MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND TRANSIT ADMINISTRATION

MDOT MTA OLTS

LOTS 2025 Vehicle Useful Life Benchmark (ULB) Analysis

February 6, 2025

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MARYLAND DEPARTMENT OF TRANSPORTATION
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Agenda

- Introductions
- ULB Background
- ULB Analysis
- ULB Recommendation
- Next Steps

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Introductions

Caroline Miller, WSP Program Manager

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Useful Life Benchmark (ULB) Background

- Useful Life
  - ***Minimum eligibility for replacement or disposal*** *of an asset for grant making purposes*
  - *Authorization to replace/dispose of an asset is at the discretion of MTA*

- Useful Life Benchmark (ULB)
  - ***Realistic projection for when an asset would be replaced*** *(after useful life criteria has been met, an order has been placed with the vendor, and the new replacement asset has been delivered),* ***based on procurement timelines***
  - *ULBs are tracked by age in years*

Useful Life Benchmark (ULB) Background

- Transit agencies must report the age of all vehicles to the National Transit Database (NTD)
- FTA tracks the performance of:
  - *Revenue vehicles (rolling stock)*
  - *Non-revenue vehicles (equipment)*
- Performance is tracked by calculating the percent of vehicles that have met or exceeded the ULB.

Useful Life Benchmark (ULB) Background

- FTA has set default ULBs for each vehicle asset class
  - *Default Useful Life Benchmark (ULB) Cheat Sheet*
- FTA Default ULB
  - *Average number of years at which a vehicle will reach a 2.5 rating on the FTA Transit Economic Requirements Model (TERM) scale*
- Agencies have the option to use the FTA default ULBs ***or*** submit an adjusted ULB based on operating environment and/or maintenance strategies

Useful Life Benchmark (ULB) Background

— FTA Circular 5010.1D, indicates that acceptable methods to determine ULB values include but are not limited to:

- *—Generally accepted accounting principles*
- *—Independent evaluation*
- *—Manufacturer's estimated useful life*
- *—Internal Revenue Service guidelines*
- *—Industry standards*
- *—Agency experience*
- *—Agency's independent auditor who needs to concur that the useful life is reasonable for depreciation purposes.*
- *—Proven useful life developed at a federal test facility*

Federal Transit Administration. Circular FTA C 5010.1E. Award Management Requirements Rev 2. July 16, 2018

Useful Life Benchmark (ULB) Analysis

- MDOT MTA OLTS developed ULBs in 2017
- ULB analysis was performed using the LOTS asset inventories (FY 2025)
- Scenarios included:
  - *FTA Default Useful Life Benchmark Cheat Sheet*
  - *Existing MDOT MTA LOTS ULBs*
  - *Proportional ULBs*
- Proportional ULBs
  - *Evaluated the existing ULBs, FTA Default ULBs, as well as the actual asset performance from the LOTS Form 6*

Useful Life Benchmark Options

Years

Vehicle Type	FTA Cheat Sheet ULB	Existing ULB	Proportional ULB
Bus Heavy Duty	14	14	14
Bus Med Size, Heavy Duty	14	12	14
Bus Medium Duty	14	10	16
Bus Light Duty	10	8	12
Non-Revenue Vehicle	14	10	10
Support Car/Truck	8	10	10
Support Van	8	10	10
Accessible Car	8	7	8
Accessible Van	8	7	8

Mileage

Vehicle Type	FTA Cheat Sheet ULB	Existing ULB	Proportional ULB
Bus Heavy Duty	N/A	510,000	583,333
Bus Med Size, Heavy Duty	N/A	510,000	490,000
Bus Medium Duty	N/A	320,000	500,000
Bus Light Duty	N/A	230,000	400,000
Non-Revenue Vehicle	N/A	160,000	200,000
Support Car/Truck	N/A	200,000	200,000
Support Van	N/A	200,000	200,000
Accessible Car	N/A	250,000	300,000
Accessible Van	N/A	250,000	300,000

Past FTA ULB

Years

Asset Type (MTA)	Total # of Vehicles	FTA Cheat Sheet ULB	# Past FTA ULB	% Past FTA ULB
Bus_Heavy_Duty_Lrg	494	14	97	19.6%
Bus_Heavy_Duty_Med	284	14	12	4.2%
Bus_Medium_Duty	74	14	1	1.4%
Bus_Light_Duty	429	10	59	13.8%
Accessible_Car	11	8	5	45.5%
Accessible_Van	57	8	6	10.5%
Support_Car_Truck	95	8	27	28.4%
Support_Van	10	8	5	50.0%
Non_Rev._Vehicle	46	14	11	23.9%

Past Existing ULB

Years

Asset Type (MTA)	Total # of Vehicles	Existing ULB	# Past Existing ULB	% Past Existing ULB
Bus_Heavy_Duty_Lrg	494	14	97	19.6%
Bus_Heavy_Duty_Med	284	12	27	9.5%
Bus_Medium_Duty	74	10	8	10.8%
Bus_Light_Duty	429	8	96	22.4%
Accessible_Car	11	7	5	45.5%
Accessible_Van	57	7	9	15.8%
Support_Car_Truck	95	10	26	27.4%
Support_Van	10	10	5	50.0%
Non_Rev._Vehicle	46	10	22	47.8%

Mileage

Asset Type (MTA)	Total # of Vehicles	Existing ULB	# Past Existing ULB	% Past Existing ULB
Bus_Heavy_Duty_Lrg	494	510,000	109	22.1%
Bus_Heavy_Duty_Med	284	510,000	11	3.9%
Bus_Medium_Duty	74	320,000	8	10.8%
Bus_Light_Duty	429	230,000	121	28.2%
Accessible_Car	11	160,000	1	9.1%
Accessible_Van	57	200,000	0	0.0%
Support_Car_Truck	95	200,000	3	3.2%
Support_Van	10	250,000	1	10.0%
Non_Rev._Vehicle	46	250,000	13	28.3%

Past Proportional ULB

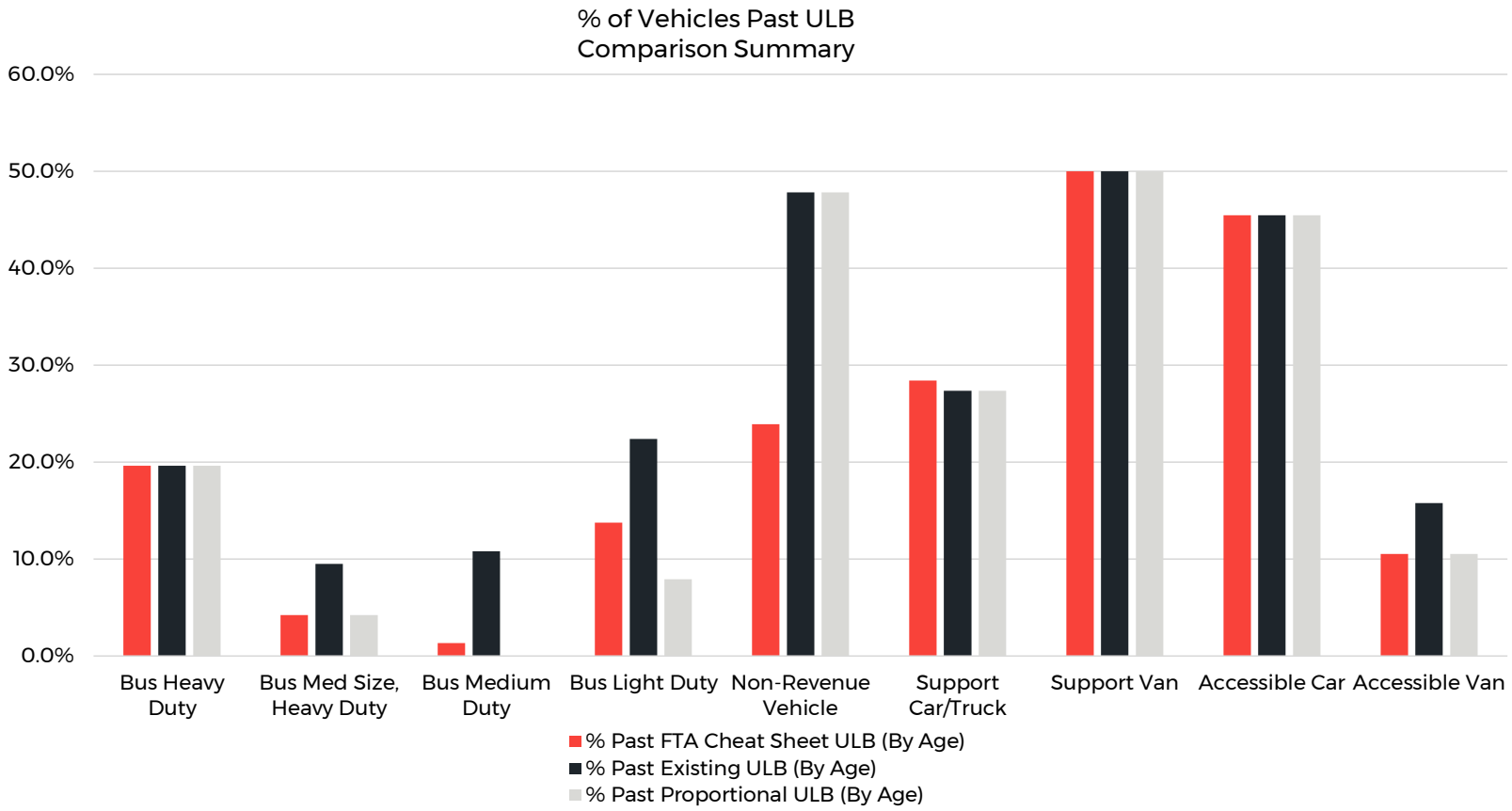
Years

Asset Type (MTA)	Total # of Vehicles	Proportional ULB	# Past Proportional ULB	% Past Proportional ULB
Bus_Heavy_Duty_Lrg	494	14	97	19.6%
Bus_Heavy_Duty_Med	284	14	12	4.2%
Bus_Medium_Duty	74	16	0	0.0%
Bus_Light_Duty	429	12	34	7.9%
Accessible_Car	11	8	5	45.5%
Accessible_Van	57	8	6	10.5%
Support_Car_Truck	95	10	26	27.4%
Support_Van	10	10	5	50.0%
Non_Rev._Vehicle	46	10	22	47.8%

Mileage

Asset Type (MTA)	Total # of Vehicles	Proportional ULB	# Past Proportional ULB	% Past Proportional ULB
Bus_Heavy_Duty_Lrg	494	583,333	46	9.3%
Bus_Heavy_Duty_Med	284	490,000	13	4.6%
Bus_Medium_Duty	74	500,000	0	0.0%
Bus_Light_Duty	429	400,000	20	4.7%
Accessible_Car	11	200,000	0	0.0%
Accessible_Van	57	200,000	0	0.0%
Support_Car_Truck	95	200,000	3	3.2%
Support_Van	10	300,000	1	10.0%
Non_Rev._Vehicle	46	300,000	9	19.6%

Vehicle Summary



Annual Funding Scenario Analysis

Year	FTA Cheat Sheet	Existing ULB	Proportional ULB
2024	$11,924,456	$19,124,673	$10,326,888
2025	$13,337,409	$16,677,874	$12,245,037
2026	$7,082,660	$9,082,241	$7,096,700
2027	$12,925,505	$6,284,499	$5,803,007
2028	$3,290,316	$4,002,559	$2,338,903
2029	$3,182,495	$5,837,205	$9,363,164
2030	$4,804,107	$12,144,606	$4,333,688
2031	$6,866,618	$9,544,482	$7,637,809
2032	$13,652,048	$13,835,916	$13,540,438
2033	$5,316,957	$11,552,387	$4,085,420
2034	$14,452,035	$13,420,591	$10,230,738
2035	$10,296,035	$12,852,580	$8,188,011
2036	$5,366,153	$11,036,334	$9,939,656
2037	$17,214,633	$2,601,861	$14,246,443
2038	$13,123,035	$9,528,333	$12,138,414
2039	$13,924,174	$12,711,012	$13,975,696
2040	$9,998,185	$16,101,001	$6,803,482
2041	$7,339,302	$16,261,141	$10,117,099
2042	$2,930,820	$8,545,426	$3,291,047
2043	$2,361,579	$5,032,662	$2,575,457
2044	$6,084,164	$10,382,171	$6,373,156
TOTAL	**$185,472,684**	**$226,559,552**	**$174,650,253**
AVERAGE	**$8,832,033**	**$10,788,550**	**$8,316,679**

ULB Recommendations & Next Steps

Vehicle Type	Existing ULB (Years)	ULB Recommendation (Years)
Bus Heavy Duty	14	14
Bus Med Size, Heavy Duty	12	14
Bus Medium Duty	10	12
Bus Light Duty	8	10
Non-Revenue Vehicle	10	12
Support Car/Truck	10	10
Support Van	10	10
Accessible Car	7	8
Accessible Van	7	8

Next Steps

- MDOT MTA LOTS Form 6 Updates
- WSP will transfer FY24 asset data into updated Form 6
  - *Save onto ProjectWise*

Thank you!

Please send questions/comments to:
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