

An aerial photograph showing a two-lane asphalt road that curves along the edge of a deep blue lake. The road is bordered by a dense forest of green trees. A single white car is visible on the road, moving away from the viewer. The water of the lake is calm, reflecting the sky and the surrounding greenery.

# Streamlining Traffic Management

**with Regional ICM Tools**

Steve Mager, Q-Free







ALLOW ME TO INTRODUCE MYSELF

# Hi, I'm Steve Mager



**VP of Distributor Management, Q-Free**

Playing in Traffic for 13+ Years

Vino Virtuoso of fine Oregon Pinot Noir

Elementary Basketball Coach

Urban Farmer

## Location

Wilsonville, OR

## Contact

[steve.mager@q-free.com](mailto:steve.mager@q-free.com)

(503) 577-8940



Join me on  
the socials!



# About Us

We go to work everyday hoping to do two things; improve mobility and make the world a little better.



Over 40 years  
of experience



Best of freeway &  
signal management



370 passionate  
traffic nerds



50+ successful  
reference markets

# Traffic ecosystem

MODERN ITS IS SMART BUT COMPLEX



**“Simply put, ICM is the integrated management of freeway, transit, arterial, and parking systems within a corridor using ITS technologies and innovative practices. It is the management of a corridor as a system rather than the management of the individual transportation networks (e.g., rail lines, bus routes, arterials, freeways) within a corridor, which is the current practice in the U.S.”**

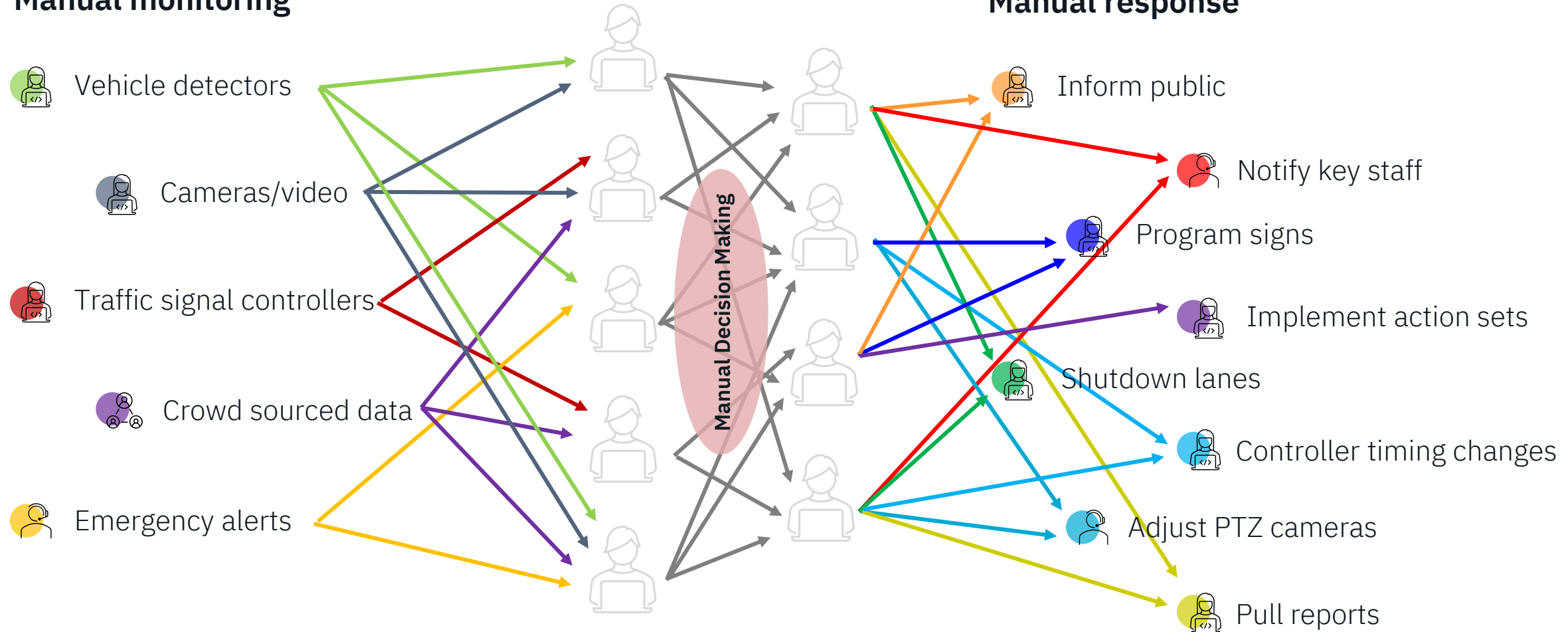
Federal Highway Administration (FHWA)

# From numerous disparate systems

MULTIPLE SYSTEMS ACROSS MULTIPLE SCREENS AND LOGINS

## Manual monitoring

## Manual response



# To one integrated system

UNIFY TRAFFIC OPERATIONS

## Monitoring

- Vehicle detectors
- Cameras/video
- Signal controllers
- Crowd sourced data
- Emergency alerts

## Holistic ATMS solution



Operator interaction

## Responses

- Inform public
- Notify key staff
- Program signs
- Implement action sets
- Controller timing changes
- Adjust PTZ cameras
- Dispatch vehicles
- Record incident details
- Create reports

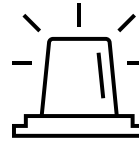


# Key Components

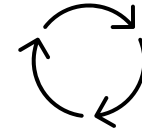
INTEGRATED CORRIDOR MANAGEMENT



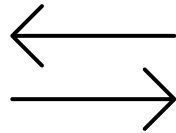
**Cross-agency collaboration**



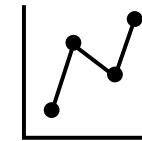
**Multi-modal incident response**



**Automation for efficiency  
and safety**



**Diverse device integrations**



**Multi-use data access**



# Benefits of a comprehensive solution



**Improved regional  
traffic flow**

**Better incident  
management**



**Implement holistic  
safety solutions**

# Coachella Valley CV Sync

REGIONAL SIGNAL SYNCHRONIZATION CASE STUDY



# CV Sync partners



**Coachella Valley  
Association of  
Governments**

Project lead



**Advantec Consulting  
Engineers**

Primary project  
consultant



**Crosstown  
Electrical & Data**

Prime electrical  
contractor



**CT West**

Southern California  
distributor,  
subcontractor

# Coachella Valley

9 incorporated cities

300,000–600,000 residents



SAN JACINTO  
MOUNTAINS



SANTA ROSA  
MOUNTAINS







# Host 200+ events and 14 million visitors every year

Palm Springs Village

Palm Springs Pride

Palm Springs Festival of Lights

Day Club

Splash House

McCormick's Exotic Car Auction

White Party

The Dinah Event & Music Festival

Cathedral City Hot Air Balloon Festival

Rancho Mirage Farmer's Market

Acrisure Arena & Music Concerts

Golf Cart Parade

Street Fair at College of the Desert

Palm Desert Market

El Paseo Cruise Night

El Paseo Art Walk

Glow in the Park

Ironman 70.3

BNP Paribas Tennis Tournament

Indian Wells Arts Festival

La Quinta Farmers Market

AMEX PGA Golf Tournament

Stagecoach Festival

Coachella Music & Art Festival

Framework

Tamale Festival

Riverside County Fair

National Date Festival

Indio Farmer's Market

Powertrip Rock n' Roll Festival

*...and more!*



# Why CVAG created a “smart region”



**Improve how residents  
and visitors travel**



**Manage traffic operations  
for major events**

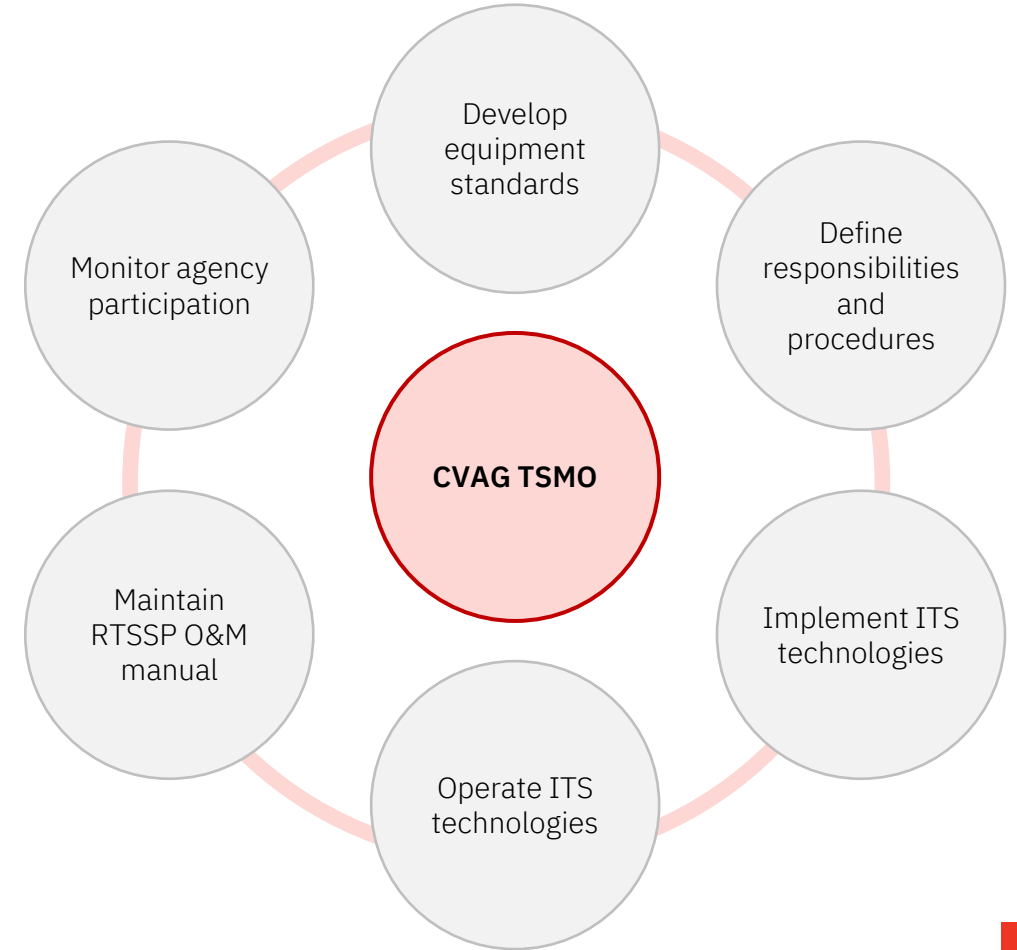


**Coordinate responses to  
natural disasters**

# Create a plan

## CVAG TSMO

- Develop equipment standards
- Define responsibilities and procedures for the region
- Implement inter-agency arterial, special event management, and ICM systems
- Operate inter-agency arterial and special event management systems
- Develop, oversee, manage, maintain and update regional traffic signal synchronization
- Engage partners on a regular basis





A photograph of a middle-aged man with grey hair, wearing a grey sweater with brown patches on the shoulders. He is resting his chin on his clasped hands, looking thoughtfully at a chessboard in the foreground. The chess pieces are wooden and dark, and the board is partially visible.

# Key Strategies

## **Regional event management**

Cities manage systems day today, while the RTMC manages regional events

## **Interoperability**

Open standards requirements force interoperability to prevent vendor lock-in

## **Multi-modal incident response**

Rules engine allows automated or recommended response on signs, signals, 511 system, notifications, and more

## **Data exchange**

Centralized data end-point allows secure access to data by 3<sup>rd</sup> party systems and future integrations



# Build a strong foundation

Create a robust communication network and IT policies to enable real-time communication between partner agencies and devices.



## Select solutions that play well with others

When choosing what solutions to use, demand interoperability and utilize out of the box solutions to eliminate the need for expensive, customized solutions.



Genetec™

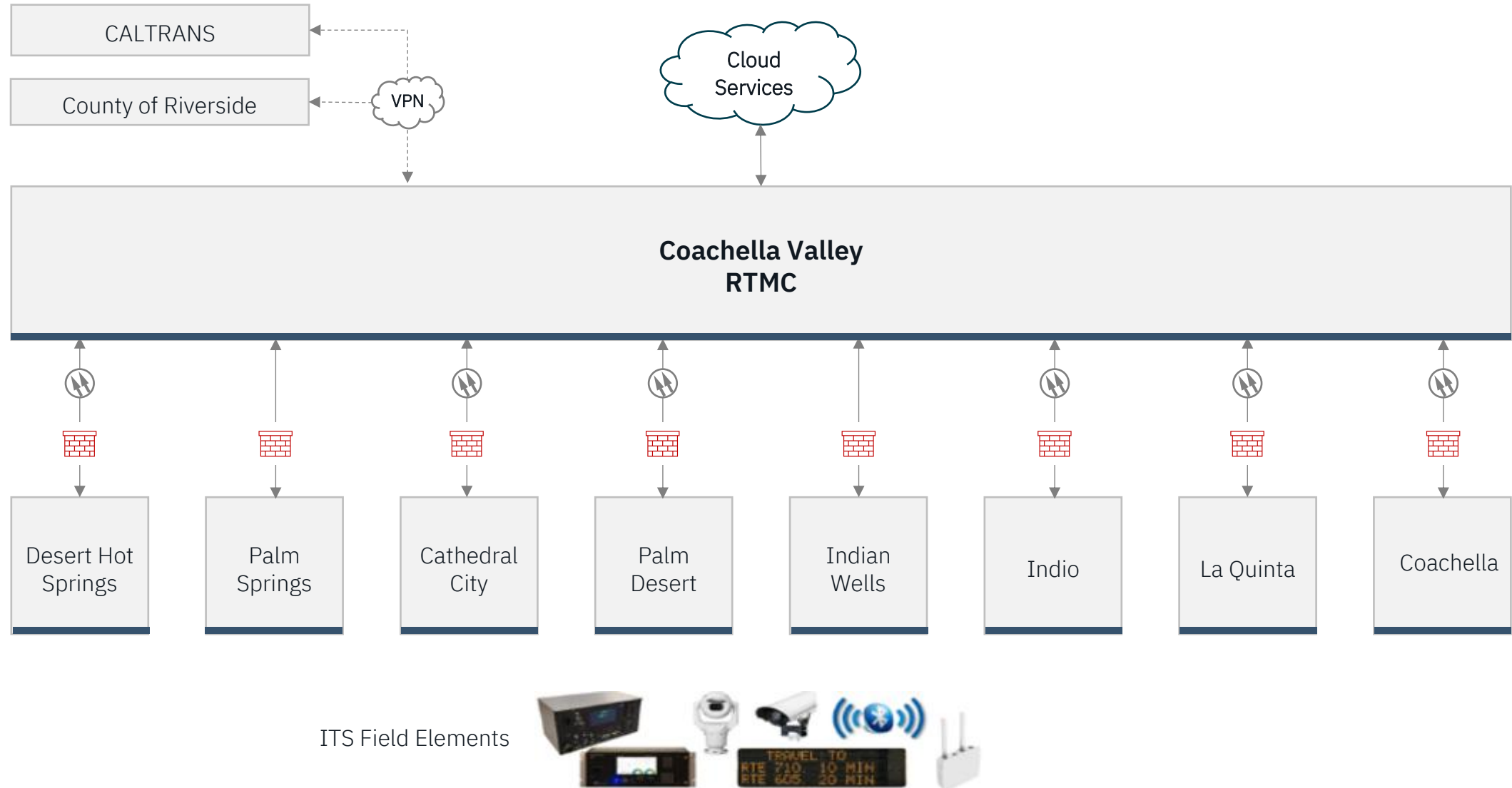
iteris®



DAKTRONICS®

YUNEX  
TRAFFIC

# Bring it all together





# Centrally view & manage all devices



Events workspace

Camera - 12TH ST S AT S CLARK ST  
12TH ST S AT S CLARK ST

12TH ST S AT S CLARK ST

VDOT FREE TRAFFIC INFO | 511virginia.org

BrambletonRampMidtownApproach

KINETIC MOBILITY

Event Detection

CREATE EVENT IGNORE

Search

<input type="checkbox"/>	Name	Location	Source	Creation Time	Last Updated	Confidence	Severity	Associated
<input type="checkbox"/>	SHOULDER HAZARD - CAR STOPPED	I-80 W	Waze	06/05/2024 10:48:40	00:02	●●○○○○○○○○	UNKNOWN	✖
<input type="checkbox"/>	SHOULDER HAZARD - CAR STOPPED	I-80 W	Waze	06/05/2024 10:43:35	00:07	●●○○○○○○○○	UNKNOWN	✖
<input type="checkbox"/>	SHOULDER HAZARD - CAR STOPPED	I-80 W	Waze	06/05/2024 10:34:26	00:16	●●○○○○○○○○	UNKNOWN	✖
<input type="checkbox"/>	SHOULDER HAZARD - CAR STOPPED	I-80 E	Waze	06/05/2024 10:32:24	00:16	●●○○○○○○○○	UNKNOWN	✖

22 of 22

Manage Signs

285N26100DMS1RHS : 0.1 mi N of S Downing St

CURRENT MESSAGE

EDIT NEW BLANK

Priority

20 - Test Messages

Expiration Time

Continuous

Data Received

06/05/2024 10:45:56

Location

US-285 North at 261

Display Time

31:17.6

QUEUE

MESSAGES

FONTS

MESSAGE LOG

ACTIVITY LOG

STATUS LOG

SETTINGS

DELETE

Search

<input type="checkbox"/>	Priority	Phase 1	Phase 2	Message Expires	Associations
<input type="checkbox"/>	20 - Test Messages	BUCKLE UP FOR SAFETY		Continuous	

Intersection - Real Time - Alameda @ Zuni

Coord

Alameda @ Zuni / Alameda @ Zuni

Device Api: MAXTIME\_2

DETAILS

LIVE DB STATUS

LIVE DB EDITOR

SCHEDULE COMMAND

STATUS

COMMENTS 1

Verified Event Types

Right Shoulder Closed

All Lanes Closed

Right Lanes Closed

Right Lane Closed

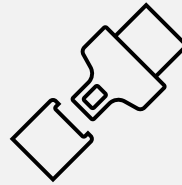


# Project benefits

An innovative approach to improving how residents and visitors travel in the Coachella Valley



**Public Health**



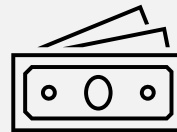
**Public Safety**



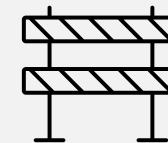
**Environmental  
Preservation**



**Shorter Commutes**



**Cost Savings**

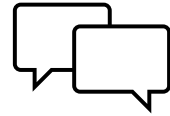


**Responsible Use of  
Public Funds**



# Key takeaways

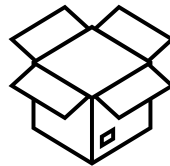
TO MAKE YOUR PROJECT A SUCCESS



**Have dialogues often and early**



**Make interoperability a requirement**



**Leverage out of the box solutions**



# Contact us

STEVE MAGER

VP of Distributor Management, Urban



[steve.mager@q-free.com](mailto:steve.mager@q-free.com)



(503) 577-8940



[www.q-free.com](http://www.q-free.com)

VISIT OUR PARTNERS  
AT BOOTH

35

Mid American Signal



@qfreeasa | #liveqfree