



U.S. Department  
of Transportation

**Federal Transit  
Administration**

Headquarters

1200 New Jersey Avenue, SE  
Washington, DC 20590

**SENT VIA EMAIL**

March 26, 2025

Ms. Meredith Biggica  
Deputy Secretary for Multimodal Transportation  
Pennsylvania Department of Transportation  
400 North St., Fifth Floor  
Harrisburg, PA 171

Subject: Resubmission Required for FTA-24-5-010 (SEPTA Tool Calibration)

Dear Ms. Biggica,

On February 21, 2025, the Pennsylvania Department of Transportation (PennDOT) submitted a closure request for required action FTA-24-5-010. FTA has reviewed this request, along with PennDOT's other submissions, to close this required action to address Finding 10 of Special Directive 24-5: "PennDOT Must Expand Activities to Oversee Tool Calibration."

Required action FTA-24-5-010 required PennDOT to direct the Southeastern Pennsylvania Transportation Authority (SEPTA) Rail Equipment Engineering and Maintenance Department (REE&M) to "formalize calibration practices for precision instrumentation/tooling" and to submit both its directive to SEPTA as well as SEPTA's "formalized program to FTA for review, approval, and implementation monitoring."

However, FTA's evaluation found deficiencies in REE&M's final standard operating procedure (SOP) for calibration practices for precision instrumentation/tooling, which PennDOT approved and submitted to FTA on February 14, 2025. This SOP—consisting of four pages with only 2.5 pages of substantive content and no other referenced procedures or material—fundamentally fails to establish the comprehensive protocols and calibration program elements essential for ensuring safety in rail transit vehicle maintenance. The brevity and lack of technical specificity in this document raises serious concerns about its adequacy as a safety-critical procedure as well as how it will be implemented across SEPTA's many rail transit vehicle maintenance facilities. In light of this, FTA cannot approve PennDOT's closure request and instead requires resubmission as addressed below.

**Actions Required to Address FTA-24-5-010 (SEPTA Tool Calibration)**

To fully address FTA-24-5-010, PennDOT must ensure that SEPTA corrects the following deficiencies, either by revising the REE&M SOP and/or through supporting program documentation.

- **Document Identification and Control**

- **Title and Reference Number:** The SOP lacks a formal title and identification number. PennDOT must ensure SEPTA properly identifies this SOP for clear referencing and document control.
- **Document Dating:** The SOP indicates a document date of November 15, 2024, but signatures are dated February 13, 2025. This discrepancy creates confusion regarding the procedure's effective date and compliance timeline. PennDOT must ensure SEPTA establishes a clear effective date.
- **Erroneous Section Reference:** Section 3.0 incorrectly references a non-existent Section 6. PennDOT must ensure this is corrected.

- **Content Accuracy and Completeness**

- **Purpose Statement (Section 1.0):** The purpose statement only mentions tool calibration, whereas the SOP includes inspection, maintenance, and storage requirements. PennDOT must ensure SEPTA expands the purpose statement to fully capture all covered activities, particularly those critical to measurement integrity.
- **Scope Clarification (Section 2.0):** The scope statement uses the term "universal tool calibration" without specific definition. PennDOT must ensure that SEPTA's SOP provides or references a facility-specific list or program that:
  - Identifies all precision measuring instruments (e.g., torque wrenches, micrometers, calipers, gauges, and electronic test equipment).
  - Classifies tools by criticality level based on safety impact.
  - Specifies which tools require in-house versus external calibration.
  - Establishes clear criteria for removing tools from service, how this is logged, and who is responsible for removing tools from service.

- **Technical Calibration Requirements**

- **Inspection and Testing Procedures:** The SOP lacks details on calibration methodologies used across SEPTA facilities. PennDOT must ensure that SEPTA's SOP reflects the tool calibration program implemented in each local facility, with reference to:
  - Specific calibration procedures for each major equipment type at each facility how procedures are stored and updated if need be.
  - Roles and responsibilities across facilities (e.g., Woodland Machine Shop's in-house calibration practices for micrometers and the shop's outsourcing procedures for test equipment, Berridge Shop's management system for torque wrenches, and Fern Rock Machine Shop's in-house equipment calibration).
  - Testing methodologies, including equipment setup, calibration sequences, and verification steps.

- Criteria for determining in-house versus external calibration.
  - Required documentation for each calibration method.
- **Asset Tracking System Integration:** The SOP does not document or reference calibrated tool tracking at each facility. PennDOT must ensure that SEPTA's SOP documents or references:
  - How precision measuring tools are tracked in its asset management system.
  - How calibration schedules are integrated into this system.
  - Notification and escalation procedures for upcoming calibration due dates.
  - Reporting capabilities for overdue calibrations and trend analysis.
  - Integration with maintenance scheduling system.
- **Out-of-Calibration Procedures (Section 4.2.3):** Section 4.3.2 briefly mentions segregating out-of-calibration tools but lacks specifics. PennDOT must ensure SEPTA establishes specifics for each facility:
  - Standardized tagging systems with color codes or symbols.
  - Secure, designated storage areas for out-of-calibration tools.
  - Lockout/tagout procedures to prevent inadvertent use of out-of-calibration tools.
  - Investigation protocols for tool found out of calibration before their scheduled calibration date.
  - Guidelines for reevaluating work completed with potentially inaccurate tools.
- **Additional Critical Program Elements.** A formalized tool calibration program should also typically include the following elements, which are not mentioned or referenced in the SOP.
  - **Calibration Frequency Standards:** Specified calibration intervals based on manufacturer guidelines, usage intensity, and industry standards.
  - **Calibration Tolerances:** Clear pass/fail thresholds for each tool under the program.
  - **Environmental Requirements:** Specifications for temperature, humidity, vibration, and cleanliness conditions during calibration and storage.
  - **Traceability to Standards:** Documentation ensuring all measurements are traceable to National Institute of Standards and Technology or equivalent national standards.
  - **Emergency Procedures:** Protocols for situations requiring measurement when calibrated tools are unavailable.
  - **Calibration Documentation Standards:** Comprehensive record-keeping requirements, including before/after measurements and reference standards.
  - **Training Requirements:** Qualification and training standards for personnel performing calibrations.
  - **Quality Assurance Oversight:** Independent verification and audit procedures to ensure calibration program integrity.

## Conclusion

PennDOT's review of SEPTA's submissions, including the REE&M SOP and Electronic Mechanical Tool Calibration Trackers, lacked the necessary rigor for comprehensive safety oversight. While PennDOT has outlined implementation monitoring steps (e.g., progress reports on tracking, storage evidence, and labeling updates), these efforts cannot substitute for a properly established tool calibration program.

FTA requires PennDOT to ensure SEPTA develops a robust and detailed calibration program before advancing to implementation monitoring. If aspects of the program exist outside the SOP, they must

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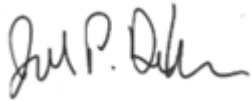
be formally documented, submitted to PennDOT for review, and approved as part of a complete tool calibration program.

PennDOT must submit a revised and comprehensive tool calibration program addressing all identified deficiencies within 60 business days of the date of this letter. This submission must include a detailed explanation of how each issue has been resolved.

If you have any questions, please contact Special Directive Coordinator Syed Ahmed at (202) 603-6765 or syed.ahmed@dot.gov.

We appreciate your continued cooperation and commitment to safety oversight.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joe P. DeLorenzo".

Joe DeLorenzo  
Associate Administrator and  
Chief Safety Officer  
Office of Transit Safety and Oversight

cc: Elizabeth Bonini, Director, State Safety Oversight Office, PennDOT  
J.M. McLaughlin, State Safety Oversight Regional Manager, PennDOT  
Terry Garcia Crews, Regional Administrator, FTA Region 3  
David Burns, General Engineer, FTA Region 3