



THE
MOST
**INNOVATIVE
SOFTWARE
SOLUTIONS**
AVAILABLE

Kimley»»Horn

Expect More. Experience Better.

» KITS
Software Solutions.

SEAMLESS SOFTWARE INTEGRATION

Kimley-Horn

provides innovative technology combined with an experienced team of diverse professionals to support and maintain your system.

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»» **KITS**
Software Solutions.

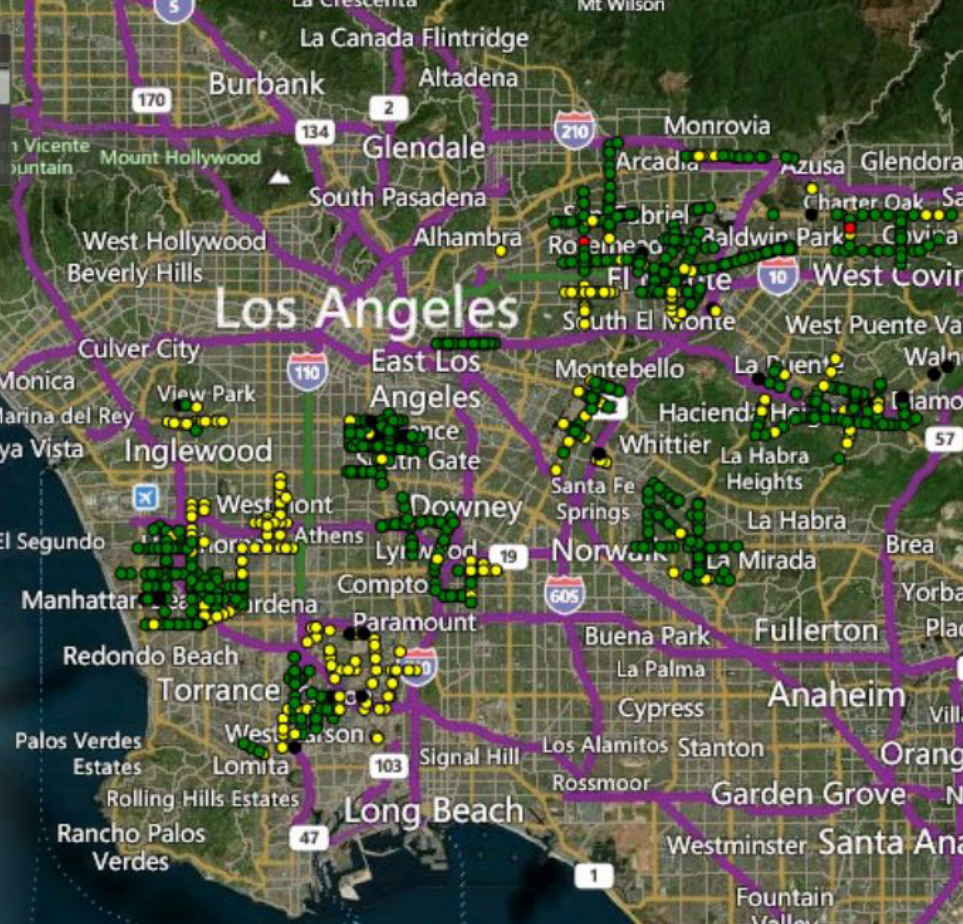
Committed to Personal Client Service

Kimley-Horn formulates the right technical solutions to fit your situation, based on a thorough understanding of your objectives and infrastructure.

Let us show you how the scalable architecture of KITS software can meet your needs.

“ They exceeded expectations. Through a lot of innovative ideas and solutions and tapping into different resources from across the Kimley-Horn family, we were able to figure a solution out and implement it on time before the Pan Am games. ”

Nelson Melendez, Engineering Technologist
City of Hamilton, Ontario, Canada



STATUS	OPERATION	PLAN	MASTER TIMER	LOCAL TIMER	TIME	CYCLE	OFFSET
Online	Nominal	3	2	113	16:50:02	150	115
						PREVIOUS	150
						CURRENT	38

Ring 1	1-WBT	2-EBT	3-SBL	4-NBT
Database	22	86	21	21
Previous	0	14	0	0
Current	17	0	21	0

Ring 2	6-WBT	5-EBT	7-NBL	8-SBT
Database	86	22	21	21
Previous	0	14	0	0
Current	17	0	21	0

STATUS	OPERATION	PLAN	MASTER TIMER	LOCAL TIMER	TIME	CYCLE	OFFSET
Online	Nominal	3	90	25	16:54:00	150	115
						PREVIOUS	150
						CURRENT	126

Ring 1	1-WBL	2-EBT	3-SBL	4-NBT
Database	22	86	21	21
Previous	19	110	21	0
Current	13	92	21	0

Ring 2	6-WBT	5-EBT	7-NBL	8-SBT
Database	86	22	21	21
Previous	107	22	21	0
Current	105	0	21	0

Comprehensive CCTV and Video Wall Management

Successful traffic operations are founded on real-time knowledge of system conditions. KITS provides comprehensive CCTV and video wall management—including equipment monitoring, failure alerts, diagnostic displays, and dynamic GIS maps—to monitor all of your system devices from one application. Let KITS monitor your transportation system for you.



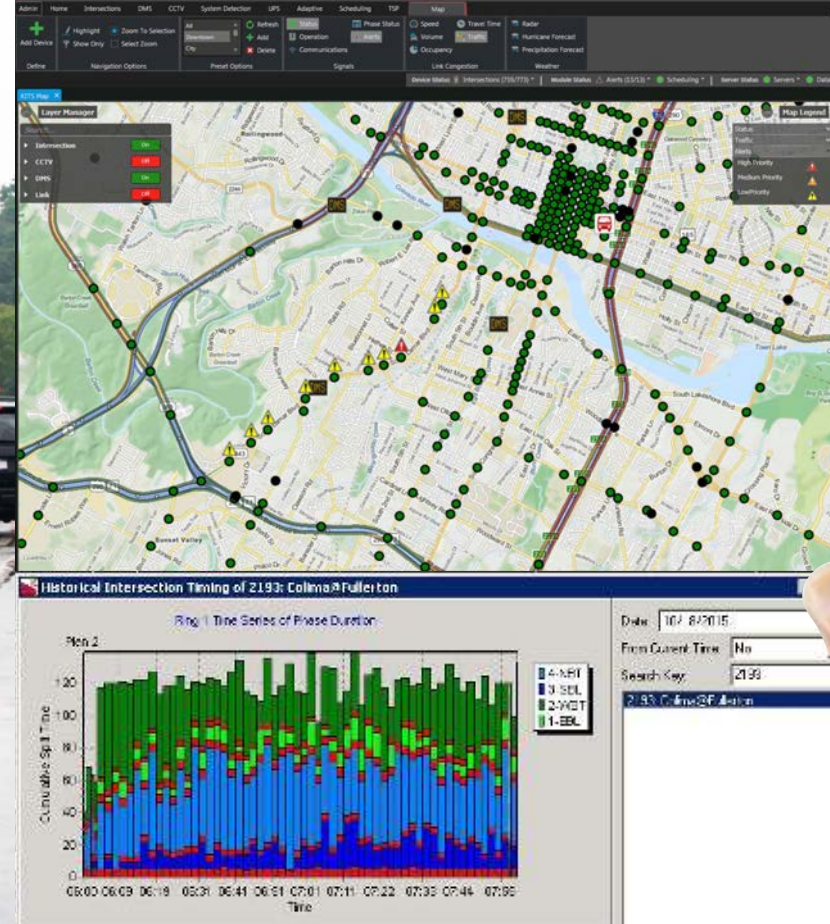
KITS Supports

- CCTV control
- Video wall control
- Camera tours
- Scheduled presets
- Real-time displays
- Dynamic GIS maps
- System detection
- Ramp metering
- Incident management
- DMS control
- RWIS integration
- Performance analysis
- Inventory management
- Bluetooth travel time
- Active traffic management



Configure KITS to **Notify you Before an Issue Becomes a Problem**

- Congestion maps
- Incident detection
- Controller phase monitoring
- Detector malfunction monitoring
- Automatic controller database verification
- Radar, video, and wireless sensor support



Let KITS **Notify you Anytime, Anywhere**



- Configurable priority-based alerts
- Audible alerts, pages, or emails
- Configurable scheduled reports
- Real-time displays

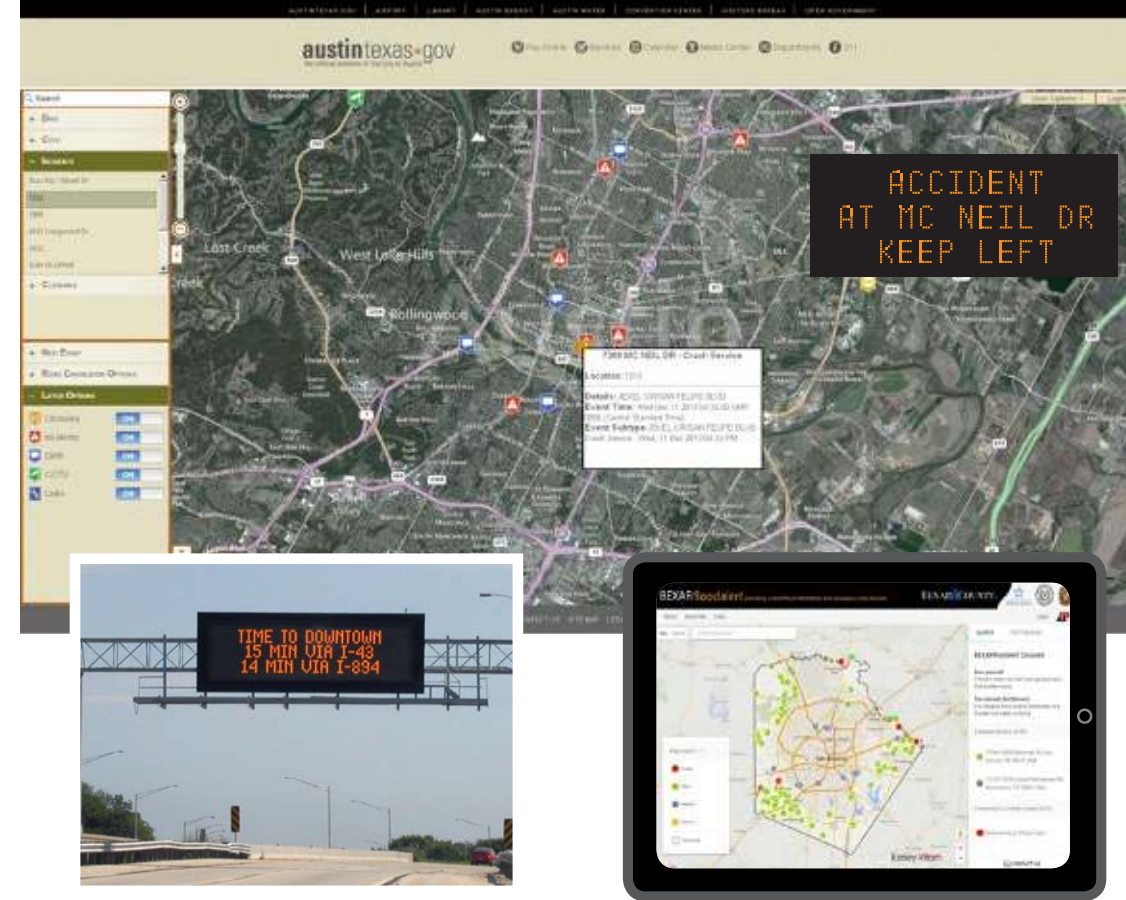
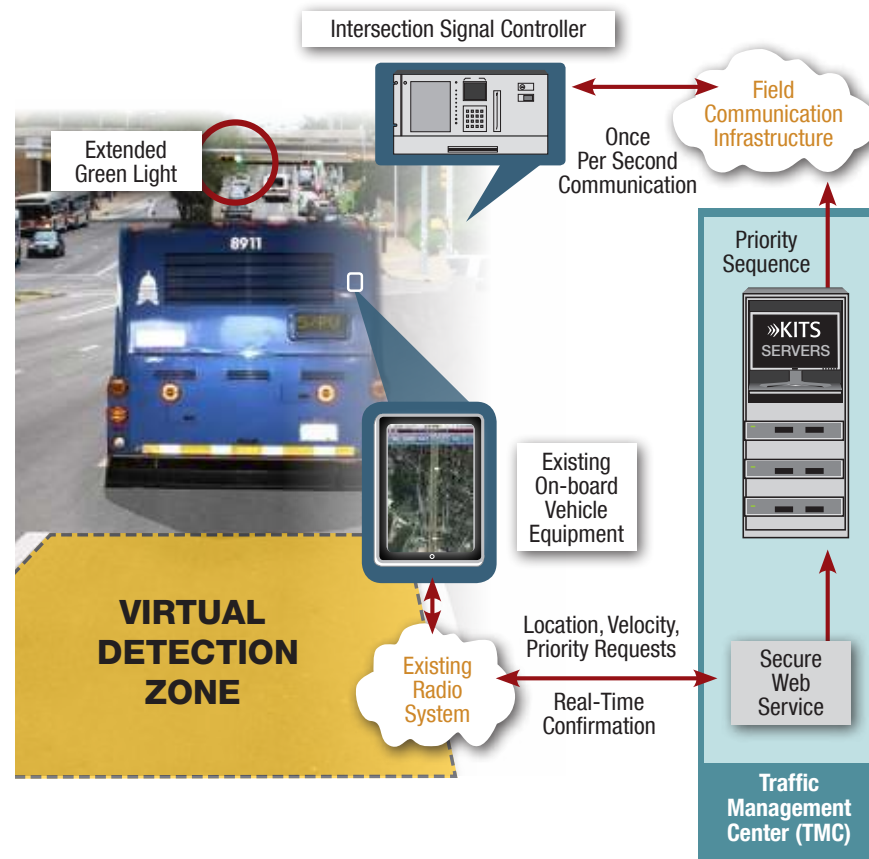
Manage Congestion and Respond to Incidents

Mitigate unusual traffic conditions created by traffic incidents, weather, or other causes with integrated CCTV, DMS, and control responses.

- Transit priority
- Preemption
- Traffic responsive
- Kadence adaptive
- Incident management

GPS-Based Bus Priority

- ✓ Increased adherence to schedule and headway
- ✓ Historical recording of performance metrics information
- ✓ Reduced maintenance costs by leveraging existing TMC communication infrastructure
- ✓ More effective than legacy methodology



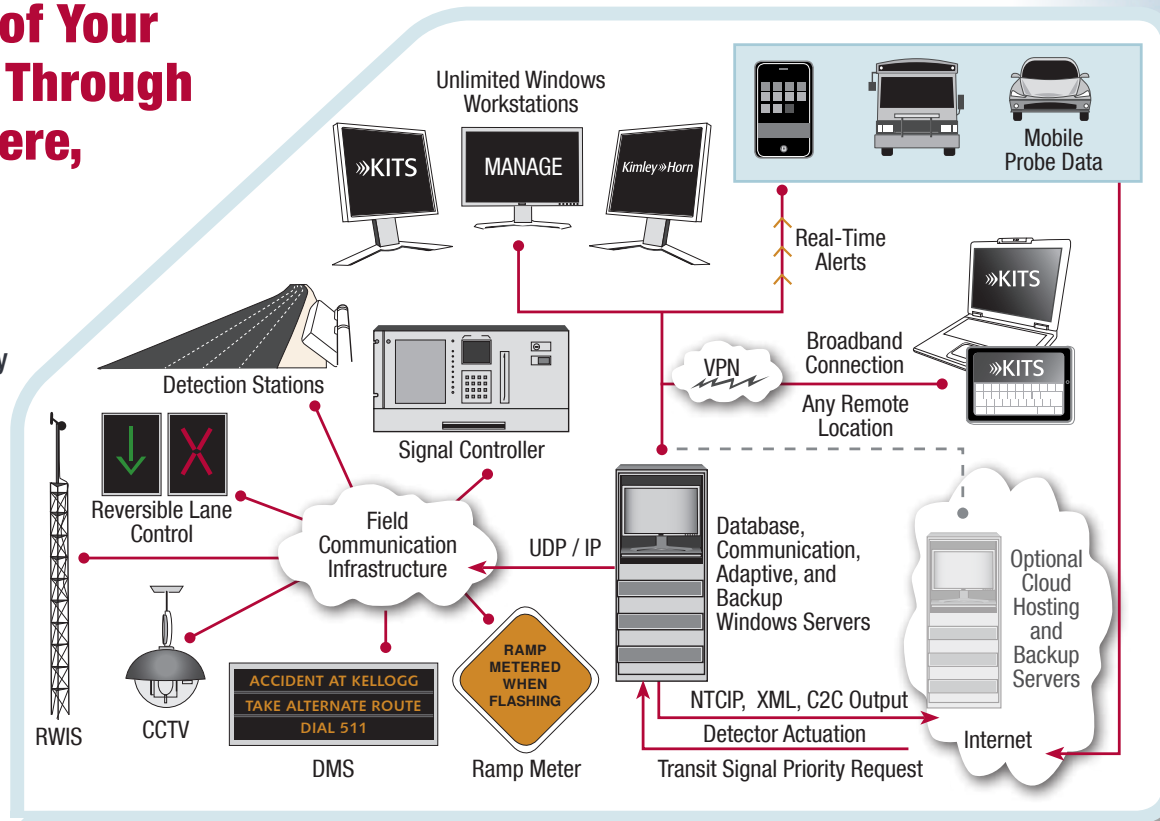
Provide Drivers the Information They Need for Mobility

- DMS with actual travel times
- Advanced Traveler Information web and mobile support
- 511 and third-party ATIS
- Twitter feeds
- Smartphone support



Manage All of Your ITS Devices Through KITS Anywhere, Anytime

- Maps with aerials
- Right-click, hotkeys
- Multi-agency security
- Event logging
- User logging
- Data archiving and retrieval
- Optional cloud hosting



Control Your Devices Remotely

KITS traffic control capabilities give traffic engineers the flexibility to configure and refine their system to meet the demands of predictable traffic patterns.

- Central scheduling
 - ✓ Time of day
 - ✓ Special events
 - ✓ DMS, CCTV, and video wall control
- Quick commands
- Adaptive control



Configure Your Devices Remotely

KITS will revolutionize the way you manage field devices. Add traffic signals with just a few clicks and store parameter history with roll-back capability.

- Controller database editors
- Excel timing sheet export
- Controller history tracking
- Visual timing plan editor
- DMS message editor

TRAFFIC SIGNAL INTERSECTION: North Loop Blvd @ North Loop Blvd

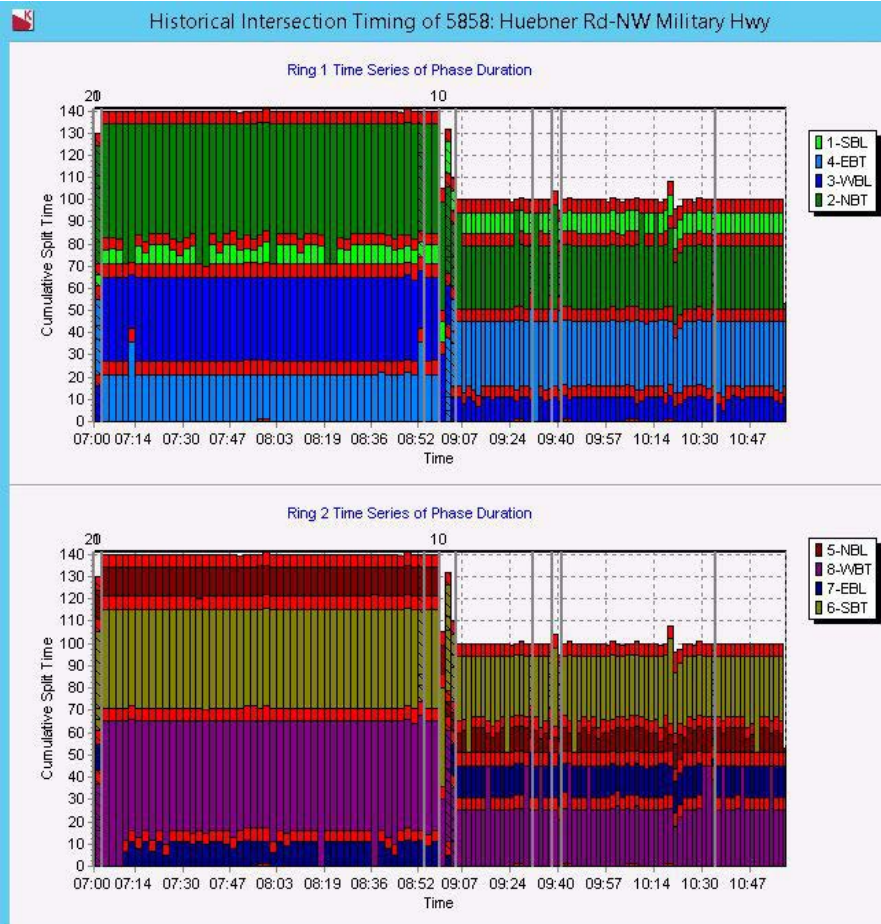
LAST EDIT DATE: 01/15 11:38 PM | ASSET: 4 | ZONE: City | SEC: | TRAFFIC SIGNAL TIMING & PHASING SHEETS

PRE-EMPT TBL	1	2	3	4	5	6	7	8	9	10	Settings
ENABLE			X		X						PHASE PLACES
NO MEM LOCK				X	X						PHASE
MAN ENABLE											PHASE
NO OVER FLASH											PHASE
NO OVER NEXT											PHASE
CHRT IN DELAY											PHASE
RE MAX PRES											PHASE

PHASE	1	2	3	4	5	6	7	8	9	10
PHASE 1	0	0	0	0	0	0	0	0	0	0
PHASE 2	0	0	0	0	0	0	0	0	0	0
PHASE 3	0	0	0	0	0	0	0	0	0	0
PHASE 4	0	0	0	0	0	0	0	0	0	0
PHASE 5	0	0	0	0	0	0	0	0	0	0
PHASE 6	0	0	0	0	0	0	0	0	0	0
PHASE 7	0	0	0	0	0	0	0	0	0	0
PHASE 8	0	0	0	0	0	0	0	0	0	0
PHASE 9	0	0	0	0	0	0	0	0	0	0
PHASE 10	0	0	0	0	0	0	0	0	0	0

PHASE	1	2	3	4	5	6	7	8	9	10
PHASE 1	0	0	0	0	0	0	0	0	0	0
PHASE 2	0	0	0	0	0	0	0	0	0	0
PHASE 3	0	0	0	0	0	0	0	0	0	0
PHASE 4	0	0	0	0	0	0	0	0	0	0
PHASE 5	0	0	0	0	0	0	0	0	0	0
PHASE 6	0	0	0	0	0	0	0	0	0	0
PHASE 7	0	0	0	0	0	0	0	0	0	0
PHASE 8	0	0	0	0	0	0	0	0	0	0
PHASE 9	0	0	0	0	0	0	0	0	0	0
PHASE 10	0	0	0	0	0	0	0	0	0	0

PHASE	1	2	3	4	5	6	7	8	9	10
PHASE 1	0	0	0	0	0	0	0	0	0	0
PHASE 2	0	0	0	0	0	0	0	0	0	0
PHASE 3	0	0	0	0	0	0	0	0	0	0
PHASE 4	0	0	0	0	0	0	0	0	0	0
PHASE 5	0	0	0	0	0	0	0	0	0	0
PHASE 6	0	0	0	0	0	0	0	0	0	0
PHASE 7	0	0	0	0	0	0	0	0	0	0
PHASE 8	0	0	0	0	0	0	0	0	0	0
PHASE 9	0	0	0	0	0	0	0	0	0	0
PHASE 10	0	0	0	0	0	0	0	0	0	0



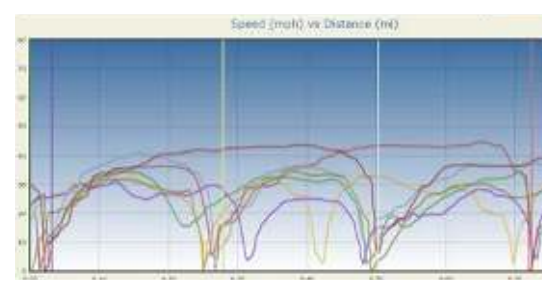
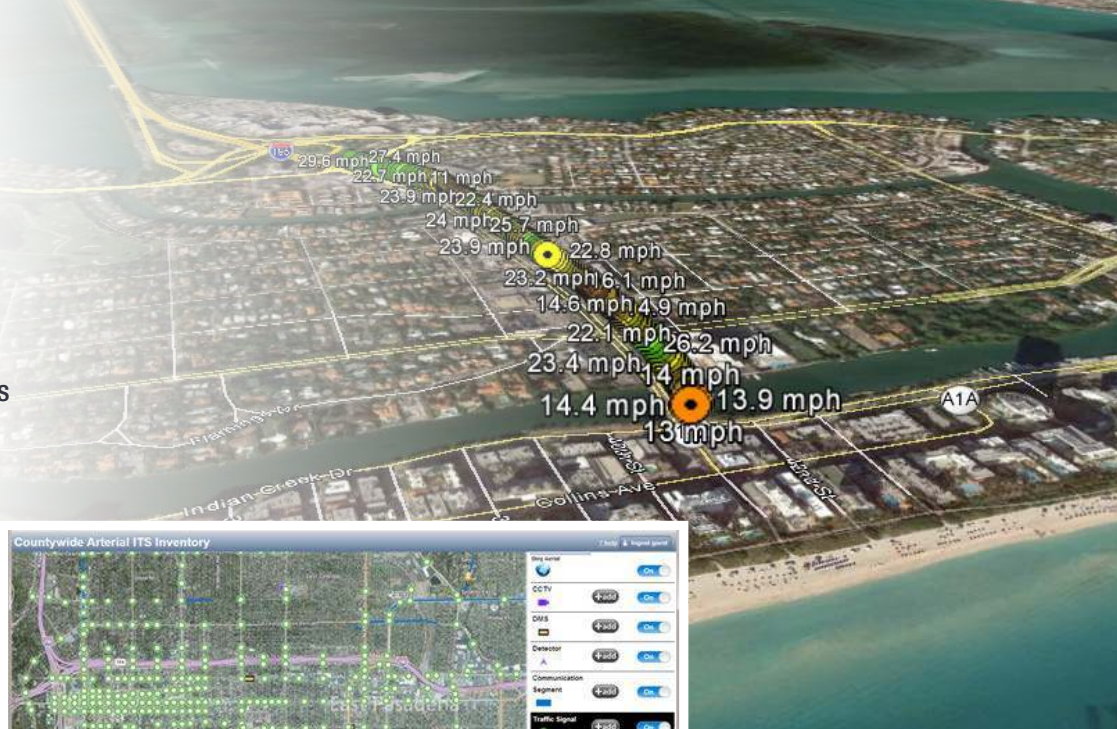
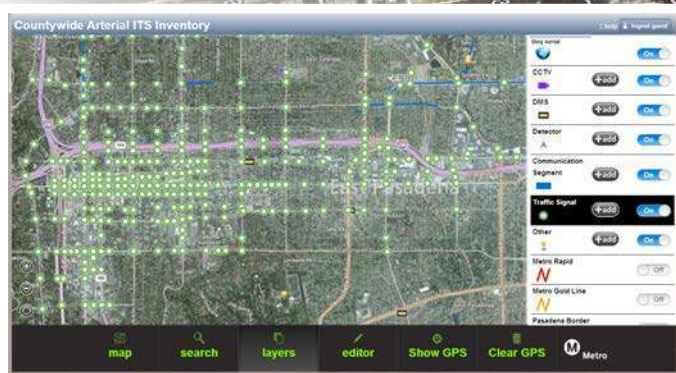
Create and Monitor Vehicle Progression Across Your System

- Time-space diagram
- Turning movement counts
- Arrivals on green
- LOS and MOE data
- Comprehensive Synchro® interface



Opportunities to Use Mobile Technology Are Rapidly Growing

- ▶ Performance metrics, emissions monitoring, and real-time, time-space diagrams
- ▶ Traffic signal priority
- ▶ Real-time tracking
- ▶ Before-and-after studies
- ▶ Real-time display and historical tracking of mobile assets, alerts, and reporting
- ▶ CCTV viewing and control
- ▶ Google Earth integration
- ▶ Bicycle detection
- ▶ Field data collection



Use our Mobile Technology for

Traffic Engineering

- ✓ Generate detailed performance metrics
- ✓ Create real-time, time space diagrams
- ✓ Fly-over using Google Earth and integrated historical data

Bike Detection

- ✓ Improve safety and efficiency using GPS-based advanced detection

Maintenance Management

- ✓ Integrate GPS-based maintenance module
- ✓ Display real-time and historical tracking of mobile assets

Transit Priority

- ✓ Develop BSP performance metric tracking
- ✓ Implement real-time signal priority


Supports iOS (iPad, iPhone) and Google Android



Take Parking Management to the Next Level

- Monitor space usage remotely and receive alerts of malfunctioning or expired meters—improving operations and revenue
- Accurately direct drivers to available spaces
- Reduce congestion and vehicle miles traveled by drivers searching for available on-street spaces
- Improve safety and save time, emissions, fuel, and money





- Space-by-space and level-by-level detection
- Automated DMS output
- Guidance to available spaces
- Real-time GIS displays
- Historical utilization reports

- Communication with smart parking meters
- Integrated CCTV control
- Maintenance alerts
- Smartphone (Apple iOS/Google Android) app integration

Asset Management

Our modern, browser-based Asset Management tool allows efficient data collection and access to robust reporting and custom queries.

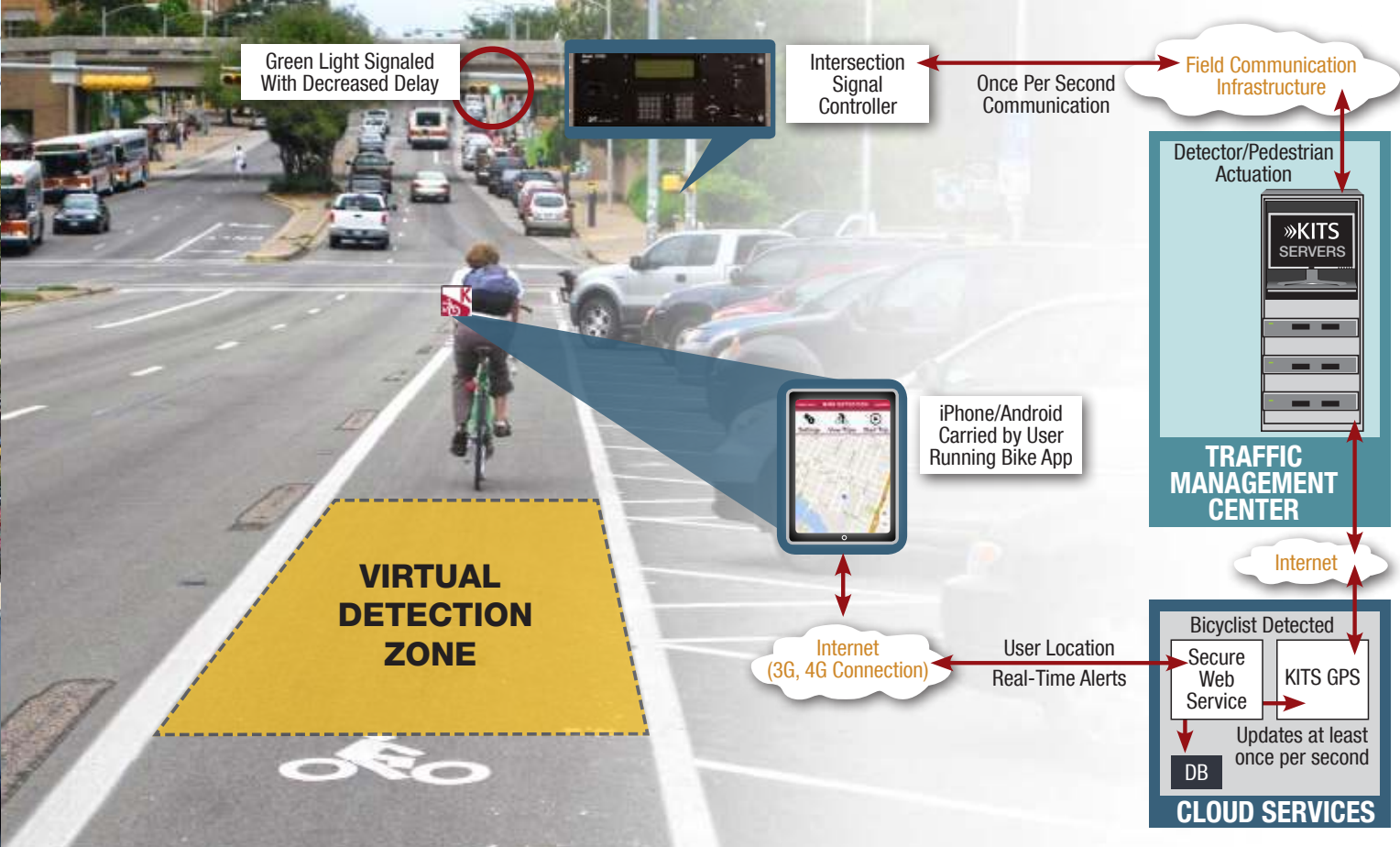
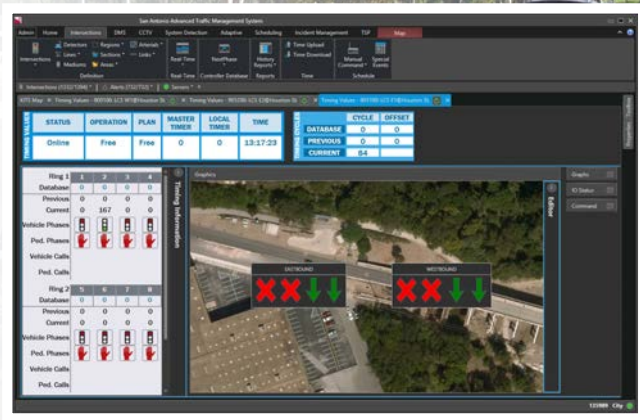


- Intuitive mobile user interface designed for field use
- Customizable wizard to collect information specific to your needs
- Companion inventory site to access asset data
- Work order site to track maintenance and upgrade activities



Advanced KITS Features Will Improve Your Transportation System

- ▶ Travel-time data collection
- ▶ Performance measures
- ▶ Asset management
- ▶ Smartphone apps
- ▶ Reversible lane control
- ▶ Internet maps integration



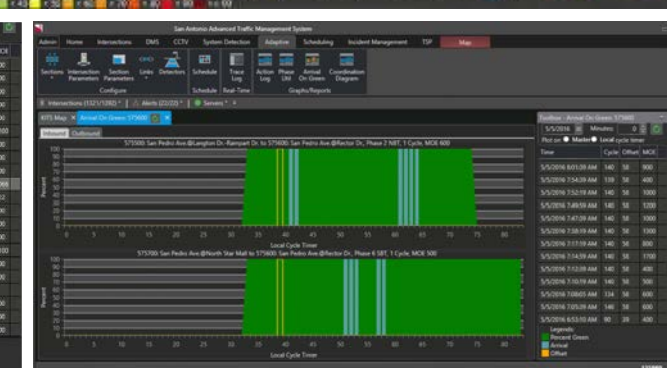
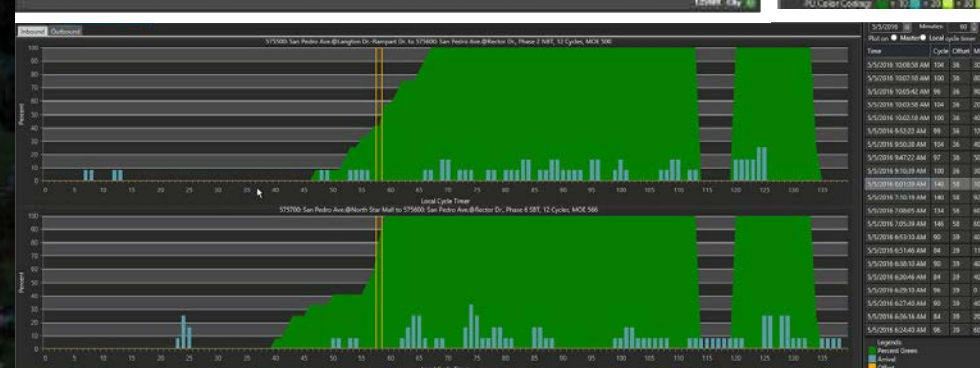
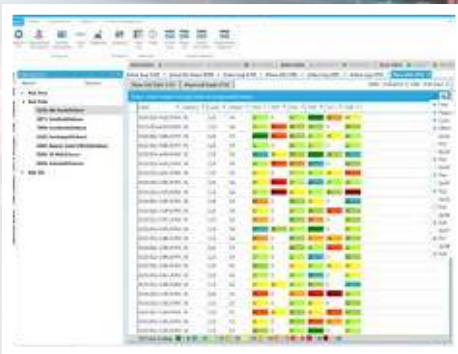


Tune Signal Parameters in Real Time

- Cycle
- Splits
- Offsets
- Sequence
- TOD Schedule

Kadence offers:

- Phase utilization and arrivals on green analysis
- System learns over time
- Use any field controller and detection technology
- Highly scalable and cost effective



Engineering Professionals for All Facets of Your Project

Kimley-Horn is a nationally recognized leader in ITS design and integration services. With a comprehensive approach to ITS technology, we have the expertise to successfully manage your agency's system implementation process, from start to finish.

Focused on client and system support, we understand the benefit of our clients coming together to discuss operational strategies and desired future functionality. Our annual Users Conference presents sessions on diverse transportation topics. Input from KITS users allows Kimley-Horn to better understand our valued clients and continually improve our system.



“ The City of Surprise has benefited immensely from the Kimley-Horn team and KITS. The expert staff at Kimley-Horn has allowed the City to maximize its resources in an extremely timely and cost effective manner. Kimley-Horn has been extremely proactive in reaching out to not only Surprise, but to many local agencies to share information and gather feedback. This open form of information sharing has created a valuable user community. ”

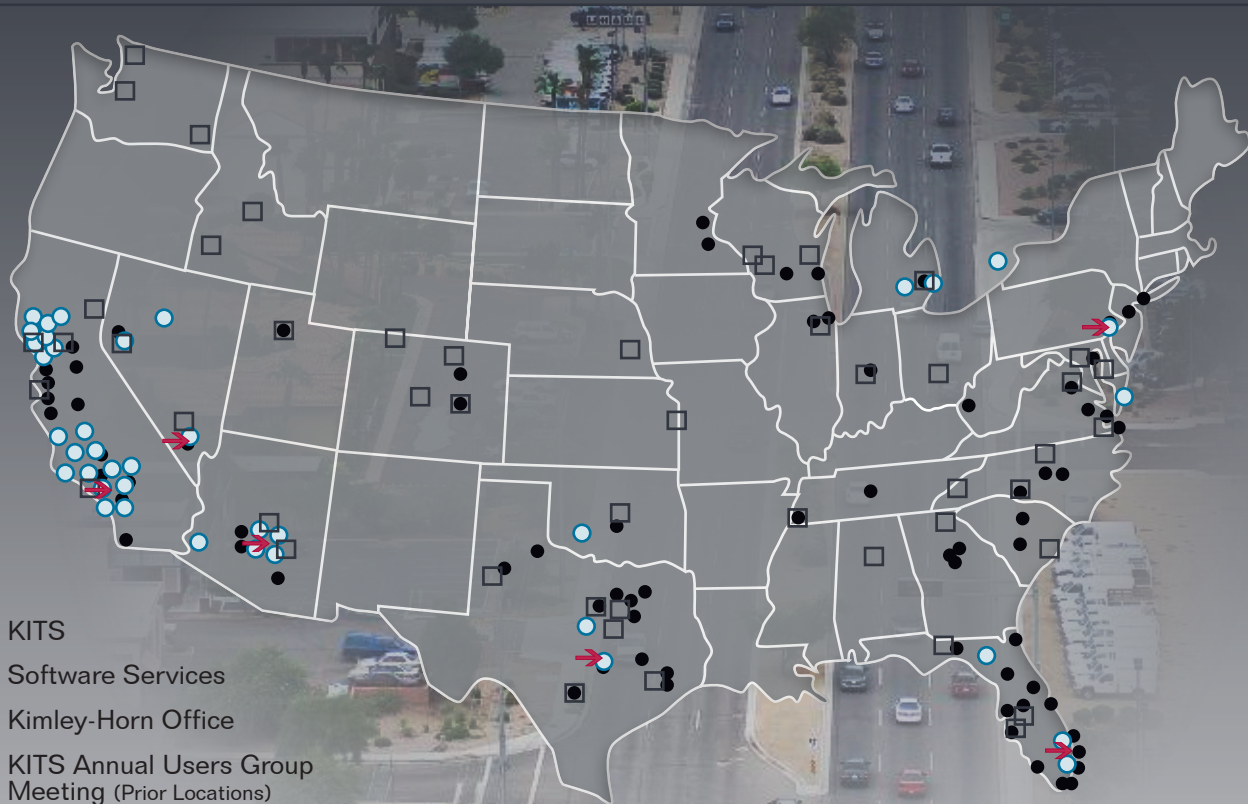
Albert Garcia, ITS Operations,
City of Surprise





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Software Solutions.





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-  KITS
-  Software Services
-  Kimley-Horn Office
-  KITS Annual Users Group Meeting (Prior Locations)