




MEMO

January 13, 2021

To: District Engineers

From: Miles R. Garrison, P.E. 
Director, Materials and Tests Division

Subject: Shared Equipment: Guidance for TxDOT Districts to Establish Engineer's Plant Asphalt Mix Labs

Each District that does not have testing space at an asphalt mix plant should communicate and coordinate with their Contractor/Producer what is an acceptable safe and efficient testing space for the Engineer, and when it should be in place.

The attached guidance is to be used in conjunction with the current Item 504 until the Item is rewritten. In this transition period, where the attached language conflicts with item 504, the attached guidance will govern.

The department encourages sharing gyratory presses, including allowing producers to use the Department's Texas Gyratory Press (TGC). Please note that TxDOT owned equipment must only be used for TxDOT projects. The Superpave Gyratory Compactor (SGC) provided by the Contractor that is shared, is not required to be locked behind TxDOT key. The location of the SGC must ultimately meet the Department's requirements which includes meeting test procedures, providing comparable and consistent QCQA test results, safety, efficiency, and accessibility. The owner of the testing equipment will be responsible for annual calibration and any calibration checks.

Existing labs that meet the operational requirements of the intent of specifications and address the recent direction on sharing equipment and security of TxDOT equipment should continue operations.

Unless otherwise agreed between Districts, the host District should take the lead when working with Contractors/Producers.

I invite you or your staff to contact me for any questions, office (512) 506-5843 or mobile (430) 342-3173.

CC: Directors or Construction
Maintenance Engineers
Laboratory Supervisors

Attachment

Joint Asphaltic Lab Facility Guidance
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These questions generally address asphalt mix labs, permanent and portable. All are the minimum requirements “unless mutually agreed.” It is the intent to make this transition as efficient as possible and minimize costs to everyone. This guidance is to be used in conjunction with the current Item 504 until the Item is rewritten. In this transition period, where language below conflicts with item 504, the below governs until Item 504 is rewritten. The department encourages sharing gyratory presses, including allowing producers to use the department’s Texas gyratory press.

Existing labs that meet the *operational* requirements of the intent of specifications and address the recent direction on sharing equipment and security of TxDOT equipment should continue operations.

Allow the producers a transition period that agrees with the deadlines established for TxDOT furnished equipment. Unless otherwise agreed between districts, the host district should take the lead when working with producers. What follows are answers to basic questions to provide practical guidance to assist with this transition.

1. How many labs are required per asphalt mix plant?

- a. The maximum number of labs required is limited to one lab per asphalt mix plant. Where there is more than one asphalt mix plant per pit that produces at the same time for TxDOT work, the producer may provide an additional lab or additional space in the same building for the TxDOT lab as approved by the district. In this scenario, multiple plants belong to the same producer.
- b. The plant should be visible from the TxDOT asphalt mix lab.
- c. The number of projects or districts that use the asphalt mix plant does not increase the number or size of the labs beyond “a.” above.
- d. Separate labs are not to be required for consultants.

2. Can the TxDOT lab be under the same roof as the producer’s lab?

Yes, as long as the department can secure their equipment and files under their key.

3. Meeting the intent of the recent direction for separate labs for TxDOT staff and working current facilities, what is the minimum lab size, behind TxDOT keys, that must be provided for TxDOT furnished equipment?

TxDOT needs enough counter space to perform testing, to place test equipment, for a preparation area, and a sink. The facility needs to provide for oven venting and exhaust equipment for room air quality and a workspace with a table and chairs to perform recordkeeping. The 700 SF for the TxDOT portion of a “Type D Asphalt Mix Control Laboratory” in Item 504 does not need to be met. Be flexible in working with producers for providing a safe and secure TxDOT lab.

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4. What must be behind TxDOT locks?

- a. Only TxDOT furnished equipment and files must be behind TxDOT locks. This can be by partitioning the rooms, separate labs, or other methods agreed to secure TxDOT equipment and files for the TxDOT lab.
- b. For the gyratory presses that are shared, the equipment is not required to be locked behind TxDOT key and must be under the same roof or in proximity to the TxDOT lab and accessible to both parties. The location of the presses must ultimately meet the department's requirements which includes meeting test procedures, providing comparable and consistent QCQA test results, safety, efficiency, and accessibility.

5. TxDOT is responsible for their own drinking water and distilled water when needed for testing purposes.

6. What are bathroom facility requirements for TxDOT that producers must meet?

One indoor or outdoor toilet accessible and in proximity to the TxDOT lab is required.

7. What are the ventilation requirements for TxDOT provided lab equipment that producers must provide?

Lab ventilation equipment to be furnished by the producer is as follows.

- a. Ovens and ignition ovens require ventilation that meets equipment manufacturers recommendations.
- b. Exhaust fan for removing volatiles and exhaust fan for the removal of aggregate fines created from shakers to meet Department and OSHA requirements are required. Vent all exhaust to the outside of the structure. Position exhaust fans to pull volatiles and fines away from the technician that facilitate room air turnover.

8. What are foundation requirements?

Foundations need to be structurally adequate to support test equipment and testing. Balances (scales), ignition ovens, gyratory presses, sieve shakers, vibrating pycnometers, and water reservoirs may create larger dead and dynamic loads. Producers are to provide stable/ isolated platforms to meet department and manufacturer requirements.

9. Can a producer provide shared sinks, water, and bathrooms with TxDOT?

Yes, as long as they are accessible to TxDOT staff and in proximity.

When the producer cannot reasonably meet the above with the existing or modified existing facilities, is there an outline of requirements to address current needs that a producer can follow to fabricate a new or furnish a newly acquired portable lab facility?

Refer to the attached outline.

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Attachment page 1: Guidance for New Fabricated or Newly Acquired Portable Facilities

To assure compliance, producers should provide the department with an opportunity to approve the layout and location of the facility before fabricating or acquiring new facilities.

- Provide a weatherproof lab with roof, floor, doors, and screened windows. Ensure the floor and landings are strong and stable platforms to support required testing. Provide an impervious floor covering for interior rooms. For portable facilities, install tie downs.
- Furnish adequate lighting, and air-conditioning and heating.
- Provide solar screens, blinds, or shades.
- Provide a partitioned restroom furnished with restroom supplies, a lavatory, and a flush toilet connected to a sewer or septic tank. The restroom may be in the TxDOT lab or in producer facilities as long as it is accessible and in proximity to the TxDOT lab. A separate portable toilet may be provided as an alternate to an interior facility when approved.
- Provide secured and controlled access to the lab through security measures.
- Provide and maintain a 10 lb. ABC fire extinguisher with up-to-date inspection tag and a working smoke detector.
- For ovens and ignition ovens, provide ventilation that meets equipment manufacturers recommendations. Provide an exhaust fan for removing volatiles and aggregate fines created from shakers and to meet OSHA requirements. Vent all exhaust to the outside of the structure. Position exhaust fans to pull volatiles and fines away from the technician that facilitate room air turnover.
- Provide enough floor area that will accommodate counter space for performing testing, to place test equipment, for a preparation area, and for a sink. Provide a floor strong enough to support required testing and aisles a minimum of approximately 5 ft. in width.
- Partition the floor area into at least 2 interconnected rooms with interior doors, 2 exterior doors, and at least 2 windows in each room. One of the rooms will be for the ovens and shaker with enough room to safely place the equipment and perform tests. All rooms will have a minimum of 8 ft. ceilings.
- Provide a desk or a table approximately at least 30 in. wide and 60 in. long. Provide chairs and a filing cabinet.
- When the lab floor is not at grade, provide a landing (approximately 4 ft. by 4 ft.) and provide 4 ft. wide steps.
- Except for water used for testing and handwashing, all consumables, including distilled water used for testing, will be provided by the engineer.
- Provide for the collection and disposal of trash, and janitorial supplies for toilet room and the lab floors.

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Attachment page 2: Guidance for New Fabricated or Newly Acquired Portable Facilities

- Provide an adequate number of electrical outlets and power for required testing equipment electrically wired by personnel meeting the requirements of Article 7.18., “Electrical Requirements.”
- Provide a 208/240 V, 50 A outlet within 3 ft. of the ignition oven location, vent the ignition oven separately to the outside according to the manufacturer’s requirements. Provide a surface for the ignition oven that is level, sturdy, and fireproof with at least 6 in. of clearance between the furnace and other vertical surfaces.
- Provide electrical power and outlets for the SuperPave gyratory press and large oven as specified by the manufacturer.
- Make hardwire, plumbing, and oven venting connections for engineer’s equipment.