



# **Transit Asset Management**

*State of Good Repair*

**RVB+A**



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# Why is this in the safety session?

- Safety, asset management, and state of good repair are inextricably linked
- Dorval Carter added it to the mother of all ANPRMs
- You need a few cartoons and clips to distract you while you learn that safety stuff
- All of the above

# It all started with MAP-21

- **49 USC 5326(b)**

- Define “State of Good Repair”
- Require TAM plans
- Condition assessment and reporting
- Decision support tools



# Then came that ANPRM

**DEPARTMENT OF TRANSPORTATION  
Federal Transit Administration  
49 CFR Chapter VI  
[Docket No. FTA-2013-0030]  
RIN 2132-AB20; 2132-AB07  
The National Public Transportation  
Safety Plan, the Public Transportation  
Agency Safety Plan, and the Public  
Transportation Safety Certification  
Training Program; Transit Asset  
Management**

**.....: Federal Transit Administration  
(FTA), DOT.**

**.....: Advance notice of proposed  
rulemaking.**

- “FTA believes that there is a nexus between achieving a state of good repair and the safety of a transit system”



# TAM rulemaking

- September 30, 2015 – NPRM
- July 26, 2016 – Final rule
- October 1, 2016 – Effective date



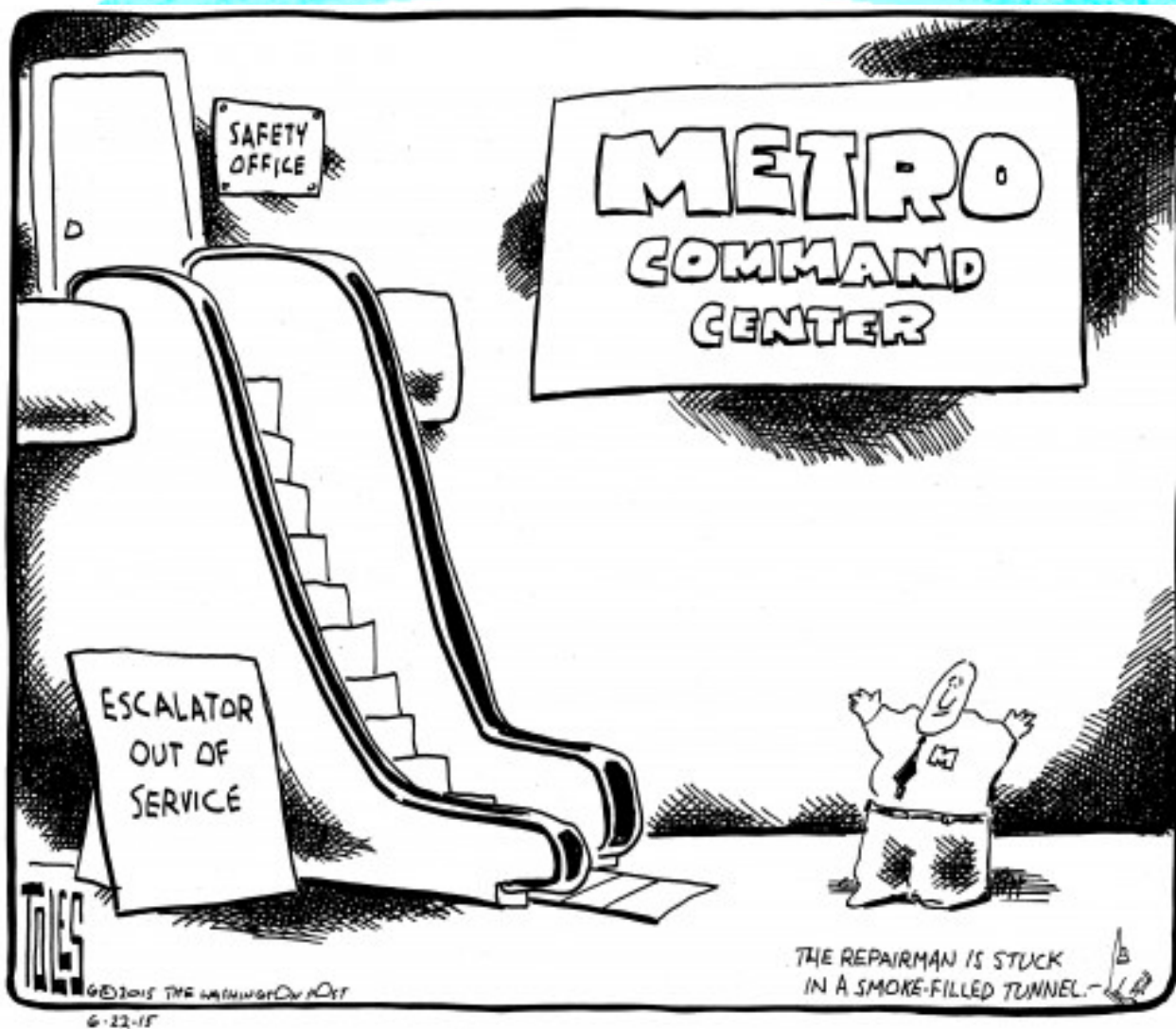
# The big picture

- TAM is “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).
- Emphasis shift from expansion to fixing current assets
- Safety, reliability, and performance as watchwords

# The big picture

- Prioritize funding
- Manage performance and risk
- Address SGR backlog





# The basics

## Tier I

Operates Rail

OR

≥ 101 vehicles across all  
fixed route modes

OR

≥ 101 vehicles in one non-  
fixed route mode

## Tier II

Sub-recipient of 5311 Funds

OR

American Indian Tribe

OR

≤ 100 vehicles across all  
fixed route modes

OR

≤ 100 vehicles in one  
non-fixed route mode

# The basics

- **State of Good Repair = “able to operate at full level of performance”**
  - Able to perform design function; no unacceptable safety risk; life cycle maintenance
- **Accountable executive**
  - Just like in the safety plan
- **Performance targets**
- **Nine elements**



# The basics

1. Inventory of Capital Assets
2. Condition Assessment
3. Decision Support Tools
4. Investment Prioritization
5. TAM and SGR Policy
6. Implementation Strategy
7. List of Key Annual Activities
8. Identification of Resources
9. Evaluation Plan

**All Providers**  
(Tier I & II)



**Tier I only**



# Inventory – four categories

Category	Class	
Equipment	Construction	Maintenance
	Service Vehicles	
Rolling Stock	Railcars	Ferries Other Passenger Vehicles
	Buses	
Infrastructure	Fixed Guideway	Power Structures
	Signal Systems	
Facilities	Maintenance Facilities	Parking Facilities Administrative Facilities
	Passenger Facilities	

# Inventory – what to count

Category	Asset Inventory	Assessing Condition
Equipment	All non-revenue service vehicles and equipment > \$50K used in the provision of public transit, except 3rd-party equipment assets	Only equipment with direct capital responsibility, no third party assets
Rolling Stock	All revenue vehicles used in the provision of public transit	Only revenue vehicles with direct capital responsibility
Infrastructure	All infrastructure used in the provision of public transit	Only infrastructure with direct capital responsibility
Facilities	All facilities used in the provision of public transit ( <u>excluding bus shelters</u> )	Only facilities with direct capital responsibility ( <u>excluding bus shelters</u> )



# Condition – one measure per category

Category	Performance Measures
Equipment	Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)
Rolling Stock	Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB
Infrastructure	Percentage of track segments with performance restrictions by class
Facilities	Percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale (1=Poor to 5=Excellent)

# “Useful Life Benchmark”

- ULB ≠ Useful life for FTA grant programs
- **Useful Life Benchmark** is defined as the expected lifecycle of a capital asset for a particular Transit Provider’s operating environment, or the acceptable period of use in service for a particular Transit Provider’s operating environment
- ULB takes into account a provider’s unique operating environment (i.e. infrastructure condition, geography, service frequency, etc.)
- There are default ULB values, but agencies are welcome to develop their own



# Decision Support Tools/Investment Prioritization

- “A decision support tool must be able to support development of the investment prioritization. The tool may be a documented process and does not need to be electronic”
- An analytic process, with or without software





# It can be simple!

Criteria	Weight	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6
Poses safety risk (0-5)	8	5	0	1	2	4	0
Age (years)	.5	17	15	15	7	7	2
Poor reliability (0-5)	5	2	3	3	4	2	1
Poor appearance (0-5)	1	1	3	2	4	2	1
Totals		59.5	25.5	32.5	43.5	47.5	7

Score  $\geq 50$ ..... **Replace this year**

$30 \leq \text{Score} < 50$ ... **Replace in year 3**

Score  $< 30$ ..... No immediate remedial action

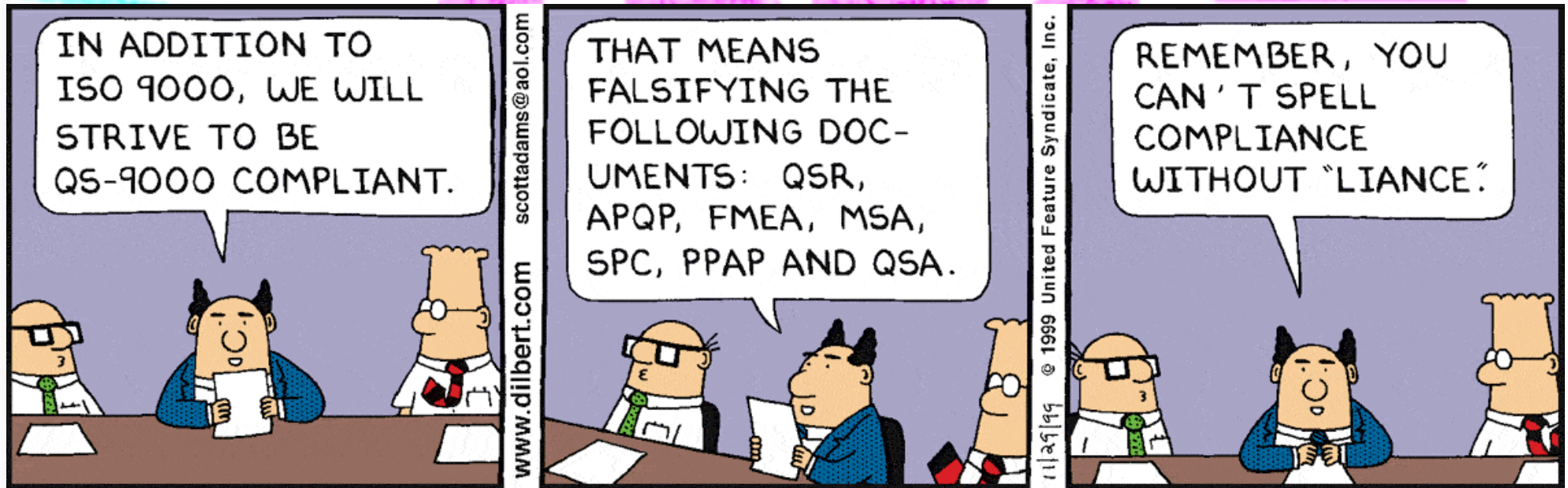
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# Important dates

- January 1, 2017 – initial performance targets
- October 1, 2018 – initial TAM plan completed
- Four year horizon
- Updates at least every four years
- Amendments upon any significant development

# What are the issues?

- Compliance





# What else?

- **Data and assessment disclosure**
  - Risks track with those of safety plan
  - Litigation risk tied to not being in a State of Good Repair
    - Especially if due to deferred maintenance!
  - Prioritization second guessing by potential plaintiffs
  - Useful Life Benchmark as a sword

# Risk Mitigation

- **Review, review, review**

- **Goals and targets**
- **Plan**
- **Assessment Criteria**
- **Maintenance plans**
- **Useful Life Benchmark**



# Transit Asset Management

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