

INDEPENDENT ASSURANCE SAMPLING AND TESTING PROGRAM

DOTD Designation S 701-20

rev 11-20-2020

The Independent Assurance (IA) Sampling and Testing Program is mandated by the Federal Highway Administration (FHWA), and conducted by the DOTD Materials Section and/or District Laboratories to provide an independent and unbiased evaluation of the reliability of our Quality Assurance Program for National Highway System (NHS) projects. Our IA Program specifically checks equipment and personnel using a system approach and project approach. The IA Program does not evaluate material quality, but, rather, gives us confidence that our Acceptance Program testers and equipment are adequately representing material quality.

Part I System Approach for Asphalt and Aggregate Gradation

1. **Accreditation:** District Laboratories and Contractor Asphalt Plant Laboratories are required to be AASHTO R-18 accredited by a DOTD-approved accrediting agency, and participate in their annual on-site inspection of equipment, procedures and documentation.
2. **Proficiency Samples:** All active asphalt testers, including DOTD technicians and Contractor technicians, are required to participate in the DOTD-approved annual asphalt sample proficiency program. All active aggregate testers in the DOTD District Labs participate in the DOTD-approved annual aggregate gradation proficiency program. Contact Jason Davis (Jason.Davis@la.gov) at Matlab to register. Participants are to test and report within 60 days of receiving samples, and respond to discrepancies within 60 days of receiving results.
3. **Annual Report:** The Materials and Testing Section will produce an annual report by January 31st, to summarize results and effectiveness of the IA program, and layout any plans for improvement.

Part II Project Approach for Embankment, Base Course, and Structural Concrete

1. Only NHS projects require IA Sampling and Testing. See below.
2. Small projects do not require IA Sampling and Testing. See Table 1, minimum trigger.

If the project is on an NHI route and if any of these quantities exceed the minimum trigger, then the District Laboratory Engineer, (DLE), is to prepare an **IA Sampling Plan** to send to the Project Engineer (PE). Since District Laboratory personnel are to take IA samples in conjunction with the PE's inspectors, the PE must notify the DLE to schedule the IA sampling.

3. Lab personnel are to take split or side-by-side samples for direct comparison of IA samples to Acceptance samples. IA testers must be different than Acceptance testers. IA testing equipment must be different than Acceptance testing equipment, except for concrete compression testing machine.
4. The DLE will prepare the **IA vs Acceptance Test Report** for each pair and retain in file.
 - a. Report the Acceptance test result, the IA test result, the difference, and the tolerance limits.
 - b. If the difference is \leq allowable tolerance, enter "Verifies".
 - c. If the difference is $>$ allowable tolerance, enter "Does Not Verify", and investigate the cause for the difference. Report the results of the investigation on the **Independent Assurance Certification**.

5. At the end of the project, the DLE will:
 - a. Complete the **IA Sampling Plan** by adding No. Samples Taken and No. of Samples that Verified.
 - b. Complete the **Independent Assurance Certification**.
If applicable, explain why certain tests were not taken, and/or why certain pairs of tests did not verify. Explain the action taken to prevent recurrence.
 - c. Send the completed **IA Sampling Plan** and the **IA Certification** to the Materials Engineer Administrator, with copies to the Assistant District Administrator of Engineering, the Project Engineer, and the FHWA Representative.

TABLE 1 - IA SAMPLING PLAN

IA Sampling Plan

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Project Number _____
 Federal Aid Number _____
 Project Name _____
 Route _____
 Parish _____

Project Engineer Name _____
 Lab Engineer Name _____
 District _____
 Date _____

IA Needed

IA Not Needed - not NHS project

IA Not Needed - too small

	Minimum Quantity Trigger	Material Type	Material Test	Minimum Test Frequency	Project Quantity	No. of Samples Required	No. of Samples Taken	No of Samples Verified
Embankment	5000 LF	All Embankment	Density	1/10,000 LF/Rdwy/Lift				
		Usable Soil	Classification	1/10,000 LF/Rdwy/Lift				
Base Course	5000 LF	Stone, RPCC, BCS	Density	1/10,000 LF/Rdwy/Lift				
Structural Concrete	500 CY	A1, A2, A3, S, Mass (A1, A2, A3)	Slump	1/2000 CY				
			Air	1/2000 CY				
			Strength	1 set / 2000 CY				
			Resistivity	1 set / 2000 CY				

Initial Sampling Plan

District Lab Engineer Signature _____

Completed Sampling Plan

District Lab Engineer Signature _____

Date _____

TABLE 2 – TOLERANCE LIMITS

<p>Embankment</p>	<p>All Embankment Usable Soil</p>	<p>Density Classification</p>	<p>No. 10 No. 40 No. 200</p>	<p>± 3% ± 5% passing ± 2 % passing ± 2 % passing</p>
<p>Base Course</p>	<p>Stone, RPCC, BCS</p>	<p>Density</p>		<p>± 3%</p>
<p>Structural Concrete</p>	<p>A1, A2, A3, S, Mass (A1, A2, A3)</p>	<p>Slump Air Strength Surface Resistivity*</p>		<p>± 0.5" ± 0.5% ± 7% of set average ± 11%</p>

*Example: If Acceptance = 36 kΩ-cm, 11% of 36 = 3.96, or 4 kΩ-cm. Tolerance is ± 4 kΩ-cm.

Independent Assurance Certification

See CFR 23 637, Appendix A to Subpart B.

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Project No. _____
Fed Aid No. _____
Project Name _____
Route _____
Parish _____

Project Engineer _____
Lab Engineer Name _____
District _____
Date _____

This is to certify that:

All Independent Assurance samples and tests are within tolerance limits of the samples and tests that are used in the Acceptance Program for the above-referenced project, except as noted herein.

District Laboratory Engineer

Date

Cc: **Materials Engineer Administrator**
Assistant District Administrator of Engineering
Project Engineer
FHWA Representative

Exceptions

Omitted Tests: *Provide explanation, corrective actions.*

Non-Verifying Tests: *Provide sample and test information, results of investigation, corrective actions, in this format.*

Material
Test
IA Sample ID
Acceptance Sample ID
Difference
Tolerance Limits
Results of Investigation
Corrective Action

Attach additional pages if needed.

NHS ROUTES

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Since some parts of a route are not NHS, check the links below.

Listed by District and Log Mile:

http://engrapps/hwyinfo/tahiwstl/nhs_summary.xlsx

Map and listed by Route:

http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Data_Collection/Mapping/Pages/National_Highway_System.aspx

Map:

<https://hepgis.fhwa.dot.gov/fhwagis/>

02	03	04	05	07	08	58	61	62
I-10	I-10	I-20	I-20	I-10	I-49	LA 28	I-10	I-10
I-310	I-49	I-220	LA 139	I-210	LA 1	US 165	I-110	I-12
I-510	LA 182	I-49	LA 143	LA 108	LA 10	US 425	I-12	I-55
I-610	LA 3025	LA 1	LA 3249	LA 109	LA 1208-5	US 65	LA 1	I-59
LA 1	LA 3073	LA 173	LA 3280	LA 1138-2	LA 184	US 84	LA 1248	LA 16
LA 18	LA 31	LA 3	LA 33	LA 12	LA 28		LA 19	LA 21
LA 182	LA 3184	LA 3032	LA 34	LA 14	LA 3054		LA 22	LA 22
LA 20	US 167	LA 3094	LA 617	LA 27	LA 498		LA 30	LA 3002
LA 23	US 190	LA 3105	LA 840-6	LA 3186	LA 6		LA 3064	LA 3188
LA 24	US 71	LA 3132	US 165	LA 378	LA 8		LA 3089	LA 3234
LA 3019	US 90	LA 511	US 165-Y	LA 384	US 165		LA 3246	LA 41
LA 3021	US 90-Y	LA 523	US 167	LA 385	US 167		LA 37	LA 434
LA 3040		LA 526	US 425	LA 389	US 167-X		LA 408	LA 447
LA 3046		US 171	US 63	US 165	US 171		LA 415	LA 637
LA 3090		US 71	US 65	US 171	US 71		LA 42	LA 64
LA 3139		US 79	US 80	US 190	US 84		LA 426	US 11
LA 3152		US 80		US 90			LA 427	US 190
LA 3154		US 84					LA 44	US 190-S
LA 3235							LA 64	US 190-Y
LA 39							LA 67	US 51
LA 428							LA 70	US 51-X
LA 46							LA 73	US 61
LA 47							LA 76	
LA 48							US 190	
LA 49							US 61	
LA 57							US 61-X	
LA 657							US 90	
LA 659								
LA 661								
US 61								
US 90								
US 90-Z								