How a smaller agency can be a leader to a smarter region.

Zach Bosch, City of Rancho Cordova
1. Intro

→ Timeline

→ Stakeholders

→ Project Details

→ Next Steps
Leading Sacramento Region:

- Center to Center integration
- Information sharing
- Regional ITS infrastructure
How do you bring your City into the next era of traffic management?
Through communication!
(and lots of patience)
The City of Rancho Cordova installed

- Over 20 miles of 48 & 96 Strand SMFO cable
- 83 Cobalt controllers
- 63 CCTV cameras
- 3 bluetooth travel time sensors, and
- Constructed a new Traffic Management Center in City Hall and the Police Dept HQ.
Planned Future Growth

- Master planned communities Rio Del Oro, Sunridge, & The Ranch
- 20,000+ homes planned
- Traffic Management will be a high priority.

Tip
Plan for future needs, not just current infrastructure. Don't cut corners on cost.
The City of Rancho Cordova and County of Sacramento have 21 shared intersections.

Tip
Look at existing agreements to update for new ITS elements.
2. Stakeholders

➔ Who

➔ Why
6 Highway 50 on-ramps/off-ramps within Rancho Cordova operated and maintained by County of Sacramento through cooperative agreement.

Tip
Build strong relationships with long standing personal on project.
County of Sacramento

- Operates County TMC 12 hours/day.
- Maintains Sacramento County’s approximately 550 traffic signals & City of Rancho Cordova’s 83 traffic signals.
- Performs manual traffic flush during AM & PM peaks along Sunrise Blvd (83,000 ADT river crossing).
- Provided project’s longest standing personal throughout project.

Tip
Good record keeping needs to be detailed and thorough.
Equipment types, installation dates, maintenance records.
City of Rancho Cordova

- Limited staff dedicated to traffic operations.
- Project was a priority to City Council.
- Other stakeholders include:
  - FHWA
  - Rancho Police Department
  - Sacramento Metro Fire
  - Construction Contractor (Pacific Excavation)
  - Econolite
  - Design Engineer (Kimley-Horn)
  - Resident Engineer (Salaber and Associates)

Tip
A strong resident engineer helps guide the project to a successful conclusion managing multiple stakeholders by having a single point of contact.
Question

→ What other challenges other have you seen or dealt with when installing ITS infrastructure?
3. Project Details

→ 3 Major components of project

◆ Hardware

◆ Software

◆ IT
Trenching conduit along arterials bridged the gaps in the communication network.

Tip
Coordinate with paving operations.
Plan for future development.
Trench in bike lane if possible.
Installation of 20 miles of 48 & 96 strand SM FO

- Plenty of capacity for anticipated future use with 96 strand.
- Potential to lease out fiber strands to communications companies or provide municipal broadband service.
- Redundancy created with rings in network.

Tip

When trenching, add additional conduit if possible. Conduit is cheap and allows for future fiber pulls at relative low cost.
Installation of CCTVs at all signalized intersections.

- Establish retention policy prior to installation and setup.
- Coordinate and communicate with Police Dept, Sheriffs Dept, etc.
- Consider 2 CCTVs for larger intersections to provide more coverage.

**Tip**

Train staff how to troubleshoot, program, diagnosis IT related issues prior to installation.
Cabinet Upgrades

- Larger space for more racks
- Alerts and Alarms when cabinet door is opened.
- 48 Channel inputs/16 Channel outputs

Tip

If performing night work
- Use Friday night if possible for major corridors, giving the team Saturday and Sunday to troubleshoot any issues prior to Monday morning commute.
Controller Upgrades

Econolite Cobalt Controller

- What does it mean for future?
- Linux, open architecture real-time multi-tasking operating system.
- Designed to support the Connected Vehicle Co-Processor (CVCP) module.
- Fully supports Signal Phase and Timing (SPaT)/MAP data messaging capabilities to provide a fundamental V2I component for connected vehicle applications.
Tip
Inform elected officials what the new systems can and cannot do.
Build a relationship with your IT department.

Server Room & Traffic Management Center

- Transformed existing conference room into Traffic Management Center
- Virtualized software to be accessible from any workstation or connected laptop.
- Terabytes of storage for video retention and MOE data.
Tip

Set up passive alerts system for important notifications for proactive and reactive responses to issues.

Centracs Central System

- System that brings all the data to one central program.
  - CCTV video, Alerts and Alarms, CMS messages, Travel time, Traffic Responsive signal timing SPaT.
- Remotely stop time from within software
  - When combined with CCTV’s, powerful tool for incident response, traffic management, etc.
- Signal Reports
4. What’s next?

➔ City

➔ Regionally
Planning for future

All future development will connect to newly installed fiber backbone.

Overhaul of detection planned with future city funding.

Automated Traffic Signal Performance Measures

Regional plan for multi-jurisdictional TMC (Caltrans, County of Sacramento, Rancho Cordova, Folsom, City of Sacramento, etc)

Highway 50 ICM project in design

Future technologies (AV/CV, DSRC, 5G)
5. Closing

➔ Overview

➔ Questions?
Good luck!

City of Rancho Cordova

Website for Current Projects -

www.cityofranchocordova.org/government/public-works/plans-and-projects

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Kimley-Horn
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