State of Bridges

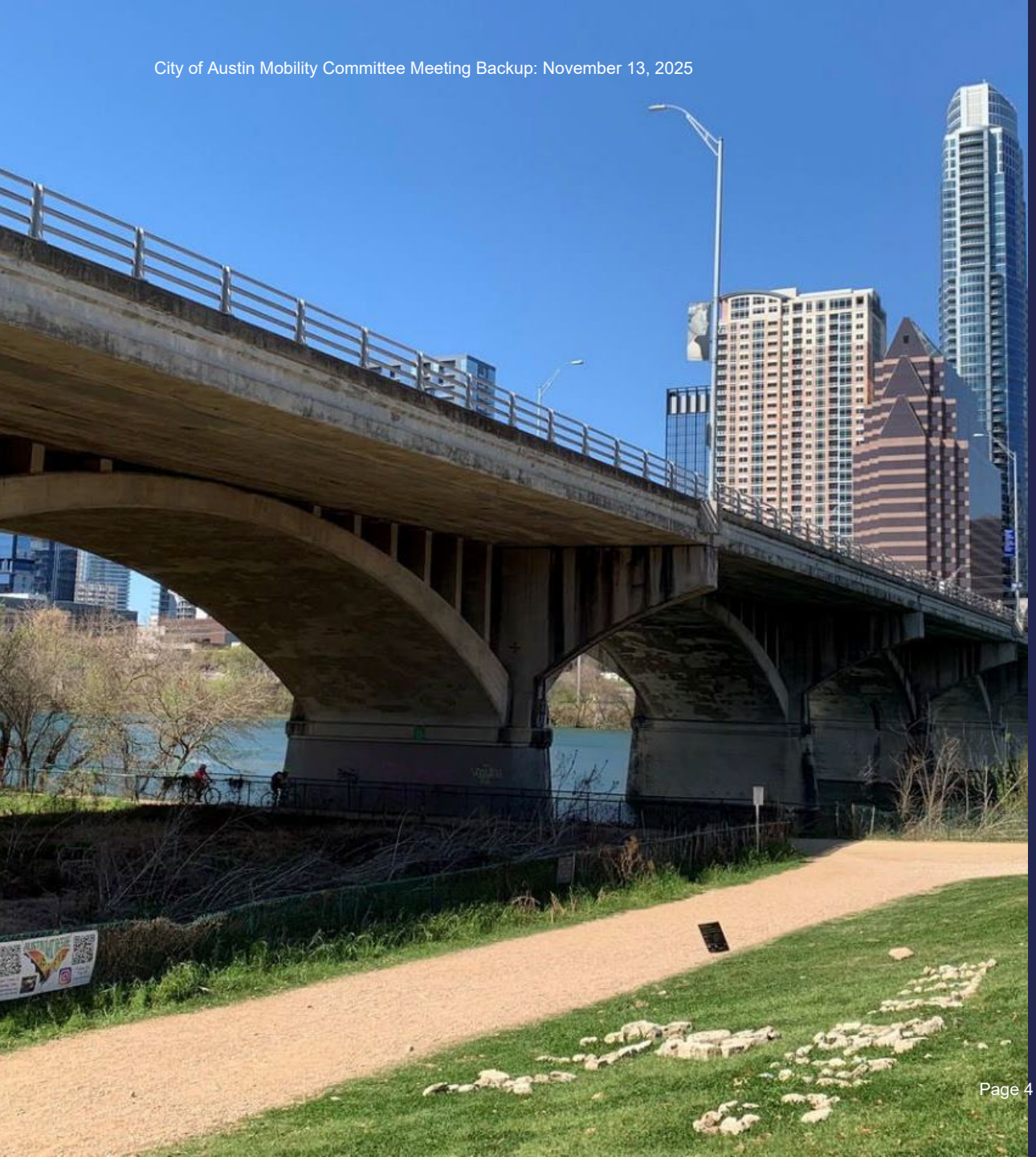
Austin Transportation and Public Works | Nov 2025

Outline

- **Bridge Inventory**
- **Condition**
  - Major Bridges
  - Small Culverts/Bridges
  - Pedestrian/Bike Bridges
- **Funding**
- **Next Steps**

Importance of Streets & Bridges

- Austin's streets and bridges are **FOUNDATIONAL** to mobility, connecting communities to opportunity.
  - Connects – walk, bike, roll, transit, drive
  - Safety and accessibility
  - Health and sustainability
  - Economic growth

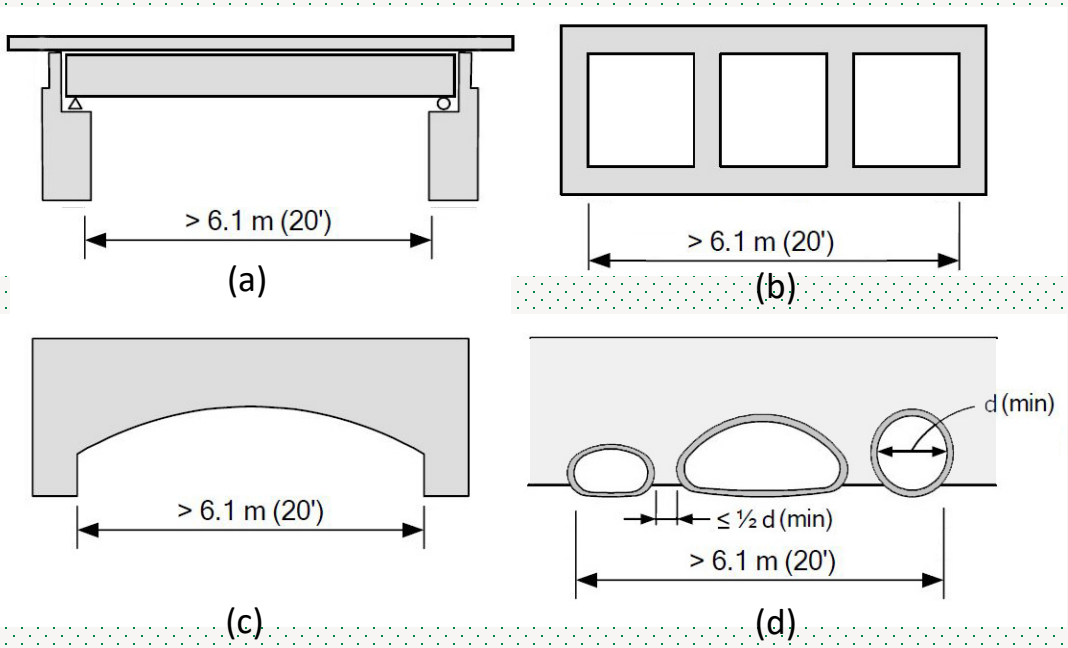


Bridge Inventory

Bridge Inventory – Types

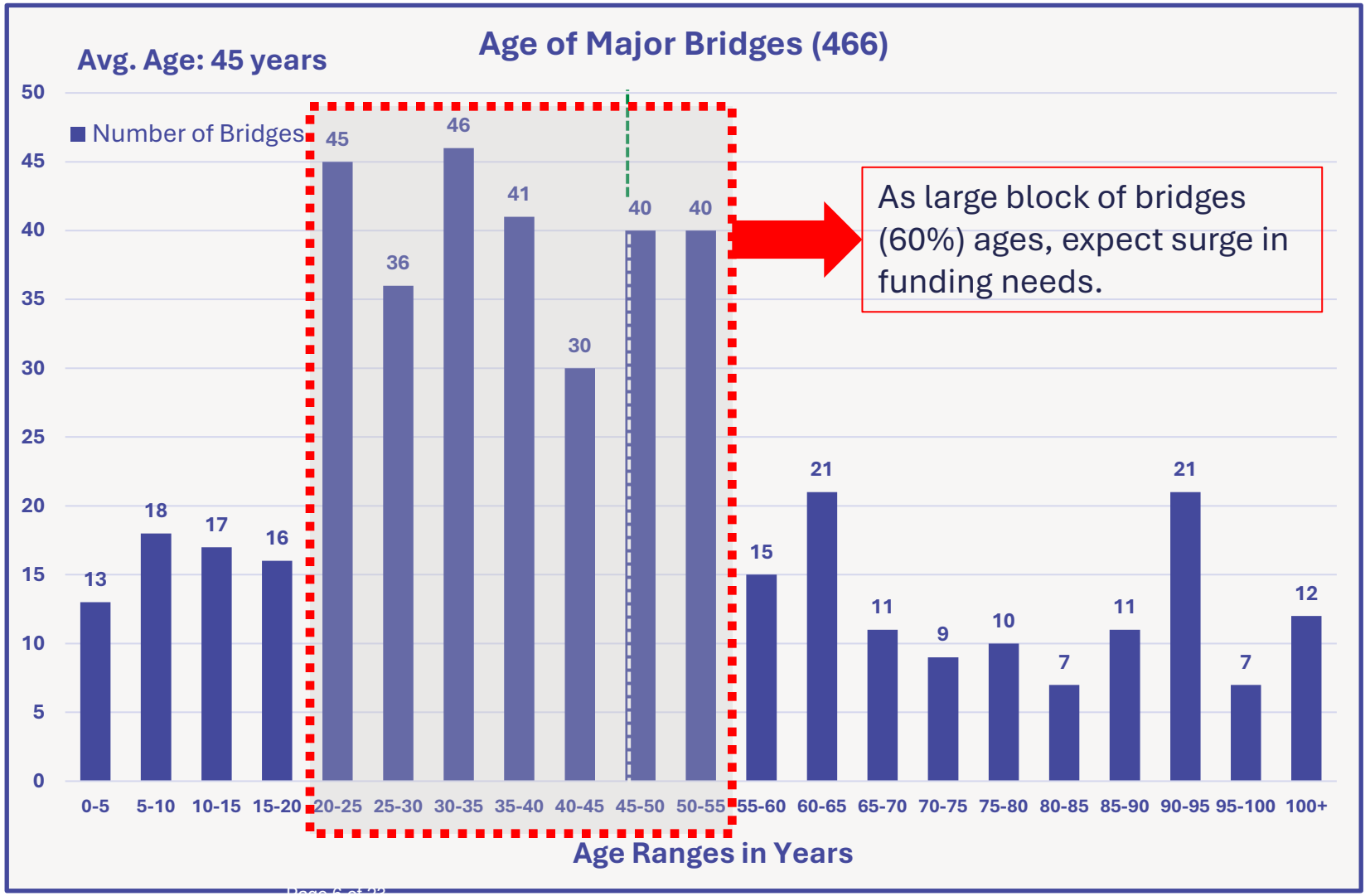
- **466 Major Bridges**
  - National Bridge Inspection Standards (NBIS) class bridges and culverts having an opening more than 20 FT.
  - Inspected by TxDOT.
- **810 Small Culverts**
  - Small culverts, pipes, or bridges with spans of less than 20 FT carrying drainage water directly across ROW.
  - Inspected by City.
- **20 Pedestrian/Bike Bridges**
  - Inspected by City.
  - Urban trail bridges inventory and condition assessment to be developed by FY27.

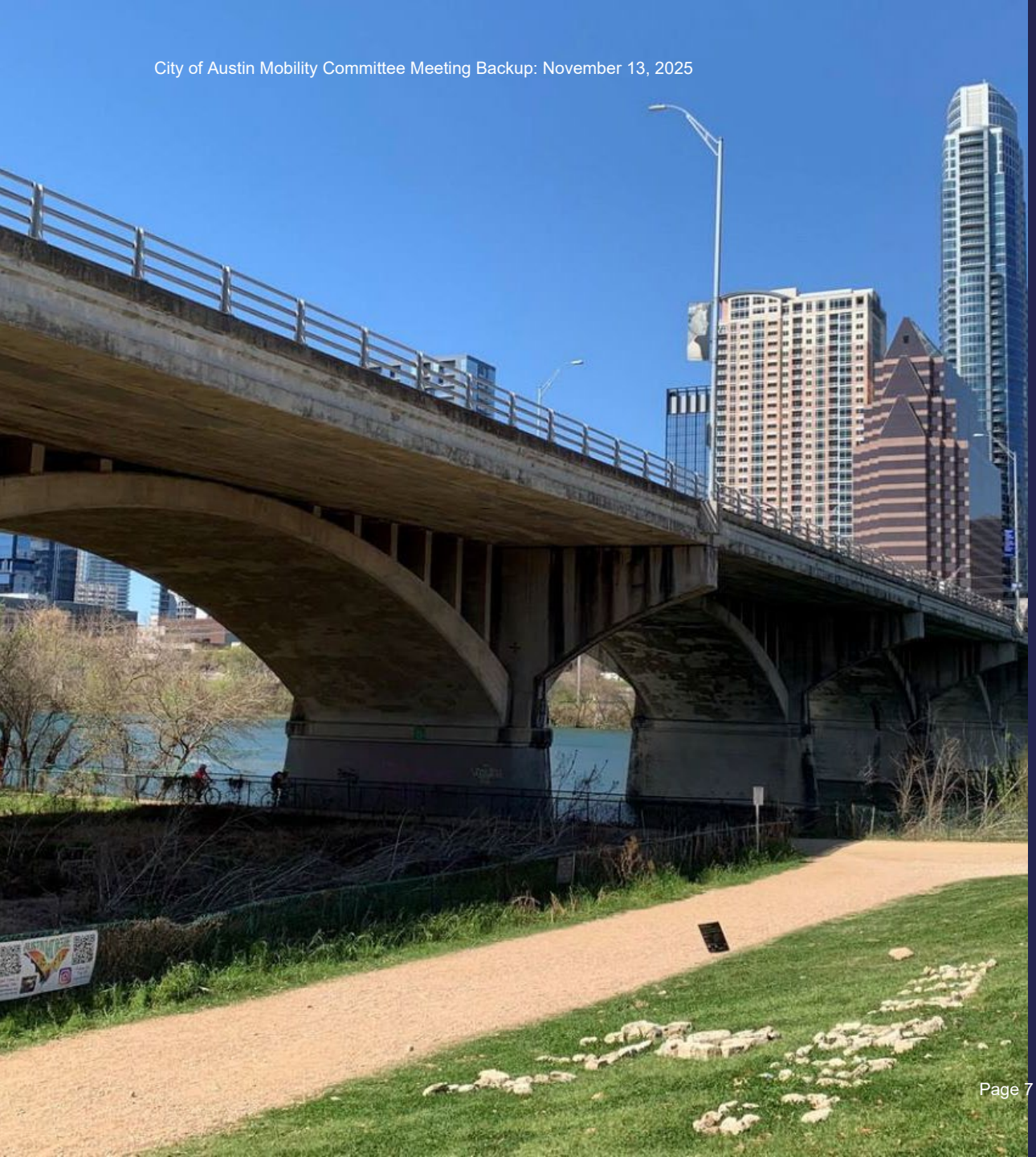
Major Bridge (NBIS Class Bridge)



Bridge Inventory – Age

- Average age: 45 years old.
- 3% are nearly 100 years old.
- 35% are past their anticipated design life of 40 to 50 years.
- Older bridges with increasing traffic loading will experience an accelerating rate of deterioration.
- Large block → surge in funding needs.



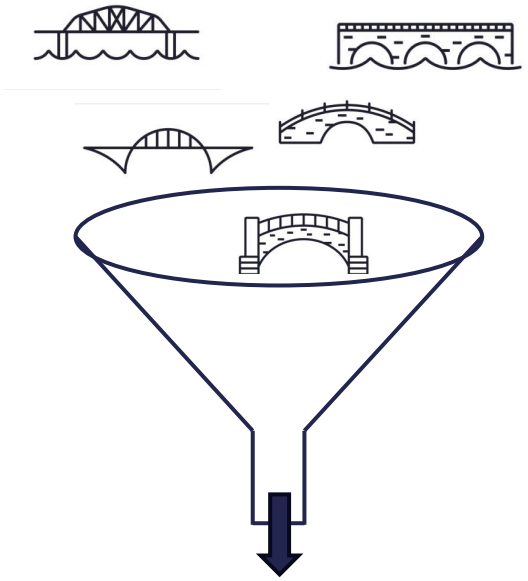


Bridge Condition

- Major Bridges
- Small Culverts/Bridges
- Pedestrian/Bike Bridges

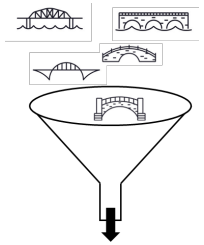
Bridge Condition – How we assess health

High Level Inspection Screening
(System-Wide + Individual Bridge Health)



Composite Structural Rating (CSR)
(Based on TxDOT Visual Inspection, NBIS)

Detailed Inspections Informed By…
(Forms Individual Bridge Needs)



CSR

Austin
3-1-1

Experience, Training, Education

Bridges in need of maintenance, rehabilitation, or replacement

Bridge Condition – How we manage health

Maintenance

- Primarily **reactive**
  - Repair railings
  - Patch concrete
  - Prevent water from reaching re-enforcing steel
  - Repair fire damage + more
- Funded through **annual operating budget**

Rehabilitation + Replacement

- **Planned**
  - Rehabilitating support structures
  - Widening to accommodate other modes of travel
  - Complete replacement
- Funded through capital budget - **bonds and grants**

Bridge Condition – Goals

Address bridges needing **immediate maintenance** and bridges that will **likely** need **rehabilitation or replacement in the next 5 to 10 years**.

Goal 1: All bridges rated in structurally Fair or better condition (CSR ≥ 5).

- Composite Structural Rating (CSR)
- CSR places emphasis on structures with the highest failure risk

Composite Structural Rating (CSR) Categories
Poor (Rating < 5)
Fair (5 ≤ Rating < 6)
Satisfactory (6 ≤ Rating < 7)
Good (7 ≤ Rating < 8)
Excellent (8 ≤ Rating < 10)

Goal 2: To minimize the financial risk of unexpected, high-cost maintenance needs at once, continually address those rated Fair or Poor:

- Major Bridges: CSR ≥ 90% - Satisfactory
- Smaller Culverts/Bridges and Pedestrian/Bike Bridges: CSR ≥ 80% - Satisfactory

Bridge Condition – Major Bridges

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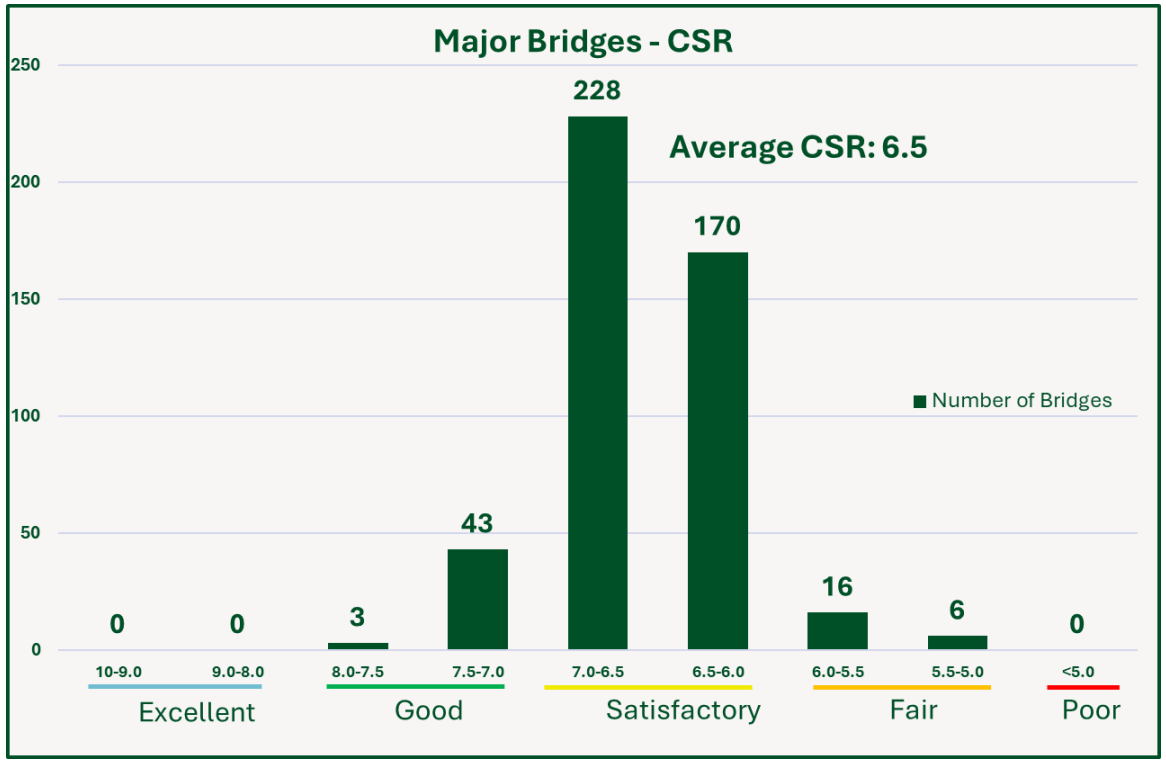
High Level Inspection Screening
(System-Wide Health)

- Average CSR - 6.5 (Satisfactory).
- All major bridges in Fair or better structural condition.
- 95% in Satisfactory or better condition.

Composite Structural Rating (CSR)		
Category	**# of Bridges**	**%**
Poor (Rating < 5)	0	0
Fair (5 ≤ Rating < 6)	22	5
Satisfactory (6 ≤ Rating < 7)	398	85
Good (7 ≤ Rating < 8)	46	10
Excellent (8 ≤ Rating < 10)	0	0



Bridge Condition – Major Bridges

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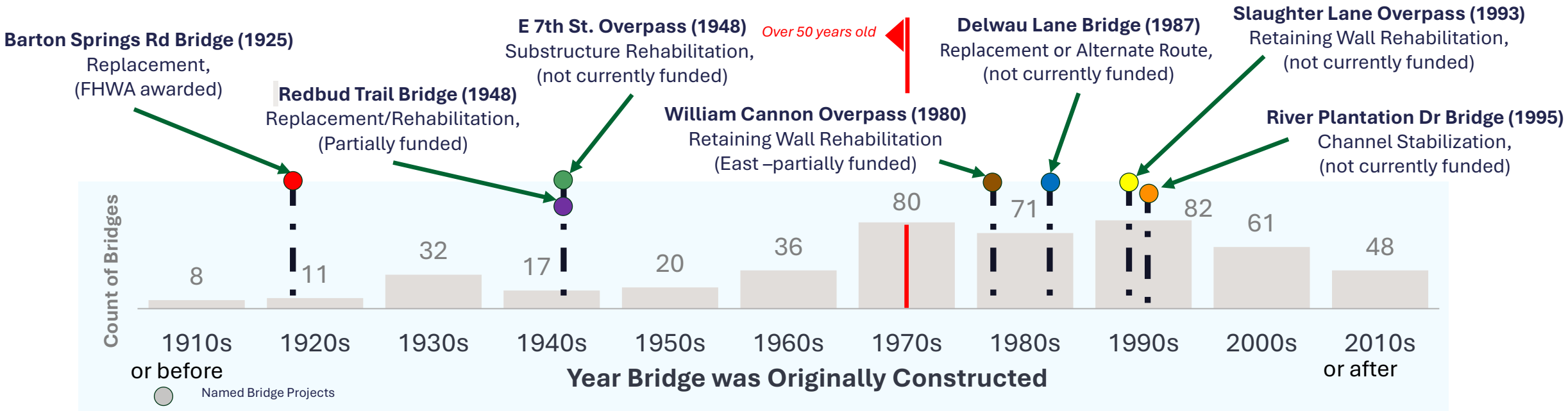
Detailed Inspections

- 7 bridges in need of rehabilitation or replacement.
- At various levels of project development.



Bridge Condition – Small Culverts/Bridges

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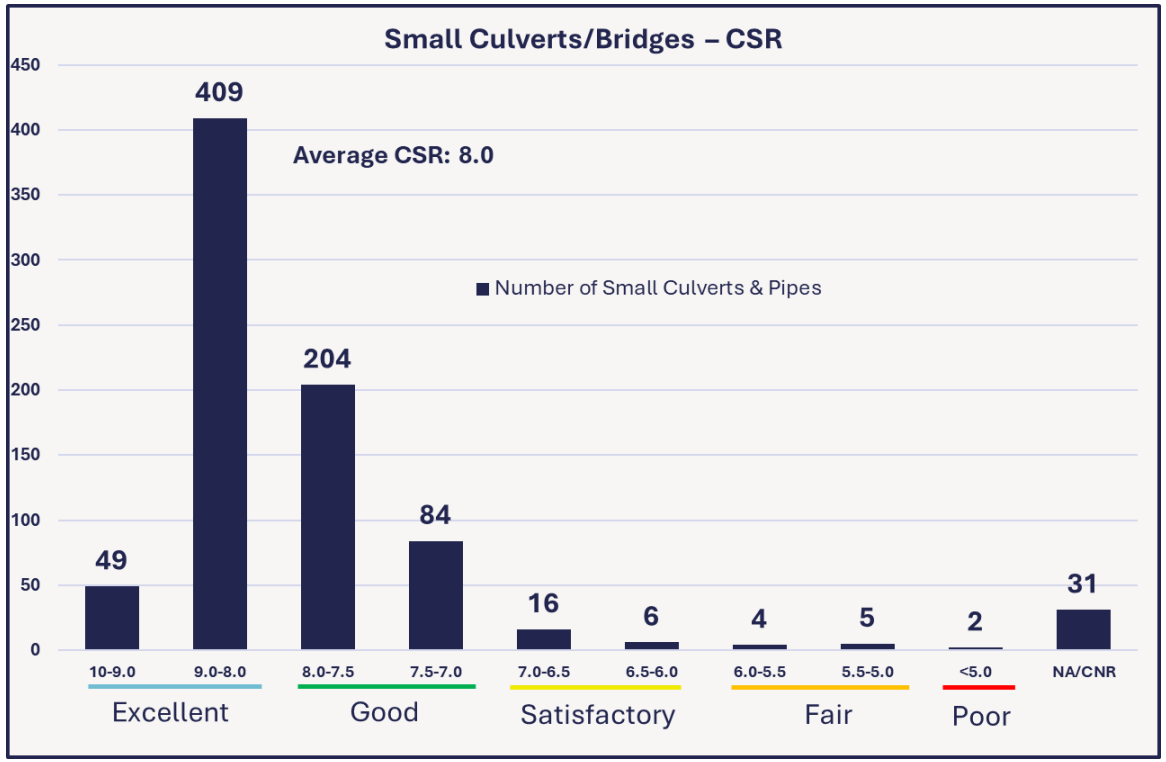
High Level Inspection Screening
(System-Wide Health)

- Average CSR - 8.0 (Excellent).
- 2 bridges identified in Poor condition.
- 99% in Satisfactory or better condition.

Composite Structural Rating (CSR)		
Category	**# of Bridges**	**%**
Poor (Rating < 5)	2	<1
Fair (5 ≤ Rating < 6)	9	1
Satisfactory (6 ≤ Rating < 7)	22	3
Good (7 ≤ Rating < 8)	288	36
Excellent (8 ≤ Rating < 10)	458	56
Not Inspected	31	4

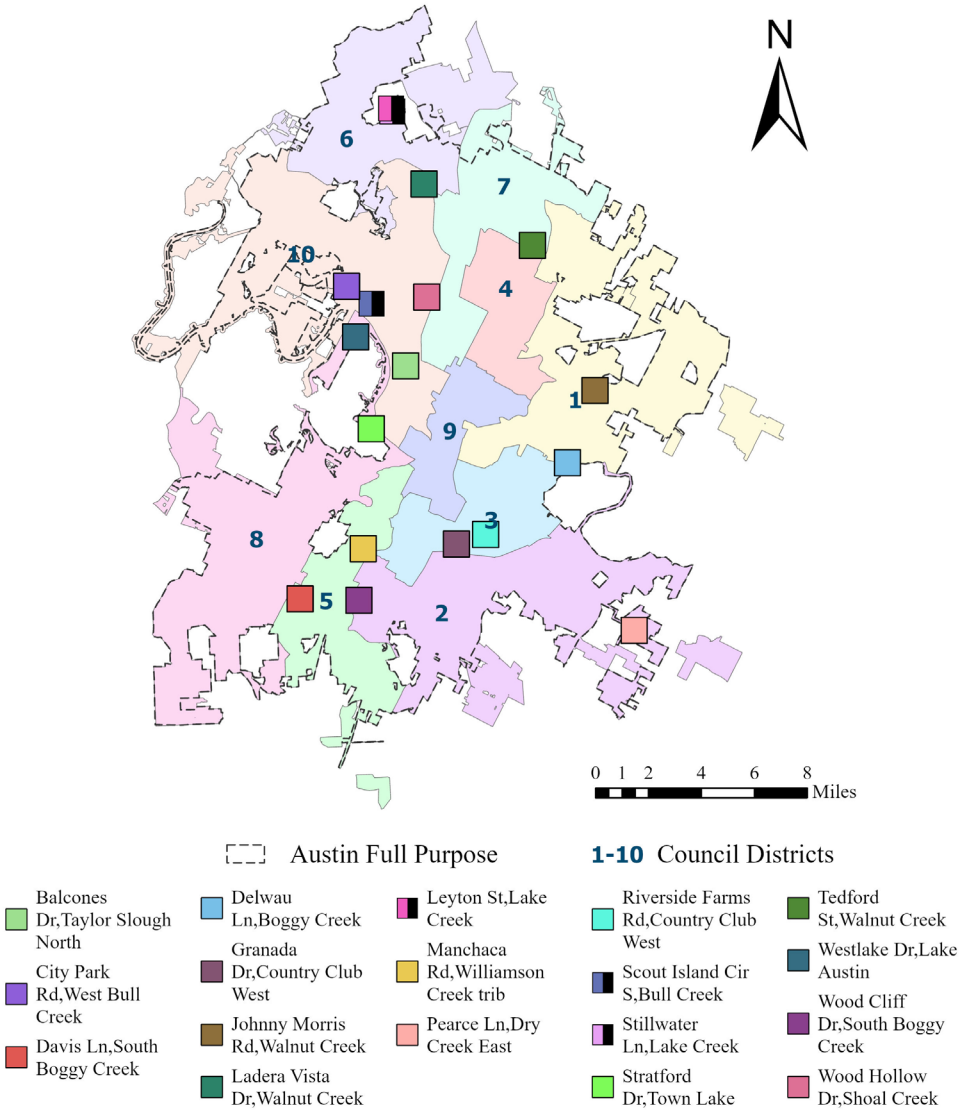


Bridge Condition – Small Culverts/Bridges

Detailed Inspections

- 18 bridges in need of rehabilitation or replacement.
- Preliminary Engineering Reports needed to estimate costs.

No.	Bridge	Project	Potential Funding Need
1	Pearce Ln at Dry Creek East[2]	Replacement	
2	Balcones Dr at Lake Austin[2]	Replacement	
3	Johnny Morris Rd at Walnut Creek[2]	Replacement	
4	Manchaca Rd at Williamson Creek[2]	Rehabilitation	
5	Delwau Ln at Boggy Creek[2]	Replacement	
6	Wood Hollow Dr at Shoal Creek[2]	Replacement	
7	Wood Cliff Dr at South Boggy Creek[2]	Replacement	
8	Westlake Dr at Lake Austin[2]	Replacement	
9	Stratford Dr at Town Lake[2]	Replacement	
10	Leyton St at Lake Creek[1]	Replacement	~$15M
11	Scout Island Cir S at Bull Creek[1]	Replacement	
12	Ladera Vista Dr at Walnut Creek[2]	Replacement	
13	Stillwater Ln at Lake Creek[1]	Replacement	
14	Riverside Farms Rd at Country Club West[2]	Replacement	
15	Tedford St at Walnut Creek[2]	Replacement	
16	City Park Rd at West Bull Creek[2]	Rehabilitation	
17	Granada Dr at Country Club West[2]	Rehab / Replace	
18	Davis Ln at South Boggy Creek[2]	Rehab / Replace	



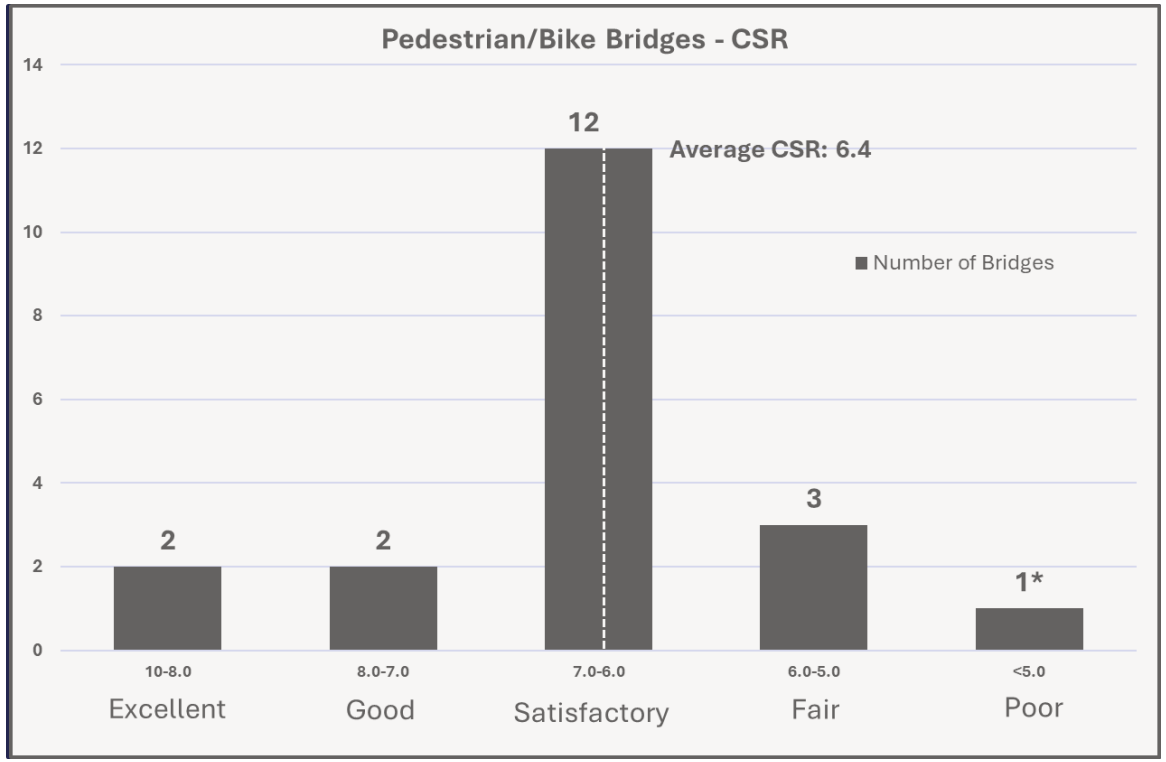
Bridge Condition – Pedestrian/Bike Bridges

Austin

High Level Inspection Screening
(System-Wide Health)

- Average CSR - 6.4 (Satisfactory).
- 1 bridge is rated in Poor condition and closed for public use.
- 80% in Satisfactory or better condition.
- Bridges on trail network to be inspected in FY27 (currently not included in data).

Composite Structural Rating (CSR)		
Category	**# of Bridges**	**%**
Poor (Rating < 5)	1	5
Fair (5 ≤ Rating < 6)	3	15
Satisfactory (6 ≤ Rating < 7)	12	60
Good (7 ≤ Rating < 8)	2	10
Excellent (8 ≤ Rating < 10)	2	10

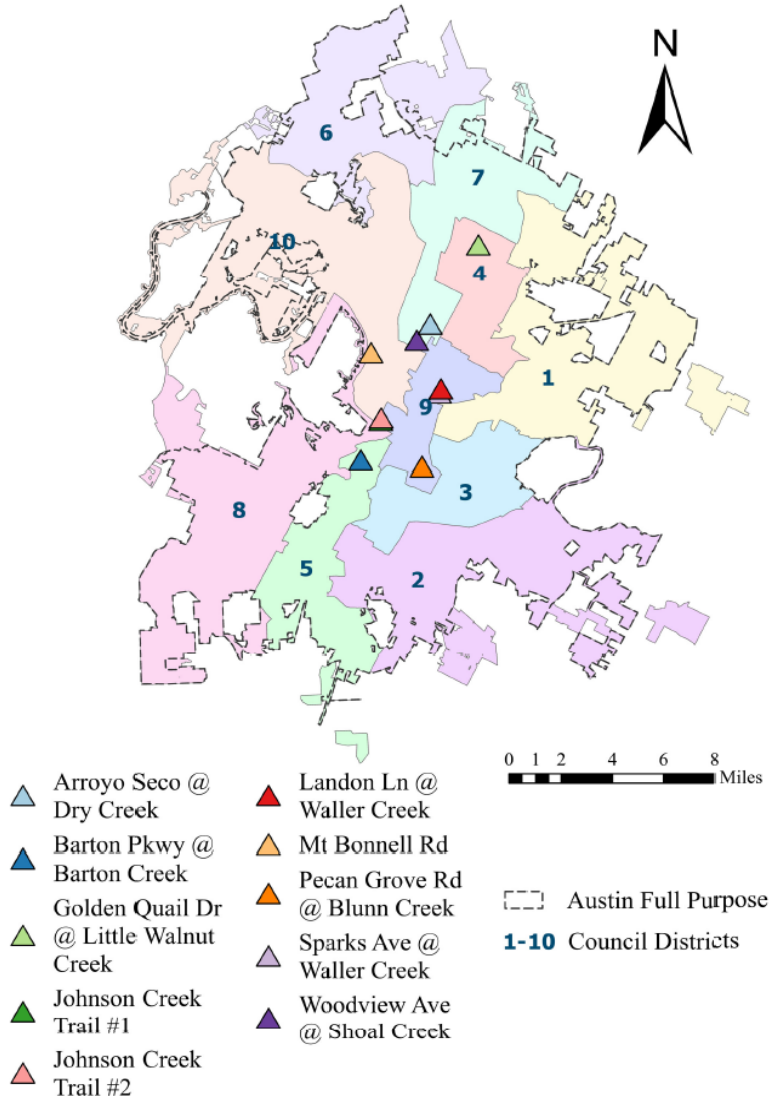


Bridge Condition – Pedestrian/Bike Bridges

Detailed Inspections

- 10 bridges in need of rehabilitation or replacement.
- Preliminary Engineering Reports needed to estimate costs.

No.	Bridge	Project	Potential Funding Need
1	Landon Ln at Waller Creek (Lee Elementary)	Replacement	~$6M
2	Sparks Ave and 31st St at Waller Creek	Replacement	
3	W 49th St and Woodview Ave at Shoal Creek	Replacement	
4	Pecan Grove Rd/Alameda Dr at Blunn Creek	Replacement	
5	Barton Pkwy at Barton Creek	Replacement	
6	Arroyo Seco at Dry Creek	Replacement	
7	S Meadows Dr to Golden Quail Dr at Little Walnut Creek	Replacement	
8	Mt Bonnell Rd	Rehabilitation	
9	Johnson Creek Trail #1	Replacement	
10	Johnson Creek Trail #2	Replacement	



Funding

Funding – Maintenance

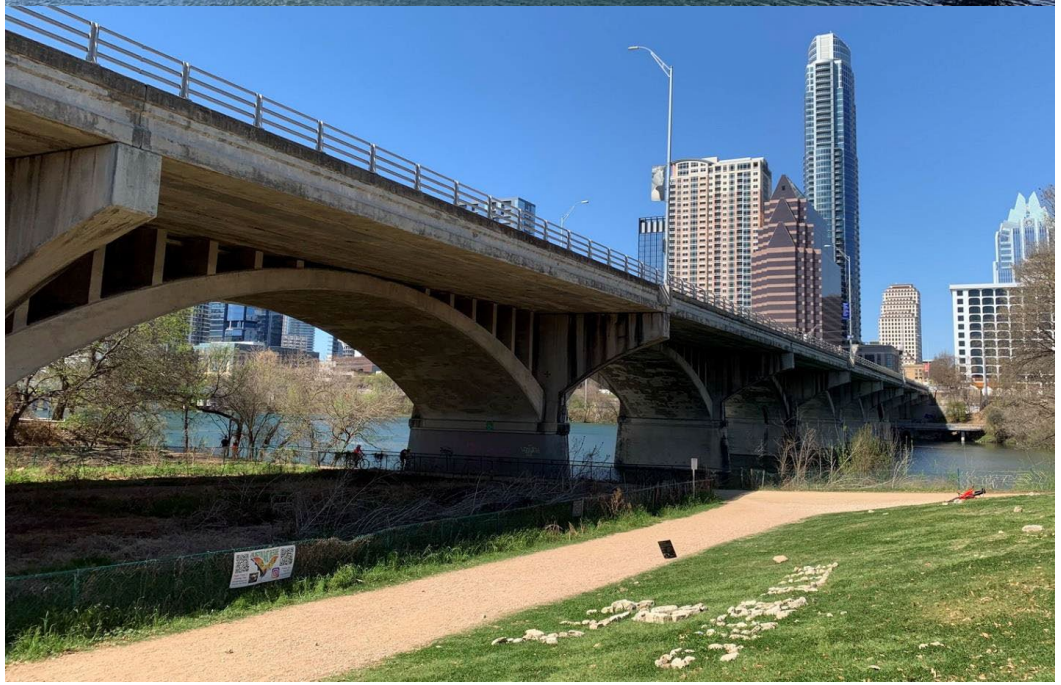
- Basic repair and maintenance need identified in inspection reports are addressed utilizing in-house and contracted resources.
- Repair types – surface repairs, guardrail and railing repairs, vegetative and debris removal, fire damage, fencing, rip rap, and minor concrete repairs.
- FY26: $1.8M annual operating budget.
- FY27: funding determined through budget process, expecting an increased need.

Funding – Rehabilitation and Replacement

- Bridges and structures are critical links **necessary to keep Austin moving**.
- If not addressed, bridges may need to be **load rated** (heavy vehicles prohibited) or **closed**.
- **Detours** to next crossing can be long and inconvenient **increasing emergency response times** and **congestion**.
- It is **difficult to predict** when to rehab/replace, some bridge may perform well and delay the need.

Funding – Rehabilitation and Replacement

- Assuming $3 Billion in bridge assets, an optimistic 100-year life and therefore 1% replacement per year, bridge needs could be as high as **~$30 Million/year**. – *annualized approach*
- Based on condition, over the next 20 years estimated **~$400 Million.** – *condition-based approach*
- Current funding: **allocated** to specific projects.
- Future funding: **determined through bond process** and **grant pursuits** to address the most critical and urgent needs.



Funding – Rehabilitation and Replacement

Funding Category	Estimate Need + Timing	
Capital (rehab/replacement)	**Years 0 – 5**	**Year 6 + Beyond**
Major Bridges	~$125M	
Small Bridges	~$16.5M[1]	
Pedestrian/Bike Bridges	~$7M[2]	
Total	**~$148.5M**	**~$30M/yr**

1. Includes $1.5 M for Project Engineering Reports (PERs) to estimate construction cost, rough construction cost estimate of $15M.
2. Includes $1M for PERs to estimate construction cost, rough construction cost estimate of $6M.

- **~$400 - $600 M needed in next 20+ years.**
- **~$73 M in bond fundings since 1998**

(average of under $3M/Year).

Next Steps

- Continue to prioritize available funding to enhance bridge safety to keep them in good serviceable condition for our community.
- Complete CIP projects.
- Develop a Street and Bridge Rehabilitation Plan.
- Continue to seek alternative funding sources – Federal and State Grants.
- Complete inventory and inspection of ped/bike bridges in the Urban Trail network in FY27.
- Complete routine inspections of small bridges in next inspection cycle - FY28.
- Develop the requirements for an automated Bridge Management Information System (BMIS) implementation that continues to align with the federal specifications.

Thank You