Amtrak Next Train CMS [Planned]

San Luis Obispo County Local ITS

Remote Transit Information Services

Public traveler interface that provides real-time travel-related information at transit stops and multi-modal transfer points, including general annunciation, display of imminent arrival information, the latest available information on transit routes, schedules, transfer options, available services, fares, and real-time schedule adherence.

1. The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users. (Status: Planned) (3)

Amtrak/MetroLink Automated Ticketing [Planned]

San Luis Obispo Regionally Significant ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
2. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
3. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
4. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
5. The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations. (Status: Planned) (1)

Arroyo Grande (Portable) CMS [Planned]

San Luis Obispo County Local ITS

Roadway Traffic Information Dissemination

Driver information systems, such as dynamic message signs and Highway Advisory Radio (HAR).

1. The field element shall include dynamic messages signs for dissemination of traffic and other information to drivers; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close). (Status: Planned) (6)
2. The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.). (Status: Planned) (7)
3. The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) for repair. (Status: Planned) (8)

Arroyo Grande Advanced Crosswalks [Programmed]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Programmed) (1)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Programmed) (2)

Arroyo Grande Signal Pre-Emption [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)

Roadway Signal Priority

Field elements that provide the capability to receive vehicle signal priority requests and control traffic signals accordingly.

1. The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings. (Status: Existing) (1)

Arroyo Grande Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)
2. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)

Atascadero Advanced Crosswalks [Planned]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Planned) (1)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Planned) (2)

Atascadero Parking Management System [Planned]

San Luis Obispo County Local ITS

Parking Data Collection

Collection and storage of parking management information. For use by operations personnel or data archives in the region.

1. The parking element shall be able to produce sample products of the data available. (Status: Planned) (4)
2. The parking element shall receive and respond to requests from ITS Archives for either a catalog of the parking management data or for the data itself. (Status: Planned) (3)
3. The parking element shall collect parking management data including lot usage and charging information. (Status: Planned) (1)

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall read data from the traveler card / payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (2)
2. The parking element shall process requests for the advanced payment of tolls and transit fares as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (9)
3. The parking element shall process requests for parking lot charges to be paid in advance. (Status: Planned) (8)
4. The parking element shall support the payment of parking lot transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (7)
5. The parking element shall process the financial requests and manage an interface to a Financial Institution. (Status: Planned) (6)
6. The parking element shall provide an interface to the driver informing them of the success or failure of the financial transaction. This may involve a request for the driver to pull aside so the operator can resolve an issue. (Status: Planned) (3)
7. The parking element shall detect and classify vehicles entering and exiting a parking facility (vehicle size, type, identifiable features, etc.). (Status: Planned) (1)
8. The parking element shall manage the parking lot charges, considering such factors as location, vehicle types, and times of day. (Status: Planned) (5)

Parking Management

Monitor vehicles and current parking availability within parking facilities. Use driver information systems (e.g., DMS) to provide parking availability and other parking facility information to drivers. Support local traffic control coordination around the parking facility.

1. The parking element shall manage local dynamic message signs that display messages to travelers such as the parking lot state, number of spaces available, location of entrances, and current charges. (Status: Planned) (3)
2. The parking element shall provide the capability to detect, count, and classify vehicles at entrances, exits, and designated locations within a parking facility. (Status: Planned) (4)
3. The parking element shall maintain parking lot information including static information such as hours of operation, rates, location, entrance locations, capacity, type, and constraints; as well as dynamic information such as current state of the lot, occupancy, arrival rates, and departure rates. (Status: Planned) (1)

Atascadero Parking Management System [Planned]

San Luis Obispo Regionally Significant ITS

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall read data from a Regional smart card payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (11)

Atascadero Signal Pre-Emption [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)

Roadway Signal Priority

Field elements that provide the capability to receive vehicle signal priority requests and control traffic signals accordingly.

1. The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings. (Status: Existing) (1)

Atascadero Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)
2. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)

Atascadero Transit [Existing]

San Luis Obispo County Local ITS

Transit Center Fixed-Route Operations

Management of fixed route transit operations. Planning, scheduling, and dispatch associated with fixed and flexible route transit services. Updates customer service operator systems, and provides current vehicle schedule adherence and optimum scenarios for schedule adjustment.

1. The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services. (Status: Planned) (10)
2. The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes (Status: Planned) (2)
3. The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency. (Status: Existing) (3)
4. The center shall collect transit operational data for use in the generation of routes and schedules. (Status: Existing) (5)
5. The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc. (Status: Existing) (9)
6. The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data. (Status: Existing) (1)

Transit Center Multi-Modal Coordination

Generate requests for transit priority on routes and at certain intersections. Coordinate schedules with other agencies and modes, including transit transfer cluster and transfer point information.

1. The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies. (Status: Planned) (5)
2. The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes. (Status: Planned) (3)

Transit Data Collection

Collection and storage of transit management data. For use by operations personnel or data archives in the region.

1. The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc. (Status: Existing) (1)

Atascadero Transit [Existing]

Transit Vehicle Operator Scheduling

Assignment of transit vehicles and operators to routes or service areas in a fair manner while minimizing labor and overtime services, considering operator preferences, qualifications, accumulated work hours, and other information about each operator.

1. The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability. (Status: Existing) (3)
2. The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies. (Status: Existing) (1)
3. The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments. (Status: Existing) (2)
4. The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions. (Status: Existing) (4)

San Luis Obispo Regionally Significant ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
2. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)

Transit Center Information Services

Provide interactive traveler information to travelers (on-board transit vehicles, at stops/stations, using personal devices), traveler information service providers, media, and other transit organizations. Includes routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, yellow pages, and special events.

1. The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems. (Status: Planned) (3)

Atascadero Transit Next Bus CMS [Planned]

San Luis Obispo County Local ITS

Remote Transit Information Services

Public traveler interface that provides real-time travel-related information at transit stops and multi-modal transfer points, including general annunciation, display of imminent arrival information, the latest available information on transit routes, schedules, transfer options, available services, fares, and real-time schedule adherence.

1. The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users. (Status: Planned) (3)

Atascadero Transit Smart Card [Planned]

San Luis Obispo County Local ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying. (Status: Planned) (1)
2. The transit vehicle shall provide passenger loading and fare statistics data to the center. (Status: Planned) (10)
3. The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities. (Status: Planned) (6)
4. The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information. (Status: Planned) (4)

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
2. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
3. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
4. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
5. The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations. (Status: Planned) (1)
6. The center shall process requests for transit fares to be paid in advance. (Status: Planned) (6)
7. The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information. (Status: Planned) (2)
8. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
9. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Planned) (10)

San Luis Obispo Regionally Significant ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The trasit vehicle shall accept payment instruments from Regional partners. (Status: Planned) (11)

Atascadero Transit Smart Kiosk [Planned]

San Luis Obispo County Local ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate parking information to travelers, including location, availability, and fees. (Status: Planned) (4)
2. The center shall collect, process, store, and disseminate event information to travelers. (Status: Planned) (7)
3. The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information. (Status: Planned) (10)
4. The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (3)

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall provide all traveler information based on the traveler's current location or a specific location identified by the traveler, and filter or customize the provided information accordingly. (Status: Planned) (10)
2. The center shall manage payment for services, such as tolls, transit fares, parking lot charges, map updates, and advanced payment for tolls, and provide transaction success or failure details. (Status: Planned) (12)
3. The center shall collect, process, store, and disseminate customized multimodal transportation service information (for example, from ferry and airline operators), including transfer points and other information, to travelers upon request. (Status: Planned) (7)
4. The center shall collect, process, store, and disseminate customized parking information to travelers, including location, availability, and fees upon request. (Status: Planned) (4)
5. The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (3)
6. The center shall provide the capability for a system operator to control the type and update frequency of traveler information. (Status: Planned) (17)
7. The center shall collect, process, store, and disseminate customized event information to travelers upon request. (Status: Planned) (8)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler. (Status: Planned) (2)

Atascadero Transit Smart Kiosk [Planned]

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler upon request. (Status: Planned) (2)
2. The public interface for travelers shall receive event information from a center and present it to the traveler upon request. (Status: Planned) (4)
3. The public interface for travelers shall support payment for services, such as confirmed trip plans, confirmed yellow pages services, tolls, transit fares, parking lot charges, and advanced payment for tolls. (Status: Planned) (8)
4. The public interface for travelers shall provide an interface through which credit identities and stored credit values may be collected from tags, traveler cards, or payment instruments used by travelers. (Status: Planned) (9)
5. The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly. (Status: Planned) (10)

San Luis Obispo Regionally Significant ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (12)

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier. (Status: Planned) (14)
2. The center shall collect, process, store, and disseminate customized Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (21)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler. (Status: Planned) (10)

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler upon request. (Status: Planned) (15)

Caltrans 1-800 ROAD Call-In System [Existing]

San Luis Obispo Regionally Significant ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information. (Status: Existing) (10)
2. The center shall collect, process, store, and disseminate weather information to travelers. (Status: Existing) (6)
3. The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities. (Status: Existing) (2)
4. The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Existing) (1)

ISP Emergency Traveler Information

Collection and distribution of emergency information to the traveler public, including evacuation information and wide-area alerts.

1. The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings. (Status: Existing) (3)
2. The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes. (Status: Existing) (1)
3. The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers. (Status: Existing) (4)

ISP Traveler Data Collection

Collects traveler information from other centers, consolidates and refines the collected data, and makes this data available to traveler information applications.

1. The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Existing) (1)
2. The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities. (Status: Existing) (2)
3. The center shall collect, process, and store weather information. (Status: Existing) (6)

Caltrans 1-800 ROAD Call-In System [Existing]

Traveler Telephone Information

Collection and distribution of traveler information and wide-area alerts to traveler telephone information systems such as 511, based on voice-based traveler requests.

1. The center shall collect and provide weather and event information in the requested voice format and for the requested location. (Status: Existing) (7)
2. The center shall receive and forward region-specific wide-area alert and advisory information to the traveler telephone information system, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings. (Status: Existing) (12)
3. The center shall collect and provide roadway environment conditions information in the requested voice format and for the requested location. (Status: Existing) (6)
4. The center shall collect and provide work zone and roadway maintenance information in the requested voice format and for the requested location. (Status: Existing) (5)
5. The center shall collect and provide information on traffic conditions in the requested voice format and for the requested location. (Status: Existing) (4)
6. The center shall provide the capability to process traveler information requests from a traveler telephone information system. (Status: Existing) (3)
7. The center shall provide the capability to process voice-formatted requests for traveler information from a traveler telephone information system, and return the information in the requested format. (Status: Existing) (1)

Caltrans D4 TMC [Existing]

San Luis Obispo Regionally Significant ITS

Collect Traffic Surveillance

Management of traffic sensors and surveillance (CCTV) equipment, and distribution of the collected information to other centers and operators.

1. The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers. (Status: Planned) (4)
2. The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center. (Status: Existing) (2)
3. The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center. (Status: Existing) (1)
4. The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network. (Status: Existing) (6)
5. The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution. (Status: Existing) (5)

Emergency Call-Taking

Provides interface to the emergency call-taking systems such as the Emergency Telecommunications System (e.g., 911) that correlate call information with emergencies reported by transit agencies, commercial vehicle operators, or other public safety agencies. Allows the operator to verify the incident and forward the information to the responding agencies.

1. The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator. (Status: Existing) (2)
2. The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence. (Status: Planned) (7)
3. The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident. (Status: Existing) (8)
4. The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency. (Status: Existing) (9)
5. The center shall update the incident information log once the emergency system operator has verified the incident. (Status: Existing) (10)
6. The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator. (Status: Existing) (5)
7. The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator. (Status: Planned) (4)
8. The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator. (Status: Existing) (6)

Caltrans D4 TMC [Existing]

Emergency Commercial Vehicle Response

Responds to commercial vehicle and freight equipment related emergencies. Includes incidents involving hazardous materials as well as the detection of non-permitted transport of security sensitive hazmat.

1. The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc. (Status: Existing) (1)

Emergency Data Collection

Collection and storage of information related to Emergency Management. For use by operations personnel or data archives in the region.

1. The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data. (Status: Existing) (1)
2. The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself. (Status: Existing) (3)

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Existing) (9)
2. The center shall relay location and incident details to the responding vehicles. (Status: Existing) (3)
3. The center shall receive traffic images to support dispatch of emergency vehicles. (Status: Existing) (7)
4. The center shall store and maintain the emergency service responses in an action log. (Status: Existing) (5)
5. The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control. (Status: Existing) (1)

Caltrans D4 TMC [Existing]

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies. (Status: Existing) (3)
2. The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies that impact Stae highwyas. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies. (Status: Existing) (16)
3. The center shall provide strategic emergency response capabilities such as that of an Emergency Operations Center for large-scale incidents on State highways and disasters. (Status: Existing) (15)
4. The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations. (Status: Existing) (14)
5. The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations. (Status: Planned) (10)
6. The center shall receive event scheduling information from Event Promoters. (Status: Existing) (7)
7. The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident. (Status: Existing) (6)
8. The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed. (Status: Existing) (5)
9. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Existing) (4)

Incident Command

Tactical decision support, resource coordination, and communications integration among emergency management agencies for Incident Commands that are established by first responders to support local management of an incident.

1. The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions. (Status: Existing) (4)
2. The center shall track and maintain resource information and action plans pertaining to the incident command. (Status: Existing) (3)
3. The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers. (Status: Existing) (2)
4. The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident. (Status: Existing) (1)

Caltrans D4 TMC [Existing]

Service Patrol Management

Dispatch and communication with roadway service patrol vehicles that monitor roads to aid motorists, offering rapid response to minor incidents.

1. The center shall share incident information collected by the service patrol with traffic, maintenance and construction, and traveler information centers for incident management, incident notification to travelers, and incident cleanup. (Status: Existing) (3)
2. The center shall store the current status of all service patrol vehicles available for dispatch and those that have been dispatched. (Status: Existing) (2)
3. The center shall dispatch roadway service patrol vehicles to identified incident locations. (Status: Existing) (1)
4. The center shall track the location and status of service patrol vehicles. (Status: Existing) (4)

TMC Freeway Management

Remotely controls ramp meters, interchange connector meters, lane control signals, mainline meters, and variable speed control systems.

1. The center shall remotely control systems to manage use of the freeways, including ramp meters, mainline metering, and lane controls. (Status: Existing) (1)
2. The center shall collect fault data from ramp meters, mainline metering, and lane controls. (Status: Existing) (3)
3. The center shall implement control strategies, under control of center personnel, on some or all of the freeway network devices (e.g. ramp meters, mainline metering, and lane controls), based on data from sensors monitoring traffic conditions upstream, downstream, and queue data on the ramps themselves. (Status: Existing) (4)
4. The center shall collect operational status from ramp meters, mainline metering, and lane controls and compare against the control information sent by the center. (Status: Existing) (2)

TMC Incident Detection

Remotely controls traffic and video sensors to support incident detection and verification; exchange information with other agencies including emergency management, maintenance and construction, alerting and advisory systems, event promoters, intermodal freight depots, and traveler information systems.

1. The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents. (Status: Existing) (2)
2. The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents. (Status: Existing) (6)
3. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots. (Status: Existing) (3)
4. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Existing) (4)

Caltrans D4 TMC [Existing]

TMC Incident Dispatch Coordination/Communication

Center-based capability to formulate an incident response that takes into account the incident potential, incident impacts, and/or resources required for incident management including proposing and facilitating the dispatch of emergency response and service vehicles as well as coordinating response with all appropriate cooperating agencies.

1. The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, and information and instructions necessary for the public to respond to the alert. This may also id (Status: Existing) (1)
2. The center shall provide road network conditions and traffic images to the Caltrans website, emergency management centers, maintenance and construction centers, and traveler information service providers. (Status: Existing) (12)
3. The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure. (Status: Existing) (10)
4. The center shall coordinate information and controls with other traffic management centers. (Status: Existing) (9)
5. The center shall exchange road network status assessment information with emergency management and maintenance centers including an assessment of damage sustained by the road network including location and extent of the damage, estimate of remaining capacity, required closures, alternate routes, necessary restrictions, and time frame for repair and recovery. (Status: Existing) (8)
6. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers. (Status: Existing) (6)
7. The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers. (Status: Existing) (5)
8. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Existing) (4)
9. The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption. (Status: Existing) (3)
10. The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations. (Status: Existing) (2)

Caltrans D4 TMC [Existing]

TMC Regional Traffic Control

Coordination between traffic management centers in order to share traffic information between centers as well as control of traffic management field equipment. This may be used during incidents and special events and during day-to-day operations.

1. The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information. (Status: Existing) (1)
2. The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.). (Status: Existing) (2)

TMC Signal Control

Remotely controls traffic signal controllers to implement traffic management strategies at signalized intersections based on traffic conditions, incidents, emergency vehicle preemptions, pedestrian crossings, etc.

1. The center shall remotely control traffic signal controllers. (Status: Existing) (1)
2. The center shall collect traffic signal controller fault data from the field. (Status: Existing) (4)
3. The center shall collect traffic signal controller operational status and compare against the control information sent by the center. (Status: Existing) (3)
4. The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc. (Status: Existing) (5)
5. The center shall accept notifications of right-of-way requests from pedestrians. (Status: Existing) (2)

Caltrans D4 TMC [Existing]

TMC Traffic Information Dissemination

Controls dissemination of traffic-related data to other centers, the media, and travelers via the driver information systems (DMS, HAR) that it operates.

1. The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media. (Status: Existing) (8)
2. The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported. (Status: Existing) (7)
3. The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers. (Status: Existing) (6)
4. The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc. (Status: Existing) (5)
5. The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair. (Status: Existing) (4)
6. The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.). (Status: Existing) (3)
7. The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers. (Status: Existing) (2)
8. The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers. (Status: Existing) (1)

Traffic Data Collection

Collection and storage of traffic management data. For use by operations personnel or data archives in the region.

1. The center shall collect traffic management data such as operational data, event logs, etc. (Status: Existing) (1)
2. The center shall be able to produce sample products of the data available. (Status: Existing) (4)

Traffic Maintenance

Monitoring and remote diagnostics of field equipment - detect failures, issue problem reports, and track the repair or replacement of the failed equipment.

1. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status. (Status: Existing) (1)
2. The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared. (Status: Existing) (7)
3. The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status. (Status: Existing) (2)
4. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair. (Status: Existing) (3)
5. The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair. (Status: Existing) (4)

Caltrans D5 (Portable) HAR [Existing]

San Luis Obispo County Local ITS

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall receive traffic information from a center and present it to the traveler. (Status: Existing) (1)
2. The public interface for travelers shall receive event information from a center and present it to the traveler. (Status: Existing) (3)
3. This public interface for travelers shall receive evacuation information from a center and present it to the traveler. (Status: Existing) (4)
4. The public interface for travelers shall receive wide-area alerts and present it to the traveler. (Status: Existing) (5)

Roadway Traffic Information Dissemination

Driver information systems, such as dynamic message signs and Highway Advisory Radio (HAR).

1. The field element shall include driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers, under center control. (Status: Existing) (2)
2. The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center. (Status: Existing) (4)
3. The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair. (Status: Existing) (5)

Caltrans D5 CCTV [Existing]

San Luis Obispo County Local ITS

Roadway Basic Surveillance

Field elements that monitor traffic conditions using loop detectors and CCTV cameras.

1. The field element shall return sensor and CCTV system fault data to the controlling center for repair. (Status: Existing) (5)
2. The field element shall collect, process, and send traffic images to the center for further analysis and distribution. (Status: Existing) (2)
3. The field element shall return sensor and CCTV system operational status to the controlling center. (Status: Existing) (4)

Caltrans D5 CMS [Programmed]

San Luis Obispo County Local ITS

Roadway Traffic Information Dissemination

Driver information systems, such as dynamic message signs and Highway Advisory Radio (HAR).

1. The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair. (Status: Existing) (5)
2. The field element shall include dynamic messages signs for dissemination of traffic and other information to drivers, under center control; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close). (Status: Existing) (1)
3. The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center. (Status: Existing) (4)

Caltrans D5 HRI [Programmed]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Programmed) (3)

Standard Rail Crossing

Field elements at highway-rail intersections (HRIs) where operational requirements do not dictate advanced features (e.g., where rail operational speeds are less than 80 miles per hour). Includes traditional HRI warning systems augmented with other standard traffic management devices.

1. The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI). (Status: Programmed) (1)
2. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center. (Status: Programmed) (2)
3. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment. (Status: Programmed) (3)
4. The field element shall receive track status from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and whether a train is approaching. (Status: Programmed) (4)
5. The field element shall close the highway-rail intersection (HRI) when a train is approaching using gates, lights/signs, barriers, and traffic control signals. (Status: Programmed) (7)
6. The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection. (Status: Programmed) (8)

Caltrans D5 Ramp Meters [Programmed]

San Luis Obispo County Local ITS

Roadway Freeway Control

Freeway control equipment including ramp meters, mainline metering, and lane control equipment which controls traffic on freeways, including indicators to drivers.

1. The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions. (Status: Programmed) (3)
2. The field element shall include ramp metering controllers, mainline meters, and lane controls for use on freeways, NOT under center control. (Status: Existing) (7)
3. The field element shall return ramp metering controller, mainline meters, and lane control operational status to the controlling center. (Status: Programmed) (4)
4. The field element shall include ramp metering controllers, mainline meters, and lane controls for use on freeways, under center control. (Status: Programmed) (1)
5. The field element shall return ramp metering controller, mainline meters, and lane control fault data to the maintenance center for repair. (Status: Programmed) (5)
6. The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from the indicator control information. (Status: Programmed) (2)

Caltrans D5 Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)
2. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)

Caltrans D5 TMC [Existing]

San Luis Obispo County Local ITS

Collect Traffic Surveillance

Management of traffic sensors and surveillance (CCTV) equipment, and distribution of the collected information to other centers and operators.

1. The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network. (Status: Existing) (6)
2. The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution. (Status: Existing) (5)
3. The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers. (Status: Planned) (4)
4. The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center. (Status: Existing) (2)
5. The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center. (Status: Existing) (1)

Emergency Call-Taking

Provides interface to the emergency call-taking systems such as the Emergency Telecommunications System (e.g., 911) that correlate call information with emergencies reported by transit agencies, commercial vehicle operators, or other public safety agencies. Allows the operator to verify the incident and forward the information to the responding agencies.

1. The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident. (Status: Existing) (8)
2. The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency. (Status: Existing) (9)
3. The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence. (Status: Planned) (7)
4. The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator. (Status: Existing) (6)
5. The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator. (Status: Existing) (5)
6. The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator. (Status: Planned) (4)
7. The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator. (Status: Existing) (2)
8. The center shall update the incident information log once the emergency system operator has verified the incident. (Status: Existing) (10)

Caltrans D5 TMC [Existing]

Emergency Commercial Vehicle Response

Responds to commercial vehicle and freight equipment related emergencies. Includes incidents involving hazardous materials as well as the detection of non-permitted transport of security sensitive hazmat.

1. The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc. (Status: Existing) (1)

Emergency Data Collection

Collection and storage of information related to Emergency Management. For use by operations personnel or data archives in the region.

1. The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data. (Status: Existing) (1)
2. The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself. (Status: Existing) (3)

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control. (Status: Existing) (1)
2. The center shall relay location and incident details to the responding vehicles. (Status: Existing) (3)
3. The center shall receive traffic images to support dispatch of emergency vehicles. (Status: Existing) (7)
4. The center shall store and maintain the emergency service responses in an action log. (Status: Existing) (5)
5. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Existing) (9)

Caltrans D5 TMC [Existing]

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies. (Status: Existing) (3)
2. The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies that impact Stae highwyas. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies. (Status: Existing) (16)
3. The center shall provide strategic emergency response capabilities such as that of an Emergency Operations Center for large-scale incidents on State highways and disasters. (Status: Existing) (15)
4. The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations. (Status: Existing) (14)
5. The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations. (Status: Planned) (10)
6. The center shall receive event scheduling information from Event Promoters. (Status: Existing) (7)
7. The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident. (Status: Existing) (6)
8. The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed. (Status: Existing) (5)
9. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Existing) (4)

Incident Command

Tactical decision support, resource coordination, and communications integration among emergency management agencies for Incident Commands that are established by first responders to support local management of an incident.

1. The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions. (Status: Existing) (4)
2. The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident. (Status: Existing) (1)
3. The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers. (Status: Existing) (2)
4. The center shall track and maintain resource information and action plans pertaining to the incident command. (Status: Existing) (3)

Caltrans D5 TMC [Existing]

TMC Freeway Management

Remotely controls ramp meters, interchange connector meters, lane control signals, mainline meters, and variable speed control systems.

1. The center shall implement control strategies, under control of center personnel, on some or all of the freeway network devices (e.g. ramp meters, mainline metering, and lane controls), based on data from sensors monitoring traffic conditions upstream, downstream, and queue data on the ramps themselves. (Status: Planned) (4)
2. The center shall collect fault data from ramp meters, mainline metering, and lane controls. (Status: Planned) (3)
3. The center shall collect operational status from ramp meters, mainline metering, and lane controls and compare against the control information sent by the center. (Status: Planned) (2)
4. The center shall remotely control systems to manage use of the freeways, including ramp meters, mainline metering, and lane controls. (Status: Planned) (1)

TMC Incident Detection

Remotely controls traffic and video sensors to support incident detection and verification; exchange information with other agencies including emergency management, maintenance and construction, alerting and advisory systems, event promoters, intermodal freight depots, and traveler information systems.

1. The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents. (Status: Planned) (6)
2. The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents. (Status: Existing) (2)
3. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Existing) (4)
4. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots. (Status: Existing) (3)

Caltrans D5 TMC [Existing]

TMC Incident Dispatch Coordination/Communication

Center-based capability to formulate an incident response that takes into account the incident potential, incident impacts, and/or resources required for incident management including proposing and facilitating the dispatch of emergency response and service vehicles as well as coordinating response with all appropriate cooperating agencies.

1. The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers. (Status: Existing) (7)
2. The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, and information and instructions necessary for the public to respond to the alert. This may also id (Status: Existing) (1)
3. The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption. (Status: Planned) (3)
4. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Existing) (4)
5. The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers. (Status: Existing) (5)
6. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers. (Status: Planned) (6)
7. The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations. (Status: Existing) (2)
8. The center shall provide road network conditions and traffic images to the Caltrans website, emergency management centers, maintenance and construction centers, and traveler information service providers. (Status: Existing) (12)
9. The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure. (Status: Planned) (10)
10. The center shall coordinate information and controls with other traffic management centers. (Status: Existing) (9)

Caltrans D5 TMC [Existing]

TMC Signal Control

Remotely controls traffic signal controllers to implement traffic management strategies at signalized intersections based on traffic conditions, incidents, emergency vehicle preemptions, pedestrian crossings, etc.

1. The center shall accept notifications of right-of-way requests from pedestrians. (Status: Existing) (2)
2. The center shall collect traffic signal controller operational status and compare against the control information sent by the center. (Status: Existing) (3)
3. The center shall remotely control traffic signal controllers. (Status: Existing) (1)
4. The center shall collect traffic signal controller fault data from the field. (Status: Existing) (4)
5. The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc. (Status: Existing) (5)

TMC Traffic Information Dissemination

Controls dissemination of traffic-related data to other centers, the media, and travelers via the driver information systems (DMS, HAR) that it operates.

1. The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers. (Status: Existing) (1)
2. The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc. (Status: Existing) (5)
3. The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers. (Status: Existing) (2)
4. The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair. (Status: Existing) (4)
5. The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers. (Status: Planned) (6)
6. The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported. (Status: Planned) (7)
7. The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media. (Status: Planned) (8)
8. The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.). (Status: Existing) (3)

Traffic Data Collection

Collection and storage of traffic management data. For use by operations personnel or data archives in the region.

1. The center shall collect traffic management data such as operational data, event logs, etc. (Status: Existing) (1)
2. The center shall be able to produce sample products of the data available. (Status: Existing) (4)

Caltrans D5 TMC [Existing]

Traffic Maintenance

Monitoring and remote diagnostics of field equipment - detect failures, issue problem reports, and track the repair or replacement of the failed equipment.

1. The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair. (Status: Existing) (4)
2. The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared. (Status: Existing) (7)
3. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status. (Status: Planned) (1)
4. The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status. (Status: Existing) (2)
5. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair. (Status: Planned) (3)

San Luis Obispo Regionally Significant ITS

Collect Traffic Surveillance

Management of traffic sensors and surveillance (CCTV) equipment, and distribution of the collected information to other centers and operators.

1. The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center. (Status: Existing) (1)
2. The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network. (Status: Existing) (6)
3. The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution. (Status: Existing) (5)
4. The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center. (Status: Existing) (2)
5. The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers. (Status: Planned) (4)

Caltrans D5 TMC [Existing]

Emergency Call-Taking

Provides interface to the emergency call-taking systems such as the Emergency Telecommunications System (e.g., 911) that correlate call information with emergencies reported by transit agencies, commercial vehicle operators, or other public safety agencies. Allows the operator to verify the incident and forward the information to the responding agencies.

1. The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator. (Status: Existing) (2)
2. The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident. (Status: Existing) (8)
3. The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator. (Status: Existing) (6)
4. The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator. (Status: Planned) (4)
5. The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator. (Status: Existing) (5)
6. The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence. (Status: Planned) (7)
7. The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency. (Status: Existing) (9)
8. The center shall update the incident information log once the emergency system operator has verified the incident. (Status: Existing) (10)

Emergency Commercial Vehicle Response

Responds to commercial vehicle and freight equipment related emergencies. Includes incidents involving hazardous materials as well as the detection of non-permitted transport of security sensitive hazmat.

1. The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc. (Status: Existing) (1)

Emergency Data Collection

Collection and storage of information related to Emergency Management. For use by operations personnel or data archives in the region.

1. The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data. (Status: Existing) (1)
2. The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself. (Status: Existing) (3)

Caltrans D5 TMC [Existing]

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall receive traffic images to support dispatch of emergency vehicles. (Status: Existing) (7)
2. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Existing) (9)
3. The center shall relay location and incident details to the responding vehicles. (Status: Existing) (3)
4. The center shall store and maintain the emergency service responses in an action log. (Status: Existing) (5)
5. The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control. (Status: Existing) (1)

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations. (Status: Existing) (14)
2. The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies. (Status: Existing) (3)
3. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Existing) (4)
4. The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed. (Status: Existing) (5)
5. The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident. (Status: Existing) (6)
6. The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies that impact Stae highwyas. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies. (Status: Existing) (16)
7. The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations. (Status: Planned) (10)
8. The center shall provide strategic emergency response capabilities such as that of an Emergency Operations Center for large-scale incidents on State highways and disasters. (Status: Existing) (15)
9. The center shall receive event scheduling information from Event Promoters. (Status: Existing) (7)

Caltrans D5 TMC [Existing]

Incident Command

Tactical decision support, resource coordination, and communications integration among emergency management agencies for Incident Commands that are established by first responders to support local management of an incident.

1. The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident. (Status: Existing) (1)
2. The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers. (Status: Existing) (2)
3. The center shall track and maintain resource information and action plans pertaining to the incident command. (Status: Existing) (3)
4. The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions. (Status: Existing) (4)

Service Patrol Management

Dispatch and communication with roadway service patrol vehicles that monitor roads to aid motorists, offering rapid response to minor incidents.

1. The center shall track the location and status of service patrol vehicles. (Status: Planned) (4)
2. The center shall dispatch roadway service patrol vehicles to identified incident locations. (Status: Existing) (1)
3. The center shall share incident information collected by the service patrol with traffic, maintenance and construction, and traveler information centers for incident management, incident notification to travelers, and incident cleanup. (Status: Existing) (3)
4. The center shall store the current status of all service patrol vehicles available for dispatch and those that have been dispatched. (Status: Existing) (2)

TMC Freeway Management

Remotely controls ramp meters, interchange connector meters, lane control signals, mainline meters, and variable speed control systems.

1. The center shall remotely control systems to manage use of the freeways, including ramp meters, mainline metering, and lane controls. (Status: Planned) (1)
2. The center shall collect fault data from ramp meters, mainline metering, and lane controls. (Status: Planned) (3)
3. The center shall collect operational status from ramp meters, mainline metering, and lane controls and compare against the control information sent by the center. (Status: Planned) (2)
4. The center shall implement control strategies, under control of center personnel, on some or all of the freeway network devices (e.g. ramp meters, mainline metering, and lane controls), based on data from sensors monitoring traffic conditions upstream, downstream, and queue data on the ramps themselves. (Status: Planned) (4)

Caltrans D5 TMC [Existing]

TMC Incident Detection

Remotely controls traffic and video sensors to support incident detection and verification; exchange information with other agencies including emergency management, maintenance and construction, alerting and advisory systems, event promoters, intermodal freight depots, and traveler information systems.

1. The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents. (Status: Existing) (2)
2. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots. (Status: Existing) (3)
3. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Existing) (4)
4. The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents. (Status: Planned) (6)

Caltrans D5 TMC [Existing]

TMC Incident Dispatch Coordination/Communication

Center-based capability to formulate an incident response that takes into account the incident potential, incident impacts, and/or resources required for incident management including proposing and facilitating the dispatch of emergency response and service vehicles as well as coordinating response with all appropriate cooperating agencies.

1. The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations. (Status: Existing) (2)
2. The center shall provide road network conditions and traffic images to the Caltrans website, emergency management centers, maintenance and construction centers, and traveler information service providers. (Status: Existing) (12)
3. The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure. (Status: Planned) (10)
4. The center shall coordinate information and controls with other traffic management centers. (Status: Existing) (9)
5. The center shall exchange road network status assessment information with emergency management and maintenance centers including an assessment of damage sustained by the road network including location and extent of the damage, estimate of remaining capacity, required closures, alternate routes, necessary restrictions, and time frame for repair and recovery. (Status: Existing) (8)
6. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers. (Status: Planned) (6)
7. The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers. (Status: Existing) (5)
8. The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption. (Status: Planned) (3)
9. The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, and information and instructions necessary for the public to respond to the alert. This may also id (Status: Existing) (1)
10. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Existing) (4)

Caltrans D5 TMC [Existing]

TMC Regional Traffic Control

Coordination between traffic management centers in order to share traffic information between centers as well as control of traffic management field equipment. This may be used during incidents and special events and during day-to-day operations.

1. The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.). (Status: Existing) (2)
2. The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information. (Status: Existing) (1)

TMC Signal Control

Remotely controls traffic signal controllers to implement traffic management strategies at signalized intersections based on traffic conditions, incidents, emergency vehicle preemptions, pedestrian crossings, etc.

1. The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc. (Status: Existing) (5)
2. The center shall collect traffic signal controller fault data from the field. (Status: Existing) (4)
3. The center shall collect traffic signal controller operational status and compare against the control information sent by the center. (Status: Existing) (3)
4. The center shall accept notifications of right-of-way requests from pedestrians. (Status: Existing) (2)
5. The center shall remotely control traffic signal controllers. (Status: Existing) (1)

Caltrans D5 TMC [Existing]

TMC Traffic Information Dissemination

Controls dissemination of traffic-related data to other centers, the media, and travelers via the driver information systems (DMS, HAR) that it operates.

1. The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers. (Status: Planned) (6)
2. The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported. (Status: Planned) (7)
3. The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair. (Status: Existing) (4)
4. The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.). (Status: Existing) (3)
5. The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers. (Status: Existing) (2)
6. The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc. (Status: Existing) (5)
7. The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers. (Status: Existing) (1)
8. The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media. (Status: Planned) (8)

Traffic Data Collection

Collection and storage of traffic management data. For use by operations personnel or data archives in the region.

1. The center shall be able to produce sample products of the data available. (Status: Existing) (4)
2. The center shall collect traffic management data such as operational data, event logs, etc. (Status: Existing) (1)

Caltrans D5 TMC [Existing]

Traffic Maintenance

Monitoring and remote diagnostics of field equipment - detect failures, issue problem reports, and track the repair or replacement of the failed equipment.

1. The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair. (Status: Existing) (4)
2. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status. (Status: Planned) (1)
3. The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status. (Status: Existing) (2)
4. The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared. (Status: Existing) (7)
5. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair. (Status: Planned) (3)

Caltrans D5 Traffic Monitoring Stations [Planned]

San Luis Obispo County Local ITS

Roadway Basic Surveillance

Field elements that monitor traffic conditions using loop detectors and CCTV cameras.

1. The field element shall collect, process, digitize, and send traffic sensor data (speed, volume, and occupancy) to the center for further analysis and storage, under center control. (Status: Planned) (1)

Roadway Data Collection

Field elements to collect traffic, road, and environmental conditions information for use in transportation planning, research, and other off-line applications. Includes the sensors, supporting roadside infrastructure, and communications equipment.

1. The field element shall include the sensors and supporting roadside devices that sense, collect, and send traffic information to a center for archival. (Status: Planned) (4)

Caltrans Website [Existing]

San Luis Obispo Regionally Significant ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information. (Status: Existing) (10)
2. The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Existing) (1)
3. The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities. (Status: Existing) (2)
4. The center shall collect, process, store, and disseminate weather information to travelers. (Status: Existing) (6)

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall provide the capability for a system operator to control the type and update frequency of traveler information. (Status: Existing) (17)
2. The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier. (Status: Planned) (14)
3. The center shall collect, process, store, and disseminate customized weather information to travelers upon request. (Status: Existing) (6)
4. The center shall collect, process, store, and disseminate customized traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes upon request. (Status: Existing) (1)
5. The center shall collect, process, store, and disseminate customized maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities upon request. (Status: Existing) (2)

Caltrans Website [Existing]

ISP Emergency Traveler Information

Collection and distribution of emergency information to the traveler public, including evacuation information and wide-area alerts.

1. The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes. (Status: Existing) (1)
2. The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings. (Status: Existing) (3)
3. The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers. (Status: Existing) (4)

ISP Traveler Data Collection

Collects traveler information from other centers, consolidates and refines the collected data, and makes this data available to traveler information applications.

1. The center shall collect, process, and store weather information. (Status: Existing) (6)
2. The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities. (Status: Existing) (2)
3. The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Existing) (1)

Central Coast Dial-A-Ride Operators [Existing]

San Luis Obispo County Local ITS

Transit Center Paratransit Operations

Management of demand response transit services, including paratransit. Planning and scheduling of these services. Supports automated vehicle dispatch and automatically updates customer service operator systems.

1. The center shall process trip requests for demand responsive transit services, i.e. paratransit. Sources of the requests may include traveler information service providers. (Status: Existing) (1)
2. The center shall monitor the operational status of the demand response vehicles including status of passenger pick-up and drop-off. (Status: Existing) (2)

Transit Data Collection

Collection and storage of transit management data. For use by operations personnel or data archives in the region.

1. The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc. (Status: Existing) (1)

Transit Vehicle Operator Scheduling

Assignment of transit vehicles and operators to routes or service areas in a fair manner while minimizing labor and overtime services, considering operator preferences, qualifications, accumulated work hours, and other information about each operator.

1. The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions. (Status: Existing) (4)
2. The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability. (Status: Existing) (3)
3. The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments. (Status: Existing) (2)
4. The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies. (Status: Existing) (1)

CHP CAD [Existing]

San Luis Obispo Regionally Significant ITS

Emergency Call-Taking

Provides interface to the emergency call-taking systems such as the Emergency Telecommunications System (e.g., 911) that correlate call information with emergencies reported by transit agencies, commercial vehicle operators, or other public safety agencies. Allows the operator to verify the incident and forward the information to the responding agencies.

1. The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator. (Status: Existing) (6)
2. The center shall support the interface to the Emergency Telecommunications System (e.g. 911 or 7-digit call routing) to receive emergency notification information and provide it to the emergency system operator. (Status: Existing) (1)
3. The center shall update the incident information log once the emergency system operator has verified the incident. (Status: Existing) (10)
4. The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency. (Status: Existing) (9)
5. The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident. (Status: Planned) (8)
6. The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator. (Status: Planned) (4)
7. The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator. (Status: Existing) (2)
8. The center shall receive emergency call information from motorist call-boxes and present the possible incident information to the emergency system operator. (Status: Existing) (3)
9. The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator. (Status: Existing) (5)

Emergency Commercial Vehicle Response

Responds to commercial vehicle and freight equipment related emergencies. Includes incidents involving hazardous materials as well as the detection of non-permitted transport of security sensitive hazmat.

1. The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc. (Status: Existing) (1)

Emergency Data Collection

Collection and storage of information related to Emergency Management. For use by operations personnel or data archives in the region.

1. The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself. (Status: Existing) (3)
2. The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data. (Status: Existing) (1)

CHP CAD [Existing]

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall receive traffic images to support dispatch of emergency vehicles. (Status: Planned) (7)
2. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Existing) (9)
3. The center shall store and maintain the emergency service responses in an action log. (Status: Existing) (5)
4. The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle. (Status: Planned) (4)
5. The center shall relay location and incident details to the responding vehicles. (Status: Existing) (3)
6. The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched. (Status: Existing) (2)
7. The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control. (Status: Existing) (1)

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies. (Status: Existing) (3)
2. The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed. (Status: Existing) (5)
3. The center shall provide strategic emergency response capabilities such as that of an Emergency Operations Center for large-scale incidents on State highways and disasters. (Status: Planned) (15)
4. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Existing) (4)
5. The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies that impact Stae highwyas. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies. (Status: Planned) (16)
6. The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies. (Status: Existing) (2)

CHP CAD [Existing]

Incident Command

Tactical decision support, resource coordination, and communications integration among emergency management agencies for Incident Commands that are established by first responders to support local management of an incident.

1. The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident. (Status: Existing) (1)
2. The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions. (Status: Existing) (4)
3. The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers. (Status: Existing) (2)
4. The center shall track and maintain resource information and action plans pertaining to the incident command. (Status: Existing) (3)

Service Patrol Management

Dispatch and communication with roadway service patrol vehicles that monitor roads to aid motorists, offering rapid response to minor incidents.

1. The center shall share incident information collected by the service patrol with traffic, maintenance and construction, and traveler information centers for incident management, incident notification to travelers, and incident cleanup. (Status: Existing) (3)
2. The center shall store the current status of all service patrol vehicles available for dispatch and those that have been dispatched. (Status: Existing) (2)
3. The center shall dispatch roadway service patrol vehicles to identified incident locations. (Status: Existing) (1)
4. The center shall track the location and status of service patrol vehicles. (Status: Planned) (4)

CHP Website [Existing]

San Luis Obispo Regionally Significant ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Existing) (1)
2. The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information. (Status: Existing) (10)

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall collect, process, store, and disseminate customized traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes upon request. (Status: Existing) (1)
2. The center shall provide the capability for a system operator to control the type and update frequency of traveler information. (Status: Existing) (17)

ISP Emergency Traveler Information

Collection and distribution of emergency information to the traveler public, including evacuation information and wide-area alerts.

1. The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes. (Status: Existing) (1)
2. The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings. (Status: Existing) (3)
3. The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers. (Status: Existing) (4)

ISP Traveler Data Collection

Collects traveler information from other centers, consolidates and refines the collected data, and makes this data available to traveler information applications.

1. The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Existing) (1)

Grover Beach Advanced Crosswalks [Planned]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Planned) (1)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Planned) (2)

Grover Beach Advanced Rail Crossings [Planned]

San Luis Obispo County Local ITS

Advanced Rail Crossing

Field elements at highway-rail intersections (HRIs) where operational requirements demand advanced features (e.g., where rail operational speeds are greater than 80 miles per hour). Capabilities from the Standard Rail Crossing plus systems which preclude entrance into the intersection when the barriers are activated, additional arriving train information, and detection of blocked intersections.

1. The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI). (Status: Planned) (1)
2. The field element shall determine whether the highway-rail intersection (HRI) is blocked by traffic in the roadway or some other obstruction. (Status: Planned) (2)
3. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment. (Status: Planned) (5)
4. The field element shall control the dynamic message signs (DMS) in the vicinity of a highway-rail intersection (HRI) to advise drivers, cyclists, and pedestrians of approaching trains. (Status: Planned) (8)
5. The field element shall close the highway-rail intersection (HRI) when a train is approaching with enough time for traffic to safely clear the crossing using gates, lights/signs, barriers, and traffic control signals. (Status: Planned) (9)
6. The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection. (Status: Planned) (10)

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Planned) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Planned) (4)

Grover Beach Signal Pre-Emption [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)

Roadway Signal Priority

Field elements that provide the capability to receive vehicle signal priority requests and control traffic signals accordingly.

1. The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings. (Status: Existing) (1)

Grover Beach Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)
2. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)

Paso Robles Advanced Crosswalks [Planned]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Planned) (1)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Planned) (2)

Paso Robles Advanced Rail Crossing [Planned]

San Luis Obispo County Local ITS

Advanced Rail Crossing

Field elements at highway-rail intersections (HRIs) where operational requirements demand advanced features (e.g., where rail operational speeds are greater than 80 miles per hour). Capabilities from the Standard Rail Crossing plus systems which preclude entrance into the intersection when the barriers are activated, additional arriving train information, and detection of blocked intersections.

1. The field element shall close the highway-rail intersection (HRI) when a train is approaching with enough time for traffic to safely clear the crossing using gates, lights/signs, barriers, and traffic control signals. (Status: Planned) (9)
2. The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection. (Status: Planned) (10)
3. The field element shall control the dynamic message signs (DMS) in the vicinity of a highway-rail intersection (HRI) to advise drivers, cyclists, and pedestrians of approaching trains. (Status: Planned) (8)
4. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment. (Status: Planned) (5)
5. The field element shall determine whether the highway-rail intersection (HRI) is blocked by traffic in the roadway or some other obstruction. (Status: Planned) (2)
6. The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI). (Status: Planned) (1)

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Planned) (4)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Planned) (3)

Paso Robles Parking Management System [Planned]

San Luis Obispo County Local ITS

Parking Coordination

Coordination between parking facilities and between parking facilities and traffic, transit, and traveler information systems. Includes sharing of hours of operation, charging strategies, lot sizes, current parking availability, and parking reservations.

1. The parking element shall distribute parking lot information to traffic management centers upon request to support integrated regional traffic control and parking management. This could include information on facility hours of operation and current parking availability. (Status: Planned) (3)
2. The parking element shall provide parking management data to traffic management centers upon request as part of the implementation of demand management programs in the region. This could include changes to hours of operation or pricing. (Status: Planned) (2)

Parking Data Collection

Collection and storage of parking management information. For use by operations personnel or data archives in the region.

1. The parking element shall be able to produce sample products of the data available. (Status: Planned) (4)
2. The parking element shall receive and respond to requests from ITS Archives for either a catalog of the parking management data or for the data itself. (Status: Planned) (3)
3. The parking element shall collect parking management data including lot usage and charging information. (Status: Planned) (1)

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall process requests for parking lot charges to be paid in advance. (Status: Planned) (8)
2. The parking element shall detect and classify vehicles entering and exiting a parking facility (vehicle size, type, identifiable features, etc.). (Status: Planned) (1)
3. The parking element shall process requests for the advanced payment of tolls and transit fares as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (9)
4. The parking element shall process the financial requests and manage an interface to a Financial Institution. (Status: Planned) (6)
5. The parking element shall manage the parking lot charges, considering such factors as location, vehicle types, and times of day. (Status: Planned) (5)
6. The parking element shall provide an interface to the driver informing them of the success or failure of the financial transaction. This may involve a request for the driver to pull aside so the operator can resolve an issue. (Status: Planned) (3)
7. The parking element shall read data from the traveler card / payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (2)
8. The parking element shall support the payment of parking lot transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (7)

Paso Robles Parking Management System [Planned]

Parking Management

Monitor vehicles and current parking availability within parking facilities. Use driver information systems (e.g., DMS) to provide parking availability and other parking facility information to drivers. Support local traffic control coordination around the parking facility.

1. The parking element shall maintain parking lot information including static information such as hours of operation, rates, location, entrance locations, capacity, type, and constraints; as well as dynamic information such as current state of the lot, occupancy, arrival rates, and departure rates. (Status: Planned) (1)
2. The parking element shall provide the capability to detect, count, and classify vehicles at entrances, exits, and designated locations within a parking facility. (Status: Planned) (4)
3. The parking element shall manage local dynamic message signs that display messages to travelers such as the parking lot state, number of spaces available, location of entrances, and current charges. (Status: Planned) (3)

San Luis Obispo Regionally Significant ITS

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall read data from a Regional smart card payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (11)

Paso Robles Signal Pre-Emption [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)

Roadway Signal Priority

Field elements that provide the capability to receive vehicle signal priority requests and control traffic signals accordingly.

1. The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings. (Status: Existing) (1)

Paso Robles Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)
2. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)

Pismo Beach Advanced Crosswalks [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Planned) (1)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Planned) (2)

Pismo Beach Parking Management System [Planned]

San Luis Obispo County Local ITS

Parking Coordination

Coordination between parking facilities and between parking facilities and traffic, transit, and traveler information systems. Includes sharing of hours of operation, charging strategies, lot sizes, current parking availability, and parking reservations.

1. The parking element shall distribute parking lot information to traffic management centers upon request to support integrated regional traffic control and parking management. This could include information on facility hours of operation and current parking availability. (Status: Planned) (3)
2. The parking element shall provide parking management data to traffic management centers upon request as part of the implementation of demand management programs in the region. This could include changes to hours of operation or pricing. (Status: Planned) (2)

Parking Data Collection

Collection and storage of parking management information. For use by operations personnel or data archives in the region.

1. The parking element shall be able to produce sample products of the data available. (Status: Planned) (4)
2. The parking element shall receive and respond to requests from ITS Archives for either a catalog of the parking management data or for the data itself. (Status: Planned) (3)
3. The parking element shall collect parking management data including lot usage and charging information. (Status: Planned) (1)

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall process requests for parking lot charges to be paid in advance. (Status: Planned) (8)
2. The parking element shall process requests for the advanced payment of tolls and transit fares as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (9)
3. The parking element shall support the payment of parking lot transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (7)
4. The parking element shall process the financial requests and manage an interface to a Financial Institution. (Status: Planned) (6)
5. The parking element shall manage the parking lot charges, considering such factors as location, vehicle types, and times of day. (Status: Planned) (5)
6. The parking element shall provide an interface to the driver informing them of the success or failure of the financial transaction. This may involve a request for the driver to pull aside so the operator can resolve an issue. (Status: Planned) (3)
7. The parking element shall read data from the traveler card / payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (2)
8. The parking element shall detect and classify vehicles entering and exiting a parking facility (vehicle size, type, identifiable features, etc.). (Status: Planned) (1)

Pismo Beach Parking Management System [Planned]

Parking Management

Monitor vehicles and current parking availability within parking facilities. Use driver information systems (e.g., DMS) to provide parking availability and other parking facility information to drivers. Support local traffic control coordination around the parking facility.

1. The parking element shall manage local dynamic message signs that display messages to travelers such as the parking lot state, number of spaces available, location of entrances, and current charges. (Status: Planned) (3)
2. The parking element shall maintain parking lot information including static information such as hours of operation, rates, location, entrance locations, capacity, type, and constraints; as well as dynamic information such as current state of the lot, occupancy, arrival rates, and departure rates. (Status: Planned) (1)
3. The parking element shall provide the capability to detect, count, and classify vehicles at entrances, exits, and designated locations within a parking facility. (Status: Planned) (4)

San Luis Obispo Regionally Significant ITS

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall read data from a Regional smart card payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (11)

Pismo Beach Signal Pre-emption [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)

Roadway Signal Priority

Field elements that provide the capability to receive vehicle signal priority requests and control traffic signals accordingly.

1. The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings. (Status: Existing) (1)

Pismo Beach Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)
2. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)

PRCATS (Paso Robles City Area Transit Service) [Existing]

San Luis Obispo County Local ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
2. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Existing) (12)
3. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Existing) (11)
4. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
5. The center shall process requests for transit fares to be paid in advance. (Status: Planned) (6)
6. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)

Transit Center Fixed-Route Operations

Management of fixed route transit operations. Planning, scheduling, and dispatch associated with fixed and flexible route transit services. Updates customer service operator systems, and provides current vehicle schedule adherence and optimum scenarios for schedule adjustment.

1. The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc. (Status: Existing) (9)
2. The center shall collect transit operational data for use in the generation of routes and schedules. (Status: Existing) (5)
3. The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency. (Status: Planned) (3)
4. The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes (Status: Planned) (2)
5. The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data. (Status: Existing) (1)
6. The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services. (Status: Existing) (10)

PRCATS (Paso Robles City Area Transit Service) [Existing]

Transit Center Multi-Modal Coordination

Generate requests for transit priority on routes and at certain intersections. Coordinate schedules with other agencies and modes, including transit transfer cluster and transfer point information.

1. The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies. (Status: Planned) (5)
2. The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes. (Status: Planned) (3)

Transit Data Collection

Collection and storage of transit management data. For use by operations personnel or data archives in the region.

1. The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc. (Status: Existing) (1)

Transit Vehicle Operator Scheduling

Assignment of transit vehicles and operators to routes or service areas in a fair manner while minimizing labor and overtime services, considering operator preferences, qualifications, accumulated work hours, and other information about each operator.

1. The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments. (Status: Existing) (2)
2. The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability. (Status: Existing) (3)
3. The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies. (Status: Existing) (1)
4. The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions. (Status: Existing) (4)

San Luis Obispo Regionally Significant ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Existing) (11)
2. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Existing) (12)

PRCATS (Paso Robles City Area Transit Service) [Existing]

Transit Center Information Services

Provide interactive traveler information to travelers (on-board transit vehicles, at stops/stations, using personal devices), traveler information service providers, media, and other transit organizations. Includes routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, yellow pages, and special events.

1. The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems. (Status: Planned) (3)

PRCATS Smart Cards [Planned]

San Luis Obispo County Local ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities. (Status: Planned) (6)
2. The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information. (Status: Planned) (4)
3. The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying. (Status: Planned) (1)
4. The transit vehicle shall provide passenger loading and fare statistics data to the center. (Status: Planned) (10)

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall process requests for transit fares to be paid in advance. (Status: Planned) (6)
2. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
3. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Planned) (10)
4. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
5. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
6. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
7. The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information. (Status: Planned) (2)
8. The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations. (Status: Planned) (1)
9. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)

San Luis Obispo Regionally Significant ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The trasit vehicle shall accept payment instruments from Regional partners. (Status: Planned) (11)

Private Call Answering Center (PCAC) [Planned]

San Luis Obispo County Local ITS

Emergency Call-Taking

Provides interface to the emergency call-taking systems such as the Emergency Telecommunications System (e.g., 911) that correlate call information with emergencies reported by transit agencies, commercial vehicle operators, or other public safety agencies. Allows the operator to verify the incident and forward the information to the responding agencies.

1. The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency. (Status: Planned) (9)
2. The center shall update the incident information log once the emergency system operator has verified the incident. (Status: Planned) (10)
3. The center shall support the interface to the Emergency Telecommunications System (e.g. 911 or 7-digit call routing) to receive emergency notification information and provide it to the emergency system operator. (Status: Planned) (1)
4. The center shall provide the capability for digitized map data to act as the background to the emergency information presented to the emergency system operator. (Status: Planned) (11)
5. The center shall receive emergency call information from motorist call-boxes and present the possible incident information to the emergency system operator. (Status: Planned) (3)

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall relay location and incident details to the responding vehicles. (Status: Planned) (3)
2. The center shall store and maintain the emergency service responses in an action log. (Status: Planned) (5)
3. The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control. (Status: Planned) (1)
4. The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator. (Status: Planned) (6)
5. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Planned) (9)

San Luis Obispo Regionally Significant ITS

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Planned) (9)

RTA (San Luis Obispo) [Existing]

San Luis Obispo County Local ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
2. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
3. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
4. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Existing) (10)
5. The center shall process requests for transit fares to be paid in advance. (Status: Existing) (6)
6. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
7. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)

Transit Center Fixed-Route Operations

Management of fixed route transit operations. Planning, scheduling, and dispatch associated with fixed and flexible route transit services. Updates customer service operator systems, and provides current vehicle schedule adherence and optimum scenarios for schedule adjustment.

1. The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency. (Status: Planned) (3)
2. The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services. (Status: Existing) (10)
3. The center shall collect transit operational data for use in the generation of routes and schedules. (Status: Existing) (5)
4. The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes (Status: Existing) (2)
5. The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data. (Status: Existing) (1)
6. The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc. (Status: Existing) (9)

RTA (San Luis Obispo) [Existing]

Transit Center Multi-Modal Coordination

Generate requests for transit priority on routes and at certain intersections. Coordinate schedules with other agencies and modes, including transit transfer cluster and transfer point information.

1. The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes. (Status: Planned) (3)
2. The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies. (Status: Planned) (5)

Transit Center Security

Monitor transit vehicle operator or traveler activated alarms; authenticate transit vehicle operators; remotely disable a transit vehicle; alert operators, travelers, and police to potential incidents identified by these security features.

1. The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches. (Status: Existing) (2)

Transit Center Vehicle Tracking

Monitoring transit vehicle locations via interactions with on-board systems. Furnish users with real-time transit schedule information and maintain interface with digital map providers.

1. The center shall provide transit operational data to traveler information service providers. (Status: Existing) (4)
2. The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for transit tracking and dispatch. (Status: Existing) (3)
3. The center shall determine adherence of transit vehicles to their assigned schedule. (Status: Existing) (2)
4. The center shall monitor the locations of all transit vehicles within its network. (Status: Existing) (1)

Transit Data Collection

Collection and storage of transit management data. For use by operations personnel or data archives in the region.

1. The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc. (Status: Existing) (1)

RTA (San Luis Obispo) [Existing]

Transit Vehicle Operator Scheduling

Assignment of transit vehicles and operators to routes or service areas in a fair manner while minimizing labor and overtime services, considering operator preferences, qualifications, accumulated work hours, and other information about each operator.

1. The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments. (Status: Existing) (2)
2. The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability. (Status: Existing) (3)
3. The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions. (Status: Existing) (4)
4. The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies. (Status: Existing) (1)

San Luis Obispo Regionally Significant ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
2. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)

Transit Center Information Services

Provide interactive traveler information to travelers (on-board transit vehicles, at stops/stations, using personal devices), traveler information service providers, media, and other transit organizations. Includes routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, yellow pages, and special events.

1. The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems. (Status: Planned) (3)

RTA Automatic Safety Buttons [Planned]

San Luis Obispo County Local ITS

On-board Transit Security

On-board video/audio surveillance systems, threat sensors, and object detection sensors to enhance security and safety on-board a transit vehicles. Also includes silent alarms activated by transit user or vehicle operator, operator authentication, and remote vehicle disabling.

1. The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc. (Status: Planned) (9)

RTA AVL [Planned]

San Luis Obispo County Local ITS

On-board Transit Trip Monitoring

Support fleet management with automatic vehicle location (AVL) and automated mileage and fuel reporting and auditing.

1. The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function. (Status: Planned) (1)
2. The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage. (Status: Planned) (3)
3. The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions. (Status: Planned) (5)

Vehicle Location Determination

Determines current location of the vehicle using GPS or similar location referencing and provides this information to other in-vehicle functions.

1. The vehicle shall calculate the location from one or more sources of position data. These location referencing systems include position systems such as GPS, DGPS, odometer and differential odometers. (Status: Planned) (2)
2. The vehicle shall provide the vehicle's current location to other in-vehicle functions. (Status: Planned) (1)

RTA Kiosks [Planned]

San Luis Obispo County Local ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information. (Status: Planned) (10)
2. The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (3)

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (3)
2. The center shall provide all traveler information based on the traveler's current location or a specific location identified by the traveler, and filter or customize the provided information accordingly. (Status: Planned) (10)
3. The center shall provide the capability for a system operator to control the type and update frequency of traveler information. (Status: Planned) (17)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler. (Status: Planned) (2)

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler upon request. (Status: Planned) (2)
2. The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly. (Status: Planned) (10)

San Luis Obispo Regionally Significant ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (12)

RTA Kiosks [Planned]

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier. (Status: Planned) (14)
2. The center shall collect, process, store, and disseminate customized Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (21)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler. (Status: Planned) (10)

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler upon request. (Status: Planned) (15)

RTA Next Bus CMS [Planned]

San Luis Obispo County Local ITS

Remote Transit Information Services

Public traveler interface that provides real-time travel-related information at transit stops and multi-modal transfer points, including general annunciation, display of imminent arrival information, the latest available information on transit routes, schedules, transfer options, available services, fares, and real-time schedule adherence.

1. The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users. (Status: Planned) (3)

RTA SLO Regional Rideshare Website [Existing]

San Luis Obispo County Local ITS

Infrastructure Provided Dynamic Ridesharing

Dynamic rideshare matching, including traveler eligibility, preference information, connections to transit or other multimodal services, confirmation, and payment of rideshare matching services.

1. The center shall store all rideshare matches and traveler eligibility data. (Status: Existing) (6)
2. The center shall accept requests from traveler interface systems for ridesharing as part of a trip plan request. (Status: Planned) (1)
3. The center shall provide a rideshare match based on origin and destination of the traveler's proposed trip, any routing constraints, preferences specified by the traveler, compatibility of this rideshare with rideshares confirmed by other travelers, the requesting traveler's eligibility data, and traffic data. (Status: Planned) (2)
4. The center shall process rideshare requests by balancing the relative benefits of the rideshare to each rideshare participant. (Status: Planned) (3)
5. The center shall arrange connections to transit or other multimodal services for portions of a multi-segment trip that includes ridesharing. (Status: Planned) (4)
6. The center shall provide a confirmation of the traveler's rideshare match and provide the capability to support a payment transaction for the rideshare service. (Status: Planned) (5)

ISP Traveler Data Collection

Collects traveler information from other centers, consolidates and refines the collected data, and makes this data available to traveler information applications.

1. The center shall collect, process, and store transit routes and schedules, transit transfer options, and transit fares. (Status: Planned) (9)

Personal Interactive Information Reception

Personal traveler interface that provides traffic, transit, yellow pages, event, and trip planning information, and other personalized traveler information services upon request. Devices include personal computers and personal portable devices such as PDAs.

1. The personal traveler interface shall receive ridesharing information from a center and present it to the traveler upon request. (Status: Existing) (15)

San Luis Obispo Regionally Significant ITS

Personal Interactive Information Reception

Personal traveler interface that provides traffic, transit, yellow pages, event, and trip planning information, and other personalized traveler information services upon request. Devices include personal computers and personal portable devices such as PDAs.

1. The personal traveler interface shall receive ridesharing information from a center and present it to the traveler upon request. (Status: Existing) (15)

RTA Smart Card [Planned]

San Luis Obispo County Local ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The transit vehicle shall provide passenger loading and fare statistics data to the center. (Status: Planned) (10)
2. The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities. (Status: Planned) (6)
3. The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information. (Status: Planned) (4)
4. The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying. (Status: Planned) (1)

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Planned) (10)
2. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
3. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
4. The center shall process requests for transit fares to be paid in advance. (Status: Planned) (6)
5. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
6. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
7. The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information. (Status: Planned) (2)
8. The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations. (Status: Planned) (1)
9. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)

San Luis Obispo Regionally Significant ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The trasit vehicle shall accept payment instruments from Regional partners. (Status: Planned) (11)

San Luis Obispo (City) Advanced Crosswalks [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Planned) (1)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Planned) (2)
2. The field element shall provide the capability to notify the traffic management center that a pedestrian has requested right-of-way and when the request was or will be granted (request for right-of-way). (Status: Planned) (3)

San Luis Obispo (City) Advanced Rail Crossing [Planned]

San Luis Obispo County Local ITS

Advanced Rail Crossing

Field elements at highway-rail intersections (HRIs) where operational requirements demand advanced features (e.g., where rail operational speeds are greater than 80 miles per hour). Capabilities from the Standard Rail Crossing plus systems which preclude entrance into the intersection when the barriers are activated, additional arriving train information, and detection of blocked intersections.

1. The field element shall receive track status and arriving train information from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and when a train is expected and/or how long the crossing will be closed. (Status: Planned) (6)
2. The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection. (Status: Planned) (10)
3. The field element shall control the dynamic message signs (DMS) in the vicinity of a highway-rail intersection (HRI) to advise drivers, cyclists, and pedestrians of approaching trains. (Status: Planned) (8)
4. The field element shall notify the traffic management center and the rail wayside equipment of any intersection blockages, including trapped vehicles or other obstructions. (Status: Planned) (3)
5. The field element shall determine whether the highway-rail intersection (HRI) is blocked by traffic in the roadway or some other obstruction. (Status: Planned) (2)
6. The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI). (Status: Planned) (1)
7. The field element shall close the highway-rail intersection (HRI) when a train is approaching with enough time for traffic to safely clear the crossing using gates, lights/signs, barriers, and traffic control signals. (Status: Planned) (9)
8. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center. (Status: Planned) (4)

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Planned) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Planned) (4)

San Luis Obispo (City) Parking Management System [Planned]

San Luis Obispo County Local ITS

Parking Data Collection

Collection and storage of parking management information. For use by operations personnel or data archives in the region.

1. The parking element shall be able to produce sample products of the data available. (Status: Planned) (4)
2. The parking element shall receive and respond to requests from ITS Archives for either a catalog of the parking management data or for the data itself. (Status: Planned) (3)
3. The parking element shall collect parking management data including lot usage and charging information. (Status: Planned) (1)

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall manage the parking lot charges, considering such factors as location, vehicle types, and times of day. (Status: Planned) (5)
2. The parking element shall process requests for the advanced payment of tolls and transit fares as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (9)
3. The parking element shall process requests for parking lot charges to be paid in advance. (Status: Planned) (8)
4. The parking element shall process the financial requests and manage an interface to a Financial Institution. (Status: Planned) (6)
5. The parking element shall provide an interface to the driver informing them of the success or failure of the financial transaction. This may involve a request for the driver to pull aside so the operator can resolve an issue. (Status: Planned) (3)
6. The parking element shall read data from the traveler card / payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (2)
7. The parking element shall detect and classify vehicles entering and exiting a parking facility (vehicle size, type, identifiable features, etc.). (Status: Planned) (1)
8. The parking element shall support the payment of parking lot transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (7)

San Luis Obispo (City) Parking Management System [Planned]

Parking Management

Monitor vehicles and current parking availability within parking facilities. Use driver information systems (e.g., DMS) to provide parking availability and other parking facility information to drivers. Support local traffic control coordination around the parking facility.

1. The parking element shall provide the capability to detect, count, and classify vehicles at entrances, exits, and designated locations within a parking facility. (Status: Planned) (4)
2. The parking element shall manage local dynamic message signs that display messages to travelers such as the parking lot state, number of spaces available, location of entrances, and current charges. (Status: Planned) (3)
3. The parking element shall share information with a traffic management center to identify queues at entrances, exits that should be used, and other information that supports coordinated local traffic control in and around the parking facility. (Status: Planned) (2)
4. The parking element shall maintain parking lot information including static information such as hours of operation, rates, location, entrance locations, capacity, type, and constraints; as well as dynamic information such as current state of the lot, occupancy, arrival rates, and departure rates. (Status: Planned) (1)

San Luis Obispo Regionally Significant ITS

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall read data from a Regional smart card payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (11)

San Luis Obispo (City) Signal Pre-Emption [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)

Roadway Signal Priority

Field elements that provide the capability to receive vehicle signal priority requests and control traffic signals accordingly.

1. The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings. (Status: Existing) (1)
2. The field element shall notify controlling traffic management center and maintenance center that the signal timing has changed based on a signal preemption/priority request to help those centers determine whether a fault detected at the signal is a true malfunction or due to a signal override. (Status: Planned) (3)

San Luis Obispo (City) Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions. (Status: Planned) (5)
2. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)
3. The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from the indicator control information. (Status: Planned) (4)
4. The field element shall return traffic signal controller operational status to the controlling center. (Status: Planned) (6)
5. The field element shall return traffic signal controller fault data to the maintenance center for repair. (Status: Planned) (7)
6. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)
7. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, under center control. (Status: Planned) (1)
8. The field element shall provide the capability to notify the traffic management center that a pedestrian has requested right-of-way and when the request was or will be granted (request for right-of-way). (Status: Planned) (3)

San Luis Obispo (City) TMC [Planned]

San Luis Obispo County Local ITS

Emergency Call-Taking

Provides interface to the emergency call-taking systems such as the Emergency Telecommunications System (e.g., 911) that correlate call information with emergencies reported by transit agencies, commercial vehicle operators, or other public safety agencies. Allows the operator to verify the incident and forward the information to the responding agencies.

1. The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency. (Status: Planned) (9)
2. The center shall update the incident information log once the emergency system operator has verified the incident. (Status: Planned) (10)
3. The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator. (Status: Planned) (6)
4. The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator. (Status: Planned) (5)
5. The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator. (Status: Planned) (4)
6. The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator. (Status: Planned) (2)

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall relay location and incident details to the responding vehicles. (Status: Planned) (3)
2. The center shall store and maintain the emergency service responses in an action log. (Status: Planned) (5)
3. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Planned) (9)
4. The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control. (Status: Planned) (1)

San Luis Obispo (City) TMC [Planned]

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies. (Status: Planned) (3)
2. The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident. (Status: Planned) (6)
3. The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations. (Status: Planned) (14)
4. The center shall provide information to the media concerning the status of an emergency response. (Status: Planned) (12)
5. The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations. (Status: Planned) (10)
6. The center shall receive event scheduling information from Event Promoters. (Status: Planned) (7)
7. The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed. (Status: Planned) (5)
8. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Planned) (4)
9. The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies. (Status: Planned) (2)
10. The center shall provide strategic emergency response capabilities such as that of an Emergency Operations Center for large-scale incidents and disasters. (Status: Planned) (1)

Incident Command

Tactical decision support, resource coordination, and communications integration among emergency management agencies for Incident Commands that are established by first responders to support local management of an incident.

1. The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers. (Status: Planned) (2)
2. The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident. (Status: Planned) (1)
3. The center shall track and maintain resource information and action plans pertaining to the incident command. (Status: Planned) (3)
4. The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions. (Status: Planned) (4)

San Luis Obispo (City) TMC [Planned]

TMC Incident Detection

Remotely controls traffic and video sensors to support incident detection and verification; exchange information with other agencies including emergency management, maintenance and construction, alerting and advisory systems, event promoters, intermodal freight depots, and traveler information systems.

1. The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents. (Status: Planned) (2)
2. The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents. (Status: Planned) (6)
3. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Planned) (4)
4. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots. (Status: Planned) (3)

San Luis Obispo (City) TMC [Planned]

TMC Incident Dispatch Coordination/Communication

Center-based capability to formulate an incident response that takes into account the incident potential, incident impacts, and/or resources required for incident management including proposing and facilitating the dispatch of emergency response and service vehicles as well as coordinating response with all appropriate cooperating agencies.

1. The center shall coordinate information and controls with other traffic management centers. (Status: Planned) (9)
2. The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations. (Status: Planned) (2)
3. The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption. (Status: Planned) (3)
4. The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, and information and instructions necessary for the public to respond to the alert. This may also id (Status: Planned) (1)
5. The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers. (Status: Planned) (5)
6. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers. (Status: Planned) (6)
7. The center shall exchange road network status assessment information with emergency management and maintenance centers including an assessment of damage sustained by the road network including location and extent of the damage, estimate of remaining capacity, required closures, alternate routes, necessary restrictions, and time frame for repair and recovery. (Status: Planned) (8)
8. The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure. (Status: Planned) (10)
9. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Planned) (4)
10. The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers. (Status: Planned) (7)

San Luis Obispo (City) TMC [Planned]

TMC Signal Control

Remotely controls traffic signal controllers to implement traffic management strategies at signalized intersections based on traffic conditions, incidents, emergency vehicle preemptions, pedestrian crossings, etc.

1. The center shall remotely control traffic signal controllers. (Status: Planned) (1)
2. The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc. (Status: Planned) (5)
3. The center shall collect traffic signal controller fault data from the field. (Status: Planned) (4)
4. The center shall accept notifications of right-of-way requests from pedestrians. (Status: Planned) (2)
5. The center shall collect traffic signal controller operational status and compare against the control information sent by the center. (Status: Planned) (3)

TMC Traffic Information Dissemination

Controls dissemination of traffic-related data to other centers, the media, and travelers via the driver information systems (DMS, HAR) that it operates.

1. The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported. (Status: Planned) (7)
2. The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers. (Status: Planned) (6)
3. The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media. (Status: Planned) (8)

Traffic Data Collection

Collection and storage of traffic management data. For use by operations personnel or data archives in the region.

1. The center shall collect traffic management data such as operational data, event logs, etc. (Status: Planned) (1)
2. The center shall be able to produce sample products of the data available. (Status: Planned) (4)

Traffic Maintenance

Monitoring and remote diagnostics of field equipment - detect failures, issue problem reports, and track the repair or replacement of the failed equipment.

1. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair. (Status: Planned) (3)
2. The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status. (Status: Planned) (1)
3. The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared. (Status: Planned) (7)

San Luis Obispo Regionally Significant ITS

San Luis Obispo (City) TMC [Planned]

Emergency Call-Taking

Provides interface to the emergency call-taking systems such as the Emergency Telecommunications System (e.g., 911) that correlate call information with emergencies reported by transit agencies, commercial vehicle operators, or other public safety agencies. Allows the operator to verify the incident and forward the information to the responding agencies.

1. The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency. (Status: Planned) (9)
2. The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator. (Status: Planned) (2)

Emergency Dispatch

Dispatch emergency vehicles to incidents, tracking their location and status. Pertinent incident information is gathered and relayed to the responding units.

1. The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized. (Status: Planned) (9)

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Planned) (4)
2. The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed. (Status: Planned) (5)
3. The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies. (Status: Planned) (3)

Incident Command

Tactical decision support, resource coordination, and communications integration among emergency management agencies for Incident Commands that are established by first responders to support local management of an incident.

1. The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions. (Status: Planned) (4)
2. The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers. (Status: Planned) (2)
3. The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident. (Status: Planned) (1)

San Luis Obispo (City) TMC [Planned]

TMC Incident Detection

Remotely controls traffic and video sensors to support incident detection and verification; exchange information with other agencies including emergency management, maintenance and construction, alerting and advisory systems, event promoters, intermodal freight depots, and traveler information systems.

1. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Planned) (4)
2. The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents. (Status: Planned) (6)

San Luis Obispo (City) TMC [Planned]

TMC Incident Dispatch Coordination/Communication

Center-based capability to formulate an incident response that takes into account the incident potential, incident impacts, and/or resources required for incident management including proposing and facilitating the dispatch of emergency response and service vehicles as well as coordinating response with all appropriate cooperating agencies.

1. The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers. (Status: Planned) (5)
2. The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure. (Status: Planned) (10)
3. The center shall exchange road network status assessment information with emergency management and maintenance centers including an assessment of damage sustained by the road network including location and extent of the damage, estimate of remaining capacity, required closures, alternate routes, necessary restrictions, and time frame for repair and recovery. (Status: Planned) (8)
4. The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers. (Status: Planned) (7)
5. The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers. (Status: Planned) (6)
6. The center shall coordinate information and controls with other traffic management centers. (Status: Planned) (9)
7. The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption. (Status: Planned) (3)
8. The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations. (Status: Planned) (2)
9. The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, and information and instructions necessary for the public to respond to the alert. This may also id (Status: Planned) (1)
10. The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident. (Status: Planned) (4)

San Luis Obispo (City) TMC [Planned]

TMC Regional Traffic Control

Coordination between traffic management centers in order to share traffic information between centers as well as control of traffic management field equipment. This may be used during incidents and special events and during day-to-day operations.

1. The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.). (Status: Planned) (2)
2. The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information. (Status: Planned) (1)

TMC Traffic Information Dissemination

Controls dissemination of traffic-related data to other centers, the media, and travelers via the driver information systems (DMS, HAR) that it operates.

1. The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers. (Status: Planned) (6)

Traffic Maintenance

Monitoring and remote diagnostics of field equipment - detect failures, issue problem reports, and track the repair or replacement of the failed equipment.

1. The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared. (Status: Planned) (7)

San Luis Obispo County Advanced Crosswalks [Planned]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)

San Luis Obispo County Advanced Rail Crossings [Planned]

San Luis Obispo County Local ITS

Advanced Rail Crossing

Field elements at highway-rail intersections (HRIs) where operational requirements demand advanced features (e.g., where rail operational speeds are greater than 80 miles per hour). Capabilities from the Standard Rail Crossing plus systems which preclude entrance into the intersection when the barriers are activated, additional arriving train information, and detection of blocked intersections.

1. The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection. (Status: Planned) (10)
2. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment. (Status: Planned) (5)
3. The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI). (Status: Planned) (1)
4. The field element shall determine whether the highway-rail intersection (HRI) is blocked by traffic in the roadway or some other obstruction. (Status: Planned) (2)
5. The field element shall close the highway-rail intersection (HRI) when a train is approaching with enough time for traffic to safely clear the crossing using gates, lights/signs, barriers, and traffic control signals. (Status: Planned) (9)
6. The field element shall control the dynamic message signs (DMS) in the vicinity of a highway-rail intersection (HRI) to advise drivers, cyclists, and pedestrians of approaching trains. (Status: Planned) (8)

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Planned) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Planned) (4)

San Luis Obispo County Emergency Medical Services [Existing]

San Luis Obispo County Local ITS

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Existing) (4)
2. The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident. (Status: Existing) (6)

On-board EV En Route Support

On-board systems for gathering of dispatch and routing information for emergency vehicle personnel, vehicle tracking, communications with care facilities, and signal preemption via short range communication directly with traffic control equipment at the roadside.

1. The emergency vehicle shall send requests to traffic signal control equipment at the roadside to preempt the signal. (Status: Existing) (5)

On-board EV Incident Management Communication

On-board systems provide communications support to first responders. Incident information is provided to dispatched emergency personnel. Emergency personnel transmit information about the incident and response status.

1. The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident. (Status: Existing) (1)
2. The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc. (Status: Existing) (2)
3. The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status. (Status: Existing) (3)

San Luis Obispo Regionally Significant ITS

Emergency Response Management

Strategic emergency planning and response capabilities and broad inter-agency interfaces to support large-scale incidents and disasters, commonly associated with Emergency Operations Centers.

1. The center shall develop, coordinate with other agencies, and store emergency response plans. (Status: Existing) (4)

San Luis Obispo County HRI [Planned]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Planned) (3)

Standard Rail Crossing

Field elements at highway-rail intersections (HRIs) where operational requirements do not dictate advanced features (e.g., where rail operational speeds are less than 80 miles per hour). Includes traditional HRI warning systems augmented with other standard traffic management devices.

1. The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection. (Status: Planned) (8)
2. The field element shall close the highway-rail intersection (HRI) when a train is approaching using gates, lights/signs, barriers, and traffic control signals. (Status: Planned) (7)
3. The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI). (Status: Planned) (1)
4. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment. (Status: Planned) (3)
5. The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center. (Status: Planned) (2)
6. The field element shall receive track status from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and whether a train is approaching. (Status: Planned) (4)

San Luis Obispo County Signal Pre-Emption [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include sensors (such as traffic, environmental, and work zone intrusion detection sensors) that provide data and status information to other field element devices (such as dynamic message signs, ramp meters, traffic signals, work zone intrusion alert systems), without center control. (Status: Existing) (1)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)

Roadway Signal Priority

Field elements that provide the capability to receive vehicle signal priority requests and control traffic signals accordingly.

1. The field element shall notify controlling traffic management center and maintenance center that the signal timing has changed based on a signal preemption/priority request to help those centers determine whether a fault detected at the signal is a true malfunction or due to a signal override. (Status: Planned) (3)
2. The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings. (Status: Existing) (1)

San Luis Obispo County Signal System [Existing]

San Luis Obispo County Local ITS

Roadway Equipment Coordination

Field elements that control and send data to other field elements (such as environmental sensors that send data to a DMS or coordination between traffic controllers on adjacent intersections), without center control.

1. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that provide data and status information to other field element devices (such as dynamic message signs, traffic controllers on adjacent intersections), without center control. (Status: Existing) (3)
2. The field element shall include devices (such as arterial or freeway controllers, roadway automated treatment systems, barrier and safeguard systems, emissions or pollution systems, and work zone intrusion alert systems) that receive control information from other field element devices, without center control. (Status: Existing) (4)

Roadway Signal Controls

Field elements including traffic signal controllers for use at signalized intersections; also supports pedestrian crossings.

1. The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner. (Status: Existing) (2)
2. The field element shall control traffic signals at intersections and on main highways for urban and rural areas, NOT under center control. (Status: Existing) (8)

San Luis Obispo Parking (City and Private) [Planned]

San Luis Obispo County Local ITS

Parking Data Collection

Collection and storage of parking management information. For use by operations personnel or data archives in the region.

1. The parking element shall be able to produce sample products of the data available. (Status: Existing) (4)
2. The parking element shall receive and respond to requests from ITS Archives for either a catalog of the parking management data or for the data itself. (Status: Existing) (3)
3. The parking element shall collect parking management data including lot usage and charging information. (Status: Existing) (1)

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall process requests for the advanced payment of tolls and transit fares as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (9)
2. The parking element shall support the payment of parking lot transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (7)
3. The parking element shall process requests for parking lot charges to be paid in advance. (Status: Planned) (8)
4. The parking element shall detect and classify vehicles entering and exiting a parking facility (vehicle size, type, identifiable features, etc.). (Status: Planned) (1)
5. The parking element shall manage the parking lot charges, considering such factors as location, vehicle types, and times of day. (Status: Planned) (5)
6. The parking element shall read data from the traveler card / payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (2)
7. The parking element shall process the financial requests and manage an interface to a Financial Institution. (Status: Planned) (6)
8. The parking element shall provide an interface to the driver informing them of the success or failure of the financial transaction. This may involve a request for the driver to pull aside so the operator can resolve an issue. (Status: Planned) (3)

San Luis Obispo Parking (City and Private) [Planned]

Parking Management

Monitor vehicles and current parking availability within parking facilities. Use driver information systems (e.g., DMS) to provide parking availability and other parking facility information to drivers. Support local traffic control coordination around the parking facility.

1. The parking element shall provide the capability to detect, count, and classify vehicles at entrances, exits, and designated locations within a parking facility. (Status: Planned) (4)
2. The parking element shall manage local dynamic message signs that display messages to travelers such as the parking lot state, number of spaces available, location of entrances, and current charges. (Status: Planned) (3)
3. The parking element shall share information with a traffic management center to identify queues at entrances, exits that should be used, and other information that supports coordinated local traffic control in and around the parking facility. (Status: Planned) (2)
4. The parking element shall maintain parking lot information including static information such as hours of operation, rates, location, entrance locations, capacity, type, and constraints; as well as dynamic information such as current state of the lot, occupancy, arrival rates, and departure rates. (Status: Planned) (1)

San Luis Obispo Regionally Significant ITS

Parking Electronic Payment

Parking payment collection using in-vehicle equipment (tags) or contact or proximity traveler cards used for electronic payment. Includes field elements and back-office functionality.

1. The parking element shall read data from a Regional smart card payment instrument carried on-board the vehicle (tag) or by the traveler. (Status: Planned) (11)

SCAT (South County Area Transit) [Existing]

San Luis Obispo County Local ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
2. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
3. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
4. The center shall process requests for transit fares to be paid in advance. (Status: Existing) (6)
5. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
6. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
7. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Existing) (10)

Transit Center Fixed-Route Operations

Management of fixed route transit operations. Planning, scheduling, and dispatch associated with fixed and flexible route transit services. Updates customer service operator systems, and provides current vehicle schedule adherence and optimum scenarios for schedule adjustment.

1. The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency. (Status: Planned) (3)
2. The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services. (Status: Existing) (10)
3. The center shall collect transit operational data for use in the generation of routes and schedules. (Status: Existing) (5)
4. The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes (Status: Existing) (2)
5. The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data. (Status: Existing) (1)
6. The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc. (Status: Existing) (9)

SCAT (South County Area Transit) [Existing]

Transit Center Multi-Modal Coordination

Generate requests for transit priority on routes and at certain intersections. Coordinate schedules with other agencies and modes, including transit transfer cluster and transfer point information.

1. The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes. (Status: Planned) (3)
2. The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies. (Status: Planned) (5)

Transit Center Vehicle Tracking

Monitoring transit vehicle locations via interactions with on-board systems. Furnish users with real-time transit schedule information and maintain interface with digital map providers.

1. The center shall provide transit operational data to traveler information service providers. (Status: Existing) (4)
2. The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for transit tracking and dispatch. (Status: Existing) (3)
3. The center shall determine adherence of transit vehicles to their assigned schedule. (Status: Existing) (2)
4. The center shall monitor the locations of all transit vehicles within its network. (Status: Existing) (1)

Transit Data Collection

Collection and storage of transit management data. For use by operations personnel or data archives in the region.

1. The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc. (Status: Existing) (1)

Transit Vehicle Operator Scheduling

Assignment of transit vehicles and operators to routes or service areas in a fair manner while minimizing labor and overtime services, considering operator preferences, qualifications, accumulated work hours, and other information about each operator.

1. The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability. (Status: Existing) (3)
2. The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies. (Status: Existing) (1)
3. The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments. (Status: Existing) (2)
4. The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions. (Status: Existing) (4)

SCAT (South County Area Transit) [Existing]

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
2. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)

Transit Center Information Services

Provide interactive traveler information to travelers (on-board transit vehicles, at stops/stations, using personal devices), traveler information service providers, media, and other transit organizations. Includes routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, yellow pages, and special events.

1. The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems. (Status: Planned) (3)

SCAT AVL [Planned]

San Luis Obispo County Local ITS

On-board Transit Trip Monitoring

Support fleet management with automatic vehicle location (AVL) and automated mileage and fuel reporting and auditing.

1. The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function. (Status: Planned) (1)
2. The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage. (Status: Planned) (3)
3. The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions. (Status: Planned) (5)

Vehicle Location Determination

Determines current location of the vehicle using GPS or similar location referencing and provides this information to other in-vehicle functions.

1. The vehicle shall provide the vehicle's current location to other in-vehicle functions. (Status: Planned) (1)
2. The vehicle shall calculate the location from one or more sources of position data. These location referencing systems include position systems such as GPS, DGPS, odometer and differential odometers. (Status: Planned) (2)

SCAT Kiosks [Planned]

San Luis Obispo County Local ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (3)
2. The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information. (Status: Planned) (10)

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (3)
2. The center shall provide all traveler information based on the traveler's current location or a specific location identified by the traveler, and filter or customize the provided information accordingly. (Status: Planned) (10)
3. The center shall provide the capability for a system operator to control the type and update frequency of traveler information. (Status: Planned) (17)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler. (Status: Planned) (2)

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler upon request. (Status: Planned) (2)
2. The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly. (Status: Planned) (10)

San Luis Obispo Regionally Significant ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (12)

SCAT Kiosks [Planned]

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier. (Status: Planned) (14)
2. The center shall collect, process, store, and disseminate customized Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (21)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler. (Status: Planned) (10)

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler upon request. (Status: Planned) (15)

SCAT Next Bus CMS [Planned]

San Luis Obispo County Local ITS

Remote Transit Information Services

Public traveler interface that provides real-time travel-related information at transit stops and multi-modal transfer points, including general annunciation, display of imminent arrival information, the latest available information on transit routes, schedules, transfer options, available services, fares, and real-time schedule adherence.

1. The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users. (Status: Planned) (3)

SCAT Smart Card [Planned]

San Luis Obispo County Local ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying. (Status: Planned) (1)
2. The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities. (Status: Planned) (6)
3. The transit vehicle shall provide passenger loading and fare statistics data to the center. (Status: Planned) (10)
4. The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information. (Status: Planned) (4)

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
2. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
3. The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information. (Status: Planned) (2)
4. The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations. (Status: Planned) (1)
5. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
6. The center shall process requests for transit fares to be paid in advance. (Status: Planned) (6)
7. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)
8. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
9. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Planned) (10)

San Luis Obispo Regionally Significant ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The trasit vehicle shall accept payment instruments from Regional partners. (Status: Planned) (11)

SLO Transit [Existing]

San Luis Obispo County Local ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
2. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
3. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Existing) (10)
4. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
5. The center shall process requests for transit fares to be paid in advance. (Status: Existing) (6)
6. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
7. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)

Transit Center Fixed-Route Operations

Management of fixed route transit operations. Planning, scheduling, and dispatch associated with fixed and flexible route transit services. Updates customer service operator systems, and provides current vehicle schedule adherence and optimum scenarios for schedule adjustment.

1. The center shall collect transit operational data for use in the generation of routes and schedules. (Status: Existing) (5)
2. The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency. (Status: Planned) (3)
3. The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes (Status: Existing) (2)
4. The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data. (Status: Existing) (1)
5. The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc. (Status: Existing) (9)
6. The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services. (Status: Existing) (10)

SLO Transit [Existing]

Transit Center Multi-Modal Coordination

Generate requests for transit priority on routes and at certain intersections. Coordinate schedules with other agencies and modes, including transit transfer cluster and transfer point information.

1. The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies. (Status: Planned) (5)
2. The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes. (Status: Planned) (3)

Transit Center Security

Monitor transit vehicle operator or traveler activated alarms; authenticate transit vehicle operators; remotely disable a transit vehicle; alert operators, travelers, and police to potential incidents identified by these security features.

1. The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches. (Status: Existing) (2)

Transit Center Vehicle Tracking

Monitoring transit vehicle locations via interactions with on-board systems. Furnish users with real-time transit schedule information and maintain interface with digital map providers.

1. The center shall monitor the locations of all transit vehicles within its network. (Status: Existing) (1)
2. The center shall provide transit operational data to traveler information service providers. (Status: Existing) (4)
3. The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for transit tracking and dispatch. (Status: Existing) (3)
4. The center shall determine adherence of transit vehicles to their assigned schedule. (Status: Existing) (2)

Transit Vehicle Operator Scheduling

Assignment of transit vehicles and operators to routes or service areas in a fair manner while minimizing labor and overtime services, considering operator preferences, qualifications, accumulated work hours, and other information about each operator.

1. The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions. (Status: Existing) (4)
2. The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability. (Status: Existing) (3)
3. The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies. (Status: Existing) (1)
4. The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments. (Status: Existing) (2)

SLO Transit [Existing]

San Luis Obispo Regionally Significant ITS

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
2. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)

Transit Center Information Services

Provide interactive traveler information to travelers (on-board transit vehicles, at stops/stations, using personal devices), traveler information service providers, media, and other transit organizations. Includes routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, yellow pages, and special events.

1. The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems. (Status: Planned) (3)

SLO Transit Automatic Safety Buttons [Planned]

San Luis Obispo County Local ITS

On-board Transit Security

On-board video/audio surveillance systems, threat sensors, and object detection sensors to enhance security and safety on-board a transit vehicles. Also includes silent alarms activated by transit user or vehicle operator, operator authentication, and remote vehicle disabling.

1. The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc. (Status: Planned) (9)

SLO Transit AVL [Planned]

San Luis Obispo County Local ITS

On-board Transit Trip Monitoring

Support fleet management with automatic vehicle location (AVL) and automated mileage and fuel reporting and auditing.

1. The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function. (Status: Planned) (1)
2. The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage. (Status: Planned) (3)
3. The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions. (Status: Planned) (5)

Vehicle Location Determination

Determines current location of the vehicle using GPS or similar location referencing and provides this information to other in-vehicle functions.

1. The vehicle shall calculate the location from one or more sources of position data. These location referencing systems include position systems such as GPS, DGPS, odometer and differential odometers. (Status: Planned) (2)

SLO Transit EDAPTS (TIS) [Existing]

San Luis Obispo County Local ITS

Remote Transit Information Services

Public traveler interface that provides real-time travel-related information at transit stops and multi-modal transfer points, including general annunciation, display of imminent arrival information, the latest available information on transit routes, schedules, transfer options, available services, fares, and real-time schedule adherence.

1. The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users. (Status: Existing) (3)

SLO Transit Kiosks [Planned]

San Luis Obispo County Local ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (3)
2. The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information. (Status: Planned) (10)

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (3)
2. The center shall provide all traveler information based on the traveler's current location or a specific location identified by the traveler, and filter or customize the provided information accordingly. (Status: Planned) (10)
3. The center shall provide the capability for a system operator to control the type and update frequency of traveler information. (Status: Planned) (17)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler. (Status: Planned) (2)

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall receive transit information from a center and present it to the traveler upon request. (Status: Planned) (2)
2. The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly. (Status: Planned) (10)

San Luis Obispo Regionally Significant ITS

Basic Information Broadcast

Collection, processing, storage, and broadcast dissemination of traffic, transit, maintenance and construction, event, and weather information to traveler interface systems and vehicles.

1. The center shall collect, process, store, and disseminate Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers. (Status: Planned) (12)

SLO Transit Kiosks [Planned]

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall collect, process, store, and disseminate customized Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (21)
2. The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier. (Status: Planned) (14)

Remote Basic Information Reception

Public traveler interface, such as a kiosk, that provides formatted traffic advisories, transit, event, and other traveler information, as well as broadcast alerts.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler. (Status: Planned) (10)

Remote Interactive Information Reception

Public traveler interface, such as a kiosk, that provides traffic, transit, yellow pages, special event, and other personalized traveler information services upon request.

1. The public interface for travelers shall recieve Regional transit, traffic, event, and alert infromation from a center and present it to the traveler upon request. (Status: Planned) (15)

SLO Transit Smart Card [Planned]

San Luis Obispo County Local ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The transit vehicle shall provide passenger loading and fare statistics data to the center. (Status: Planned) (10)
2. The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities. (Status: Planned) (6)
3. The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information. (Status: Planned) (4)
4. The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying. (Status: Planned) (1)

Transit Center Fare and Load Management

Management of fare collection at the center - includes setting and distributing fare information, central processing of fares for transit as well as other ITS services, links to financial institutions and enforcement agencies.

1. The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities. (Status: Planned) (11)
2. The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures. (Status: Planned) (10)
3. The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations. (Status: Planned) (1)
4. The center shall process requests for the advanced payment of tolls and parking lot charges as well as other non-transportation services, e.g. yellow-pages services. (Status: Planned) (7)
5. The center shall process requests for transit fares to be paid in advance. (Status: Planned) (6)
6. The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments. (Status: Planned) (4)
7. The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution. (Status: Planned) (3)
8. The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information. (Status: Planned) (2)
9. The center shall provide transit fare information to other centers, including traveler information providers upon request. (Status: Planned) (12)

San Luis Obispo Regionally Significant ITS

On-board Transit Fare and Load Management

On-board systems provide variable and flexible fare collection using a travelers fare medium (stored value cards or other payment instrument). Collect data required to determine accurate ridership levels and fare statistics.

1. The trasit vehicle shall accept payment instruments from Regional partners. (Status: Planned) (11)

SLOCOG 511 [Planned]

San Luis Obispo County Local ITS

ISP Traveler Data Collection

Collects traveler information from other centers, consolidates and refines the collected data, and makes this data available to traveler information applications.

1. The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities. (Status: Planned) (2)
2. The center shall collect, process, and store weather information. (Status: Planned) (6)
3. The center shall collect, process, and store transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information. (Status: Planned) (3)
4. The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Planned) (1)
5. The center shall collect, process, and store parking information, including location, availability, and fees. (Status: Planned) (4)

SLOCOG 511 [Planned]

Traveler Telephone Information

Collection and distribution of traveler information and wide-area alerts to traveler telephone information systems such as 511, based on voice-based traveler requests.

1. The center shall provide the capability to process dual-tone multifrequency (DTMF)-based requests (touch-tone) for traveler information from a traveler telephone information system. (Status: Planned) (2)
2. The center shall receive and forward region-specific wide-area alert and advisory information to the traveler telephone information system, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings. (Status: Planned) (12)
3. The center shall provide the capability to support both specific caller requests as well as bulk upload of regional traveler information. (Status: Planned) (11)
4. The center shall collect and provide transit service information in the requested voice format and for the requested location. (Status: Planned) (8)
5. The center shall collect and provide current ferry and rail schedule and airport status information in the requested voice format and for the requested location. (Status: Planned) (10)
6. The center shall collect and provide roadway environment conditions information in the requested voice format and for the requested location. (Status: Planned) (6)
7. The center shall collect and provide work zone and roadway maintenance information in the requested voice format and for the requested location. (Status: Planned) (5)
8. The center shall provide the capability to process traveler information requests from a traveler telephone information system. (Status: Planned) (3)
9. The center shall provide the capability to process voice-formatted requests for traveler information from a traveler telephone information system, and return the information in the requested format. (Status: Planned) (1)
10. The center shall collect and provide information on traffic conditions in the requested voice format and for the requested location. (Status: Planned) (4)
11. The center shall collect and provide weather and event information in the requested voice format and for the requested location. (Status: Planned) (7)

San Luis Obispo Regionally Significant ITS

SLOCOG 511 [Planned]

Interactive Infrastructure Information

Collection, processing, storage, and personalized dissemination of traffic, transit, maintenance and construction, multimodal, event, and weather information to traveler interface systems and vehicles, upon request.

1. The center shall collect, process, store, and disseminate customized Regional maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities upon request. (Status: Planned) (20)
2. The center shall collect, process, store, and disseminate customized Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request. (Status: Planned) (21)
3. The center shall collect, process, store, and disseminate customized Regional traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes upon request. (Status: Planned) (19)
4. The center shall collect, process, store, and disseminate customized Regional traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes within the Region upon request. (Status: Planned) (18)
5. The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier. (Status: Planned) (14)
6. The center shall collect, process, store, and disseminate customized Regional parking information to travelers, including location, availability, and fees upon request. (Status: Planned) (22)

ISP Data Collection

Collection and storage of information supporting the operations of traveler information service providers. For use by operations personnel or data archives in the region.

1. The center shall collect Regional traveler information data, such as parking lot data, rideshare data, road network use data, vehicle probe data, and other data from traveler information system operations. (Status: Planned) (6)

ISP Emergency Traveler Information

Collection and distribution of emergency information to the traveler public, including evacuation information and wide-area alerts.

1. The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes. (Status: Planned) (1)
2. The center shall provide evacuation information to shelter providers. (Status: Planned) (2)
3. The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings. (Status: Planned) (3)
4. The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers. (Status: Planned) (4)

SLOCOG 511 [Planned]

ISP Traveler Data Collection

Collects traveler information from other centers, consolidates and refines the collected data, and makes this data available to traveler information applications.

1. The center shall collect, process, and store Regional parking information, including location, availability, and fees. (Status: Planned) (12)
2. The center shall collect, process, and store Regional transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information. (Status: Planned) (11)
3. The center shall collect, process, and store Regional traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes. (Status: Planned) (10)

Traveler Telephone Information

Collection and distribution of traveler information and wide-area alerts to traveler telephone information systems such as 511, based on voice-based traveler requests.

1. The center shall receive and forward region-specific wide-area alert and advisory information to the traveler telephone information system, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings. (Status: Planned) (12)

SLOCOG Call Boxes [Existing]

San Luis Obispo County Local ITS

Remote Traveler Security

Public traveler interface that provides the capability for travelers to report an emergency or activate a panic button to summon assistance in areas such as transit stops, park-and-ride areas, etc.

1. The public interface for travelers shall provide the capability for a traveler to report an emergency and summon assistance from secure areas such as transit stops, transit stations, modal transfer facilities, rest stops, park-and-ride areas, travel information areas, and emergency pull off areas. (Status: Existing) (1)
2. When initiated by a traveler, the public interface for travelers shall forward a request for assistance to an emergency management function and acknowledge the request. (Status: Existing) (2)

SLOCOG Planning [Existing]

San Luis Obispo County Local ITS

Government Reporting Systems Support

Selects and formats data residing in an ITS archive to facilitate local, state, and federal government data reporting requirements.

1. The center shall provide data from an ITS archive to federal, state, or local government reporting systems. (Status: Existing) (1)
2. The center shall provide the capability to format data from an ITS archive suitable for input into government reports. (Status: Planned) (3)
3. The center shall provide the capability to select data from an ITS archive for use in government reports. (Status: Planned) (2)

ITS Data Repository

Collect and maintain data and data catalogs from one or more data sources. May include quality checks, error notification, and archive coordination.

1. The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region. (Status: Existing) (7)
2. The center shall include capabilities for performing quality checks on the incoming archived data. (Status: Existing) (4)
3. The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users. (Status: Existing) (3)
4. The center shall collect data to be archived from one or more data sources. (Status: Existing) (1)
5. The center shall participate in the maintenance of the local (County) ITS Architecture. (Status: Planned) (15)

San Luis Obispo Regionally Significant ITS

Government Reporting Systems Support

Selects and formats data residing in an ITS archive to facilitate local, state, and federal government data reporting requirements.

1. The center shall provide the capability to format data from an ITS archive suitable for input into government reports. (Status: Planned) (3)
2. The center shall provide data from an ITS archive to federal, state, or local government reporting systems. (Status: Existing) (1)
3. The center shall provide the capability to select data from an ITS archive for use in government reports. (Status: Planned) (2)

ITS Data Repository

Collect and maintain data and data catalogs from one or more data sources. May include quality checks, error notification, and archive coordination.

1. The center shall participate in the mainenance of the MPO ITS Architecture, with Regional (CCITS) coordination. (Status: Existing) (14)

SLOCOG Ramp Meters [Planned]

San Luis Obispo County Local ITS

Roadway Freeway Control

Freeway control equipment including ramp meters, mainline metering, and lane control equipment which controls traffic on freeways, including indicators to drivers.

1. The field element shall include ramp metering controllers, mainline meters, and lane controls for use on freeways, under center control. (Status: Planned) (1)
2. The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from the indicator control information. (Status: Planned) (2)
3. The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions. (Status: Planned) (3)
4. The field element shall return ramp metering controller, mainline meters, and lane control operational status to the controlling center. (Status: Planned) (4)
5. The field element shall return ramp metering controller, mainline meters, and lane control fault data to the maintenance center for repair. (Status: Planned) (5)

SLOCOG Smart Call Boxes [Planned]

San Luis Obispo County Local ITS

Remote Traveler Security

Public traveler interface that provides the capability for travelers to report an emergency or activate a panic button to summon assistance in areas such as transit stops, park-and-ride areas, etc.

1. The public interface for travelers shall provide the capability for a traveler to report an emergency and summon assistance from secure areas such as transit stops, transit stations, modal transfer facilities, rest stops, park-and-ride areas, travel information areas, and emergency pull off areas. (Status: Planned) (1)
2. When initiated by a traveler, the public interface for travelers shall forward a request for assistance to an emergency management function and acknowledge the request. (Status: Planned) (2)
3. The public interface for travelers shall provide the capability to broadcast a message to advise or warn a traveler. (Status: Planned) (3)
4. The public interface will automatically transmit time & geographic infromation to the emergency management system/operator. (Status: Planned) (5)