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**Test Procedure for****OBTAINING AND TRIMMING CORES OF  
BITUMINOUS MIXTURES****TxDOT Designation: Tex-251-F****Effective Date: November 2019**

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**1. SCOPE**

- 1.1 Use Part I of this test method to obtain cores drilled from compacted bituminous pavements.
  - 1.2 Use Part II of this test method to trim cores to prepare specimens for laboratory testing.
  - 1.3 The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.
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**PART I—OBTAINING CORES OF BITUMINOUS MIXTURES**

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**2. SCOPE**

- 2.1 Use this procedure to obtain cores drilled from bituminous mixtures.
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**3. APPARATUS**

- 3.1 *Core Bit*, of hardened steel or other suitable material, diamond-impregnated in cutting edge, of desired diameter.
  - 3.2 *Core Drill*, motor-driven with enough horsepower to obtain full-depth cylindrical cores.
  - 3.3 *Cooling Agent*, such as water, ice, or dry ice.
  - 3.4 *Retrieval Device*, for removing cores, such as a steel rod, thin wire loop, or mallet.
  - 3.5 *Security Bags*, Department-provided.
  - 3.6 *Repair material*, for filling in core holes.
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**4. PROCEDURE**

- 4.1 Ensure the pavement surface is sufficiently cool to prevent damage to the core.
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**Note 1**—A **maximum** surface temperature of 160°F is recommended to prevent damage to the core.

**Note 2**—A cooling agent can be used to decrease the surface temperature before coring.

- 4.2 Place the core bit directly above the desired sampling location.
- 4.3 Provide water to aid in the removal of cuttings and to minimize the generation of heat caused by friction between the core bit and the pavement.
- 4.4 Maintain the core bit perpendicular to the pavement while applying constant downward pressure on the core bit until the desired depth is achieved.
- Note 3**—Failure to apply constant pressure or applying excessive pressure may cause the core bit to bind or the core to distort.
- 4.5 Use retrieval device to take the pavement core out of the core bit. Avoid distorting, bending, or cracking the cores.
- 4.6 Place cores in security bags and store in a cool place.
- 4.7 Remove water from core hole.
- 4.8 Repair the resulting core hole by filling with approved patch material or hot mix and compacting until top is flush with the pavement surface.

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## PART II—TRIMMING CORES OF BITUMINOUS MIXTURES

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### 5. SCOPE

- 5.1 Use this procedure to trim cores to prepare specimens for laboratory testing.

### 6. APPARATUS

- 6.1 *Masonry Saw*, for trimming ends of cores, with diamond or silicon-carbide cutting edge and capable of cutting cores without introducing cracks or dislodging aggregate particles.
- 6.2 *Marker*, such as paint pen or permanent marker.
- 6.3 *Measuring Device*, such as a ruler, calipers, or measuring tape.

### 7. PROCEDURE

- 7.1 For cores with uneven surfaces, follow the instructions in Sections 7.3–7.12.
- 7.2 For cores with level surfaces, measure the untrimmed core height to the nearest 1/16 in. and proceed to Section 7.8.
- Note 4**—When measuring the untrimmed core height, do not include foreign matter. Foreign matter is material extraneous to the pavement layer being tested; examples

- include another paving layer, such as hot mix, surface treatment, subgrade, or base material.
- 7.3 On the top surface of the core, mark the apparent thinnest location with a marker.
- 7.4 Make three more marks around the perimeter of the core at 90, 180, and 270 degrees from the mark made in Section 7.3.
- 7.5 Measure the height of the core at the marked locations. Refer to Note 4.
- 7.6 Take additional measurements around the core if the measurements taken in Section 7.5 vary by more than 1/4 in. Mark the location of the additional measurements.
- 7.7 Average the measurements and record the untrimmed core height to the nearest 1/16 in.
- 7.8 Remove visually evident foreign matter and tack material from the core with a saw or by any other satisfactory means.
- 7.9 Ensure that the sample size and number of samples conform to the requirements of Tex-222-F.
- 7.10 Trim the bottom or top of the core only when necessary. Remove any foreign matter and tack material to ensure a level and smooth surface for testing.
- 7.11 Trim the minimum amount of core necessary, but no more than 1/2 in.  
**Note 5**—Do not trim the core if the surface is level and there is not foreign matter or tack material bonded to the surface of the core.
- 7.12 Measure and record the trimmed core height to the nearest 1/16 in.