

Agenda Item 5



METROPOLITAN
TRANSPORTATION
COMMISSION

Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700
TEL 510.817.5700
TDD/TTY 510.817.5769
FAX 510.817.5848
E-MAIL info@mtc.ca.gov
WEB www.mtc.ca.gov

Memorandum

TO: Policy Advisory Council

DATE: April 2, 2014

FR: Pam Grove, Staff Liaison

W.I. 1114

RE: Policy Advisory Council Orientation – Operations

The Operations Section Director Melanie Crotty will attend your next meeting to give you an overview of the Operations Section. Attached for your preview are the slides Ms. Crotty will use for the presentation.

As always, please feel free to contact me if you have questions or need assistance.

Attachment

J:\COMMITTEE\Policy Advisory Council\Meeting Packets\2014\04_April_2014\5_Council_Orientation_Operations.docx

Policy Advisory Council Orientation



Operations Section
Melanie Crotty, Director

April 9, 2014

MTC's Evolving Roles



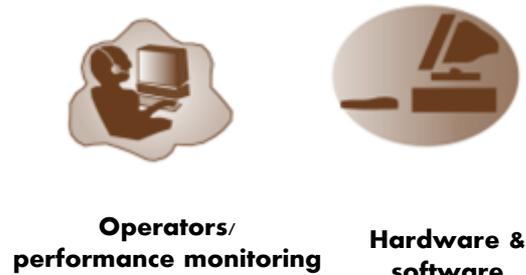
System Management - What We've Done

Transportation Management System

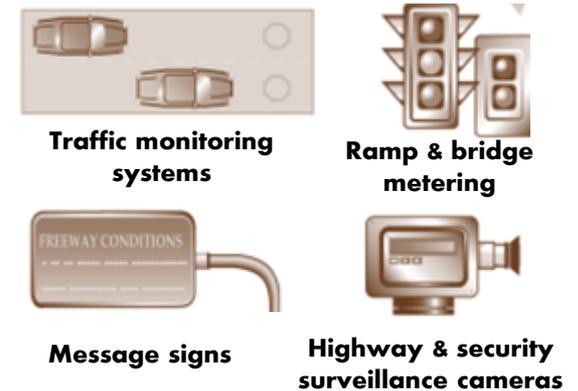
Incident Management



Freeway Management



Field Equipment



TMC Equipment Upgrades

Installed TMC Software

Replaced Video Wall

Upgrade Camera Systems

2009

MTC Lead Agency

Operations & Maintenance

TMS MOU

TMS Action Plan

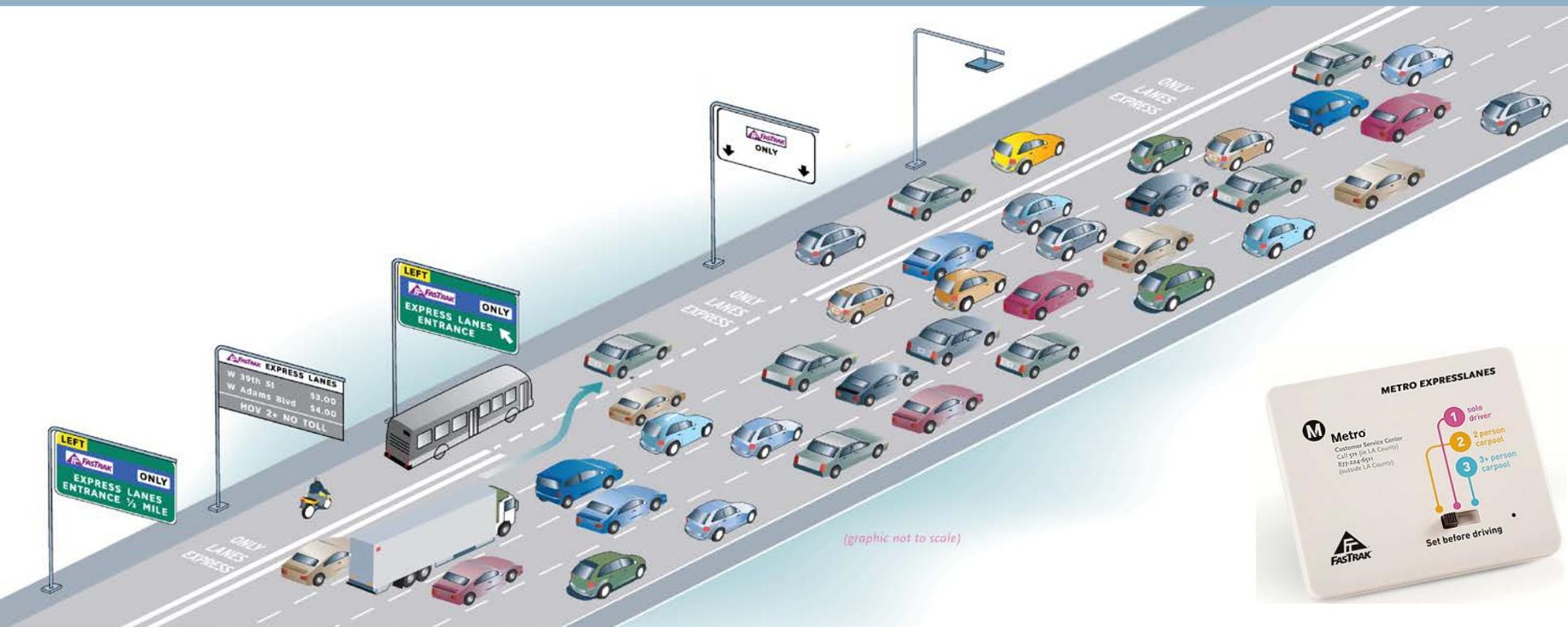
Master Cooperative Agreement

MTC/Caltrans Joint Operations

Today

MTC (BAIFA) Express Lanes

- Single lane, not reversible
- More open access lane configuration
- Dynamic tolls keep lane free flowing (congestion pricing)
- Carpools, buses free



MTC Express Lanes

270 miles:

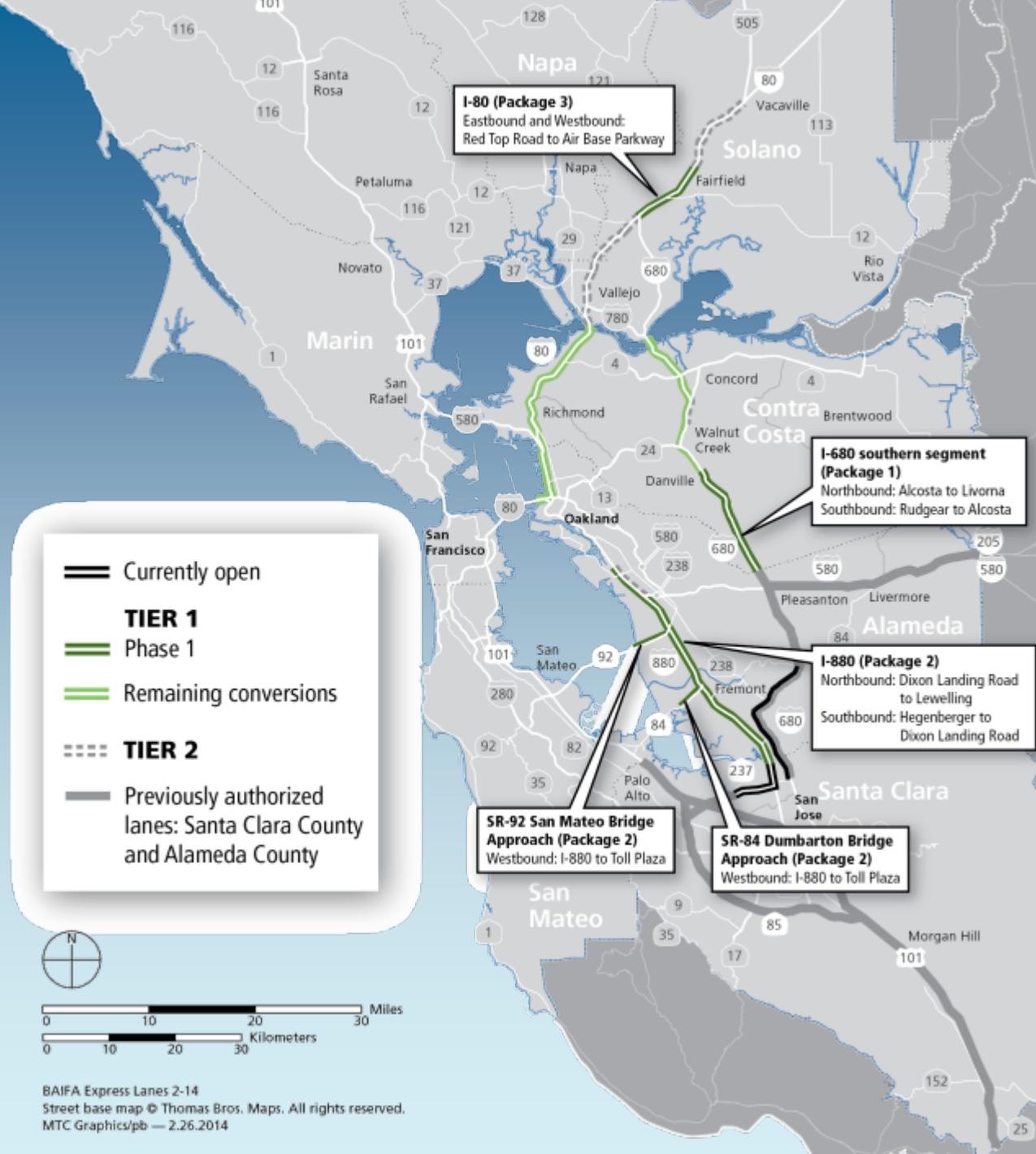
- 150 miles converted HOV
- 120 miles new

Legend:

- == Currently open
- TIER 1**
- == Phase 1
- == Remaining conversions
- ==== **TIER 2**
- Previously authorized lanes: Santa Clara County and Alameda County



BAIFA Express Lanes 2-14
Street base map © Thomas Bros. Maps. All rights reserved.
MTC Graphics/pb — 2.26.2014



MTC Express Lane Configuration

Existing HOV Lane



Express Lane Conversion



Express Lane Access Restriction



Freeway Performance Initiative

Goals

- Deploy current technology to better manage freeway congestion
- Address bottlenecks and incidents
- Improve freeway operations and safety
- Install ramp meters to manage the rate of cars/trucks entering the freeway and to reduce number of incidents through safer merges



Upcoming Metering Activation by Year

Activated

2014

2015

2016

≥2017



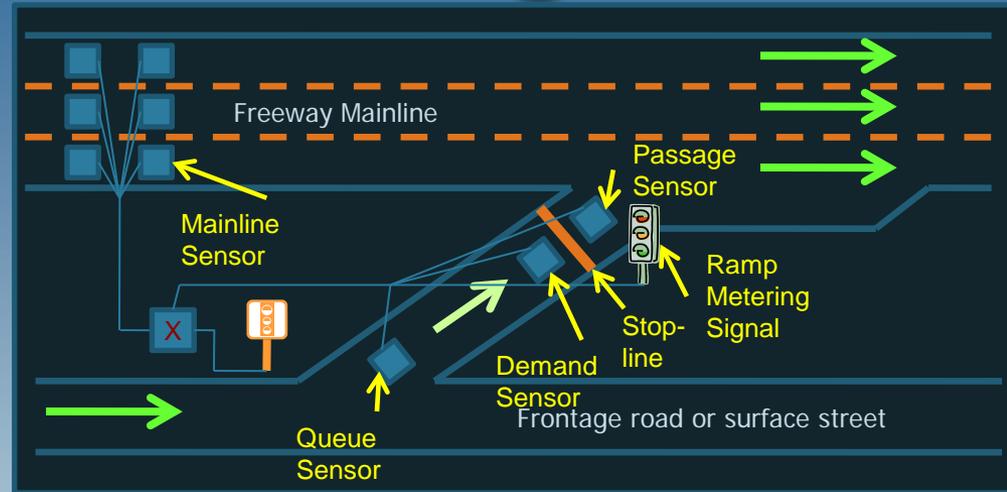
What's Next: Close "Gaps"

- Close "gaps" in metering on other high-priority corridors (to be funded with federal funds from upcoming Cycle 3)
- Identify priority corridors using performance-based approach in consultation with Caltrans and partner agencies

Baseline
FPI Capital Program
(Cycles 1 & 2 Funding)
Potential Future FPI Corridors
(Cycle 3 Funding)

What's Next: Active Management Strategies

- **Adaptive Ramp Metering**
 - Adaptive to system-wide traffic on a freeway corridor (not just at specific ramp location)
 - Reduces freeway travel time by 3 to 10% (vs. conventional ramp metering)
 - Examples:
 - Orange, Ventura, and Los Angeles Counties' Adaptive Ramp Metering (1990s)
 - Alameda CTC's I-80 Adaptive Ramp Metering (2015)
- **Other Active Traffic Management Strategies (Hard shoulder running, variable speed limits, dynamic pricing, contraflow lane)**



Adaptive Ramp Metering (I-80 in Alameda County)



Hard Shoulder Running (M42 in UK)



Variable Speed Limits (I-5 in Seattle)

Actively Manage Freeway Traffic



Emergency Refuge Area (ERA) Loops

Hard Shoulder Running (HSR)

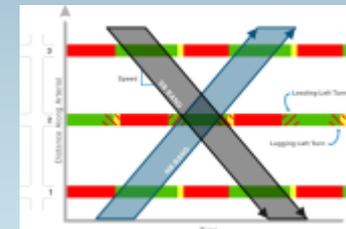
Variable Speed Limits (VSL)

- Deploy hard shoulder running and variable speed limits on I-80, I-680 and I-880
- Hard shoulder running increases capacity (700 – 1,400 veh/hour)
- Variable speed limits increases capacity by 1-5% and reduces crashes by 15-40%
- Hard shoulder running lane being piloted on Richmond-San Rafael for eastbound afternoon peak hours

Increase freeway capacity by 5 to 25% and reduce crashes by 15 to 40%

Program for Arterial System Synchronization (PASS)

- Coordinates signals during peak periods (commute, school, etc.)
- Improves bike, ped and transit mobility on major arterials
- Develops incident management flush plans, traffic responsive plans, and event coordination plans (\$2M in FY2015)



SAFE PROGRAM

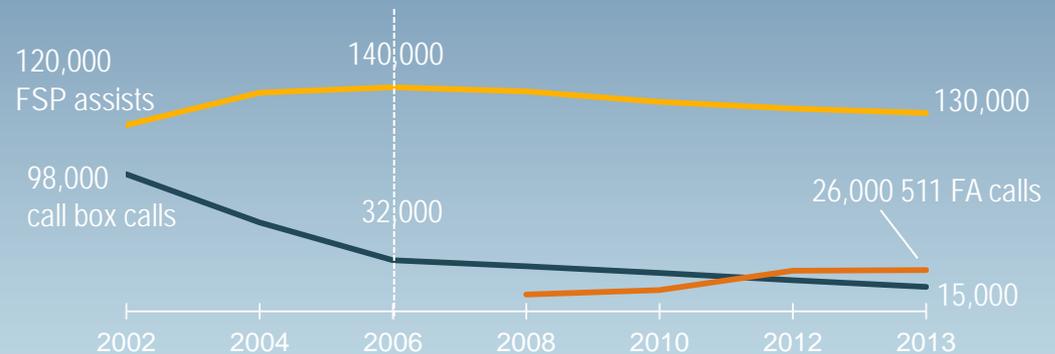
Freeway Service Patrol



- Private tow contractors provide incident response during peak commute hours over 550 centerline miles
- Focus: deploy service to reflect regional congestion and incident patterns

2013

- Assists: 130,000
- Motorist wait time: 9 minutes
- Survey 'excellent' rating: 99%

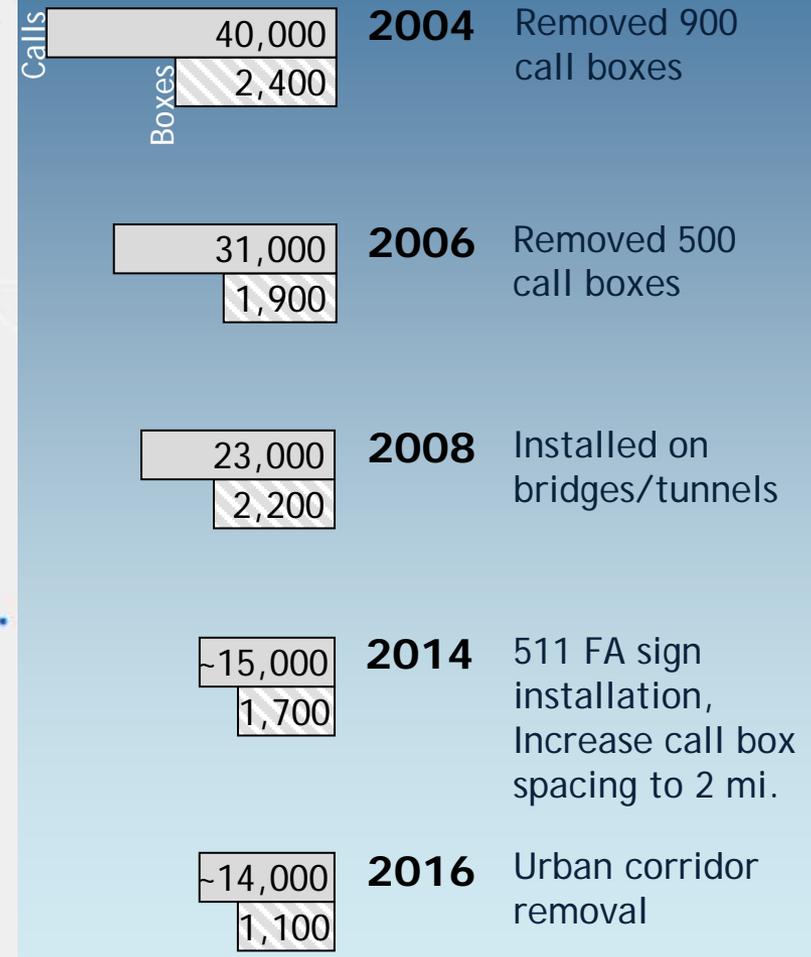


Callboxes

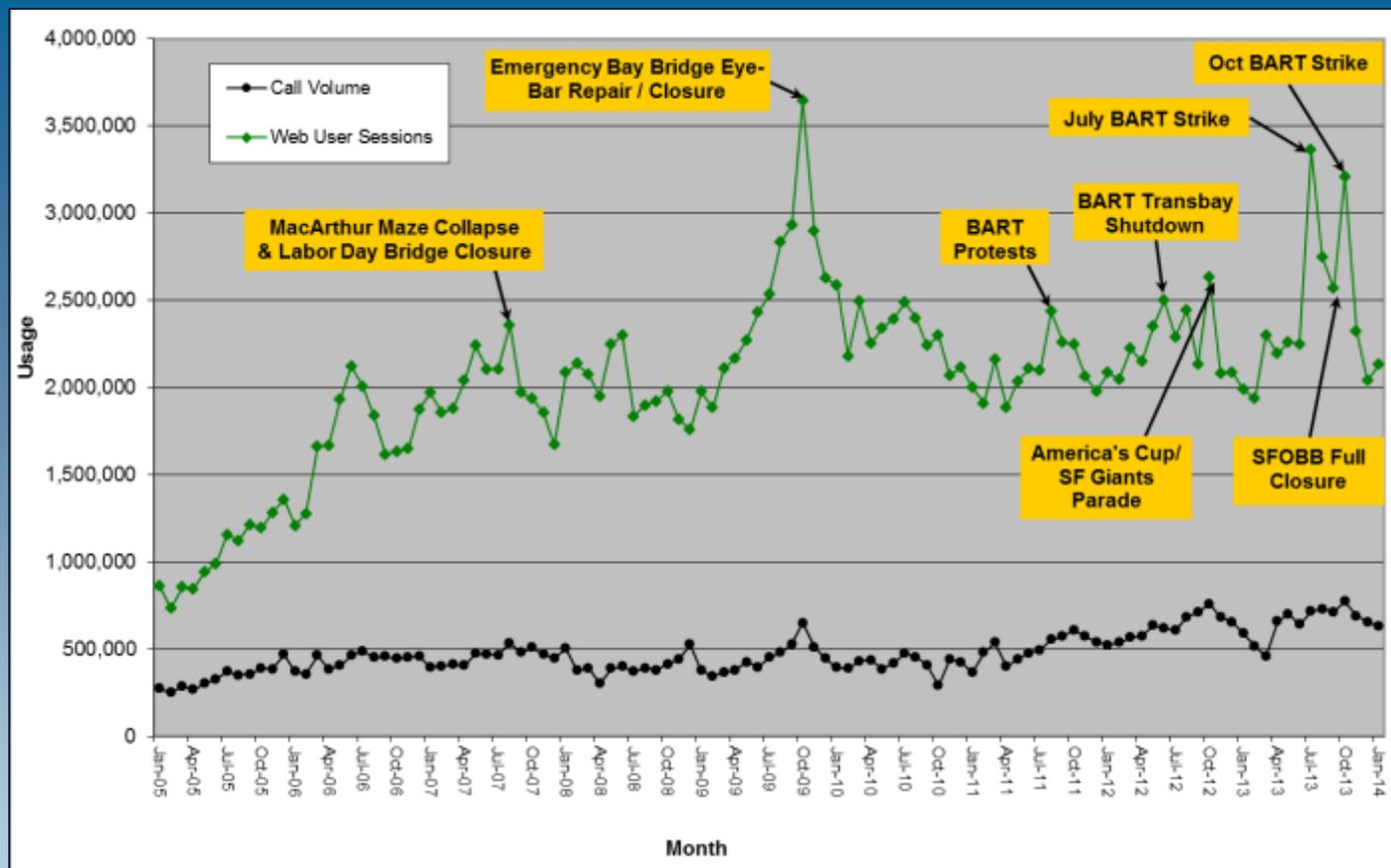
- Call volume continues to decline due to prevalence of cell phones - 511 Freeway Assist introduced
- 2013: 1,700 boxes; 15,000 calls (call box & 511 FA)
- Commission approved phased downscale project in progress



Phased Downscale



511



What 511 Delivers

- Real-time & historical traffic
- Real-time & static transit
- Ridesharing & bicycling
- Real-time & static parking
- Breaking news & emergency info

How It's Delivered

- Phone – call 511
- Web – visit 511.org
- Mobile – visit m.511.org
- App – 511 SF Bay Transit
- Texting/SMS
- Transit Hub and Highway CMSs

Should MTC Own and Operate? Operational Strategies

Park-Rides



Park-Rides



Corp Buses

Systemwide Easement



Ramp Metering



Active Traffic Management



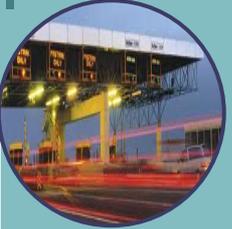
Contraflow Lane

Express Lanes

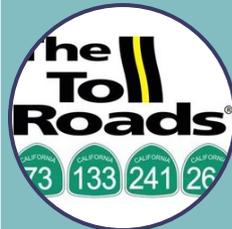


Pricing - Express Lanes

Toll Bridges



Dynamic Pricing - Toll Bridges



Full Facility Freeway Pricing

Entire Network



www.mtc.ca.gov

Melanie Crotty, Director
Operations Section
mcrotty@mtc.ca.gov
510.817.5880