

ADDENDUM #1 – Pavement Condition Survey & HPMS Data Collection 2025-2028

Date: June 12, 2024

Project Number: SPR-1(129)/109278-128000

County: Statewide

Project Description: Provide Pavement Condition Survey and Roadway Inventory of the state-maintained highway system (SMHS), the National Highway System (NHS) and the Highway Performance Monitoring System (HPMS), Statewide.

Dates Published in Clarion Ledger: May 22nd and May 29th, 2024

From: Stephen Rone – MDOT Director of Consultant Services

Statement of modifications:

The purpose of this addendum is to make the following changes:

- 1. The PROPOSAL submittal date/time stated in the Legal Notice and Request for Proposal (RFP) is 5:00 p.m., Central Time, **Thursday, June 20th, 2024**. This submittal date/time shall be extended to 5:00 p.m., Central Time, **Thursday, July 11th, 2024**.**
- 2. Pages 16-18, PART 3 of the RFP, shall be amended as stated below:**

PART 3 PROJECT DESCRIPTION

The CONSULTANT will provide Pavement Condition Survey and Roadway Inventory of the state-maintained highway system (SMHS), the National Highway System (NHS) and the Highway Performance Monitoring System (HPMS), Statewide.

MDOT prefers the camera configuration for this project, at a minimum, to include the following:

- 1. A high-resolution 360-degree camera**
- 2. Three individual high-resolution forward-facing cameras to collect right of way images (left, right, and center)**
- 3. One high-resolution 3D camera to collect downward pavement digital images**

This contract will include the following:

1. Year One (approximate) – The Year One survey will include collection of condition, GPS, state of the art 360 georeferenced imagery with proper and accurate EXIF metadata tags along with ~~downward pavement/right of way downward~~ digital ~~pavement~~ images. Imagery shall be provided with an index file i.e. a .SHP file or FGDB format indicating image name, the coordinates at which the image was taken, and the route on which the image was taken and mile point along the route. ~~MDOT prefers that imagery shall also be collected and processed into downward pavement/right of way views, and not extracted from the 360 camera perspective views for left, center, right, and rear.~~ Additionally, all imagery shall be provided in a non-proprietary format, ~~specifically Downward pavement imagery shall be provided~~ in the AASHTO MP 47 format. The contract will also provide for the automated post-processing, distress quantification and reporting on 100% of the rightmost through lane on asphalt pavements and visual post-processing, distress quantification and reporting on 100% of the rightmost through lane of concrete pavements. The CONSULTANT will provide a web-based viewer and thumbnail images for this web-based viewer for the survey. The CONSULTANT will provide full-size images for viewing distresses and to assist with quality assurance by MDOT, as well as any distress rating/viewing software. The condition/distress data collection and analysis shall be inclusive of Rutting, Faulting, Cracking, and IRI per the most recent HPMS Field Manual and FHWA rules in 1/10th mile increments processed by route and log mile as well as by pavement analysis section when concurrent sections exist. In addition to these metrics, the data shall also be delivered with the state specific pavement condition rating (PCR) by both pavement analysis sections and 1/10th mile segments. The data collection and extraction shall be performed on Interstate NHS Routes in both directions. Year one will also include any data viewing software and training, for Jackson and District personnel.
2. Year Two (approximate) - The Year Two survey will include the same GPS and imagery requirements of Year One and will also include collection of condition and curve and grade data collected and coded using the newest HPMS field manual specifications. The contract will also provide for both automated and visual post-processing, distress quantification, and reporting on 100% of the rightmost through lane on all pavement segments. All condition and distress data will be used to produce the statewide distress analysis and condition rating calculations. The condition/distress data collection and analysis will be performed on (a) routes on the state-maintained highway system (SMHS) in 1/10th of mile increments by route and log mile in addition to pavement analysis section where present; (b) HPMS sample routes off the state-maintained highway system, and (c) any NHS routes off the (SMHS). Friction data may be collected and reported on the (SMHS). All data from Year Two will be delivered in Year Two along with any additional training or updates needed to the initially delivered software.
3. Year Three (approximate) – The Year Three survey will include the same tasks as Year One as well as a software provision if updates are needed. Additionally, if

any new samples were added to the HPMS system, they shall also be collected per Year Two requirements.

4. Year Four (approximate) - The Year Four survey will include the same tasks as Year Two. If more storage space is required or any software updates are necessary to the delivered software and hardware from Year One, they shall be carried out/added in this year. To account for new and reconstruction projects along with take backs from the county and/or local highway system, Additionally, if any new samples were added to the HPMS system or routes to the NHS system, they shall also be collected per Year Two requirements.

Services shall comply with the current version of the following publications and/or specifications:

1. ASTM E950: Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer-Established Inertial Profiling Reference;
2. ASTM E1926-08: Standard Practice for Computing International Roughness Index of Roads from Longitudinal Profile Measurements;
3. ASTM E1656-11: Standard Guide for Classification of Automated Pavement Condition Survey Equipment;
- ~~4. ASTM E3303-21: Standard Practice for Generating Pavement Surface Cracking Indices from Digital Images;~~
- ~~5. ASTM E 274, Standard Test Method for Skid Resistance of Paved Surfaces Using a Full-Scale Tire;~~
- ~~6. ASTM E501-08 Standard Specification for Standard Rib Tire for Pavement Skid-Resistance Tests;~~
- ~~7. ASTM E524-08 Standard Specification for Standard Smooth Tire for Pavement Skid-Resistance Tests;~~
4. AASHTO M 328-14: Standard Specification for Inertial Profiler;
5. AASHTO R 43-13: Standard Practice for Quantifying Roughness of Pavements;
6. AASHTO R 56-14: Certification of Inertial Profiler Systems;
7. AASHTO R 57-14: Standard Practice for Operating Inertial Profiler Systems;
8. AASHTO R 85-18: Quantifying Cracks in Asphalt Pavement Surfaces from Collected Pavement Images Utilizing Automated Methods;
9. AASHTO R 86-18: Collecting Images of Pavement Surfaces for Distress Detection;
10. AASHTO R 87-18: Determining Pavement Deformation Parameters and Cross Slope from Collected Transverse Profiles;
11. AASHTO R 88-18: Standard Practice for Collecting the Transverse Pavement Profile;
12. AASHTO Standard R36-17: Standard Practice for Evaluating Faulting of Concrete Pavements;
13. AASHTO MP 47: File Format of Two-Dimensional and Three-Dimensional (2D/3D) Pavement Image Data
- ~~14. AASHTO PP 106: Assessment of Static Performance in Transverse Pavement Profiling Systems~~

- ~~15. AASHTO PP 107: Assessment of Body Motion Cancellation in Transverse Pavement Profiling Systems~~
- ~~16. AASHTO PP 108: Assessment of Navigation Drift Mitigation in Transverse Pavement Profiling Systems~~
- ~~17. AASHTO PP 109: Assessment of Highway Performance in Transverse Pavement Profiling Systems~~
- ~~18. AASHTO PP 110: Assessment of Ground Reference Data for Transverse Pavement Profiling System Assessment~~
- ~~19. AASHTO PP 111: Definition of Terms Related to Transverse Pavement Profiling Systems and Ground Reference Equipment~~
14. HPMS Field Manual;
15. MDOT Pavement Data Collection and Processing Guidelines;
16. MDOT Distress Classification Guide;
17. Any applicable federal regulations and rulemakings for pavement performance, including but not limited to 23 CFR 490;
18. MDOT Data Quality Management Plan; and
19. Any other publications listed in the Contract, or as instructed by MDOT.

At the discretion of MDOT, services may be required to comply with the current version of the following publications and/or specifications:

1. ASTM E3303-21: Standard Practice for Generating Pavement Surface Cracking Indices from Digital Images;
2. ASTM E-274, Standard Test Method for Skid Resistance of Paved Surfaces Using a Full-Scale Tire;
3. ASTM E501-08 Standard Specification for Standard Rib Tire for Pavement Skid-Resistance Tests;
4. ASTM E524-08 Standard Specification for Standard Smooth Tire for Pavement Skid-Resistance Tests;
5. AASHTO PP 106: Assessment of Static Performance in Transverse Pavement Profiling Systems
6. AASHTO PP 107: Assessment of Body Motion Cancellation in Transverse Pavement Profiling Systems
7. AASHTO PP 108: Assessment of Navigation Drift Mitigation in Transverse Pavement Profiling Systems
8. AASHTO PP 109: Assessment of Highway Performance in Transverse Pavement Profiling Systems
9. AASHTO PP 110: Assessment of Ground Reference Data for Transverse Pavement Profiling System Assessment
10. AASHTO PP 111: Definition of Terms Related to Transverse Pavement Profiling Systems and Ground Reference Equipment
11. Any other publications listed in the Contract, or as instructed by MDOT.

This Addendum is effective this date and shall be used in the selection of any firms interested in submitting proposals for this Project.