SM 101 MANAGED LANES PROJECT

Caltrans

San Mateo County Transportation Authority

C/CAG

Presentation for City/County Association of Governments Apr. 13, 2017

INTRODUCTION

- The Problem
- Project Background
- Project Alternatives
- Technical Challenges
- What's ahead

INTEGRATED TEAM

C/CAG City/County Association of Governments of San Mateo County

SAN MATEO COUNTY Transportation Authority

Co-Sponsor Agencies

Caltrans

Environmental Lead Agency

Integrated Project Delivery Team

BACKGROUND – THE PROBLEM

The congestion on 101 has been bad and will continue to get worse.

- Jobs, housing and population continue to grow throughout the corridor
- Vehicle trip demand is projected to grow 4-7% by 2020
- Travel-time in congestion is two times longer than in free flow conditions
- Congestion is bad in both directions during commute hours
- Carpools and buses are delayed by the congestion, so there is limited incentive to share a ride
- Cars leave the freeway, causing congestion on adjacent city streets
- Travelers can't plan trip time well because travels times vary
- No single solution to relieve congestion

BACKGROUND – THE BACKUPS

SM 101 MANAGED LANES PROJECT

US 101

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THE PROBLEM – 101 Northbound AM HOVs

THE PROBLEM – 101 Southbound AM HOVs

THE PROBLEM – Northbound AM ramps

THE PROBLEM – Southbound AM ramps

Questions about the Problem?

BACKGROUND – BIG PICTURE

The problem is greater than one project can solve.
Other projects are in the works to provide a comprehensive solution.

- The Caltrain Electrification Project will not fully address projected demand
- SAMTRANS is studying express bus service on the 101 corridor
- VTA is in final design to create a 2+ HOV Express Lanes from south of 85 to the San Mateo County line
- SFCTA is studying an extension of the 101 managed lanes into San Francisco
- MTC is planning to improve and increase Park and Ride lots
- Municipalities implementing TDM measures

BACKGROUND - THE CHALLENGE OVERALL

- Find a solution quickly
- Secure public and political support of the Project
- Secure the required funding
- Minimize environmental impacts
- Stay within the current Right of Way as much as possible
- Don't make congestion worse in the other lanes
- Reduce regional car trips on the local street network
- Build the project as soon as possible

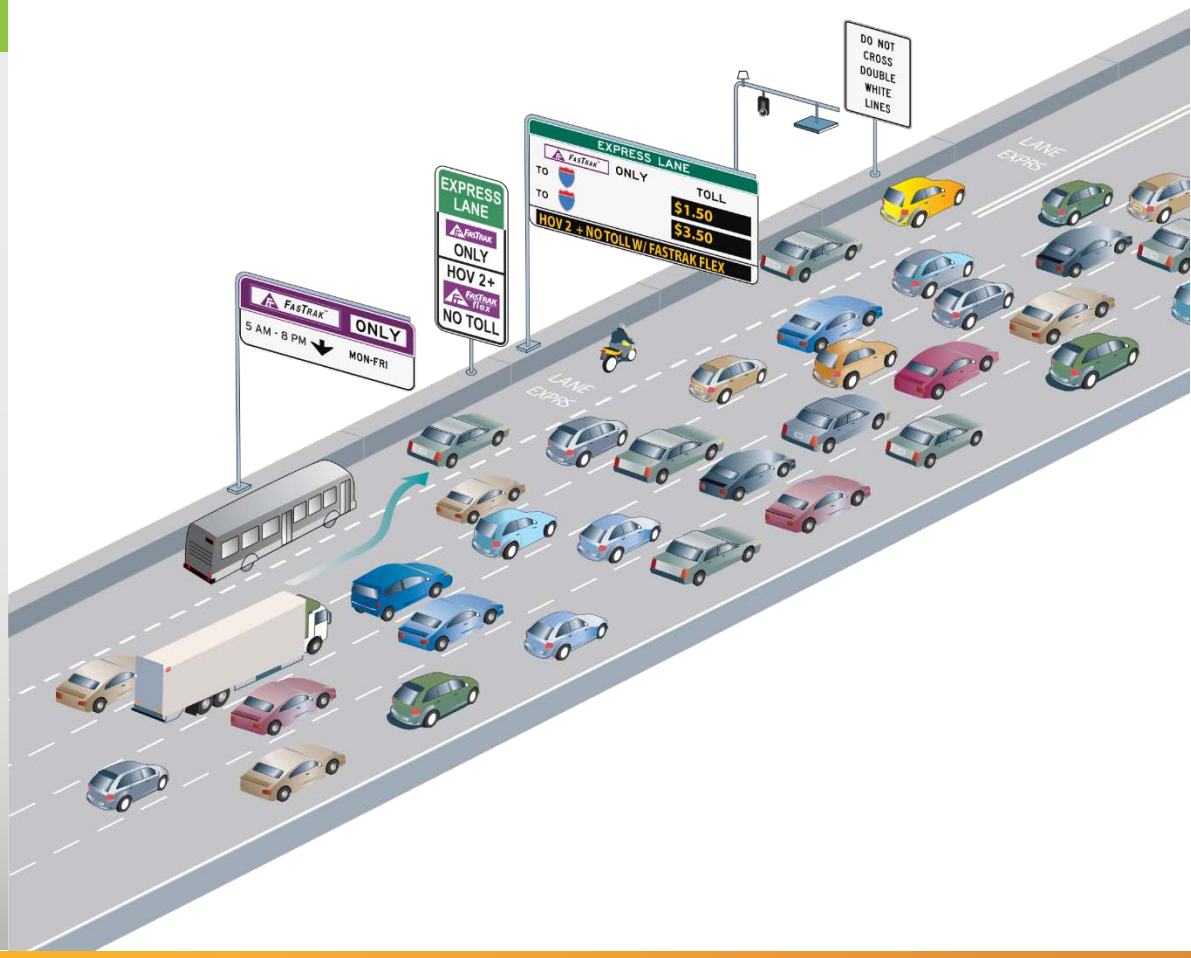
BACKGROUND - LANE TYPES

CONTROL FACTOR	GENERAL PURPOSE	MANAGED LANE (ML)	
		HOV	EXPRESS LANE
Uncontrolled operation of lane	▲		
Hours of operation		▲	▲
Detail requirements		▲	▲
Points of access		▲	▲
Enforcement		▲	▲
Toll charged to non-HOV drivers			▲
O&M toll administration cost			▲

WHAT IS AN EXPRESS LANE

- Carpools, buses, motorcycles and eligible clean air vehicles free
- Other drivers can choose to pay
- Electronic toll
- Dynamic tolls (congestion pricing) keep lane free flowing

HOW AN EXPRESS LANE OPERATES



BACKGROUND – PROJECT PURPOSE

- Reduce congestion in the corridor
- Encourage carpooling and transit use
- Provide managed lanes for travel-time reliability
- Minimize operational degradation of general purpose lanes
- Increase person throughput
- Apply technology and/or design features to help manage traffic

BACKGROUND – THE PROJECT LIMITS

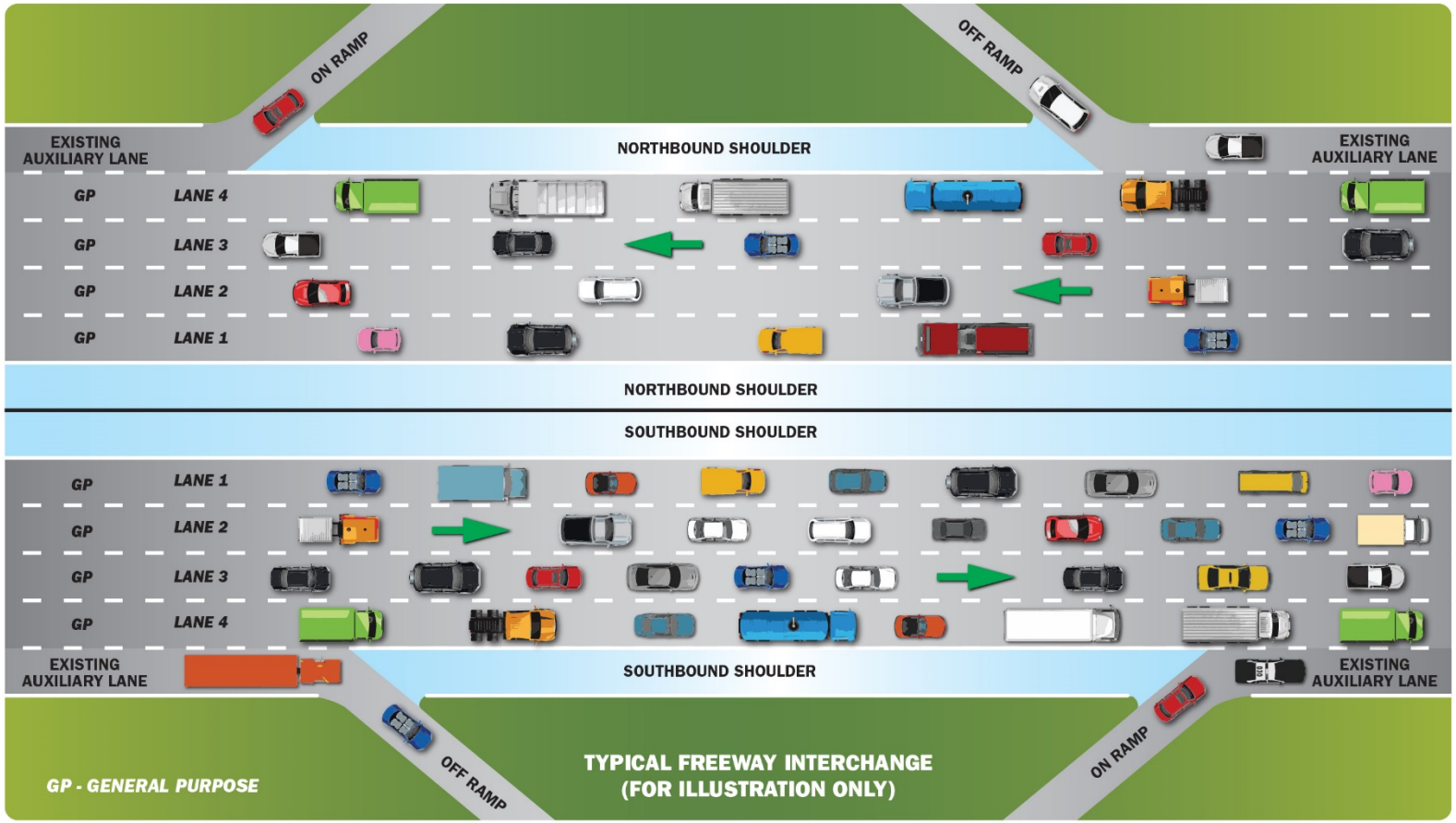
Questions about the Project Background?

TRAFFIC ANALYSIS - THE ALTERNATIVES

- **Alternative 1:** No project
- **Alternative 2:** Modify existing auxiliary lanes to make a new through lane from Whipple Road to I-380; convert median lane to an HOV lane
- **Alternative 3:** Convert the existing center lane to an Express Lane
- **Alternative 4:** Modify existing auxiliary lanes to make a new through lane from Whipple Road to I-380; convert median lane to an Express Lane

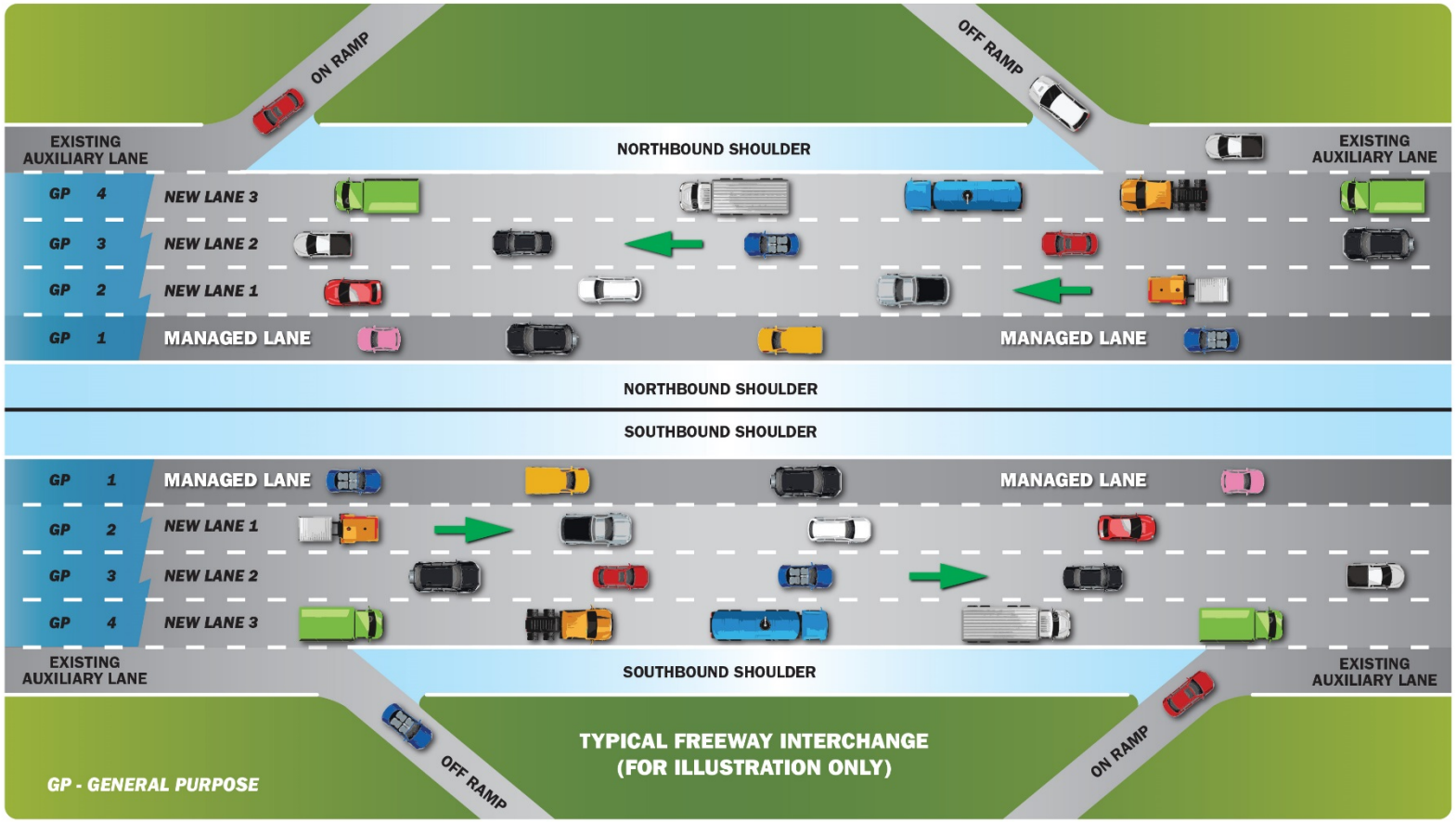
LANE CONFIGURATION A:

Existing Conditions/No Build



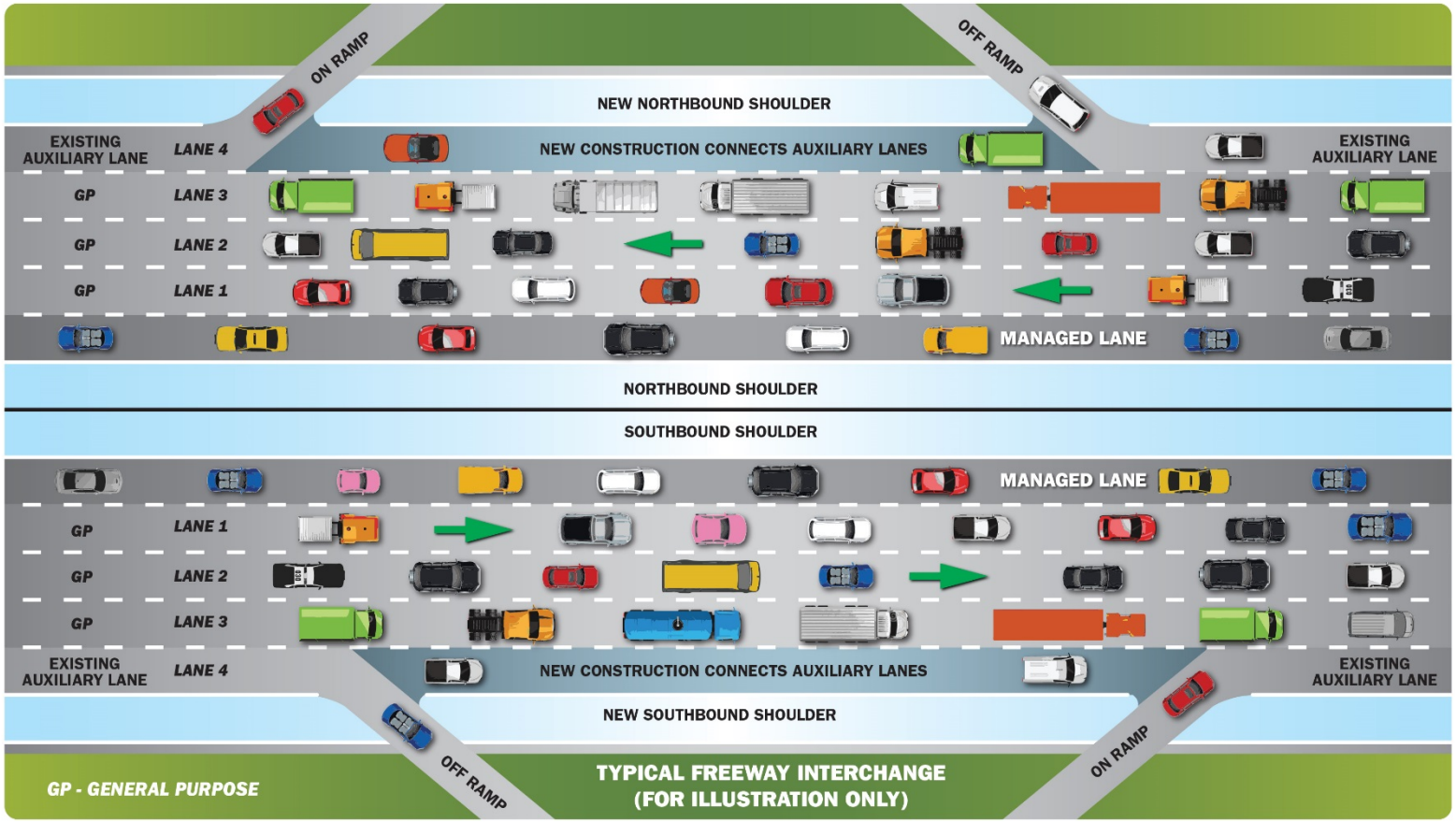
LANE CONFIGURATION B:

Managed Lane in Converted No. 1 Lane



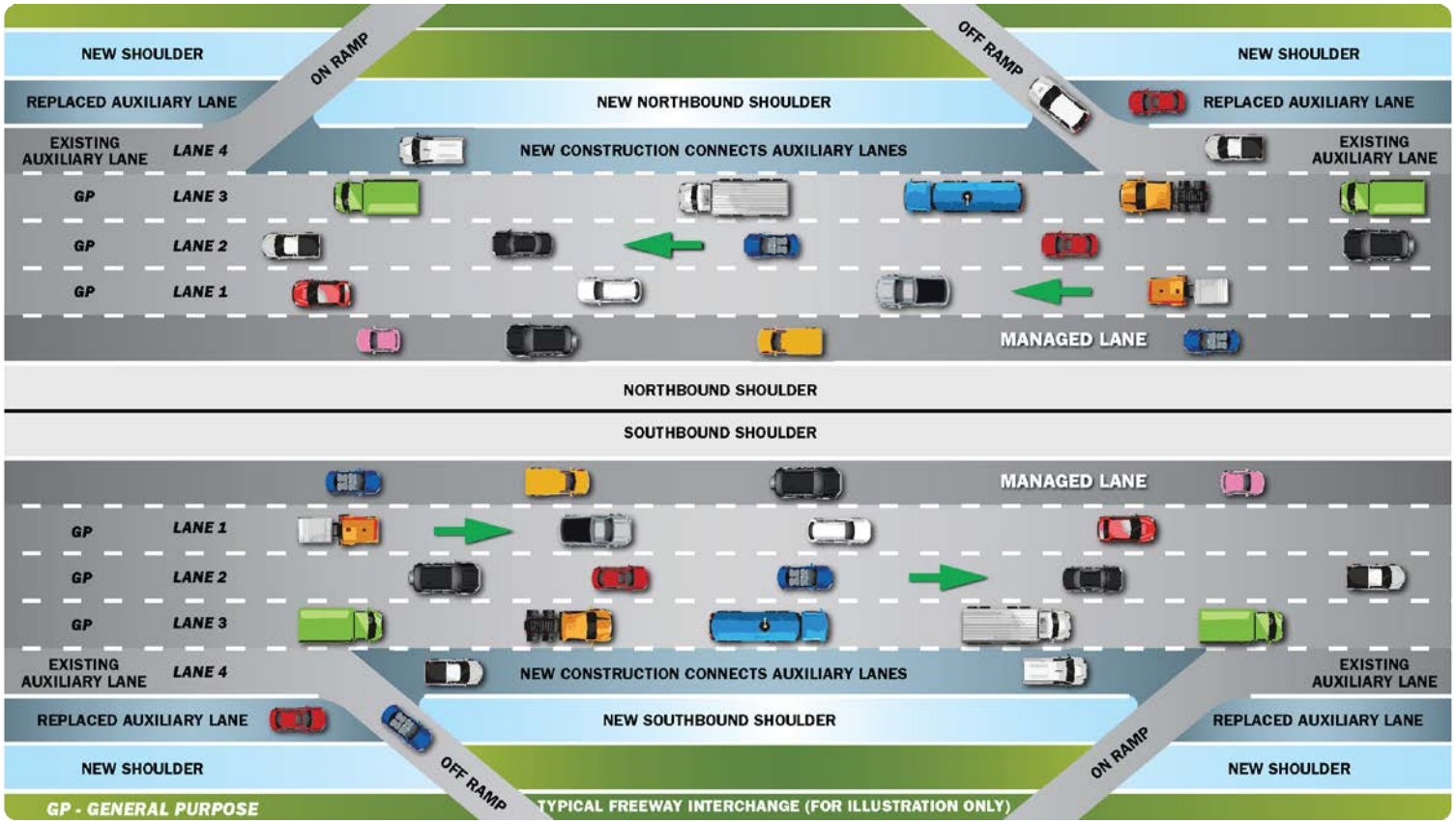
LANE CONFIGURATION C:

Managed Lane with Converted Auxiliary Lanes



LANE CONFIGURATION D:

Managed Lane with Converted Auxiliary Lanes with Auxiliary Lane Replaced



Questions about the Alternatives?

CHALLENGES WITH THE ALTERNATIVES

- **Alternative 2**: There is currently a high volume of HOV 2s along with Clean Air Vehicles and violators;
- **Alternative 3**: There is no additional capacity to accommodate growth. Estimated to only work if a significant amount of people change their travel behavior.
- **Alternative 4**: Transitions with the configurations in Santa Clara and SF will have to be carefully coordinated with VTA and SFCTA.

TRAFFIC ANALYSIS - SCREENING CRITERIA

Examples of key evaluation criteria:

- **Vehicle hours of delay** – How many hours each car sits in traffic
- **Change in travel times** – How long it takes to get from point A to point B
- **Person throughput** – How many people can we move through point A to point B
- **Vehicle miles travelled** – How many miles a vehicle travels in a specific time period (could mean reduced vehicle travel or could also mean gridlock)

THE CHALLENGE WITH DETAILS

- Existing congestion on local city streets;
- Narrow Right of Way constrain the options for restoring Auxiliary Lanes;
- Ever-evolving technology could help, but must plan and design to what is proven; and
- Very limited amount of traffic choosing alternative modes.

PRELIMINARY DESIGN - CONSIDERATIONS

- **Auxiliary lane replacement** – Removal of Aux lanes sometimes impacts local street circulation and needs to be replaced to prevent negative impacts.
- **Right of Way** – In replacing Aux lanes, the team is minimizing right of way impacts by utilizing design exceptions, shifting alignments, and working with cities.
- **Environmentally sensitive areas** – The team identifies sensitive areas early and is working to reduce impacts.
- **Relocation of existing sound walls** – Design team is working with impacted Cities to minimize issues associated with sound walls.

ENVIRONMENTAL TECHNICAL STUDIES

Study	Status	Study	Status
Air Quality (VMT & GHG)	Started	Natural Resources	Draft report
Archeological	Draft report	Noise	Started
Climate Change	Started	Paleontological	Started
Community Impact	Draft report	Traffic	Started
Energy	Starting	Vegetation	Started
Flood Plain Analysis	Starting	Visual Assessment	Started
Geology and Seismicity	Started	Water Quality	Draft report
Hazardous Materials	Started	Wetlands	Draft report
Historic Properties	Draft report		

Questions about the Technical Challenges?

WHAT'S AHEAD - FUNDING

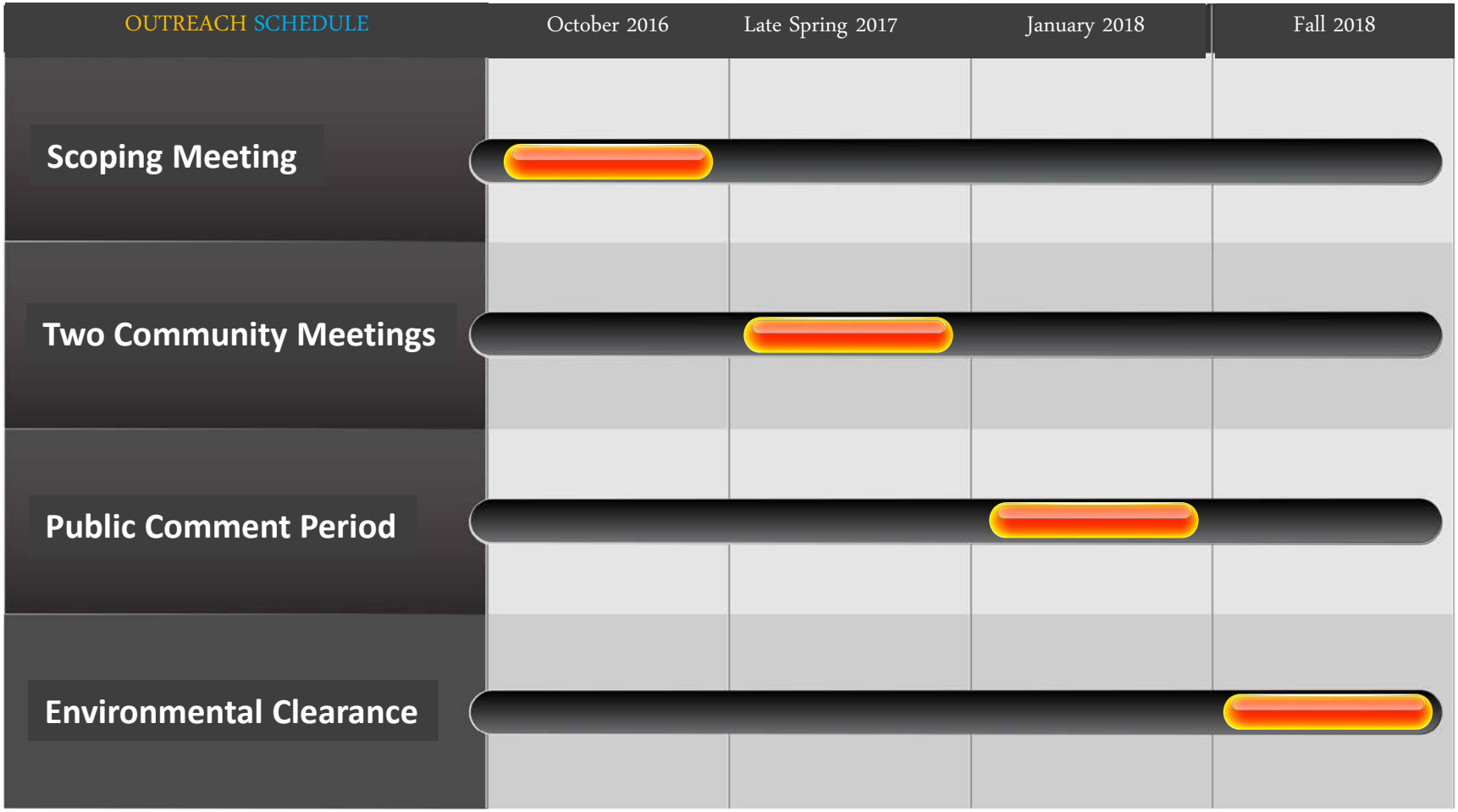
- $11.5m for Environmental Clearance – This funding is secured (SMCTA, SAMCEDA)
- $9.7m for Design– Partially funded to start the early stage of the design phase (Federal Earmark).
- Funding to completed Design and go to Construction is not secured.

WHAT'S AHEAD - FUTURE POLICY CONSIDERATIONS

Some of the following policy questions will have to be answered in the future.

- Should this lane open as a 2+ HOV Express or 3+ HOV Express?
- If it opens as a 3+ HOV Express should 2+ HOVs get a discount?
- What should be the hours of tolling? Should it toll 24/7?
- Tolling generally changes based on congestion. What should be the frequency and increment of change?
- How should excess (revenue beyond operations and maintenance cost) revenue be directed?

WHAT'S AHEAD - PUBLIC ENGAGEMENT SCHEDULE



WHAT'S AHEAD - PUBLIC OUTREACH TO-DATE AND PLANNED

- October 27, 2016: Public Scoping Meeting, San Mateo City Hall
- January – March 2017: outreach to city staffs
- March 9, 2017: City Managers Meeting presentation
- **May 31, 2017**: Community Meeting, San Mateo City Hall
- **June 5, 2017**: Community Meeting, City Hall Redwood City

www.dot.ca.gov/d4/
101managedlanes

Questions?