COLORADO
Department of Transportation

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DATE: July 10, 2020
TO: Transit and Rail Advisory Committee
FROM: David Krutsinger, Director, Division of Transit & Rail
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SUBJECT: Transit Asset Metrics

Purpose
The purpose of this memo is to provide information related to the transit asset fleet for small urban and rural transportation agencies participating in the Colorado DOT Transit Asset Management Group Plan, following submission of the 2019 annual report package to the National Transit Database. The information will also identify impacts to the State of Good Repair of the revenue service vehicle fleet if $5m to $10m in capital funding is deferred from the 2021 Consolidated Call for Capital Projects and put towards transit agencies' unmet operating expenses.

Action
Information and discussion only; no action required.

Background
The FTA's October 1, 2016 Transit Asset Management (TAM) Rule established asset management planning and reporting requirements for receipients and subrecipients of 49 U.S.C. Chapter 53 funds that own, operate, or manage capital assets in the provision of public transportation. The TAM Rule required transit agencies to develop a TAM Plan to prioritize and guide investments in transit assets to keep the transit system in a State of Good Repair (SGR). The TAM Rule identified three capital asset categories (rolling stock, equipment, and facilities) and established SGR performance measures for each, as shown in Table 1, and outlined annual reporting requirements about the state of transit assets to the National Transit Database (NTD).

Table 1. FTA SGR Performance Measures for Capital Assets.

Asset Category	Performance Measure
Rolling Stock	The percentage of revenue vehicles within an asset class that have either met or exceeded their useful life benchmark (ULB). ULB is the age at which an asset has reached the end of its economic useful life, specified in terms of asset age, mileage, and/or other factors.
Equipment	The percentage of service and maintenance vehicles (non-revenue) that have either met or exceeded their ULB.
Facilities	The percentage of facilities within an asset class rated below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale.

The TAM Rule also required DOTs to sponsor a Group Plan for all Tier II transit agencies that wished to participate. The Colorado DOT Transit Asset Management Group Plan (Group TAMP) was completed in the Fall of 2018 and included approximately 53 small urban and rural public transportation providers who offer a combination of fixed-route, demand response, and other specialized transportation services throughout the State. The Group TAMP incorporated FTA's performance measures for SGR and set performance targets for 2019.

In early 2019, CDOT staff and Group TAMP agencies assembled and submitted data to NTD related to the inventory of revenue service vehicles, non-revenue service vehicles, and facilities for 2018 as part of the annual reporting requirements. Staff also set performance targets for 2019 based on the targets established in the Group TAMP.

On June 30, 2020, CDOT staff submitted the 2019 report package. It included performance targets for 2020 and a narrative report describing how 2020 targets were set and our progress towards improving the SGR of small urban and rural transit assets.

Details

2019 Performance and 2020 Targets for Revenue Vehicles

Table 2 shows performance and targets for revenue vehicles for 2019 and 2020, alongside 2018 performance data. Comparing 2019 performance to the targets set for that year shows all but three classes—articulated bus, over-the-road bus, and other—with worse performance than targeted. However, a comparison of 2019 performance to 2018 performance shows that the SGR improved last year for six asset classes and remained steady for two more.

Table 2. Percentage of Asset Class Beyond SGR from 2019 Report Package for Revenue Vehicles.

	2018 Performance	2019 Target	2019 Performance	2020 Target
AB - Articulated Bus	66.67	18.80	0.00	0.00
AO - Automobile	26.67	8.00	21.43	28.00
BR - Over-the-road Bus	16.67	18.80	17.95	17.50
BU - Bus	19.05	18.80	24.81	26.00
CU - Cutaway	26.09	18.00	24.61	23.00
MV - Minivan	36.61	2.00	23.85	21.50
OR - Other	13.04	13.00	12.50	0.00
SB - School Bus	100.00	N/A	100.00	100.00
SV - Sports Utility Vehicle	50.00	8.00	40.00	40.00
TR - Aerial Tramway	83.82	41.00	83.82	86.76
VN - Van	12.84	2.00	13.79	17.50

2020 Target Setting Process

The 2020 targets are estimates resulting from an analysis of: 2019 performance data, including the number of vehicles in each asset class, the number and type of vehicles retired in 2019, and the number and type of vehicles that will reach ULB in 2020; awards made to Group TAMP participants by CDOT through the Consolidated Call for Capital Projects (CCCP) process for 2018, 2019, and 2020; and the number and type of vehicles accepted and added to the small urban and rural fleet in 2019 and to-date in 2020.

The targets for 2020, shown in Table 2 above, are conservative compared to those set for 2019. There are a few reasons for this. First, the targets in the Group TAMP were derived from a modeling tool which simulated the distribution of reasonably anticipated funds over time and across asset types in order to support and improve SGR. The simulation assumed that funds would be allocated towards all vehicle asset classes that had active vehicles, though CDOT, as a matter of practice, awards funding only for buses, cutaways, minivans, over-the-road buses, and vans. The second reason is that CDOT awards vehicle projects based on a prioritization of the vehicles applied for in the CCCP, and not solely on the basis of priority or calculated need. This is because the modeling tool does not now account for transit agency eligibility for each funding program, how operating conditions differ between the mountains and front range/eastern plains, or an equitable geographic distribution of funds across the State. The tool also cannot account for actual availability of program funds and funds for local match, unforeseen changes to fleets (e.g., crashes), or changes to the service provided by a particular agency. Finally, spare vehicles must be reported to NTD as active, and there is no specific field for designating a vehicle or fleet as a spare, so there is no simple way to know just how many of the vehicles that have met or exceeded the ULB have been kept for that purpose and will not soon be retired.

Transit Assets in 2019

As shown in Table 3, there were 1,310 total vehicles in 2019 in the Group TAMP, 371 (28%) of which met ULB. Of the total vehicles, it is estimated that 105 new vehicles were added (based on manufacture year) and 70 were retired, though only 45 (64%) had met ULB. At the end of 2019, there were 1,240 active vehicles, with 326 (26%) of those having met or exceeded its ULB. An additional 83 active vehicles will reach ULB in 2020. Thus, we started 2020 with 1,240 vehicles, 409 (33%) of which had reached ULB.

Table 3. Revenue Vehicle Numbers for 2019.

	Total Vehicles	Vehicles at ULB 2019	Retired Vehicles	Retired Vehicles at ULB	Active Vehicles	Vehicles at ULB 2020
AB - Articulated Bus	1	0	0	0	1	0
AO - Automobile	50	11	2	2	48	14
BR - Over-the-road Bus	41	7	0	0	41	9
BU - Bus	458	134	14	12	444	145
CU - Cutaway	346	98	29	23	317	98
DB - Double Decker Bus	N/A	N/A	N/A	N/A	N/A	N/A
MV - Minivan	149	36	7	7	142	47
OR - Other	24	3	0	0	24	5
SB - School Bus	1	1	0	0	1	1
SV - Sports Utility Vehicle	10	4	0	0	10	4
TR - Aerial Tramway	68	57	0	0	68	59
VN - Van	162	20	18	1	144	27
TOTAL	**1,310**	**371**	**70**	**45**	**1,240**	**409**

Revenue Vehicle Data Summary

SGR of Fleet

Table 3 shows that the pace of new vehicles added and old vehicles retired is not keeping up with the pace of active vehicles reaching ULB. We started 2020 with a greater percentage of vehicles at ULB than in 2019.

Vehicle Awards in 2018, 2019, and 2020

An average of $9.33m in federal/state funds are awarded each year for the purchase of 52 new buses, cutaways, minivans, over-the-road buses, and vans.

Funding for Accepted Vehicles in 2019

Agencies accepted[1] 65 vehicles in calendar year 2019 through COTRAMS, for $14.6m in federal/state funds, including $4.13m FASTER funds. The accepted vehicles were funded as follows:

- 10 vehicles from funding year 2017 for $2.25m;
- 34 vehicles from funding year 2018 for $4.93m; and
- 21 vehicles from funding year 2019 for $7.5m.

Impacts of Deferred Funding

The Group TAMP assumed $12m in federal/state funds ($15m total, including local match) would be available per year for all capital assets. Actual awards to Group TAMP agencies for revenue service vehicles have averaged $9.33m per year ($11.5m total, including local match). In the last two CCCPs, an average of $33m in federal/state funds was made available, including $4.1m in competitive FASTER funds. Group TAMP agencies have received $3.1m (funding year 2019), $38,084 (funding year 2020), and $3.2m (funding year 2021) in FASTER funds since the

[1] Vehicle acceptance was based on the date reported by agencies on the Notices of Acceptance submitted in COTRAMS.

2018 CCCP. Those funds were awarded for the purchase of 13 vehicles plus local match for four more (funding year 2019), two local match (funding year 2020), and 12 vehicles plus local match for another four (funding year 2021).

What is impact on revenue vehicle SGR if $5m to $10m in funding is deferred in 2021 CCCP?
Due to the coronavirus impacts on the economy, consideration is being given to offering less money for capital purposes, to instead sustain operations during this time. Based on the potential loss of FASTER funding for 12 to 13 vehicles, there would be a 24% reduction in new vehicles (out of 52 average vehicles per year), up to 28% if agencies are unable to purchase vehicles without local match assistance. The loss of this many new vehicles could potentially decrease the revenue vehicle SGR by 3%, to 36%, based on numbers known at the start of 2020. Luckily, the impact of funding deferral would not be felt immediately. Group TAMP agencies are still spending FASTER funds from funding years 2018 and 2019, and 2021 funds have not yet been spent. There is time to mitigate any impacts from deferred funding. Retiring and disposing old vehicles will improve the fleet SGR, and the lag time between the awarding and spending of funds allows time for economic recovery and/or finding other sources of funds.

Next Steps

1. Increase the rate of old vehicle disposals and find out from agencies if there are barriers to timely completion of this process.
2. Update the unconstrained prioritization list in the Group TAMP to remove retired vehicles and compare to awards and accepted vehicles, then determine if there are any agencies falling too far behind on maintaining fleet SGR.
3. Review NTD data with agencies and reconcile COTRAMS data, then discuss ways to improve the tracking and reporting processes to reduce duplication of efforts and improve accuracy.
4. Work with the Capital Programming Specialist and the Programming Unit on the upcoming CCCP.
5. Update PD-14 for consistency with the Group TAMP and compliance with FTA's transit asset management rules at 46 CFR Parts 625 and 630.

Attachment
Presentation