

REGIONAL TARGETS FOR TRANSIT ASSET MANAGEMENT

Performance-Based Planning and Programming

2022 Report **DRAFT**



Regional Targets for Transit Asset Management – 2022 Report

DRAFT January 28, 2022

ABOUT THE TPB

The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 23 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

CREDITS

Editor: Eric Randall

Contributing Editors: Antonio Castañeda, Andrew Meese

Design: COG Communications Office

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Jurisdictional and transit agency staff from across the region.

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Executive Summary – 2022 Regional TAM Targets

This report presents the transit asset management (TAM) targets developed for the region for adoption by the National Capital Region Transportation Planning Board (TPB) for 2022. The setting of annual TAM targets is one of the requirements of the performance-based planning and programming (PBPP) rulemakings enacted by the federal government in accordance with the MAP-21 and FAST Act surface transportation acts. Once providers of public transportation have each set their TAM targets, MPOs have 180 days to adopt transit asset targets for their metropolitan planning area to comply with requirements.

Transit asset management (TAM) is “a strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively through the life cycle of such assets.” In accordance with federal requirements, providers of public transportation must adopt annual targets for the performance of their transit assets. Initial TAM targets were adopted by the region’s providers of public transportation in January 2017, following which TPB staff in consultation and coordination with the region’s providers proposed a set of TAM targets for the region that summarized those reported by all agencies in table or matrix format. This summary table of TAM targets was adopted by the TPB on June 2017 as the initial set of regional TAM targets.

Subsequently, the regional TAM targets were developed in accordance with the FTA guidance, which suggests that the MPOs adopt a single regional target for each asset class. The regional targets were developed by calculating the total number of each asset class and the associated target based on the targets of each the region’s providers of public transportation. Figure 5 (Page 13) shows the approved 2020 TAM targets for the region, adopted by the TPB in February 2020.

FTA guidance is for MPOs to approve a new set of TAM targets with each adoption of a new Transportation Improvement Program (TIP) OR Metropolitan Transportation Plan (MTP). The TPB will be adopting a new Plan and TIP in June 2022, so a new set of TAM targets is being adopted in March 2022 to allow inclusion in those products.

Overview of Performance-Based Planning and Programming Requirements

Under the Moving Ahead for Progress in the 21st Century Act (MAP-21) and reinforced in the Fixing America's Surface Transportation (FAST) Act, federal surface transportation regulations require the implementation of performance management requirements through which states and metropolitan planning organizations (MPOs) will “transition to a performance-driven, outcome-based program that provides for a greater level of transparency and accountability, improved project decision-making, and more efficient investment of federal transportation funds.”

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued a set of rulemakings for the implementation of this performance-based planning and programming (PBPP) process. Each rulemaking lays out the goals of performance for a particular area of transportation, establishes the measures for evaluating performance, specifies the data to be used to calculate the measures, and then sets requirements for the setting of targets.

Under the PBPP process, states, MPOs, and providers of public transportation must link investment priorities to the achievement of performance targets in the following areas.

1. Highway Safety
2. Highway Assets: Pavement and Bridge Condition
3. System Performance (Interstate and National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program)
4. Transit Asset Management
5. Transit Safety

The federal *Statewide and Metropolitan Planning Rule*, published May 27, 2016, provides direction and guidance on requirements for implementation of PBPP, including specified measures and data sources, forecasting performance, target-setting, documentation in the statewide and metropolitan long-range transportation plans and Transportation Improvement Programs (TIPs), and reporting requirements.

States measure performance and set targets on a statewide basis and providers of public transportation measure performance and set targets for their transit system. Depending upon the area of performance, targets may be set annually, biennially, or every four years. States and providers of public transportation must also develop supporting strategic plans for monitoring and improving performance in order to achieve their selected targets. In addition to quantitative targets, periodic narrative reports on performance are also required. Target-setting is based on an agency's strategic plan and science-based methodology for forecasting performance based on measured trends and the funding available and programmed for projects that will affect performance.

The MPO is responsible for collecting this information to calculate measures and set targets for the metropolitan planning area as appropriate. MPOs have up to 180 days to adopt targets following the targets being set by state DOTs or providers of public transportation. MPOs must coordinate with the state DOTs and providers of public transportation in setting the metropolitan area targets, which should be based on the strategic plans and funded projects of the cognizant agencies.

Introduction to Transit Asset Management (TAM) Performance and Target Setting

This report presents the transit asset management (TAM) targets being adopted by the National Capital Region Transportation Planning Board (TPB) for 2022. The setting of TAM targets is one of the requirements of the PBPP rulemaking.

The final Transit Asset Management rule was published in the Federal Register on July 26, 2016 and became effective October 1, 2016.¹ Transit asset management (TAM) is “a strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively through the life cycle of such assets.”

Under the final TAM rule, transit providers must collect and report data for four performance measures, covering rolling stock, equipment, infrastructure, and facility condition. For these measures, transit providers have to annually set targets for the fiscal year, develop a four-year TAM plan for managing capital assets, and use a decision support tool and analytical process to develop a prioritized list of investments.

Each provider of public transportation is required to adopt annual targets for the performance of their transit assets. An initial reporting of targets was required by January 1, 2017. Subsequently, mandatory annual target-setting and reporting began with the 2019 fiscal year, with providers required to set targets within four months of the end of the previous fiscal year. Most regional transit providers are on a July-to-June fiscal year; accordingly, they have to set targets for the new fiscal year by the end of October. Only the District of Columbia transit services use the federal fiscal year calendar (October to September) and have until the end of February to set TAM targets for the new fiscal year.

Once providers of public transportation have all set their TAM targets, MPOs have 180 days to adopt transit asset targets for their metropolitan planning area to comply with requirements. Initially, the TPB adopted the first set of transit asset targets for the region in June 2017. Subsequent sets of regional TAM targets were adopted for 2019 in February 2019 and for 2020 in February 2020.

Applicability to Regional Providers

The final TAM rule applies to all recipients and subrecipients of federal transit funds (e.g., Section 53XX funds) that own, operate, or manage capital assets used in the provision of public transportation and requires accounting for all assets used in the provision of public transportation service, regardless of funding source, and whether used by the recipient or subrecipient directly, or leased by a third party.

The federal TAM rulemaking defines two tiers of providers of public transportation. Tier 1 providers are those that operate rail service or more than 100 vehicles in regular service. Tier 2 providers are those operating less than 100 vehicles in regular service. Tier 1 providers must set transit asset targets for their agency, as well as fulfilling other additional reporting and asset management requirements. Tier 2 providers can set their own targets or participate in a group plan with other Tier

¹ <https://www.gpo.gov/fdsys/pkg/FR-2016-07-26/pdf/2016-16883.pdf>

2 providers whereby targets are set for the group as a whole. Note that a parent organization can operate several services, such as bus service and paratransit service, that combined exceed 100 vehicles.

The region has seven Tier 1 providers of public transportation as defined in the federal rulemaking:

1. WMATA: Metrorail, Metrobus, MetroAccess
2. District of Columbia: Streetcar, Circulator
3. Fairfax County: Connector, Community and Neighborhood Services
4. Montgomery County: Ride On
5. Prince George's County: TheBus, Call-A-Bus
6. Potomac and Rappahannock Transportation Commission (PRTC): OmniRide
7. Virginia Railway Express (VRE)

The region has twelve Tier 2 providers as defined in the federal rulemaking, including several small paratransit providers and non-profit providers:

Northern Virginia

1. Alexandria: DASH, DOT
2. Arlington: ART
3. Loudoun County Transit
4. Virginia Regional Transit (VRT)
5. The Arc of Greater Prince William
6. Every Citizen Has Opportunities, Inc. (ECHO)
7. Endependence Center of Northern VA
8. Weinstein Jewish Community Center
9. Prince William Area Agency on Aging

Suburban Maryland

11. Charles County: VanGo
12. Frederick County: TransitIT

All of the Tier 2 providers in the region have chosen to participate in a group plan with their respective state agency: the Maryland Transit Administration (MTA) or the Virginia Department of Rail and Public Transportation (DRPT). Accordingly, there are nine reporting entities in the TPB's metropolitan planning area for 2022.

Providers of public transportation operating within the region but based outside of the TPB's metropolitan planning area, such as MTA Commuter Bus and MARC commuter rail, are not included.

The following schedule for TAM requirements was published in the final rulemaking in July 2016, and subsequently modified by FTA through issued guidance in February and April 2017².

- **By January 1, 2017:** Providers of public transportation were required to establish initial performance targets.
- **By June 30, 2017:** MPOs were required to adopt transit asset targets for the metropolitan region within 180 days.
 - Subsequently, regional transit asset targets shall be adopted with every new long-range plan or Transportation Improvement Program (TIP).

² February 2017 guidance: <https://www.transit.dot.gov/TAM/gettingstarted/htmlFAQs>

April 2017 guidance: <https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/metropolitan-planning-organization-responsibilities>

- **Starting October 2017:** Providers of public transportation report performance data and targets in the National Transit Database (NTD) within four months after fiscal year end:
 - Optional reporting for FY 2017 data and FY 2018 targets.
 - Mandatory reporting for future years, beginning with FY 2018 data and FY 2019 targets by October 31, 2018 (if fiscal year July-June).
 - Starting October 2019, submit a narrative report describing changes in the condition of the provider’s transit system from the previous year and progress made during the year to meet the performance targets.

- **By October 2018:** Providers of public transportation must develop and submit to FTA their initial four-year strategic TAM Plans. Subsequently, these plans must be updated every four years.

TAM Performance Measures

There are four transit asset performance measures, two of which are age-based and two of which are condition-based (see Figure 1):

1. Rolling stock (Age)
2. Equipment: (non-revenue) service vehicles (Age)
3. Infrastructure: rail fixed-guideway track, signals, and systems (Condition)
4. Stations/Facilities (Condition)

Within each of the performance measures, assets are further divided into asset classes. For example, distinct asset classes for buses can be articulated buses, standard buses, or minibuses. Each asset class is measured separately for performance and for target-setting. National Transit Database Form A-90 is the means by which TAM targets are reported to the FTA (see Figure 2), with target and performance for each asset class listed. Note that many of these asset classes are not represented in the National Capital Region

For the age-based performance measures, providers set their own standard – the useful life benchmark (ULB) – for each asset class. The ULB is the anticipated useful lifetime of the asset. Accordingly, each provider in the region can set a different standard for its buses as well as different targets for the anticipated percentage of buses that will exceed those standards, to reflect different degrees of usage and operating conditions, variations in maintenance efforts, etc. This affects the feasibility of comparison among agencies and the integration of data to measure regional performance and set regional targets.

Providers of public transportation measure their performance in accordance with the definitions and requirements of federal rulemaking, including the TAM final rule and the final rule on National Transit Database (NTD) Asset Inventory Reporting. The FTA also published a Guideway Performance Assessment Guidebook and a Facility Performance Assessment Guidebook to provide guidance to providers of public transportation on how to collect data and measure performance for these assets.

Figure 1 – TAM Performance Measures

| | Performance Measure | Asset Classes |
|---|---|---|
| Rolling stock (Age) | Percentage of revenue vehicles within a particular asset class that have met or exceeded useful life benchmark (ULB). | 40 foot bus, 60 foot bus, vans, automobiles, locomotives, rail vehicles |
| Equipment - (non-revenue) service vehicles (Age) | Percentage of vehicles that have met or exceeded their ULB. | Cranes, prime movers, vehicle lifts, tow trucks |
| Infrastructure-rail fixed-guideway track, signals, and systems (Condition) | The percentage of track segments, signal, and systems with performance restrictions. | Signal or relay house, interlockings, catenary, mechanical, electrical and IT systems |
| Stations/ Facilities (Condition) | The percentage of facilities, within an asset class, rated below 3 on the TERM scale. | Stations, depots, administration, parking garages, terminals |

Figure 2 – TAM Performance Measures Form - National Transit Database (A-90) Screenshot

Records - NTD Report Packages
FY 2018 Reporting - 25651 - Full Operating USOA 2018 - 2019

Summary News **Related Actions**

Transit Asset Management Performance Measure Targets (A-90)
 25651 - Full Operating USOA 2018 - 2019 (Full Reporter: Operating) - RY18 Original Submission (Working Data)

There are currently no open issues on this form.

1) Rolling Stock - Percent of revenue vehicles that have met or exceeded their useful life benchmark

| Performance Measure | 2018 Target (%) | 2018 Performance (%) | 2018 Difference | 2019 Target (%) | N/A |
|-------------------------------|-----------------|----------------------|-----------------|-----------------|--------------------------|
| AB - Articulated Bus | | | | | <input type="checkbox"/> |
| BR - Over-the-road Bus | | | | | <input type="checkbox"/> |
| BU - Bus | | | | | <input type="checkbox"/> |
| CU - Cutaway | | | | | <input type="checkbox"/> |
| DB - Double Decker Bus | | | | | <input type="checkbox"/> |
| HR - Heavy Rail Passenger Car | | | | | <input type="checkbox"/> |
| MV - Minivan | | | | | <input type="checkbox"/> |
| OR - Other | | | | | <input type="checkbox"/> |
| VN - Van | | | | | <input type="checkbox"/> |

2) Equipment - Percent of service vehicles that have met or exceeded their useful life benchmark

| Performance Measure | 2018 Target (%) | 2018 Performance (%) | 2018 Difference | 2019 Target (%) | N/A |
|---------------------|-----------------|----------------------|-----------------|-----------------|--------------------------|
| Automobiles | | | | | <input type="checkbox"/> |

³ <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/ntd/A-90.pdf>

2022 Regional TAM Targets

Targets are the threshold for the maximum percentage of assets at or exceeding acceptable standards.

TRANSIT PROVIDER TAM TARGET-SETTING

Following the establishment of initial TAM targets by the providers of public transportation in January 2017, TPB staff in consultation and coordination with the region’s providers developed a set of TAM targets for the region that summarized those reported by all agencies in table or matrix format. The summary of 2022 TAM targets for the nine providers of public transportation in the region that are reporting entities are shown in Figure 3.

Starting in 2019, the regional TAM targets were developed in accordance with the FTA guidance, which suggests that the MPOs adopt a single target for each asset class in the region. The regional targets calculate the total number of each asset class and the associated target based on the targets of each provider of public transportation. Figure 4 shows the formally adopted 2022 TAM targets for the region.

Figure 3 – Summary of Providers’ 2022 TAM Targets - DRAFT

| Reporting Entity | Rolling Stock | Service Vehicles | Rail Infrastructure | Station/ Facility Condition |
|------------------------|------------------|--------------------|---------------------|-----------------------------|
| WMATA | 0% Rail, 3% Bus | 44% ^c | 3.5% | 5% ^f |
| DDOT* | 0% Rail, 0% Bus | n/a | 5% | 0% ^g |
| Ffx. Co. | 10% | 10% ^d | n/a | 0% |
| Mont. Co. | 5% | 50% ^d | n/a | 0% |
| Pr. Geo. Co.* | 34% | n/a | n/a | 0% |
| PRTC | 11% ^b | 25% ^d | n/a | 0% ^g |
| VRE | 0% | 0% ^e | n/a | 0% |
| Maryland Tier 2 (MTA) | 18% ^a | 44.0% ^e | n/a | 0% ^g |
| Virginia Tier 2 (DRPT) | 15% ^a | 25% ^e | n/a | 10% ^g |

a: 40-foot buses; b: 45-foot buses; c: autos; d: trucks; e: service vehicles; f: passenger, g: maintenance/administrative facilities

* Previous year’s data

Figure 4 – 2022 Regional TAM Targets - DRAFT

| Percentage of revenue vehicles that have met or exceeded useful life benchmark | Regional Assets Total | Regional Target |
|--|-----------------------|-----------------|
| AB- Articulated bus | 95 | 2.5% |
| AO- Auto | 253 | 0.0% |
| BR- Over-the-road bus | 214 | 12.4% |
| BU- Bus | 2616 | 6.9% |
| CU- Cutaway bus | 112 | 0.7% |
| HR- Heavy rail passenger car | 866 | 0.0% |
| LR- Light rail vehicle | 6 | 0.0% |
| RL- Commuter rail locomotive | 20 | 0.0% |
| RP- Commuter rail passenger coach | 100 | 0.0% |
| VN- Van | 693 | 0.0% |
| <i>Revenue Vehicle Totals</i> | <i>4975</i> | |

| Percentage of service vehicles that have either met or exceeded their useful life benchmark | | |
|---|-------------|-------|
| Automobiles | 177 | 41.8% |
| Trucks and other Rubber Tire Vehicles | 1407 | 46.7% |
| Steel Wheel Vehicles | 77 | 25.0% |
| <i>Service Vehicle Totals</i> | <i>1661</i> | |

| Percentage of track segments, signals, and systems with performance restrictions (over length in miles) | | |
|---|--------------|------|
| CR - Commuter Rail | 0 | 0.0% |
| HR - Heavy Rail | 234 | 3.5% |
| SR - Streetcar Rail | 5.6 | 5.0% |
| <i>Track Segments Totals</i> | <i>239.6</i> | |

| Percentage of Passenger and Maint. facilities rated below condition 3 on the condition scale | | |
|--|------------|------|
| Passenger Facilities | 113 | 4.1% |
| Passenger Parking Facilities | 87 | 4.3% |
| Maintenance Facilities | 106 | 9.2% |
| Administrative Facilities | 26 | 8.0% |
| <i>Facility Totals</i> | <i>332</i> | |

2020 TAM Targets: Performance vs Targets

Along with reporting targets for the upcoming year, starting in 2019 transit providers were also required to report performance against the previous year's targets, via Form A-90. The matrix of transit providers' 2020 TAM targets can be compared with their reported performance for 2020, the results of which are shown in Figure 8.

This information is still under review for 2021 Performance vs. Targets

Figure 8 – 2020 TAM Targets: Performance vs Targets

| Reporting Entity | Rolling Stock | Actual | Service Vehicles | Actual | Rail Infrastructure | Actual | Station/Facility Condition | Actual |
|------------------------|--------------------|--------------------|------------------|--------|---------------------|--------|----------------------------|--------|
| WMATA | 0% Rail, 0% Bus | 0% Rail, 3% Bus | 11% ^d | 31% | 2.1% | 1.69% | 7% ^f | 7.1% |
| DDOT | 0% Rail, 0% Bus | 0% Rail, 0% Bus | n/a | n/a | 5% | - | 0% ^g | 0% |
| Arl. Co. | 0% | 0% | n/a | n/a | n/a | n/a | 0% | 0% |
| Fairfax Co. | 0% | - | 12% ^d | - | n/a | n/a | 0% | - |
| Mont. Co. | 11% | 14% | 34% ^d | 40% | n/a | n/a | 22% ^g | 22% |
| Pr. Geo. Co. | 4% | 25% | 43% ^d | 25% | n/a | n/a | 0% | 0% |
| PRTC | 8% ^b | 19% | 0% ^e | 50% | n/a | n/a | 0% ^g | 0% |
| VRE | 0% | 0% | 0% ^e | 0% | n/a | n/a | 0% | 0% |
| Maryland Tier 2 (MTA) | 13% ^a | 17% | 15% ^d | 30% | n/a | n/a | 24% ^g | 4% |
| Virginia Tier 2 (DRPT) | 10% | - | 25% ^e | - | n/a | n/a | 10% ^g | - |

a: heavy-duty buses; b: 45-foot buses; c: autos; d: trucks; e: service vehicles; f: passenger; g: maintenance/administrative facilities