



MOBILITY
MANAGEMENT
CENTER

2020

ANNUAL REPORT

Mobility

*Management
Center*



Overview

The Mobility Management Center (MMC) operates the City of Austin's arterial street network. Using Smart City technologies, the MMC works to ensure that traffic signals are operating safely and efficiently for people traveling by all modes (walking, biking, transit, and cars). The MMC prepares for and responds to expected and unexpected events and works continuously to improve the City's traffic infrastructure performance.

This report summarizes the major quantifiable and qualitative accomplishments of the MMC in 2022. This report also estimates the value of benefit the MMC provides to the traveling public and reports a benefit-cost ratio of 3.55 for 2022. This means the MMC project provided an estimated \$6 million in benefits to traveling citizens in 2022.

\$6,000,000
EST. OVERALL BENEFIT



3.55
B/C RATIO

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Benefits

The Austin MMC exists to improve traveler safety and mobility for all transportation modes across the City. Whether adjusting signal timings for construction, managing event traffic, remotely troubleshooting issues, or analyzing operations for safety enhancements, the MMC improves the lives of people traveling in Austin every day.



3.55
B/C
RATIO

In 2022, the MMC reported a total of approximately \$6 million in benefits to the traveling public. We have summarized the categories of MMC activities that generated these benefits below, and describe them in more detail throughout this report.

SOME OF THE BENEFITS OF THE MMC ARE MEASURABLE AND SUPPORTED BY DATA ANALYSIS:



Remote investigation and response



Lane closure management



Special event management



Proactive signal timing adjustments

Savings to the City of Austin

Delay and staff time savings

\$2,650,000

Remote investigation and response

\$1,390,000

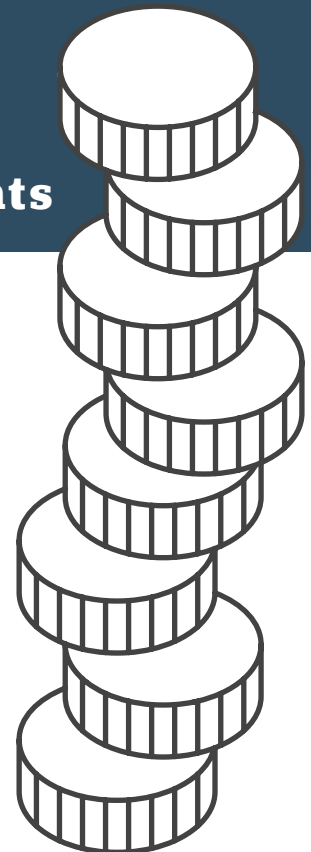
Special events

\$1,200,000

Lane closure management

\$794,000

Proactive MMC actions



Core Operations

Every day, MMC staff:



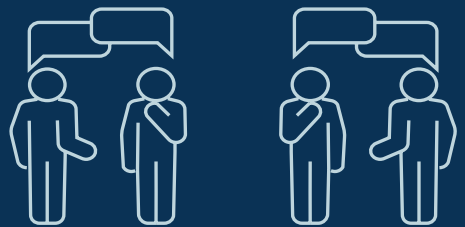
Respond to Citizen Service Requests (CSRs)

Activate and manage emergency response efforts impacting the City's transportation network



Coordinate with partners for construction and event traffic impacts

Tweet and message critical traffic impacts to the public



Coordinate signal upgrades and improvements



Adjust timing for incidents and spontaneous congestion



Plan for and manage special events

Analyze data to identify trends and issues



Our team also is ready for unexpected situations that require rapid response. The MMC responds in times of crisis through various levels. In times of inclement weather, the MMC uses emergency management workflows to quickly and efficiently prioritize repairs and manage field technicians to return signal infrastructure to operating status as fast as possible. In 2022, the MMC used emergency incident response procedures 14 times, responding to a combined total of 236 signals, with an average of 17 signals per event. Crashes also can cause extensive closures on major arterials, creating delay for road users. The MMC adjusts signal timings to keep detour traffic moving using special “flush plans” to clear roadways. In 2022, the MMC saved Austin drivers \$351,000 using these plans.

Lastly, the MMC organizes the Regional TMC (RTMC) meeting, developing relationships with other agencies in the region and coordinating not only within the City of Austin but also with surrounding agencies for unplanned incidents. Because of those relationships, the City of Round Rock reached out in March 2022 when a tornado hit the City, damaging several traffic signals. The Austin MMC supported signal repairs by dispatching technicians to work in parallel with Round Rock’s crews to bring signals back to operational status within hours.

9,001

TOTAL SERVICE REQUESTS

275

REMOTELY RESET FLASHING SIGNALS

699

MANAGED LANE CLOSURES

301

SIGNAL TIMING PLAN ADJUSTMENTS (EXCLUDING EVENTS)

84%

PERCENT OF SIGNAL FAULTS FIRST DETECTED BY THE MMC DURING OPERATIONAL HOURS

1,100

TRAFFIC ALERT TWEETS (@AUSTINMOBILITY)

4,977

REMOTELY RESOLVED SERVICE REQUESTS



MOBILITY MANAGEMENT CENTER



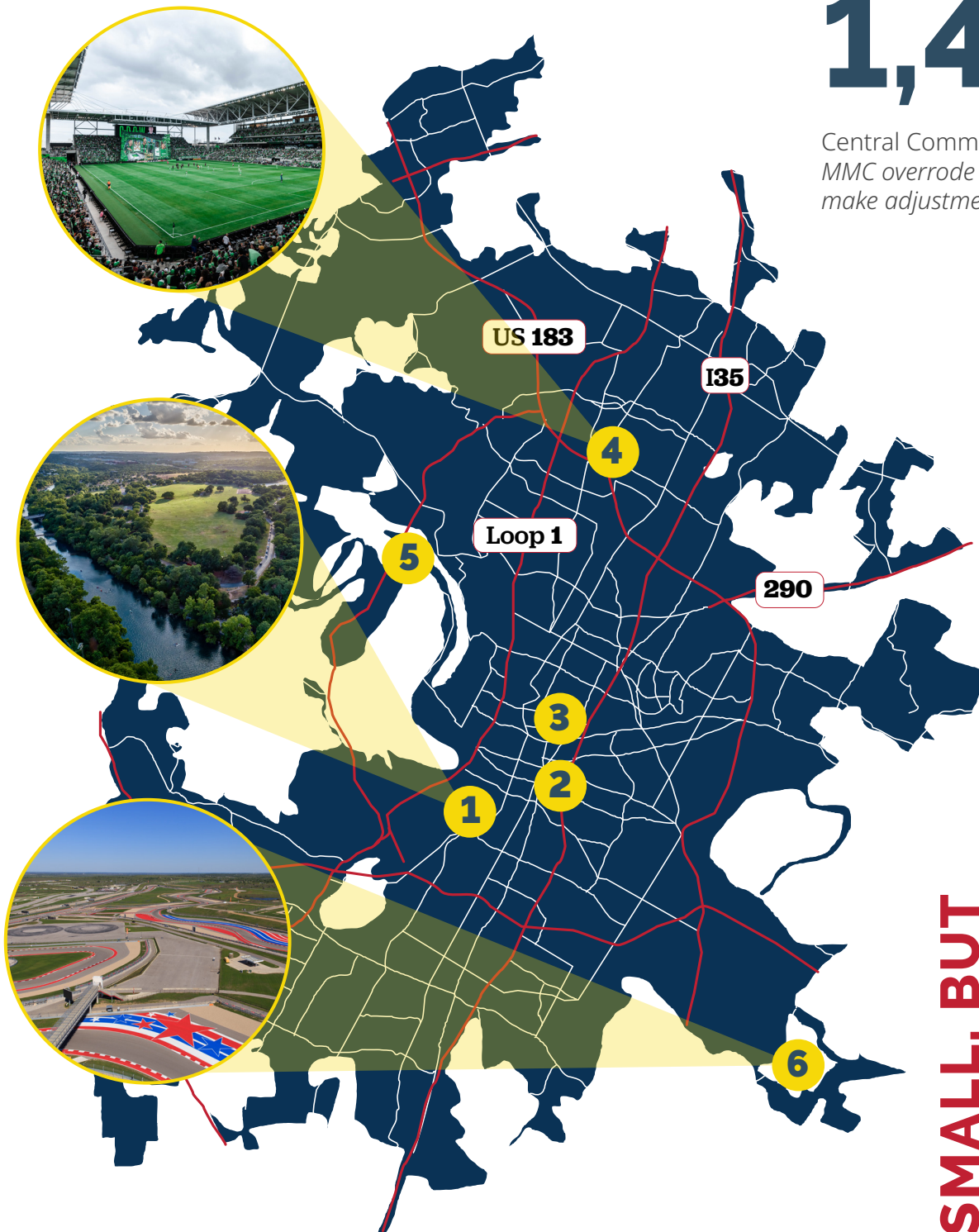
Special Event Management

Austin is a hub of major events, and the MMC manages traffic for each to create a seamless experience for residents and visitors alike. In 2022, the MMC extended hours to actively manage and adjust signal timing for more than 100 major events, including:

Major Events

The MMC's continued innovation improves safety and mobility for event attendees in Austin. We developed unique pedestrian phasing for Austin FC matches to prioritize the safety and efficiency of fans as they leave. This exclusive pedestrian phase (often called a "pedestrian scramble") was also adopted for critical intersections for the Austin City Limits music festival. These innovations made it easier for police to manage crowds and improve safety at each intersection, helping fans and music lovers get home safer and more quickly.

"HOW AUSTIN USED A 'PEDESTRIAN SCRAMBLE' TO GET PEOPLE SAFELY HOME FROM ACL."



MAJOR EVENT LOCATIONS

- 1 Zilker Park**
ACL, Blues on the Green, other festivals
- 2 Downtown**
SXSW, festivals, races, & rallies
- 3 Darrell K Royal Stadium**
UT Football
- 4 Q2 Stadium**
Austin FC and other sporting events
- 5 Austin Country Club**
Dell Matchplay Golf Tournament
- 6 Circuit of the Americas**
US Formula 1 Grand Prix, Moto GP, NASCAR

5,000,000

Estimated total attendees of events managed by the MMC

1,493

Central Commands (times the MMC overrode local timings to make adjustments)

42,000

Estimated total hours of delay saved

466

Total events MMC managed and adjusted timing for

Minor Events

Historically, the MMC only actively managed or adjusted timings for major events. In 2022, the MMC expanded its management of events to include smaller events and venues.

Though these "minor" events draw smaller crowds, simple timing adjustments make it easier for attendees to get in and out—making for a big improvement in the flow of traffic. The MMC can now handle many small events simultaneously without widespread impacts to the system, providing major benefits to road users. In the 402 minor events supported by the MMC in 2022, road users saved an estimated **\$725,900**.

SMALL, BUT MIGHTY EVENTS

UT ATHLETICS GAMES

- Volleyball
- Basketball
- Baseball and Softball
- Tennis
- Track and Field

HIGH SCHOOL FOOTBALL

MOODY CENTER EVENTS

CONFERENCES

MAJOR UIL EVENTS

BASS CONCERT HALL

Project Team

Staff from Kimley-Horn and Maldonado-Burkett manage daily operations at the MMC on the following schedule. Our team also extends hours for special events and emergencies.

MONDAY - FRIDAY

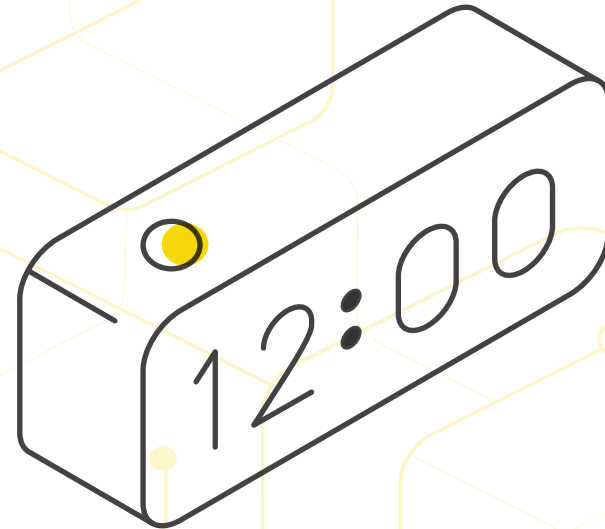
6AM - 8PM

SATURDAY

9AM - 6PM

SUNDAY

10AM - 6PM



Full-Time Staff

In addition to the **core MMC staff of three managers and three operators for basic operations**, the Kimley-Horn team provides comprehensive coverage for major and minor events. The core team also includes on-site staffing at the Combined Transportation and Emergency Communication Center (CTECC) and an MMC liaison at CTECC on a weekly basis. This provides tight coordination between the MMC and partner agencies and supports the City's "one system" management goal for the region. Kimley-Horn also leverages a vast array of firmwide staff resources with specialized skills for unique assignments, including grant writing, traffic signal grounding, pole foundation details, communications master planning, and others. **ATD staff can continue to rely on our national experts to solve any technical challenge that may arise.**



Construction and Incident Management

The MMC tracks and manages construction closures every day by adjusting signal timing and alerting the traveling public via Twitter, Dynamic Message Signs, and other technologies.

The MMC actively adjusted signal timing for at least 39 Congestion Management Customer Service Request (CSRs) to track construction-related activities or closures and posted 1,100 tweets. In addition to adjusting signal timing and notifying the public, the MMC coordinated with numerous internal and external partners before, during, and after construction. This included reviewing construction plans to evaluate possible signal operations and adjustments, notifying right-of-way partners of inadequate or incorrect traffic control configurations, and alerting signal inspection teams to damaged field infrastructure.

As the city continues to grow, future planning for major freeway facilities and mass transit will remain at the forefront. The MMC continues to be involved in these processes by reviewing and managing impacts from Mobility35, Project Connect, and various city bond projects.



A crash at S 1st & Stassey has several lanes blocked. Consider alternative routes and expect delays. #ATXtraffic

 @austinmobility
ATX Transportation

Proactive Solutions

Instead of reacting to reports of issues from road users, in 2022 the MMC pivoted to proactively maintain and repair traffic infrastructure through the use of integrated dashboards and automated alerts.

Proactive MMC Actions

In January 2022, the MMC began using data from the KITS, the Advanced Traffic Management System (ATMS) that connects and manages each of the traffic signals, and INRIX Signal Analytics to proactively identify traffic signal performance issues. This Smart City data uses crowd-sourced travel metrics to find locations where delay and stops increased most significantly each week throughout the City. MMC staff then investigated each of these issues to remedy problems as they arose and before the public even noticed.

Using their data and traffic signal expertise, the MMC identified over 100 such issues in 2022. Many of these issues were broken equipment or changes in traffic patterns that resulted in unnecessary delay. The MMC then adjusted timing to improve the “target” movements that were struggling the most and tracked the improvement using the INRIX Signal Analytics dataset. On average, the MMC improved the target movement delay by 35% and improved the overall intersection by 23%. The sum of all these changes impacted 14 million trips and saved Austin drivers \$800,000 in 2022.

THE MMC'S 123 MMC ACTIONS IN 2022 RESULTED IN NEARLY \$800,000 DOLLARS SAVED FOR ROAD USERS, WITH AN AVERAGE DELAY IMPROVEMENT OF 35%.

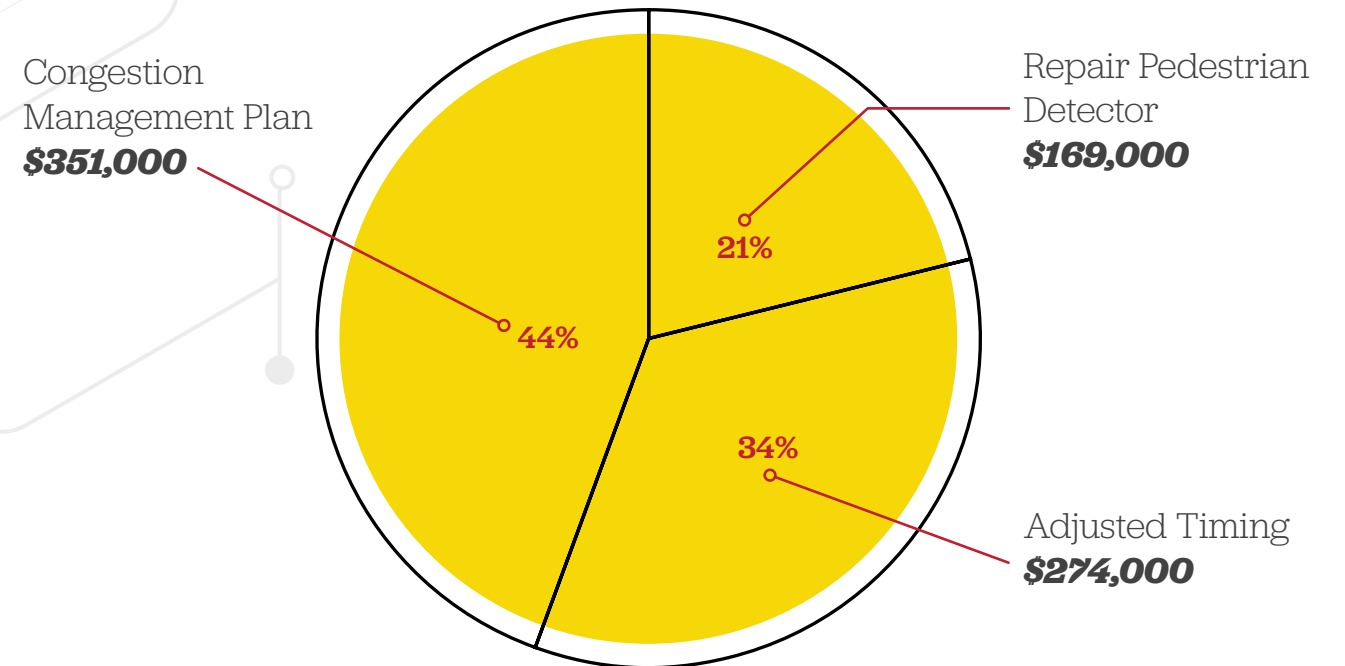
\$794,000
in delay savings

14 MILLION
impacted trips

35%
target movement
delay improvement

23%
total intersection
delay improvement

Total Benefit by Action Type



Closing Summary

\$2,650,000
Remote investigation
and response

\$1,200,000
Lane closure
management

\$1,390,000
Special event
management

\$794,000
Proactive
MMC actions

\$6M / \$1.6M

EST. OVERALL BENEFIT

EST. COST BENEFIT RATIO

3.55

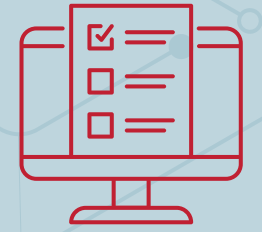
B/C RATIO

**OUR TEAM IS COMMITTED TO THE
SUCCESS OF THE AUSTIN MMC.**

Kimley»Horn



Click the icons
below to learn more.



Resources and Methodology

Benefit Reports

Remote
Investigation
and Response

Lane
Closure
Management

Special
Event
Management

Proactive
MMC
Actions

Other Links

Print
Report

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Management

Past MMC
Reports

View
Online

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