BOARD COMMUNICATION: YOLO TRANSPORTATION DISTRICT
350 Industrial Way, Woodland, CA 95776---- (530) 661-0816

Topic: Yolo 80 Managed Lanes Update	**Agenda Item#:**	**7**
	Agenda Type:	**Information**
		Attachments: Yes **No**
Prepared By: B. Abbanat		**Meeting Date: March 10, 2025**

RECOMMENDATION:

Informational.

BACKGROUND:

Note: This staff report focuses on updating the Board on project activities since the last update in October 2024. Staff reports dating to the project's inception can be found on the YoloTD website:

Yolotd.org → Planning & Projects → Freeways & Roads

Key Activities Since June Board Meeting

1. *YoloTD Procures Yolo 80 Managed Lanes Tolling Advance Planning Consulting Services*

In October 2024, the YoloTD Board approved an agreement with Silicon Transportation Consultants (STC) to provide tolling advance planning consulting services. STC's scope of work includes the following key tasks and their progress:

Task 1, Process Mapping: STC has developed a process chart with key milestones, deliverables, and schedule.

Task 2, Technical Advisory Services for Yolo 80 Express Lanes: This is an ongoing task.

Task 3, Roadside Toll System Procurement Request for Proposals: STC / Kimley-Horn (subconsultant) are coordinating closely with Caltrans District 3 project delivery team on tolling design, detection technology, are the foundation for the Roadside Toll System procurement. STC has also begun drafting the RFP with language and terms common to the industry. Project-specific terms, equipment, etc. will be incorporated into the RFP when ready. RFP is expected to release in late summer 2025. In February 2025, STC /Kimley-Horn gave a presentation to the CARTA Board of Directors regarding facility design, including concerns about the current design of the Causeway portion of the Yolo-80 project that may result in high rates of weaving and toll violations. Since the CARTA Board meeting, YoloTD staff and consultants have continued to work with Caltrans District 3 staff and CARTA staff on identifying options for improving lane separation and/or enforcement on the Causeway.

Task 4, Level 2 Traffic and Revenue Study Analysis: With YoloTD staff guidance, the STC / C&M (subconsultant) team has established high level assumptions to bookend the two T&R study model scenarios which will estimate the expected revenue generated by the tolled lanes.

Task 5, Community Outreach and Engagement: Not started.

Task 6, Legal Advisory Services: This is an ongoing task.

Task 7, Countywide Transportation Demand Management (TDM) Organizational Study: The STC / WSP (subconsultant) team has completed stakeholder focus group interviews and received feedback

from staff on preferences for peer organization TDM program comparisons.

Task 8, Project-specific Equity Plan: The STC / WSP team has completed an initial literature review and map analysis planning. They have begun preliminary outreach to equity stakeholders for focus group discussions.

2. *CARTA Procures Regional Tolling Planning Consulting Services*

In August 2024, the Capital Area Regional Tolling Authority (CARTA) procured consulting services for region Toll Lane Program Development, selecting HNTB. Key scope of work tasks include:

1. Toll and Other Managed Lanes System Review
2. Implementation Workplan
3. Near-Term Policy Development and Management
4. Staffing Support

CARTA staff and consultants and YoloTD staff and consultants are closely coordinating on areas of mutual interest.

3. *CARTA Board Meetings*

August 1st: 1) The CARTA Board amended its bylaws to establish a $100 stipend for directors to attend Board meetings. 2) The Board directed Caltrans staff to revise the Services Memorandum with more specific language, including quantifying the value of Caltrans' partnership commitments and to return to the CARTA Board in October

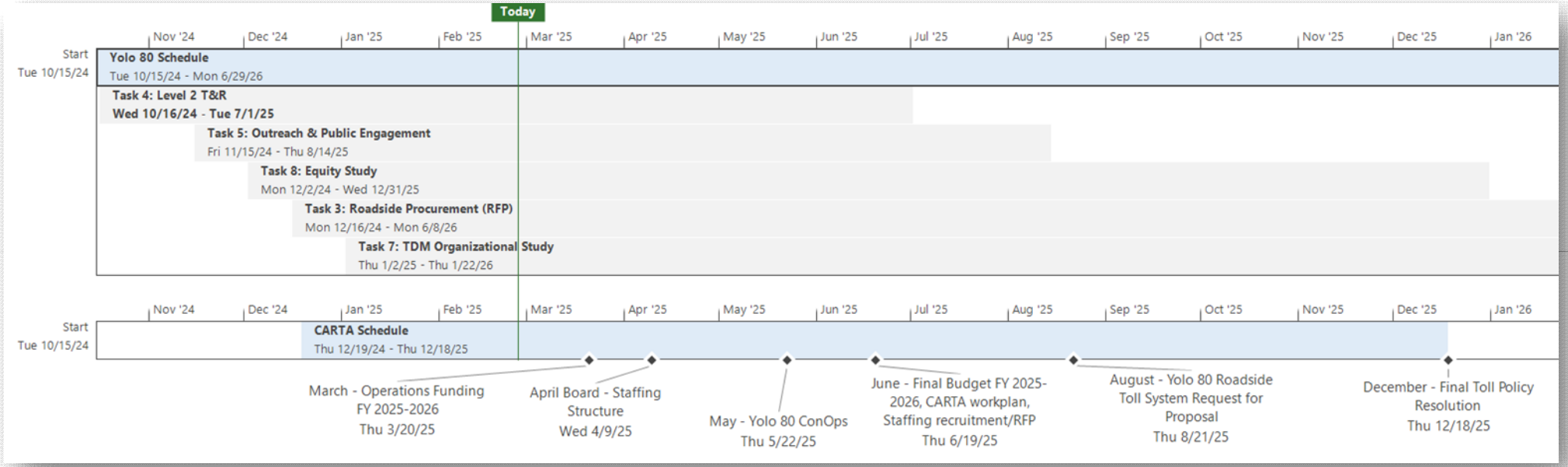
October 17: 1) CARTA Board accepted the revised Caltrans Services Memorandum and seek acceptance from SACOG and YoloTD. 2) CARTA Board directed staff to apply for a Caltrans Strategic Partnerships Planning Grant to fund a regional toll equity study.

December 19: CARTA Board received informational presentations on the CARTA Toll Program Workplan and Policy Development and funding and staffing CARTA for fiscal year 25/26.

February 20: CARTA received presentations on staffing approach for FY 25/26 and operations funding. They also received a presentations on tolling back-office structure, Tolling 101, open access tradeoffs for the Yolo 80 project, and discussed CARTA draft mission, vision, and values.

Schedule

The exhibit below illustrates the timeline for the YoloTD-led Yolo 80 Managed Lanes Tolling Advance Planning project and the CARTA-led Regional Toll Lane Program Development project.


Today
Nov '24
Dec '24
Jan '25
Feb '25
Mar '25
Apr '25
May '25
Jun '25
Jul '25
Aug '25
Sep '25
Oct '25
Nov '25
Dec '25
Jan '26
Start
Tue 10/15/24
Yolo 80 Schedule
Tue 10/15/24 - Mon 6/29/26
Task 4: Level 2 T&R
Wed 10/16/24 - Tue 7/1/25
Task 5: Outreach & Public Engagement
Fri 11/15/24 - Thu 8/14/25
Task 8: Equity Study
Mon 12/2/24 - Wed 12/31/25
Task 3: Roadside Procurement (RFP)
Mon 12/16/24 - Mon 6/8/26
Task 7: TDM Organizational Study
Thu 1/2/25 - Thu 1/22/26
Start
Tue 10/15/24
CARTA Schedule
Thu 12/19/24 - Thu 12/18/25
March - Operations Funding FY 2025-2026
Thu 3/20/25
April Board - Staffing Structure
Wed 4/9/25
May - Yolo 80 ConOps
Thu 5/22/25
June - Final Budget FY 2025-2026, CARTA workplan, Staffing recruitment/RFP
Thu 6/19/25
August - Yolo 80 Roadside Toll System Request for Proposal
Thu 8/21/25
December - Final Toll Policy Resolution
Thu 12/18/25

At this meeting, staff and Silicon Transportation Consultants will give a brief presentation to bring the Board up to speed on YoloTD-scoped Tolling Advance Planning activities as well as broader issues facing the interregional partnership with CARTA, SACOG, YoloTD, and Caltrans District 3 with respect to project- and regional-level topics.

ATTACHMENT:

1. February 2025 CARTA Board Meeting Slide Deck on Lane Separation

Yolo 80 Managed Lanes CARTA Board Meeting

February 20, 2025

Attachment 7A

Yolo Transportation District

Agenda

- Overview of Current Constraints and Challenges
- Overview of Types of Separation
- Current Facility Design and Proposed Modifications

Overview

Project Goals

Goals for the project remain:

- Safety
- Managing congestion
- Improving traffic time reliability
- Meeting Vehicle Miles Traveled (VMT) commitments

Causeway Overview

- The current design is open access – allowing drivers to enter and exit at any point
- Causeway has very limited space and the project does not include widening the causeway
- Current design reduces lane widths but maintains 2’ inside shoulder and 10’ outside shoulder
- Current design does not have any read points on causeway (4 miles)
- Caltrans agrees that lane separation or technology on causeway could be considered in the future but reducing shoulders may have safety concerns

Challenges

- Open access without read points for 4+ miles is estimated to result in **10 – 15% revenue leakage**
- Very challenging to install traditional toll gantries on causeway structure
- The causeway is a chokepoint and will have highest demand for express lanes – managing traffic with pricing will be difficult without read points or lane separation
- Changes to the design at this point will require a change order/increase in cost. Contract has very limited funding.
- Implementing lane separation would reduce shoulder widths and trigger the need for Caltrans approval of design exceptions

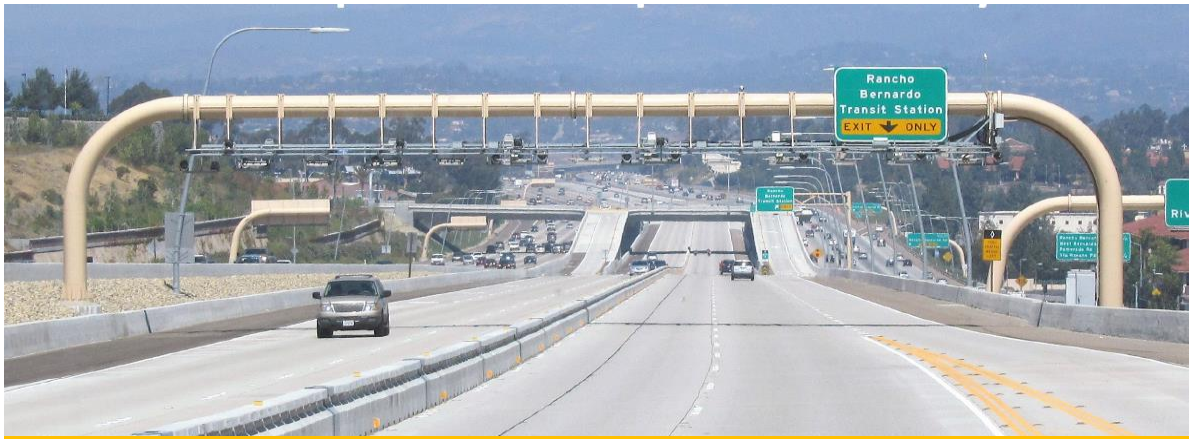
How are managed lanes separated from general purpose lanes?

Types of Separation

- Physical Separation
  - Concrete Barrier
  - Pylons/Tubular Delineators
- Soft Separation
  - Striped Buffer
  - Solid or Dashed Stripe

Barrier Separation

- Fixed width
- Favors longer distance trips with minimal intermediate access points
- Sometimes coupled with reversible lane configuration



I-15 Express Lanes – San Diego

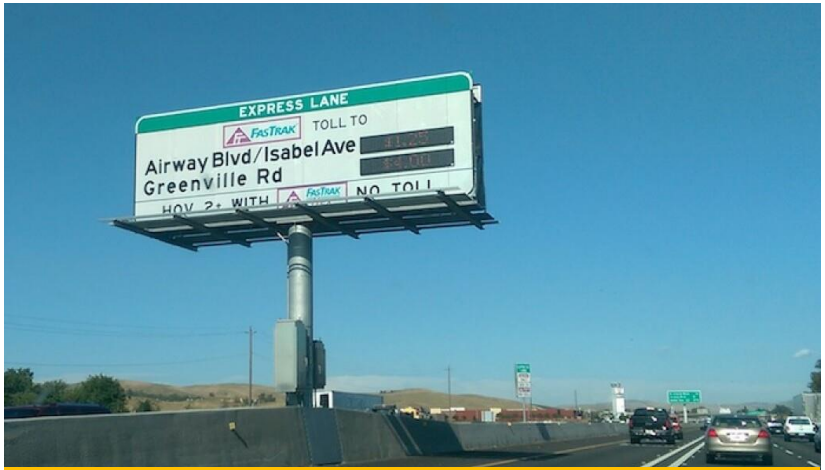
Pylons or Tubular Delineators

- Flexible material
- Return to an upright position after impacts at 70mph
- Easy to replace

I-405 Express Lanes – Orange County

Striped Buffers or Lane Stripes

- Double white lines for buffered systems
- Single dashed stripe for open access systems



I-580 Express Lanes – Dublin/Pleasanton

I-680 Express Lanes – San Ramon/Danville

Capacity of Managed Lanes

- **Friction Effect:** ML operations are sensitive to congestion in adjacent GP lanes under certain separation conditions. This **frictional effect** is **stronger** on facilities with minimal physical separation such as the **Continuous Access**[2]

- *Source: Kitae Jang, D. R.-Y. (2009). A Comparative Safety Study of Limited versus Continuous Access High Occupancy Vehicle (HOV) Facilities. California Department of Transportation*

Safety and Operations Effects

- Violation of crossing the lines are a safety concern. Pylon or barrier separations eliminate the weaving concern.
- Modeling is just starting but it is anticipated that 10% to 15% of managed lane users will evade the tolls on the causeway without separation
- EL performance and travel time reliability will be impacted by travelers using EL as passing lane

Timing of Decision

- Roadway construction is underway
- Modifications will require issuing a change order to contractor
- Decision needed soon to allow time for development/design of CCO, contract negotiations, ordering materials, and technology inclusions in the forthcoming toll system Request for Proposals

Physical Separation

Advantages

- No weaving in/out
- Improved safety
- Reduced violation
- Easier to enforce
- Protection of express lanes revenue
- More reliable travel time for all users, including transit vehicles
- More effective use of dynamic pricing
- Pylons allow emergency/incident response

Disadvantages

- Eliminates flexibility for shorter trips*
- **Concrete barriers require more physical space than pylons**
- Pylons increase maintenance and operation costs
- Weaving locations may lead to more bottlenecks if not carefully designed

Soft Separation

Advantages

- Minimal to no additional space required
- Provides flexibility for emergency/incident response
- Reduced maintenance costs

Disadvantages

- Weaving creates operational and safety challenge
- Increased violation
- Harder to enforce
- Less reliable travel time
- Less reliable revenue stream
- **Additional gantries are needed**

CURRENT DESIGN AND PROPOSED MODIFICATIONS

Yolo 80 Proposed Configuration

EB Reader		
#	Location (Sta.)	Spacing (Mile)
1	297+00	0.64
2	330+75	1.80
3	426+00	0.98
4	478+00	0.42
5	500+00	1.54
6	581+10	4.11
7	798+00	0.51
8	825+00	

WB Reader		
#	Location (Sta.)	Spacing (Mile)
1	798+00	
2	763+00	0.66
3	581+20	3.44
4	500+00	1.54
5	482+00	0.34
6	443+00	0.74

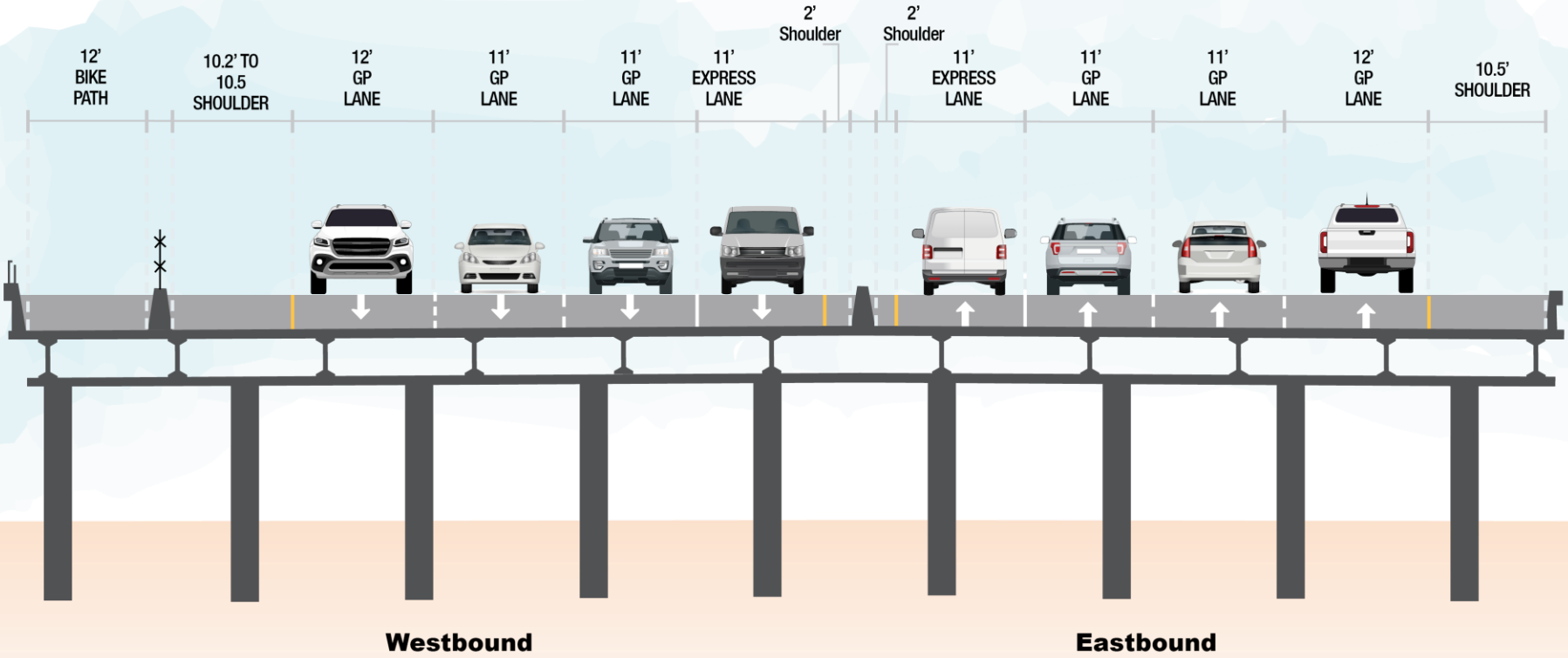
- Total Length: 17 miles
- Number of Toll Gantries
  - 8 EB Toll Points
  - 6 WB Toll Points
- Longest spacing: 4 miles on Causeway

TYPICAL SECTION 1

Current Proposal

Causeway West

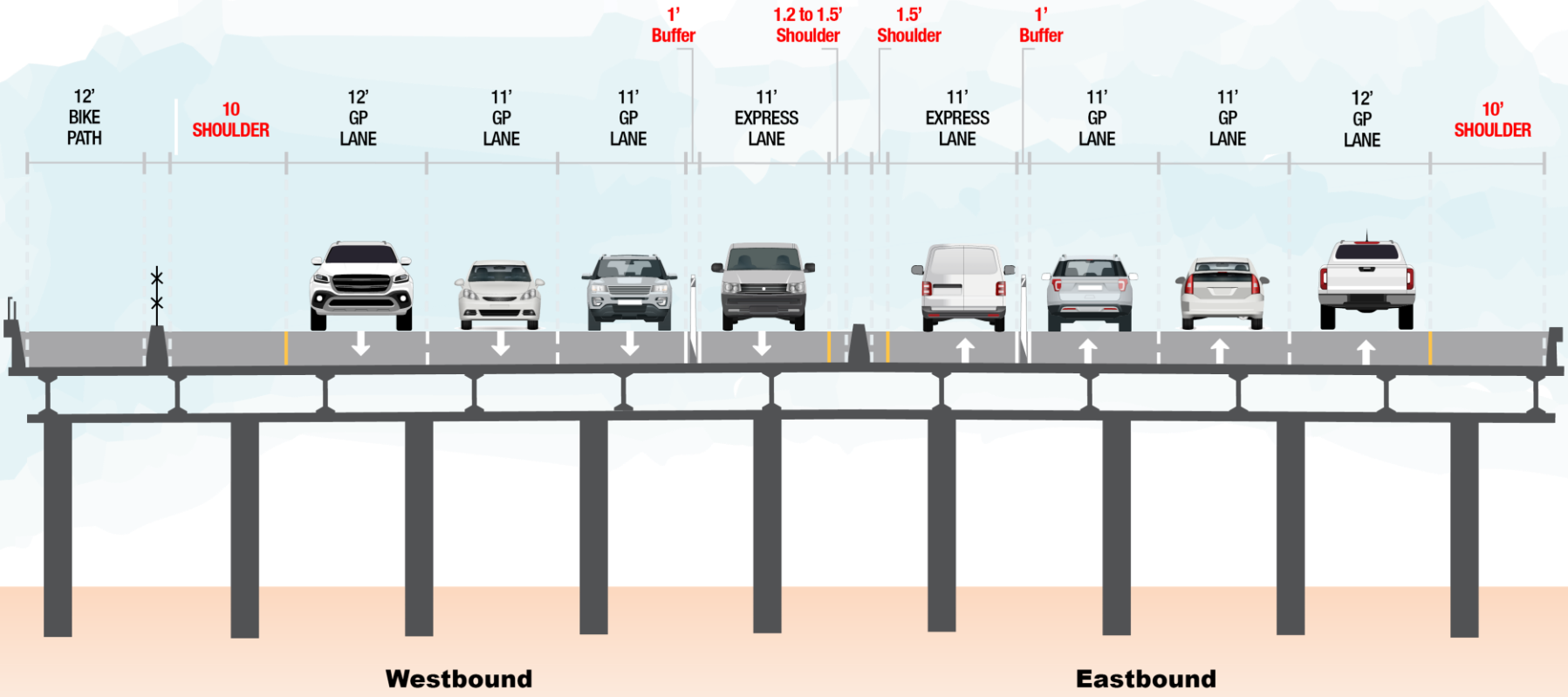
Note: Inside shoulder and lane widths have been reduced to add the express lane



TYPICAL SECTION 1

Option 1: *1-Foot Buffer*

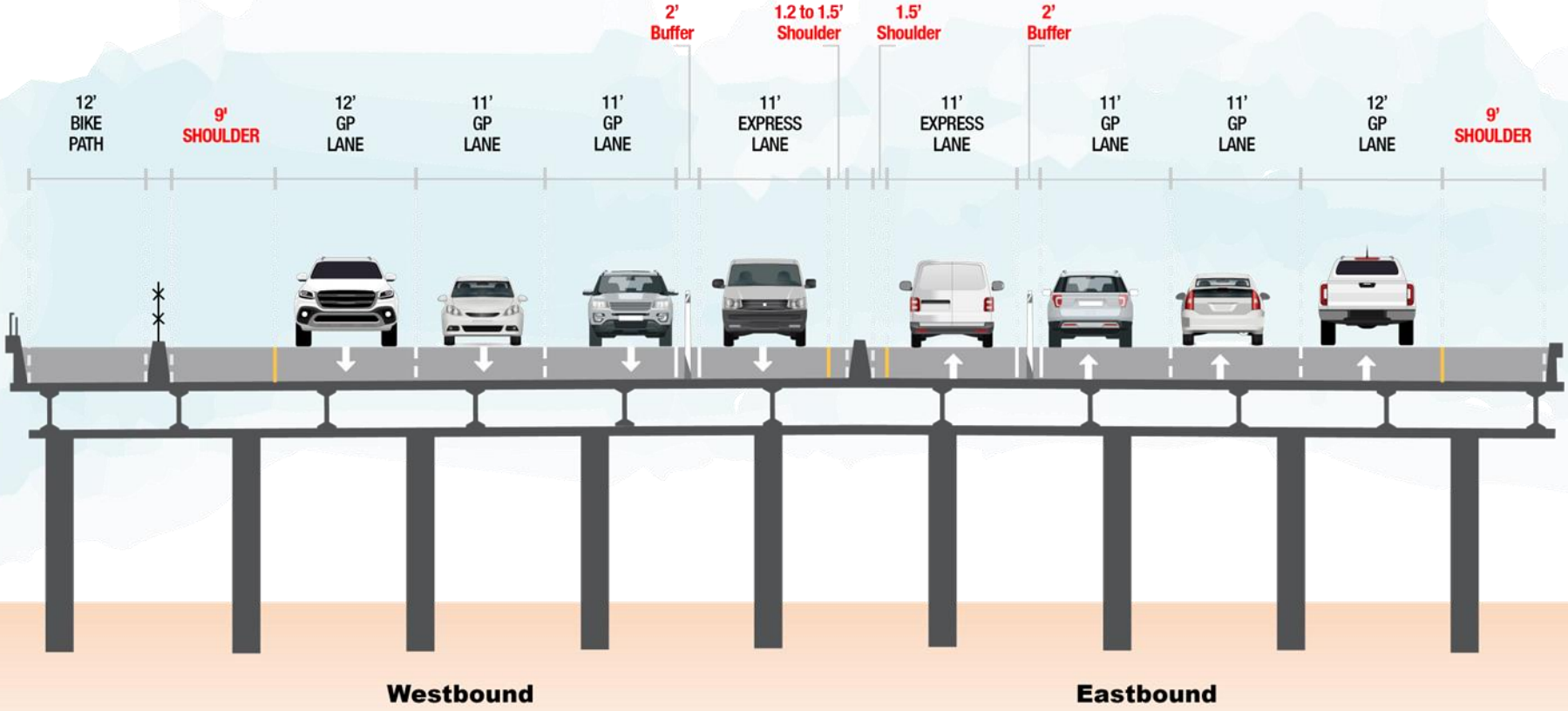
Causeway West



TYPICAL SECTION 1

Option 2: *2-Foot Buffer*

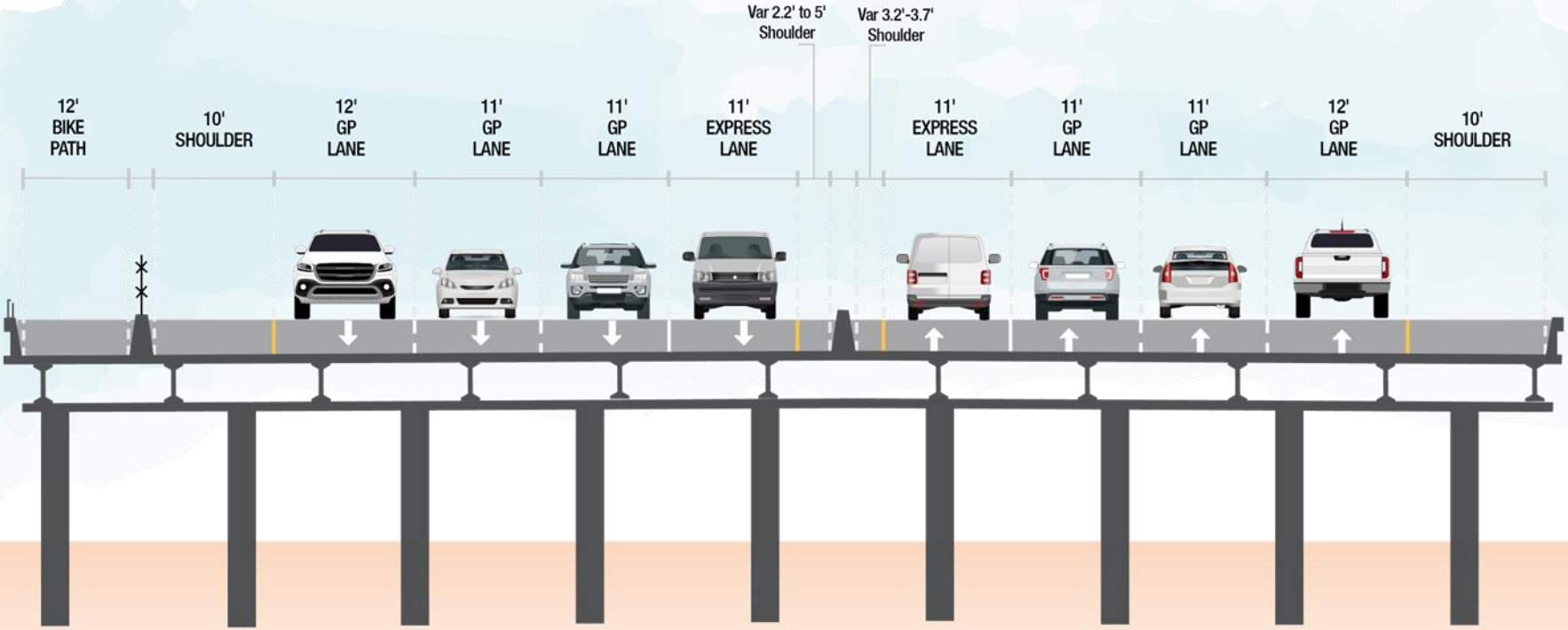
Causeway West



TYPICAL SECTION 3

Current Proposal

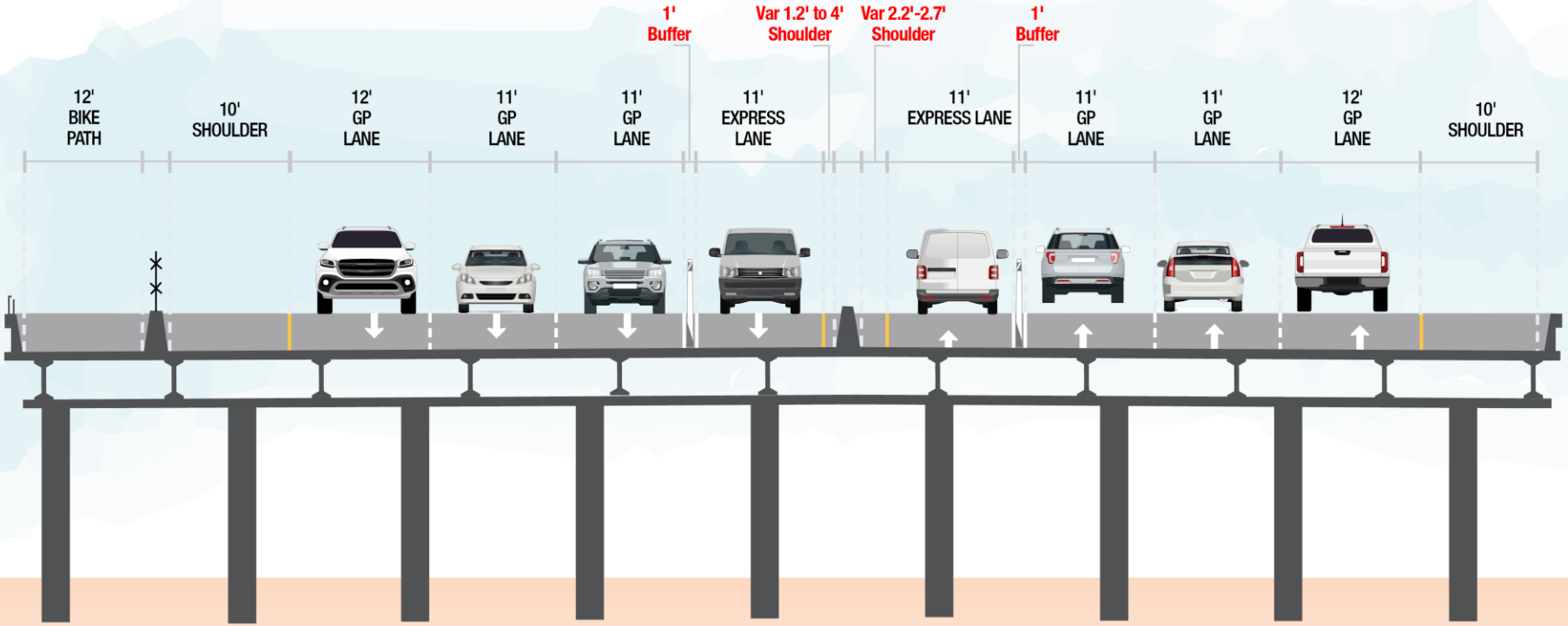
Causeway East



TYPICAL SECTION 3

Option 1: 1-Foot Buffer

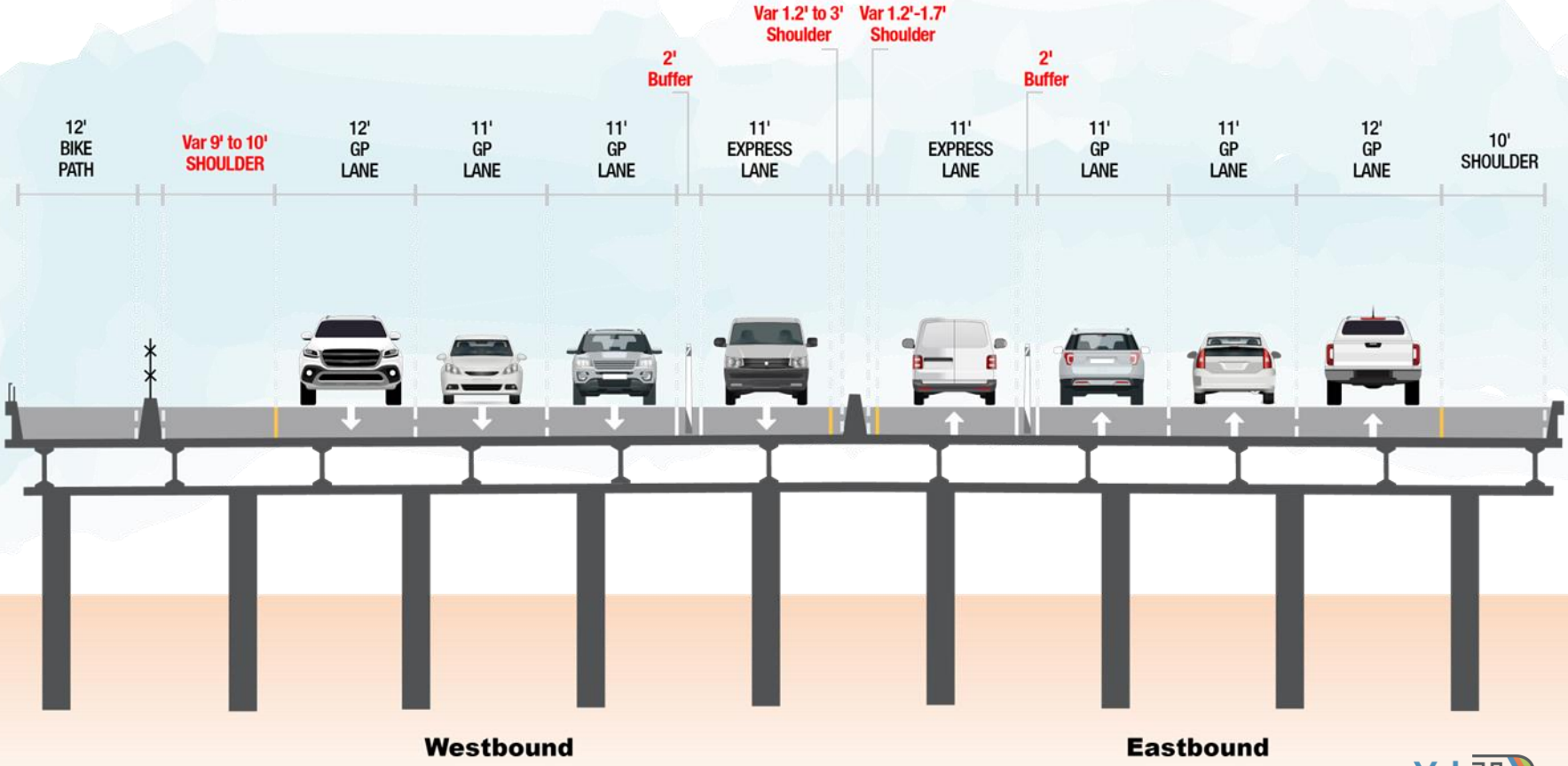
Causeway East



TYPICAL SECTION 3

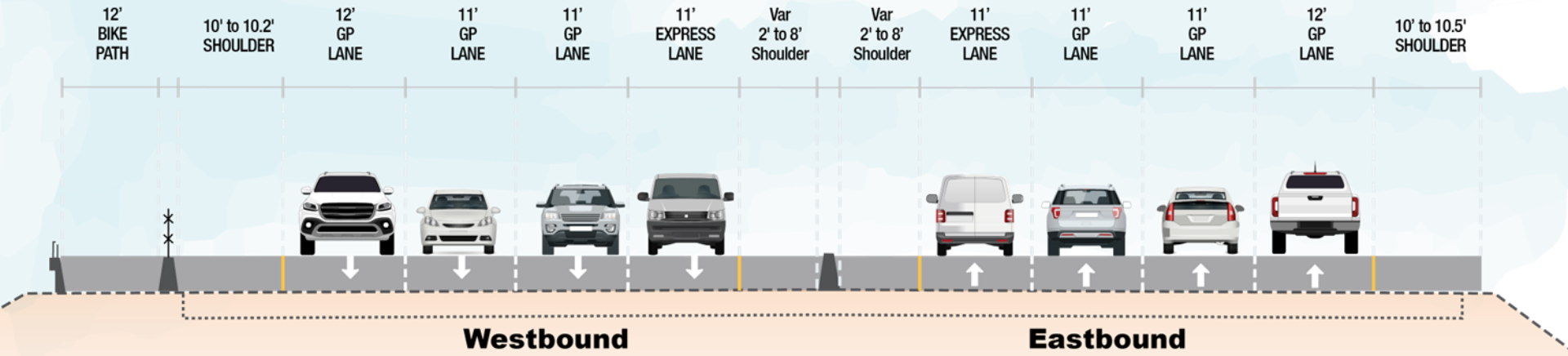
Option 2: 2-Foot Buffer

Causeway East



Outside the Causeway limits

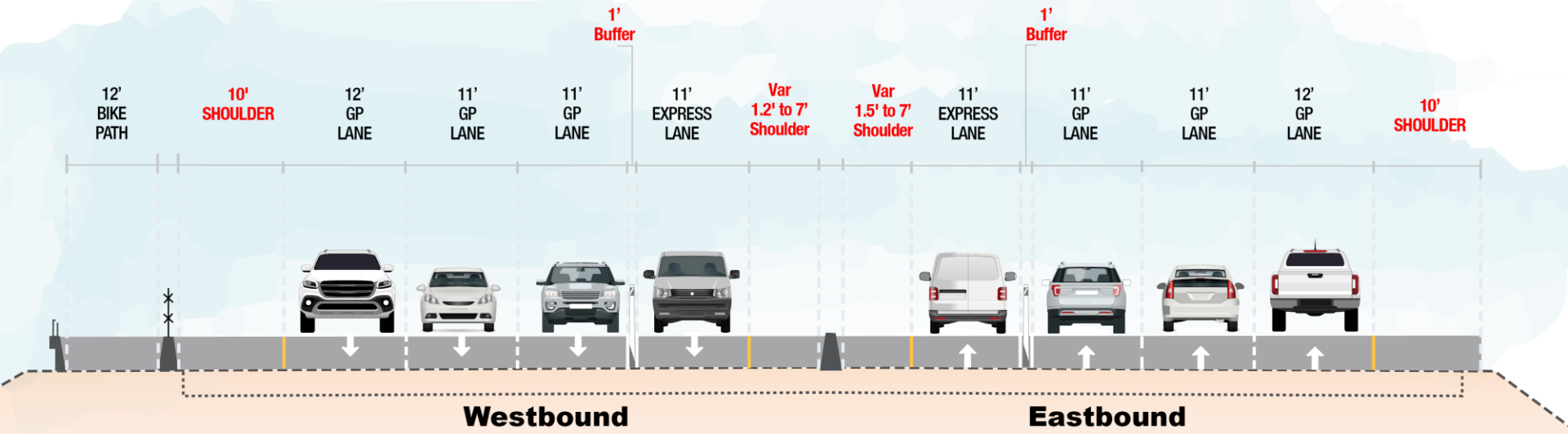
TYPICAL SECTION 2
Current Proposal



Outside the Causeway limits

TYPICAL SECTION 2

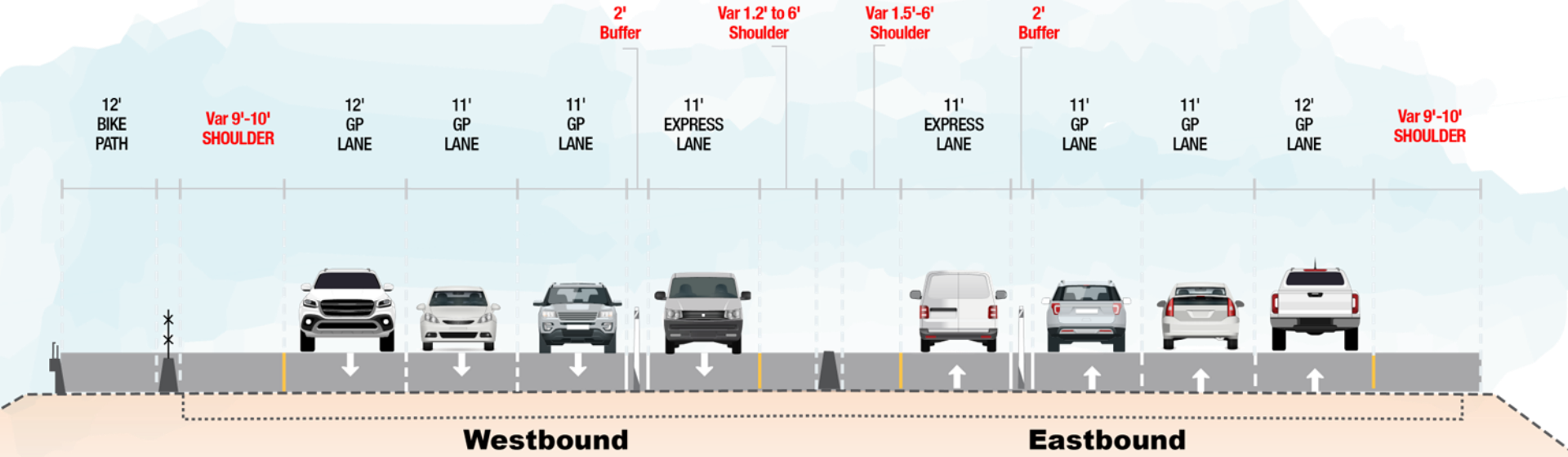
Option 1: 1-Foot Buffer



Outside the Causeway limits

TYPICAL SECTION 2

Option 2: 2-Foot Buffer



Additional Toll Readers

- Without delineators, additional toll readers would be needed
- Installing toll gantries on the Causeway would be challenged by the structural design requirements and environmental constraints
- Additional power and communications infrastructure would be needed
- Opportunity to use other technologies to toll traffic in the lane using license plate readers

License Plate Cameras

- Supplemental toll read along Causeway
- Mounted to the side with no mast arm
- Uses license plate read technology
- Correlates with registered toll tag account for toll verification
- Provide toll system redundancy
- Requires lane closure when maintenance is needed, but could be performed at night or during off-peak

YOLO 80 Project Update

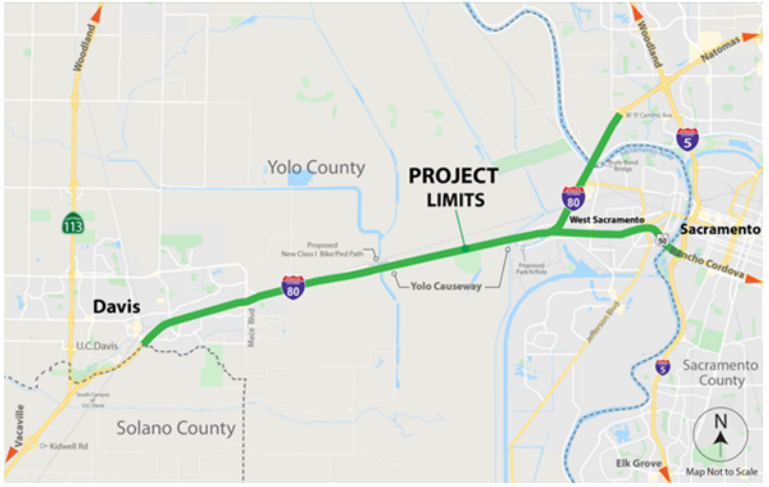
March 10, 2025

SILICON
Transportation Consultants

YoloTD
Yolo Transportation District

Agenda

- Project Overview
- Core Focus Areas
  - Policy Development and T&R
  - Corridor Construction
  - Toll System RFP
- Responsibilities Diagram

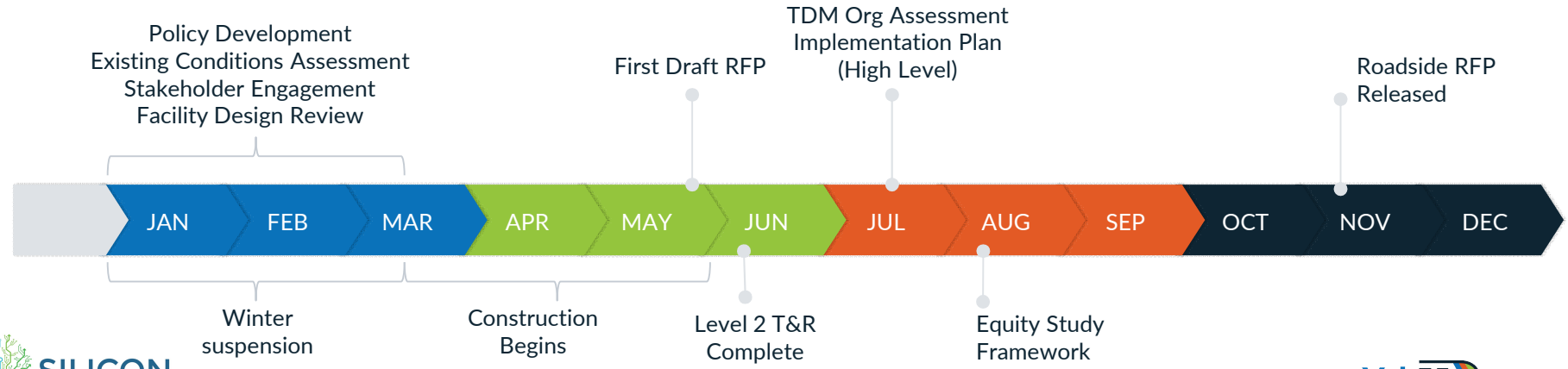


Project Overview

- High Occupancy Toll (HOT) 3+ lane in each direction on I-80 between Solano, Yolo and Sacramento Counties
- Contract Awarded to Silicon Transportation Consultants (a DBE Prime) in October 2024
- Total Contract Value: $1.77M

PM & Process Mapping (Task 1 & 2)

- Coordination between Caltrans and CARTA
- Coordination between tasks
- Master schedule management
- Policy matrix creation and updates



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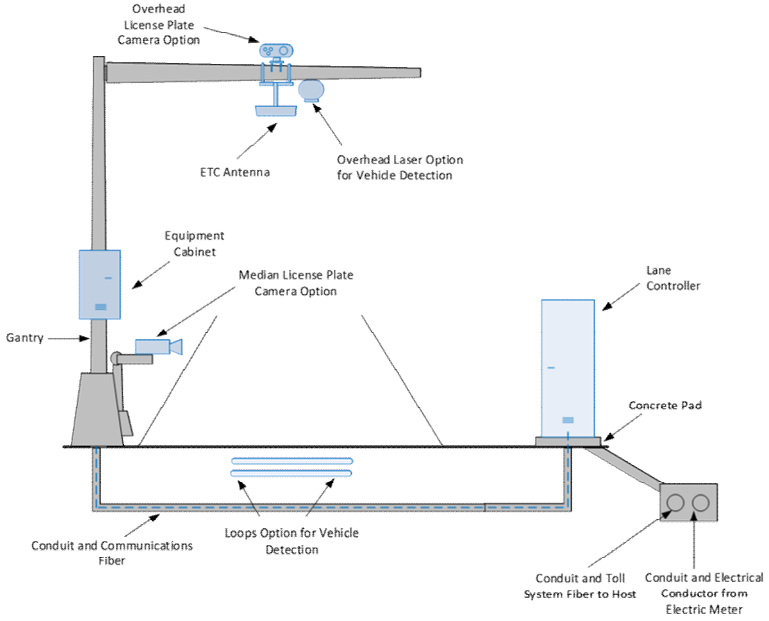
Roadside RFP (Task 3)

- RFP being developed to procure toll system equipment that meets YoloTD's needs
- Requires coordination with Caltrans for roadway construction that will begin in April 2024
- CARTA will release RFP so STC will coordinate business and legal terms with CARTA



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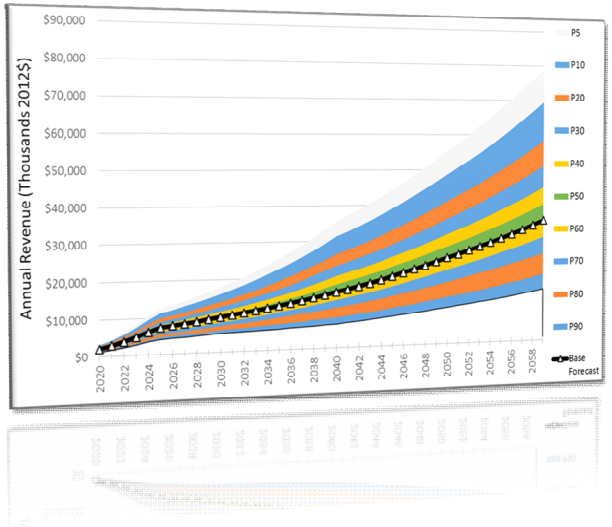
Level II Traffic and Revenue Analysis (Task 4)



Level II T&R informs policy, pricing, and funding

Complete:

- Existing traffic data review
- Socioeconomic data review

In-Progress:

- Existing conditions data review
- Finalizing parameters for 2 T&R scenarios
- Coordinated with Yolo/CARTA/Caltrans on T&R assumptions
- Began model development

Upcoming:

- Calibrate the base year model

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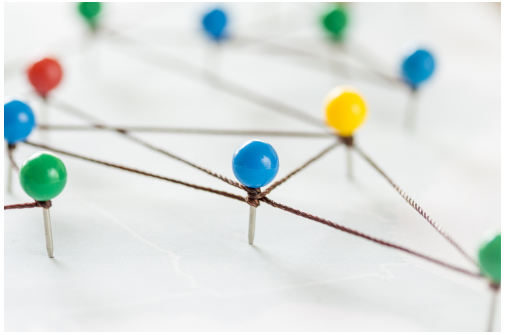
Community Outreach and Engagement (Task 5)

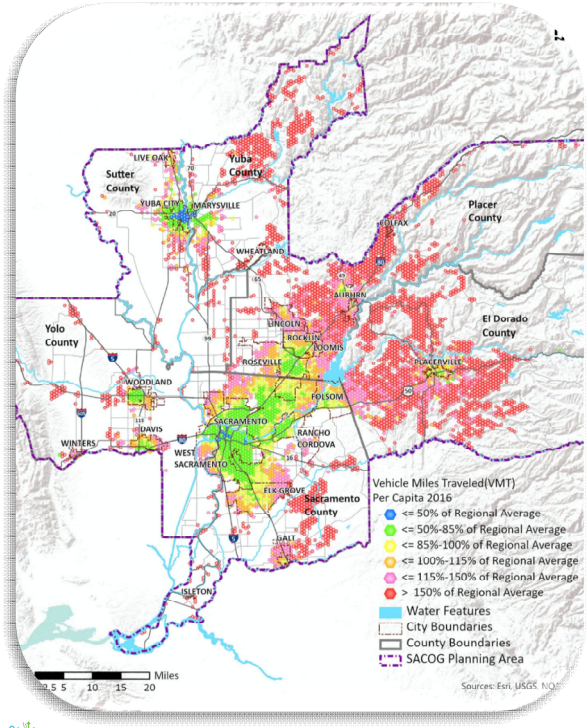
- Team is available to assist with eventual information and outreach on tolling plans
- Will support equity outreach and stakeholder engagement
- Provides input on messaging, comms coordination and operational policies



Legal Advisory Services (Task 6)

- Provides as-needed legal counsel
- Led by Kirk Trost
- Documents reviewed include CARTA agreement, Cooperative agreement, and VMT Mitigation Plan

Transportation Demand Management Organizational Assessment (Task 7)



- Project includes VMT Mitigation through Voluntary Trip Reduction Program (TDM)
- Evaluation needed on how to best “scale up” the current TDM program
- Work completed includes stakeholder interviews with focus groups, advocacy organizations, and Yolo Commute Board
- Future work includes review of other TDMs for best practices and the creation of a TDM Toolbox for options and recommendations

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Project-Specific Equity Study (Task 8)

- Yolo-specific equity study is being performed with a focus on County equity issues
- Goal is to produce an equity framework that will inform toll policy
- Will coordinate with larger CARTA regional equity study when started
- Completed work includes goals and outcomes memo and workshop, literature review, and map analysis

Core Focus Area: Policy Development and T&R

- Policy discussions are occurring regionally for CARTA, as well as at the YoloTD level
- Policy drives Yolo80-specific initiatives:
  - Inputs into equity, TDM, program discounts or other initiatives
  - Technical design decisions in the RFP
  - Operations and Maintenance requirements
- T&R will inform pricing and revenue forecasts

Description	Category	Options	Yolo/CARTA Decision
Project Limits	Design	Project Phases 1 and 2	Yolo
Hours of Operation	Policy	1. 5am - 8pm (mon - fri) 2. 5am - 8pm (everyday) 3. 24/7 (everyday)	Yolo
Toll-Exempt Vehicles	Policy		CARTA
ULEV/ZEV Allowances	Policy	1. Free 2. Discounted 3. No Discount	Yolo
Lane Configuration (future express lanes projects in the region)	Design	Depending on by what year the planned toll lanes can be completed, the T&R analysis will select the future model year and adjust the lane configurations of the models based on the	Yolo/CARTA

Core Focus Area: Corridor Construction (Caltrans)

- Caltrans has awarded construction contract, with construction anticipated in April 2025
- Due to timing of INFRA Grant, design was completed without a toll system vendor
- Working with Caltrans to minimize change orders, improve design, and to include items in toll system RFP
- Identifying cost saving opportunities

Image Credit: www.sacbee.com

Core Focus Area: Toll System RFP

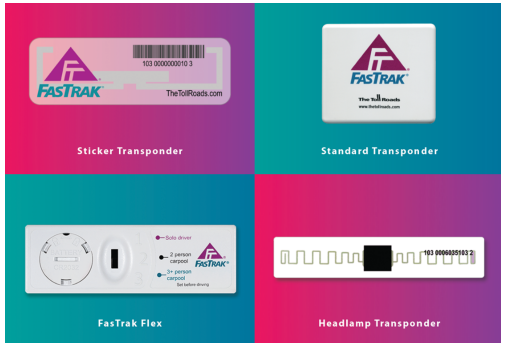
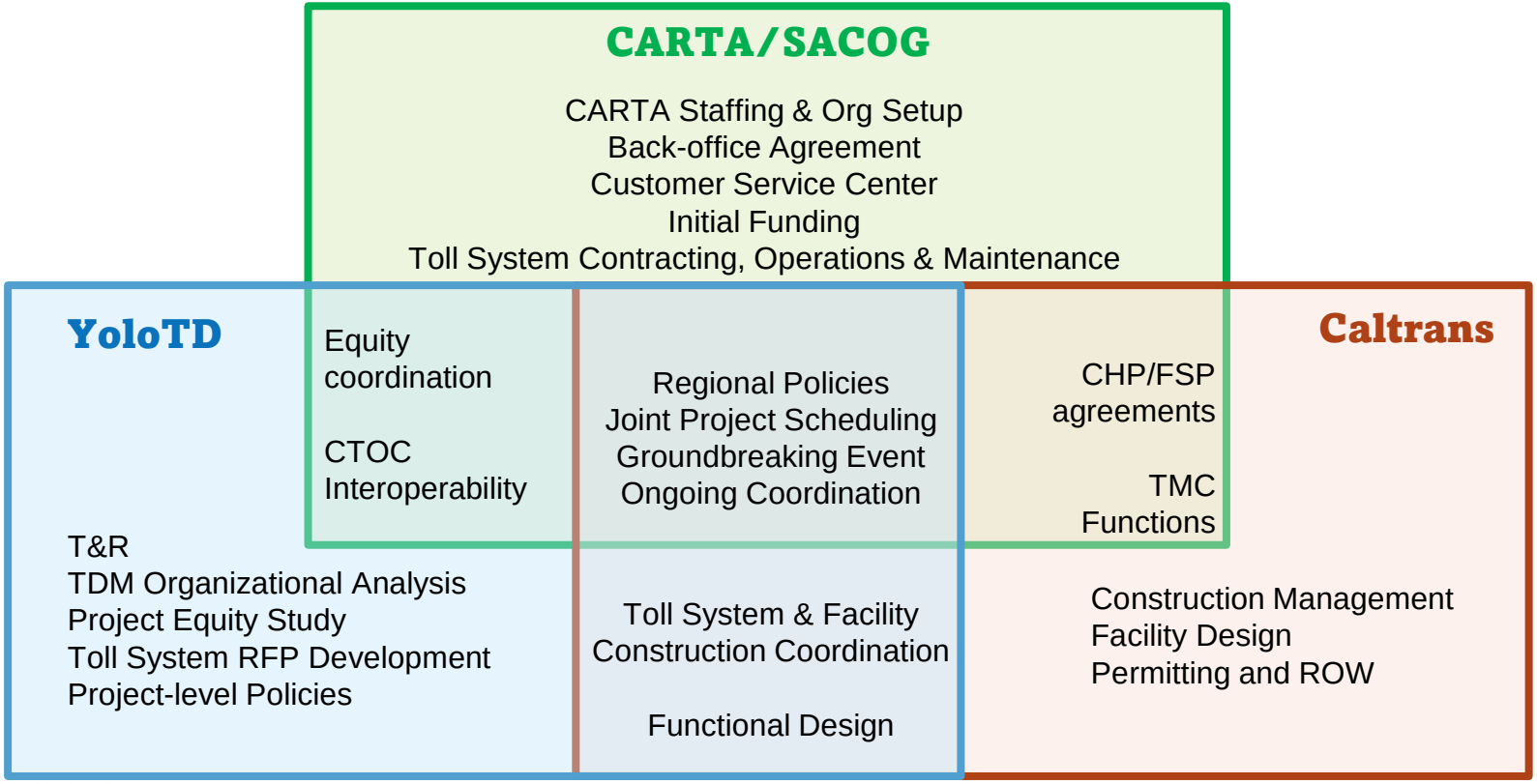


Image Credit: www.fastrak.org

- Toll System RFP represents one of the longest lead times for procurement, award, design, installation and testing
- Need to catch up to Caltrans work
- Partially informed by CARTA back-office contracts
- Work with CARTA (SACOG) Contracts & Legal teams for RFP release
- O&M needs must be defined so CARTA can staff accordingly

Responsibilities Breakout



Questions