Traffic Signal Infrastructure

Transportation Division

CITY OF CUPERTINO

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Existing Infrastructure

- City operates and maintains **60 Traffic Signals**
  - **8 Traffic Signals** owned by Caltrans
- Traffic Signal Vehicle Detection
  - Vehicle Detection Loops
    - 39 Locations
  - Video Detection Cameras
    - 14 Locations
  - Both Loop and Video Detection
    - 7 Locations

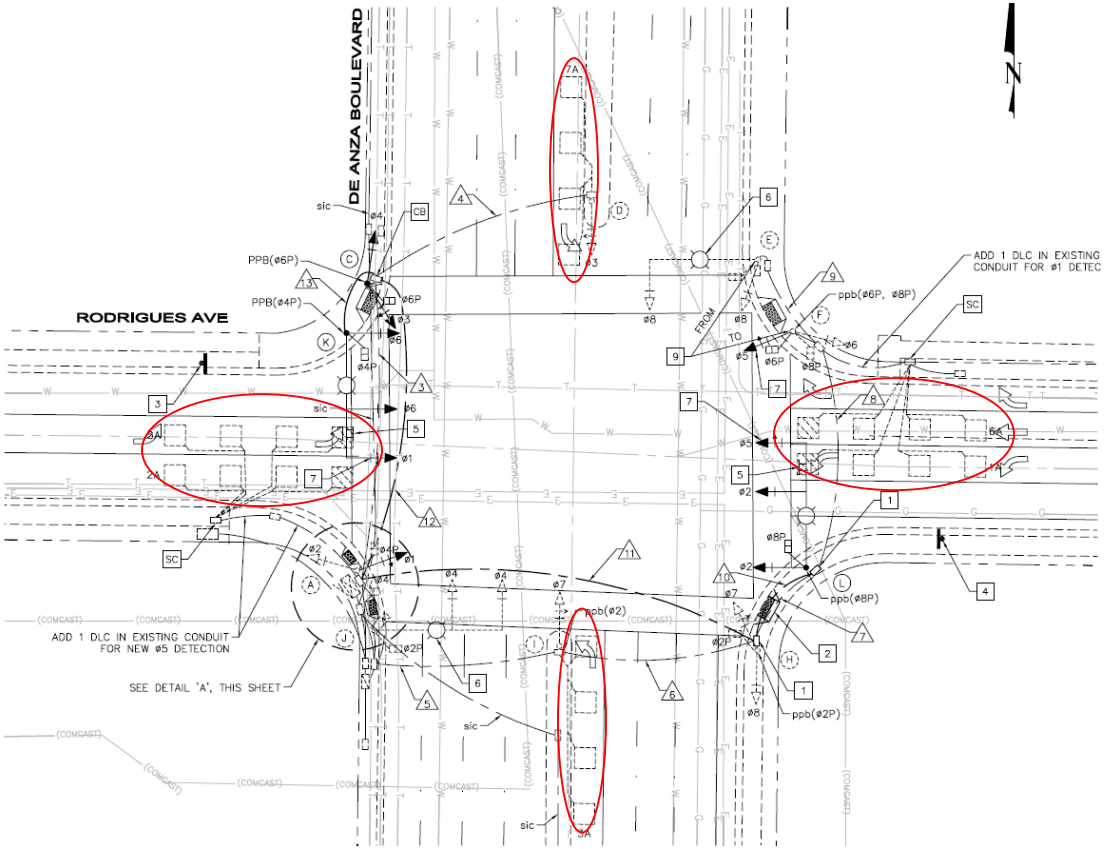
- Franco Traffic Operations Center
  - **52 Traffic signals** communicate back / forth via Fiber Optic Network
  - Program detects and reports signal status, malfunctions, and failures in real time
  - Able to test and adjust traffic signal timing parameters

Vehicle Detection Loops

- Detect vehicles passing or arriving at a certain point in the roadway

- Pavement invasive
- Can provide basic traffic parameters (e.g. volume, speed, gap, etc.)
    - City currently does not have this software capability

Vehicle Detection Loops



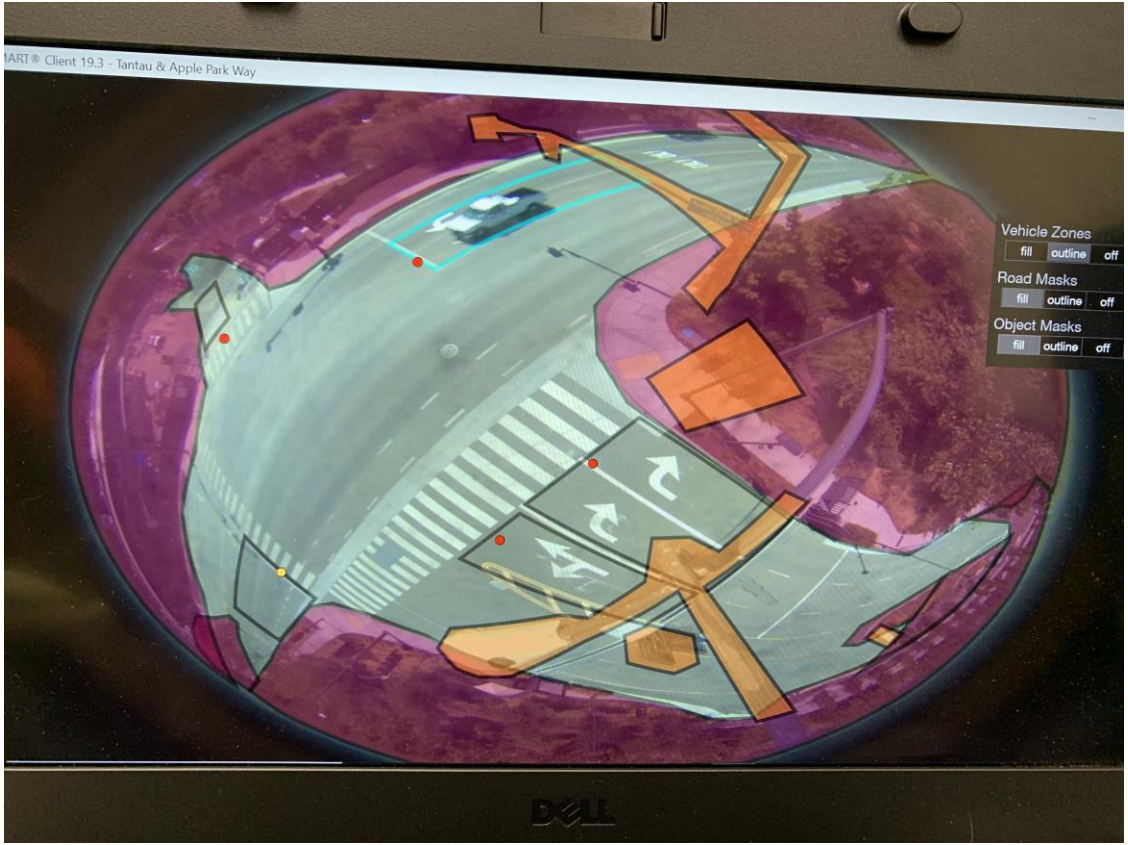
Video Detection Cameras

- *Video cameras detect traffic, and the images are digitized, processed and converted into traffic data*

- Non-pavement invasive
- Able to monitor and modify multiple detection zones
- Performance can be affected by weather
- Can provide basic traffic parameters
    - City currently does not have this software function

Grid Smart

Grid Smart


ART® Client 19.3 - Tantau & Apple Park Way
Vehicle Zones
fill
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Road Masks
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Object Masks
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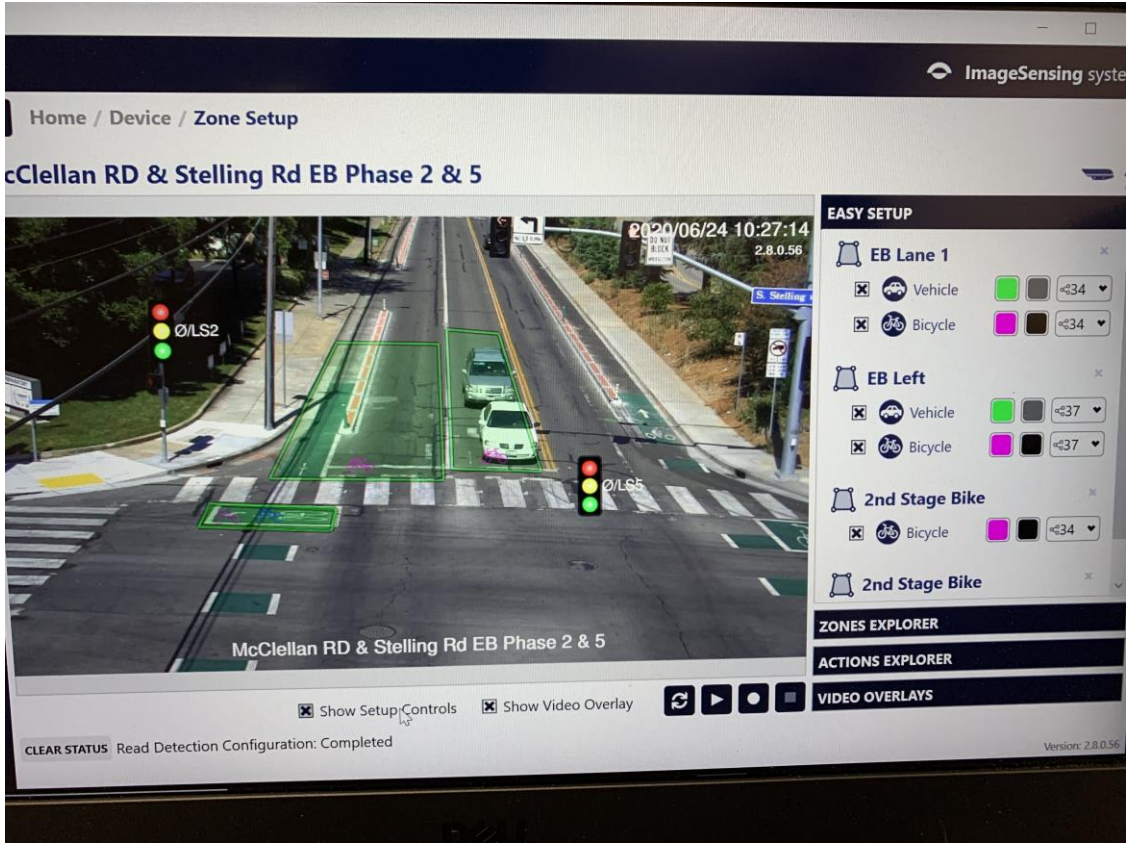
DELL

Econolite, Iteris, and Traficon



Adaptive Traffic Control system

- Traffic management strategy in which traffic signal timing changes, or adapts, based on actual traffic demand

- ATCS requires overhaul of existing traffic hardware and software
- City currently does not have ATCS in place

Thank You