supply chain and provide a basis for qualified products.	1	per 1	Prior to Source Request

Review of Product (SM):			Product Qualification
Qualification of Material Product for use on State Projects.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

## Project Construction

Material Verification at Project Site, Structural Materials			Material Verification
Project Engineer to collect certifications (TC 1.03 w/o test data) and submit certs to OMT for clearance.	1	per 1	Delivery to Project

## SM Group 5 - Producer and Batch Data Tracked

### Plant or Product Qualification

Review of Misc Production Location			Limited Producer Check
Production facility data maintained to track the material supply chain.	1	per 1	Prior to Source Request

Review of Product (SM):			Product Qualification
Maintain data on each heat or batch of product used on State projects.	1	per 1	Batch, Lot or Heat

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Material Production

OMT approval of material for shipment, Structural Materials			Material Certification for Project Usage
Batch/Heat of Material must be approved by OMT. The producer to submit Material Certification (TC 1.03 w/ test data) and Sample to Structural Materials for evaluation. Contact metals@sha.state.md.us for further information.	1	per 1	Batch, Lot or Heat

## Project Construction

Material Verification at Project Site, Structural Materials			Material Verification
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# Material Quality Assurance Processes

Project Engineer to collect OMT stamped Material Certification (TC 1.03 w/ test data) and submit to the Materials Management Division for materials clearance. 1 per 1 Delivery to Project

## SM Group 6 - Qualified Facilities, Limited Review

### Plant or Product Qualification

Review of Producer (SM)	Facility Qualification		
Facility to be qualified for state projects (and re-qualified annually) and issued an OMT certification stamp before it is sourced to a project.	1 per 1	1	Prior to Source Request
	1 per 12		Months

### Source Approval

Source Submission	Source of Supply Submittal		
Source of Supply Processing	1 per 1		Prior to Usage on Project

### Material Production

Quality Assurance of Structural Material production facilities.	Material Certification for Project Usage		
Facility re-qualification required, Structural Materials to conduct facility evaluation and reissue facility certification. Please contact metals@sha.state.md.us to schedule an evaluation.	1 per 12		Months

### Project Construction

Material Verification at Project Site, Structural Materials	Material Verification		
Project Engineer to collect the stamped supplier's Certification of Compliance listing the materials shipped and submit to the Materials Management Division for materials clearance.	1 per 1		Delivery to Project

## SM Group 7 - Qualified Facilities, Cert Review

### Plant or Product Qualification

Review of Producer (SM)	Facility Qualification		
Facility to be qualified for state projects before it is sourced.	1 per 12		Months

### Source Approval

Source Submission	Source of Supply Submittal		
Source of Supply Processing	1 per 1		Prior to Usage on Project

### Material Production

Quality Assurance of Structural Material production facilities.	Material Certification for Project Usage		
Facility re-qualification required. Structural Materials to conduct facility evaluation prior to material approval. Contact metals@sha.state.md.us to determine inspection schedule.	1 per 12		Months

OMT approval of material for shipment, Structural Materials	Material Certification for Project Usage		
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# Material Quality Assurance Processes

Submit Material Certification (TC 1.03 w/ test data) to metals@sha.state.md.us for review prior to delivery. If acceptable the document will be stamped by OMT and returned to the source of supply to accompany the delivery. 1 per 1 Prior to Usage on Project

Submit Material Certification (TC 1.03 w/ test data) and a sample to Structural Materials, contact metals@sha.state.md.us. If acceptable the document will be stamped by OMT and returned to the source of supply to accompany the delivery. 1 per 1 Prior to Usage on Project

## Project Construction

Material Verification at Project Site, Structural Materials			Material Verification
Project Engineer to collect OMT stamped documentation indicating review and approval of material. Submit document to the Materials Management Division for materials clearance.	1	per 1	Delivery to Project

## SM Group 8 - Qualified Facilities, Production Insp

### Plant or Product Qualification

Review of Producer (SM)			Facility Qualification
Facility to be qualified for state projects before it is sourced.	1	per 1	Prior to Source Request

### Source Approval

Source Submission			Source of Supply Submittal
Source of Supply Processing	1	per 1	Prior to Usage on Project

### Material Production

Quality Assurance of Structural Material production facilities.			Material Certification for Project Usage
Facility re-qualification required. Structural Materials to conduct facility evaluation and reissue facility certification.	1	per 12	Months

OMT approval of material for shipment, Structural Materials			Material Certification for Project Usage
The Metals team will inspect the fabrication, all relevant certifications, and may take material samples at the production facility. Please contact metals@sha.state.md.us to determine inspection schedule.	1	per 1	Prior to Usage on Project

## Project Construction

Material Verification at Project Site, Structural Materials			Material Verification
Project Engineer to collect OMT stamped documentation indicating review and approval of material. Submit document to the Materials Management Division for materials clearance.	1	per 1	Delivery to Project

## SM Group 9 - Qualified Facilities, Not Sourced

### Plant or Product Qualification

Review of Producer (SM)			Facility Qualification
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# Material Quality Assurance Processes

Facility to be qualified for state projects (and re-qualified annually).

1 per 12

Months

## Soil Amendments

### Plant or Product Qualification

Review of Misc Production Location		Limited Producer Check	
Production facility data maintained to track the material supply chain.	1 per 1	1	Prior to Source Request

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	1	Prior to Usage on Project

### Project Construction

LPD Material Verification		Material Verification	
Project Engineer to verify material product, submit Form 14 for clearance.	1 per 1	1	Item Completion

## Soil Cement

### Plant or Product Qualification

Evaluation of Production Facility for SATD Materials		Facility Qualification	
Qualification of Production Facility for state projects.	1 per 1	1	Prior to Source Request
	1 per 2	2	Year

### Source Approval

Source Submission		Source of Supply Submittal	
Source of Supply Processing	1 per 1	1	Prior to Usage on Project

### Material Production

SATD Material Review		Material Certification for Project Usage	
Material to be sampled at its place of origin. Project Engineer to contact SATD to schedule a sampling.	1 per 1	1	Prior to Usage on Project

### Project Construction

Material Verification for SATD Materials		Material Verification	
Submit mix design sample to laboratory for verification	2 per 2	2	Sample Set
	1 per 1	1	Each

Project Engineer to Submit FM 14 for every load of Cement.

1 per 1

Sample Set

35 LBS in a Soils Bag

Project Site Testing		Material Sampling and Testing	
Design mix, construct a 100 foot long control strip onsite. Submit a verification unconfined compressive strength sample to the laboratory for testing. Complete a moisture correction factor based on this control strip.	1 per 1	1	Cubic Yard

35 LBS in a Soils Bag



# Material Quality Assurance Processes

The Project Engineer (PE) is to perform density tests at the frequency of 1 density test per station, per lane. Utilize the moisture correction factor from the control strip. PE to submit density sheets to laboratory for materials clearance.

1 per 1 Cubic Yard

The Project Engineer (PE) is to take 1 unconfined compressive strength sample per 5 stations, per lane.

1 per 1 Cubic Yard

35 LBS in a Soils Bag

## Soil Materials, Fill Soil

### Source Approval

Source Submission	Source of Supply Submittal			
Source of Supply Processing	1	per	1	Prior to Usage on Project

### Material Production

SATD Material Review	Material Certification for Project Usage			
Material to be sampled as Common Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	2	per	1	Prior to Usage on Project
Material to be sampled as Capping Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	2	per	1	Prior to Usage on Project
Material to be sampled as Modified Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	2	per	1	Prior to Usage on Project
Material to be sampled as Select Borrow at its place of origin. Project Engineer to contact SATD to schedule a sampling. 35 LBS in a Soils Bag	2	per	1	Prior to Usage on Project
Material to be sampled as Clay Core material at its place of origin. Project Engineer to contact SATD to schedule a sampling 35 LBS in a Soils Bag	2	per	1	Prior to Usage on Project

### Project Construction

Project Sampling and Lab Testing of SATD Material	Material Verification			
Project Engineer to submit verification samples of Common Borrow. 35 LBS in a Soils Bag	1	per	15000	Cubic Yard
Project Engineer to submit verification samples of material of Capping Borrow. 35 LBS in a Soils Bag	2	per	2	Lane Mile per Lift
Project Engineer to submit verification samples of material of Modified Borrow. 35 LBS in a Soils Bag	1	per	15000	Cubic Yard
Project Engineer to submit verification samples of material of Select Borrow. 35 LBS in a Soils Bag	1	per	15000	Cubic Yard

# Material Quality Assurance Processes

Project Engineer to submit verification samples of Clay Core material. 1 per 15000 Cubic Yard  
 35 LBS in a Soils Bag

## Project Site Testing Material Sampling and Testing

Compaction and Moisture analysis of Common Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.	4 per 1 per	1 2000	Lane Mile per Lift Cubic Yard
Compaction and Moisture analysis of Capping Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.	4 per 1 per	1 2000	Lane Mile per Lift Cubic Yard
Compaction and Moisture analysis of Modified Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.	4 per 1 per	1 2000	Lane Mile per Lift Cubic Yard
Compaction and Moisture analysis of Select Borrow to be performed by Project Engineer. Submit Compaction report to MMD for clearance.	4 per 1 per	1 2000	Lane Mile per Lift Cubic Yard
Compaction and Moisture analysis of Select Borrow for Trench Backfill to be performed by Project Engineer. Submit Compaction report to MMD for clearance.	1 per	150	Linear Feet per 3 Foot Lift
Compaction and Moisture analysis of Clay Core material to be performed by Project Engineer. Submit Compaction report to MMD for clearance.	1 per	2000	Cubic Yard

## Soil Materials, Furnished Landscaping Soils

### Plant or Product Qualification

#### Evaluation of Production Facility for SATD Materials Facility Qualification

Material Producer to have their soil product tested by an independent laboratory and submit results to SATD. 1 per 12 Months

#### Evaluation of Material Product for SATD Materials Product Qualification

Quality Evaluation of Furnished Topsoil Product. 1 per 1 Prior to Source Approval  
 20 LB in a Soils Bag 1 per 6 Months

### Source Approval

#### Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

#### Material Verification for SATD Materials Material Verification

Project Engineer to verify material and submit the approved Form 27B to the Materials Management Division for clearance. Form 27B may be found on the Documents Tab on the material source submission. 1 per 1 Delivery to Project

## Soil Materials, Salvaged & Other Landscaping Soils

### Plant or Product Qualification

# Material Quality Assurance Processes

<b>Review of Misc Production Location</b>	<i>Limited Producer Check</i>
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Production facility data maintained to track the material supply chain.	1	per	1	Prior to Source Request
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## Source Approval

<b>Source Submission</b>	<i>Source of Supply Submittal</i>
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Source of Supply Processing	1	per	1	Prior to Usage on Project
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## Material Production

<b>SATD Material Review</b>	<i>Material Certification for Project Usage</i>
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Project Engineer to contact SATD at least 30 days prior to material usage or placement. SATD will sample material at source, ensure material testing, and provide a Soil Test Report (Form 27B) and the Nutrient Management Plan.	1	per	1	Prior to Usage on Project
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20 LB in a Soils Bag

Project Engineer to contact SATD at least 30 days prior to material usage or placement. SATD will sample material at source, ensure material testing, and provide a Soil Test Report (Form 27B).	1	per	1	Prior to Usage on Project
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20 LB in a Soils Bag

## Project Construction

<b>Material Verification for SATD Materials</b>	<i>Material Verification</i>
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Project Engineer to verify material and submit the approved Form 27B to the Materials Management Division for clearance.	1	per	1	Item Completion
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## Soil Stabilization Matting

### Plant or Product Qualification

<b>Evaluation of Material Producer for LPD Materials</b>	<i>Facility Qualification</i>
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Production facility data maintained to track the material supply chain and provide a basis for qualified products.	1	per	1	Prior to Source Request
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<b>Evaluation of Material Product for LPD Materials</b>	<i>Product Qualification</i>
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Qualification of Material Product for use on State Projects	1	per	1	Prior to Usage on Project
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### Source Approval

<b>Source Submission</b>	<i>Source of Supply Submittal</i>
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Source of Supply Processing	1	per	1	Prior to Usage on Project
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### Project Construction

<b>LPD Material Verification</b>	<i>Material Verification</i>
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Project Engineer to inspect placed material and submit Form 14.	1	per	1	Delivery to Project
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## Surface Treatments

### Plant or Product Qualification

<b>Evaluation of Production Facility for ATD Materials</b>	<i>Facility Qualification</i>
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# Material Quality Assurance Processes

Production facility data maintained to provide a basis for qualified products. 1 per 1 Prior to Source Request

## Evaluation of Material Product for ATD Materials Product Qualification

Review and Qualification of Material Mixture for use on State Projects. 1 per 1 Prior to Source Request

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Material Production

## Notification of Production for ATD materials Production Notification

Producer to notify the Asphalt Technology Division one week prior to material placement. 1 per 1 Placement Day

### Project Construction

## ATD Material Verification Material Verification

Project Engineer to collect material certifications (TC 1.03 w/o test results) and submit to materials management for clearance. 1 per 1 Delivery to Project

## Sampling and Testing of ATD materials Material Sampling and Testing

Project Engineer to sample emulsion and mixture. Sample to be delivered to OMT for verification. 1 per 1 Production Day

1 Gallon of Mixture and 1 Gallon of Emulsion in a Widemouth Plastic Jar

## Traffic and Related Materials, Miscellaneous

### Plant or Product Qualification

## Review of Misc Production Location Limited Producer Check

Production facility data maintained to track the material supply chain. 1 per 1 Prior to Source Request

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

## OOTS Material Verification Material Verification

Project Engineer to submit Form 14 to the Materials Management Division confirming the product is undamaged, acceptably placed, and conforms to specification. 1 per 1 Delivery to Project

## Traffic Barrier End Treatments

### Plant or Product Qualification

## Review of Producer (QPL) Facility Qualification

# Material Quality Assurance Processes

Production facility data maintained to provide a basis for qualified products. 1 per 1 Prior to Source Request

## Review of Product (QPL) Product Qualification

Qualification of Material Product for use on State Projects. 1 per 1 Prior to Source Request

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Material Production

## Approval of Material Prior to Shipment Material Certification for Project Usage

Contractor to submit "Request to use NCHRP-350 Product" to the Engineer of Record. The Engineer of Record refers to a Project's design Engineer or plan sheet approver who is a Licensed Engineer in the field of design and MASH implementation. 1 per 1 Prior to Usage on Project

### Project Construction

## OOTS Material Verification Material Verification

See source response for "Metal Traffic Barrier, Certified Installer" for this item for acceptance procedures. 1 per 1 Delivery to Project

Project Engineer to collect manufacturer's certification (TC 1.03 w/o test data) and submit certifications to the Materials Management Division for clearance. 1 per 1 Delivery to Project

## Traffic Control Materials, Qualified

### Plant or Product Qualification

## Review Producer (OOTS) Facility Qualification

Production facility data maintained to track the material supply chain and provide a basis for qualified products. 1 per 1 Prior to Source Request

## Review Product (OOTS) Product Qualification

Qualification of Material Product for use on State Projects. 1 per 1 Prior to Source Request

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

## OOTS Material Verification Material Verification

Project Engineer to collect certifications (TC 1.03 w/o test data) and submit certs to the Materials Management Division for clearance. 1 per 1 Delivery to Project

## Traffic Control Materials, Qualified & Temporary

### Plant or Product Qualification

## Review Producer (OOTS) Facility Qualification

# Material Quality Assurance Processes

Production facility data maintained to track the material supply chain and provide a basis for qualified products. 1 per 1 Prior to Source Request

## Review Product (OOTS) Product Qualification

Qualification of Material Product for use on State Projects. 1 per 1 Prior to Source Request

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Project Construction

## OOTS Material Verification Material Verification

Project Engineer to submit Form 14 to the Materials Management Division confirming the product is undamaged, acceptably placed, and conforms to specification. Indicate the product manufacturer and model number (when available). 1 per 1 Delivery to Project

## Traffic Control Materials, Specialty Items

### Plant or Product Qualification

## Review of Misc Production Location Limited Producer Check

Production facility data maintained to track the material supply chain. 1 per 1 Prior to Source Request

## Review Product (OOTS) Product Qualification

Product data maintained for historical purposes. 1 per 1 Prior to Usage on Project

### Source Approval

## Source Submission Source of Supply Submittal

Source of Supply Processing 1 per 1 Prior to Usage on Project

### Material Production

## Approval of Material Prior to Shipment Material Certification for Project Usage

Producer to submit Shop Drawings or Catalog Cuts to the Office of Traffic and Safety for evaluation. 1 per 1 Prior to Usage on Project

### Project Construction

## OOTS Material Verification Material Verification

Project Engineer to submit Form 14 to the Materials Management Division confirming receipt of approved documentation from OOTS and conformance to specifications. 1 per 1 Delivery to Project

## Traffic, Misc. Services and Products

### Plant or Product Qualification

## Review Producer (OOTS) Facility Qualification

Facility data maintained to provide a basis for product data or historical reference. 1 per 1 Each

## Review Product (OOTS) Product Qualification

# Material Quality Assurance Processes

Product data maintained for historical purposes.

1 per 1

Each

## Source Approval

Source Submission	Source of Supply Submittal
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Source of Supply Processing

1 per 1

Prior to Usage on Project

## Project Construction

OOTS Material Verification	Material Verification
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Project Engineer to submit Form 14 to the Materials Management Division confirming the product is undamaged, acceptably placed, and conforms to specification. Indicate the product manufacturer and model number (when available).

1 per 1

Delivery to Project