# MDOT Transportation Asset Management Plan

**Meredith Hill**

**MAP-21/FAST Act Coordinator**

**MDOT State Highway Administration**

Transportation Planning Board

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MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

# Presentation Items

- Transportation Asset Management Plan (TAMP)

  – Requirements

  – Elements

  – Timeline

- MDOT Approach to TAMP

- Next Steps

  \* MDOT MTA is developing a Transit Asset Management Plan

# MAP-21/FAST Act Federal Requirements

- MAP-21 establishes requirements for asset management planning

- Surface transportation law moves to performance-based federal-aid program

- FAST Act focuses on performance-based planning, freight assets planning

- TAMP Specifics
  - National Highway System (NHS) bridges and pavement
  - Periodic evaluation of facilities that have repeatedly required repair and reconstruction due to emergency events (Part 667)
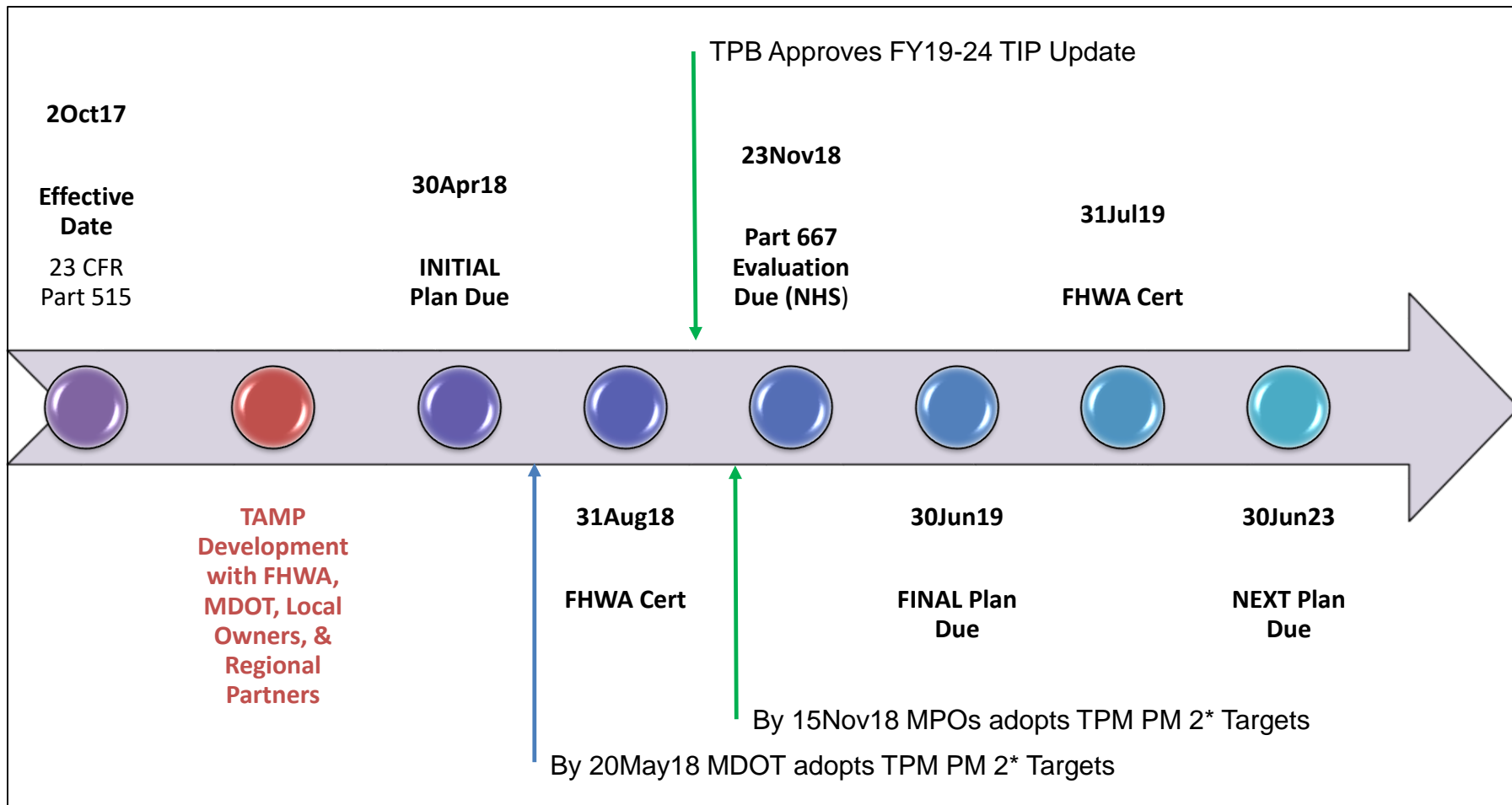
# TAMP Elements

- Inventory & condition for required assets (NHS bridges and pavement, regardless of ownership)

- MDOT objectives, condition, & performance measures with targets

- Performance gap identification

- Life-cycle planning

- Risk management analysis

- Financial plan for 10 years

- Investment & improvement strategies

*Processes* **to support these areas in Draft (April 2018)**
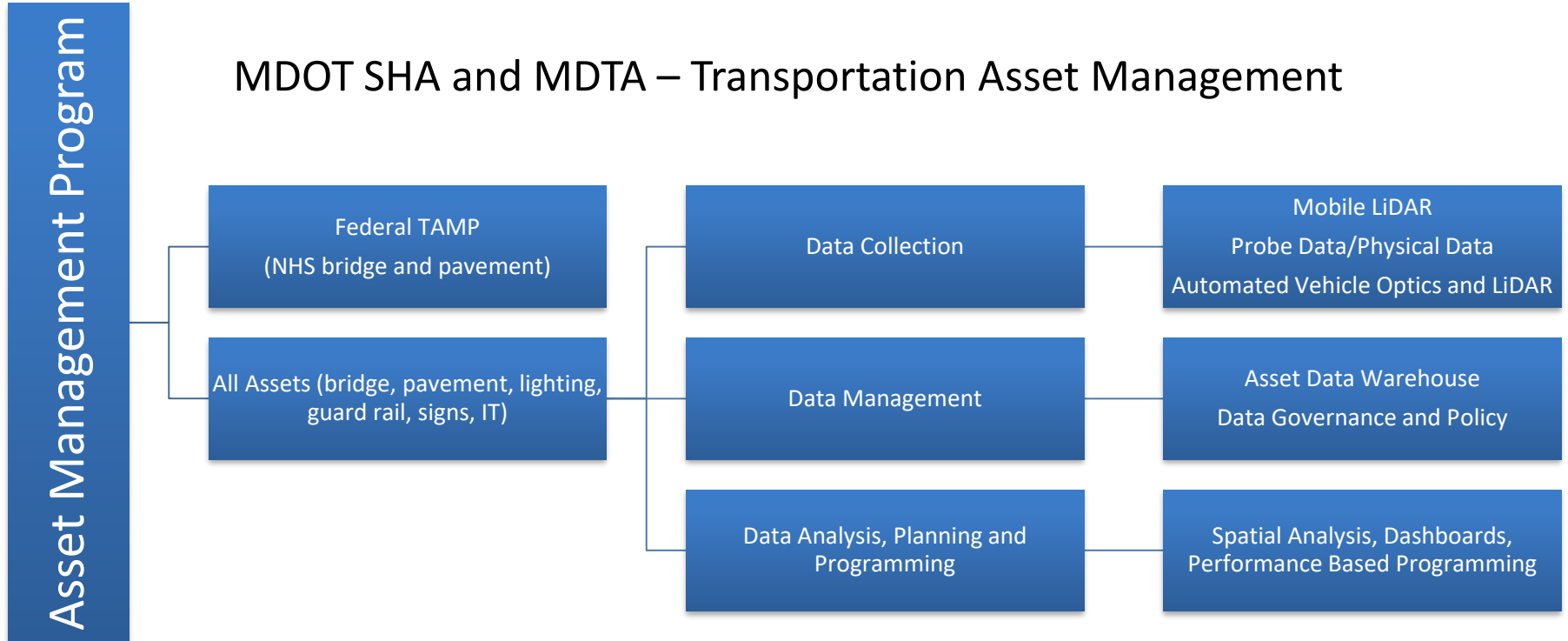
*Analysis* **of these areas submitted in Final (June 2019)**

# MDOT TAMP Timeline

**2Oct17**

**Effective Date**

23 CFR Part 515

**TAMP Development with FHWA, MDOT, Local Owners, & Regional Partners**

**30Apr18**

**INITIAL Plan Due**

**31Aug18**

**FHWA Cert**

By 20May18 MDOT adopts TPM PM 2* Targets

TPB Approves FY19-24 TIP Update

**23Nov18**

**Part 667 Evaluation Due (NHS)**

By 15Nov18 MPOs adopts TPM PM 2* Targets

**31Jul19**

**FHWA Cert**

**30Jun19**

**FINAL Plan Due**

**30Jun23**

**NEXT Plan Due**

*TPM PM 2 refers to MAP-21/FAST Act Transportation Performance Management (TPM) performance measures for which states and MPOs must adopt infrastructure condition targets for performance of NHS bridges and pavements

# MDOT Asset Management Program

**Asset Management Program**

MDOT SHA and MDTA – Transportation Asset Management

| Federal TAMP (NHS bridge and pavement) | | Data Collection | | Mobile LiDAR<br>Probe Data/Physical Data<br>Automated Vehicle Optics and LiDAR |
| --- | --- | --- | --- | --- |
| All Assets (bridge, pavement, lighting, guard rail, signs, IT) | | Data Management | | Asset Data Warehouse<br>Data Governance and Policy |
| | | Data Analysis, Planning and Programming | | Spatial Analysis, Dashboards, Performance Based Programming |

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# MDOT SHA & MDTA TAMP Process

- Partner and Stakeholder Engagement
  - **Completed 2016 - 2017** – Workshops for bridge, pavement, objectives and measures, risk management, & financial and investment strategies
  - **On-Going 2016 - 2018** – Collaboration with regional partners and non-state owners of NHS assets for plan development & transportation performance management (TPM) target setting

- Gap Analysis assessed MDOT SHA asset management against industry best practices and identified opportunities to improve policies, operations, & assets

- Improving data collection, analysis, & sharing practices

# TAMP NHS Inventory and Condition - Bridges

- TPM Performance Measures (Infrastructure Condition) – Percent of NHS bridges classified as in good condition & in poor condition

- Square Feet Deck Area
  - MDOT SHA
  - MDTA
  - Non-State

| NBI Rating Scale (from 0 – 9) | 9  8  7 Good | 6  5 Fair | 4  3  2  1  0 Poor |
|---|---|---|---|
| Deck (Item 58) | ≥7 | 5 or 6 | ≤4 |
| Superstructure (Item 59) | ≥ 7 | 5 or 6 | ≤ 4 |
| Substructure (Item 60) | ≥ 7 | 5 or 6 | ≤ 4 |
| Culvert (Item 62) | ≥ 7 | 5 or 6 | ≤ 4 |

# TAMP NHS Inventory and Condition - Pavement

- TPM Performance Measures (Infrastructure Condition) – Percent of pavement on the interstate & on the non-interstate NHS in good condition & in poor condition
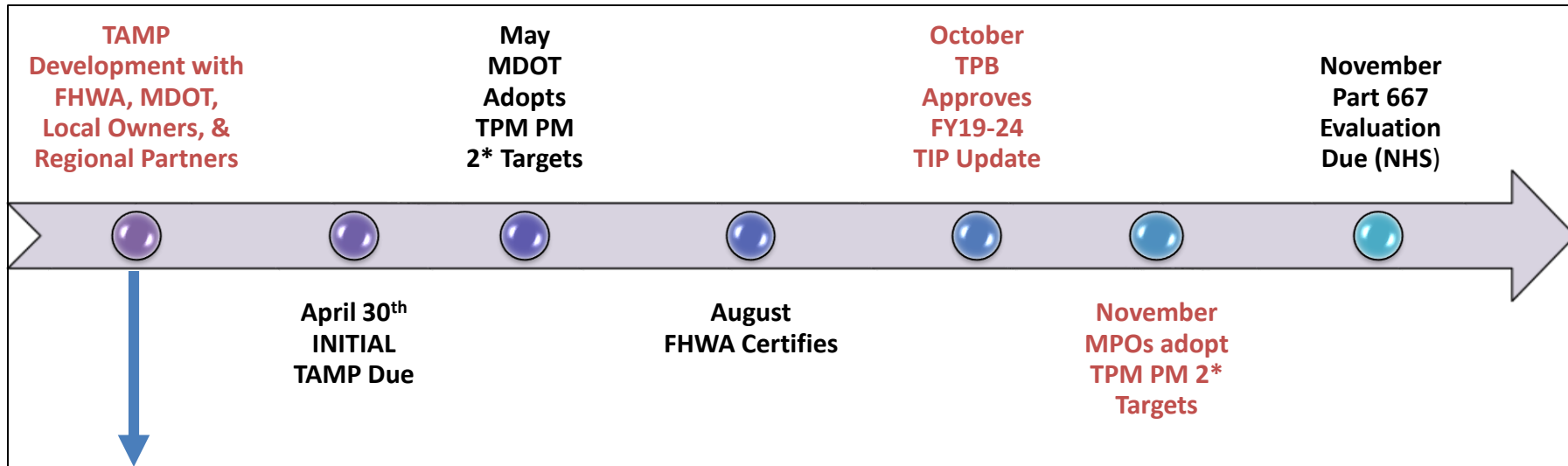
- Lane Miles
  - MDOT SHA
  - MDTA
  - Non-State

|  | Good | Fair | Poor |
|---|---|---|---|
| **IRI** (inches/mile) | <95 | 95-170 95-220* | >170 >220* |
| **Cracking** (%) | <5 | 5-10 | >10 |
| **Rutting** (inches) | <0.20 | 0.20-0.40 | >0.40 |
| **Faulting** (inches) | <0.05 | 0.05-0.15 | >0.15 |

*Urbanized Population >1M

# MDOT SHA and MDTA TAMP Development

- Financial plan

  - Years 1-6 CTP; Years 7-10 as a 6-year rolling average of CTP

- Incorporate risk-based analysis & project planning

- Complete Part 667 evaluation

- Develop risk register

  - Agency, Program, & Project Levels

- Describe strategy for eliminating performance gaps

# Next Steps for 2018

**TAMP Development with FHWA, MDOT, Local Owners, & Regional Partners**

**May MDOT Adopts TPM PM 2* Targets**

**October TPB Approves FY19-24 TIP Update**

**November Part 667 Evaluation Due (NHS)**

**April 30ᵗʰ INITIAL TAMP Due**

**August FHWA Certifies**

**November MPOs adopt TPM PM 2* Targets**

- Asset Owners - Identify planned investments for the NHS by non-state owners
- MDOT is analyzing three required investment scenarios:
  - Funding necessary to meet FHWA thresholds and MDOT performance targets
  - Predicted conditions at reasonably available funding levels
  - Funding necessary to maintain current conditions

*TPM PM 2 refers to MAP-21/FAST Act Transportation Performance Management (TPM) performance measures for which states and MPOs must adopt infrastructure condition targets for performance of NHS bridges and pavements

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# More Information

Meredith Hill

MAP-21/FAST Act Coordinator

MDOT SHA, Innovative Performance Planning Division

410-545-8739

mhill8@sha.state.md.us

http://arcg.is/1r04uH

MWCOG/TPB Resources

Map and informational sheet for the pavement and bridge conditions:
https://gis.mwcog.org/webmaps/tpb/pbpp/pavement_bridge/