

San Jose Smart Intersections

City of San José

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San Jose Smart Intersections-Air Quality Conformity Task Force

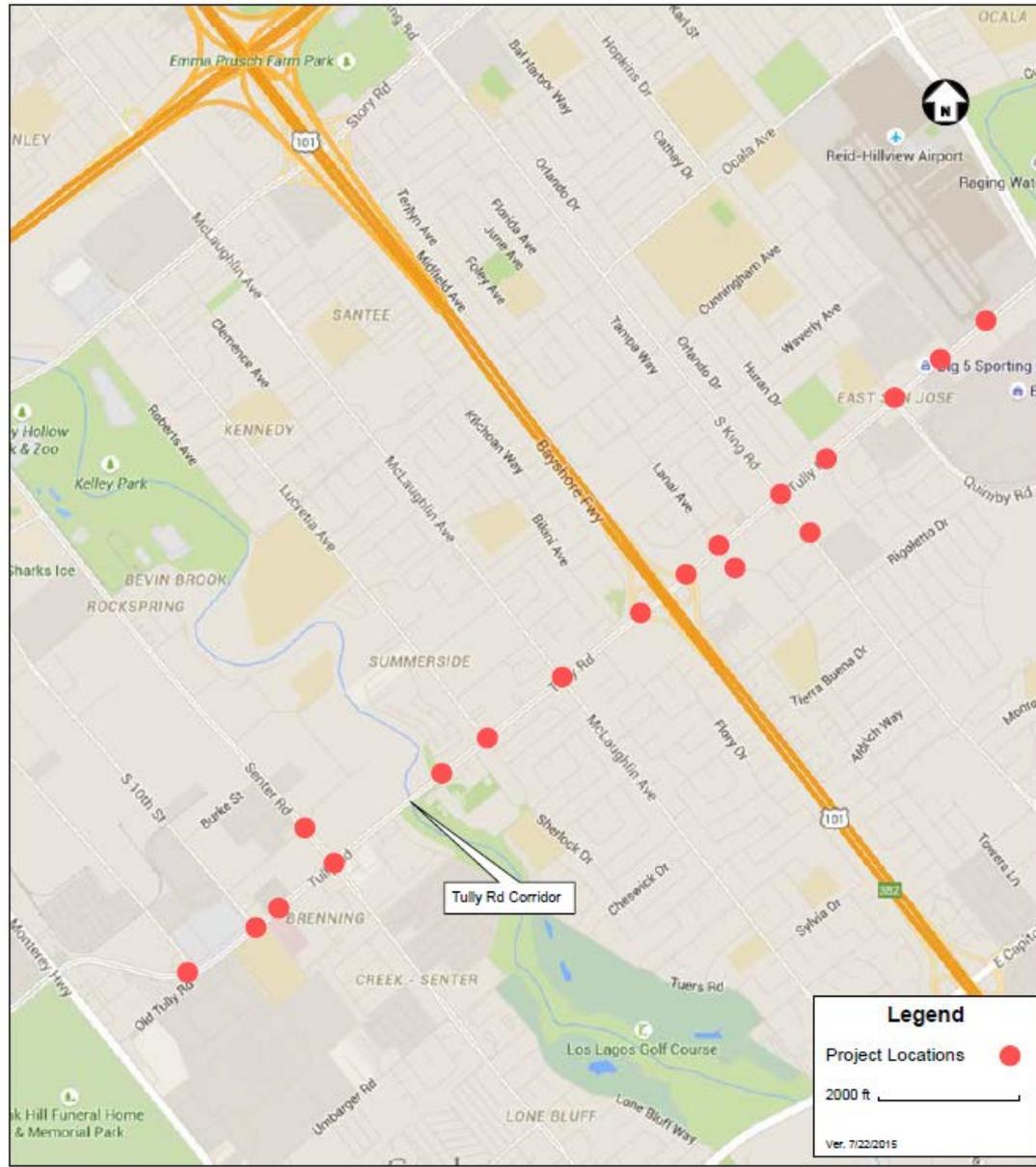


Adaptive Traffic Signal Control

- Project will install an adaptive traffic signal control (ATSC) system at 35 signalized intersections along two corridors, Tully Road and Saratoga Avenue, in San Jose.
- Utilizing real-time vehicle detection information, proposed ATSC system will adjust signal timings on a cycle-by-cycle basis in accordance with fluctuations in traffic demand. The existing signal controller will remain in place and the project will leverage the existing traffic signal communications network.
- Project will improve travel time reliability, reduce congestion and improve air quality through a more efficient roadway operation all hours of the day.
- This project will not create any additional trips by diesel-powered vehicles.
- No bus stops will be relocated or added.
- Construction impacts are limited to temporary lane closures required by City forces to install vehicle detection equipment on traffic signal poles. No other impacts are anticipated.

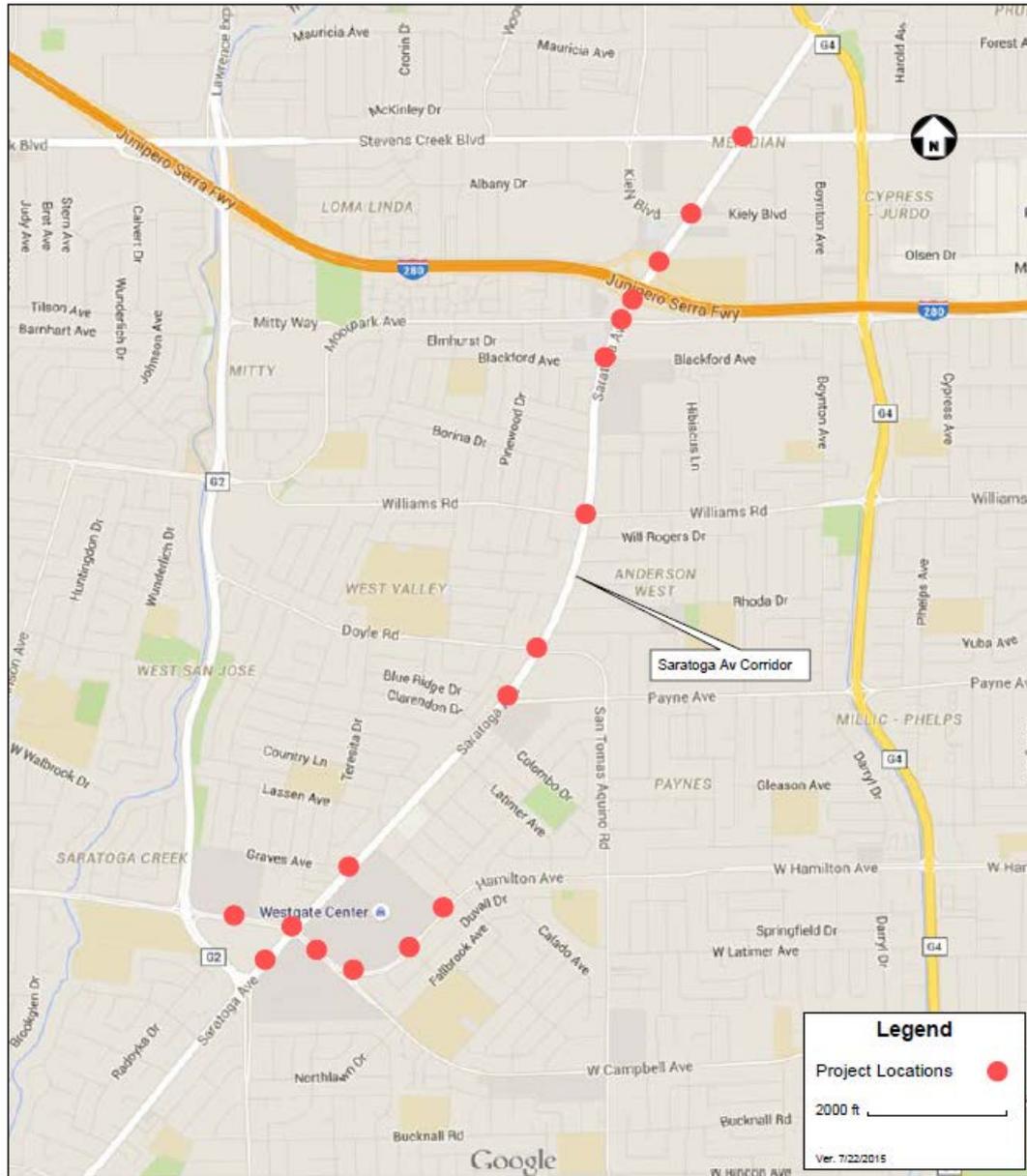
OBAG Smart Intersections Project

Location Map – Tully Rd Corridor



OBAG Smart Intersections Project

Location Map – Saratoga Av Corridor

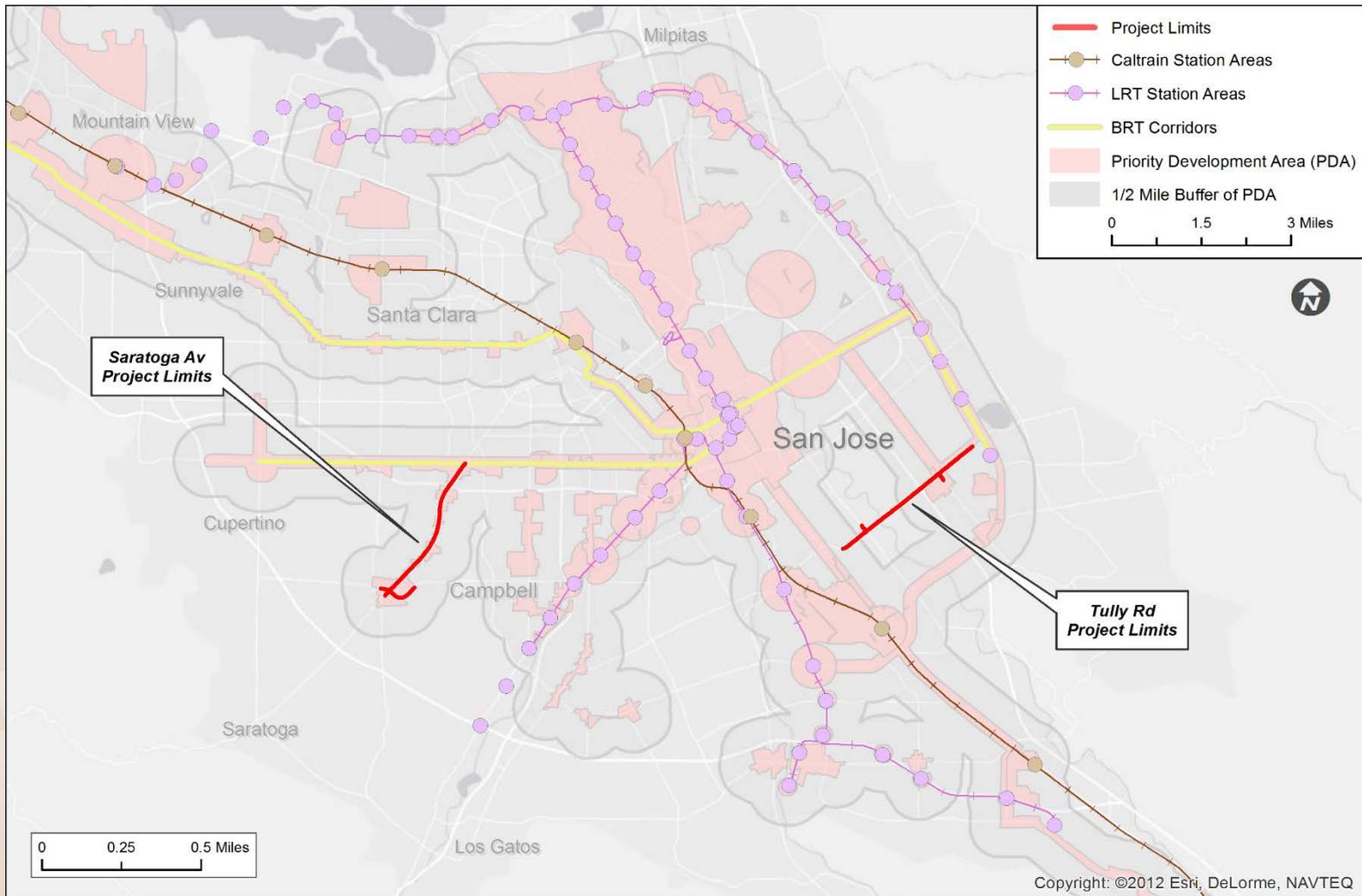


Project Purpose

- These two project corridors are home to a concentration of businesses, commercial and shopping districts. The two areas' mix of intersection geometries, proximity to freeway ramps and interchanges, high density and mixed-use land development create dynamic traffic conditions that cannot be effectively addressed by conventional pre-programmed, time-of-day, signal timing schedules. Traffic volume peaks not only during commute hours, but also weekend periods. These corridors also experience high seasonal traffic volume during holidays and special events.
- The ATSC will be deployed to improve travel time reliability, reduce congestion and improve air quality through a more efficient roadway operation all hours of the day. The project will achieve these targets by specifically reducing the travel times, delays and the number of stops at signalized intersections. Conventional signal systems, in particular traditional time-of-day (TOD) signal timing plans, do not accommodate variable and unpredictable traffic demands. This often results in increased customer complaint, frustrated drivers, excess fuel consumption, increased delay, and degraded safety.

Traffic Generators/ Methodology for Analysis

- The two corridors are fronted by high concentration of commercial and retail businesses, major shopping, entertainment and community centers, and high-density housing. The proposed project has a net zero effect on diesel traffic.
- This project is focused on improving the operations of traffic signals along two of San Jose's most congested corridors. It aims to provide more efficient, real-time traffic signal operations over the traditional, fixed, time-of-day signal timing. It involves no new or expanded highways and no change in truck volumes on the affected streets within the project limits or any other streets in the area. As shown below, the implementation of this project will produce a net zero effect on the cross street ADT. Specifically, this project will improve travel time reliability, reduce congestion and improve air quality. As such, the criteria for a project of air quality concern should not apply to this project.



SAN JOSE SMART INTERSECTIONS PROGRAM
PRIORITY DEVELOPMENT AREA (PDA) MAP

CITY OF SAN JOSE
DEPARTMENT OF TRANSPORTATION
FEBRUARY 2013

Opening Year

Installation of the proposed adaptive traffic signal control system is expected to occur in Fiscal Year 2015-16. ADT at critical intersections mostly affected by this project is summarized below:

The ADT, truck ADT and % trucks listed below are a representative sample of the 35 intersections within the project limits. (The ADTs are also representative of AADTs.) Truck (or heavy vehicle) traffic on Tully Rd and Saratoga Av is limited to local deliveries, school buses, public utility vehicles, and refuse collection vehicles. Truck traffic represents up to 2% of the ADT on these streets.

| Intersection | Build ADT | No Build ADT | Truck ADT | % Trucks |
|------------------|-----------|--------------|-----------|----------|
| King/Tully | 22,600 | 22,615 | 339 | 1.5 |
| McLaughlin/Tully | 25,600 | 25,627 | 410 | 1.6 |
| Lucretia/Tully | 12,100 | 12,127 | 242 | 2.0 |
| Doyle/Saratoga | 11,100 | 11,085 | 232 | 2.1 |
| Kiely/Saratoga | 13,100 | 13,100 | 314 | 2.4 |

No change in the ADT, truck percentage or truck ADT is expected at any of these intersections as a result of the proposed project (Build scenario).

RTP Horizon Year/Design Year

Below ADT, Truck ADT and % Trucks are near term forecasts based on approved development and proposed changes to the local transportation network. % Trucks is expected to remain unchanged from current levels. City's General Plan 2040 is currently under development so a 2040 forecast is currently not available.

| Intersection | Build ADT | No Build ADT | Truck ADT | % Trucks |
|------------------|-----------|--------------|-----------|----------|
| King/Tully | 25,600 | 25,600 | 384 | 1.5 |
| McLaughlin/Tully | 27,300 | 27,267 | 436 | 1.6 |
| Lucretia/Tully | 12,700 | 12,721 | 254 | 2.0 |
| Dolye/Saratoga | 11,300 | 11,334 | 238 | 2.1 |
| Kiely/Saratoga | 13,300 | 13,303 | 319 | 2.4 |

No change in the near term ADT, truck percentage or truck ADT is expected at any of these intersections as a result of the proposed project (Build scenario).

Not a Project of Air Quality Concern

- *New or expanded highway projects with significant number/increase in diesel vehicles?*
 - Not a new or expanded highway project
 - This is a traffic synchronization project that will improve signal operations.
 - No anticipated change in traffic volumes, number of diesel vehicles, or diesel vehicle percentage of traffic inside or outside of the project area
- *Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?*
 - Both project corridors experience light diesel truck traffic (possibly limited to 2% of daily traffic volumes).
 - Project is expected to maintain or improve LOS levels at all signalized intersections located within the project corridors.
 - This project does not change land use and will not lead to an increase in traffic volumes or an increase in diesel vehicle number or percentage of daily traffic volumes inside or outside of the project area.
- *Affects areas identified in PM₁₀ or PM_{2.5} implementation plan as site of violation?*
 - The project does not affect areas identified in PM₁₀ or PM_{2.5} implementation plan as site of violation. Furthermore, the project area is not identified in the plan as an area of possible violation

Summary

This proposed project aims to provide more efficient traffic signal operation along two of the most congested corridors in San Jose, connecting major commute routes during peak periods and providing access to major commercial, business, and entertainment hubs in the surrounding areas. Its primary goals are to improve travel time reliability, reduce congestion, and reduce emissions of hydrocarbons and carbon monoxide due to the reduction in stops and delays. Therefore, no negative environmental or air quality impacts are anticipated as a result of this project.

Based on the project information provided in this report, we believe that it should not be considered a project of air quality concern and, therefore, should not be required to complete PM2.5 hot-spot analysis for project-level conformity determination.