



Oak Grove and Carolan Avenue Traffic Signal Project Update

Traffic Safety and Parking Commission (TSPC)

August 14, 2025



OVERVIEW

- 1 Provide Project Background and Existing Conditions
- 2 Present Project Location with the Background Conditions
- 3 Show Project Timeline
- 4 Present Project Operations Analysis
- 5 Show Project Layout
- 6 Summary of Project Benefits
- 7 Next Steps

PROJECT BACKGROUND & EXISTING CONDITIONS

- Existing signal at Oak Grove/California
- California/Carolan stop control on 3 out of 4 legs
- Eastbound direction is uncontrolled movement
- Difficult for drivers to know who has right of way and sufficient gaps to turn with pedestrians crossing.
- Large Queue buildup during school drop off/pickup times.
- Caltrain's Peninsula Corridor Electrification Project (PCEP) recommended a traffic signal installed at California/Carolan with coordination with the traffic signal at Oak Grove/California as well as the RR signals
- Staff has been coordinating with Caltrain, and CPUC to ensure their feedback on the project
- Adding a signal at Oak Grove/Carolan will have increased safety benefits, particularly for pedestrians and bicyclists, and would make the intersection less confusing to drivers and can avoid potential conflicts for all users of the intersection



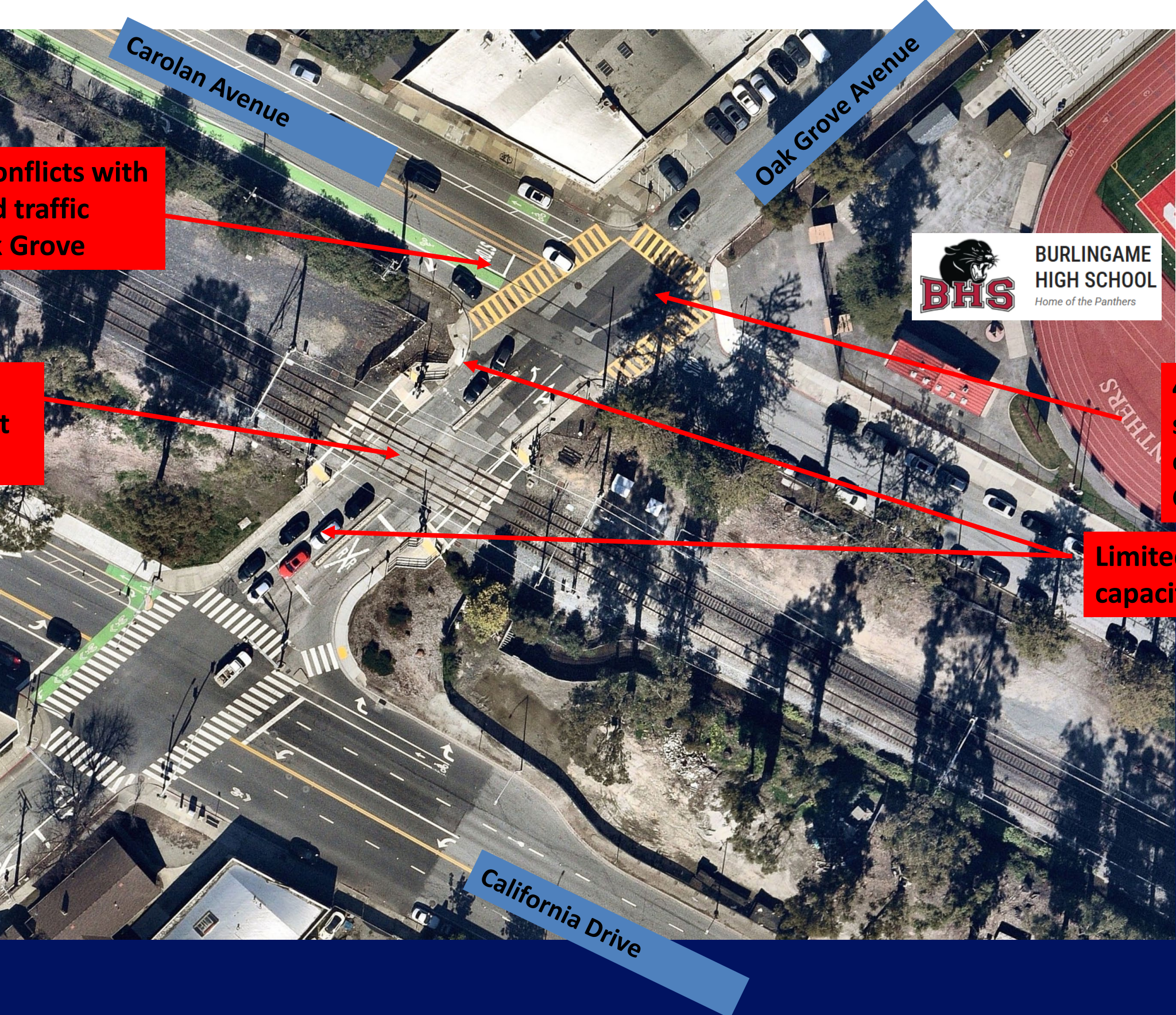
PROJECT LOCATION & BACKGROUND CONDITIONS

Crosswalk conflicts with uncontrolled traffic from EB Oak Grove

Caltrain line with existing preemption at Oak Grove/California

4-way intersection with stop-controls on all but eastbound leg on Oak Grove.

Limited vehicle queuing capacity.



PROJECT TIMELINE

- **March 2020 - Project was initiated**
- **November 2020 - TSPC presentation of Traffic Operations Study**
- **COVID Pandemic put project on hold**
- **May 2021 - CPUC General Order 88B application submitted**
- **August 2023 - Comments received from Caltrain & began addressing them**
- **2023- 2024 - California Dr Road Diet & Bike Project design, construction & monitoring - to confirm established traffic patterns**
- **April 2024 - City staff began coordination with Caltrain PCEP staff**
- **July 2024 - CPUC Diagnostic meeting and feedback**
- **January 2025 – Collection of updated traffic data post California Drive Diet Project**
- **March – June 2025 - Update Traffic Operations Study with new traffic data based on new patterns in the light of road diet and bike lanes geometry**



TRAFFIC OPERATIONS ANALYSIS

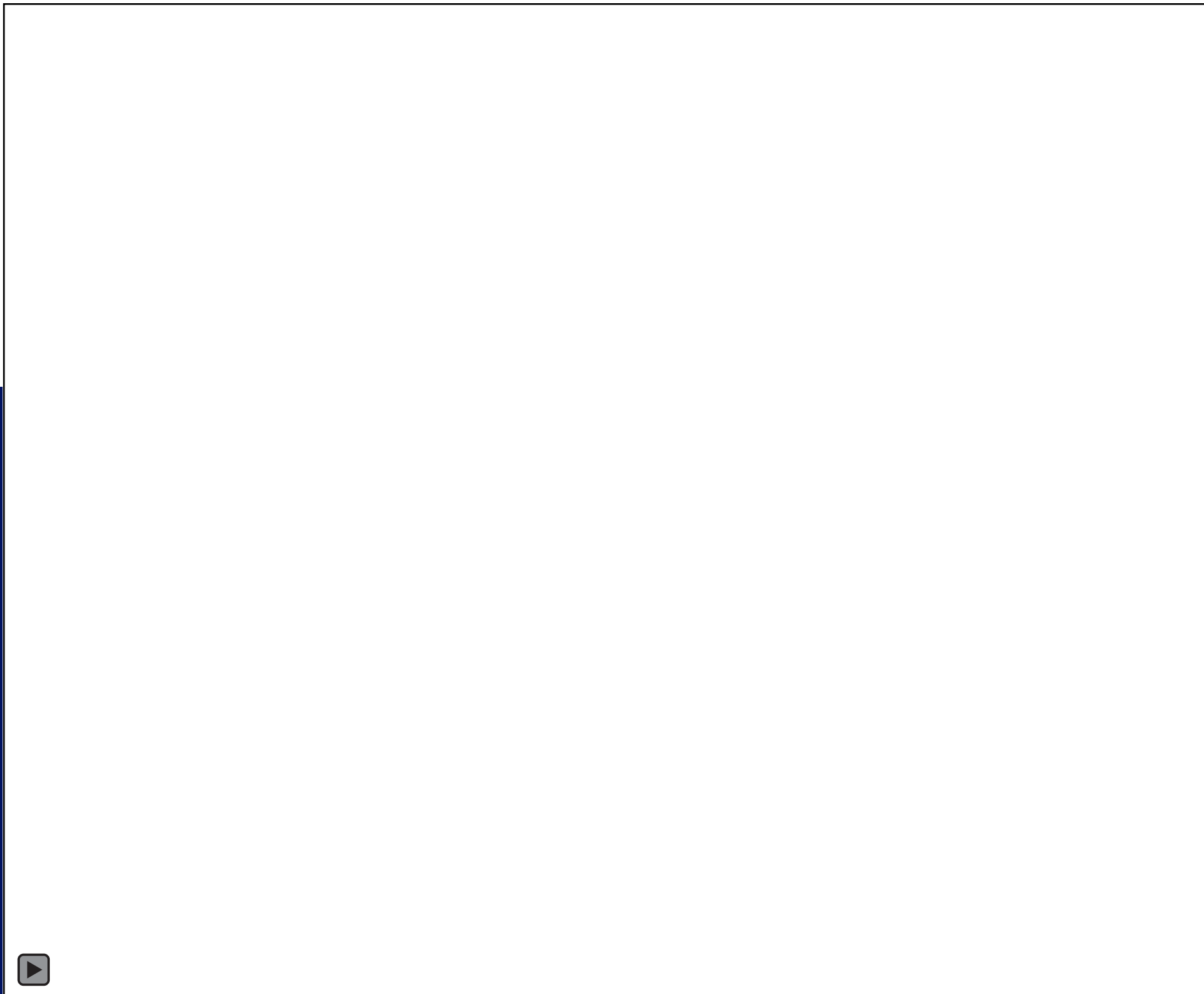
EXISTING CONDITIONS – MORNING PEAK



TRAFFIC OPERATIONS ANALYSIS – PROTECTED LEFT TURN OPTION MORNING PEAK



TRAFFIC OPERATIONS ANALYSIS – SPLIT PHASING OPTION MORNING PEAK



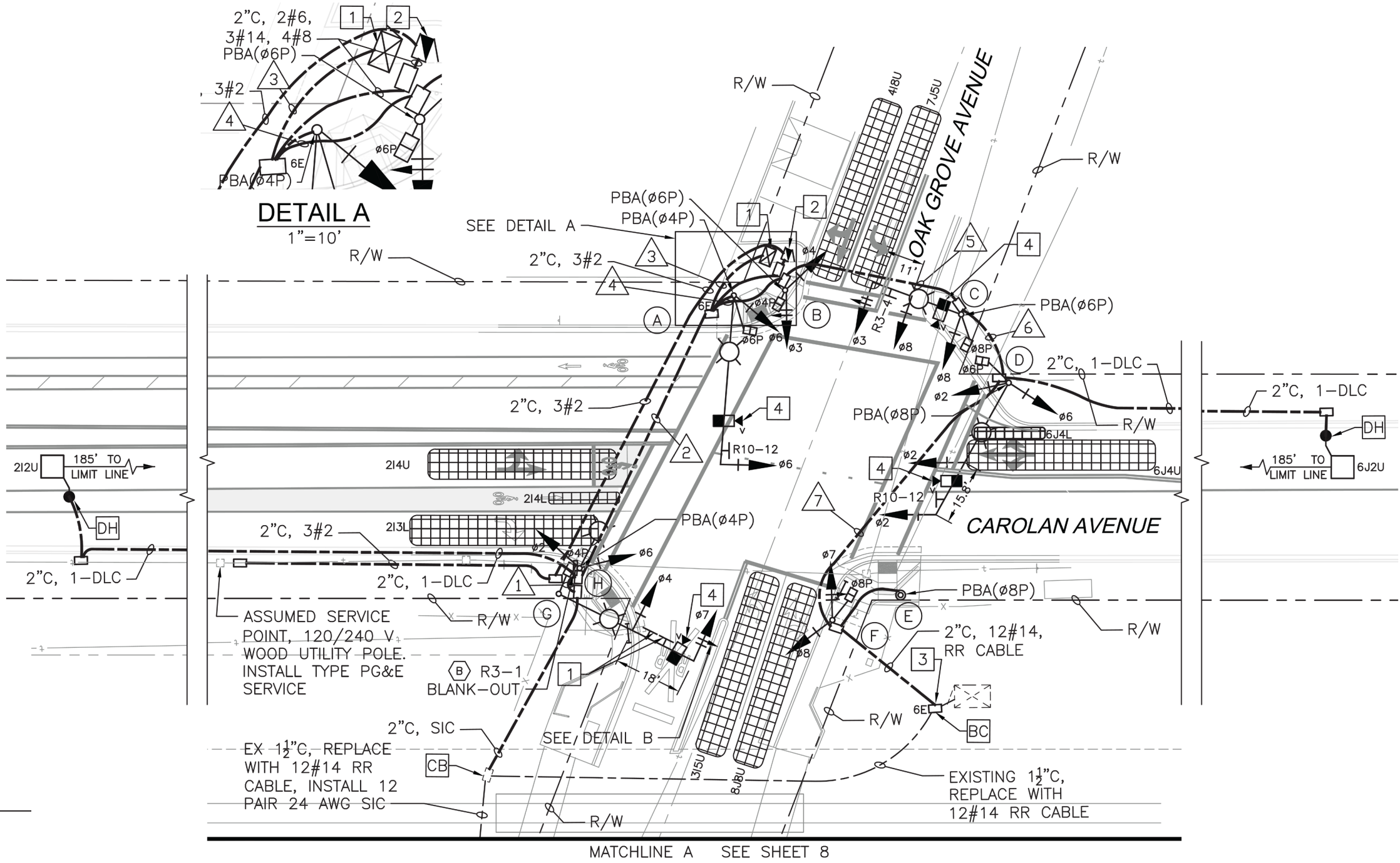
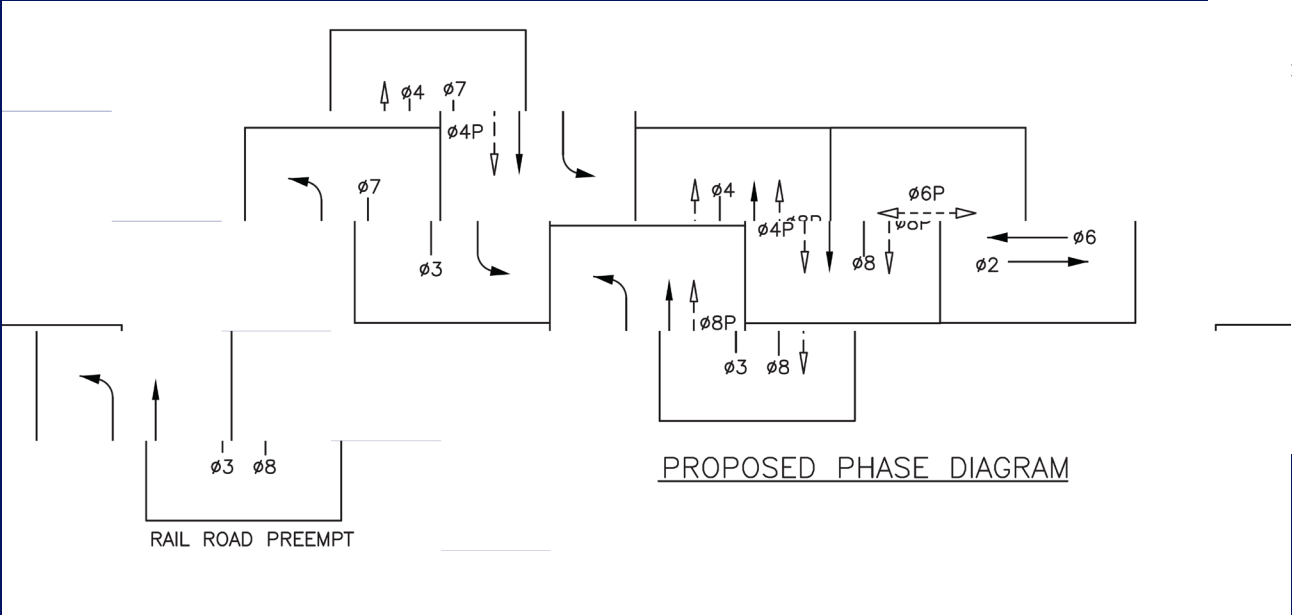
TRAFFIC ANALYSIS OPERATIONS RESULTS

Intersection	Existing				Protected Left Turns				Split Phasing			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Oak Grove/California Dr	34.5	C	26.8	C	31.8	C	24.9	C	51.6	D	31.9	C
2. Oak Grove/Carolan Ave	39.2	E*	15.7	C*	26.1	C	23.0	C	42.0	D	29.7	C
<i>Total Network Delay</i>	<i>54.5</i>	<i>-</i>	<i>34.2</i>	<i>-</i>	<i>45.6</i>	<i>-</i>	<i>36.4</i>	<i>-</i>	<i>71.4</i>	<i>-</i>	<i>45.6</i>	<i>-</i>

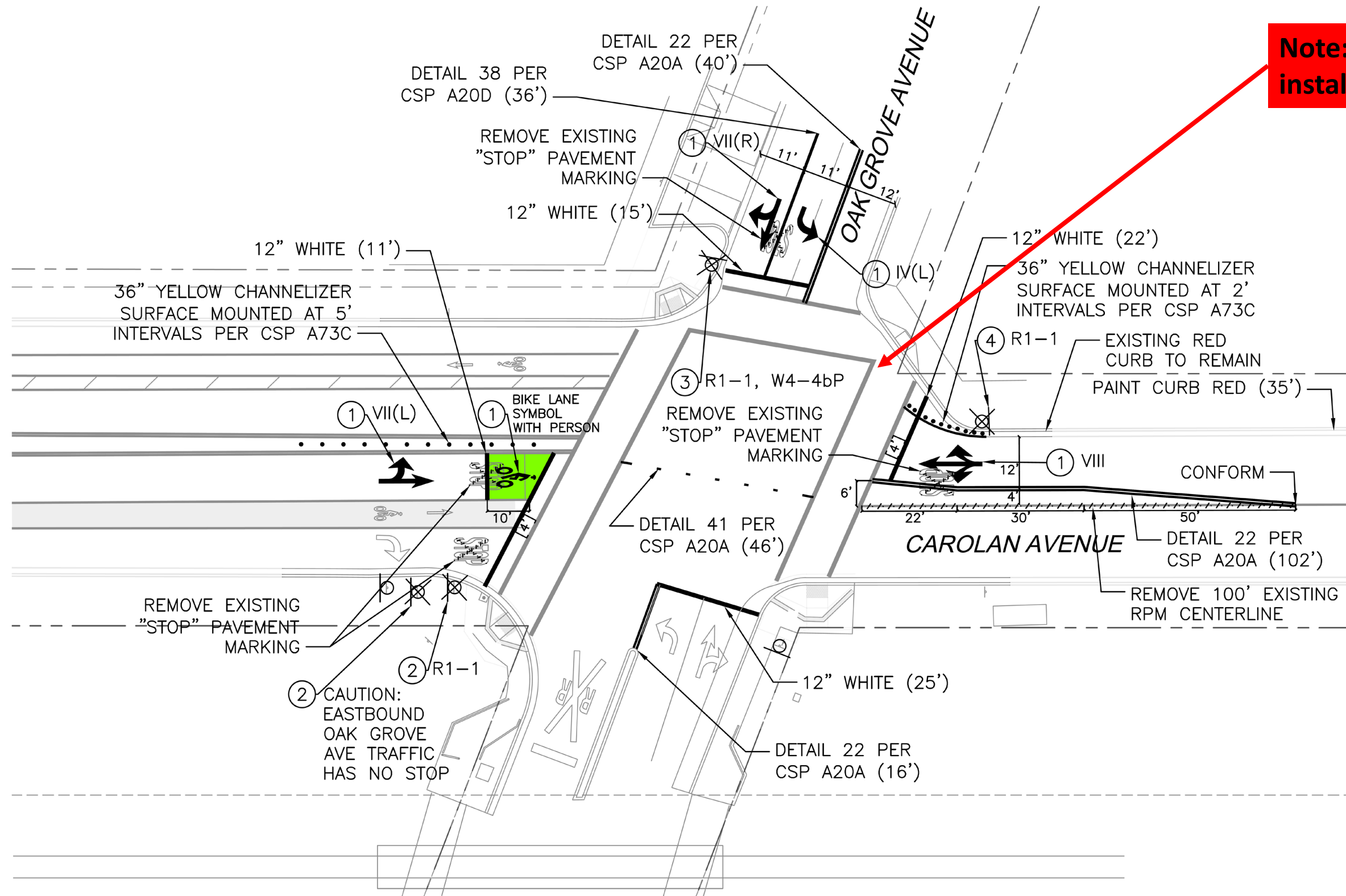
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

* = Oak Grove Ave/Carolan Ave is unsignalized under existing conditions, so delay thresholds for Level of Service are different than for signalized intersections

OAK GROVE/CAROLAN TRAFFIC SIGNAL LAYOUT

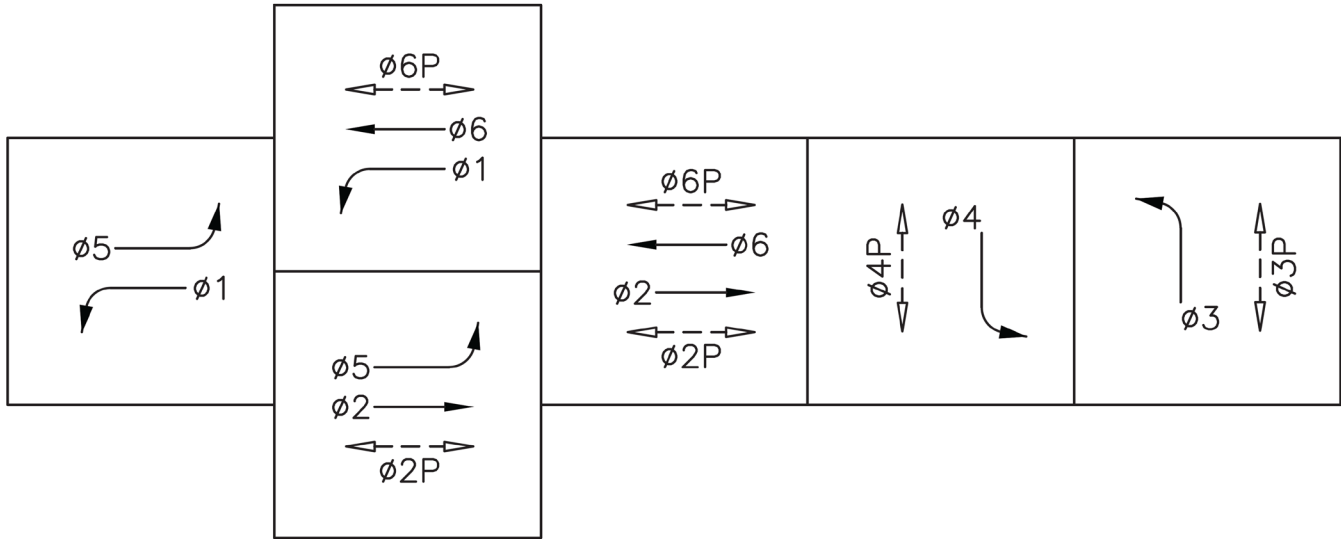


OAK GROVE/CAROLAN STRIPING LAYOUT (REFERENCE)

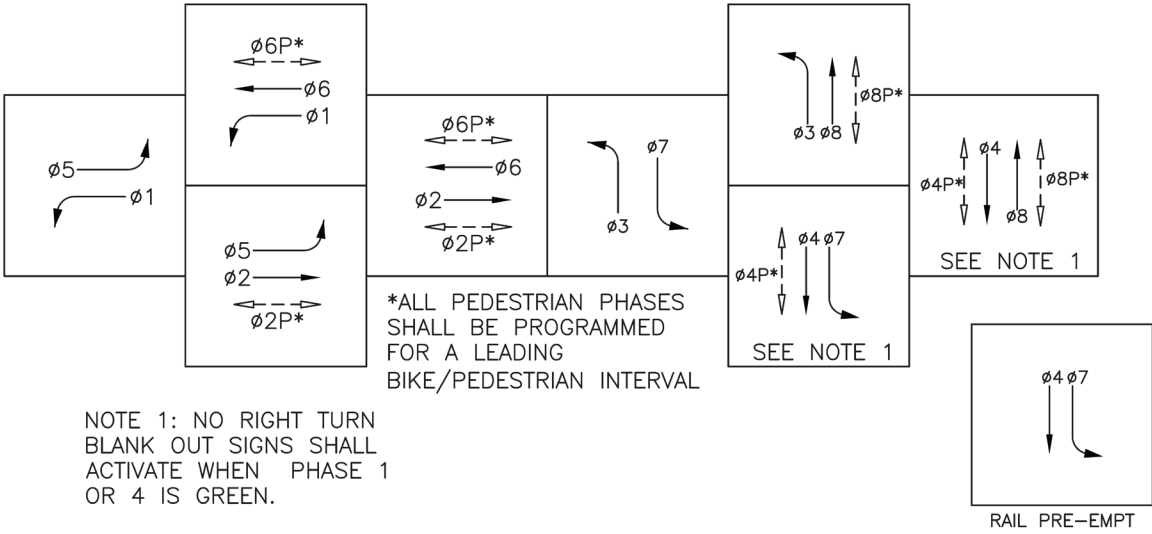


Note: Buildout to be installed

OAK GROVE/CALIFORNIA TRAFFIC SIGNAL LAYOUT

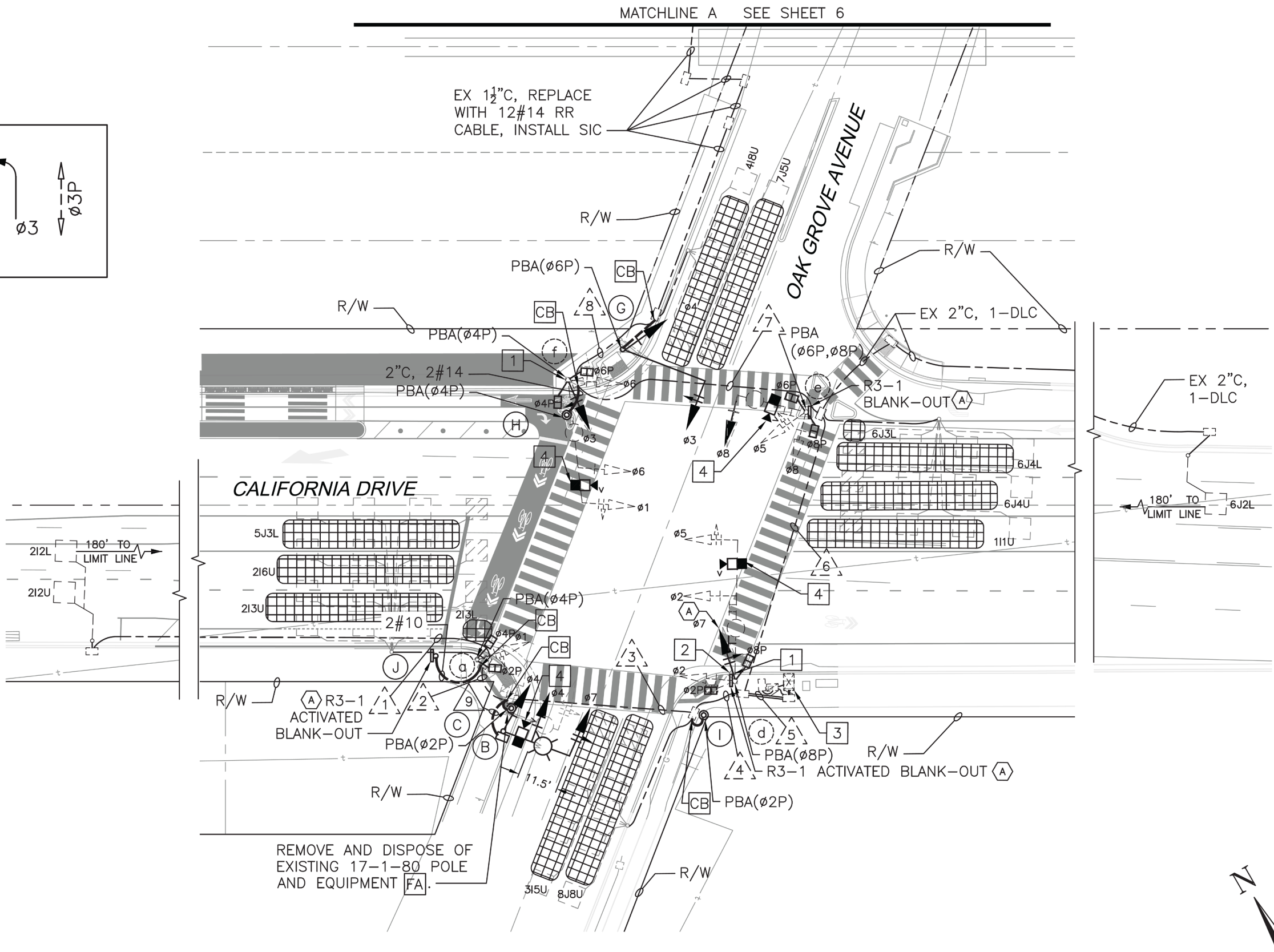


EXISTING PHASE DIAGRAM



NOTE 1: NO RIGHT TURN
BLANK OUT SIGNS SHALL
ACTIVATE WHEN PHASE 1
OR 4 IS GREEN.

PROPOSED PHASE DIAGRAM



PROJECT BENEFITS

- Improves right-of-way assignment at Oak Grove/Carolan
- Coordination between the traffic signals at Oak Grove/Carolan and Oak Grove/California
- Improves pedestrian safety by removing pedestrian and vehicular conflicts at Oak Grove/Carolan crosswalks
- Pedestrian improvements at both intersections; including ramps, bulb out, and pedestrian countdown timers



NEXT STEPS

- Continued design coordination with both Caltrain and the California Public Utilities Commission (CPUC)
- Negotiate Cost Sharing Agreement with Caltrain for the Traffic Signal Installation (Peninsula Corridor Electrification Project (PCEP) mitigation report.)
- Finalize the Project Plans and Specifications, and Construction Documents
- Advertise for construction bids
- Award Construction contract and begin construction
- This presentation will be also shown at the August 18th City Council meeting





**QUESTIONS &
FEEDBACK**