



ALAMEDA COUNTY TRANSPORTATION COMMISSION

# I-680 Sunol Express Lanes System Manager Services: A16-0075 Amendment #4

Presented to the Programs and Projects Committee  
Liz Rutman, Director of Express Lanes Implementation and Operations

## I-680 Sunol Express Lanes Project Components

### Southbound Conversion

- ❖ Southbound Conversion of the existing express lane to continuous access from SR262 (Mission) to SR84

### Electronic Toll System

- ❖ Deploy a new toll system for both NB and SB express lanes
- ❖ Implement enhanced toll system compliant with adopted toll policies, including violation enforcement



### Northbound Phase 1

- ❖ South of Auto Mall to SR 84
- ❖ 8.2 miles of new express lane

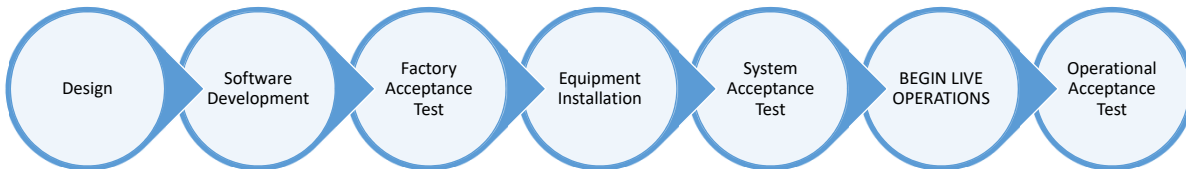
### Caltrans Rehab

- ❖ Grimmer to Koopman



# Electronic Toll System Implementation

Seven high-level stages of implementation:

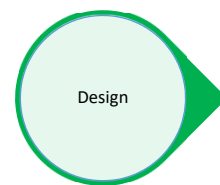


Complex, specialized work performed by a Toll System Integrator (TSI)  
Oversight by Alameda CTC staff and a System Manager



## Design and Software Development

- Design and Software Development
  - System Detailed Design Document drafted
  - Specifies all aspects of the toll system
    - Vehicle detection and fare assignment
    - Dynamic Pricing
    - Equipment monitoring and Performance validation
- Software Development – in progress
  - Modifies base product to specific project
  - Over 1200 requirements to code and test



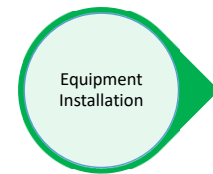
# Factory Acceptance Test (FAT)



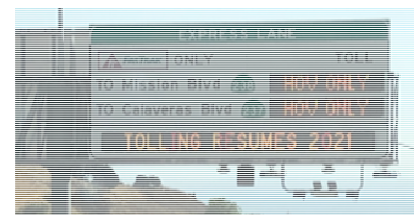
- Proof of concept for the equipment and toll host
- Field test performed at Kapsch test track in Taylor, TX
- All testing observed by System Manager (remote)
- Hundreds of scenarios test all requirements and business rules
- Successful completion → Test actual corridor equipment



# Equipment Installation



- To keep the project moving forward, Kapsch has installed the toll equipment for all 31 sites at risk
  - Message panels
  - Toll tag readers/antennas
  - Scanners
  - License plate cameras
  - Traffic sensors
  - Performance monitoring cameras
  - Occupancy detection beacons for CHP use
  - Roadside cabinet equipment



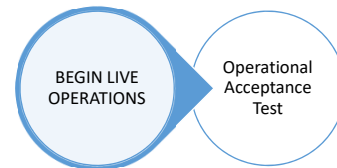
# System Acceptance Test (SAT)



- Validation of project toll system
  - Communications network is complete and functional
    - Roadside to Host Systems (San Francisco and Sacramento)
    - Host to BATA customer service center
  - All toll equipment and systems are properly integrated and functional
    - Monitoring capabilities online
    - Vehicle test runs successful
  - High degree of performance and accuracy required
- Successful completion → Begin Live Operations



# Operational Acceptance Test (OAT)



- Under live operations
- Validation of all required performance metrics
  - Minimum of 2 months of successful performance
  - Typically takes a new toll system 6 – 9 months to complete
- Successful completion → End of Implementation Phase



## Transition: Old to New

- Original southbound EL opened September 2010
- Components of that toll system conflicted with construction
- Original Toll System Decommissioned August 10, 2020



## Project Status – NB and SB EL open to HOV

- Lanes operating in HOV ONLY mode
  - Carpools, CAVs, Motorcycles, Transit only
  - Monday – Friday, 5 am – 8 pm
- Signage conveys use restriction
- New toll equipment installed
- Civil construction substantially complete

GO LIVE in Fall 2021



## Summary of Agreement No. A16-0075

Contract Status	Work Description	Value	Total Contract Not-to-Exceed Value
Original Professional Services Agreement with HNTB (A17-0075) Approved July 2016	System Manager Services for the I-680 Sunol Express Lanes	\$1,000,000	\$1,000,000
Amendment No. 1 (Administrative Amendment) Executed February 2018	Addition of Special Conditions Relating to Personally Identifiable Information	N/A	\$1,000,000
Amendment No. 2 Approved November 2018	Additional System Manager services for the I-680 and I-580 Express lanes, additional budget, and 24-month time extension	\$525,000	\$1,525,000
Amendment No. 3 (Administrative Amendment) Executed June 2020	Modification of indemnification and insurance requirement provisions	N/A	\$1,525,000
<b>Proposed Amendment No. 4 February 2021 – (This Agenda Item)</b>	<b>Provide additional budget and time extension to complete the I-680 Sunol Express Lanes project with additional scope of work</b>	<b>\$920,000</b>	<b>\$2,445,000</b>
<b>Total Amended Contract Not-to-Exceed Amount</b>			<b>\$2,445,000</b>



## Recommended Action

Approve and authorize the Executive Director to execute Amendment No. 4 to Agreement A16-0075 with HTNB Corporation (HNTB) for an additional amount of \$920,000 for a total not-to-exceed amount of \$2,445,000, and time extension to December 31, 2022, to complete System Manager services for the I-680 Sunol Express Lanes Project (PN 1369000).



Thank You

