



Southern California Association of Governments (SCAG) Imperial County and Ventura County 2026 ITS Architecture Update

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Table of Contents

I. Introduction.....	3
Purpose.....	3
Goals.....	3
Process.....	3
Approach.....	4
Stakeholder Input	5
Document Structure.....	5
II. Imperial County.....	6
Background	6
Architecture Structure	6
Resources Used for Update	6
Projects	6
Changes to Original Projects.....	6
Calexico Parking Management.....	6
Calexico Port of Entry – Brawley Commercial Vehicle Operations (CVO) Corridor Management System	7
Grade Crossing Installation	7
I-8 Corridor ITS Gap Closure Project.....	7
Imperial Valley Transit.....	8
Multi-Jurisdictional Traffic Signal Coordination and Maintenance Project	8
Rail and Highway Intersection Improvements	9
Recreational Area ATIS	9
State Highway Callbox Project	9
State Highway RWIS Project.....	9
Traffic Signal Systems Upgrade	9
Signal Circuitry Project and Union Pacific HAZMAT Train Manifest.....	10
Train Location Sharing.....	10
New Projects	10
City of Brawley Traffic Signal Synchronization and ITS.....	10
Intermodal Transportation Centers	10
U.S. Border Management.....	11
Electric Vehicle Infrastructure.....	11
Positive Train Control (PTC)	11
Gaps	12
III. Ventura County.....	13
Background	13
Architecture Structure	13
Resources Used for Update	13
Service Areas	13
Changes to Original Service Area Elements.....	13
Transit	13
Emergency Management.....	15
Communications with Caltrans	16
New Projects	16
FTIP: City of Oxnard Bike Lanes	16
FTIP: US 101 Corridor Improvements	17
Freeway Service Patrol	17
Systemic Countywide Intersection Improvements.....	17
Transit Signal Priority.....	18

Charging Infrastructure	18
Gaps	19
IV. Next Steps.....	20
Appendix A: Stakeholder Meetings	21
Appendix B: Stakeholder Surveys.....	22

I. Introduction

Purpose

A regional Intelligent Transportation System (ITS) architecture is a planning framework for the deployment of integrated transportation systems. An ITS architecture includes an inventory of existing and planned ITS elements and identifies stakeholder roles and responsibilities, facilitating data exchange and interoperability. Conformance with ITS architectures is required for federally funded projects.

The Southern California Region of Governments (SCAG) is updating the Imperial and Ventura County Regional ITS Architectures to better reflect the current state of technology in the regions and provide a planning framework for the future. The Imperial County Regional ITS Architecture was last updated in 2005 and the Ventura County ITS Architecture was last updated in 2004.

ITS Architecture Update

Goals

The primary goals of the ITS architecture update process included:

- Compliance with FHWA Final Rule 23 CFR Part 940
- Support regional compliance for federal funding
- Coordinate across local agencies for regional issues
- Provide integration opportunities for technology-related projects
- Support the planning, programming, and design for technology-related projects

Achieving these goals contributes to a robust ITS architecture, making it a more effective planning tool for each region. Establishing operational concepts in the ITS architecture for planned projects and efforts allows for better advance identification of roles and responsibilities as each region becomes more prepared for ITS improvements.

Process

At the time of the last architecture updates in 2004 and 2005, the current Regional Architecture Development for Intelligent Transportation (RAD-IT) application existed as a previous version known as Turbo Architecture. The first step in the update process was to convert the existing Turbo files into RAD-IT files so that they would be compatible with the current application. Listed below are the primary components of RAD-IT used to define ITS communications:

- **Service Packages:** Groups of ITS-related systems organized by how they communicate with each other and their service area (e.g. public transportation, traffic management, maintenance and construction, etc.)
- **Physical Objects:** Systems, centers, and equipment used as points of communication in service packages (transit management centers, on-board equipment, etc.)
- **Information Flows:** Information that is being communicated between physical objects (e.g. location data from transit vehicle on-board equipment to a transit management center)

- **Service Package Diagrams:** Diagrams that show existing and planned information flows between physical objects based on service packages
- **Project Diagrams:** Diagrams that show all existing and planned information flows between physical objects within a project

During the conversion process, certain service packages and flows were updated, added, or lost due to changes in the software. After the conversion, there was a thorough backcheck process between the current files and the originals to resolve any changes.

The backcheck process used the following steps:

- For each project, confirmed all service packages are still included (checking for name changes during the conversion)
- Corrected physical object mapping for each element (e.g. defining a local transit agency as a transit management center)
- Reviewed service package diagrams and compared to project diagrams from the original Turbo files, identifying additional and missing flows

An assumption was made that if RAD-IT added a flow to a service package, that flow was kept in the architecture as planned.

After the backcheck was completed, the team updated the projects and service packages already in the architecture to reflect what flows and elements are now existing, and what is still planned, following the approach described in the following section. These updates were made using a combination of stakeholder input, local agency documents and websites, and Kimley-Horn knowledge of local transportation projects.

Finally, the architecture update added elements and projects that are entirely new since 2005 determined by the Federal Transportation Improvement Program (FTIP) projects, local and regional plans, and discussions with stakeholders. This includes initiatives that have been implemented since 2004 and those that are currently planned for 2026 and beyond.

Approach

The approach to the ITS architecture update was to keep project descriptions and elements general (e.g., “Traffic Signal Systems Upgrade” instead of “Traffic Signal Upgrade on Main Street from Western Avenue to 6th Street”) where possible. This allows for maximum flexibility of the architecture for planning, creating frameworks that can be used for future projects without continuous architecture updates. The exception to this approach is where specific projects are funded by federal grants or regionally significant; those certain projects are identified in the architecture specifically and by name.

Another standard followed was to leave projects as planned unless they are fully implemented. If a project is partially implemented or complete only in some jurisdictions but not others, it is designated as planned in the architecture. Additionally, where the update team did not have adequate information or stakeholder input to confirm the status of an element or flow, the default was to leave them as planned. Leaving projects, elements, and flows as planned maintain their eligibility for federal funding. The following sections for each County’s architecture notes other assumptions for planned vs. existing data flows.

Stakeholder Input

The update team met with Imperial County three times and Ventura County two times to discuss the content of the ITS architecture update. All meetings are listed in **Appendix A**. An initial kick off meeting was held between SCAG, Kimley-Horn, and a representative from the Imperial County Transportation Commission (ICTC) to discuss regional goals and needs to be included in the update. The update team attended two meetings each for both the ICTC Technical Advisory Committee (TAC) and Ventura County Transportation Commission (VCTC) Transportation Technical Advisory Committee (TTAC) to give an update on the architecture update process and solicit stakeholder input. The project team also sent out a survey to each TAC and relevant project stakeholders to fill in information that was not publicly available.

Document Structure

The following sections describe the ITS architecture update process in detail by County. Each County section lists the structure of the respective architecture, the specific resources used in the update, and the projects and service areas that were considered. Each project and/or service area has a description, regional status, and services packages that were included in the architecture. New projects, regionally significant projects, and granted funded projects are called out explicitly. Finally, the last subsection for each County notes the gaps still within the architecture after the update process.

II. Imperial County

Background

Architecture Structure

The Imperial County ITS Architecture uses projects to organize ITS systems and planned initiatives. Some of these projects are countywide, some are for specific jurisdictions or projects. Service packages exist at both the regional and the project level.

Resources Used for Update

The architecture update used the most recent version of the Imperial County ITS Architecture, last updated in 2005, along with the documentation for that update prepared by the consultant National Engineering Technology (NET, since acquired by Parsons Corporation). The team also referenced the National Reference Architecture, ARC-IT, which provides a common basis for planning and defining intelligent transportation systems.

The update team referenced various documents to update the current state of ITS projects in Imperial County and identify ongoing and planned future projects. The resources used for the Imperial County update include the following:

- 2025 Federal Transportation Improvement Program (FTIP)
- ICTC Active and Complete Projects
- Short Range Transit Plan
- Regional Active Transportation Plan
- California-Baja California Border Master Plan
- Calexico Needs Assessment Study
- Imperial County Emergency Operations Plan
- 2011 SCAG Regional ITS Architecture Update: Positive Train Control Regional ITS Architecture Elements Technical Memo
- Kimley-Horn Knowledge of Local Traffic Improvement Projects
- Input from Imperial County stakeholders

Projects

Changes to Original Projects

The following projects were included in the 2005 Imperial County Regional ITS Architecture. Each project has been reviewed and its status updated to reflect current conditions. Projects remain designated as planned unless fully implemented; partial implementation is noted where applicable.

Calexico Parking Management

Description: Decrease congestion due primarily to commercial vehicles near the international border in the City of Calexico. This project encompasses implementation of a parking structure,

fee collection, and a parking management plan, with public communication via changeable message signs (CMS) or similar devices.

Status: Planned. No significant changes to project scope or status since the 2005 architecture update.

Service Packages: PM01 (Parking Management), PM03 (Parking Facility Management). Both service packages remain planned.

Calexico Port of Entry – Brawley Commercial Vehicle Operations (CVO) Corridor Management System

Description: This project would deploy ITS traffic management technologies such as system detection, advanced signal control, closed-circuit television (CCTV) cameras and traffic management systems to monitor and manage truck traffic along state highways through the region.

Status: Planned. The project has no implementation to date; data exchanges between local city signal systems and equipment, Caltrans D11 signal operations and equipment – including traffic detector data, CCTV images/video, and signal control – are designated as planned.

Service Packages: TM03 (Traffic Signal Control). Planned.

Grade Crossing Installation

Description: Install grade crossings at identified arterials along the Calexico to Plaster City corridor to improve vehicle safety. Enhanced grade crossing infrastructure enables dispatchers to track train locations in real time, increases operational speeds, and improves safety at rail-highway intersections. Public utilities retain authority over grade crossings.

Status: Planned, with certain data flows recorded as existing. The following data exchanges between county equipment/signal systems, local city equipment/signal systems, and rail operators are existing: track status and rail crossing operational status. The following flows are planned: rail crossing request and control, traffic images and video surveillance, arriving train information, and right-of-way coordination. New Positive Train Control (PTC) elements are added to the project inventory, with associated flows designated as planned. Specific grade crossing projects that are regionally significant or grant-funded will be called out individually in the architecture.

Service Packages: TM14 (Railroad Operations Coordination). Planned.

I-8 Corridor ITS Gap Closure Project

Description: Install traffic operations system (TOS) elements and communications infrastructure to provide surveillance of the state highway system for roadside weather and traffic conditions, accessible from the Regional Traffic Management Center (TMC).

Status: Planned. Certain elements, including the TMC and CCTV cameras, have been partially implemented, but the project has not been completed in full. Per the update approach, the project retains planned status. Data exchanges between Caltrans D11 TMC and Caltrans roadside equipment, including traffic images/video surveillance, traffic detectors, and traffic metering, are designated as planned.

Service Packages: TM05 (HOV Lane Management). Planned.

Imperial Valley Transit

Description: ITS projects related to Imperial Valley Transit (IVT), encompassing fixed-route operations, transit management, traveler information, and coordination with other transportation modes and emergency services.

Status: Mixed existing and planned. Several core transit management and operations functions are existing, including vehicle operator information, transit schedule information, and transit vehicle conditions. Real-time information via General Transit Feed Specification (GTFS) Realtime is planned – IVT is in the process of integrating GTFS Realtime to provide real-time passenger information, detour notifications, and improved dispatch communication; implementation is pending installation of new routers on the fixed-route fleet. Electronic fare payment remains planned, as contactless payment systems have not yet been deployed.

Service Packages: PT02 (Transit Fixed-Route Operations), PT03 (Transit Passenger and Fare Management), PT04 (Transit Security), PT08 (Transit Traveler Information). Mix of existing and planned flows as described above.

PT01 (Transit Vehicle Tracking) remains planned as GTFS feeds are not yet active. PT06 (Transit Traveler Information) remains planned pending connection to the 511 system.

PT05 (Transit Incident Management) and PT09 (Transit Signal Priority) are added as planned service packages, reflecting the region's interest in TSP deployment. For the TSP service package, the relevant data exchanges – transit schedule information, intersection status, and signal control status and commands – are designated as planned, with involvement from Caltrans TMC/roadside equipment, Imperial Valley Transit, and local city signal systems and equipment.

Multi-Jurisdictional Traffic Signal Coordination and Maintenance Project

Description: Installation of improved communications and control equipment to allow for more efficient monitoring and operation of traffic signals along major highways across multiple jurisdictions in Imperial County.

Status: Planned. Implementation is underway in certain jurisdictions: some cities have signal synchronization in place, and the City of Brawley is nearing completion of its first phase. El Centro has established a TMC with fiber communications and video detection and the City of Brawley signal synchronization project is in progress (this is identified separately in the architecture as a regionally significant, grant-funded project). Because implementation is not complete across all participating jurisdictions, the project retains planned status per the update approach. Data exchanges between Caltrans D11 signal operations and equipment, local city signal systems and equipment, and Imperial County equipment, including traffic images/video surveillance, traffic detectors, and signal control, are designated as planned.

Service Packages: TM03 (Traffic Signal Control), TM07 (Regional Traffic Management). Planned.

Rail and Highway Intersection Improvements

Description: Improve highway/rail intersections along the far east and far west portions of Interstate 8 and along State Routes 111, 115, and 80.

Status: Planned, with certain data flows recorded as existing. The Section 130 federal grade crossing safety program is active statewide and funds improvements along these corridors. The following data exchanges between rail operators, Caltrans, local city signal systems, and county equipment are existing: rail crossing operational status, track status, traffic signal control, and traffic detector data and control. The following flows are planned: video surveillance and traffic images, rail crossing advisories, and right-of-way coordination.

Service Packages: TM13 (Road Weather Data Collection). Planned, with certain flows existing as described above.

Recreational Area ATIS

Description: Provide Advanced Traveler Information System (ATIS) services to motorists accessing the Glamis Dunes and Salton Sea recreational areas of Imperial County.

Status: Planned. Data exchanges between Caltrans TMC and equipment and Imperial County equipment and facilities, including traffic images, traffic control, dynamic signage, and roadway advisories, are designated as planned.

Service Packages: TM06 (Traffic Information Dissemination). Planned.

State Highway Callbox Project

Description: Installation of call boxes at critical locations along State Highways 78 and 86, including some traffic data collection capabilities utilizing wireless communications.

Status: Deleted from architecture. This project has been removed as it is superseded by technology advancements, and the County is sunsetting the callboxes. Existing traffic detector control and traffic detector data flows have been retained in the architecture.

State Highway RWIS Project

Description: Installation of Roadside Weather Information Systems (RWIS) at key locations on the state highway system to provide improved weather-related information for Caltrans and motorists.

Status: All data flows are recorded as existing. Data exchanges between Caltrans D11 TMC and Caltrans D11 roadside equipment, environmental sensor data and control and environmental monitoring application data, are existing.

Service Packages: WX01 (Weather Data Collection). Existing.

Traffic Signal Systems Upgrade

Description: Upgrade traffic signal systems and communications infrastructure across the region to support improved signal operations and coordination.

Status: Planned. Signal upgrades have been completed in some jurisdictions but not others; the project retains planned status per the update approach. Data exchanges between Caltrans

D11 signal operations and equipment, local city signal systems and equipment, and Imperial County equipment, including traffic images/video surveillance, traffic detectors, and signal control, are designated as planned.

Service Packages: TM03 (Traffic Signal Control). Planned.

Signal Circuitry Project and Union Pacific HAZMAT Train Manifest

These two projects from the 2005 architecture have been deleted and are superseded by Positive Train Control (PTC), the federally mandated safety system for freight and passenger railroad, designed to prevent train-to-train collisions, over-speed derailments, work zone incursions, and incorrect switches. In Imperial County, PTC features are implemented by Union Pacific, as described in the New Project section to follow.

Train Location Sharing

Description: Share real time Union Pacific data with cities and Imperial County.

Status: Planned. Positive Train Control is an active system but specific data sharing with jurisdictions and safety monitoring programs are unconfirmed. Flows designated as planned, in line with the PTC service packages in SCAG's Regional ITS Architecture.

Service Packages: TM15 (Railroad Operations Coordination). MC07 (Work Zone Safety Monitoring) added as planned; uses Positive Train Control elements but the status of specific flows is unconfirmed by stakeholders.

New Projects

The following projects were not included in the 2005 architecture and are added to reflect new programs, completed projects, and planned investments identified through stakeholder engagement, review of the 2025 FTIP, and other regional planning documents.

City of Brawley Traffic Signal Synchronization and ITS

Description: City of Brawley communications improvements along Main Street between Northwest Plaza and 6th Street and modifications of traffic signals at 3rd Street and 6th Street intersections. Improvements also include new fiber optic cable along Main Street, new traffic signal controller cabinets, new CCTV with mounting, and new conduit and pull boxes. This is included specifically in the architecture as it is a regionally significant and grant-funded project.

Status: Planned. As of June 2026, Phase II is underway.

Service Packages: TM03 (Traffic Signal Control), TM07 (Regional Traffic Management). Planned.

Intermodal Transportation Centers

Description: Two intermodal transportation centers are planned in Calexico. The Calexico Intermodal Transportation Center (ITC) will serve as a new mobility hub and bus transfer terminal in the city. The Calexico East Port of Entry Intermodal Transportation Center will provide new transit facilities at the Calexico East border crossing.

Status: Planned. As of June 2026, Calexico ITC is currently in progress; the East Port of Entry ITC has funding awarded.

Service Packages: PT02 (Transit Fixed-Route Operations), PT03 (Dynamic Transit Operations), PT06 (Transit Traveler Information), PT04 (Transit Security), PT14 (Multi-Modal Coordination). Planned.

U.S. Border Management

Description: ITS improvements supporting the movement of people and goods across the US–Mexico border in Imperial County. This includes the SR-86 Border Patrol Checkpoint Expansion (a new canopy with two northbound inspection lanes and one truck inspection lane) and planned border wait time information systems at the Calexico east and west ports of entry, providing real-time crossing wait time data to motorists approaching from both the US and Mexico sides.

Status: Planned. Stakeholders include US Border Patrol, US Port of Entry, Imperial County, Caltrans, and local cities. Data exchanges are designated as planned, including border crossing status information and border wait time data between border inspection and transportation management systems, as well as lane management control and dynamic signage data between roadway equipment and traffic management systems.

Service Packages: TM22 (Dynamic Lane Management and Shoulder Use), TM23 (Border Management Systems), CVO22 (International Border Coordination). Planned.

Electric Vehicle Infrastructure

Description: A new generic service package covering planned electric vehicle (EV) charging and support infrastructure in the Imperial County region, consistent with statewide and regional electrification goals.

Status: Planned at the regional level.

Service Packages: ST05 (Electric Charging Stations Management). Planned.

Positive Train Control (PTC)

Positive Train Control (PTC) is not a new project in the architecture, but a group of elements and associated service packages that have been added to the architecture to reflect the federally mandated PTC systems operated by Union Pacific.

Elements: The following elements were added at the regional level to reflect existing PTC systems: Union Pacific (UP) Wayside Signal System, UP On-board PTC Component, UP Back Office System, Work Zone Safety Management System, UP Train Control and Operations Center.

Service Packages: MC07 (Work Zone Safety Monitoring) added as planned; uses Positive Train Control elements but the status of specific flows is unconfirmed by stakeholders.

Gaps

There are potential gaps in the ITS architecture update due to low survey response from stakeholders (only one response to the Imperial County survey) and limited public information availability. Where the update team could not confirm the status of a data flow or project, it remains designated as planned in the architecture.

The following projects lacked adequate stakeholder input to definitively identify the status (planned, existing, or not planned) of certain data exchanges:

- Calexico Port of Entry – Brawley CVO Corridor Management System: Project implementation status in Calexico, Brawley, and regionally is unconfirmed; remains designated as planned.
- I-8 Corridor ITS Gap Closure Project: Not one unified project; some elements have been implemented (two Caltrans CCTV on I-8 in El Centro). Imperial County is not included in Caltrans Performance Measurement System (PeMS), so ITS gaps still exist. Exact existing flows unconfirmed, so project remains fully planned.
- Rail and Highway Intersection Improvements: Status of specific improvements from the 2005 architecture (Far east and far west portions of Interstate 8, along with state route 111, 115 and 80) are unconfirmed; planned and existing assumed to be unchanged.
- Rail Projects: The status of planned vs. existing data sharing capabilities between Union Pacific, Imperial County, and local jurisdictions was unconfirmed. Elements (aligned with Positive Train Control in the SCAG Regional ITS Architecture) are all existing, as PTC was required to be fully installed and operational by 2020, but service packages and new data exchanges remain planned.

Additionally, there were information gaps for some of the new and future projects, Intermodal Transportation Centers and U.S. Border Management, so elements and data exchanges remain planned.

The project team discussed the potential for a future Regional TMC, so that is included as an element in the architecture. However, without further discussion about ownership or structure, this is limited and not included in any projects. As this idea is developed further, future architecture updates can add details and further integrate this element.

III. Ventura County

Background

Architecture Structure

The Ventura County ITS Architecture uses a regionwide inventory to organize ITS systems and planned initiatives. The original architecture did not have defined projects, but rather inventory tied to stakeholders to represent their specific communications.

Resources Used for Update

The architecture update used the most recent version of the Ventura County ITS architecture, last updated in 2004, along with the documentation for that update prepared by NET. The team also referenced the National Reference Architecture, ARC-IT, which provides a common basis for planning and defining intelligent transportation systems.

The update team referenced various documents to update the current state of ITS projects in Ventura County and identify ongoing and planned future projects. The resources used for the Ventura County update include the following:

- 2025 FTIP
- VCTC Strategic Plan
- Ventura County Comprehensive Transportation Plan
- Ventura County Circulation, Transportation, and Mobility Element
- Transportation Emergency Preparedness Plan (TEPP)
- Short Range Transit Plan
- Freeway Service Patrol Brochure
- Ventura County Freight Corridors Study
- Demand Response Integration Plan
- LA County Regional ITS Architecture
- Kimley-Horn Knowledge of Local Traffic Improvement Projects
- Input from Ventura County stakeholders

Service Areas

Changes to Original Service Area Elements

The following service areas encompass the elements that were included in the 2004 Ventura County Regional ITS Architecture. Each service area element has been reviewed and its status updated to reflect current conditions. Inventory connections remain designated as planned unless fully implemented; partial implementation is noted where applicable.

Transit

Description: ITS projects related to the transit services operating in Ventura County, encompassing fixed-route operations, transit management, traveler information, and coordination with other transportation agencies, modes, and emergency services.

Transit Agencies:

The following transit agencies were included in the original Ventura County ITS Architecture:

- Camarillo Area Transit
- Campus Circulator California State University Channel Islands (CSUCI)
- Harbor Beaches Transit
- Moorpark Transit
- Ojai Trolley
- South Coast Area Transit (SCAT)
- Simi Valley Transit
- Thousand Oaks Transit
- Ventura Intercity Service Transit Authority (VISTA)

Since 2004, new transit agencies have established services in Ventura County, some transit agencies were discontinued, and some transit agencies were rebranded under different names. The following transit agencies are represented in the current architecture:

- Camarillo Area Transit
- Gold Coast Transit District (formerly known as SCAT)
- Kanan Shuttle
- Moorpark City Transit (formerly known as Moorpark Transit)
- Ojai Trolley
- Simi Valley Transit
- Thousand Oaks Transit
- Valley Express
- VCTC Intercity (formerly known as VISTA)

Dial-A-Ride/Paratransit:

In the original ITS Architecture, the following dial-a-ride/paratransit services were included:

- Guaranteed Ride Home
- Oak Park Dial-A-Ride

Since 2004, transit agencies have established new demand response services. The following services are included in this update of the ITS architecture:

- Agoura Hills Dial-A-Ride (formerly known as Oak Park Dial-A-Ride)
- Camarillo Area Transit Dial-a-Ride
- Gold Coast Transit District's GO ACCESS
- HELP of Ojai
- Moorpark City Transit Dial-A-Ride
- Simi Valley Transit Dial-a-Ride
- Thousand Oaks Transit Dial-a-Ride
- Valley Express Dial-a-Ride

Fare Payment Systems:

In the previous update of the ITS Architecture, Smart Card was the primary fare payment system for transit. In the current update, Smart Card has been rebranded as VCBuspass, which includes a reloadable physical card and mobile phone app. Another fare payment system known as Tap2Ride was added, which includes contactless payment via debit or credit card for VCTC Intercity service.

Status: Mix of planned and existing, assumed to be the same across agencies. Several core transit management and operations functions are existing, including schedule information, fare collection, location information, schedule performance, and loading information. The following data exchanges between transit agencies, transit vehicles, and fare payment systems remain planned: operator information, alarm information, transit vehicle conditions, and incident information.

For Dial-a-Ride/Paratransit services, demand responsive transit information, operator information, loading data, trip confirmation, and incident information all remain planned.

For fare payment, Smart Card was rebranded to VCBuspass and is now used for all transit agencies. Tap2Ride is currently existing for VCTC Intercity and planned for the remaining transit agencies.

Service Packages: PT01 (Transit Vehicle Tracking), PT02 (Transit Fixed-Route Operations), PT03 (Dynamic Transit Operations), PT04 (Transit Fare Collection Management), PT08 (Transit Traveler Information). Mix of planned and existing.

Emergency Management

Description: Ventura County has an Office of Emergency Services (OES) and a comprehensive Transportation Emergency Preparedness Plan (TEPP) created by VCTC and the Santa Barbara County Association of Governments (SBCAG). Emergency management includes the dispatch of and communication with emergency vehicles and local law enforcement.

Stakeholders: In the last update of the ITS architecture, emergency management was primarily represented by the California Highway Patrol (CHP). The architecture has been updated to reflect the following stakeholders included in the TEPP:

- Ventura County OES
- VCTC
- Local Agencies
- Transit Agencies
- Airports
- Ports/Harbors
- Naval Base Ventura County
- Channel Islands Air National Guard Station
- Commercial Railroads
- Caltrans
- CHP

Status: Mix of planned and existing. With the existing OES and emergency management policies, emergency plan coordination, emergency routes, and emergency dispatch information are assumed to be existing. Data exchanges including road network information and incident status information remain planned.

Service Packages: PS02 (Emergency Response), PS06 (Incident Scene Pre-Arrival Staging Guidance for Emergency Responders), PS10 (Wide-Area Alert), TM08 (Traffic Incident Management System), TM12 (Dynamic Roadway Warning). Mix of planned and existing.

Communications with Caltrans

Description: Caltrans District 7 manages ATIS and advanced traffic management system (ATMS) field equipment, maintenance centers, and lane closure systems throughout Los Angeles and Ventura County. Elements and service packages relating to Caltrans communications were updated and added based on the Los Angeles County Regional ITS Architecture.

Status: Primarily planned. Some information flows between Caltrans inventory are existing, but there is limited communication between Caltrans equipment and Ventura County equipment.

Service Packages: MC01 (Maintenance and Construction Vehicle and Equipment Tracking), MC02 (Maintenance and Construction Vehicle Maintenance), MC05 (Roadway Maintenance and Construction), MC06 (Work Zone Management), ST08 (Eco-Approach and Departure at Signalized Intersections), SU01 (Connected Vehicle System Monitoring and Management), SU04 (Map Management), TI01 (Broadcast Traveler Information), TI02 (Personalized Traveler Information), TM01 (Infrastructure-Based Traffic Surveillance), TM02 (Vehicle-Based Traffic Surveillance), TM03 (Traffic Signal Control), TM04 (Connected Vehicle Traffic Signal System), TM05 (Traffic Metering), TM07 (Regional Traffic Management), TM20 (Variable Speed Limits), TM21 (Speed Harmonization), TM22 (Dynamic Lane Management and Shoulder Use), VS17 (Automated Vehicle Operations). Mix of existing and planned.

New Projects

The following projects were not included in the 2004 architecture and are added to reflect new programs, completed projects, and planned investments identified through stakeholder engagement, review of the 2025 FTIP, and other regional planning documents. These projects were determined to be regionally significant or grant-funded, so they are included specifically in the architecture.

FTIP: City of Oxnard Bike Lanes

Description: This FTIP-funded project will install Class II bike lanes with green bike conflict striping, high-visibility crosswalks, advance warning flashing beacons, advance stop bars, leading pedestrian interval timing, and traffic signal retro-reflective backplates. Traffic signal upgrades and advanced warning systems will use ITS elements.

Status: Planned. Detection information and signal control information are planned data exchanges between local traffic control systems, local traffic control equipment, and Caltrans equipment.

Service Packages: TM03 (Traffic Signal Control)

FTIP: US 101 Corridor Improvements

Description: This FTIP-funded project aims to reduce congestion along the US 101 by establishing high-occupancy vehicle (HOV) lanes along a 27-mile segment of the corridor. The project is currently evaluating several alternatives and will undergo traffic, engineering, and environmental studies.

Stakeholders: VCTC and Caltrans are the main leads involved with the US 101 improvements. The City of Ventura, City of Oxnard, City of Camarillo, City of Thousand Oaks, and County of Ventura are directly affected by the US 101 as the corridor runs through their jurisdictions. The City of Simi Valley, City of Ojai, City of Santa Paula, City of Moorpark, City of Port Hueneme, and City of Fillmore do not have the US 101 in their jurisdiction but are still affected by its congestion.

Status: Planned. While there is no confirmation on which ITS improvements will explicitly be included as part of the improvements, dynamic signage, ramp metering, and CCTV have generically been added to the ITS architecture as planned.

Service Packages: TM01 (Infrastructure-Based Traffic Surveillance), TM05 (Traffic Metering), TM06 (Traffic Information Dissemination), TM07 (Regional Traffic Management), TM08 (Traffic Incident Management System)

Freeway Service Patrol

Description: Launched in 2021, the Freeway Service Patrol (FSP) provides free, fast roadside assistance on key County highway segments. In Ventura, this program is run by VCTC in partnership with a local tow truck company that provides two roaming tow trucks on each designated highway segment. This program is funded by FTIP.

Stakeholders: VCTC, California Highway Patrol (CHP), Caltrans

Status: Existing. The following data exchanges exist between VCTC, CHP, and the FSP fleet: incident information, traffic operator information, vehicle tracking data, and service patrol dispatch, requests, response, and status.

Service Packages: PS08 (Roadway Service Patrols)

Systemic Countywide Intersection Improvements

Description: This project was funded by the Highway Safety Improvement Program (HSIP) Cycle 10 and upgraded 44 signalized intersections in the County. ITS improvements included video detection systems, upgraded traffic signal controllers, and push button upgrades.

Stakeholders: Ventura County, Local Agencies

Status: Existing at specific intersections, but planned at a regional level. Data exchanges such video surveillance, signal control, and detector data are now existing at the select 44 intersections but remained planned in the architecture to reflect the region status.

Service Packages: TM03 (Traffic Signal Control)

Transit Signal Priority

Description: Transit Signal Priority (TSP) aims to make transit more efficient by prioritizing transit vehicles at intersections. Communication between traffic control systems and transit vehicles enables either an early green or an early return to green to keep transit vehicles on schedule.

Stakeholders: Camarillo Area Transit, Gold Coast Transit District, Kanan Shuttle, Moorpark City Transit, Ojai Trolley, Simi Valley Transit, Thousand Oaks Transit, Valley Express, VCTC Intercity

Status: Planned. Planned information flows between traffic control systems and transit vehicles include intersection status, schedule information, and traffic control priority request.

Service Packages: PT09 (Transit Signal Priority)

Charging Infrastructure

Description: Charging infrastructure projects are often state and federally funded to support zero emission initiatives. They include infrastructure for both transit vehicle fleets and passenger vehicles, often at transit maintenance facilities and transit center parking lots.

Stakeholders: VCTC, VCTC Intercity, Camarillo Area Transit, City of Camarillo, Simi Valley Transit, City of Thousand Oaks

Status: Planned. Current planned charging infrastructure projects include shared charging infrastructure at the Camarillo Metrolink Station parking lot, bus charging infrastructure at the Simi Valley Transit Maintenance Facility, a new Regional Transit Center with overhead charging infrastructure in the City of Simi Valley, and charging infrastructure at the City of Thousand Oaks Transit Center.

Service Packages: ST05 (Electric Charging Stations Management)

Gaps

There are potential gaps in the ITS architecture update due to limited stakeholder response and limited public information availability. Where the update team could not confirm the status of a data flow or project, it remained designated as planned in the architecture.

The following projects and service areas lacked adequate input to definitively identify the status (planned, existing, or not planned) of certain data exchanges:

- **Transit:** All transit agencies were assumed to have the same status of existing and planned information flows. If one or more transit agencies have more robust communications than the others, it is not reflected in the ITS architecture.
- **Emergency Management:** Emergency management was primarily based on the TEPP and one stakeholder survey response. With no input from other emergency management stakeholders, the communications across agencies and jurisdictions primarily remain planned.
- **US 101 Corridor Improvements:** Input on the FTIP funded US 101 corridor improvements was limited to publicly available information. While typical ITS improvements such as dynamic signage, ramp metering, and CCTV were included as planned improvements, they may not reflect all improvements.
- **Grant-funded Projects:** FTIP, HSIP, and stakeholder input were the primary sources for information on grant funded projects. All grant funded projects may not be reflected in the ITS Architecture.

Unconfirmed information flows being left as planned allows for ease of updating as future projects ultimately get built out. Gaps in the status of data exchanges in the ITS Architecture can be bridged through further stakeholder input.

IV. Next Steps

The 2026 ITS architecture update for Imperial and Ventura County positions the regions for future planning efforts and grant funding opportunities for intelligent transportation systems. Future engagement with stakeholders can be used to fill the gaps addressed in this memo and continue to identify the existing and planned elements of each architecture.

It is important to note that the Imperial and Ventura County ITS Architectures serve as frameworks for ITS improvements. They act as references for communication across agencies and jurisdictions and allow for streamlined identification of gaps when a region is prepared to address them. Both Imperial and Ventura County will continue to undergo ITS improvements and their ITS architectures will continue to require updates to reflect their region's status.

The ITS Architecture Final Rule established by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) requires the conformance of ITS projects to a region's overall ITS Architecture to be eligible for federal funding. Overall, both Imperial and Ventura County ITS Architectures were updated with a variety of planned projects across several service areas. The status of specific information flows will still require further stakeholder input, but they are still represented in some capacity and can be updated more flexibly in the future. Continued interagency coordination will support that existing and planned ITS projects will conform with their regional architecture.

Appendix A: Stakeholder Meetings

The update team attended the following meetings to obtain stakeholder input during the update process:

- February 10th Meeting with Imperial County Transportation Commission (ICTC) Senior Transportation Planner and Regional Mobility Coordinator
- February 26th ICTC Technical Advisory Committee (TAC)
- March 18th Ventura County Transportation Commission (VCTC) Transportation Technical Advisory Committee (TTAC)
- May 20th VCTC TTAC
- May 28th ICTC TAC

Appendix B: Stakeholder Surveys

Imperial County ITS Architecture Update Survey

The SCAG team is updating the Imperial County ITS Architecture, which is a planning framework for the deployment of integrated transportation systems. ITS architectures are an inventory of the existing and planned ITS elements in the region, the stakeholders responsible for operations and coordination, and the data exchanges between agencies, systems, and travelers.

Imperial County's ITS Architecture was last updated in 2005. In order to capture the latest information in the current update, the SCAG team is requesting assistance from Imperial County stakeholders. Please provide your knowledge on the following projects to the best of your ability and forward this survey to those who would also be able to provide relevant information.

The goal of this survey is to gain a better understanding of what transportation technology and data exchanges are currently existing or planned in the County.

Please note:

- Projects are being kept general so that they can apply to future development without continuous architecture updates.
- If the project is not fully implemented, it is still considered to be planned.
- Projects that are grant-funded or regionally significant are listed separately.

The survey should take approximately 20 minutes. Please respond to the best of your ability but feel free to skip sections that are not applicable to your role/knowledge.

Survey Responder

1. Name

2. Role and Department

3. Are you interested in being contacted directly for follow up questions from the ITS architecture update team? If yes, please provide your contact information.

Calexico Parking Management

This is a project to use ITS to manage parking and electronic parking payment. KH recommends that this project remain "planned" as it is not fully implemented. Please confirm the status of parking management in Calexico.

4. What is the status of this project?

- ☐ Planned
- ☐ Partially Planned, Partially Implemented
- ☐ Complete
- ☐ Other

Calexico Port of Entry – Brawley CVO Corridor Management System

This project is described in the architecture as ITS traffic management technologies (such as system detection, advanced signal control, CCTV cameras and traffic management systems) to monitor and manage truck traffic along state highways.

The data exchanged in between local signal systems and equipment, Caltrans D11 signal operations and equipment. Data exchanges include traffic detector data, CCTV images/video, and signal control.

5. What is the status of this project in Brawley?

- ☐ Planned
- ☐ Partially Planned, Partially Implemented
- ☐ Complete
- ☐ Other

6. What is the status of this project countywide?

- ☐ Planned
- ☐ Partially Planned, Partially Implemented
- ☐ Complete
- ☐ Other

Grade Crossing Installation

7. Are grade crossings existing in Plaster City?

- ☐ Yes, grade crossing projects are complete in Plaster City
- ☐ Partially, Plaster City has grade crossings but there are more planned
- ☐ No, all grade crossing projects in Plaster City are still planned

8. Are there any grade crossing projects that should be specifically called out (regionally significant or grant funded)?

9. What is the status of the following data exchanges between County systems, local city systems, and rail operators? The exchanges in this table are believed to be **planned or partially implemented**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Rail crossing request and control	☐	☐	☐
Traffic images and video surveillance	☐	☐	☐
Arriving train information	☐	☐	☐
Right-of-way coordination	☐	☐	☐

10. Any additional information to provide about the data exchanges above?

11. What is the status of the following data exchanges between County systems, local city systems, and rail operators? The exchanges in this table are believed to be **existing**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Track status	☐	☐	☐
Rail crossing operational status	☐	☐	☐

12. Any additional information to provide about the data exchanges above?

I-8 Corridor ITS Gap Closure Project

This is a project to install traffic operations system (TOS) elements and communications media to provide surveillance of state highway for roadside weather and traffic conditions from the Regional TMC.

13. Please confirm the status (planned or existing) of the following data exchanges between Caltrans D11 TMC and Caltrans roadside equipment:

	Planned	Existing	Unknown/Other
Traffic images/video surveillance	☐	☐	☐
Roadway/traffic sensors	☐	☐	☐
Ramp metering	☐	☐	☐

14. Any additional information to provide about the data exchanges above?

Imperial Valley Transit

15. What is the status of the following data exchanges between IVT and transit vehicles? The exchanges in this table are believed to be **planned**, but **please confirm**.

	Planned	Existing	Unknown/Other
Transit vehicle tracking (GTFS)	☐	☐	☐
Vehicle schedule performance (GTFS)	☐	☐	☐
Demand response passenger data (boarding/alighting information, paratransit/microtransit requests)	☐	☐	☐
Electronic transit fare collection and management	☐	☐	☐
Transit traveler information (real time information to riders/personal devices)	☐	☐	☐

16. Any additional information to include about the data exchanges above?

17. What is the status of the following data exchanges between IVT and transit vehicles? The exchanges in this table are believed to be **existing**, but **please confirm**.

	Planned	Existing	Unknown/Other
Transit schedule information	☐	☐	☐
Vehicle operator information	☐	☐	☐
Transit vehicle conditions	☐	☐	☐

18. Any additional information to include about the data exchanges above?

IVT: Transit Signal Priority

TSP has been added to the Imperial Valley Transit project.

19. Please confirm if any of the following data exchanges are already existing between Caltrans TMC/equipment, Imperial Valley Transit, and local city signal systems/equipment:

	Planned	Partial	Existing	Unknown/Other
Transit schedule information	☐	☐	☐	☐
Intersection status	☐	☐	☐	☐
Signal control status and commands	☐	☐	☐	☐

20. Any additional information to provide about the data exchanges above?

Multi-Jurisdictional Traffic Signal Coordination and Maintenance Project

21. Which projects should be called out specifically (regionally significant or grant funded)?

Brawley synchronization and the **El Centro TMC/ fiber and video detection** were previously discussed with Imperial County. Should either of these be added as specific projects?

22. Please confirm the status (planned or existing) of the following data exchanges between Caltrans D11 signal operations and equipment, local cities signal systems and equipment, and Imperial County equipment:

	Planned	Partial	Existing	Unknown/Other
Traffic images/video surveillance	☐	☐	☐	☐
Roadway/traffic sensors	☐	☐	☐	☐
Signal control	☐	☐	☐	☐

23. Any additional information about the data exchanges above?

Rail and Highway Intersection Improvements

24. What is the status of the specific improvements listed in the original project?

Improvements to **far east and far west portions of Interstate 8, along with State Routes 111, 115, and 80**

25. Are there any rail/highway intersection improvement projects that should be called out specifically (regionally significant or grant funded)?

26. What is the status of the following data exchanges between rail operators, local city systems, County systems, and Caltrans? The exchanges in this table are believed to be **planned**, but **please confirm**.

	Planned	Existing	Unknown/Other
Video surveillance and traffic images	☐	☐	☐
Rail crossing advisories	☐	☐	☐
Right-of-way coordination	☐	☐	☐

27. Any additional information to include about the data exchanges above?

28. Any additional information to include about the data exchanges above?

Recreational Area ATIS

This is a project to provide traffic information to motorists at the Glamis Dunes and Slaton Sea recreational areas of the County.

The data exchanges involved in this project include traffic images, traffic control, and dynamic signage with communications between Caltrans and Imperial County.

29. Is this still a fully planned project?

- ☐ Yes, this project is fully planned
- ☐ Partially, some aspects have been implemented but others are still planned
- ☐ No, this is a completed project
- ☐ This project is no longer relevant to the County
- ☐ Other

State Highway Callbox Project

30. Please confirm that this project should be deleted since callboxes are being decommissioned.

- ☐ Yes, the callbox project is no longer relevant to Imperial County's ITS architecture
- ☐ No, please keep this as an existing project
- ☐ Other

State Highway Roadside Weather Information Systems (RWIS)

This project includes the exchange of environmental data between Caltrans TMC and Caltrans equipment (and it is already categorized as existing). KH would like to confirm the status of this system.

31. Is this system still in use?

Traffic Signal Systems Upgrade

32. Please confirm if any of these FTIP projects should be added individually (grant funded or regionally significant)?

- ☐ Traffic Signal Synchronization & Intelligent Transportation Systems Phase I on Main Street from Western Avenue to 6th Street
- ☐ Traffic Signal Synchronization & Intelligent Transportation Systems Phase II on Main Street from 6th Street to Best Ave., and on 8th Street from Main Street to B Street
- ☐ Imperial Ave. Traffic Signal Synchronization from Ocotillo Dr. to Main St.
- ☐ None need to be called out specifically (general Traffic Signal Systems Upgrades)

33. Are there any other traffic signal systems upgrade projects that should be called out specifically (regionally significant or grant funded)?

Rail Projects

The original rail projects have been superseded by Positive Train Control (PTC). Please respond to the following questions for the update to rail related elements and projects.

34. Please confirm the status of the following elements. They are presumed to be **existing**.

	Planned	Existing	Unknown/Other
Union Pacific on-board PTC component	☐	☐	☐
Union Pacific wayside signal systems	☐	☐	☐
Union Pacific Train Control and Operations Center	☐	☐	☐
Work Zone Safety Management System	☐	☐	☐

35. Any additional comments on the elements above?

36. Do the Union Pacific PTC systems share data with the County and local jurisdictions?

Is there still a need or plan for increased coordination?

37. Is Union Pacific data used (or planned to be used) for Railroad Grade Crossings or Work Zone Safety Monitoring?

38. What is the status of the following data exchanges between rail operators, local city systems, County systems, and Caltrans? The exchanges in this table are believed to be **existing**, but **please confirm**.

	Planned	Existing	Unknown/Other
Rail crossing operational status	☐	☐	☐
Track status	☐	☐	☐
Traffic signal control	☐	☐	☐
Traffic detector data and controls	☐	☐	☐

New Project: Intermodal Transportation Center

Adding a project for the Calexico Intermodal Transportation Center (in progress) and East Port of Entry Intermodal Transportation Center (funding awarded).

39. Please confirm that the following stakeholders are involved with the intermodal transportation center. Check all that apply.

☐ Imperial Valley Transit

☐ City of Calexico

☐ Imperial County

☐ Other

New Project: U.S. Border Management Systems

Adding a border management project which will include border management systems, international border coordination, dynamic lane management, and emergency response at the border. Please answer the following questions regarding the current state of data exchanges and communication at the border crossings.

40. The stakeholders included in this project are U.S. Border Patrol, U.S. Port of Entry, Imperial County, Caltrans, and local cities. **Are any other stakeholders involved with border management?**

41. What is the existing border inspection system?

42. Are there any communications with Mexico-side border management (inspection results, expedited clearance, etc.)?

43. Are border wait times currently tracked?

- ☐ Yes
- ☐ No
- ☐ Other

44. Is there any dynamic lane management?

- ☐ Yes
- ☐ No
- ☐ Other

45. What emergency management center works with the border? (CHP, County...)?

Regional TMC

Please provide more information about the potential regional TMC discussed in initial meetings. This can be added as a future planned project.

46. Who are the stakeholders involved in a potential future regional TMC effort?

47. What facilities are involved and who will manage them?

48. Is there any more relevant information to provide or a contact to discuss this project further?

Electric Vehicle Infrastructure

Electric Charging Station Management will be added as planned.

49. Who will own/manage EV charging infrastructure?

Emergency Management

50. Please confirm the following stakeholders are involved in emergency management. Select all that apply.

- ☐ Imperial County and EOC
- ☐ Local Cities
- ☐ Caltrans
- ☐ California Highway Patrol (CHP) and CHP EOC
- ☐ U.S. Border Patrol
- ☐ Other

51. What is the status of the following data exchanges for emergency management? The exchanges in this table are believed to be **existing**, but **please confirm**.

	Planned	Existing	Unknown/Other
Emergency Plan coordination	☐	☐	☐
Emergency routes	☐	☐	☐
Emergency dispatch information	☐	☐	☐
Incident status information	☐	☐	☐

52. Anything to add regarding the data exchanges above?

53. What is the status of the following data exchanges for emergency management? The exchanges in this table are believed to be **planned**, but **please confirm**.

	Planned	Existing	Unknown/Other
Road network information (real time roadway status)	☐	☐	☐

Other Improvements

Please include what, if any, ITS elements are involved in the following projects (cameras, tolling, CMS, etc).

54. Forrester Road Expressway

Are there any ITS elements involved with this project?

55. SR-86 Border Patrol Checkpoint Expansion

Are there any ITS elements involved with this project?

56. Street Safety with Traffic Control

As described by the FTIP: street safety improvements via traffic control devices, sidewalks, curb ramps, and curb extensions at various intersections on Main St, 12th St, and Community Center.

Are there any ITS elements involved with traffic control or other aspects of this project?

Additional Projects

57. Are there any ITS projects that have not been mentioned that should be included?

Conclusion

Thank you so much for you time completing this survey!

58. Any other questions or comments?

Ventura County ITS Architecture Update Survey

The SCAG team is updating the Ventura County ITS Architecture, which is a planning framework for the deployment of integrated transportation systems. ITS architectures are an inventory of the existing and planned ITS elements in the region, the stakeholders responsible for operations and coordination, and the data exchanges between agencies, systems, and travelers.

Ventura County's ITS Architecture was last updated in 2005. In order to capture the latest information in the current update, the SCAG team is requesting assistance from Imperial County stakeholders. Please provide your knowledge on the status of the following service areas and projects to the best of your ability and forward this survey to those who would also be able to provide relevant information.

The goal of this survey is to gain a better understanding of what transportation technology and data exchanges are currently existing or planned in the County.

Please note:

- Projects are being kept general so that they can apply to future development without continuous architecture updates.
- If the project is not fully implemented, it is still considered to be planned.
- Projects that are grant-funded or regionally significant are listed separately.

Survey Responder

1. Name

2. Role and Department

3. Would you be interested in being contacted directly for follow-up questions?

☐ Yes

☐ No

4. If you answered "Yes" to the previous question, please provide your contact information.

Transit

This service area covers transit agencies, fare payment systems, paratransit, coordination with other agencies, and free fare programs. Please confirm the status of the following transit-related services.

5. Do the following stakeholders represent all transit agencies in Ventura County?

- Camarillo Area Transit
- Gold Coast Transit District
- Kanan Shuttle
- Moorpark City Transit
- Ojai Trolley
- Simi Valley Transit
- Thousand Oaks Transit
- Valley Express
- VCTC Intercity

Please type in any missing transit agencies in the "Other" option, if applicable.

☐ Yes

☐ Other

6. What is the status of the following data exchanges between transit agencies, transit vehicles, and fare payment systems in Ventura County? The data shared in this table are believed to be **existing**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Schedule Information	☐	☐	☐
Fare Collection	☐	☐	☐
Location Information	☐	☐	☐
Schedule Performance	☐	☐	☐
Passenger Boarding Information	☐	☐	☐

7. What is the status of the following data exchanges between transit agencies, transit vehicles, and fare payment systems in Ventura County? The data shared in this table are believed to be **planned or partially implemented**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Operator Information (transit instructions, alerts, and traffic information for transit vehicle operators)	☐	☐	☐
Alarm Information (alarm activated by a transit vehicle operator)	☐	☐	☐
Transit Vehicle Conditions (engine conditions, fuel level, oil pressure, etc.)	☐	☐	☐
Incident Information (vehicle collisions, natural disasters, etc.)	☐	☐	☐

8. Are the following payment systems two separate systems or one integrated system?

- VCbuspass
- Tap2Ride

- ☐ Two separate systems
- ☐ One integrated system
- ☐ Other

9. Are there any other fare payment systems that should be included in the ITS Architecture?

- ☐ No
- ☐ Other

10. Do fare payment systems communicate the same level of information across all transit agencies?

☐ Yes

☐ Other

11. Do the following stakeholders provide demand-response services? This includes Dial-A-Ride and paratransit.

- Agoura Hills
- Camarillo Area Transit
- East County Transit Alliance
- Gold Coast Transit District
- Moorpark City Transit
- Simi Valley Transit
- Thousand Oaks Transit
- Valley Express

Please type in any missing agencies in the "Other" option, if applicable.

☐ Yes

☐ Other

12. How is information coordinated for ride-sharing through demand-response services?

13. What is the status of the following data exchanges between transit agencies, demand-response vehicles, and fare payment systems in Ventura County? The data shared in this table are believed to be **existing**, but **please confirm**.

	Planned	Existing	Unknown/Other
Demand Responsive Transit Information (pickup and drop off information for paratransit)	☐	☐	☐
Operator Information (transit instructions, alerts, and traffic information for transit vehicle operators)	☐	☐	☐
Passenger Boarding Information	☐	☐	☐
Trip Confirmation (driver accepting reservation/route requests)	☐	☐	☐

14. What is the status of the following data exchanges between transit agencies, demand-response vehicles, and fare payment systems in Ventura County? The data shared in this table are believed to be **planned or partially implemented**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Incident Information (vehicle collisions, natural disasters, etc.)	☐	☐	☐

15. Do any transit agencies coordinate schedules with Amtrak and Metrolink service? If there are specific transit agencies, please list them in the "Other" option:

- ☐ Yes
- ☐ No
- ☐ Other

16. What is the status of the following data exchanges between Amtrak, Metrolink, and VCTC? The data shared in this table are believed to be **planned or partially implemented**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Incident Information (vehicle collisions, natural disasters, etc.)	☐	☐	☐
Fare Information	☐	☐	☐

17. Is any other information exchanged between Amtrak, Metrolink, and VCTC? If so, please list in the "Other" option:

- ☐ No
- ☐ Other

18. The College Ride Program is a free fare program that is scheduled to end in June 2026. Are there any plans to continue this program or any other free fare programs? If so, please elaborate in the "Other" option:

- ☐ No
- ☐ Other

19. How is information shared and verified for free fare programs?

20. Is there any other transit-related information that should be included in the ITS Architecture?

Emergency Management

This service area covers emergency management and related data exchanges. Please confirm the status of the following emergency management related information.

21. Do the following stakeholders represent all emergency management in Ventura County?

- Ventura County Office of Emergency Services
- VCTC
- Local Agencies
- Transit Agencies
- Airports
- Ports/Harbors
- Naval Base Ventura County
- Channel Islands Air National Guard Station
- Commercial Railroads
- Caltrans
- California Highway Patrol (CHP)

Please type in any missing stakeholders in the "Other" option, if applicable.

☐ Yes

☐ Other

22. What is the status of the following data exchanges between emergency management stakeholders? The data shared in this table are believed to be **existing**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Emergency Plan Coordination	☐	☐	☐
Emergency Routes	☐	☐	☐
Emergency Dispatch Information	☐	☐	☐

23. What is the status of the following data exchanges between emergency management stakeholders? The data shared in this table are believed to be **planned**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Road Network Information	☐	☐	☐
Incident Status Information	☐	☐	☐

24. Is there any other emergency management-related information that should be included in the ITS Architecture?

Grant Funded and Regionally Specific Projects

25. The City of Oxnard Class II Bike Lanes Project is funded by the Federal Transportation Improvement Program (FTIP). Do the following stakeholders/elements represent all points of communication involved in this project?

- Local Traffic Control Systems
- Local Traffic Control Equipment
- Caltrans Equipment

Please type in any missing elements in the "Other" option, if applicable.

☐ Yes

☐ Other

26. What is the status of the following data exchanges between City of Oxnard Class II Bike Lanes Project elements? The data shared in this table are believed to be **planned or partially implemented**, but **please confirm**.

	Planned or Partially Implemented	Existing	Unknown/Other
Detection Information (loop detectors, cameras, etc.)	☐	☐	☐
Signal Control Information (communication with traffic signal controllers)	☐	☐	☐

27. The US-101 Corridor Improvements are funded by FTIP. Do the following stakeholders represent all stakeholders involved in this project?

- VCTC
- Caltrans
- City of Ventura
- City of Oxnard
- City of Camarillo
- City of Thousand Oaks
- County of Ventura

Please type in any missing stakeholders in the "Other" option, if applicable.

☐ Yes

☐ Other

28. Are dynamic signage, ramp metering, CCTV, and/or other transportation technologies being considered for the US-101 Corridor Improvements? If so, please list them in the "Other" option:

☐ No

☐ Other

29. Do the following stakeholders represent all transit agencies that would be involved in Transit Signal Priority (TSP)?

- Camarillo Area Transit
- Gold Coast Transit District
- Kanan Shuttle
- Moorpark City Transit
- Ojai Trolley
- Simi Valley Transit
- Thousand Oaks Transit
- Valley Express
- VCTC Intercity

Please type in any missing transit agencies in the "Other" option, if applicable.

☐ Yes

☐ Other

30. Is there any information currently being shared with roadway equipment that would be compatible with TSP operations? (Ex: intersection status information, signal control status, etc.)

31. What charging infrastructure projects are existing or planned in Ventura County?

32. Are there any other grant funded and/or regionally specific projects that should be included in the ITS Architecture?