Arterial Management Division

August 1,2023

Austin Transportation & Public Works

Overview of the Arterial Management Division

Timing

Construction

Maintenance

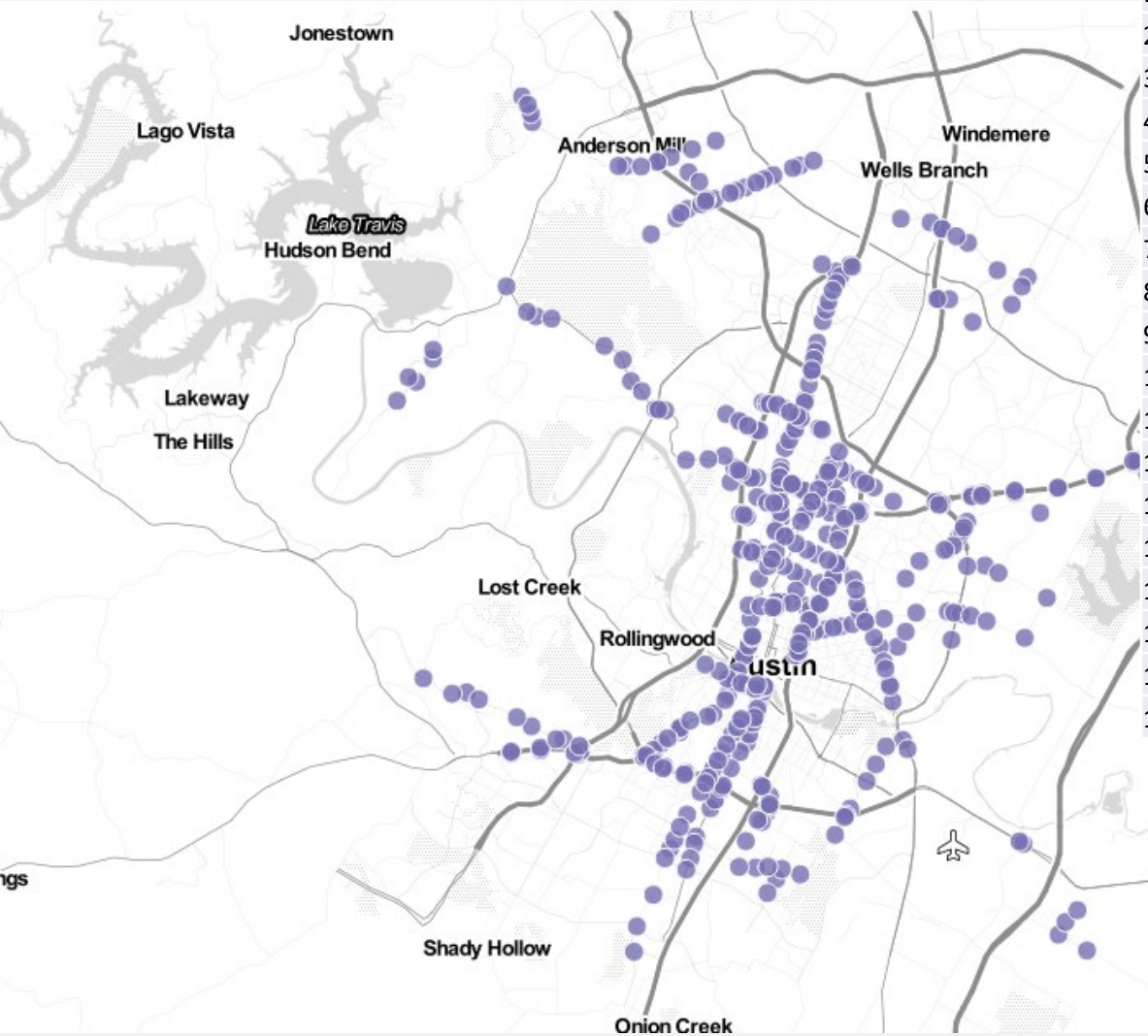
ITS and Communications

MMC

Project Delivery

Signal Timing

Annual Signal Retiming

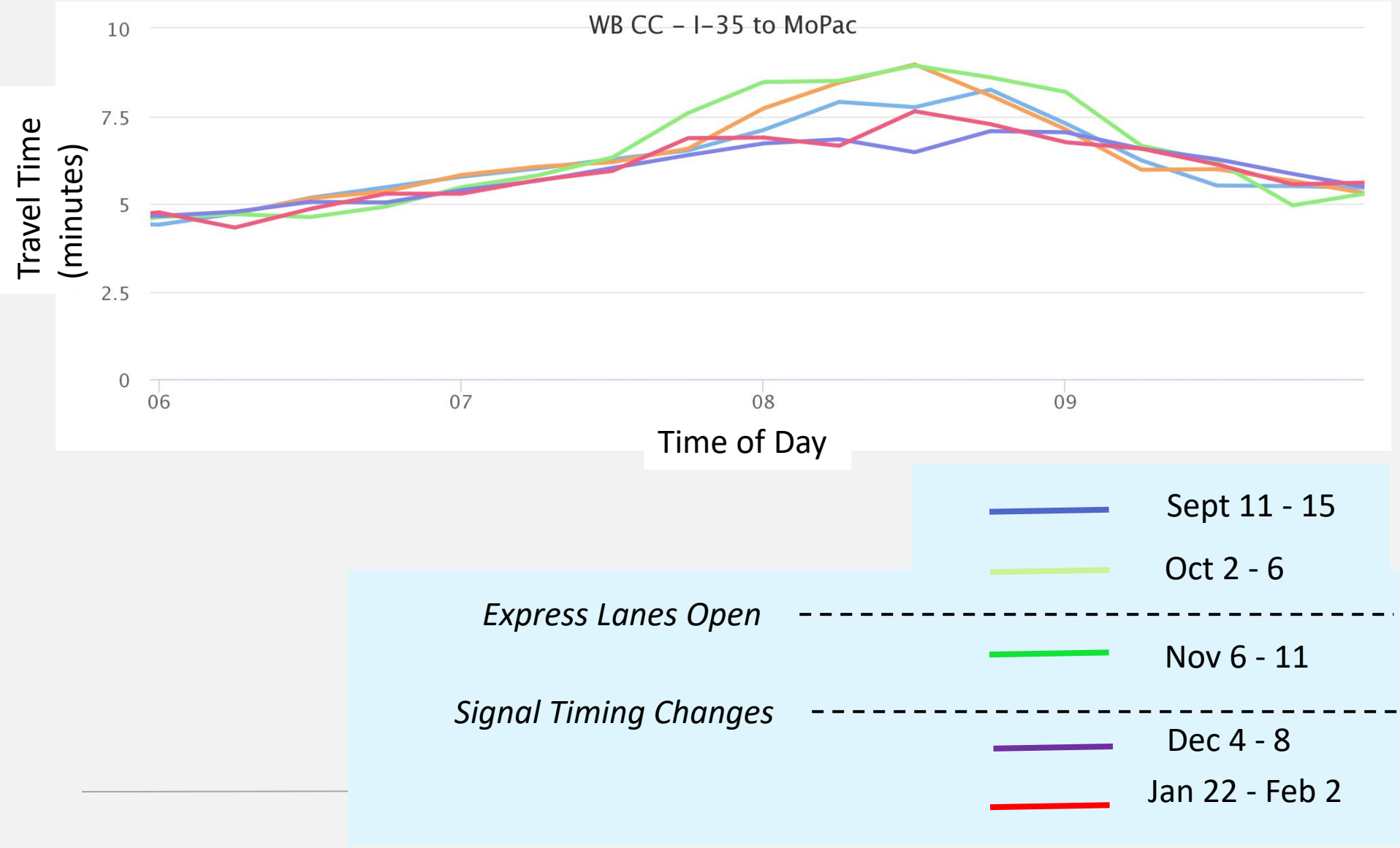


FY 22 Retiming Corridors

1. ROSS	19. LAMAR - SOUTH
2. LAMAR - CENTRAL	20. QUINLAN PARK
3. 45TH	21. SOUTHWEST PARKWAY
4. DEAN KEETON	22. HOWARD
5. 38TH	23. ST JOHNS
6. BARTON SPRINGS	24. SOUTH 1ST - NORTH
7. MONTOPOLIS	25. SOUTH 1ST - SOUTH
8. WOODWARD	26. MANOR - EAST
9. MCNEIL/SPICEWOOD SPGS	27. ANDERSON MILL
10. BEN WHITE - WEST	28. ANDERSON MILL WEST
11. YAGER	29. STASSNEY - EAST
12. 24TH	30. RM 2222 - CENTRAL
13. KOENIG/NORTHLAND	31. RM 2222 - WEST
14. BURNET	32. LOYOLA
15. IH 35 SRVC RDS	33. US 290 - EAST
16. ANDERSON	34. CONGRESS - SOUTH
17. RM 2222 - EAST	35. MLK - EAST
18. FAR WEST	36. AIRPORT

Traditional Retiming Metrics

Cesar Chavez Corridor: *Retiming after MoPac Express Lanes opened*



Annual Signal Retiming

Annual Signal Retiming Overview (2023 & later)

AUSTIN TRANSPORTATION | MOBILITY MANAGEMENT CENTER | Kimley»Horn

7/6/2023 1:29:55 PM
Date Last Refreshed

FY
2023

Corridor Retiming Zone
All

Avg Travel Time Change
-2%

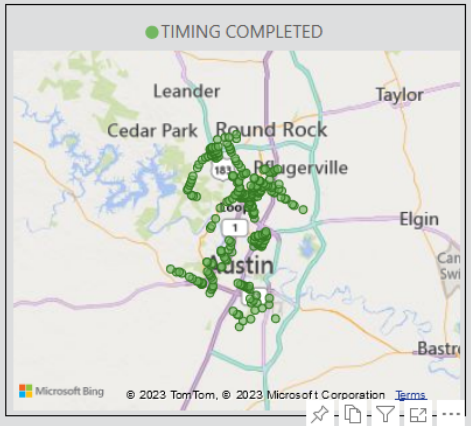
Avg Arrival (AOG) Change
1%

Avg Delay Change
-3%

Avg Split Failure Rate Change
0.0%

Count of Signals by Status

ASR Goal is to retime each signal every 3 years. The number of signals retimed each year may vary between 250-400 depending on need, upgrades, and performance. Please note that some signals do not have data available from our provider.



Corridor Retiming Zone	Retiming Status	Scheduled Month	Change in TT	Change in Control Delay	Change in AOG	Change in Split Failure Rate	Engineer Note
Parmer East	TIMING COMPLETED	August 2023	1%	-6%	8%	0.2%	Cycle length was Decreased for the evening plan. Adjusted offsets to improve progression for all plans. Cross-coordinate the Parmer East corridor with Parmer/IH35 DDI new pattern.
Parmer West	TIMING COMPLETED	August 2023	-2%	-6%	2%	0.2%	
Domain	TIMING COMPLETED	September 2023	-0%	-3%	0%	0.1%	
Mueller	TIMING COMPLETED	September 2023	-2%	-7%	5%	-0.1%	Cycle length was Decreased for the Mid-day Off-peak plan. Adjusted offsets to improve progression for all plans for all corridors. Created new special AM & PM school plans for School start/end time. Adjusted configuration for signals at Barbara Jordan Blvd to run coordinated.
Wells Branch	TIMING COMPLETED	September 2023	0%	7%	-2%	0.5%	Adjusted offsets to improve progression for all plans. Adjust split timings at most of the
Total			**-2%**	**-3%**	**1%**	**0.0%**	

Please note that some signals do not have performance data available from our provider.

Annual Signal Retiming

Annual Signal Retiming Metrics (2023 & later)

AUSTIN TRANSPORTATION | MOBILITY MANAGEMENT CENTER | Kimley»Horn

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Date Last Refreshed

Please note that some signals do not have performance data available from our provider.

FY: 2023

Peak: All

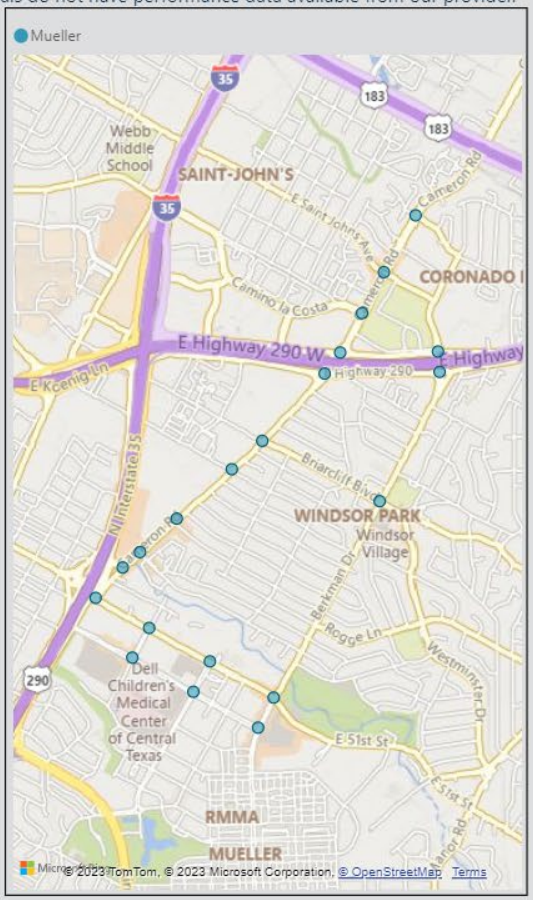
Corridor Retiming Zone: Mueller

Intersection: All

Approach: All

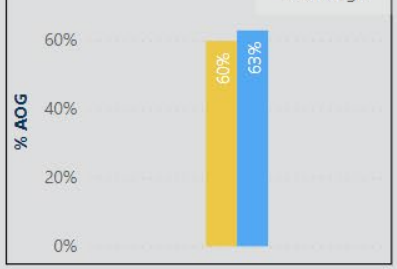
Movement: All

Travel Time by TOD

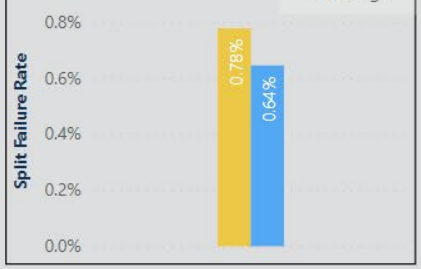


Control Delay

Arrivals on Green

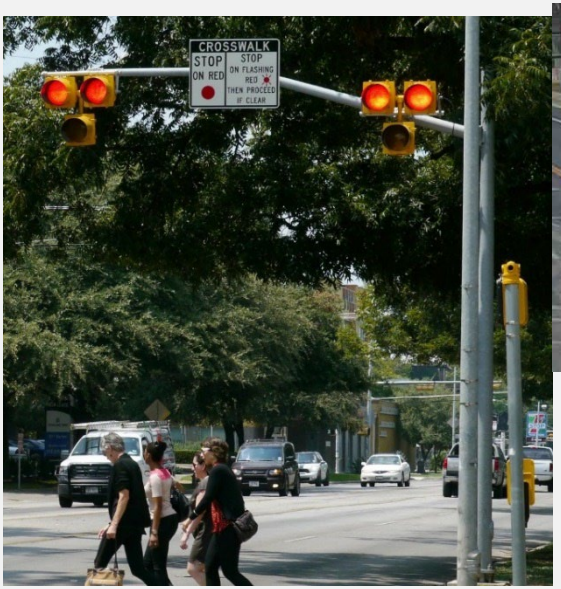


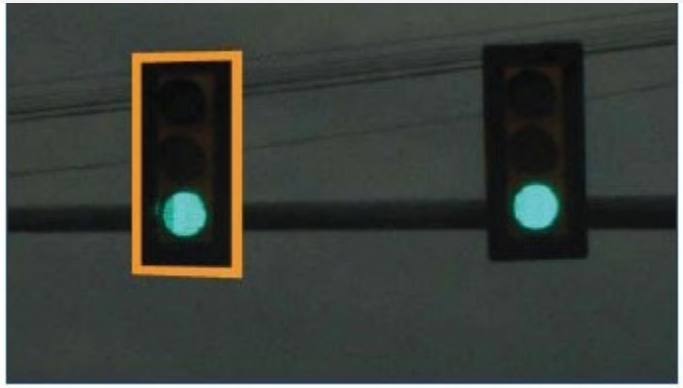
Split Failure Rate



Construction

Signal Construction





Signal Construction

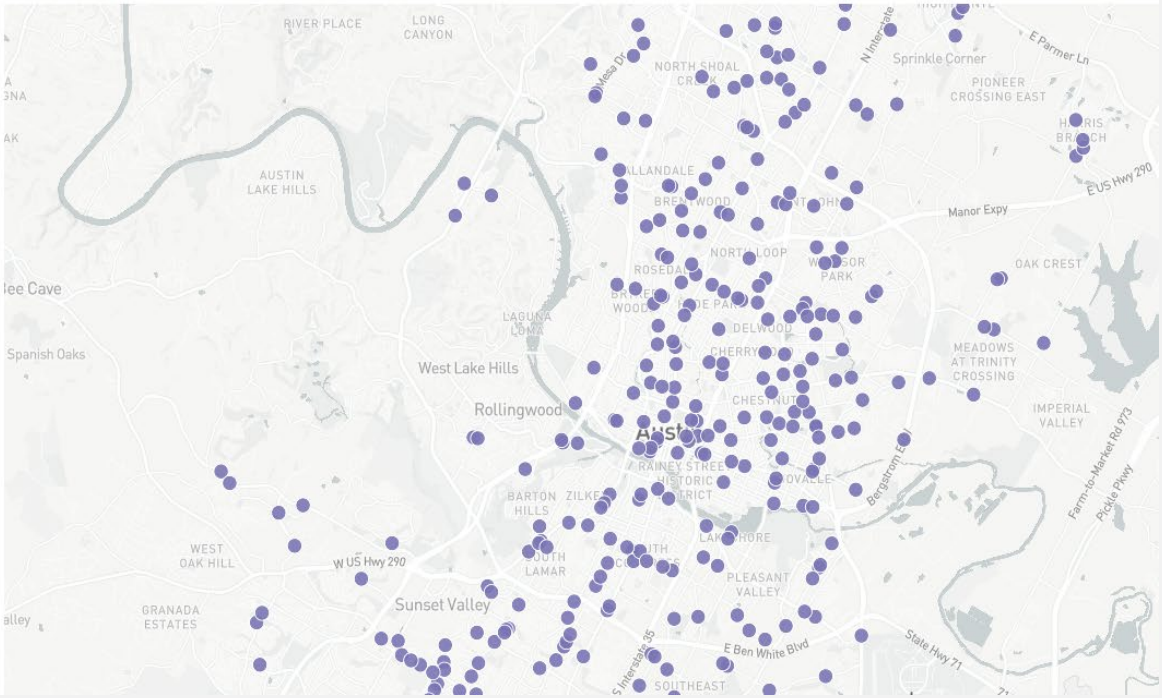
Signal Request Process

Traffic Signal Evaluations

Identification → Evaluation → Recommendation → Funding → Construction

Search by location... Filter

- 1200 BLK S LAMAR BLVD (Gibson St. Bar, Finleys) — Active
- 12208 BLK TECHNOLOGY BLVD — Active
- 1221 BLK S LAMAR BLVD (Cinco Dr.) — Ready for design
- 12TH ST / CEDAR AVE (12th and Cedar Ave) — Active
- 12TH ST / HARVEY ST (12th and Harvey) — Active
- 12TH ST / NAVASOTA ST — Engineering study
- 1300 BLK E OLTORF ST (Travis High School) — Not recommended
- 1300 BLK RED RIVER ST (Brackenridge Hosp.) — Active
- 1424 BLK W WELLS BRANCH PKWY — Needs funding



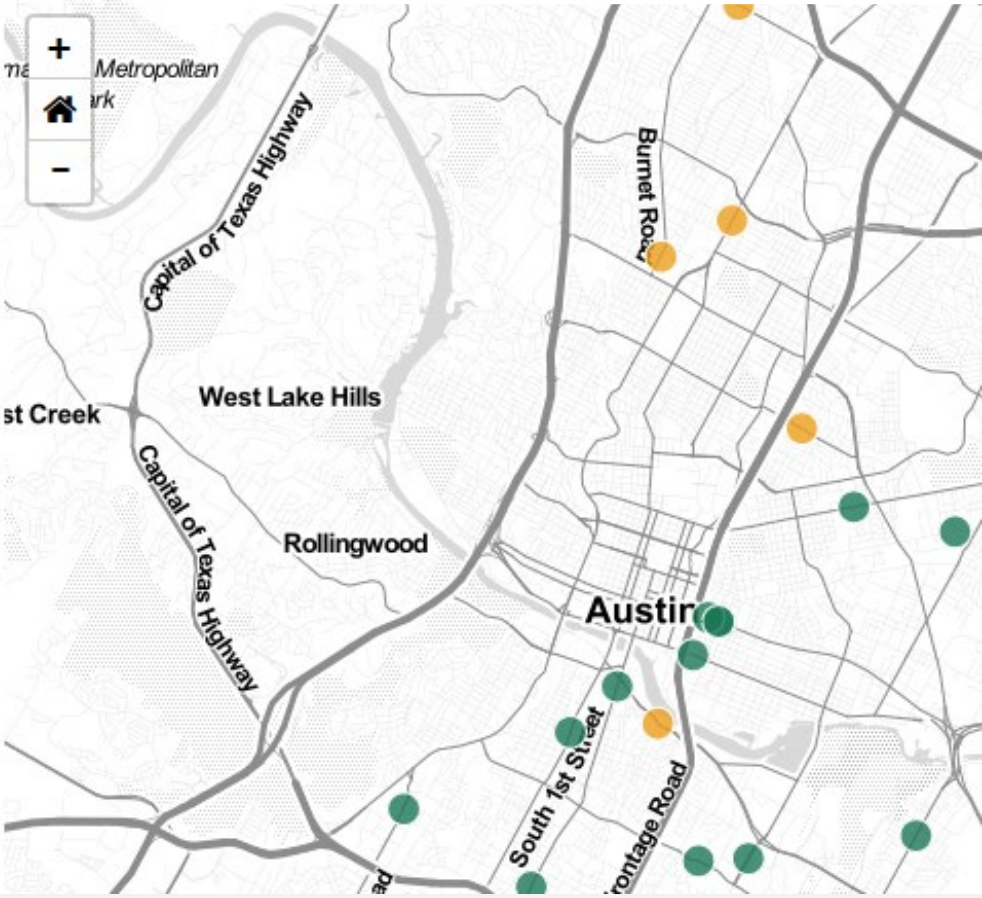
Signal Construction

Signal Project Status

Construction | Design | Turned On

Search by street name or status...

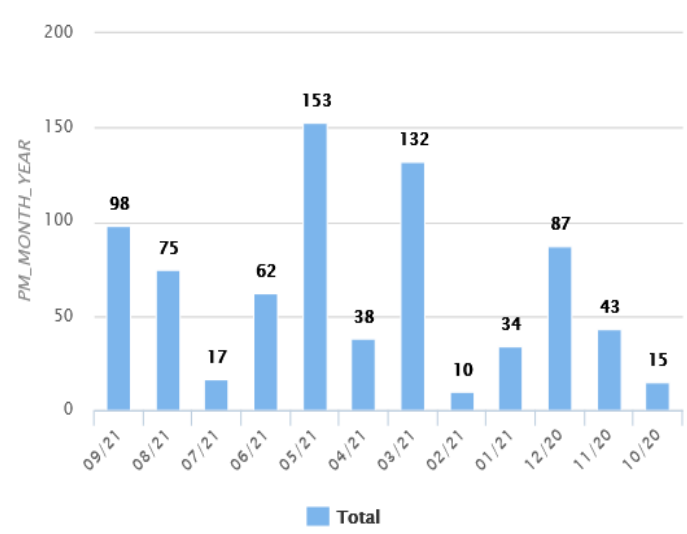
Location	Type	Status	Updated
LAFAYETTE AVE	PHB	CONSTRUCTION	9/25/2017
WELLS BRANCH PKWY / KILLINGSWORTH LN	TRAFFIC	CONSTRUCTION	4/14/2017
4500 BLK ROSS RD	PHB	DESIGN	4/20/2018
MONTOPOLIS DR / HOGAN AVE	TRAFFIC	DESIGN	4/17/2018
MOPAC EXPY SVRD / DAVIS LN	TRAFFIC	DESIGN	4/17/2018
STEINER RANCH BLVD / GRIMES RANCH RD	PHB	DESIGN	4/17/2018

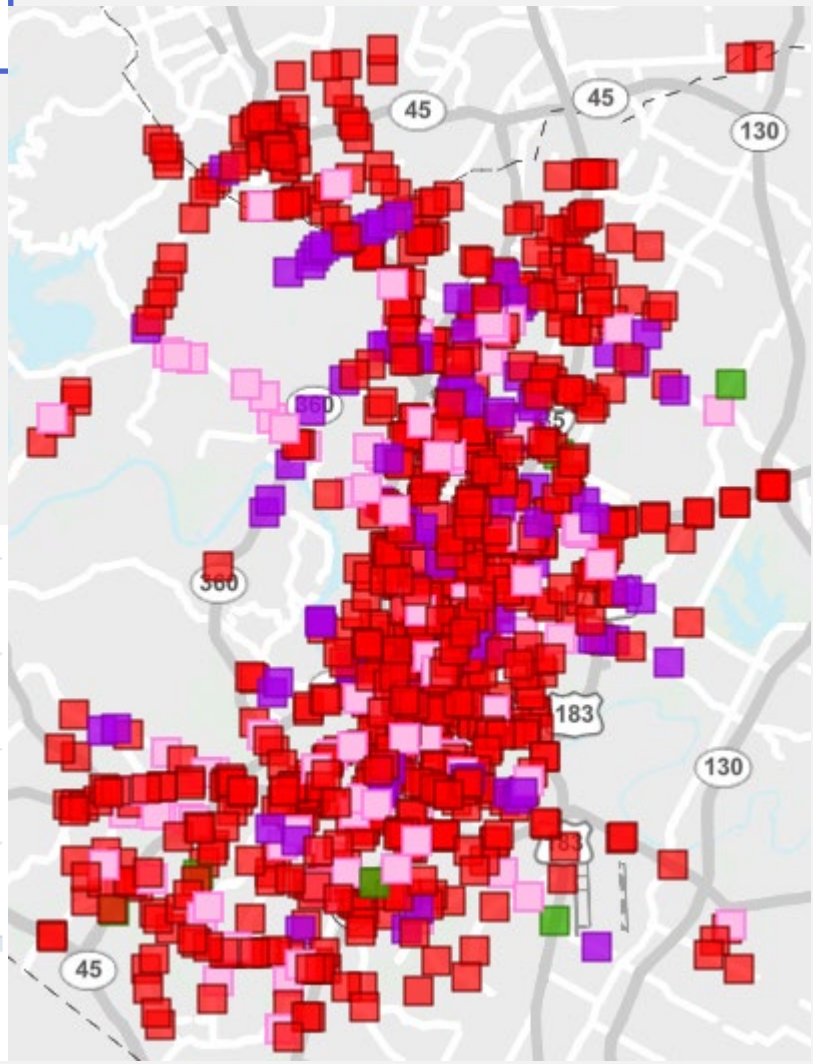


Maintenance

Signal Maintenance

Preventative Maintenance





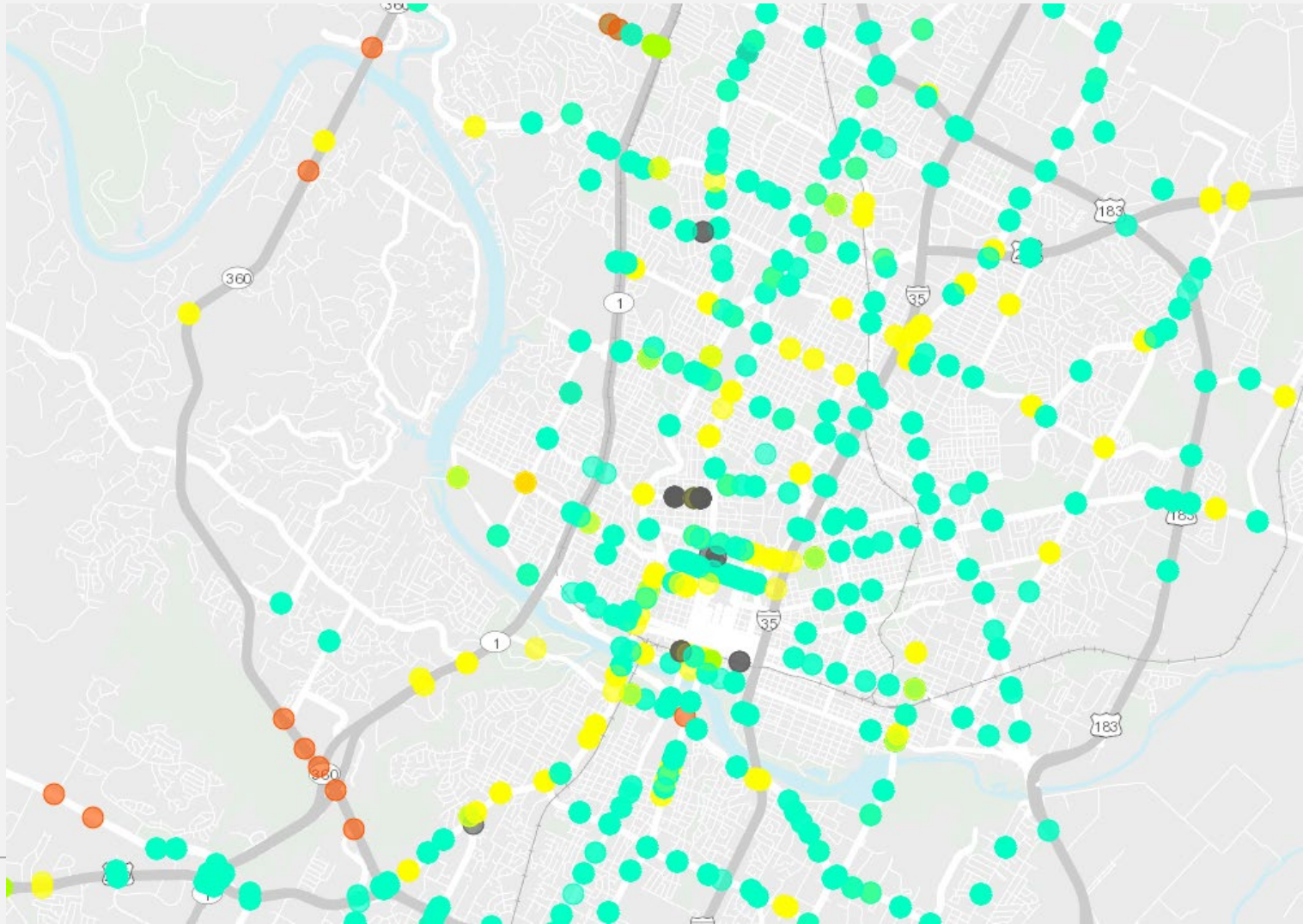
- 2018
- 2017
- 2016
- 2015
- 2014
- Other

Signal Maintenance

Detection

Vehicle Detectors

- LOOP
- VIDEO
- GRIDSMART
- CBD / NO DETECTORS
- SENSYS
- RADAR



Signal Maintenance

ITS and Communications

ITS and Communications

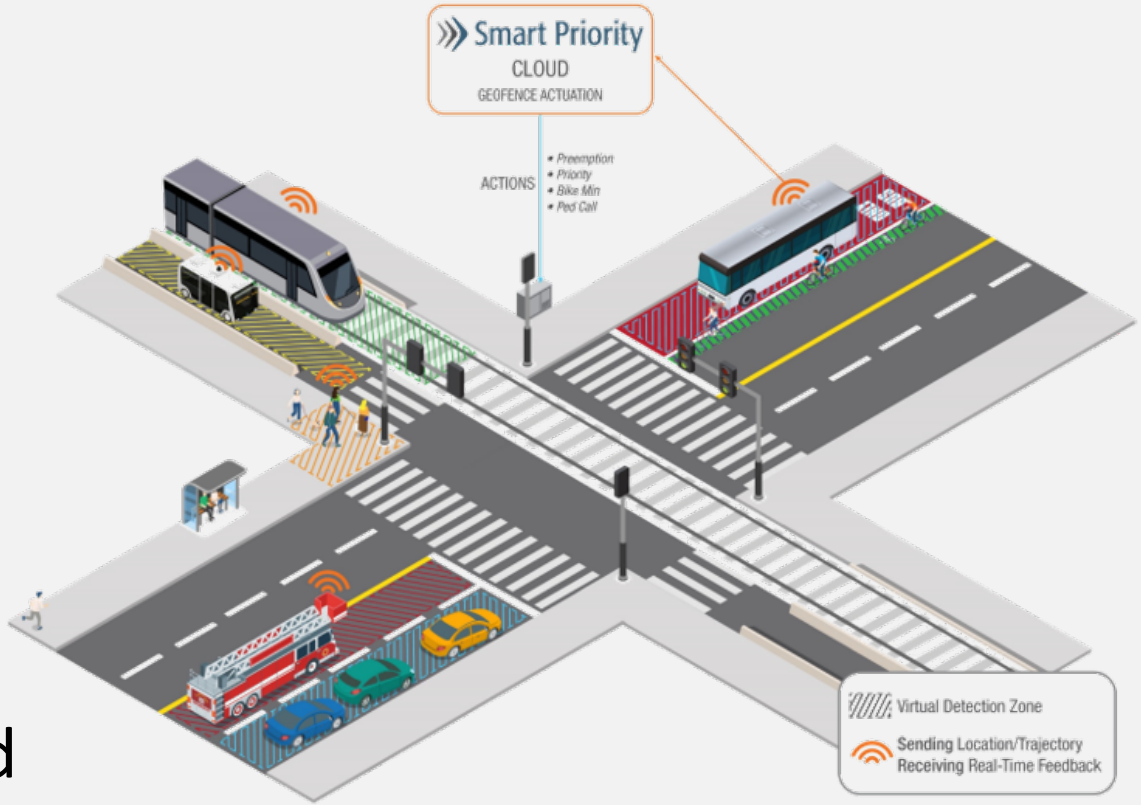
Upgrading Signal Systems

- 250+ miles of fiber optic cable enabling realtime
- 500+ Battery Back up Units

- 680+ CCTV Cameras
- Resettable conflict monitors
- D4 controller firmware to enable “next gen capability”

ITS and Communications

- Smart Priority
  - Centralized Transit Signal Priority and Emergency Vehicle Preemption



- GPS based
- No equipment in field
- Immediately scalable

ITS and Communications

Transit Signal Priority

ITS and Communications

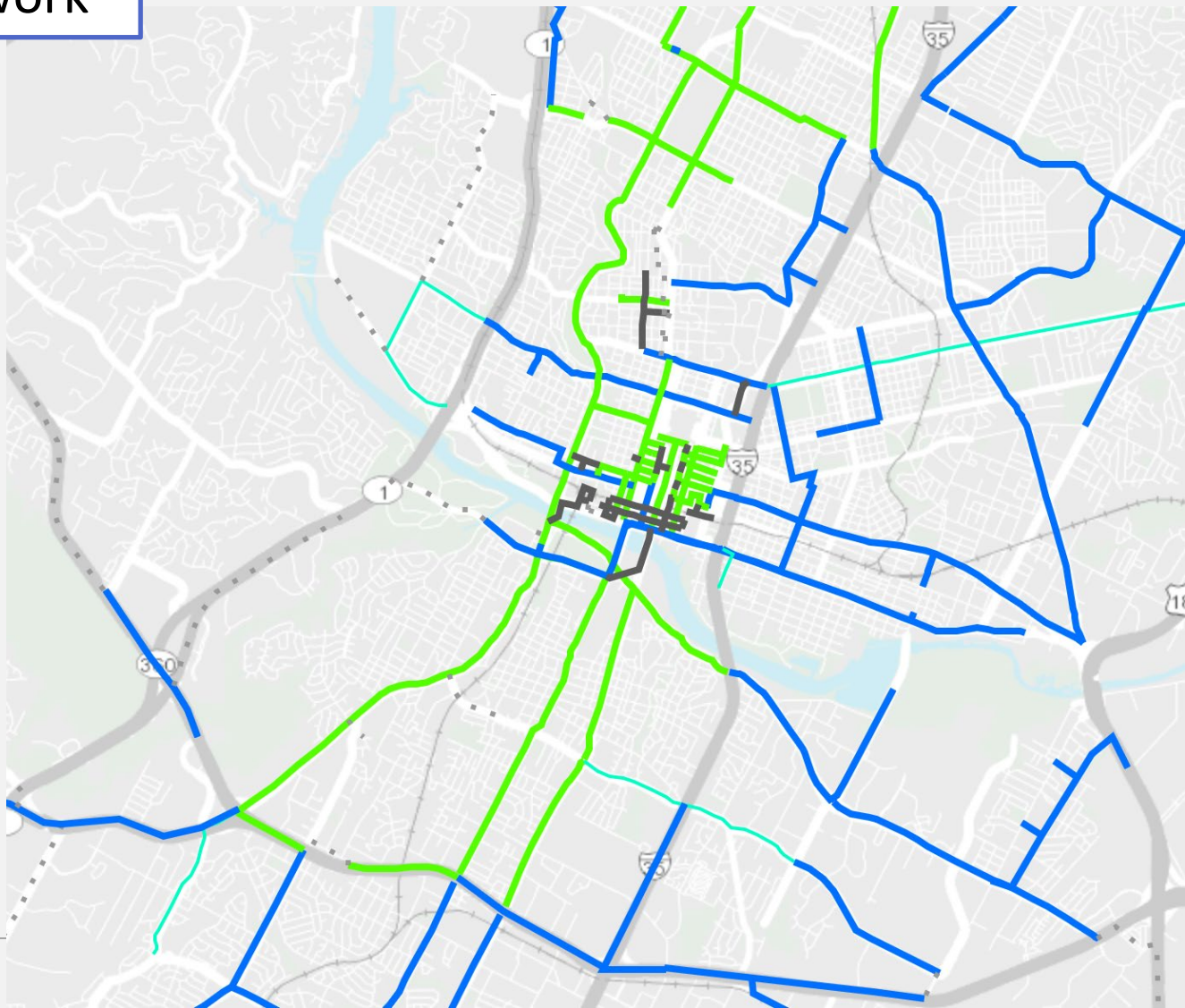
Emergency Vehicle Preemption

Currently 100+ locations using optical EVP

Moving toward a center-to-center approach to expand City wide

ITS and Communications

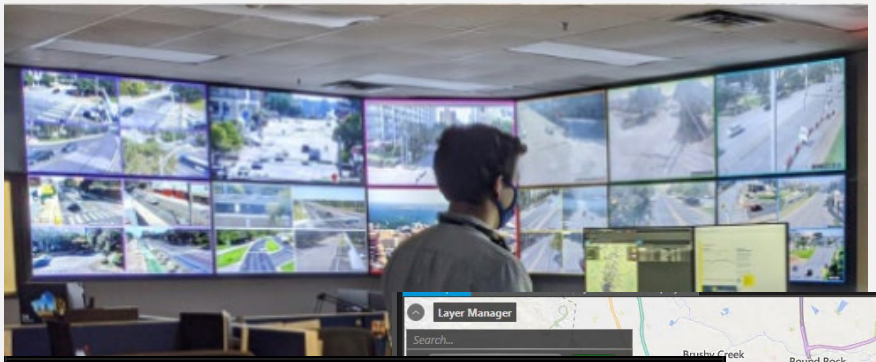
Communications Network

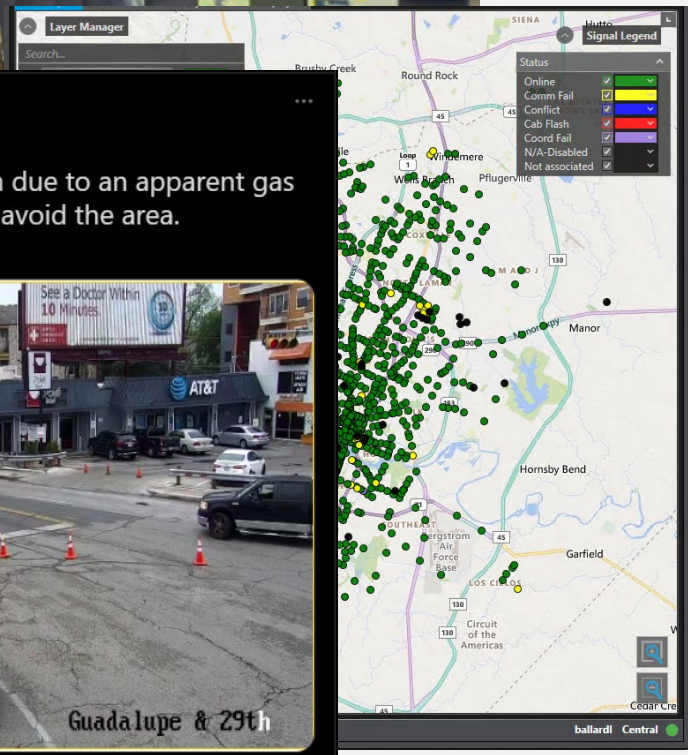


Mobility Management Center

Mobility Management Center

- Consultant Staffed
- Active Management:
  - 200 miles of Critical Arterials
  - Monitor traffic flow
  - Real-time signal adjustments
  - Traveler information
  - Maintenance management
  - Dispatch technicians
  - Event management





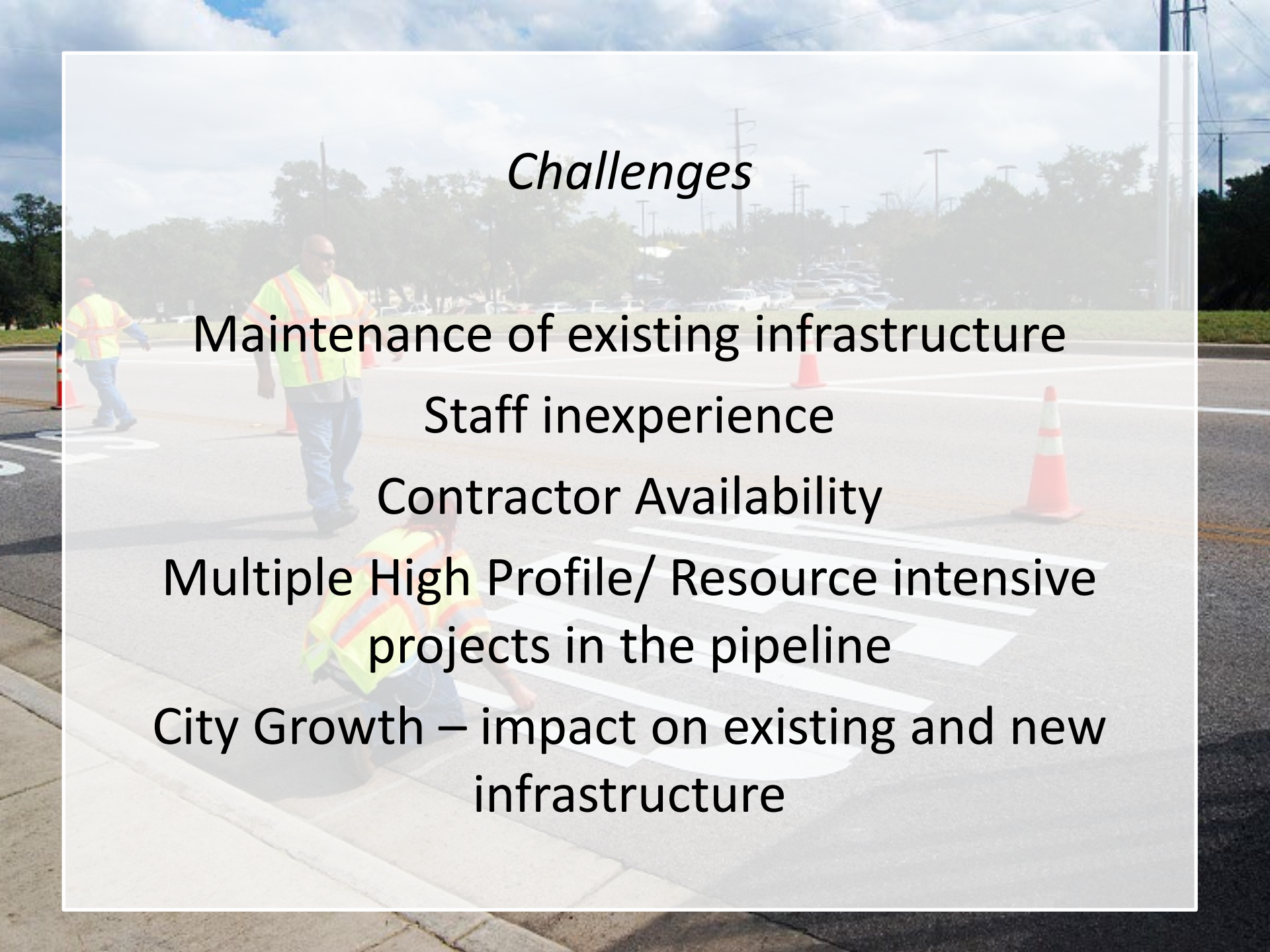
Summary of some things on the horizon

Communications and ITS Plans to improve Redundancy and Resiliency

Lane Closure Reporting System

One System Regional TMC

Inter-agency Data and CCTV Sharing



Challenges

Maintenance of existing infrastructure

Staff inexperience

Contractor Availability

Multiple High Profile/ Resource intensive projects in the pipeline

City Growth – impact on existing and new infrastructure

Thank you.

Brian Craig, PE

Managing Engineer

Arterial Management Division

Austin Transportation and Public Works

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