

TIER II SPONSORED GROUP TRANSIT ASSET MANAGEMENT PLAN

TDOT Sponsored Group TAM Plan for Rural Transit Agencies

Effective October 1, 2018

*Tennessee
Department of
Transportation*

Acknowledgements

Tennessee Department of Transportation

Matthew Long, Transportation Manager

Kaitlyn McClanahan, Transportation Administration Program Supervisor

George Mitchell, Transportation Compliance Program Supervisor

Christopher Broach, Asset Program Monitor

Simeon Ayton, Procurement Program Monitor

TranSystems Corporation

Gina Trimarco, Planner IV

Andrew Parker, Planner III

Zach Balasonne, Planner III

RLS & Associates

Kelly Shawn

Plan Participant Transit Asset Management Accountable Executives

Adrienne McGarity, Delta Human Resource Agency (DHRA)

Brent Gagley, East Tennessee Human Resource Agency (ETHRA)

Candice Gump, First Tennessee Human Resource Agency (FTHRA)

Buddy Parton, City of Gatlinburg/Gatlinburg Mass Transit System (GMTS)

Jane Hamrick, Mid-Cumberland Human Resource Agency (MCHRA)

John Bucy, Northwest Tennessee Human Resource Agency (Nwthra)

Lynn Wilhoite, City of Pigeon Forge/Pigeon Forge Fun Time Trolley (PFFTT)

Jason Rich, South Central Tennessee Development District (SCTDD)

Chris Kleehammer, Southeast Tennessee Human Resource Agency (SETHRA)

Diana Turner, Southwest Human Resource Agency (SWHRA)

Rebecca Harris, Upper Cumberland Human Resource Agency (UCHRA)

Table of Contents

Index of Tables.....4

ACRONYMS AND DEFINITIONS.....5

CHAPTER 1: INTRODUCTION.....8

 1.1 Overview.....8

 1.2 Transit Providers.....9

 1.3 TAM Plan Requirements/Compliance.....9

 1.4 State of Good Repair Performance Measure..... 11

Chapter 2: Asset Inventory..... 13

 2.1 Data Collection..... 13

 2.2 Rolling Stock..... 13

 2.3 Equipment (Non-Revenue Service Vehicles)..... 15

 2.4 Facilities..... 16

Chapter 3: DECISION SUPPORT TOOLS..... 18

 3.1 Rolling Stock and Equipment (Non-Revenue Service Vehicles)..... 18

 3.2 Facilities..... 20

 3.3 ASSET CONDITION RESULTS..... 22

 3.3.1 Rolling Stock..... 22

 3.3.2 Equipment (Non-Revenue Service Vehicles)..... 23

 3.3.3 Facilities..... 25

Chapter 4: INVESTMENT PRIORITIZATION..... 26

 4.1 Current Funding Level Trends..... 26

 4.2 Prioritized List of Investments..... 26

Chapter 5: National Transit Database (NTD)..... 27

Chapter 6: Plan Updates and Conclusions..... 28

Appendices..... 29

Index of Tables

Table 1: TERM Scale	11
Table 2: TDOT Sponsored Plan State of Good Repair Targets	12
Table 3: Data Inventory	13
Table 4: Rolling Stock Assets by Transit Provider	14
Table 5: Rolling Stock Assets by Asset Type	14
Table 6: Non-Revenue Service Vehicles by Transit Agency	15
Table 7: Facilities with Participant Direct Capital Responsibility	17
Table 8: Decision Support Tool Benchmarks	18
Table 9: Condition Rating for Rolling Stock	19
Table 10: SGR for Rolling Stock Based on ULB	22
Table 11: SGR for Rolling Stock by Asset Based on ULB	22
Table 12: TDOT TAM Score for Rolling Stock	23
Table 13: SGR Non-Revenue Service Vehicles based on ULB	23
Table 14: SGR Non-Revenue Service Vehicles based on Class	24
Table 15: TDOT TAM SCORE for Non-Revenue Service Vehicles	24
Table 16: Facility TERM Ratings	25
Table 17: Current Projected Funding per 2017-2020 STIP	26

ACRONYMS AND DEFINITIONS

Accountable Executive: Means a single, identifiable person who has ultimate responsibility for carrying out the safety management system of a public transportation agency; responsibility for carrying out transit asset management practices; and control or direction over the human and capital resources needed to develop and maintain both the agency's public transportation agency safety plan, in accordance with 49 U.S.C. 5329(d), and the agency's transit asset management plan in accordance with 49 U.S.C. 5326.

Asset Category: Means a grouping of asset classes, including a grouping of equipment, a grouping of rolling stock, a grouping of infrastructure, and a grouping of facilities.

Asset Class: Means a subgroup of capital assets within an asset category. For example, buses, trolleys, and cutaway vans are all asset classes within the rolling stock asset category.

Asset Inventory: Means a register of capital assets, and information about those assets.

Capital Asset: Means a unit of rolling stock, a facility, a unit of equipment, or an element of infrastructure used for providing public transportation.

Decision Support Tool: Means an analytic process or methodology: (1) To help prioritize projects to improve and maintain the state of good repair of capital assets within a public transportation system, based on available condition data and objective criteria; or (2) To assess financial needs for asset investments over time.

Direct Recipient: Means an entity that receives Federal financial assistance directly from the Federal Transit Administration.

Equipment: Means an article of nonexpendable, tangible property having a useful life of at least one year.

Exclusive-Use Maintenance Facility: Means a maintenance facility that is not commercial and either owned by a transit provider or used for servicing their vehicles.

Facility: Means a building or structure that is used in the support of public transportation.

Full Level of Performance: Means the objective standard established by FTA for determining whether a capital asset is in a state of good repair.

Horizon Period: Means the fixed period of time within which a transit provider will evaluate the performance of its TAM Plan. FTA standard horizon period is four years.

Implementation Strategy: Means a transit provider's approach to carrying out TAM practices, including establishing a schedule, accountabilities, tasks, dependencies, and roles and responsibilities.

Investment Prioritization: Means a transit provider's ranking of capital projects or programs to achieve or maintain a state of good repair. An investment prioritization is based on financial resources from all sources that a transit provider reasonably anticipates will be available over the TAM Plan horizon period.

Key Asset Management Activities: Means a list of activities that a transit provider determines are critical to achieving its TAM goals.

Participant: Means a Tier II provider that participates in a group TAM Plan.

Performance Measure: Means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets

Performance Target: Means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Public Transportation System: Means the entirety of a transit provider's operations, including the services provided through contractors.

Recipient: Means an entity that receives Federal financial assistance under 49 U.S.C. Chapter 53, either directly from FTA or as a subrecipient.

Rolling Stock: Means a revenue vehicle used in providing public transportation, including vehicles used for carrying passengers on fare-free services.

Service Vehicle: Means a unit of equipment that is used primarily either to support maintenance and repair work for a public transportation system or for delivery of materials, equipment, or tools.

State of Good Repair (SGR): Means the condition in which a capital asset is able to operate at a full level of performance.

Subrecipient: Means an entity that receives Federal transit grant funds indirectly through a State or a direct recipient.

TERM Scale: Means the five (5) category rating system used in the Federal Transit Administration's Transit Economic Requirements Model (TERM) to describe the condition of an asset: 5.0—Excellent, 4.0—Good; 3.0— Adequate, 2.0—Marginal, and 1.0—Poor.

Tier II Provider: Means a recipient that owns, operates, or manages (1) one hundred(100) or fewer vehicles in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode, (2) a subrecipient under the 5311 Rural Area Formula Program, (3) or any American Indian tribe.

Transit Asset Management (TAM): Means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation.

Transit Asset Management (TAM) Plan: Means a plan that includes an inventory of capital assets, a condition assessment of inventoried assets, a decision support tool, and a prioritization of investments.

Transit Provider (provider): Means a recipient or subrecipient of Federal financial assistance under 49 U.S.C. Chapter 53 that owns, operates, or manages capital assets used in providing public transportation.

Useful life: Means the minimal acceptable period of use in service determined byFTA.

Useful life benchmark (ULB): Means the acceptable period of use in service for a capital asset, as determined by the default benchmark provided byFTA.

CHAPTER 1: INTRODUCTION

1.1 Overview

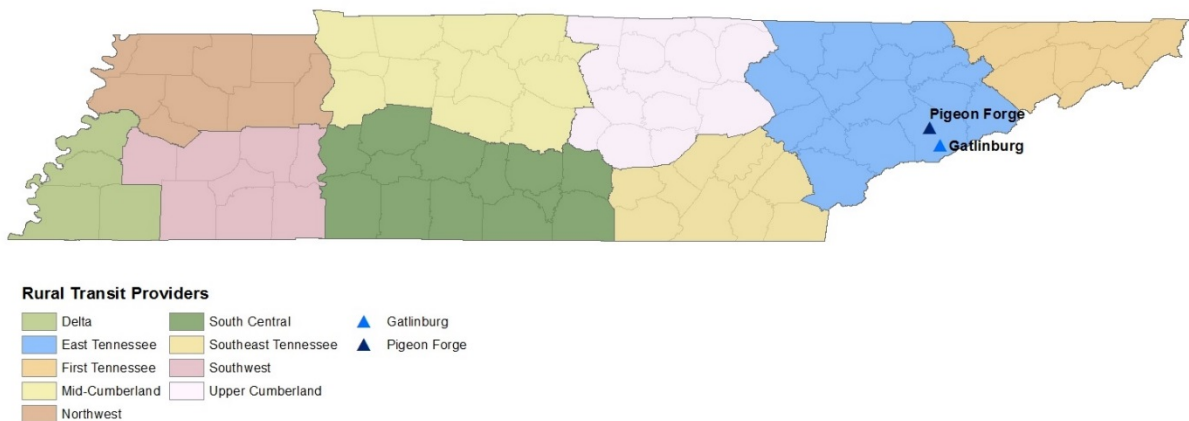
Transit Asset Management (TAM) is a business model that prioritizes funding based on the condition of transit assets in order to achieve or maintain transit networks in a State of Good Repair (SGR).

In 2012, in order to address the capital needs of public transit systems across the country, the Moving Ahead for Progress in the 21st Century (MAP-21) legislation mandated the creation of a TAM system to be implemented by the Federal Transit Administration (FTA). On July 26, 2016, the FTA published requirements that became effective October 1, 2016 which would establish “a strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively through the life cycle of such assets.” 49 U.S.C. 5326(a)(3). These requirements state that each agency must develop a Transit Asset Management (TAM) Plan if it owns, operates or manages capital assets used to provide public transportation and receives federal financial assistance under 49 U.S.C. Chapter 53 as a recipient or subrecipient.

As the State Department of Transportation that serves as the administrator and recipient of FTA funds, the Tennessee Department of Transportation (TDOT) opted to sponsor a Group Transit Asset Management (TAM) Plan for their Tier II subrecipient agencies that receive Section 5311 Rural Area Formula Program funding. All eleven of TDOT’s rural providers qualify as Tier II operators and are part of the TDOT Group TAM Plan as described in Section 1.2.

1.2 Transit Providers

This Group TAM Plan covers eleven rural transit systems in Tennessee. Nine transit providers (eight human resource agencies and one developmental district) cover regional rural transportation needs in 94 of 95 counties in the state and two locally operated rural transit providers (Gatlinburg and Pigeon Forge) that operate in the tourist areas of Sevier County. The 11 agencies combined provide demand response, flex route, and fixed route services.



1.3 TAM Plan Requirements/Compliance

The Group Transit Asset Management (TAM) Plan will fulfill the requirements of the Federal Transit Administration's (FTA) Final Rule, Volume 81, No. 143, on Transit Asset Management. The rule encompasses a state of good repair and the data collection, prioritization, and data delivery to the National Transit Database (NTD).

A Tier II Group TAM Plan includes four (4) elements of the Final Rule as follows:

- Inventory of Capital Assets: *An inventory of the number and type of capital assets to include: rolling stock, facilities, and equipment - 49CFR§625.25 (b)(1)*

- Condition Assessment: *A condition assessment of those inventoried assets for which the transit provider has direct ownership and/or capital responsibilities - 49CFR§625.25 (b)(2)*
- Decision Support Tools: *A description of the analytical processes and decision support tools that the Authority uses to estimate capital investment needs over time, and develops its investment prioritization - 49CFR§625.25 (b)(3)*
- Investment Prioritization: The list of project-based prioritization of investments. - 49CFR§625.25 (b)(4)

The implementation deadline for the TAM Plan to become effective is October 1, 2018. The TAM Plan must cover a horizon period and be updated in its entirety at least four years. The Plan can be amended as needed, or when there is a significant change to the asset inventory, condition assessment or investment prioritization.

In addition to the TAM Plan, the TAM Final Rule requires the submission of two additional reports to the FTA's National Transit Database (NTD) with the annual reporting package.

- The *Data Report* should describe the condition of the transportation system currently and the SGR performance targets for the upcoming year
- The *Narrative Report, which will be required beginning in FFY 2019*, should describe the changes in the transportation system condition and report progress on meeting the performance targets from the prior year, and describe any revisions to the established goals.

Each transit provider must designate an Accountable Executive to ensure appropriate resources for implementing the agency's TAM Plan. The Accountable Executive of each participating agency is expected to approve the Plan and is ultimately responsible for implementation of the Plan at the participant agency.

1.4 State of Good Repair Performance Measure

Each agency is required to establish annual State of Good Repair (SGR) performance measures and targets for each asset category. As the group sponsor, TDOT has established statewide targets. Participating agencies may develop more restrictive targets. TDOT will report on the statewide targets for SGR measures in the following asset categories:

- **Rolling Stock** (revenue vehicles): Percent of vehicles that have either met or exceeded their Useful Life Benchmark (ULB). Condition ratings for vehicles are expressed in terms of the percentage of assets that are at or beyond the ULB -based on FTA Circular 9030.1D, paragraph 4a.
- **Equipment** (including non-revenue service vehicles): Percent of assets that have either met or exceeded their ULB.
- **Facilities:** Percent of facilities rated below condition 3 on the FTA TERM scale shown in Table 1.

Table 1: TERM Scale

5	Excellent	<ul style="list-style-type: none">• No visible defects, new or near new condition• May still be under warranty (if applicable)
4	Good	<ul style="list-style-type: none">• Good condition, but no longer new,• may be slightly defective or deteriorated, but is overall functional
3	Adequate	<ul style="list-style-type: none">• Moderately deteriorated or defective; but has not exceeded useful life
2	Marginal	<ul style="list-style-type: none">• Defective or deteriorated in need of replacement; exceeded useful life
1	Poor	<ul style="list-style-type: none">• Critically damaged or in need of immediate repair; well past useful life

TDOT established the following SGR targets for rolling stock and equipment (i.e. non-revenue service vehicles) effective January 1, 2017 and submitted them to the FTA, as well as provided them to all Tennessee Metropolitan Planning Organizations for reference in the establishment of their MPO goals.

Table 2: TDOT Sponsored Plan State of Good Repair Targets

Rolling Stock

TDOT utilizes the FTA default ULB for revenue vehicle targets.

Vehicle Type	FTA Default Useful Life Benchmark	TDOT-Set Performance Measure Target
Automobile (AO)	8	Less than 25% of automobiles will exceed the ULB
Bus (BU)	14	Less than 25% of buses will exceed the ULB
Cutaway Bus (CU)	10	Less than 25% of cutaway busses will exceed the ULB
Minivan (MV)	8	Less than 25% of minivans will exceed the ULB
Other Rubber Tire (OR)	14	Less than 25% of other rubber tire vehicles will exceed the ULB
Van (VN)	8	Less than 25% of vans will exceed the ULB

Equipment (Non-Revenue Service Vehicles)

TDOT utilizes the FTA default ULB for non-revenue service vehicles performance targets.

Vehicle Type	FTA Default Useful Life Benchmark	TDOT-Set Performance Measure Target
Automobile	8	Less than 25% of automobiles will exceed the ULB
Trucks/Other Rubber Tire	14	Less than 25% of other rubber tire vehicles will exceed the ULB

Facilities

TDOT utilizes the FTA TERM scale for facility conditioning targets.

Facility Type	FTA TERM RATING	TDOT-Set Performance Measure Target
Administrative/Maintenance	3	Less than 25% Administrative/Maintenance Facilities rated below a 3
Passenger/Parking	3	Less than 25% Passenger/Parking Facilities will be below a 3

Chapter 2: Asset Inventory

2.1 Data Collection

The TAM final rule requires the transit provider to assess all assets for which they have direct or partial capital responsibility, including those that are owned by a different public agency or private entity.. The three categories of assets included are rolling stock, equipment, and facilities. The TAM Plan is to have an inventory of all capital assets in each category that the transit provider owns, operates, or manages.

2.2 Rolling Stock

For the purposes of this Plan, rolling stock is considered to be revenue service vehicles used for the transport of passengers. As part of the data collection process, each transit provider submitted their rolling stock and service vehicles in an Excel spreadsheet. The following information was requested by TDOT to be consistent with internal perpetual inventory and National Transit Database (NTD) reporting requirements.

Table 3: Data Inventory

Asset Type	Type of Usage
RVI Code	Anticipated Disposal Date
Model Description	2018 Condition
Vehicle Identification Number (VIN)	2018 Odometer Reading
Make/Manufacturer	Dedicated Fleet
Manufacturer Year	Fuel Type
Tag Number	Other Fuel Type
ADA Vehicle	Dual Fuel Type
Agency Assigned Vehicle Number	Vehicle Length
Current Status	Seating Capacity
Total Item Cost	NTD Funding Type
Beginning Active Service Date	Ownership Type
Purchased Condition	Supports Another Mode/TOS
Depreciation Method	Emergency Contingency Vehicles
Yearly Depreciation Amount	

Table 4 depicts the total rolling stock vehicles by asset type for each transit provider. Asset types are prescribed by the FTA in NTD reporting. There are a total of 1,086 revenue rolling stock assets that are inventoried, conditioned and reported. Table 5 provides the total of each revenue asset type included in the Group TAM Plan. Appendix A provides the inventory of revenue vehicles and equipment (non-revenue vehicles). Appendix D gives a visual breakdown of each participating agency's complete rolling stock and equipment inventory in relation to the established SGR goals.

Table 4: Rolling Stock Assets by Transit Provider

DHRA	CU	9	MCHRA	MV	27	SETHRA	AO	16
	MV	11		VN	99		CU	74
	VN	33		Subtotal	126		MV	8
Subtotal		53				Subtotal		98
ETHRA	CU	126	NWTHRA	VN	101	SWHRA	CU	37
	MV	17		Subtotal	101		MV	6
Subtotal		143					VN	56
FTHRA	AO	2	PFFTT	BU	33	Subtotal		99
	CU	2		CU	4	UCHRA	BU	3
	MV	42		OR	10		CU	17
	VN	69		VN	2		MV	1
Subtotal		115	Subtotal		49		VN	72
GMTS	BU	20	SCTDD	BU	16	Subtotal		93
	VN	1		MV	21	Total Rolling Stock:		
Subtotal		21		Subtotal		188	1086	

Table 5: Rolling Stock Assets by Asset Type

AO	18	CU	269	OR	10
BU	72	MV	133	VN	584

2.3 Equipment (Non-Revenue Service Vehicles)

Non-revenue service vehicles used for transportation purposes (e.g. supervisor vehicles) are included as equipment. Equipment with an acquisition value between \$10,000 and \$50,000 may be considered part of an administrative or maintenance facility. If equipment is valued at \$50,000 or more, or is a piece of equipment that is movable and can be taken to a different location, it needs to be inventoried separately. If the equipment is physically attached to the facility, even if valued over \$50,000 (e.g. a bus washer), it is considered as part of the facility and is included in the facility condition assessment.

No agency had equipment valued at \$50,000 or greater that was not considered to be part of a facility.

Eight of the eleven agencies use non-revenue service vehicles which are used for transportation purposes. These 41 vehicles are detailed in Table 6.

Table 6: Non-Revenue Service Vehicles by Transit Agency

DHRA	Non-Revenue Automobile	1	PFFTT	Non-Revenue Automobile	3
	Truck/ Other Rubber Tire	1		Truck/ Other Rubber Tire	2
	Subtotal	2		Subtotal	5
ETHRA	Non-Revenue Automobile	1	SETHRA	Non-Revenue Automobile	1
	Truck/ Other Rubber Tire	2		Truck/ Other Rubber Tire	4
	Subtotal	3		Subtotal	5
FTHRA	Non-Revenue Automobile	5	SWHRA	Non-Revenue Automobile	1
	Truck/ Other Rubber Tire	1		Truck/ Other Rubber Tire	1
	Subtotal	6		Subtotal	2
GMTS	Non-Revenue Automobile	4	UCHRA	Non-Revenue Automobile	7
	Truck/ Other Rubber Tire	1		Truck/ Other Rubber Tire	6
	Subtotal	5		Subtotal	13

Total Non-Revenue Service Vehicles: 41

2.4 Facilities

Agencies are required to report the overall condition of all facilities for which they have direct or shared capital responsibility. A single facility is defined as one building. The TAM final rule established performance measures to be reported to the NTD Asset Inventory Module (AIM) at 49 CFR part 625, Subpart D - Performance Management. The TAM Facility Performance Measure Reporting Guidebook (*Version 1.2 March 2018*) outlines the calculation of the Facility Condition Assessment for reporting to the NTD. Facility condition assessments must be conducted by assessing the condition of and assigning a rating for facility assets using FTA's TERM scale shown in Table 1. The 2017 AIM Manual identifies all facility types that will be reported to the NTD. Each of these facility types and any other building where transit administrative, maintenance, or operations functions are conducted should be considered an independent facility even when it is adjacent to or on the same property as another building.

Administrative and Maintenance Facilities

- Management and supporting activities for transit operations
- Facilities for customer information or ticket sales
- Facilities where routine or heavy maintenance and repairs are done

Passenger and Parking Facilities

- All passenger stations that are significant enclosed structures used for items such as ticketing, information, restrooms and concessions. Bus stop shelters are not considered to be passenger stations.
- Parking facilities including park & ride lots and parking garages that are immediately adjacent to passenger facilities.

There are a total of 65 transit facilities utilized for operations and administration of public transit services by the participating agencies in the Group TAM Plan (see Appendix B). Of these 65 facilities, transit agencies have direct capital responsibility for 19 facilities (see Table 7). Only facilities where the transit provider has direct capital responsibility need to go through a condition assessment and be included in the TAM Plan.

Table 7: Facilities with Participant Direct Capital Responsibility

TRANSIT PROVIDER	FACILITY NAME/LOCATION	TYPE
ETHRA	Loudon County Facility	Maintenance
Gatlinburg	Main Office	Administration
FTHRA	Main Office	Administration
FTHRA	TMD Garage	Maintenance
NWTHRA	Main Office	Administration and Maintenance
Pigeon Forge	Main Office	Administration
Pigeon Forge	Park and Ride	Passenger and Parking
Pigeon Forge	Trolley Maintenance	Maintenance
SCTDD	Main Office	Administration
SETHRA	Main Office	Administration and Maintenance
SETHRA	Dunlap Storage	Administration
SETHRA	Polk County Office	Administration
SETHRA	Bradley County Facility	Administration and Maintenance
SWHRA	Madison Co. Community Service Center	Administration
SWHRA	Main Office	Administration and Maintenance
UCHRA	Main Office	Administration
UCHRA	Garage	Maintenance
UCHRA	Cumberland County Office	Administration
UCHRA	Jackson County Office	Administration

Chapter 3: DECISION SUPPORT TOOLS

In addition to the State of Good Repair (SGR) Goals, TDOT established TAM support tools to assist in evaluating progress toward these goals. These decision support tools are based upon tangible criteria related to asset performance. These decision support tools can help TDOT and the participating agencies determine and predict the cost to improve asset conditions at various stages of the asset life cycle, while balancing prioritization of capital, operating and expansion needs.

3.1 Rolling Stock and Equipment (Non-Revenue Service Vehicles)

In order to report on the State of Good Repair for rolling stock and equipment to the NTD data base, the **Group TAM Plan rolling stock assets have been calculated based solely on an asset's relation to the Age/Useful Life Benchmark (ULB)**. The ULB utilized is the ULB benchmark established by the FTA and reflected in Table 2.

In order to establish investment prioritization for both categories, TDOT has established **a decision support tool that uses a combination average of ULB, mileage, and condition rating** (i.e. "TDOT TAM Score"). TDOT has established the following mileage and condition performance targets (See Tables 8 and 9):

Table 8: Decision Support Tool Benchmarks

Asset Class	FTA ULB	USEFUL LIFE	MIN. MILEAGE
Automobile (AO)	8	4	100,000
Cutaway Bus (CU)	10	5	150,000
Minivan (MV)	8	4	100,000
Other Rubber Tire Vehicles (OR)	14	7	200,000
Van (VN)	8	4	100,000
Bus (BU)	14	7	200,000

Useful Life			Mileage		
5	up to 50%	Min Useful Life	5	up to 50%	Min Mileage
4	51-100%	Min Useful Life	4	51-100%	Min Mileage
3	Up to 150%	Min Useful Life	3	Up to 150%	Min Mileage
2	150-200%	Min Useful Life	2	150-200%	Min Mileage
1	Over 200%	Min Useful Life	1	Over 200%	Min Mileage

The condition assessment for rolling stock uses a rating scale to evaluate the current maintenance record for each vehicle. Each transit provider was asked to assess rolling stock by using the following rating scale:

Table 9: Condition Rating for Rolling Stock

5	Excellent	<ul style="list-style-type: none"> • Brand new, • No major problems exist • Only routine preventive maintenance.
4	Good	<ul style="list-style-type: none"> • Elements are in good working order • Requiring only nominal or infrequent minor repairs (greater than 6 months between minor repairs).
3	Fair	<ul style="list-style-type: none"> • Requires frequent minor repairs OR (less than 6 months between repairs) • Infrequent major repairs (more than 6 months between major repairs).
2	Poor	<ul style="list-style-type: none"> • Requires frequent major repairs (less than 6 months between major repairs).
1	Bad	<ul style="list-style-type: none"> • In a state where continued use presents potential problems.

TDOT calculated an aggregate condition score for each asset, and asset type by combining the three performance measure targets for each asset. The raw condition rating score extends to a .00 decimal to serve as an additional factor in the decision support tool to determine which assets across the state are in not in a SGR.

3.2 Facilities

To determine the overall condition of a facility, the following *primary and secondary* levels *were* inspected and given a TERM scale rating:

Substructure	Basement
	Foundation
Shell	Superstructure/Structural Frame
	Roof
	Exterior
	Shell Appurtenances
Interiors	Partitions
	Stairs
	Finishes
	Passenger Areas
Conveyance	Elevators
	Escalators
	Lifts
Plumbing	Fixtures
	Water Supply
	Sanitary Waste
	Rain Water Drainage
HVAC	Energy Supply
	Heating/Cooling generation and distribution
	Testing, balancing, controls, and instrumentation
	Chimneys and vents
Fire Protection	Sprinklers
	Standpipes
	Hydrants and other fire protection specialties
Electrical	Electrical Service & Distribution
	Lighting & Branch wiring (interior/exterior)
	Communications & Security
	Other Electrical systems

Equipment	Equipment related to the function of the facility
	Equipment related to Fare Collection
	Other major equipment related to the function of the facility
Site	Roadways/Driveways
	Parking Lots
	Pedestrian Areas
	Site Development
	Landscaping
	Site Utilities

TDOT assessed each facility by its individual aspects (secondary level assessments) and then calculated those assessments to determine the overall condition of the asset. TDOT decided to assess all of the participating agency facilities in the first year of the TAM Plan, which means that the facilities are not required to be reassessed until 2022, or four years after this Plan has been submitted.

As per FTA regulations, any facility conditioned with a TERM rating below a "3" is considered to not be in a State of Good Repair.

3.3 ASSET CONDITION RESULTS

As stated previously, TDOT selected two methods for the condition analysis: 1) using the FTA default ULB benchmarks and 2) using the decision support tool metric that combines age, condition, and mileage (i.e. the “TAM Plan score”).

3.3.1 Rolling Stock

The 1,086 rolling stock assets were compared to the ULB performance targets set by FTA for each asset class to determine what percentage meet a state of good repair. As Table 10 indicates, 82.78% of the total Group TAM Plan assets are in a state of good repair based on the ULB benchmarks. Table 11 breaks down the information by asset type. All asset types, with the exception of automobiles, have met the TDOT set performance measure targets as shown in Table 2.

Table 10: SGR for Rolling Stock Based on ULB

	Exceeded ULB	Below ULB	Total
Number	187	899	1086
Percentage	17.22%	82.78%	100%

Table 11: SGR for Rolling Stock by Asset Based on ULB

Asset Type	Total Number	% Exceeded ULB	% Under ULB
AO	18	38.89%	61.11%
BU	72	8.33%	91.67%
CU	269	2.60%	97.40%
MV	133	24.81%	75.19%
OR	10	0.00%	100.00%
VN	584	22.95%	77.05%

Table 12 shows the percentage of the Group Plan vehicles in each category using the TDOT TAM Plan combined scoring methodology (age/mileage/condition). In this scenario, it was assumed that a rounded condition score of 3.0 and above rating is in state of good repair. As shown, 80.20% of the vehicles are in SGR.

Table 12: TDOT TAM Score for Rolling Stock

	1.00-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.00	Total
Number	35	180	298	269	304	1086
Percentage	3.22%	16.57%	27.44%	24.77%	27.99%	100%
% Grouped	19.80%		80.20%			100%

See Appendix C for the full list of the ranked Group TAM Plan assets.

See Appendix D for individual plan participant ranked assets.

3.3.2 Equipment (Non-Revenue Service Vehicles)

The non-revenue service vehicles were compared to the ULB performance targets set by FTA for each asset class to determine what percentage have exceeded the ULBs. As Table 13 indicates, 36.59% of the total Group Plan non-revenue service vehicle assets are in a state of good repair based on the ULB benchmarks. As Table 14 indicates, neither class of non-revenue asset met the TDOT set performance measure targets as shown in Table 1.

Table 13: SGR Non-Revenue Service Vehicles based on ULB

	Exceeded ULB	Below ULB	Total
Number	26	15	41
Percentage	63.41%	36.59 %	100%

Table 14: SGR Non-Revenue Service Vehicles based on Class

Asset Type	Total Number	% Exceeded ULB	% Under ULB
Non-Revenue/Service Automobile	23	52.17 %	47.83 %
Truck/Other Rubber Tire	18	77.78 %	22.22 %

Table 15 shows the percentage of the Group Plan non-revenue vehicles in each category using the TDOT TAM Plan combined scoring methodology (age/mileage/condition). As shown, 100% of the vehicles are in SGR.

Table 15: TDOT TAM SCORE for Non-Revenue Service Vehicles

	1.00-1.49	1.50-2.49	2.50-3.49	3.50-4.49	4.50-5.0	Total
Number	0	0	7	29	5	41
Percentage	0%	0 %	17.07%	70.73 %	12.20 %	100%
% Grouped	0%		100%			100 %

3.3.3 Facilities

The overall ratings for each facility can be found in the Table 16 (all raw scores were rounded up for ratings that are consistent with NTD reporting fields).

Table 16: Facility TERM Ratings

Transit Provider	Facility Name/Location	Type	Rating
ETHRA	Loudon Co. Facility	Maintenance	4
GMTS	Main Office	Administrative	4
FTHRA	Main Office	Administrative	3
FTHRA	TMD Garage	Maintenance	3
NWTHRA	Main Office	Admin/Maintenance	3
PFFTT	Main Office	Administrative	4
PFFTT	Park and Ride	Passenger Parking	3
PFFTT	Trolley Maintenance	Maintenance	3
SCTDD	Main Office	Administrative	4
SETHRA	Main Office	Administrative	4
SETHRA	Dunlap Storage	Administrative	4
SETHRA	Polk Co. Office	Administrative	3
SETHRA	Bradley Co. Facility	Admin/Maintenance	4
SWHRA	Madison Co. Service Center	Administrative	4
SWHRA	Main Office	Admin/Maintenance	4
UCHRA	Main Office	Administrative	4
UCHRA	Garage	Maintenance	4
UCHRA	Cumberland Co. Office	Administrative	3
UCHRA	Jackson Co. Office	Administrative	4

Chapter 4: INVESTMENT PRIORITIZATION

4.1 Current Funding Level Trends

There are various funding sources that are resources for the replacement of rolling stock, equipment and facilities. These funding sources and the estimated annual amounts for FY 2018, 2019, and 2020 are shown in Table 17. Transit service providers need to fill out grant applications and compete for funding resources for vehicle replacement.

Table 17: Current Projected Funding per 2017-2020 STIP

Project Year	Project Name	Estimated Funds Available
2018	5339b Replacements - Rural Apportionment	\$ 4,063,918.00
2018	Tennessee IMPROVE Funds	\$ 17,000,000.00
2018	5310 Program Allocation	\$ 4,697,000.00
2018	5339 Replacement Program	\$ 2,648,000.00
2018	5311 Rural Program Allocation	\$ 47,990,000.00
2019	Tennessee IMPROVE Funds	\$ 21,000,000.00
2019	5310 Program Allocation	\$ 5,167,000.00
2019	5311 Program Allocation	\$ 52,787,000.00
2019	5339 Replacement Program	\$ 2,330,000.00
2020	5310 Program Allocation	\$ 5,684,000.00
2020	5311 Program Allocation	\$ 58,067,000.00
2020	5339 Replacement Program	\$ 3,205,000.00

4.2 Prioritized List of Investments

TDOT will perform an investment prioritization analysis on an annual basis in order to determine what capital investments are needed to maintain a SGR and meet their performance targets. The Group TAM Plan investment prioritization policy is to replace rolling stock and non-revenue service vehicles starting with the worst ranked vehicles using the TDOT "TAM Plan Score" and continuing until the funding has been expended. A complete ranked list can be found in Appendix C.

Chapter 5: National Transit Database (NTD)

As part of the TAM Plan requirements, TDOT will report on an annual basis, starting in FY 2019, a data report and a narrative report to the FTA's National Transit Database (NTD) which contains the following information:

- Inventory of assets
- SGR performance targets for the next fiscal year
- Condition inspection assessments and performance measures of capital assets
- A narrative that provides a description of any change in the condition of the transit providers' transit systems or operations from the previous year, and describes the progress made during the reporting year to meet the performance targets set in the previous reporting year.

Chapter 6: Plan Updates and Conclusions

TDOT will set SGR performance targets for each applicable asset class on an annual basis for each fiscal year. These performance targets will be set and communicated by January 1st of each year. SGR performance targets are based on realistic expectations derived from the most recent available data (ULB/condition/mileage), FTA performance measure criteria, and the financial resources from Section 5339 and 5310 funds that TDOT estimates will be available during the TAM Plan horizon period for capital planning purposes. The Accountable Executive for each transit agency will provide input on setting annual performance targets prior to submission to FTA/NTD.

The TAM Plan will be reviewed on an annual basis. The document covers a horizon period that begins with the completion of the initial TAM Plan on October 1, 2018, and concludes four years later on September 30, 2022.

Appendices

To gain access to this information, please send a request to:

TDOT.MultiModalAdmin@tn.gov