

2023 Performance Benchmark Report



Michael Johnson P.E.

State Asset Management Engineer

California Department of Transportation

June 2023

2022/23
Performance
Benchmark
Report

June 2023



California Department of
Transportation

What is the Performance Benchmark Report?

- **CTC Guidelines:**

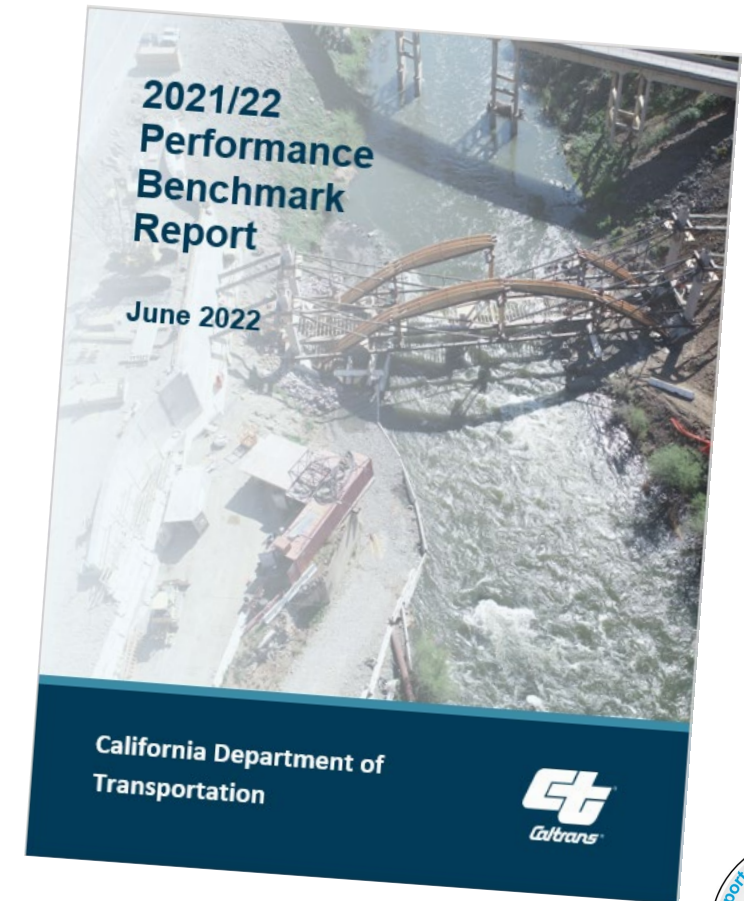
CTC Guidelines require an annual report to the Commission showing progress toward asset management and SB1 performance targets

- **What's in the Report:**

Reports the current condition and future projections relative to the 19 established baseline conditions 2017-2027.

- **Timing:**

The 2022/23 Performance Benchmark Report is presented in June of each year. This is the sixth reporting with actual conditions through 50% of the time period



Report Features

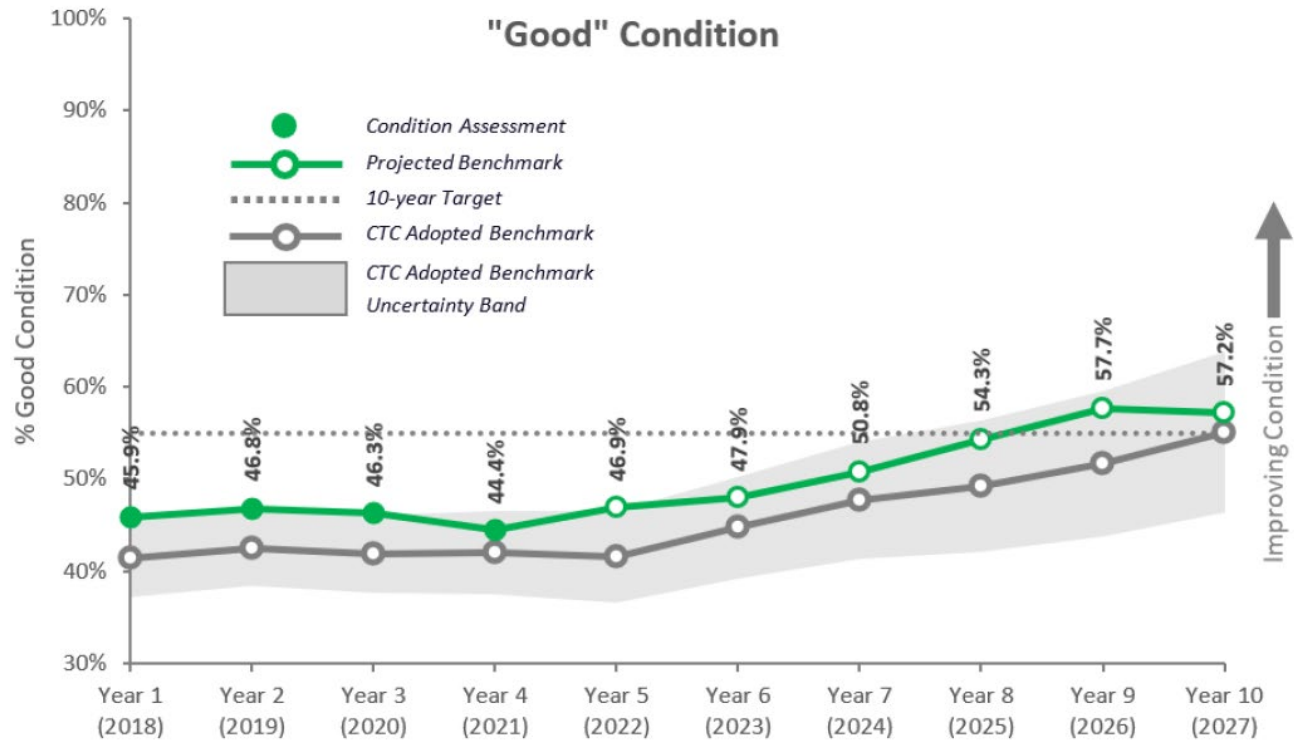


Figure 4 - Pavement Class II, Good

Table 4 - Pavement Class II Condition Summary

Condition	2027 Target	2021 Year End	2022 Year End (Projection)	Change in Condition
Good	55.0%	44.4%	46.9%	2.5%↑
Fair	43.0%	54.4%	52.4%	-2.0%↓
Poor	2.0%	1.2%	0.7%	-0.5%↓



Benchmark Development

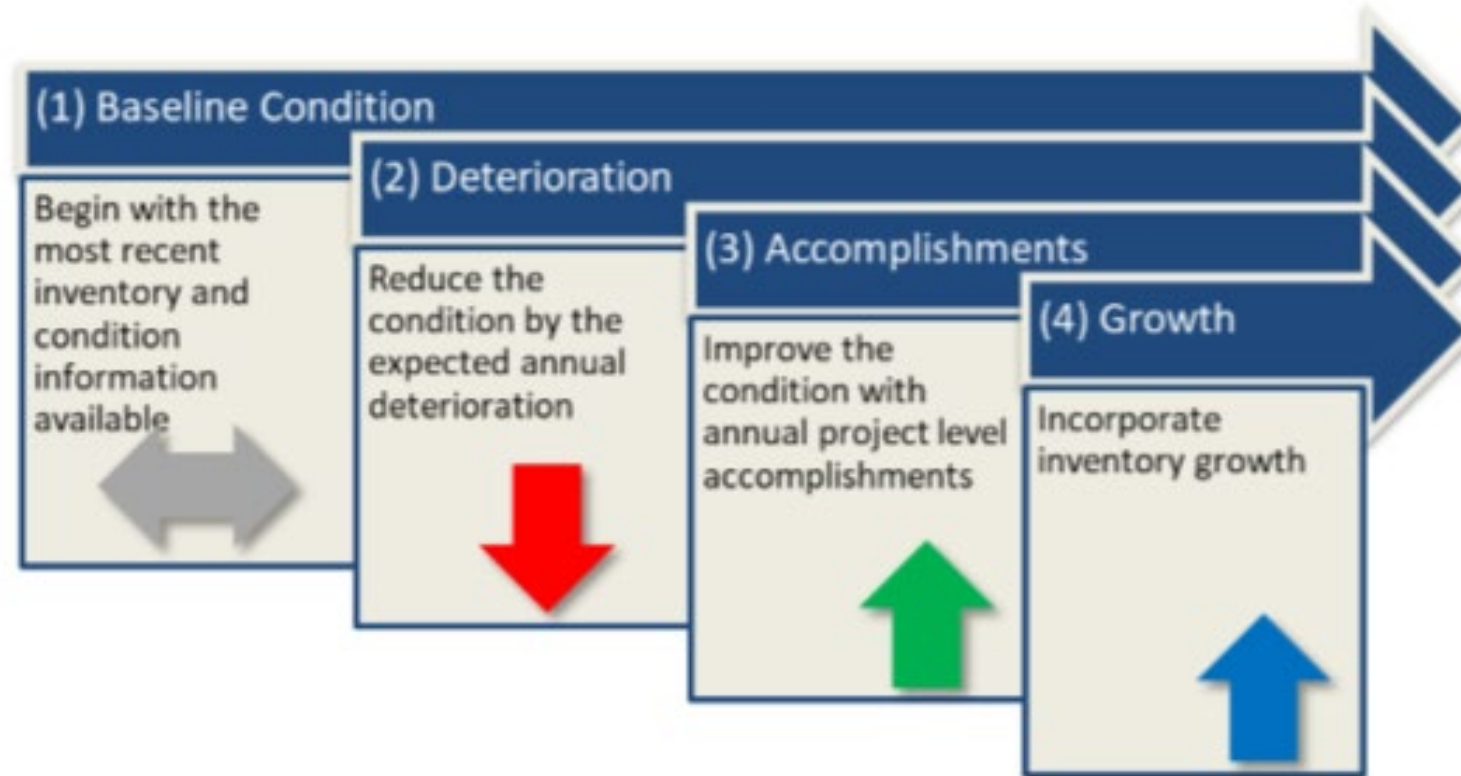


Figure 4-2. Steps in Calculating Benchmark Projections

Summary of Progress on SB1 Targets

Table 1 – Progress Towards 2027 SB1 Targets

Asset Class	2027 SB1 Target	Status of Progress
Pavement	98% Good or Fair Condition;	● On Track
	90% level of service (LOS) achieved for maintenance of potholes, spalls, and cracks	● On Track
Bridges	Fix an additional 500 bridges	● On Track/ Target Achieved
Culverts	90% Good or Fair Condition	● On Track
TMS	90% Good Condition	● On Track

- **On Track** – Caltrans is on track to meet performance targets by 2027.
- **Monitor** – Projected performance falls within uncertainty bounds, or performance metric under revision.
- **Action Required** – Changes to plans are needed to assure that performance targets are achieved by 2027.



Summary of Progress on Asset Management Targets

Table 2 – Progress Towards TAMP Targets

Asset Class		Good	Fair	Poor	Status of Progress
Pavement	Class 1	60%	39%	1%	● On Track
	Class 2	55%	43%	2%	● On Track
	Class 3	45%	53%	2%	● On Track
Bridges and Tunnels		48.5%	50%	1.5%	● Action Required
Drainage (Culverts)		70%	20%	10%	● On Track
TMS		90%	N/A	10%	● On Track

- **On Track** – Caltrans is on track to meet performance targets by 2027.
- **Monitor** – Projected performance falls within uncertainty bounds, or performance metric under revision.
- **Action Required** – Changes to plans are needed to assure that performance targets are achieved by 2027.





Pavement Progress

Pavement Summary

Table 3 – Pavement Class I Condition Summary

Condition	2027 Target	2021 Year End	2022 Year End (Projection)	Change in Condition
Good	60.0%	61.3%	63.1%	1.8%↑
Fair	39.0%	37.4%	36.1%	-1.3%↓
Poor	1.0%	1.3%	0.8%	-0.5%↓

Table 4 - Pavement Class II Condition Summary

Condition	2027 Target	2021 Year End	2022 Year End (Projection)	Change in Condition
Good	55.0%	44.4%	46.9%	2.5%↑
Fair	43.0%	54.4%	52.4%	-2.0%↓
Poor	2.0%	1.2%	0.7%	-0.5%↓

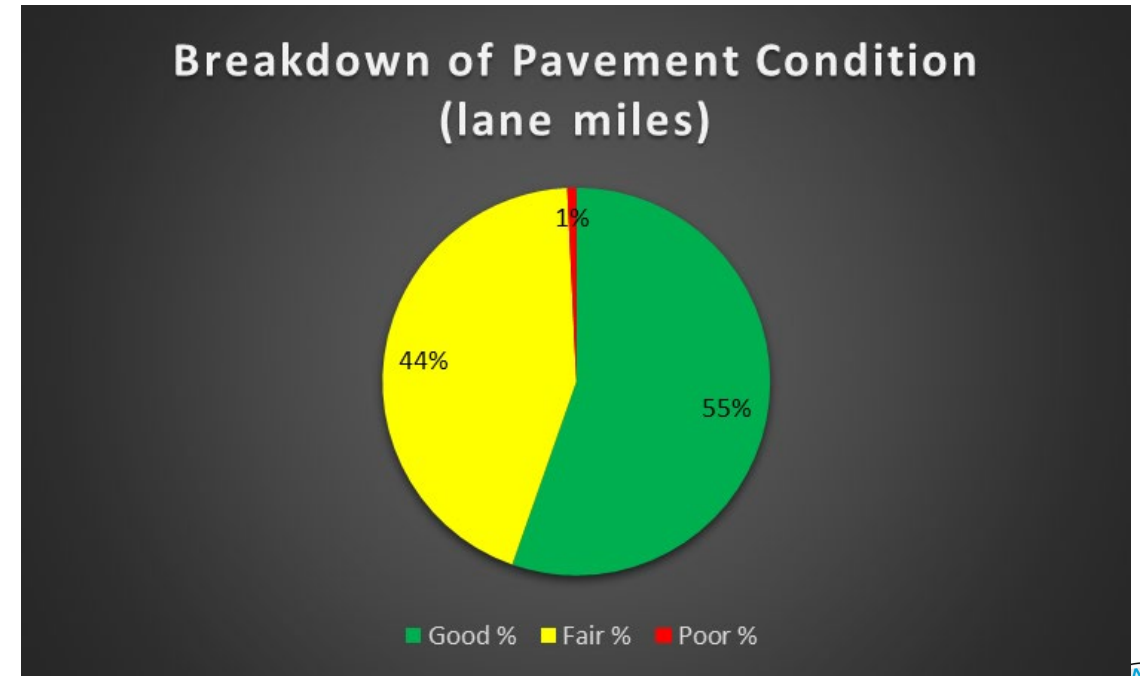
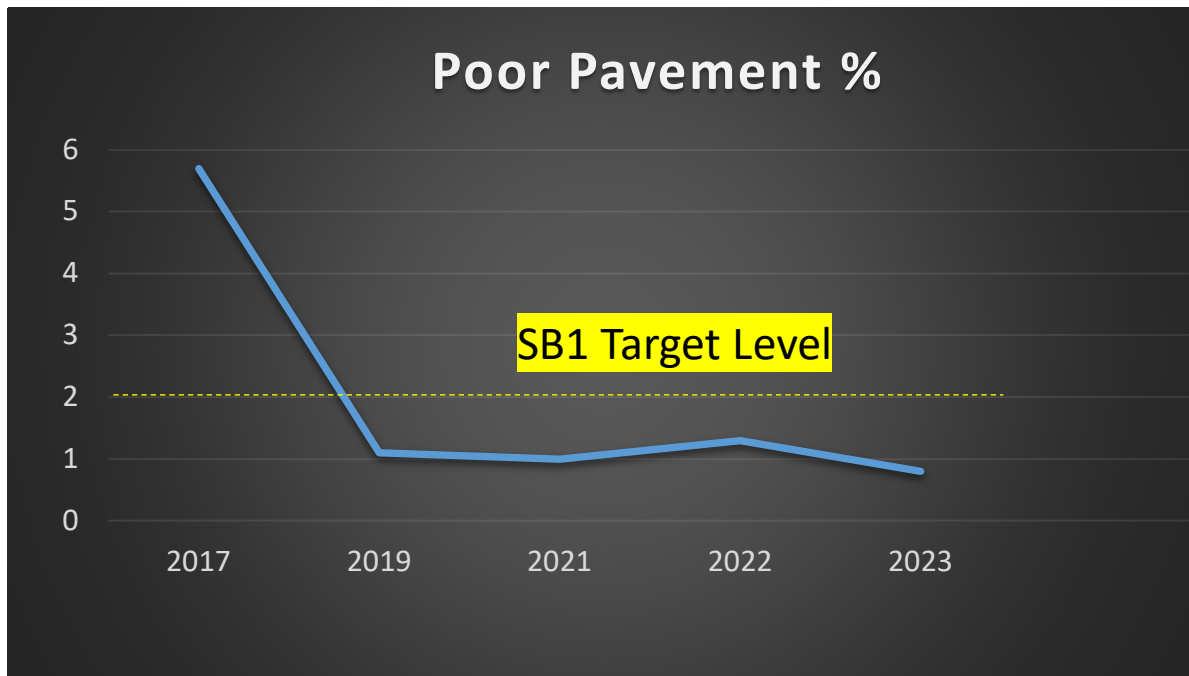
Table 5 - Pavement Class III Condition Summary

Condition	2027 Target	2021 Year End	2022 Year End (Projection)	Change in Condition
Good	45.0%	41.3%	44.5%	3.2%↑
Fair	53.0%	57.1%	54.8%	-2.3%↓
Poor	2.0%	1.6%	0.7%	-0.9%↓



Pavement Progress

- Pavement condition continues to meet targets!



Storms dealt a few setbacks!



MON-1-18.0
Mill Creek Slide
1/15/23



MON-1-21.7
Paul's Slide
1/15/2023

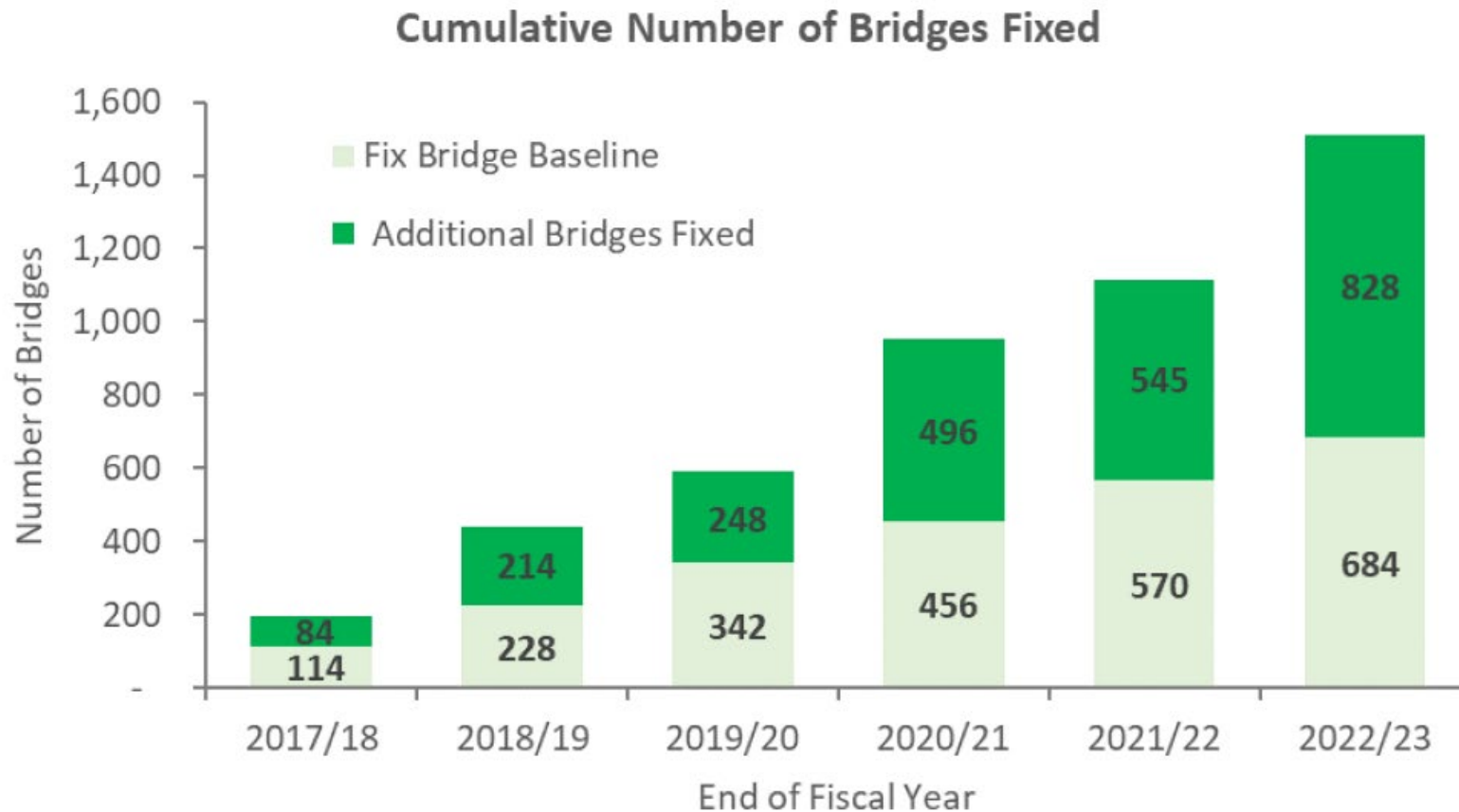


Bridge Progress



SB1 Bridge Fixes

- SB1 commitment exceeded by more than 300 bridges



Bridge Condition Summary

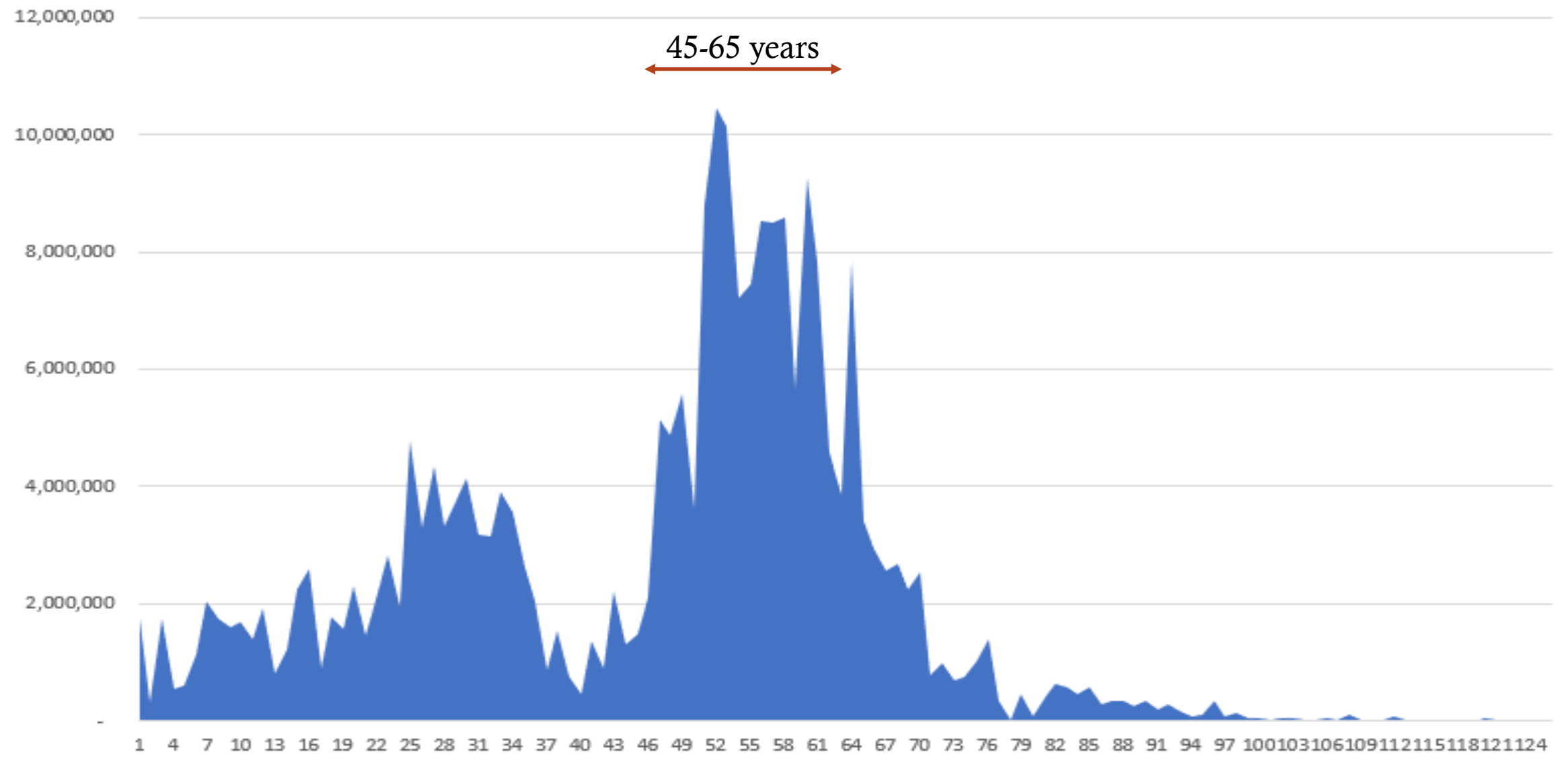
Table 6 – Bridge and Tunnel Health Condition Summary

Condition	2027 Target	2021 Year End	2022 Year End	Change in Condition
Good	48.5%	49.3%	47.1%	-2.2% ↓
Fair	50.0%	46.9%	48.2%	+1.3% ↑
Poor	1.5%	3.8%	4.7%	+0.9% ↑



Bridge Deck Area by Age of Bridge

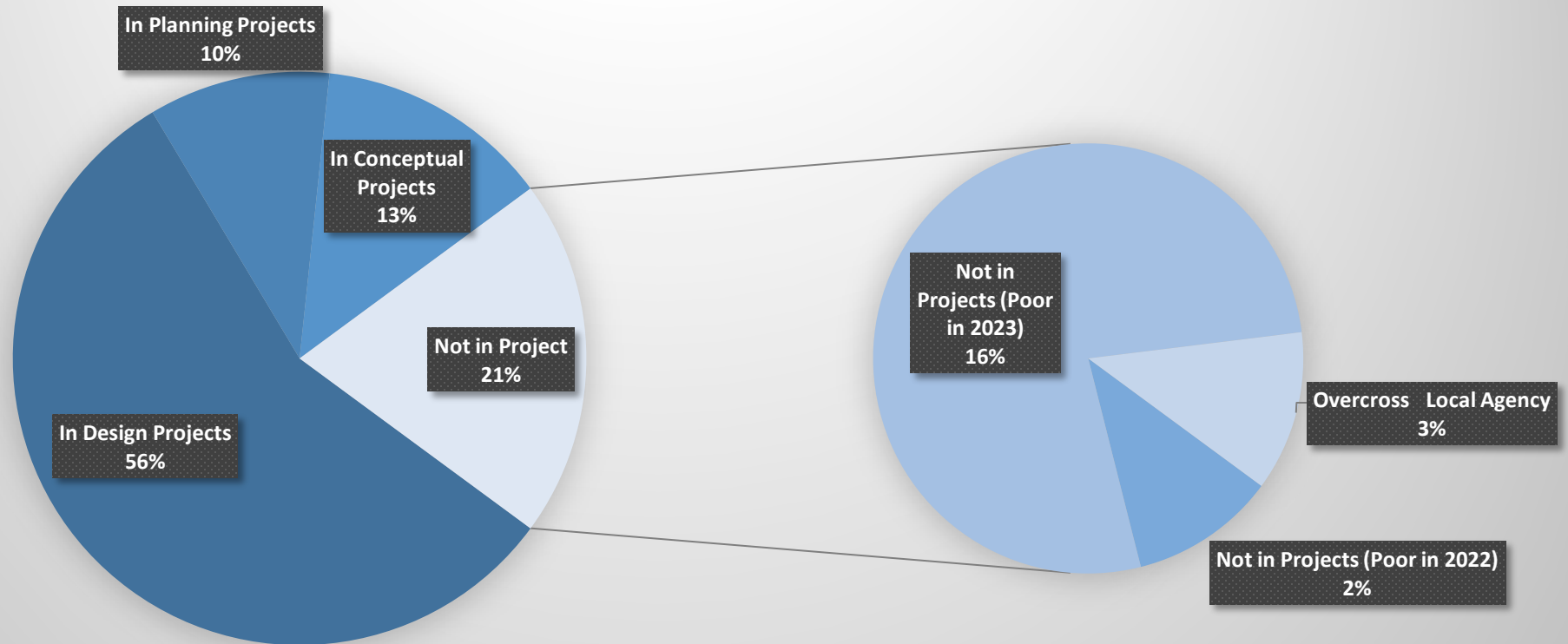
45-65 years



Bridge Age ▾

Breakdown of Project Status of Poor Bridges

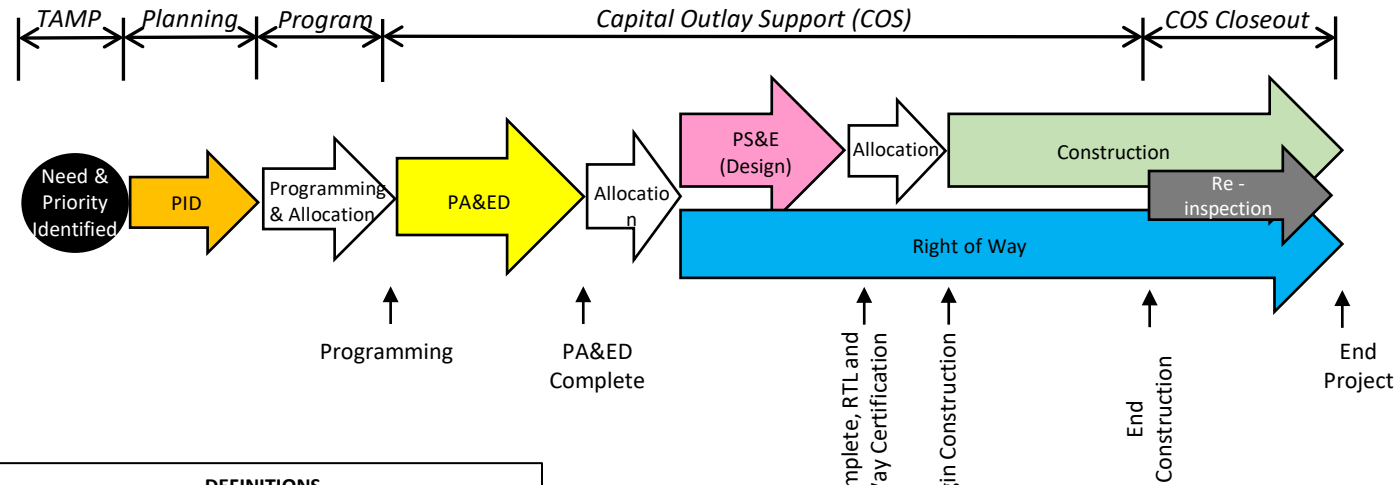
557 Poor Bridges
~12 million sq ft



Bridge Project Timeline

Average Time Period = 9.5 Years

On - going	2 Years	1 Year	2.2 Years	1.6 Years	0.5 Year	1.2 Years	1 Year
------------	---------	--------	-----------	-----------	----------	-----------	--------



DEFINITIONS	
TAMP	Transportation Asset Management Plan
PID	Project Initiation Document
PA&ED Document	Project Approval and Environmental Document
PS&E	Plans, Specifications and Estimate
RTL	Ready to List for Advertising



Bridge Action Required

- Bridge deck program implemented 2 years ago will show gains over the next 2 years
- Requesting continuous programming of Poor condition bridges
- Look for opportunities to speed up projects
 - Potential new contracting approaches
 - Permit and environmental streamlining
- Expedited reinspection after projects





Culvert Progress



Aug 26, 20
+33.64

Culvert Summary

- Culvert conditions continue to exceed target levels

Table 7 - Drainage Condition Summary

Condition	2027 Target	2021 Year End	2022 Year End	Change in Condition
Good	70.0%	73.3%	74.2%	0.9% ↑
Fair	20.0%	16.7%	16.2%	-0.5% ↓
Poor	10.0%	9.9%	9.5%	-0.4% ↓





TMS Progress

TMS Condition

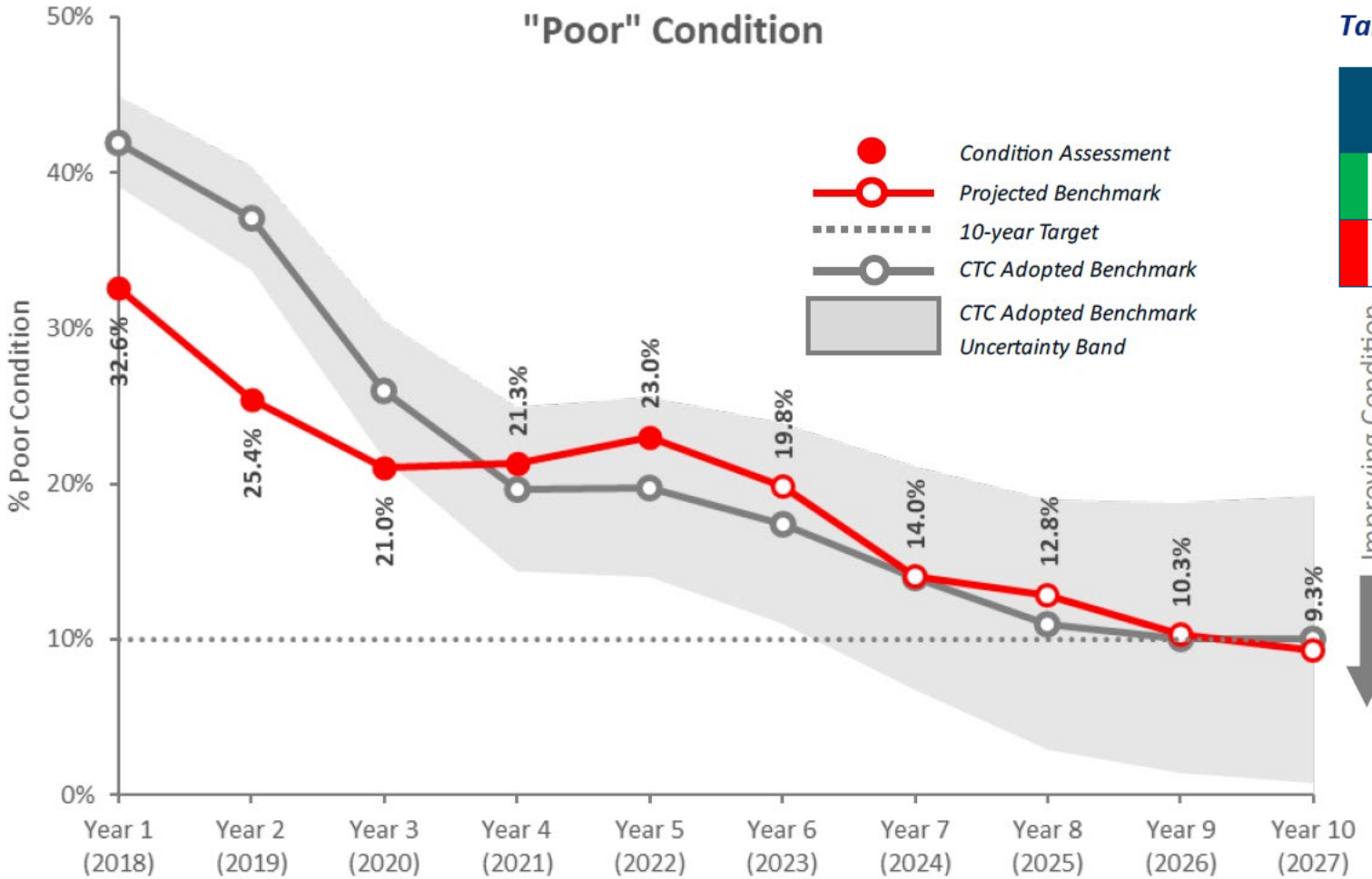


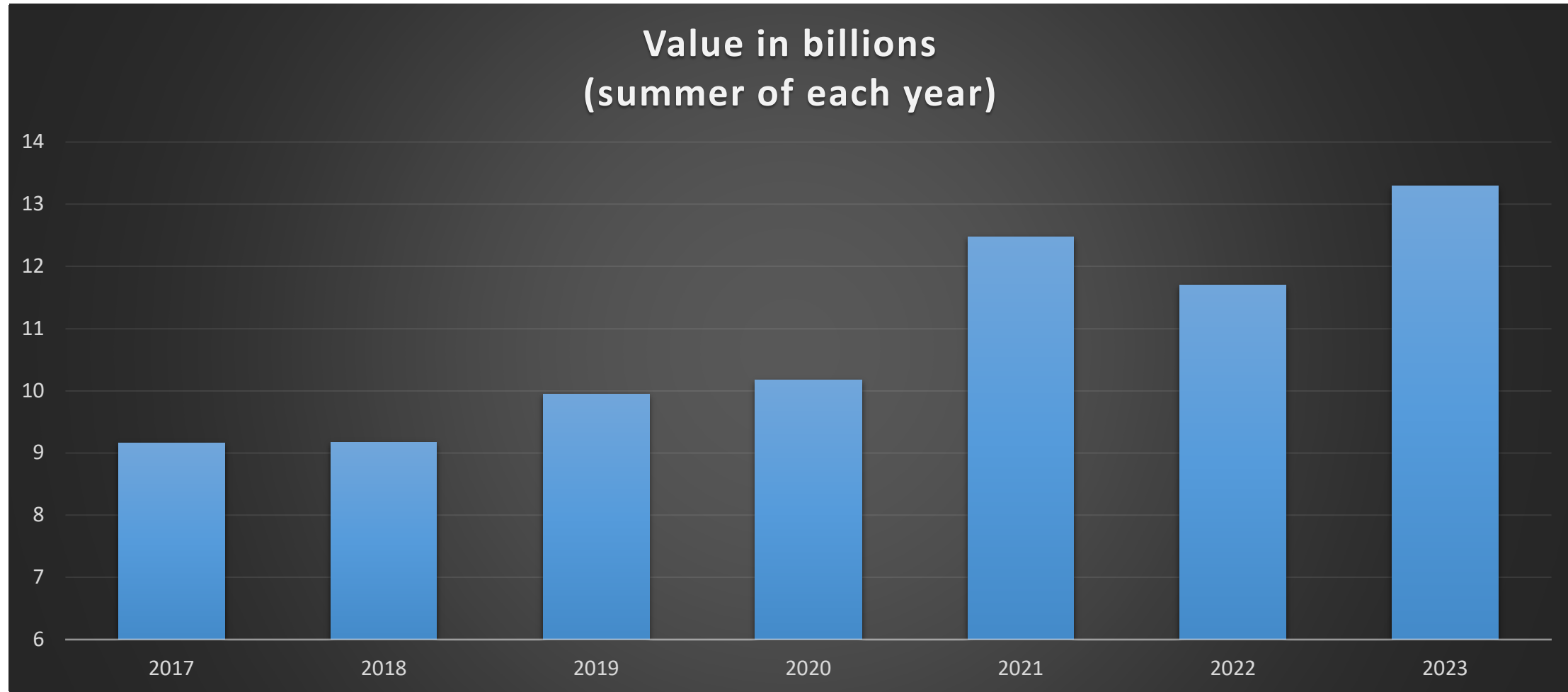
Table 8 - Transportation Management Systems Condition Summary

Condition	2027 Target	2020 Year End	2021 Year End	Change in Condition
Good	90.0%	79.0%	78.7%	-0.3% ↓
Poor	10.0%	21.0	21.3%	0.3% ↑

Figure 17 - Transportation Management Systems, Poor



Value of Going Construction



Cumulative Accomplishments Since 2017

- Pavement rehabilitation – **14,856 lane miles**
- Bridges fixed– **1,512 fixed** (828 above pre SB1 levels)
- Drainage systems fixed or replaced – **Over 578,000 feet**
- TMS elements fixed or replaced – **6,198 elements**



Conclusion

- Executing our asset management plan and making good progress
- We expect to meet all SB1 performance targets
- Need to maintain investment levels to sustain these conditions
- Will be implementing bridge improvement actions

