Transportation Performance Management
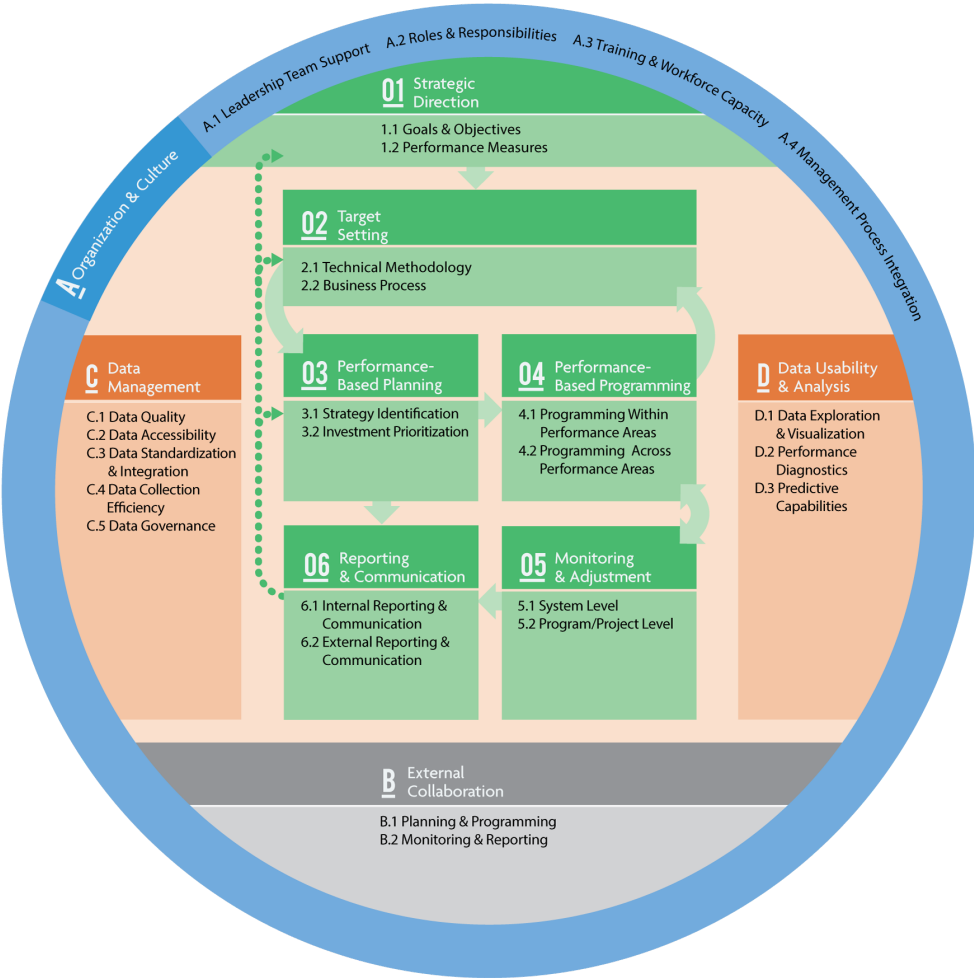
Non-Discrimination Policy Statement

Transportation Performance Management Framework

There are ten components to the Transportation Performance Management (TPM) Framework. These activities don't necessarily happen in order.

Organization and Culture: Institutionalization of a transportation performance management culture within the organization, as evidenced by leadership support, employee buy-in, and embedded organizational structures and processes that support transportation performance management.

External Collaboration and Coordination: Established processes to collaborate and coordinate with agency partners and stakeholders on planning/ visioning, target setting, programming, data sharing, and reporting. External collaboration allows agencies to leverage partner resources and capabilities, as well as increase understanding of how activities impact and are impacted by external factors

Data Management: A set of coordinated activities for maximizing the value of data to an organization. It includes data collection, creation, processing, storage, backup, organization, documentation, protection, integration, dissemination, archiving, and disposal. Well-managed data are essential for a robust TPM practice.

Data Usability and Analysis: Existence of useful and valuable data sets and analysis capabilities available in accessible, convenient forms to support transportation performance management. While many agencies have a wealth of data, such data are often disorganized, or cannot be analyzed effectively to produce useful information to support target setting, decision making, monitoring, or other TPM practices.

Strategic Direction: The establishment of an agency's focus through well-defined goals and objectives, enabling assessment of the agency's progress toward meeting goals and objectives by specifying a set of aligned performance measures. The Strategic Direction is the foundation upon which all transportation performance management rests.

Target Setting: The use of baseline data, information on possible strategies, resource constraints, and forecasting tools to collaboratively establish a quantifiable level of performance the agency wants to achieve within a specific time frame. Targets make the link between investment decisions and performance expectations transparent across all stakeholders.

Performance-Based Planning: The use of agency goals and objectives and performance trends to drive the development of strategies and priorities in the long-range transportation plan and other performance-based plans and processes. The resulting planning documents become the blueprint for how an agency intends to achieve its desired performance outcomes.

Performance-Based Programming: The use of strategies and priorities to guide the allocation of resources to projects that are selected to achieve goals, objectives, and targets. Performance-based programming establishes clear linkages between investments made and expected performance outputs and outcomes.

Monitoring and Adjustment: A set of processes used to track and evaluate actions taken and outcomes achieved, thereby establishing a feedback loop to refine planning, programming, and target setting decisions. It involves using performance data to obtain key insights into the effectiveness of decisions and identifying where adjustments need to be made in order to improve performance.

Reporting and Communication: The products, techniques, and processes used to communicate performance information to different audiences for maximum impact. Reporting is an important element for increasing accountability and transparency to external stakeholders and for explaining internally how transportation performance management is driving a data-driven approach to decision making.

Performance Management Elements and Framework

FHWA defines Transportation Performance Management (TPM) as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Performance management outcomes are grouped into six elements.

National Goals: Congressionally established goals or program purpose to focus the Federal-aid highway program into specific areas of performance.

Measures: FHWA-established measures to assess performance/condition in carrying out performance-based Federal-aid highway programs.

Targets: Targets established by Federal-aid highway funding recipients for the measures to document future performance expectations

Plans: Development of strategic and/or tactical plans by Federal funding recipients to identify strategies and investments that address performance needs.

Reports: Development of reports by Federal funding recipients that document progress toward target achievement, including the effectiveness of Federal-aid highway investments.

Accountability and Transparency: FHWA-developed requirements for Federal funding recipients to use to achieve or make significant progress toward targets.

National Goals
The National FHWA program performance goals as established by Congress are:

Safety - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Infrastructure Condition - To maintain the highway infrastructure asset system in a state of good repair.

Congestion Reduction - To achieve a significant reduction in congestion on the National Highway System.

System Reliability - To improve the efficiency of the surface transportation system.

Freight Movement and Economic Vitality - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

Environmental Sustainability - To enhance the performance of the transportation system while protecting and enhancing the natural environment.

Reduced Project Delivery Delays - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Performance Based Planning and Programming Requirements and Performance Measures
Under the performance-based approach to transportation decision making, the metropolitan transportation planning process must include the establishment of performance targets that address the performance measures or standards established by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) to use in tracking progress toward attainment of critical outcomes for the region in support of national transportation goals.

MPO Responsibilities
For each roadway performance measure, BACTS is required to establish a regional performance target or adopt and support the MaineDOT established target and therefore agree to plan and program projects that contribute toward meeting the targets. PM-1 Safety targets are updated annually. PM-2 Infrastructure Condition and PM-2 System Performance targets are based on a 4-year performance period. The first performance period is 2018-2021. Separate 2-year and 4-year targets are established for various particular measures under PM-2 and PM-3.

Transit performance measures require that BACTS establish initial regional performance targets within 180 days of the establishment of the transit provider targets or standards established for both Infrastructure Condition (Transit Asset Management State of Good Repair) and Safety. An MPO may choose to set new regional transit performance targets more frequently; however, regional transit performance targets are required to be updated with the preparation and submission of the system performance report that is required as part of the Metropolitan Transportation Plan (MTP).

BACTS is responsible for integrating performance measures in plans and programs, including providing a system performance report in the MTP which provides a description of the performance measures and targets used to assess system performance, evaluate the

performance of the transportation system with respect to the performance targets and report on progress made. The TIP must link investment priorities to the targets noted in the MTP and describe, to the maximum extent practicable, the anticipated effect of the program toward achieving established targets.

The Performance Based Planning and Programming rule requires that an MPO integrate (directly or by reference) the goals, objectives, performance measures, and targets described in state transportation plans and transportation processes, as well as any plans developed by providers of public transportation, required as part of a performance based-program. These plans include:

1. The State Asset Management Plan for the NHS (as defined in 23 U.S.C. 119(e))
2. Transit Asset Management Plan (49 U.S.C. 5326)
3. Applicable portions of the HSIP, including the SHSP (23 U.S.C. 148)
4. The Public Transportation Agency Safety Plan (49 U.S.C. 5329(d))
5. Other safety and security planning and review processes, plans, and programs, as appropriate
6. The Congestion Mitigation and Air Quality Improvement Program performance plan, as applicable (23 U.S.C. 149(l))
7. Appropriate (metropolitan) portions of the State Freight Plan (MAP-21 § 1118)
8. The congestion management process, if applicable (23 CFR 450.322)
9. Other State transportation plans and transportation processes required as part of a performance-based program.

FEDERAL HIGHWAY ADMINISTRATION (FHWA) PERFORMANCE MEASURES

Federal Highway Administration Performance Measures
23 CFR 490

Rulemaking	National Goal	Performance Area	Performance Measure
PM1	Safety	Injuries & Fatalities	• Number of fatalities • Fatality rate (p/100m VMT) • Number of serious injuries • Serious injury rate (p/100m VMT) • Number of non-motorized fatalities and non-motorized serious injuries
PM2	Infrastructure Condition	Pavement Condition	• Percentage of pavements on the Interstate System in Good condition • Percentage of pavements on the Interstate System in Poor condition • Percentage of pavements on the non-Interstate NHS in Good condition • Percentage of pavements on the non-Interstate NHS in Poor condition
		Bridge Condition	• Percentage of NHS bridges classified as Good condition • Percentage of NHS bridges classified as Poor condition
PM3	System Reliability	System Performance: National Highway System	• Percent of person miles traveled on the Interstate System that are reliable • Percent of person miles traveled on the non-Interstate NHS that are reliable
	Freight Movement/ Economic Vitality	System Performance: Freight Movement on Interstate System	• Percentage of Interstate System mileage providing reliable truck travel time - Truck Travel Time Reliability Index (TTTR)
	Congestion Reduction	System Performance: Traffic Congestion	• Annual hours of peak-hour excessive delay per capita • Percent of non-single occupant vehicle travel
	Environmental Sustainability	System Performance: Congestion Mitigation and Air Quality Program	• On-Road Mobile Source Emissions Reduction

(PM-1) SAFETY PERFORMANCE TARGETS

Federal regulations require BACTS to establish safety targets (expressed as five-year rolling averages and compared with a five-year rolling average base period comprising of the five calendar years ending prior to the year the targets are due) each year by either:

1. Agreeing to plan and program projects so that they contribute toward the accomplishment of the State DOT safety target for that performance measure; or
2. Committing to a quantifiable target for that performance measure for their metropolitan planning area.

The BACTS Policy Committee has committed to support the performance targets for all five safety performance measures developed by MaineDOT and plan and program projects so that they contribute toward the accomplishment of these targets.

In developing initial performance targets for 2018, the following assumptions were made:
- Economy and fuel prices remain fairly stable.
- Multi-agency safety efforts continue to be refined and focused on primary serious crash trends such as lane departure and pedestrians.
- Based on recruitment difficulties along with state and local budgetary restraints, law enforcement agencies will continue to experience staffing challenges, reducing the effective crash-reducing impact that their on-road presence has.
- Impaired driving is a growing concern both due to legalization of marijuana and increased illicit drug use, translating into serious crash exposures.
- Maine's VMT will continue to increase due to economic factors. Increases in traffic exposure may decrease the level of service on high volume roads.

The 2019 state-wide targets were established based on the the following assumptions:
- Economy and fuel prices started to climb and are expected to stabilize the state's annual VMT that has steadily climbed the last several years.
- Multi-agency safety efforts remain the same as previous.
- Law enforcement agencies will continue to experience enforcement and staffing challenges,reducing the effective crash-reducing impact that their on-road presence has.
- Impaired driving continued to be a concern due to legalization of marijuana and increased illicit drug use like opiates, etc.
- Maine's VMT will stabilize due to economic factors cited including increased fuel costs. Some regional increases in traffic exposure may occur and decrease the level of service on select high volume roads.

In developing the 2020 performance targets, the following factors influenced the ability of Maine to meet previous safety performance targets and were considered for future projections:
- Maine's economy and fuel prices stabilized.
- Multi-agency safety efforts continued as in previous years.
- Based on recruitment difficulties along with state and local budgetary restraints, law enforcement agencies continued staffing shortages.
- Impaired driving due to legalization of marijuana and increased illicit drug usage results in serious crash exposures.
- VMT was projected to increase due to population growth and economic factors by about 0.51% per year moving forward from 2018. The increased traffic exposure increases safety risk and may decrease level of service on high volume roads.

In developing the 2021 performance targets, the following factors influenced the ability of Maine to meet previous safety performance targets and were assumed for future projections:
- Maine's annual VMT in 2020 was projected to be approximately 20% lower than originally estimated due to the COVID-19 pandemic. Sharp decreases in VMT began in March and continued through the middle of May. Significant uncertainty surrounding the "return to normal," timeframe.
- Based on the recovery from the economic downturn of 2009, projected 2021 VMT was estimated to be 10% lower than 2019 actual VMT.
- Maine's economy and fuel prices will be affected by COVID-19.
- The tourism industry will be heavily impacted for 2020 and likely into early 2021.
- Multi-agency safety efforts continued to focus primarily on serious crash trends such as lane departure and pedestrians.
- Continued challenges in staffing for traffic law enforcement.
- Impaired driving caused by drug usage, and the resulting serious crash exposures created, continued to be a concern.

MAINE STATEWIDE PM-1 SAFETY PERFORMANCE TARGETS				
	2021	**2020**	**2019**	**2018**
Number of Fatalities	158.0	161.0	165.0	153.4
Number of Serious Injuries	725.0	737.0	737.6	736
Rate of Fatalities	1.12	1.07	1.1	1.03
Rate of Serious Injuries	5.02	4.90	4.90	5.12
Number of Non-Motorized Fatalities and Serious Injuries	89.0	90.0	91.0	90.0

The MaineDOT Office of Safety has developed BACTS metropolitan planning area specific calculations applying the same assumptions and methodology used to develop the Statewide performance targets as shown below.

BACTS PLANNING AREA PM-1 SAFETY PERFORMANCE TARGETS				
	2021	**2020**	**2019**	**2018**
Number of Fatalities	6.0	5.6	6.0	7.4
Number of Serious Injuries	36.0	38.0	39.0	43.6
Rate of Fatalities	0.66	0.66	0.71	0.87
Rate of Serious Injuries	4.23	4.50	4.64	5.08
Number of Non-Motorized Fatalities and Serious Injuries	9.0	9.0	9.8	11.4

Source: MaineDOT Office of Safety

(PM-1) SAFETY PERFORMANCE REPORT

MAINE STATEWIDE PM-1 SAFETY PERFORMANCE REPORT				
	2021	**2020**	**2019**	**2018**
Number of Fatalities			157.0	136
Number of Serious Injuries			689.0	685
Rate of Fatalities			1.04	0.91
Rate of Serious Injuries			4.56	4.56
Number of Non-Motorized Fatalities and Serious Injuries			80.0	79.0
Vehicle Miles Traveled (in hundred millions)			151.006873050	150.127039630

BACTS PLANNING AREA PM-1 SAFETY PERFORMANCE REPORT				
	2021	**2020**	**2019**	**2018**
Number of Fatalities			11.00	1.00
Number of Serious Injuries			30.00	32.00
Rate of Fatalities			1.28	0.12
Rate of Serious Injuries			3.48	3.78
Number of Non-Motorized Fatalities and Serious Injuries			13.00	4.00
Vehicle Miles Traveled (in hundred millions)			8.613135802	8.47339452

Source: MaineDOT Office of Safety

References:

State Highway Safety Report
https://www.fhwa.dot.gov/tpm/reporting/state/safety.cfm?state=Maine

Maine FY2020 Highway Safety Plan:
https://www.maine.gov/dps/bhs/publications/documents/Maine-HighwaySafetyplan-FY2020_Submitted_2.pdf

Maine's 2017 Strategic Highway Safety Plan:
https://www.maine.gov/dps/bhs/publications/documents/Strategic-Highway-Safety-Plan_2017.pdf

Maine Highway Safety Improvement Program 2017 Annual Report:
https://safety.fhwa.dot.gov/hsip/reports/pdf/2017/me.pdf

(PM-2) PAVEMENT AND BRIDGE CONDITION PERFORMANCE TARGETS

Federal regulations required the establishment of initial bridge and pavement condition performance targets on or before November 16, 2018, and requires targets to be established every four (4) years thereafter, related to each of the six performance measures by either:

1. Agreeing to plan and program projects so that they contribute toward the accomplishment of the State DOT target for that performance measure; or

2. Committing to a quantifiable target for that performance measure for the metropolitan planning area.

MaineDOT owns the entire NHS system in Maine except for the Maine Turnpike. MaineDOT collects 100% of the pavement data for the National Highway System (NHS) (including the Turnpike) and inspects all non-Turnpike bridges. Maine NHS pavement data is collected annually by a single collection vehicle and a single MaineDOT crew; therefore, maximizing the potential for consistent data collection. MaineDOT inspects NHS bridges on a 24-month cycle using both above and underwater inspection teams.

As MaineDOT has responsibility and authority for planning and programming all projects for the Interstate and major bridge planning activities, the BACTS Policy Committee has agreed to support the relevant MaineDOT established 4-year pavement and bridge condition performance targets and support the planning and programming of projects that contribute to MaineDOT's performance targets as shown below.

MAINE STATEWIDE
PM-2 PAVEMENT AND BRIDGE CONDITION
PERFORMANCE TARGETS

		Baseline (2017 data)	2-Year Target (2020)	4-Year Target (2022)	State of Good Repair
Interstate Pavement	Good	36.30%	38.00%	40.00%	40.00%
	Fair	62.50%			57.00%
	Poor	1.20%	1.50%	1.50%	3.00%
Non-Interstate Pavement	Good	31.20%	32.00%	34.00%	35.00%
	Fair	63.30%			55.00%
	Poor	5.50%	5.00%	5.00%	10.00%
NHS Bridges	Good	30.00%	32.00%	34.00%	40.00%
	Fair	66.30%			55.00%
	Poor	3.80%	4.00%	4.00%	7.00%

(PM-2) PAVEMENT AND BRIDGE CONDITION PERFORMANCE

MAINE STATEWIDE
PM-2 PAVEMENT AND BRIDGE CONDITION
PERFORMANCE REPORT

		2-Year Condition/ Performance (2020)	4-Year Target Adjustment
Interstate Pavement	Good	26.10%	
	Poor	0.90%	
Non-Interstate Pavement	Good	38.20%	
	Poor	7.10%	
NHS Bridges	Good	27.20%	30.00%
	Poor	4.10%	

Notes:

MaineDOT shifted the collection of pavement data on the interstate from the fall to the spring in 2018. The TAMP was developed off 2017 data. This shift resulted in a 1-year shift in conditions suppressing the level of good pavements on the interstate. What was a baseline of 36.3% good in interstate pavement for 2017 dropped to 26.1% for 2019 largely due to the shift in data collection time. In essence losing a year of improvement on the rating.

The investment strategies developed and documented in the MaineDOT TAMP were executed within the constructs of the plan and the risk matrix. The resulting conditions of the NHS system largely within the parameters established in the TAMP. In general MaineDOT was able to maintain assets at a level that met or exceeded the targets of poor conditions and trailed the targets set for good condition ratings.

The challenge for MaineDOT in 2019 was an unprecedented increase in bid prices for work. MaineDOT saw a 30-50% increase in prices over the baseline period of 2019. Adjustments according to the risk matrix were made along the way with investment levels reaching or exceeding the levels outlined in the TAMP. However, due to the increase in prices less work was accomplished. This resulted in a lag in the level of "good" ratings. Additionally, MaineDOT anticipates due to the COVID-19 pandemic and plummeting revenue that trend will continue although with some moderation to prices.

Source: MaineDOT Results and Information Office

The MaineDOT Results and Information Office provided BACTS with baseline region specific pavement and bridge condition data as shown below.

BACTS Region NHS Pavement Existing Conditions (2017)			
Asset	Condition	Lanes Miles	Percent Lane Miles
Interstate Pavement	Good	22.27	36.0%
	Fair	39.36	63.7%
	Poor	0.2	0.3%
	Total	61.83	
Non-Interstate Pavement	Good	11.48	17.4%
	Fair	46.08	69.8%
	Poor	8.47	12.8%
	Total	66.03	
BACTS Region NHS Bridge Existing Conditions (2017)			
Asset	Condition	Deck Area	Percent Deck Area
NHS Bridge	Good	58,101	10.9%
	Poor	31,847	6.0%
	Total	534,955	

Source: MaineDOT Results and Information Office

Minimum acceptable pavement conditions require that not more than five percent (5%) of Interstate pavements be in poor condition. FHWA will make yearly determinations of minimum pavement conditions and if it is determined that the Interstate pavement condition falls below the minimum level for any given year, MaineDOT will be required to obligate the National Highway Performance Program (NHPP) and transfer a portion of its Surface Transportation Program (STP) funds to adequately address pavement conditions.

Minimum acceptable conditions for NHS bridges require that not more than ten percent (10%) of the total deck area of a State's NHS bridges are classified as structurally deficient for three consecutive years. FHWA will make a yearly determination for the minimum bridge condition and if that minimum is not met for three (3) consecutive years, MaineDOT will be required to obligate NHPP funds and reserve funds for eligible bridge projects.

References:

MaineDOT Transportation Asset Management Plan:
https://www.maine.gov/mdot/publications/docs/plansreports/MaineDOT-Transportation-Asset-Management-Plan-final.pdf

State Highway Infrastructure Report:
https://www.fhwa.dot.gov/tpm/reporting/state/condition.cfm?state=Maine

(PM-3) SYSTEM PERFORMANCE AND FREIGHT PERFORMANCE TARGETS

Federal regulations required BACTS to establish initial System Performance and Freight reliability performance targets on or before November 16th, 2018, and every four years thereafter, related to each of these performance measures by either:

1. Agreeing to plan and program projects so that they contribute toward the accomplishment of the State DOT targets for system performance and freight reliability performance measure; or
2. Committing to a quantifiable target for that performance measure for their metropolitan planning area.

The BACTS Policy Committee agreed to support the MaineDOT developed performance targets and plan and program projects to contribute toward the accomplishment of the relevant MaineDOT established 4-year System Performance and Freight Reliability performance targets as shown below. The MaineDOT Results and Information Office also provided BACTS with region specific baseline system performance and freight reliability condition data as shown below.

MAINE STATEWIDE AND BACTS PLANNING AREA PM-3 SYSTEM PERFORMANCE AND FREIGHT RELIABILITY ON NHS PERFORMANCE TARGETS				
Performance Measure		**2017 Data**	**2018 Performance**	**MaineDOT Target**
Truck Travel Time Reliability Index (TTTR)	Statewide	1.23	1.24	**< 1.50**
	BACTS	1.26	1.29	
% PMT Reliable on Interstate	Statewide	100.00%	100.00%	**>= 95%**
	BACTS	100.00%	100.00%	
% PMT Reliable on Non-Interstate NHS	Statewide	91.30%	91.50%	**>= 90%**
	BACTS	92.00%	85.50%	

(PM-3) SYSTEM PERFORMANCE AND FREIGHT PERFORMANCE REPORT

MAINE STATEWIDE AND BACTS PLANNING AREA PM-3 SYSTEM PERFORMANCE AND FREIGHT RELIABILITY ON NHS PERFORMANCE REPORT				
Performance Measure		**2020**	**2019**	**2018**
Truck Travel Time Reliability Index (TTTR)	Statewide	1.20	1.27	1.24
	BACTS	1.28	1.31	1.29
% PMT Reliable on Interstate	Statewide	100.00%	100.00%	100.00%
	BACTS	100.00%	99.50%	100.00%
% PMT Reliable on Non-Interstate NHS	Statewide	94.90%	91.50%	94.50%
	BACTS	94.20%	91.10%	85.50%

Source: MaineDOT Results and Information Office

BACTS will track and monitor non-interstate NHS performance to determine if decline in performance is related to any specific area, related to weather events, construction events or other non-traffic related issues. BACTS will continue to support local, regional and state-wide efforts to improve system performance and reliability.

Note: The BACTS area does not contain any part of a nonattainment or maintenance area for any of the criteria pollutants, as provided in 23 CFR 490.105(f)(6); and is therefore not subject to the CMAQ traffic congestion measure (23 CFR 490.703), or on-road mobile source emissions measures (23 CFR 490.707 and 23 CFR 490.807).

References:

Maine Integrated Freight Strategy:
https://www.maine.gov/mdot/ofbs/docs/MaineDOT-FreightStrategy-Updt20171114.pdf

State Highway Reliability Report:
https://www.fhwa.dot.gov/tpm/reporting/state/reliability.cfm?state=Maine

FEDERAL TRANSIT ADMINISTRATION (FTA) PERFORMANCE MEASURES

Federal Transit Administration Performance Measures
49 USC 5326 (c) and 49 USC 5329 (d)

National Goal	Performance Area	Performance Measure
Infrastructure Condition	Rolling Stock	• Percentage of revenue vehicles (by type) that exceed ULB
	Equipment	• Percentage of non-revenue service vehicles (by type) that exceed ULB
	Facilities	• Percentage of facilities (by group) that are rated less than 3.0 on the FTA TERM scale
	Infrastructure	• Percentage of track segments (rail) that have performance restrictions
Safety	Fatalities	• Total number of reportable fatalities and rate (p/100,00 VRM) by mode
	Injuries	• Total number reportable injuries and rate (p/100,000 VRM) by mode
	Safety Events	• Total number reportable events and rate (p/100,000 VRM) by mode
	System Reliability	• Mean distance between major mechanical failures by mode

TRANSIT ASSET STATE OF GOOD REPAIR (SGR) PERFORMANCE TARGETS

MPOs are required to revisit and update planning area transit infrastructure condition (state of good repair) targets when updating the Metropolitan Transportation Plan (MTP); although an MPO may choose to set targets more often. To determine performance targets for transit asset infrastructure condition, useful life benchmarks (ULBs) must be defined for each asset class.

Rolling Stock

Based on the vehicle inventory report provided by Community Connector, as well as several discussions with Community Connector staff regarding fleet management, BACTS defined rolling stock useful life benchmarks for calculator of initial performance targets August 2017, based on the F*TA Default Useful Life Benchmark Cheat Sheet* which uses the expected service years for each vehicle class as defined in the National Transit Database (NTD) 2017 Asset Inventory Module Reporting Manual.

Performance targets for 2018 and 2019 were set using the following ULBs.

BACTS METROPOLITAN PLANNING AREA TRANSIT ASSET CATEGORY: ROLLING STOCK DEFINITIONS AND BENCHMARKS 2017						
Subcategory		**Class**		**Definition**		**ULB (Years)**
BU	Bus	S	Standard	Revenue Service Vehicles 30 feet or greater in length, regardless of duty	14	From date of manufacture
		E	Extended Life	Revenue Service Vehicles 30 feet or greater in length, regardless of duty, significant and purposeful investments made to rebuild mechanical systems with the intent of enhancing reliability and extending the vehicle's life	18	From date of manufacture
CU	Cutaway Bus			Revenue Service Vehicles 27 feet in length, with a bus body mounted on the chassis of a van or light-duty truck	10	From date of manufacture

In November 2019, the Policy Committee adjusted the rolling stock asset class definitions and useful life benchmarks to better align the performance metrics with those submitted to NTD by the City of Bangor Community Connector. The ULBs are shown in the table below and performance targets from 2020 - 2023 have been calculated using these benchmarks. Because the last Cutaway bus was retired in 2019 with no plans to replace that type of vehicle, that asset subcategory was deleted. Two new subcategories were added with the acquisition of a trolley In November 2017, and a Minivan in October 2018, when Community Connector discontinued its agreement with a third-party to provide ADA Complementary Paratransit service and began directly operating that service.

BACTS METROPOLITAN PLANNING AREA TRANSIT ASSET CATEGORY: ROLLING STOCK DEFINITIONS AND BENCHMARKS 2019 Update						
Subcategory		**Class**		**Definition**		**ULB (Years)**
BU	Bus	S	Standard	Rubber-tired passenger vehicles 29 feet or greater in length, powered by diesel fuel engine.	12	From date of manufacture
		E	Extended Life	Rubber-tired passenger vehicles 29 feet or greater in length, powered by diesel fuel engine, with significant and purposeful investments made to rebuild mechanical systems with the intent of enhancing reliability and extending the vehicles useful life.	18	From date of manufacture
MV	Minivan			Light-duty vehicle having typical seating capacity of up to seven passengers plus a driver.	8	From date of manufacture
RT	Rubber Tire Trolley			Rubber-tired bus designed to resemble an old-style Trolleybus	14	From date of manufacture

In 2017 and 2018, the BACTS Policy Committee adopted SGR performance targets for each following fiscal year. In fiscal year 2017 (baseline data), Community Connector's bus fleet consisted of 24 vehicles. Two of these buses were out of service and anticipated to be disposed of in fiscal year 2018.

Table 2.2										
BACTS METROPOLITAN PLANNING AREA **FY 17 ACTUAL PERFORMANCE** **ASSET CATEGORY: ROLLING STOCK**										
Rolling Stock		Fleet		Age of Fleet				Assets that Meet or Exceed ULB		
Sub-Category	Class	Total	To Be Disposed	Average	Median	Newest	Oldest	ULB	Total	Performance
Bus (BU)	(S) Standard	15	1	14.53	15.00	6.00	21.00	14	11	73.33%
Bus (BU)	(E) Extended Life	4	0	10.00	10.00	6.00	14.00	18	0	0.00%
	BU Subcategory Total	19	1	13.58	15.00	6.00	21.00		11	57.89%
Cutaway Bus (CU)		5	1	9.60	10.00	8.00	10.00	10	4	80.00%
	Total	24	2	12.75	14.00	6.00	21.00		15	62.50%

In developing rolling stock performance targets for fiscal year 2018, it was anticipated that two new 2017 Gillig buses (BU), two overhauled previously-owned 2003 New Flyer buses (BU-E), and one previously-owned 2004 Gillig bus (BU) would be added to the fleet. With those additions, five buses with advancing age and deteriorating condition were anticipated to be identified for disposal. Based on the anticipated fleet changes and the Section 5339 grant monies awarded by FTA for the purchase of an additional five new buses (to be added to the fleet over the following few years), It was also communicated that Community Connector intended to eventually eliminate Cutaway Buses (CU) from the fleet.

In developing the BACTS performance targets for fiscal year 2019, the newly acquired trolley and minivan was included in the target calculations and it was assumed that three (3) new buses (BU-S) would replace vehicles beyond their useful life.

BACTS METROPOLITAN PLANNING AREA TRANSIT ASSET STATE OF GOOD REPAIR ASSET CATEGORY: ROLLING STOCK PERFORMANCE TARGETS						
Sub-Category	Class	ULB*	FY18		FY19	
			# in Fleet	Target	# in Fleet	Target
Bus (BU)	(S) Standard	14	12	50.00%	15	40.00%
Bus (BU)	(E) Extended Life	18	6	0.00%	6	0.00%
	BU Subcategory Total		18	33.33%	21	28.57%
Cutaway Bus (CU)		10	4	75.00%	3	66.67%
Trolley (RT)		14			1	100.00%
Minivan (MV)		8			1	100.00%
	Total		22	40.91%	26	38.46%

In January 2019, the BACTS Policy Committee adopted performance targets for 2020 – 2023, when the next MTP is due to be updated. Performance targets for rolling stock for fiscal years 2020 through 2023 were calculated based on the following assumptions:

- 7 new Standard Buses will be added to the fleet, and 4 will be retired in 2020
- 1 Cutaway Bus will be retired; and that class of asset will be eliminated from the fleet in 2020
- 3 new Minivans will be added to the fleet, and 1 will be retired in 2020
- 3 new Standard Buses will be added to the fleet, and 1 will be retired in 2021
- 2 Extended Life Buses will be retired in 2021
- 2 Standard Buses will be added to the fleet, and 1 will be retired in 2022
- 2 Extended Life Buses will be retired in 2022
- 2 Standard Buses will be added to the fleet, and 3 will be retired in 2023

BACTS METROPOLITAN PLANNING AREA TRANSIT ASSET STATE OF GOOD REPAIR ASSET CATEGORY: ROLLING STOCK PERFORMANCE TARGETS									
	ULB*	FY20		FY21		FY22		FY23	
Sub-Category Class		# in Fleet	Target	# in Fleet	Target	# in Fleet	Target	# in Fleet	Target
Bus (BU) (S) Standard	12	17	11.76%	19	5.26%	20	0.00%	19	0.00%
Bus (BU) (E) Extended Life	16	6	66.67%	4	50.00%	2	0.00%	2	0.00%
BU Subcategory Total		23	26.09%	23	13.04%	22	0.00%	21	0.00%
Cutaway Bus (CU)									
Trolley (RT)	14	1	100.00%	1	100.00%	1	100.00%	1	100.00%
Minivan (MV)	8	3	0.00%	3	0.00%	3	0.00%	3	0.00%
Total		27	25.93%	27	14.81%	26	3.85%	25	4.00%

Facilities

There are two overarching groups of facilities: 1) Administrative and Maintenance; and 2) Passenger and Parking. Transit agencies must provide an asset inventory of *all* facilities used in the provision of public transportation and indicate if the agency has partial or full capital responsibility for the facility or any component of the facility. The transit agency is required to also provide overall facility condition ratings for each facility which it has capital responsibility for.

The initial inventory, estimated condition assessment and performance targets for transit facilities for the baseline was developed using personal knowledge and readily available public records (such as property cards, municipal budgets, plans and reports).

Administrative Facilities – offices where management and supporting activities for overall transit operations (e.g. finance, engineering, legal, safety, security, customer services, scheduling, planning) are conducted, as well as locations that provide customer information or ticket sales that are not part of any passenger station.   The Community Connector Administrative Office is situated within the City of Bangor Motor Pool complex on Maine Avenue in Bangor.

Maintenance Facilities – garages or shops where routine and/or heavy maintenance, inspections, repairs and rebuilds are performed, vehicles are stored and/or cleaned (excluding facilities owned/used by third-party vendors). General maintenance and repairs of the fleet are performed by the City of Bangor Motor Pool at the Motor Pool Garage on Maine Avenue in Bangor. The University of Maine Motor Pool in Orono provides a limited amount of light maintenance to buses that serve the Black Bear Orono Express shuttle (BBOE). Painting, major overhaul and rebuilds are conducted off-site by a third-party vendor. Except for the BBOE Shuttle buses, which were stored outdoors at the Town of Orono Fire Department through the end of 2018, the fleet is garaged in the bus barns located on Maine Avenue in Bangor. The bus wash facility is adjacent to the bus barns.

Passenger and Parking Facilities. Passenger and parking facilities are often collectively referenced as "passenger facilities." Passenger facilities include any transportation, transit or transfer center used in the provision of public transportation (even if the agency does not own the facility). Parking facilities include park and ride lots as well as parking garages. Parking facilities are those immediately adjacent to passenger facilities. The Community Connector combined passenger and parking facility is located at Pickering Square on Broad Street in Bangor. The passenger facilities were located on the main level of the parking garage.

Six maintenance facilities were identified as being used in the provision of the public transit service; however, two of these facilities are wholly owned and maintained by a third party. The City of Bangor has no capital responsibility for these facilities.

2018 performance targets were calculated making the assumption that construction of the new administrative office building be completed in the second quarter of the 2018 fiscal year and that the Community Connector would be entering into an agreement with the Town of Orono to relocate storage of the BBOE Shuttle buses from the Orono Fire Department to the Orono Public Works Garage.

Table 2.5

BACTS METROPOLITAN PLANNING AREA
FY 17 ACTUAL PERFORMANCE
ASSET CATEGORY: FACILITIES

Facilities		Structure		Condition		
Subcategory	Class	Facility Name	Location	TERM	Benchmark	Exceeding Benchmark
Administrative Facility (AD)	(O) Administrative/Sales Office	Administrative Office	481 Maine Avenue, Bangor	2.00	3 - Adequate	100.00%
	(SI) Service and Inspection Garage	City of Bangor Motor Pool Garage	481 Maine Avenue, Bangor	3.00	3 - Adequate	0.00%
	(WSH) Vehicle Washing Facility	Bus Wash	481 Maine Avenue, Bangor	3.00	3 - Adequate	0.00%
Maintenance Facility (MNT)	(GP) General Purpose Facility	Bus Barn	481 Maine Avenue, Bangor	4.00	3 - Adequate	
	(GP) General Purpose Facility	Bus Barn - Cold Storage	481 Maine Avenue, Bangor	2.50	3 - Adequate	50.00%
	(GP) General Purpose Facility	Town of Orono Fire Department	59 Main Street, Orono		N/A	
	(GP) General Purpose Facility	UMO Motor Pool Garage	Rangeley Road, Orono		N/A	
	MNT Subcategory Total			1/4		25.00%
	Total Administrative and Maintenance Facilities			2/5		40.00%
Passenger Facility (PS)	(TSF) Transfer Center	Pickering Square Bus Hub	100 Broad Street, Bangor	3.00	3 - Adequate	0.00%
Parking Facility (PR)	(GAR) Parking Garage	Pickering Square Parking Garage	100 Broad Street, Bangor	3.00	3 - Adequate	0.00%
	Total Passenger and Parking Facilities			0/2		0.00%
	Total Facilities			2/7		28.57%

Performance targets for facilities for fiscal years 2020 through 2023 were calculated based on the following assumptions:

- Construction on the Pickering Square Parking Garage completed during calendar year 2020.
- Construction of the new Transit Center will be completed in the calendar year 2022.
- No other facility construction/renovation projects are planned.

BACTS METROPOLITAN PLANNING AREA
TRANSIT ASSET STATE OF GOOD REPAIR
ASSET CATEGORY: FACILITIES
PERFORMANCE TARGETS

Sub-Category	Class	Location	Year Built	Year Renovated /Replaced	2018 Condition	2018 Exceeding Benchmark	2019 Condition	2019 Exceeding Benchmark	2020 Condition	2020 Exceeding Benchmark	2021 Condition	2021 Exceeding Benchmark	2022 Condition	2022 Exceeding Benchmark	2023 Condition	2023 Exceeding Benchmark
Administrative Facility	Administrative Office	475 Maine Avenue, Bangor	2017		5.00		5.00		5.00		5.00		5.00		5.00	
	City of Bangor Motor Pool Garage	481 Maine Avenue, Bangor	1958		3.00	0.00%	3.00	0.00%	2.00	50.00%	2.00	50.00%	2.00	50.00%	2.00	50.00%
Maintenance Facility	Bus Barn	481 Maine Avenue, Bangor	2005		4.00		4.00		4.00		4.00		4.00		4.00	
	Bus Wash	481 Maine Avenue, Bangor	2003		3.00		3.00		4.00		4.00		4.00		4.00	
	Bus Barn - Cold Storage	481 Maine Avenue, Bangor	1958		2.50	33.33%	2.50	33.33%	2.00	33.30%	2.00	33.30%	2.00	33.30%	2.00	33.30%
		Total Administrative and Maintenance Facilities				20.00%		20.00%		40.00%		40.00%		40.00%		40.00%
Passenger Facility	Pickering Square Bus Hub	100 Broad Street, Bangor	1989		3.00	0.00%	3.00	0.00%	1.00	100.00%	1.00	100.00%	1.00	100.00%	5.00	0.00%
Parking Facility	Pickering Square Parking Garage	100 Broad Street, Bangor	1989	2019	3.00	0.00%	3.00	0.00%	4.00	0.00%	4.00	0.00%	4.00	0.00%	4.00	0.00%
		Total Passenger and Parking Facilities				0.00%		0.00%		50.00%		50.00%		50.00%		0.00%
		Total Facilities				14.29%		14.29%		42.86%		42.86%		42.86%		28.57%

TRANSIT ASSET STATE OF GOOD REPAIR (SGR) PERFORMANCE

Rolling Stock
Analysis of the revenue vehicle inventory provided for fiscal year 2017 compared to fiscal year 2018 showed five additional vehicles in the inventory and three vehicles removed from inventory in addition to the two that were in the boneyard (B723 and B45). Acquisition dates for buses B0321 and B0330 indicate they should have been included in fiscal year 2017 inventory, but were not. These vehicles were end of life vehicles purchased with a contract with Maine Military Authority on December 4, 2015. The contract was reassigned to Loring Industries on January 23, 2017 and these two buses were delivered and operational within the fleet during fiscal year 2018. In addition, the City of Bangor purchased a trolley during the fiscal year.

During the City of Bangor 2019 fiscal year (July 1, 2018 to June 30, 2019), three new 29-foot Gillig Buses (BU) were added to the fleet. These new buses are identified as bus numbers 1858, 1859, and 1960. Six vehicles were retired from the fleet; three 2002 Orions (BU) (bus numbers B202, B207, B209); one 2006 Blue Bird (BU) (bus number B0621); and two 2007 El Dorados (CU) (bus numbers B0725 and B0726).

During fiscal year 2020 City of Bangor, Community Connector took delivery of seven (7) new 29-foot Gillig Buses (BU) identified as bus numbers 1961, 1962, 1985, 1986, 1987, 1988, and 1989. Six (6) vehicles were retired in fiscal year 2020; two Orion Buses bus numbers 0210, 0203, three New Flyers buses, numbers 0027, 0028, and 0029 and one El Dorados (CU) bus number 0726.

BACTS METROPOLITAN PLANNING AREA
TRANSIT ASSET STATE OF GOOD REPAIR
ASSET CATEGORY: ROLLING STOCK
PERFORMANCE REPORT*

Rolling Stock		Assets that Meet or Exceed ULB 2017			Assets that Meet or Exceed ULB 2018			Assets that Meet or Exceed ULB 2019			Assets that Meet or Exceed ULB 2020		
Sub-Category	Class	Total Fleet Vehicles	Meet or Exceed	Performance	Total Fleet Vehicles	Meet or Exceed	Performance	Total Fleet Vehicles	Meet or Exceed	Performance	Total Fleet Vehicles	Meet or Exceed	Performance
Bus (BU)	(S) Standard	15	11	73.33%	13	8	61.54%	14	6	42.86%	18	3	16.67%
Bus (BU)	(E) Extended Life	4	0	0.00%	6	0	0.00%	6	0	0.00%	6	0	0.00%
	BU Subcategory Total	19	11	57.89%	19	8	42.11%	20	6	30.00%	24	3	12.50%
Cutaway Bus (CU)		5	4	80.00%	3	2	66.67%	1	1	100.00%			
Trolley (TR)					1	1	100.00%	1	1	100.00%	1	1	100.00%
Minivan (MV)								1	0	0.00%	1	1	100.00%
	Total	**24**	**15**	**62.50%**	**23**	**11**	**47.83%**	**23**	**8**	**34.78%**	**26**	**5**	**19.23%**

* Three vehicles (Bus ID 203 (BU - 02 Orion), 210 (BU - 02 Orion), and 924 (CU- 09 Chevrolet) not accounted for on NTD Inventory). These results include those vehicles.

* Three vehicles (Bus ID 203 (BU - 02 Orion), 210 (BU - 02 Orion), and 924 (CU- 09 Chevrolet) not accounted for on NTD Inventory). These results include those vehicles.

Facilities

In 2018, the construction of the new administrative office building was completed. 2018 performance targets were calculated making the assumption that the Community Connector would be entering into an agreement with the Town of Orono to relocate storage of the BBOE Shuttle buses from the Orono Fire Department to the Orono Public Works Garage. However, the decision was made to garage all Community Connector buses at Maine Avenue in Bangor.

During the City of Bangor 2019 fiscal year (July 1st, 2018 to June 30th, 2019), renovations to the Pickering Square Parking Garage began. The Bus Hub waiting area was dislocated as well during the construction. Temporary waiting areas, shelters and restrooms were used during the construction.

In 2020, the Pickering Square Parking Garage renovations were completed. The renovated garage displaced the Passenger Facility and temporary bus shelters have been placed in Pickering Square until the construction of the new Transit Center Building is complete.

BACTS METROPOLITAN PLANNING AREA **TRANSIT ASSET STATE OF GOOD REPAIR** **ASSET CATEGORY: FACILITIES** **PERFORMANCE REPORT**												
				2017 Performance		**2018 Performance**		**2019 Performance**		**2020 Performance**	
Sub-Category	**Class**	**Location**	**Year Built**	Condition	Exceeding Benchmark	Condition	Exceeding Benchmark	Condition	Exceeding Benchmark	Condition	Exceeding Benchmark
Administrative Facility	Administrative Office	475 Maine Avenue, Bangor	2017	2.00		5.00		5.00		5.00	
	City of Bangor Motor Pool Garage	481 Maine Avenue, Bangor	1958	3.00	50.00%	2.00	50.00%	2.00	50.00%	2.00	50.00%
Maintenance Facility	Bus Barn	481 Maine Avenue, Bangor	2005	4.00		4.00		4.00		4.00	
	Bus Wash	481 Maine Avenue, Bangor	2003	3.00		4.00		3.00		3.00	
	Bus Barn - Cold Storage	481 Maine Avenue, Bangor	1958	2.50	33.33%	2.00	33.33%	2.00	33.33%	2.00	33.33%
		Total Administrative and Maintenance Facilities			40.00%		40.00%		40.00%		40.00%
Passenger Facility	Pickering Square Bus Hub	100 Broad Street, Bangor	1989	3.00	0.00%	1.00	100.00%	1.00	100.00%	1.00	100.00%
Parking Facility	Pickering Square Parking Garage	100 Broad Street, Bangor	1989/2020	3.00	0.00%	2.50	100.00%	2.00	100.00%	5.00	0.00%
		Total Passenger and Parking Facilities			0.00%		100.00%		100.00%		50.00%
		Total Facilities			28.57%		57.14%		71.43%		42.86%

References:

City of Bangor Community Connector Transit Asset Management (TAM) Plan:
https://bactsmpo.org/wp-content/uploads/2021/01/2020-Community-Connector-TAM-PLAN-1.pdf

National Transit Database Asset report:
https://www.transit.dot.gov/ntd/data-product/2018-urbanized-area-asset-summary-tool-0

FTA TRANSIT SAFETY PERFORMANCE MEASURES

Transit agencies are required to review their Public Transportation Agency Safety Plans, and performance targets, annually. Just as with TAM SGR performance targets, MPOs are not required to set new transit safety targets each year, but can revisit the regional safety performance targets based on the schedule for preparation of its system performance report that is part of the MTP.

FTA TRANSIT SAFETY PERFORMANCE TARGETS

Baseline data was gathered from the 2018 NTD report and unpublished 2019 NTD reporting data to develop safety performance targets in 2021.. The initial BACTS metropolitan planning area transit safety performance targets were calculated using the peer benchmarking strategy using data obtained from the National Transit Database.The SPTs shown in the "Safety Performance Targets Benchmarking" table are calculated as an annual average of the five-year average of all peer agencies.

The Community Connector 2018 NTD report and unpublished 2019 data shows the following statistics:

2018	Total	MB	DR - PT	DT - PT	
UPT	799,726	791,981	3,989	3,756	
VRM	631,900	594,879	13,600	23,421	
VRH	47,096	45,794	530	772	
VOMS	28	14	8	6	
2019	Total	MB	DR - DO	DR - PT	DT - PT
UPT	777,235	768,787	6,996	621	831
VRM	647,800	580,662	58,346	2,439	6,353
VRH	51,446	45,860	4,320	541	725
VOMS	33	14	5	8	6

UPT – Unlinked Passenger Trips   VRM – Vehicle Revenue Miles   VRH – Vehicle Revenue Hours   VOMS- Vehicles Operated in Maximum Service
MB – Motor Bus (Fixed Route)   DO – Directly Operated   PT- Purchased Transportation   DR – Demand Response (Paratransit)
DT – Demand Response Taxi

Four agencies used to benchmark the fixed-route (MB) mode of service were: Montachusett Regional Transit Authority, City of Eau Claire, City of Sioux City, and Yuba-Sutter Transit Authority. The five agencies used to benchmark the demand response (DR) mode of service were: Williamsburg Area Transit Authority, Athens-Clarke County Unified Government, Ames Transit Agency, City of Commerce, and Yuma County Intergovernmental Public Transit Authority.

The BACTS Policy Committee adopted the initial transit safety performance targets on January 19th, 2021. The safety performance targets will be revisited with the update of the MTP in 2023.

	SAFETY PERFORMANCE TARGETS BENCHMARKING						
	Fatalities		Injuries		Safety Events		System Reliability
Mode	Total Number	Rate per 100,000 VRM	Total Number	Rate per 100,000 VRM	Total Number	Rate per 100,000 VRM	VRM/Major Mechanical Failures
MB	0	0.00	2.40	0.37	2.30	0.36	(641,002 / 42.65) 15,029.35
DR	0	0.00	0.20	0.35	0.20	0.35	(57,593 / 2.52) 22,854.50

References:

City of Bangor - Community Connector Public Transportation Agency Safety Plan:
https://bactsmpo.org/wp-content/uploads/2021/01/2020-City-of-Bangor-Community-Connector-PTASP-1.pdf