

Appendix H – Information Flow Diagrams Contained in the RAD-IT Database

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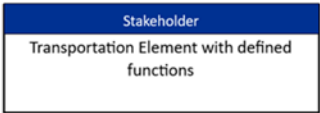
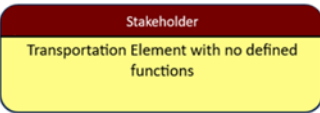
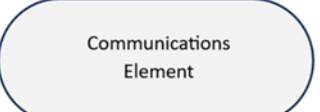
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	<p><u>Subsystem Box</u> Subsystems are individual pieces of the Intelligent Transportation System defined by ARC-IT. Subsystems are defined at three levels of hierarchy: ITS Objects, Classes, and Functional Subsystems. They are the principle structural element of the physical view of ARC-IT.</p>
	<p><u>Terminator Box</u> Terminators define the boundary of an architecture. ARC-IT terminators represent the people, systems, and general environment that interface to ITS. The interfaces between terminators and the subsystems and processes within ARC-IT are defined, but no functional requirements are allocated to terminators. The functional and physical view of ARC-IT both contain the same set of terminators.</p>
	<p><u>Communications Box</u> Some of the physical objects defined in ARC-IT primarily provide a communications capability that enables other physical objects to share information.</p>

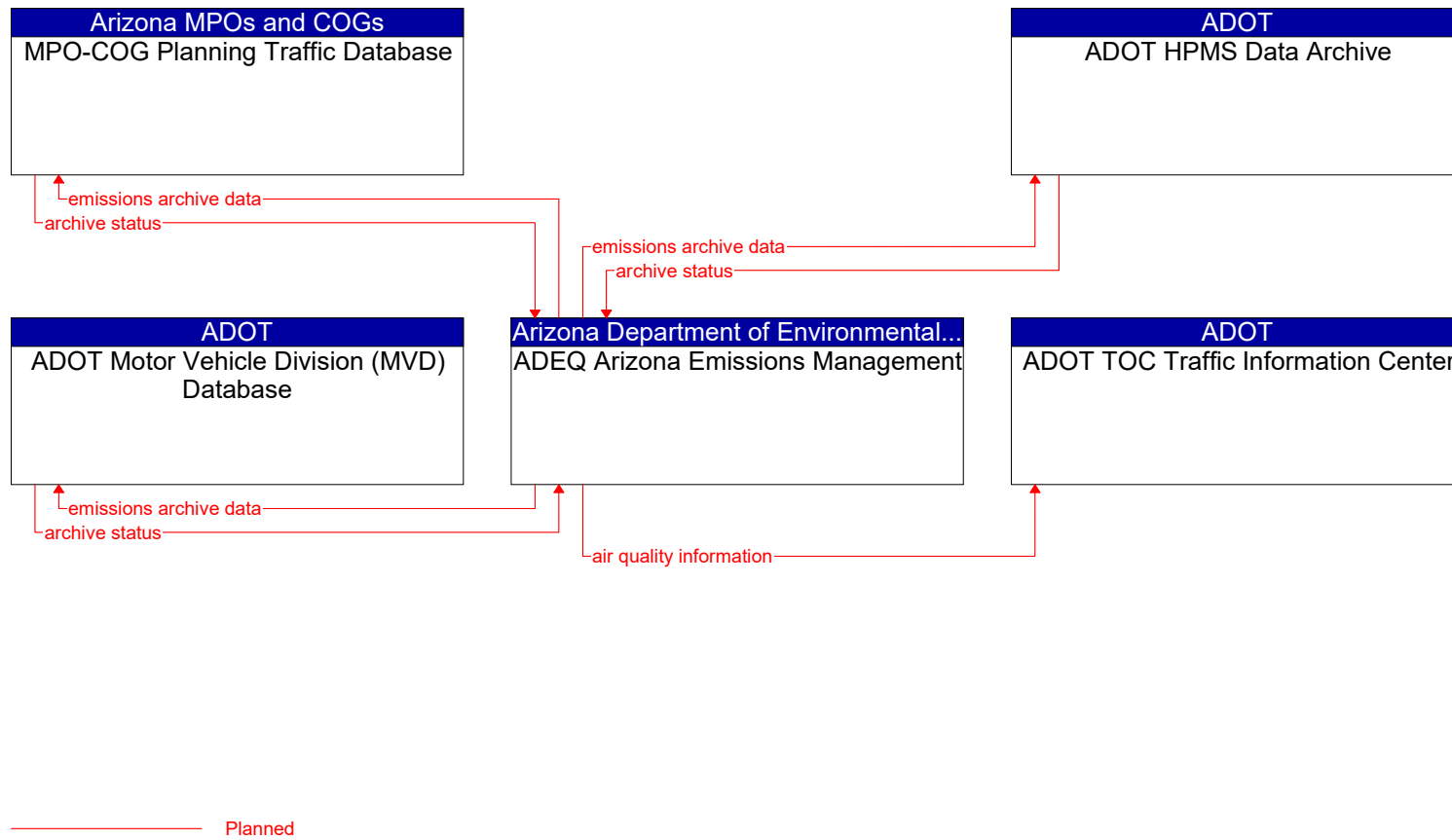


Figure 1: ADEQ Arizona Emissions Management Context Diagram

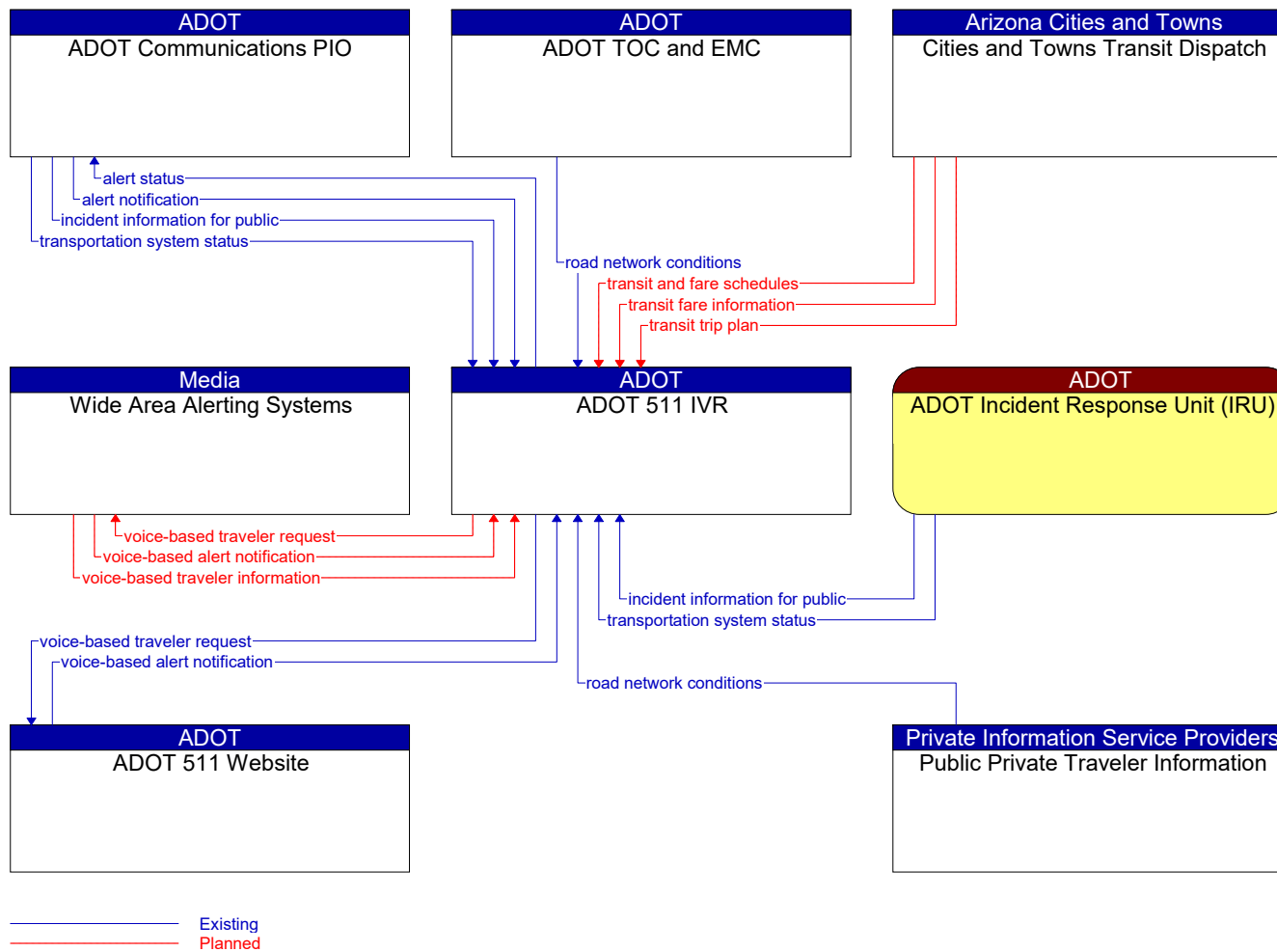


Figure 2: ADOT 511 IVR Context Diagram

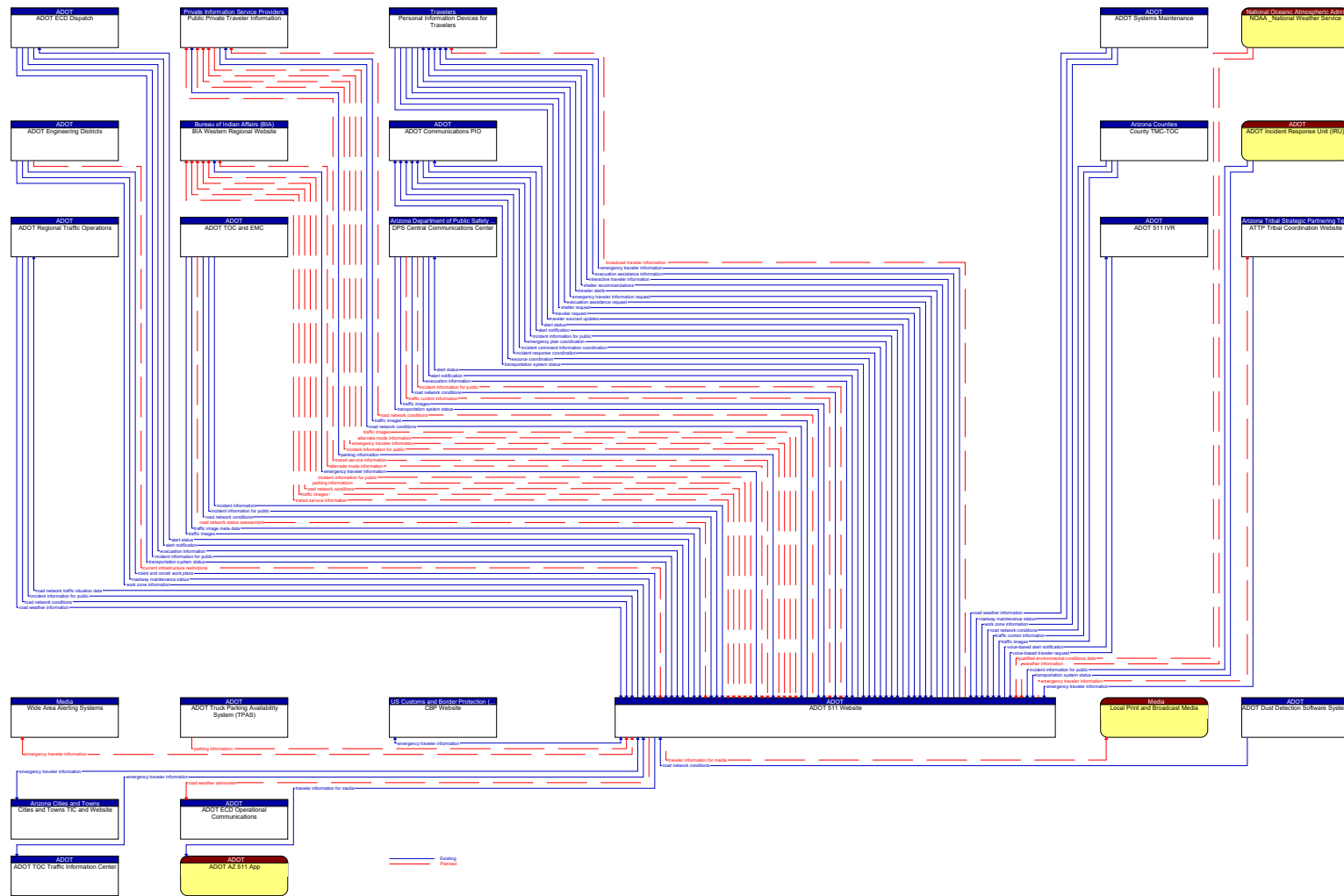


Figure 3: ADOT 511 Website Context Diagram

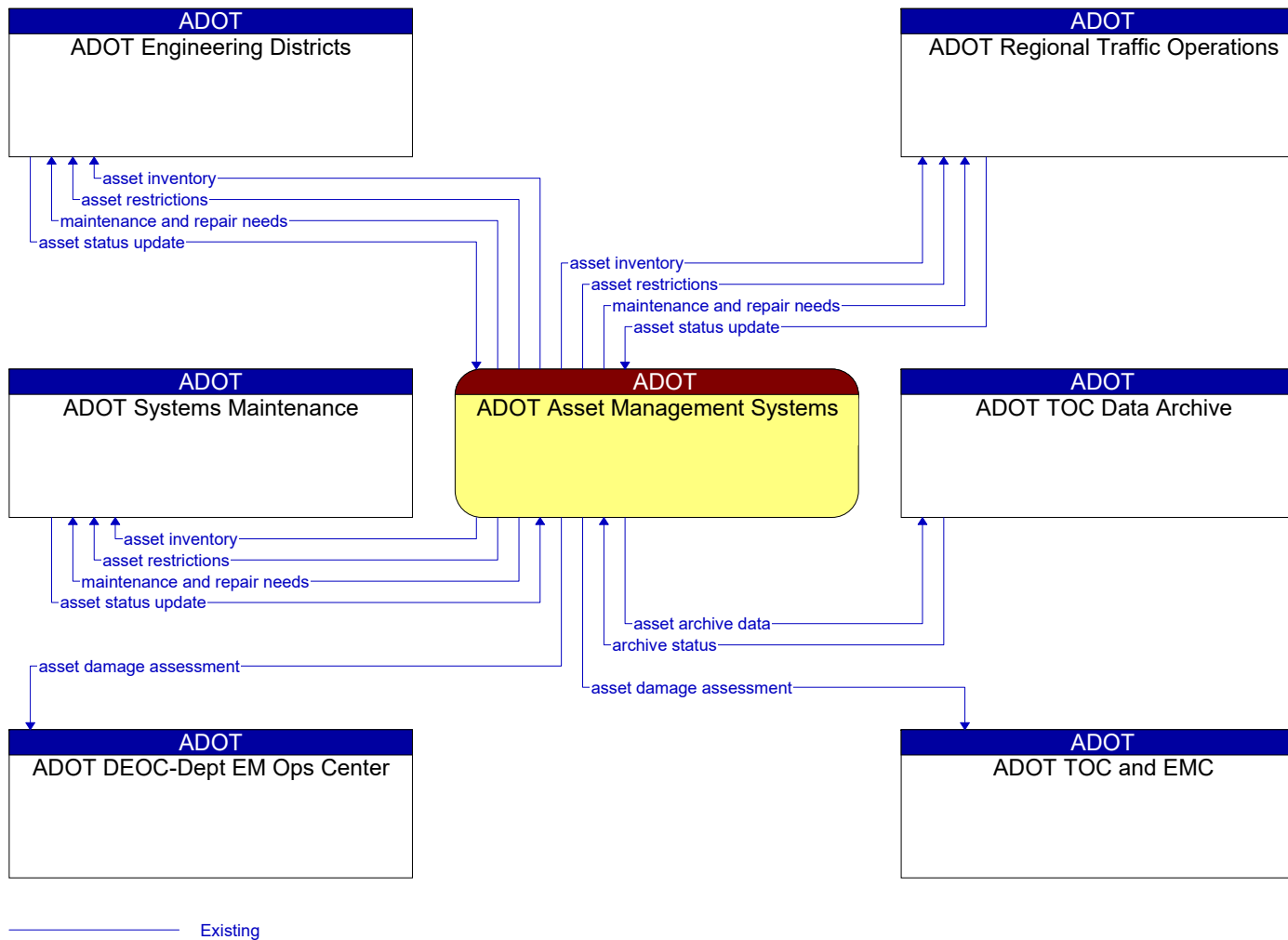


Figure 4: ADOT Asset Management Systems Context Diagram

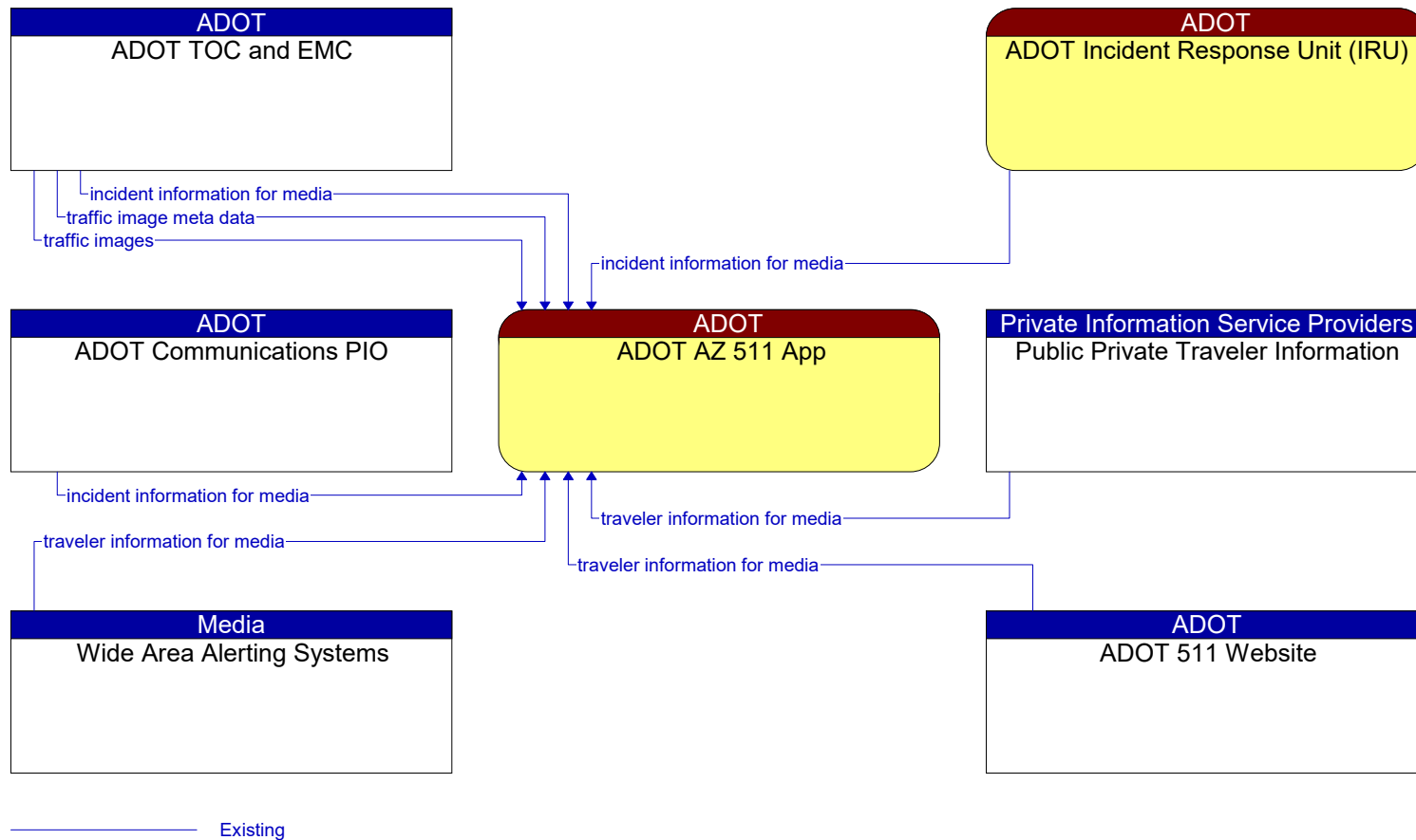


Figure 5: ADOT AZ 511 App Context Diagram

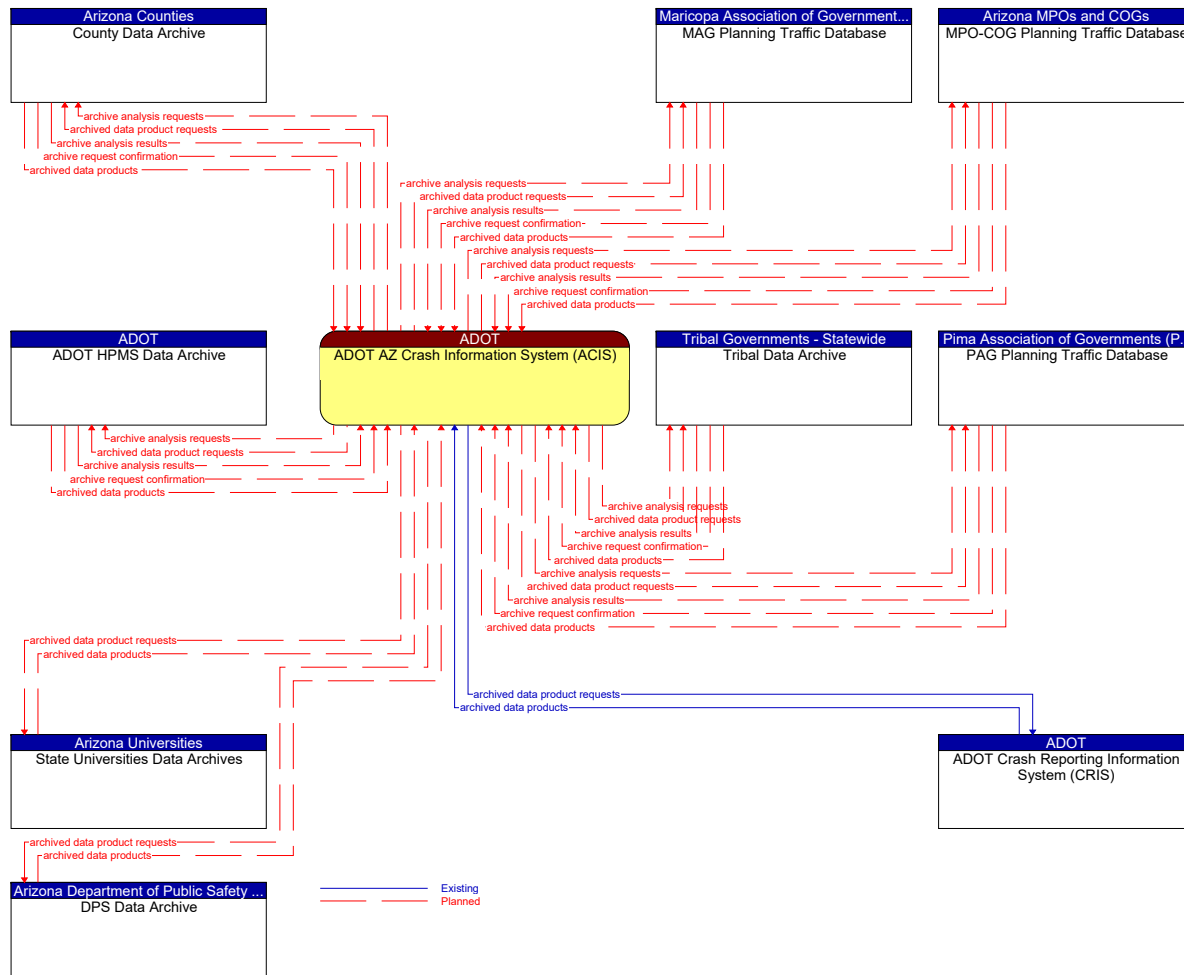


Figure 6: ADOT AZ Crash Information System (ACIS) Context Diagram

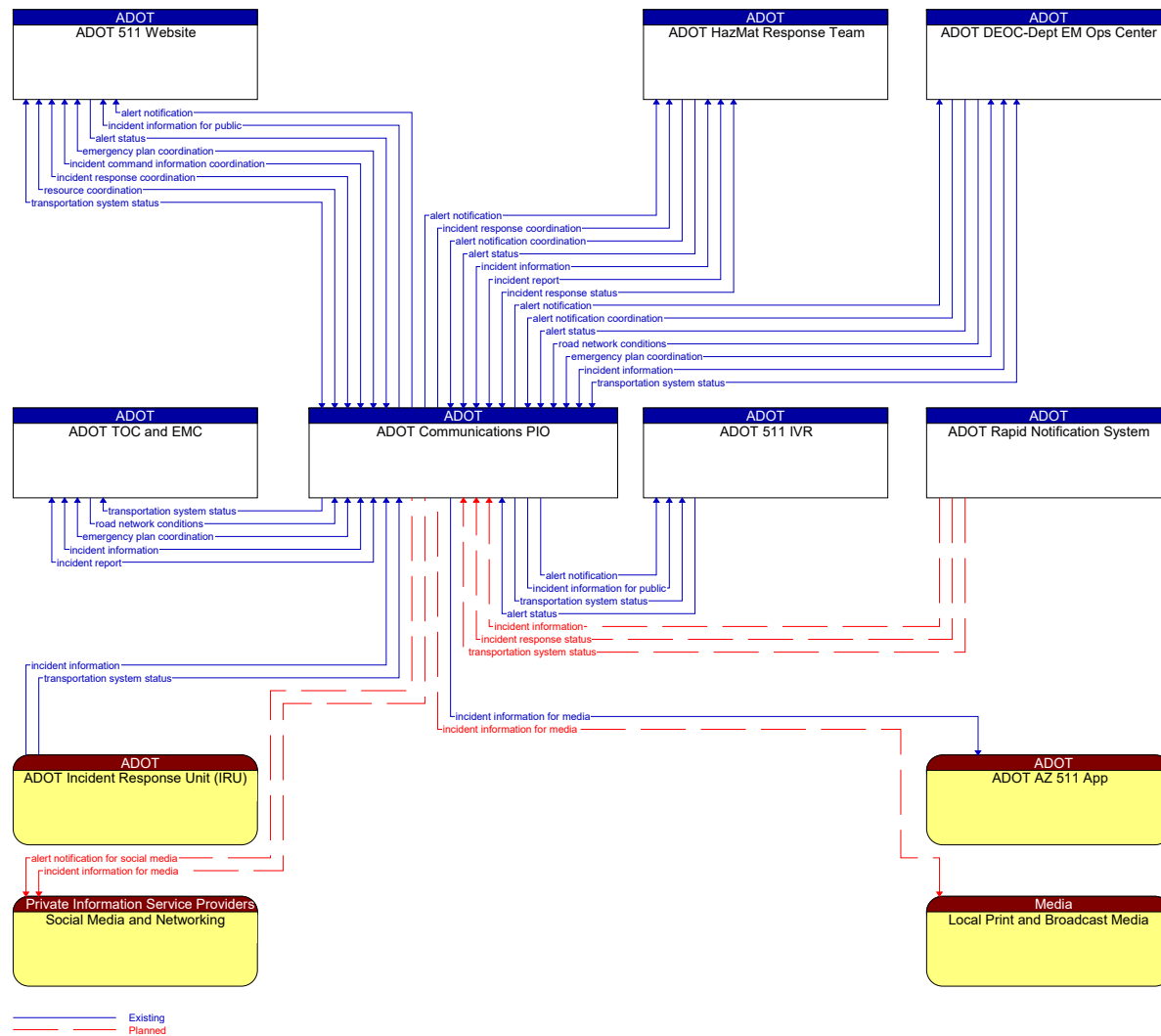


Figure 7: ADOT Communications PIO Context Diagram

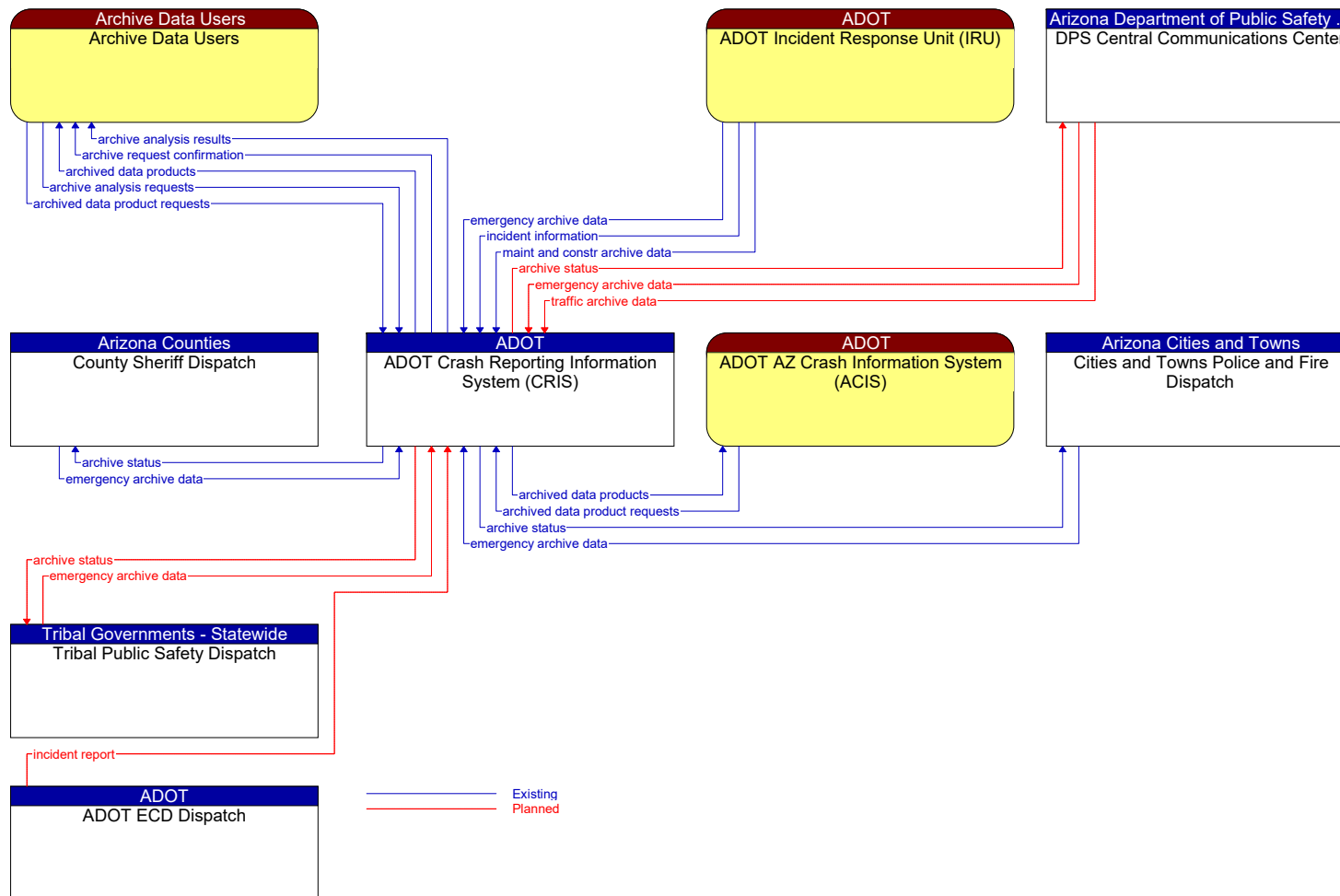


Figure 8: ADOT Crash Reporting Information System (CRIS) Context Diagram

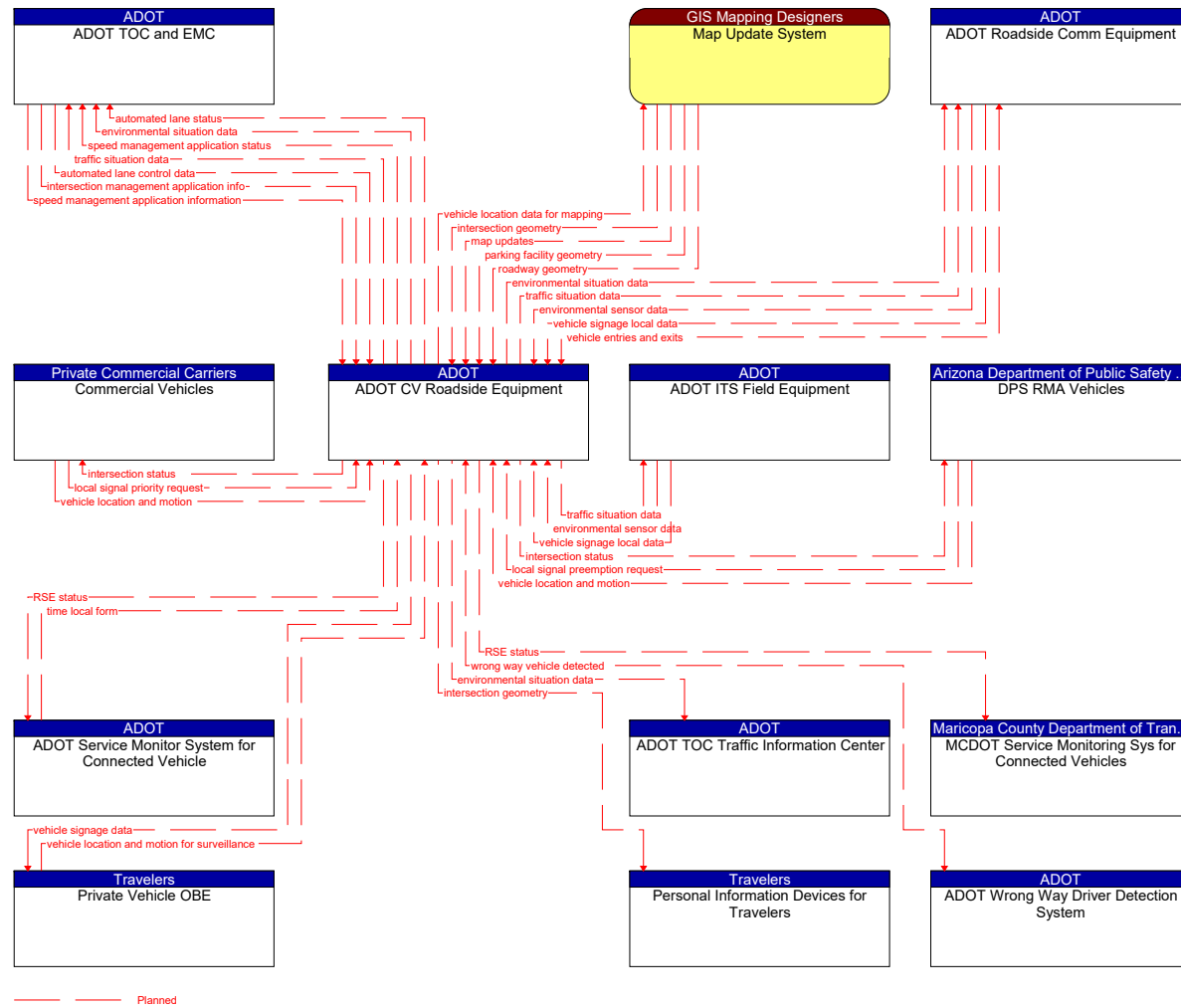


Figure 9: ADOT CV Roadside Equipment Context Diagram

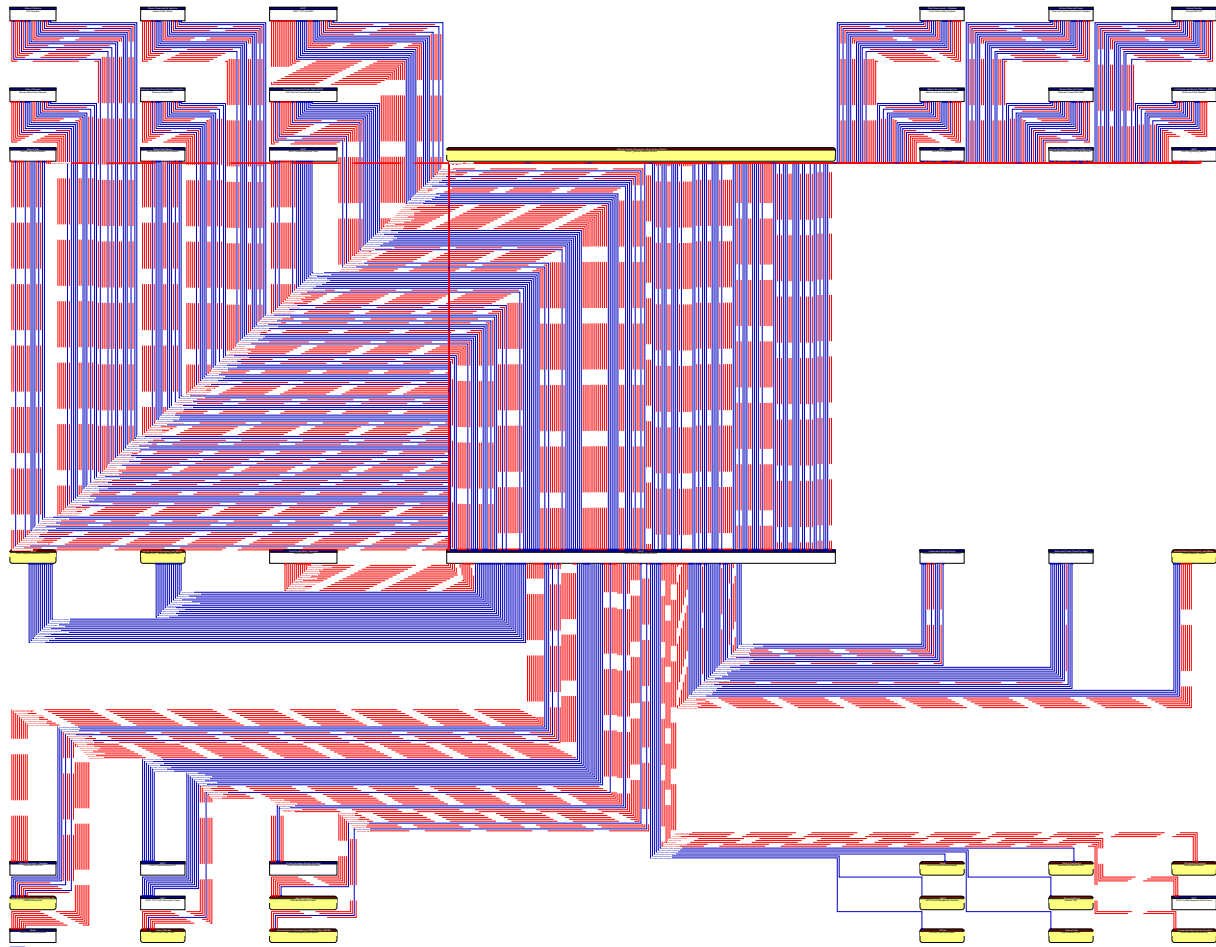


Figure 10: ADOT DEOC-Dept EM Ops Center Context Diagram

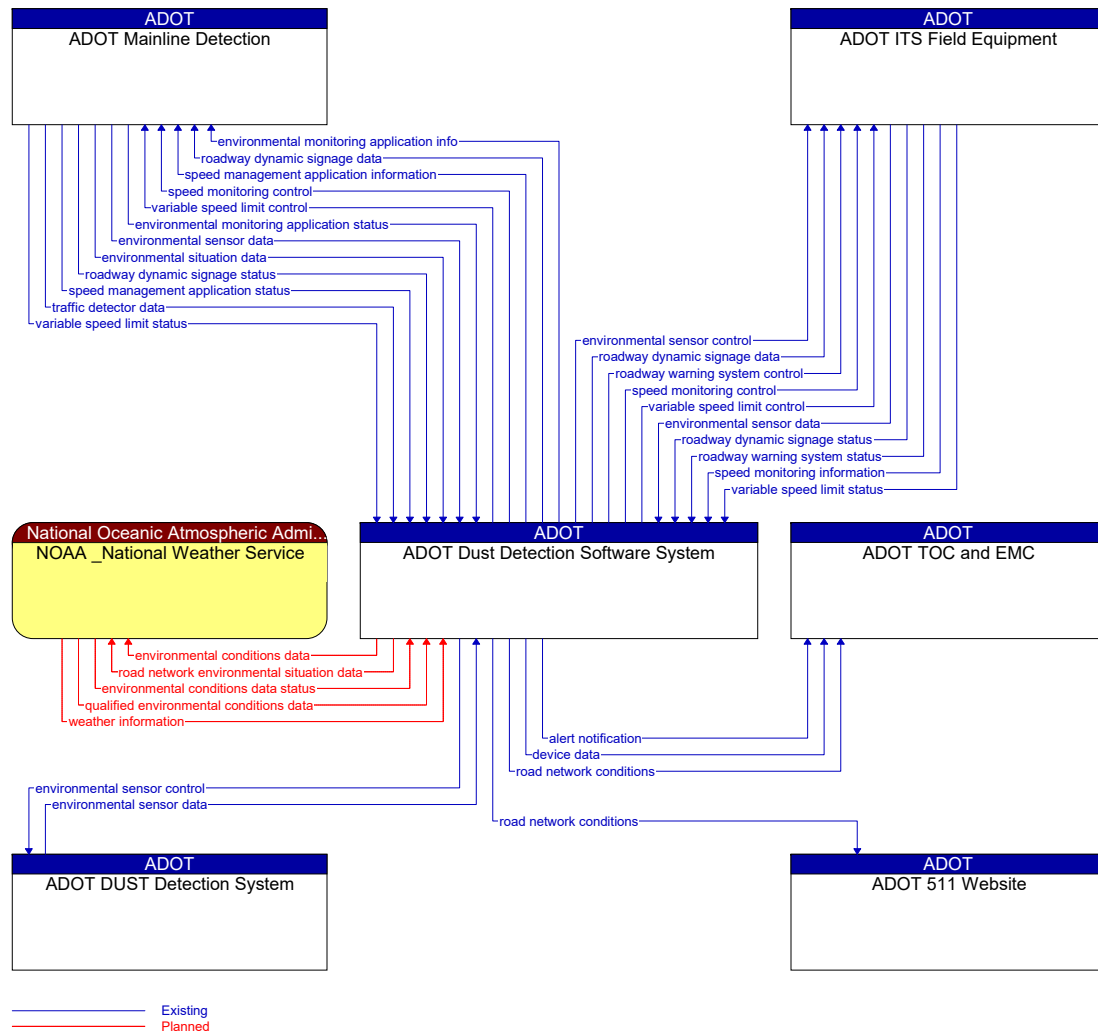


Figure 11: ADOT Dust Detection Software System Context Diagram

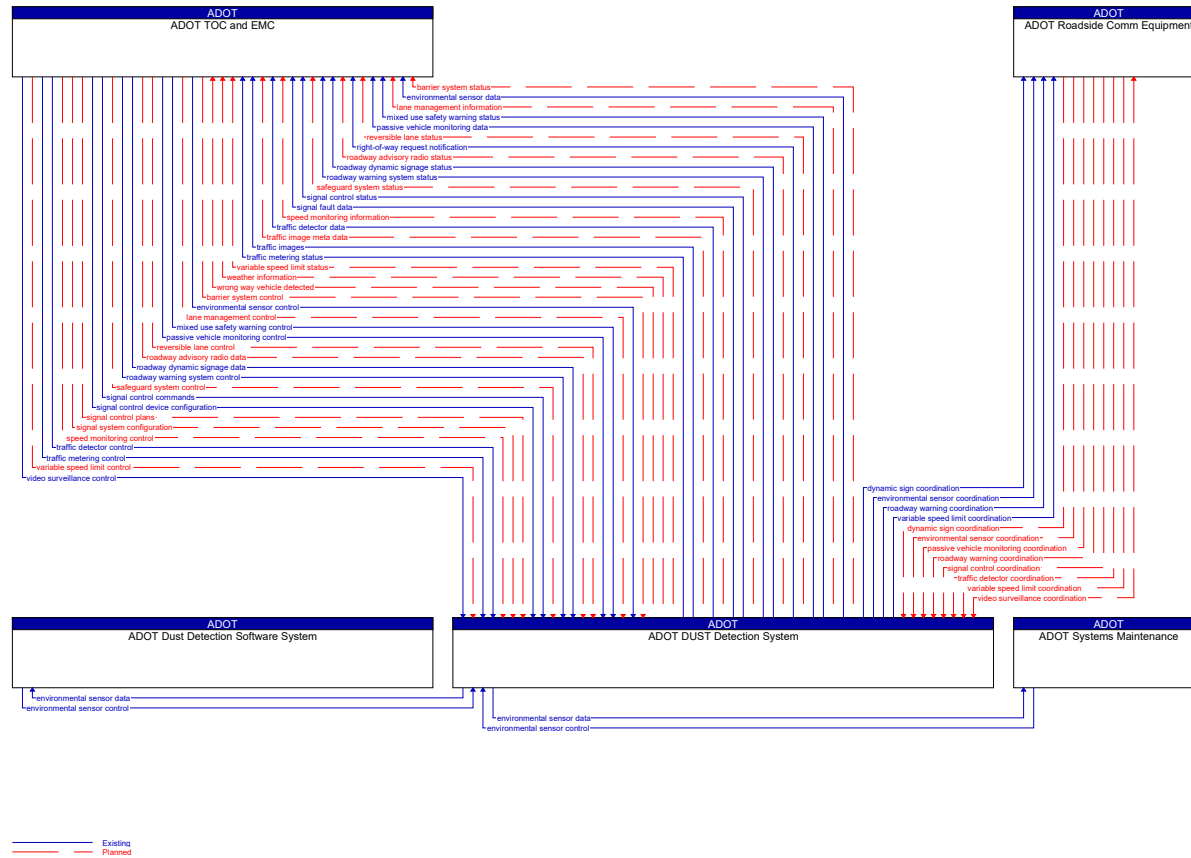


Figure 12: ADOT DUST Detection System Context Diagram

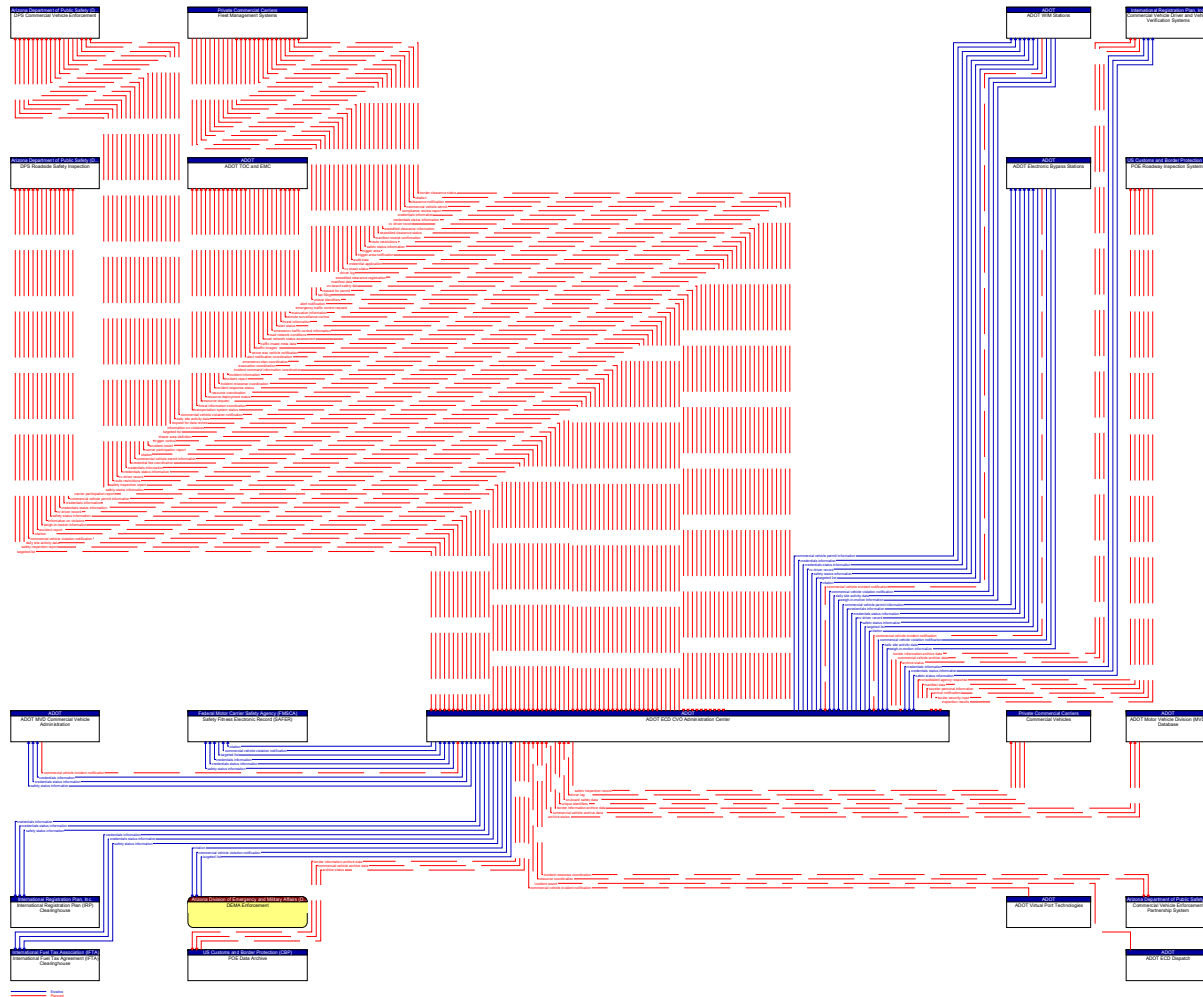


Figure 13: ADOT ECD CVO Administration Center Context Diagram

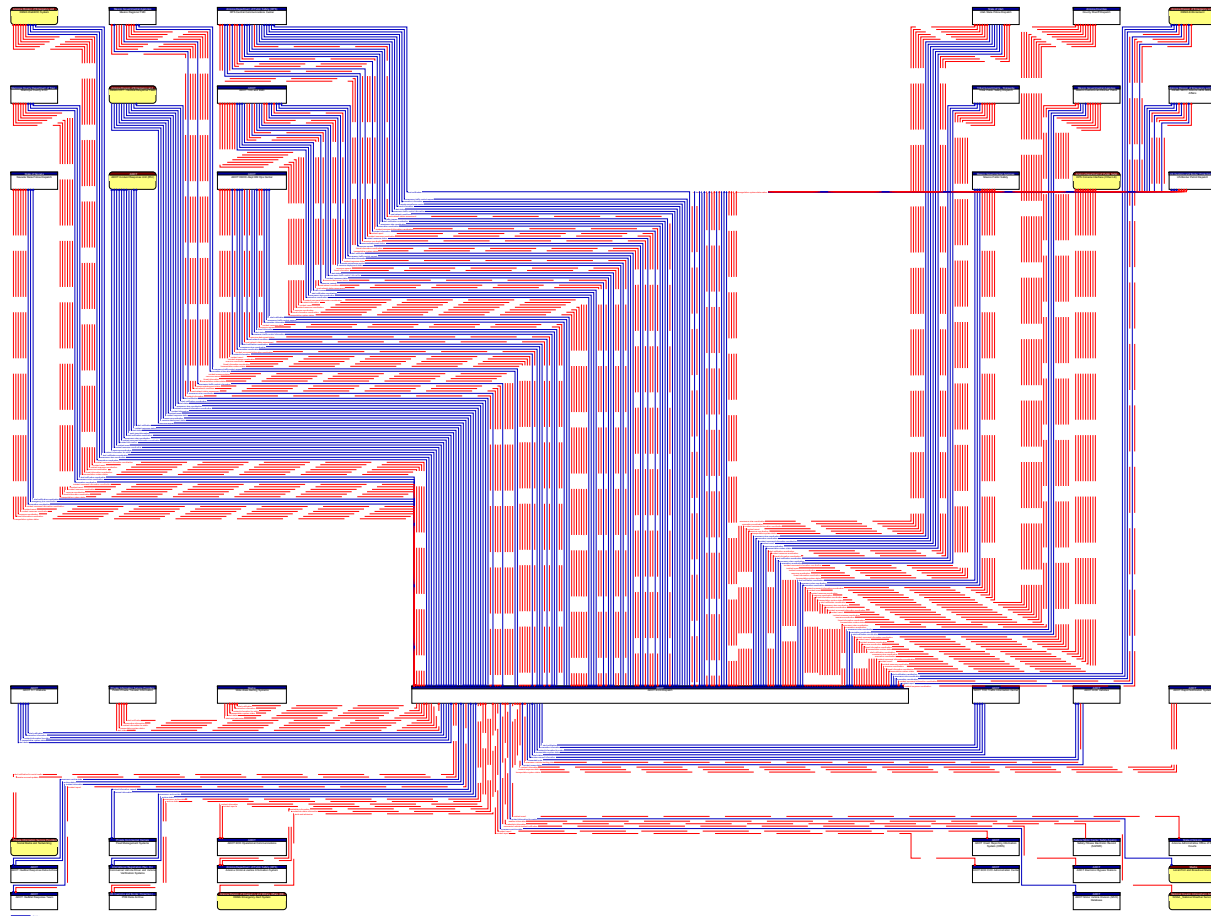


Figure 14: ADOT ECD Dispatch Context Diagram

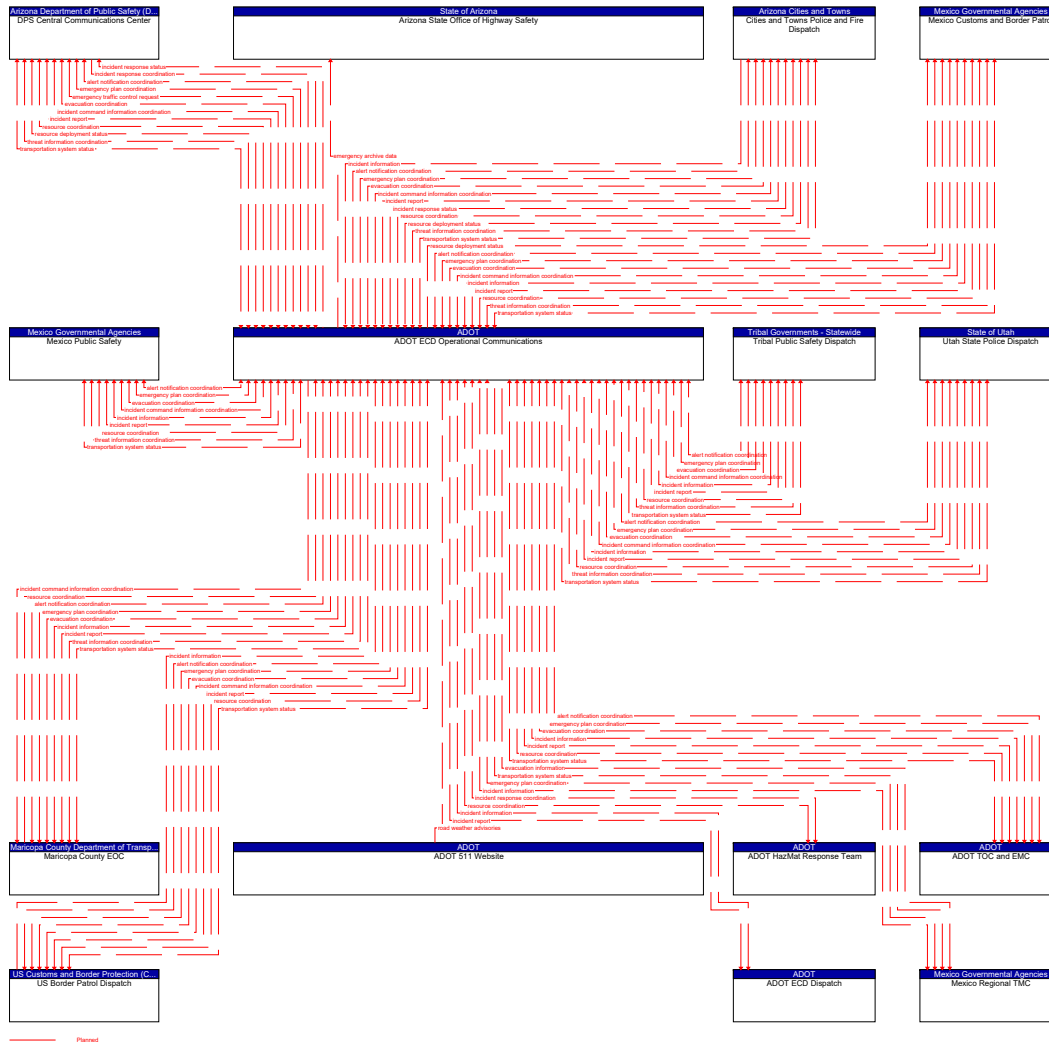


Figure 15: ADOT ECD Operational Communications Context Diagram

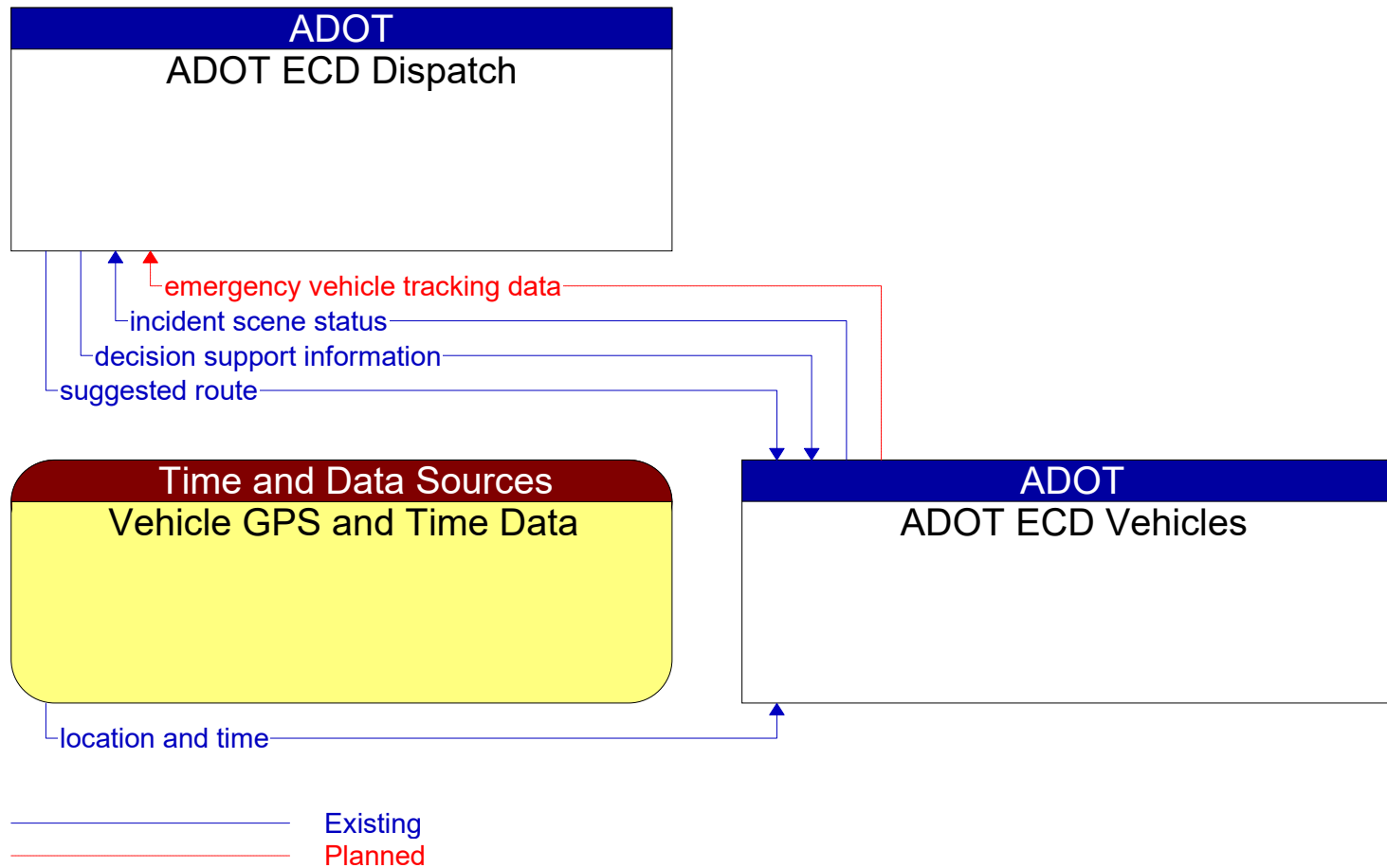


Figure 16: ADOT ECD Vehicles Context Diagram

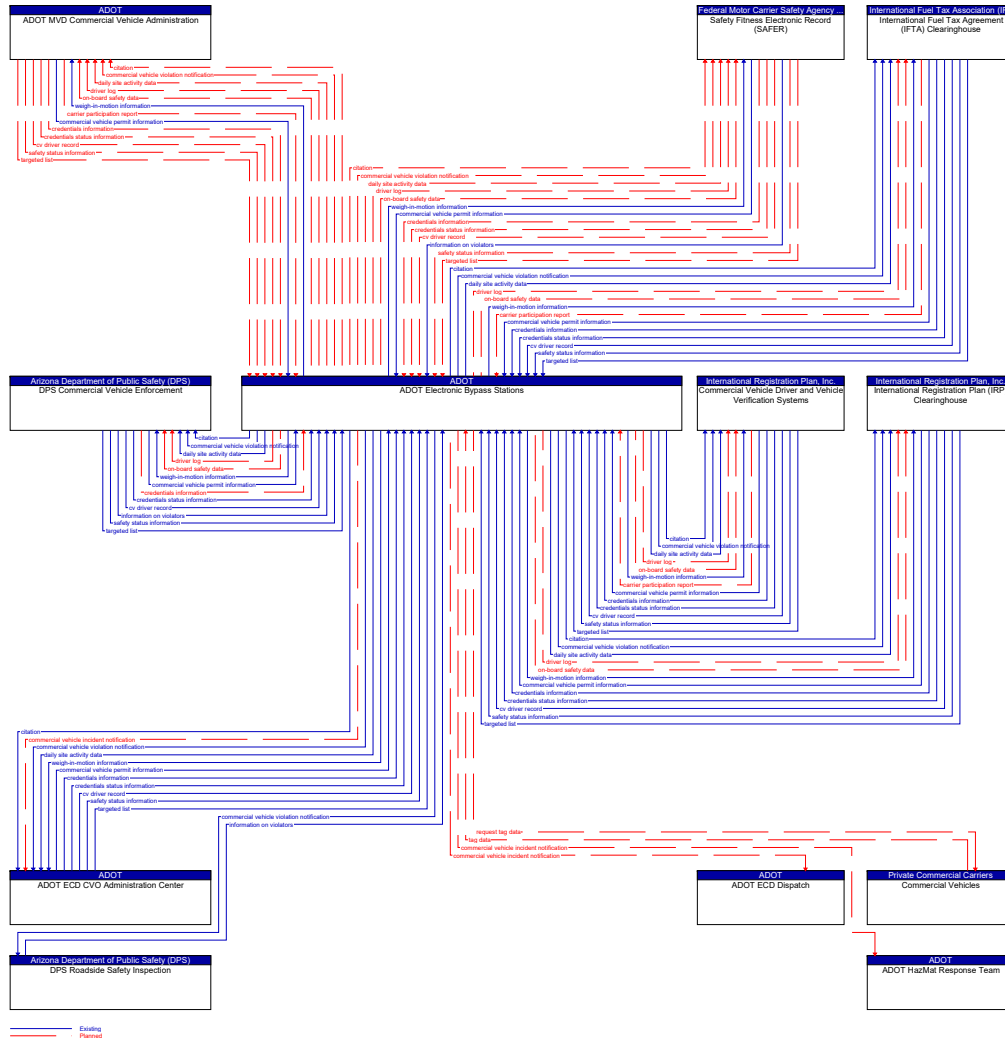


Figure 17: ADOT Electronic Bypass Stations Context Diagram

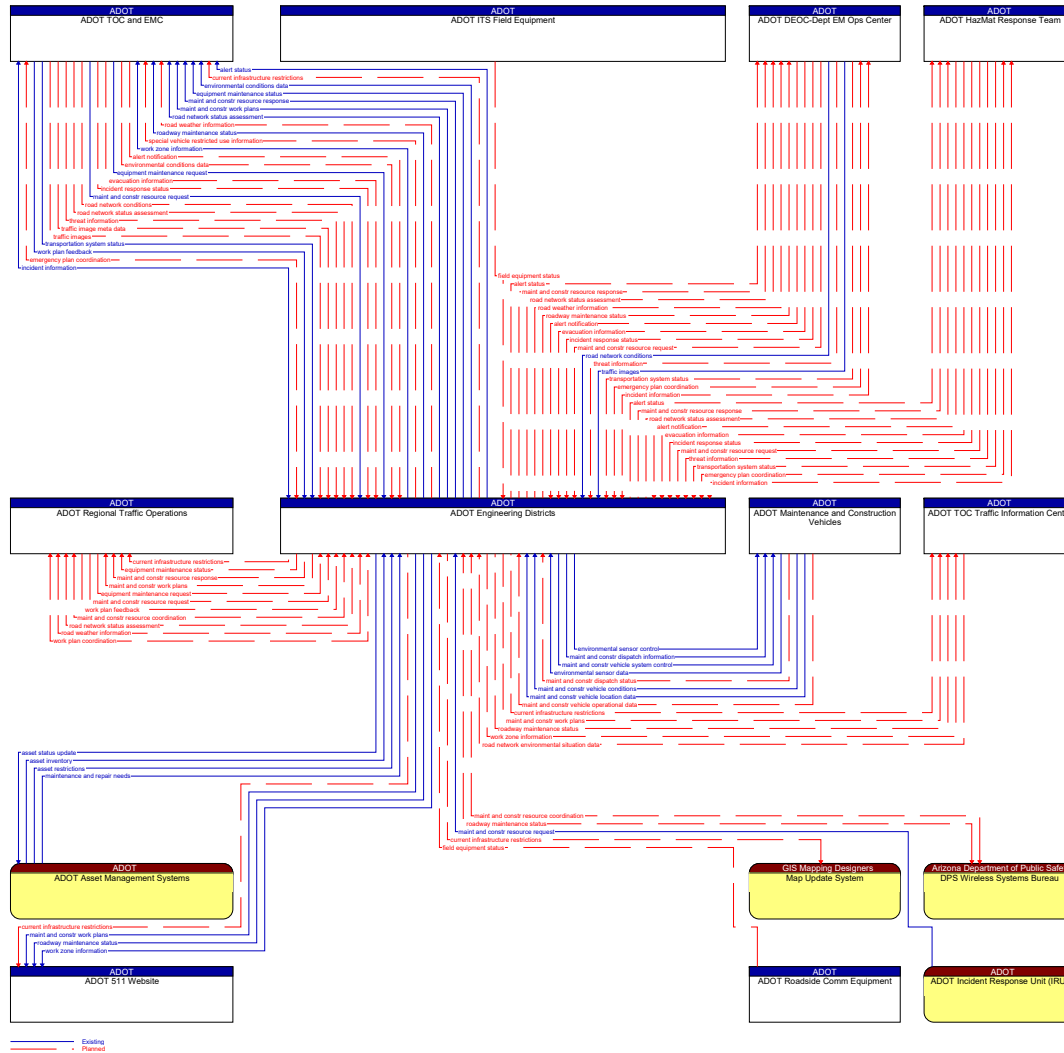


Figure 18: ADOT Engineering Districts Context Diagram

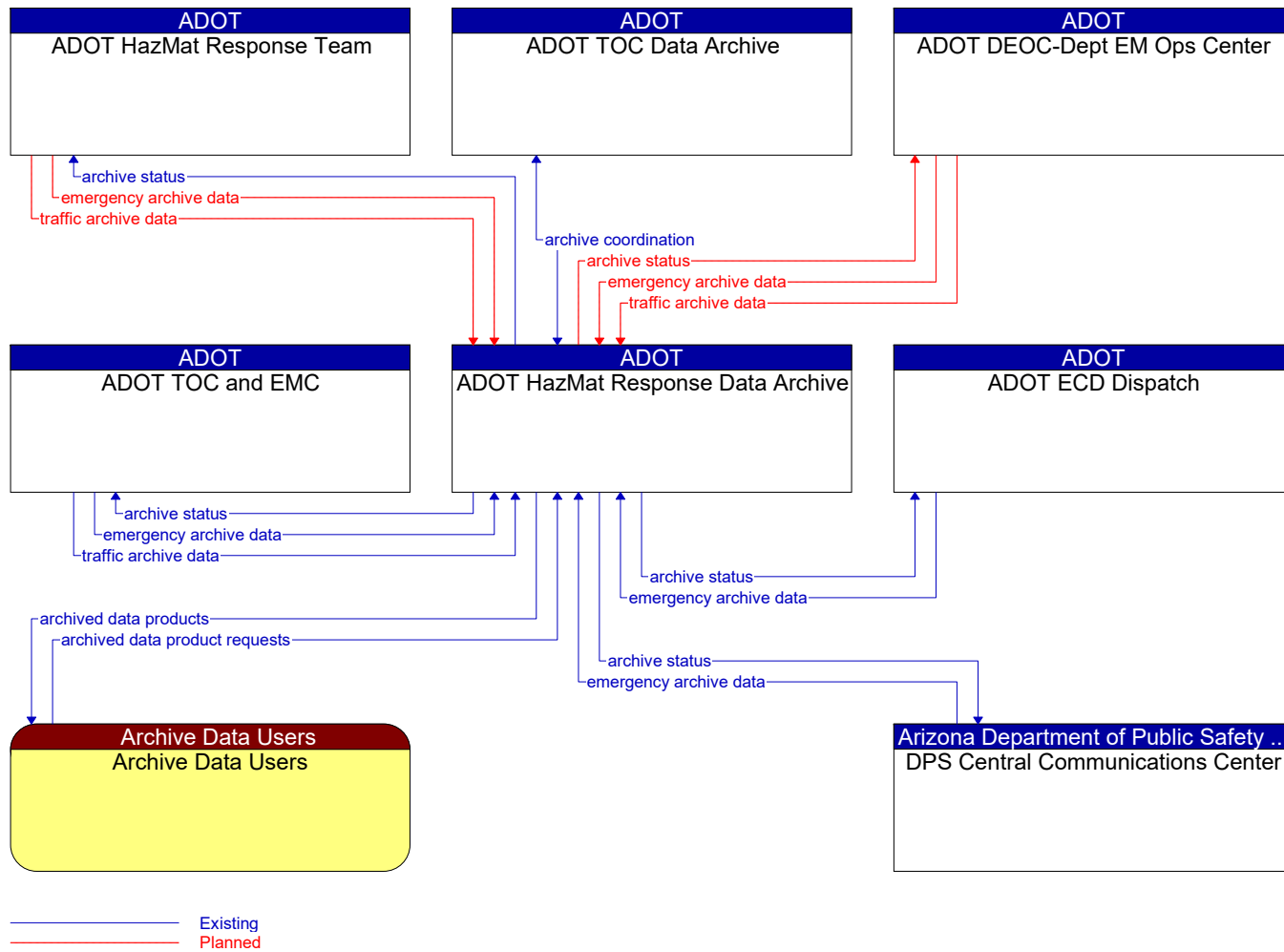


Figure 19: ADOT HazMat Response Data Archive Context Diagram

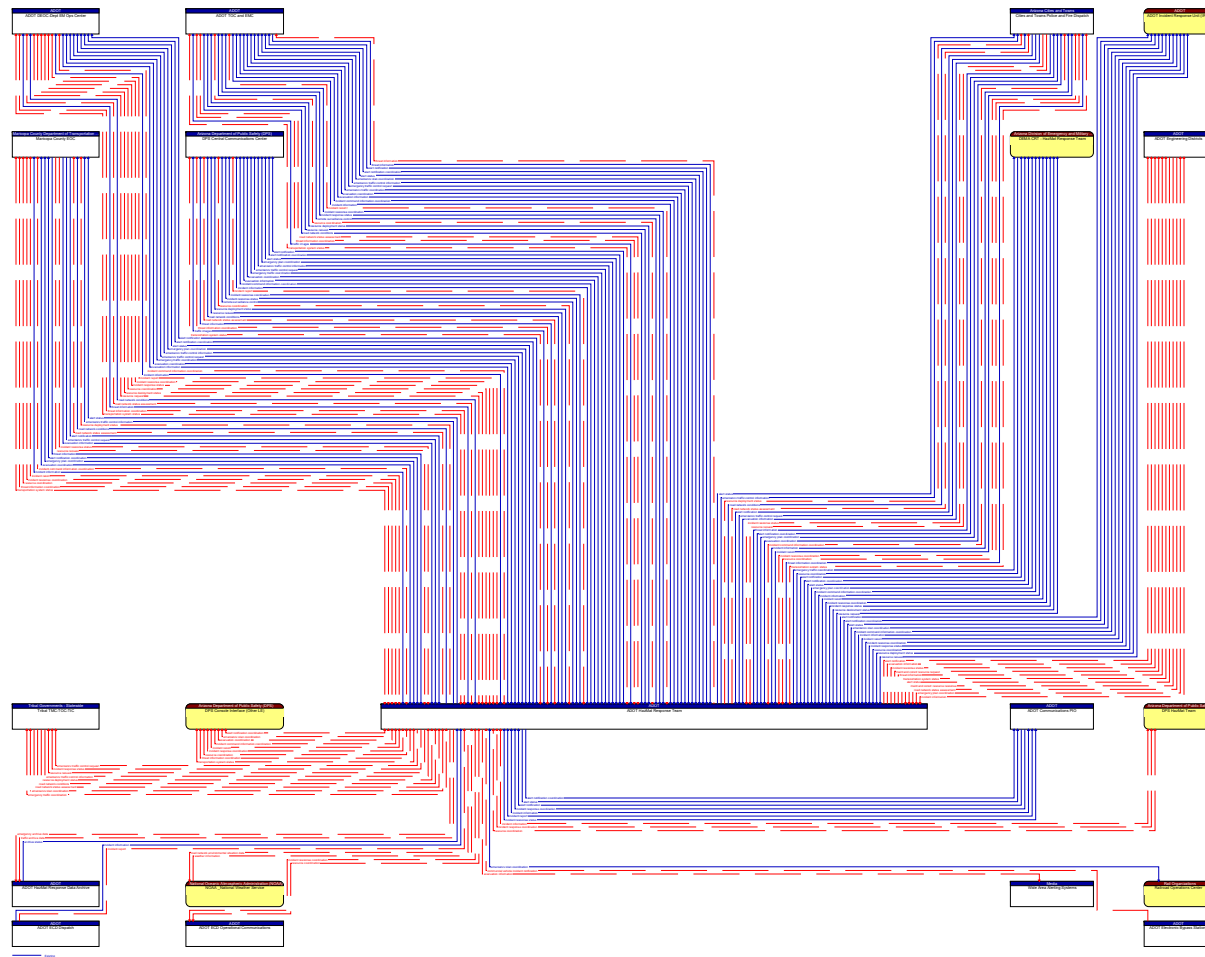


Figure 20: ADOT HazMat Response Team Context Diagram

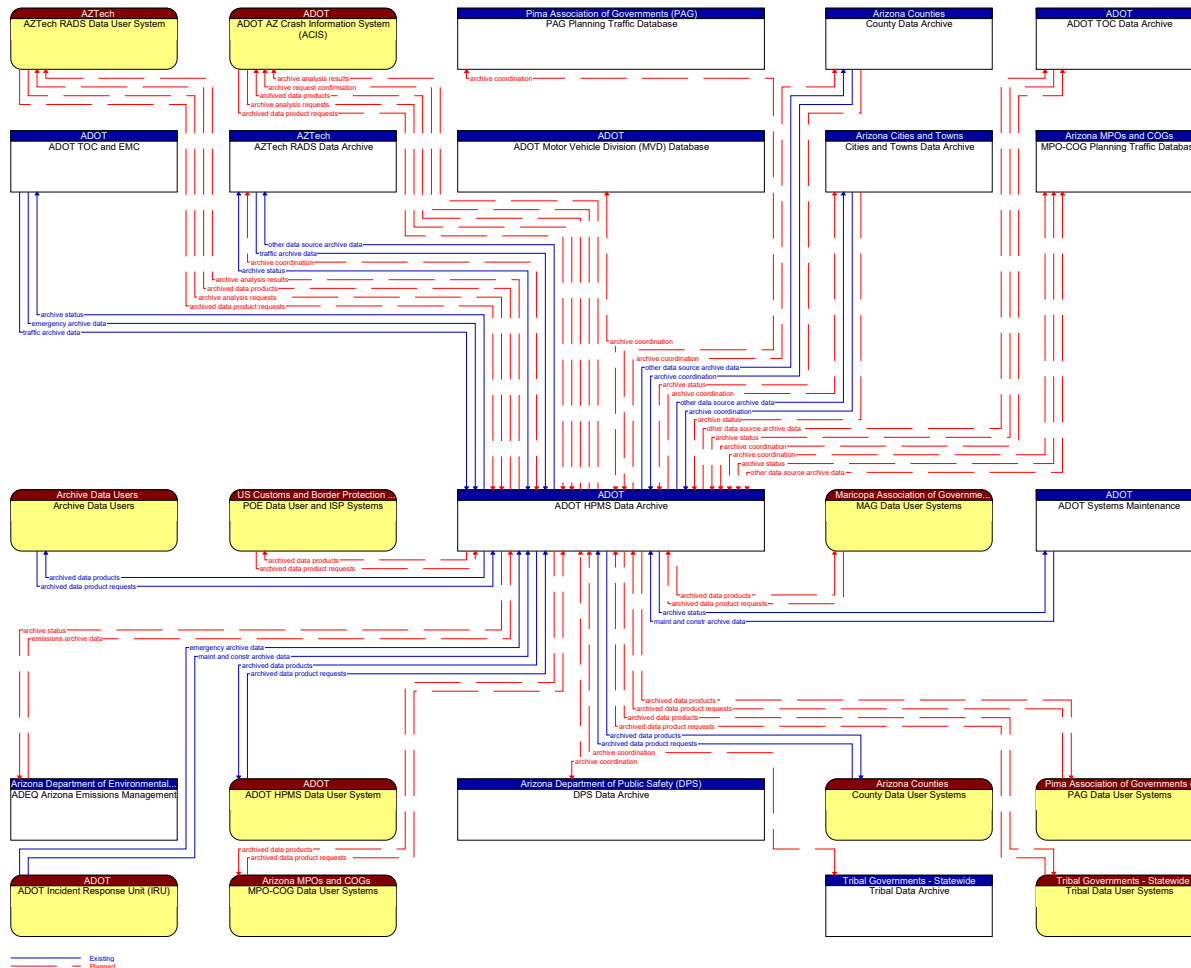


Figure 21: ADOT HPMS Data Archive Context Diagram

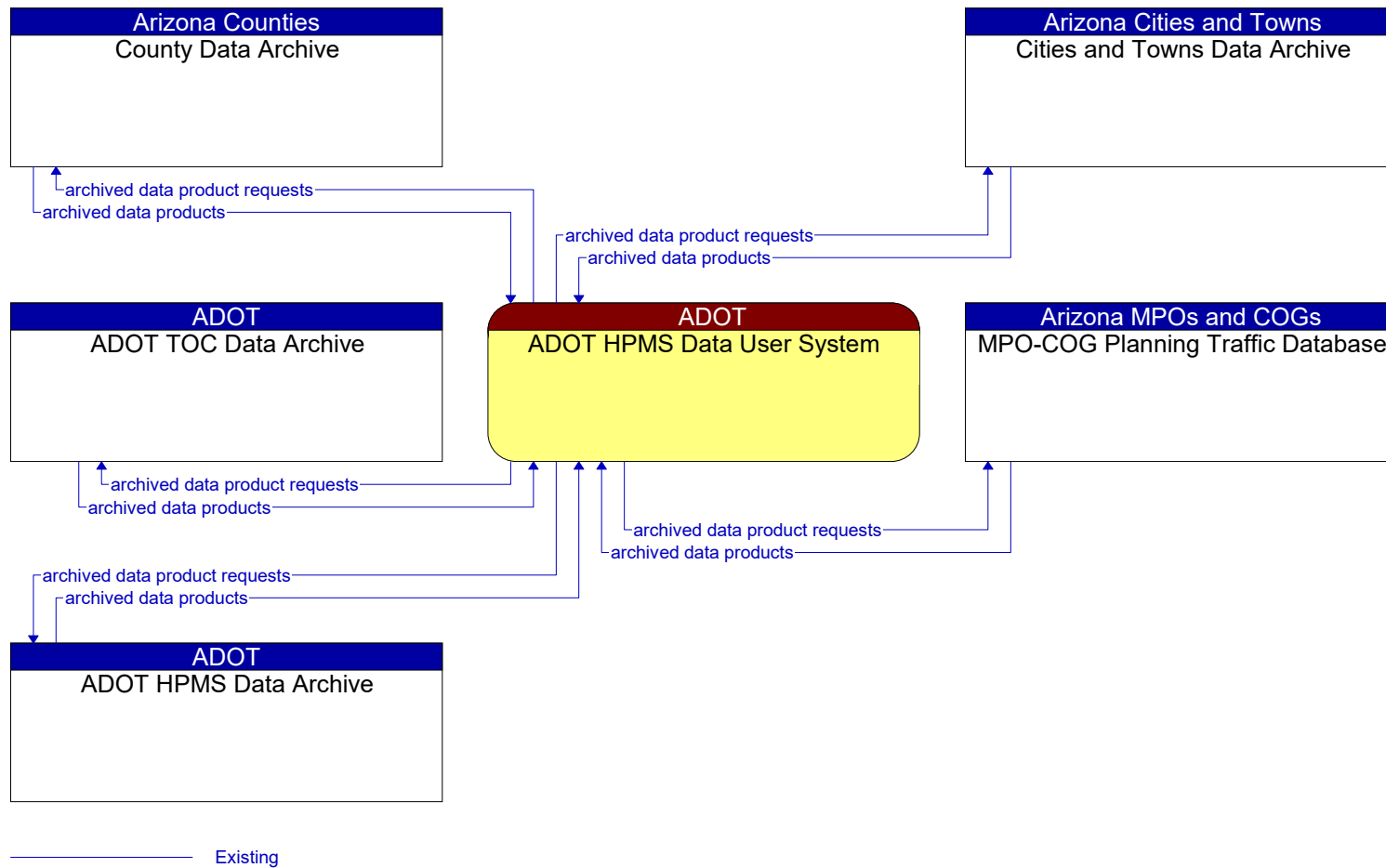


Figure 22: ADOT HPMS Data User System Context Diagram

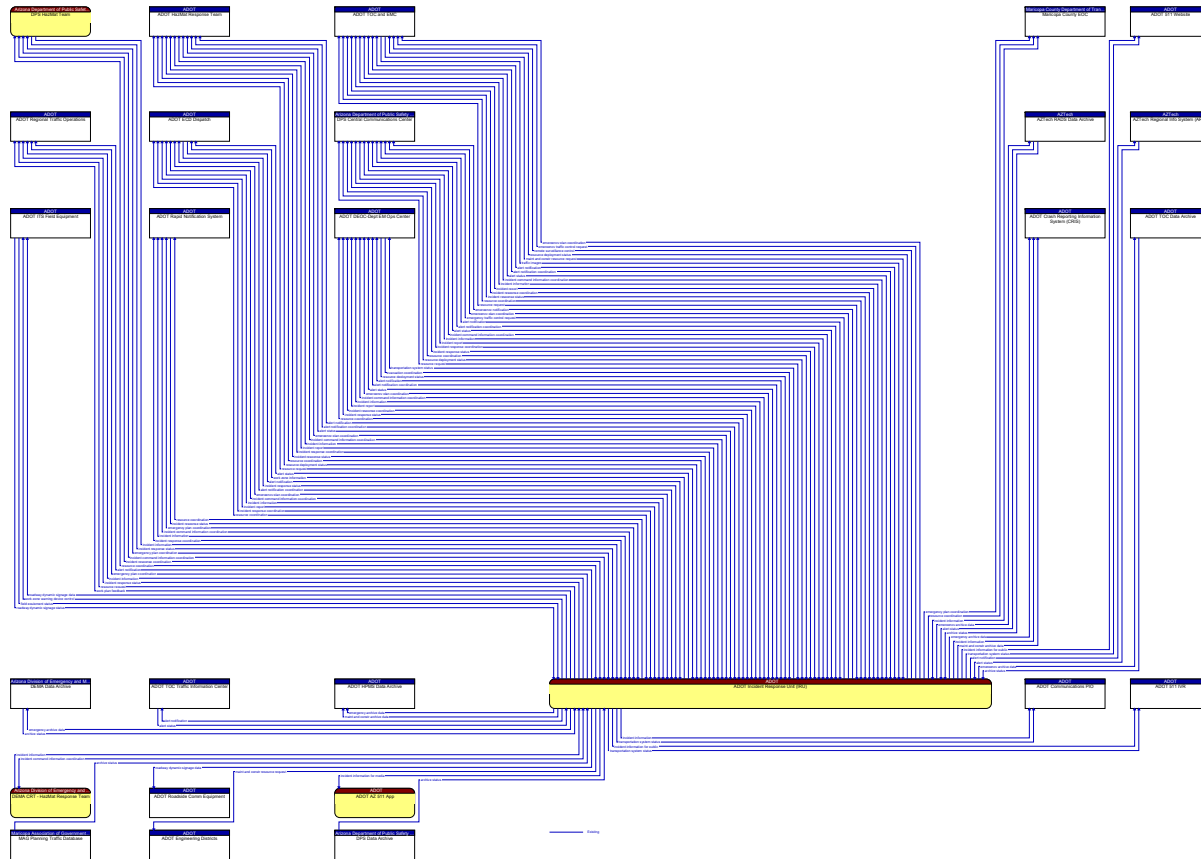
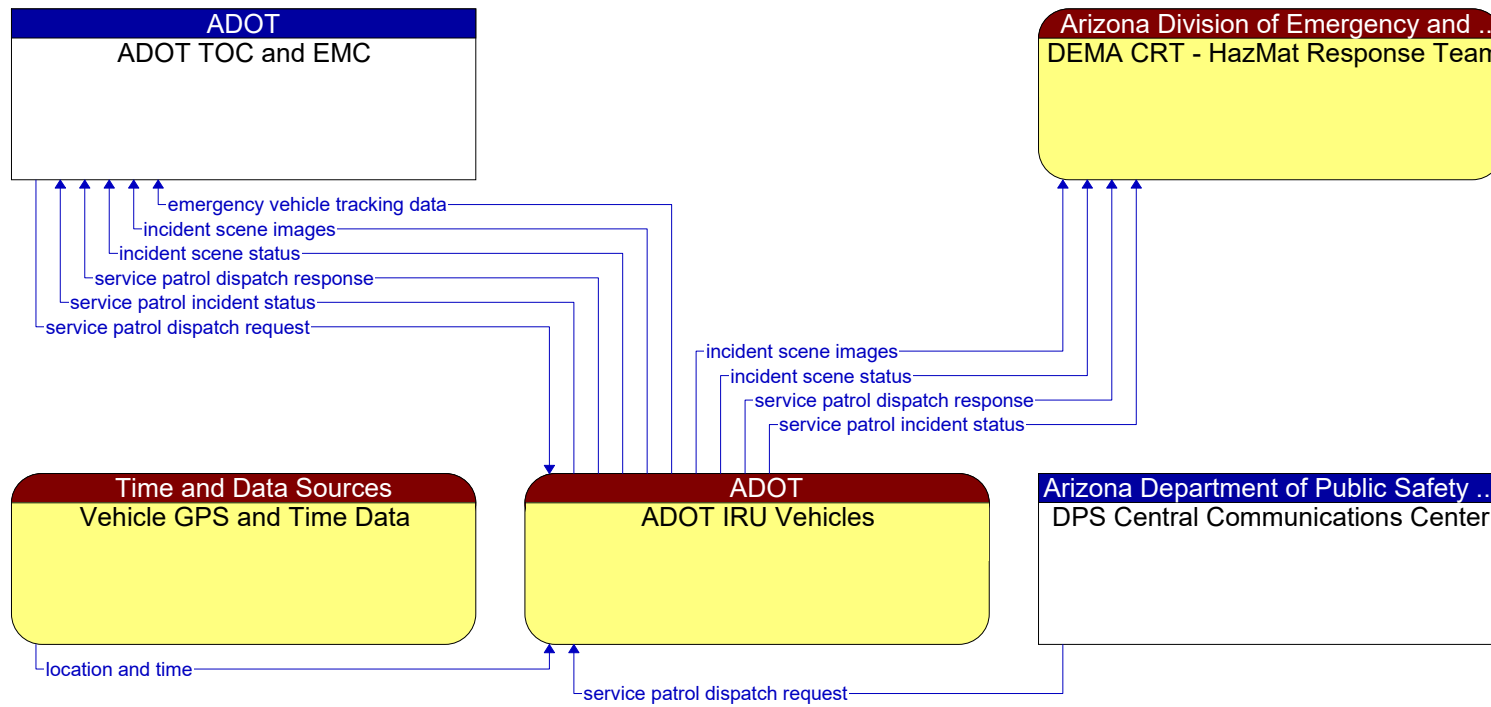


Figure 23: ADOT Incident Response Unit (IRU) Context Diagram



Existing

Figure 24: ADOT IRU Vehicles Context Diagram

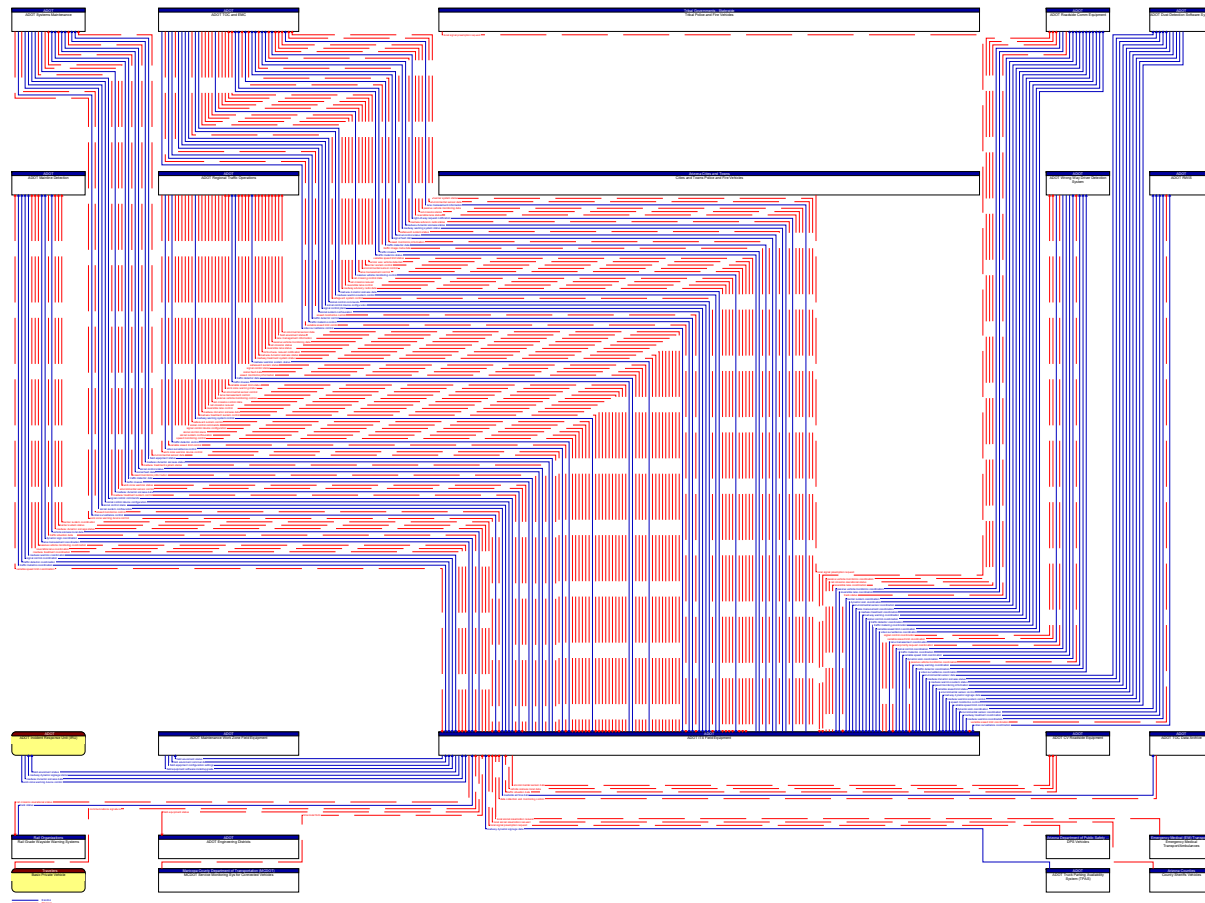


Figure 25: ADOT ITS Field Equipment Context Diagram

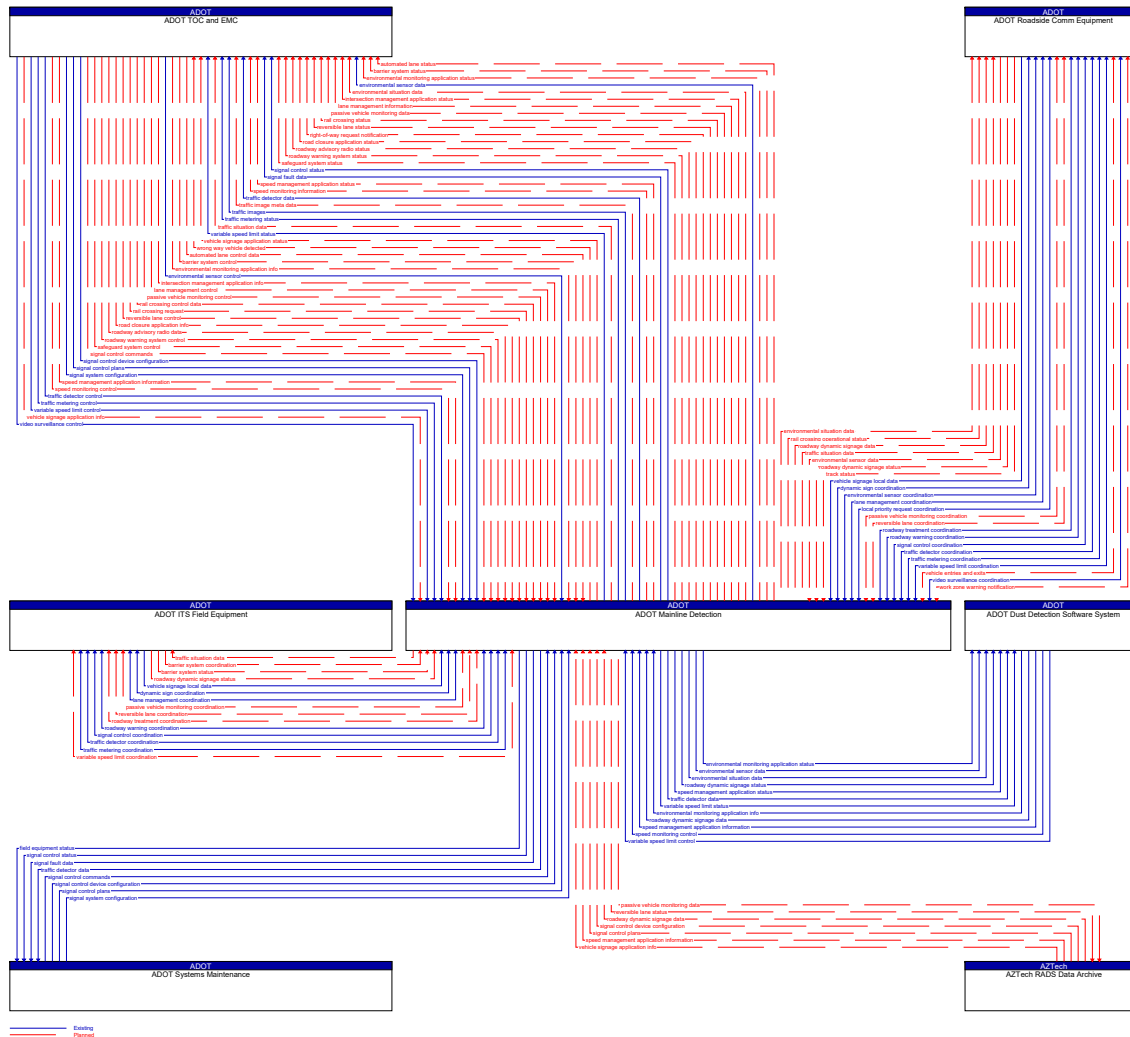


Figure 26: ADOT Mainline Detection Context Diagram

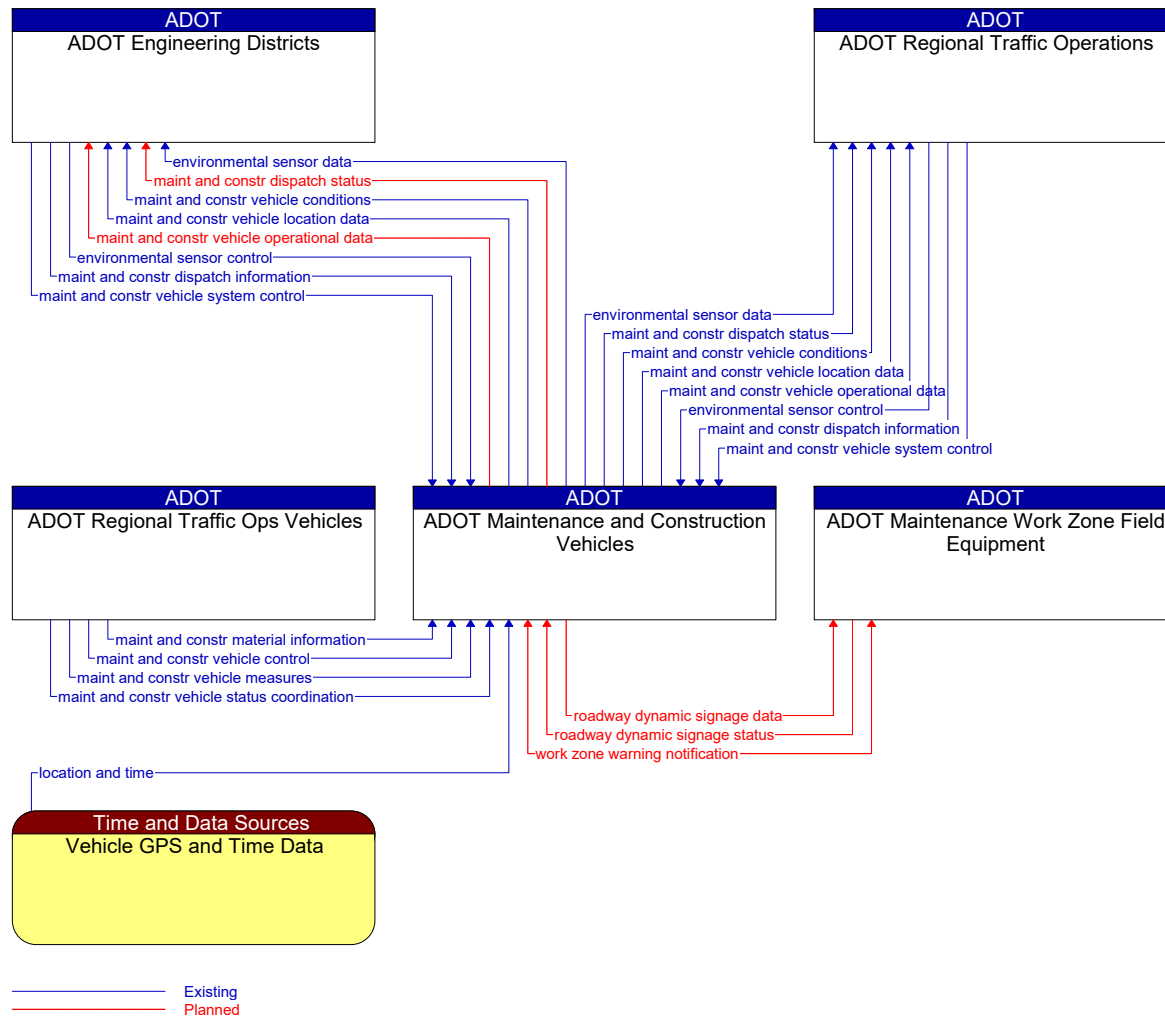


Figure 27: ADOT Maintenance and Construction Vehicles Context Diagram

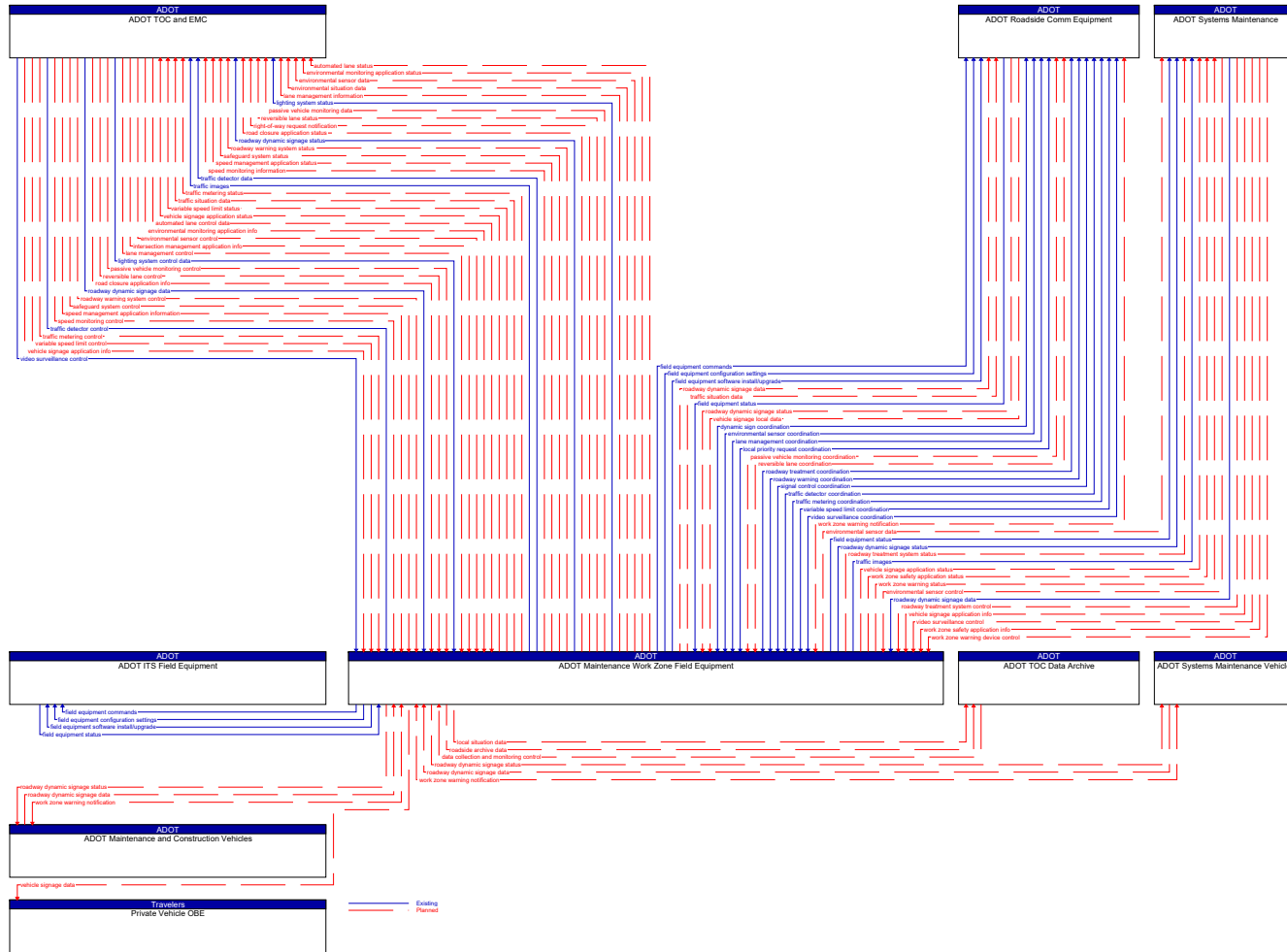


Figure 28: ADOT Maintenance Work Zone Field Equipment Context Diagram

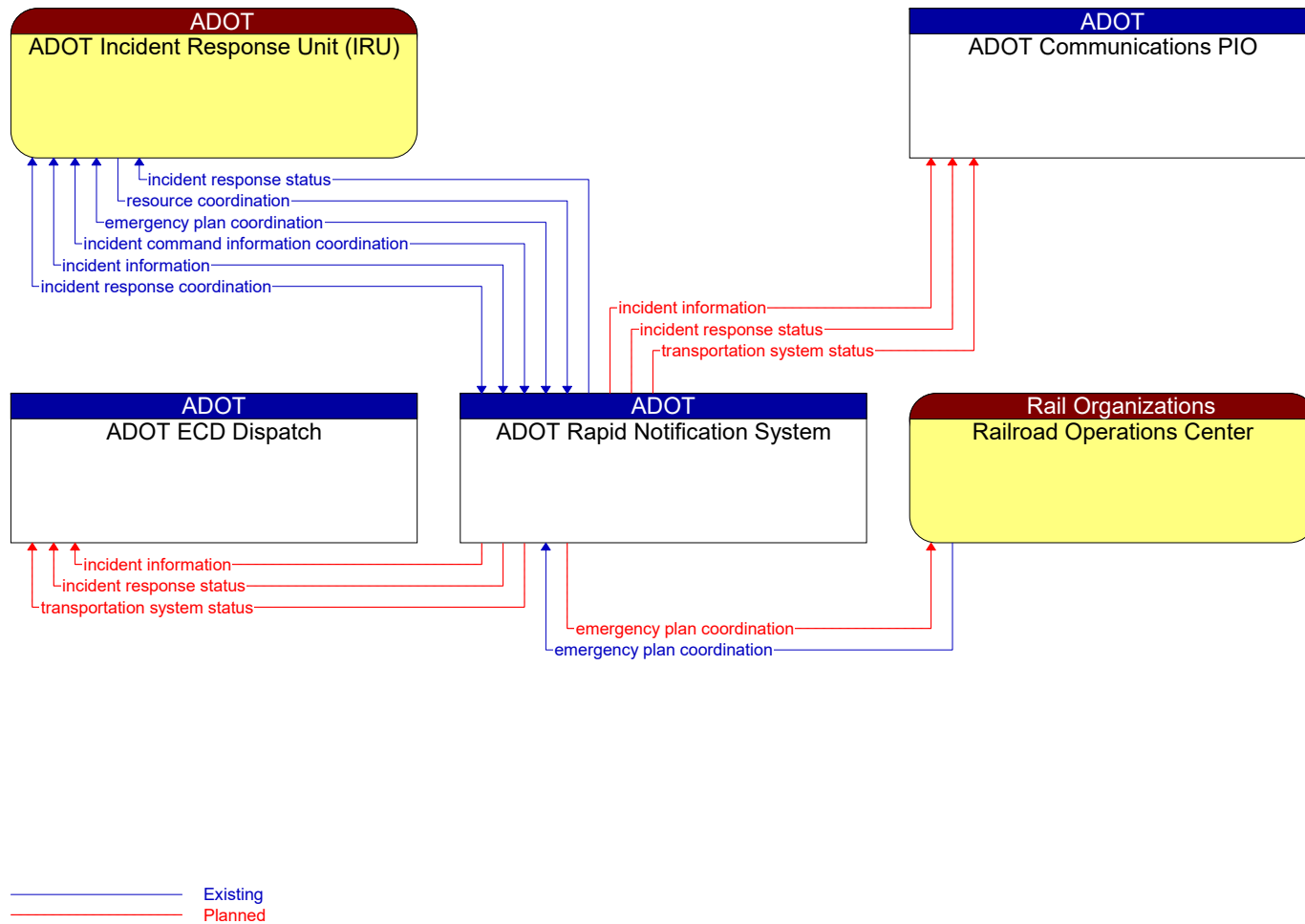


Figure 31: ADOT Rapid Notification System Context Diagram

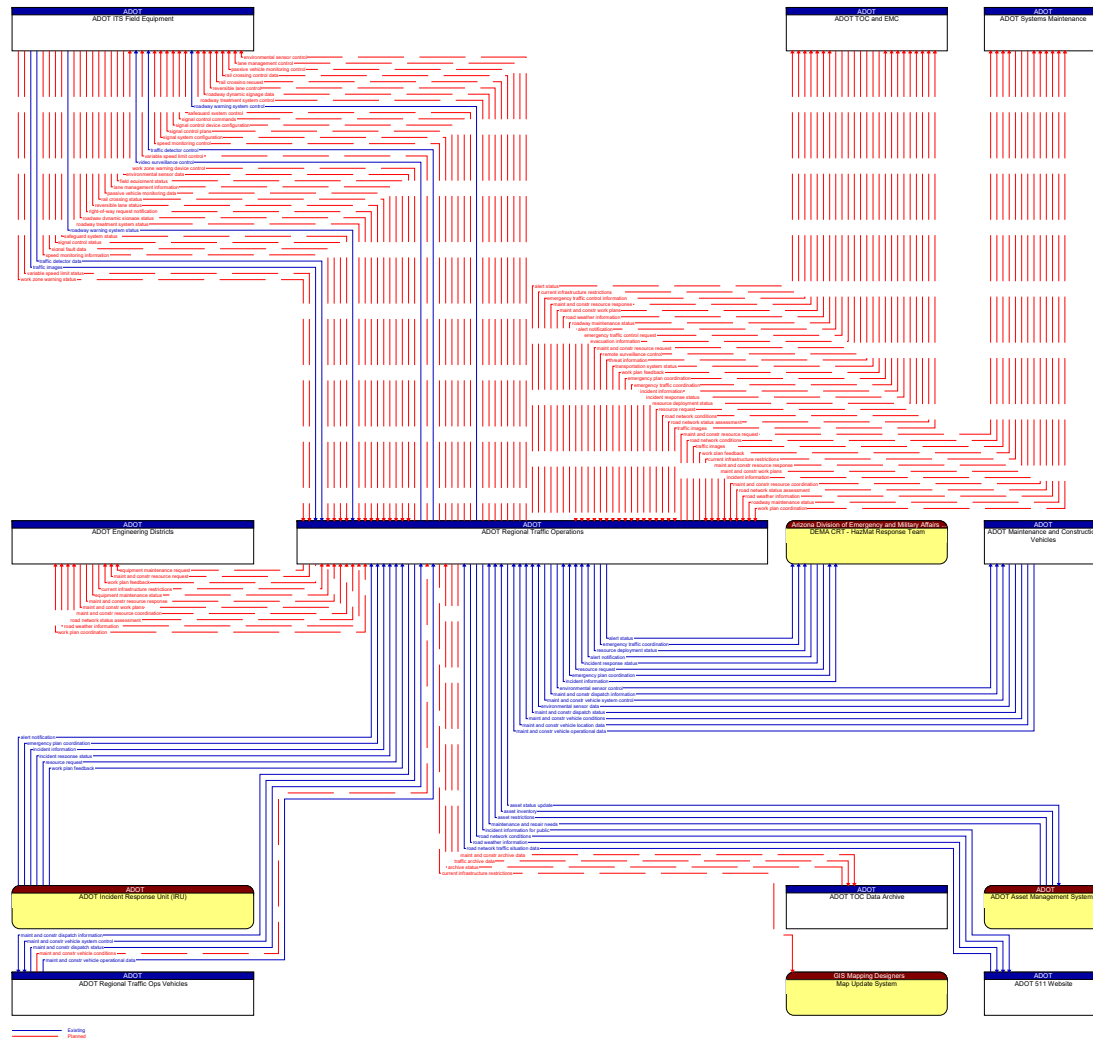


Figure 32: ADOT Regional Traffic Operations Context Diagram

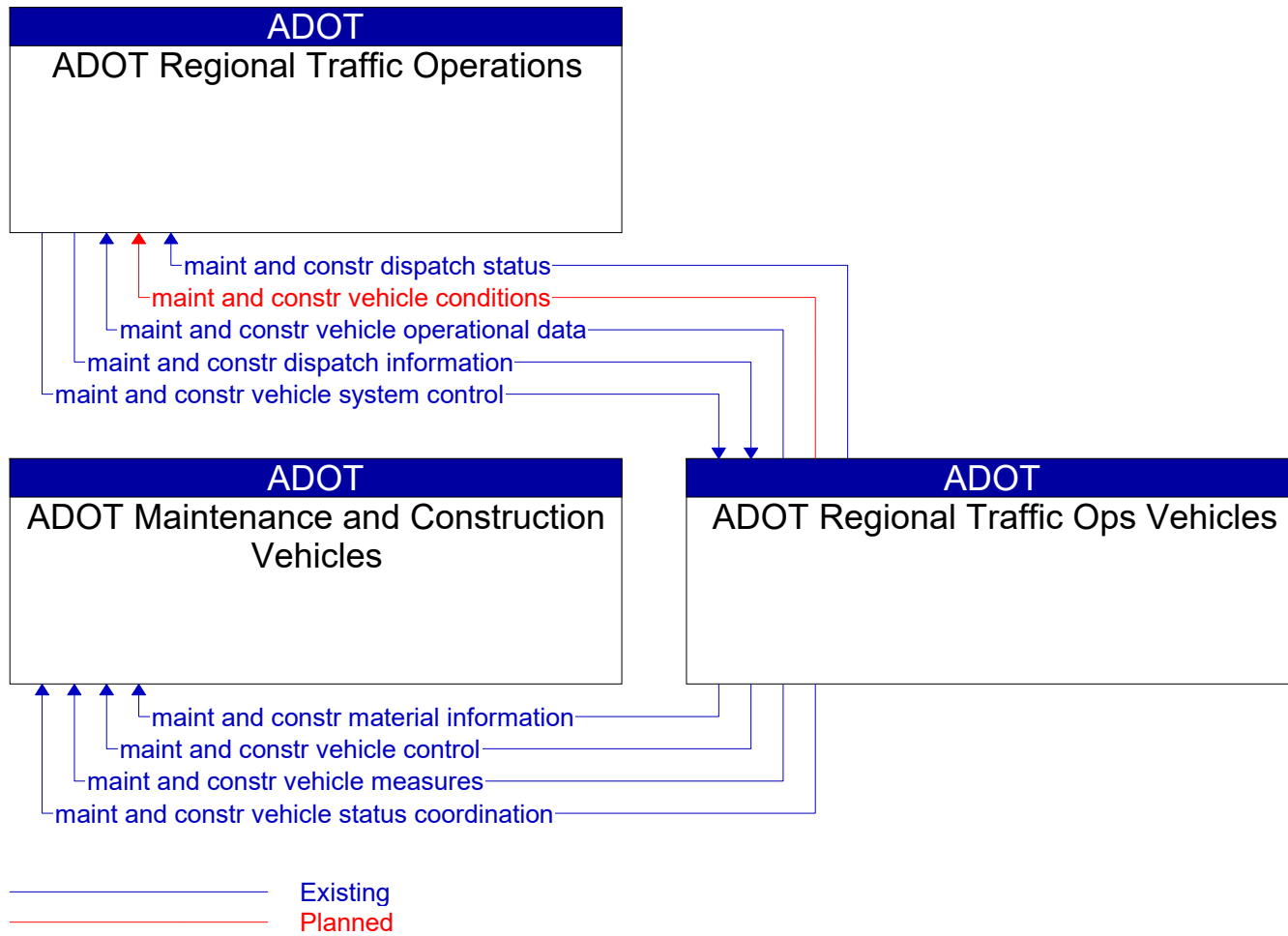


Figure 33: ADOT Regional Traffic Ops Vehicles Context Diagram

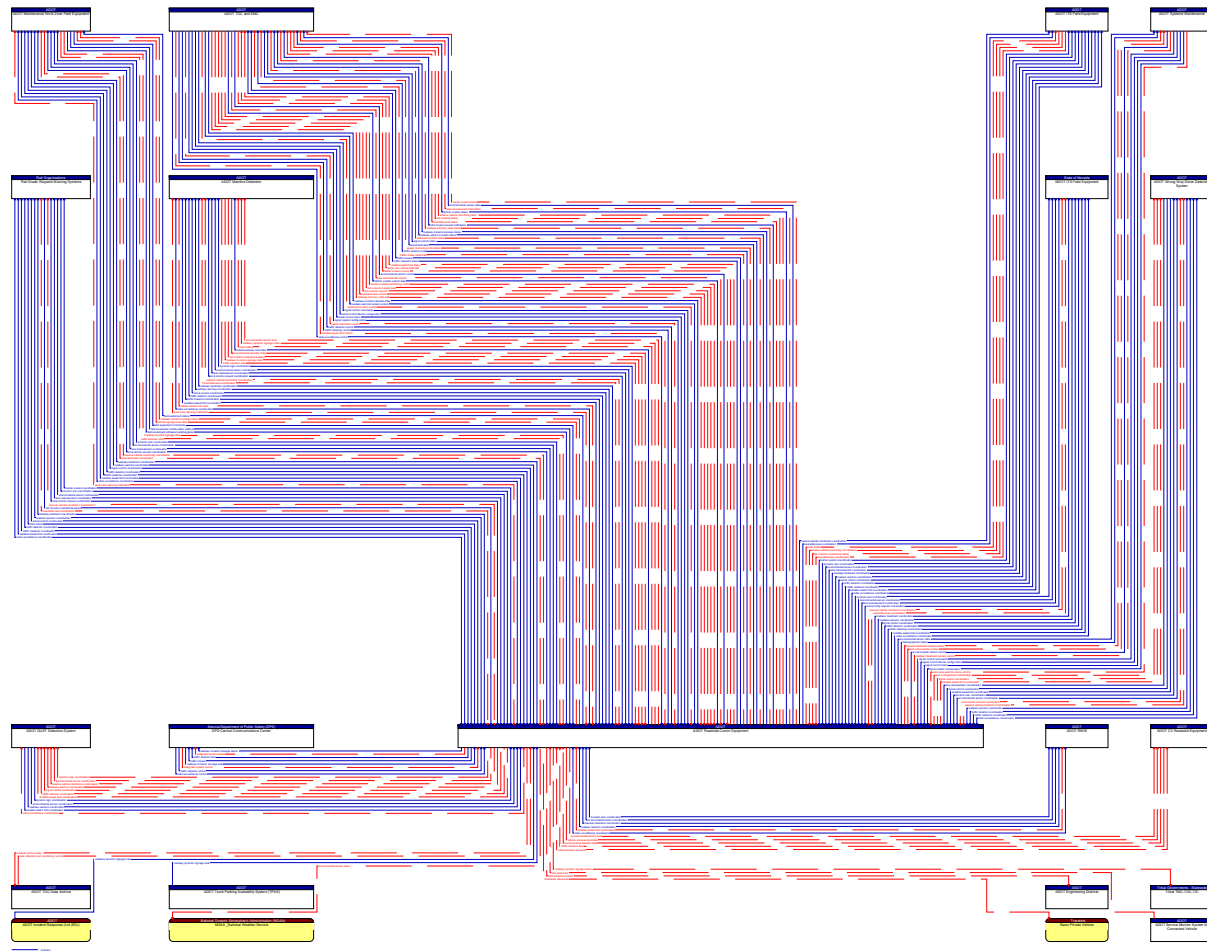


Figure 34: ADOT Roadside Comm Equipment Context Diagram

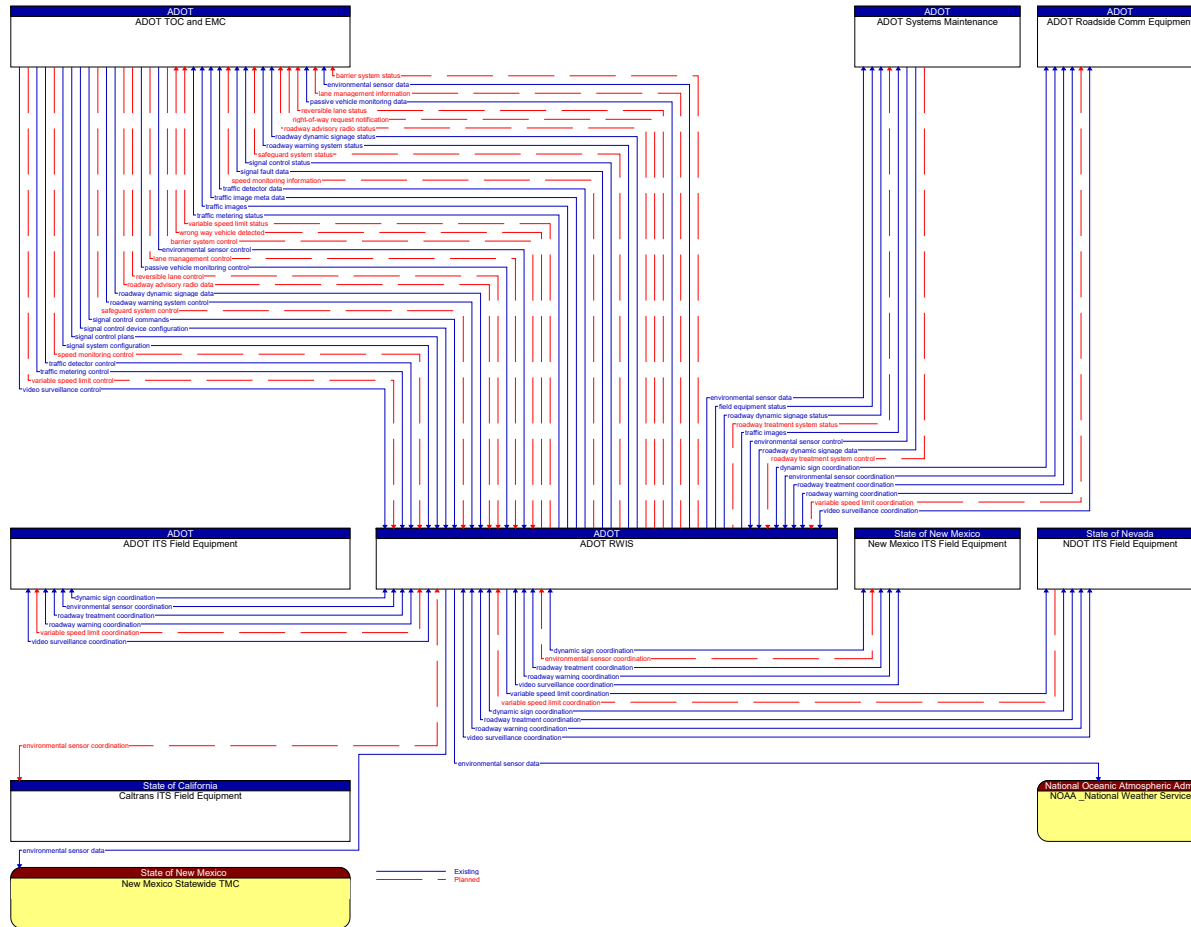


Figure 35: ADOT RWIS Context Diagram

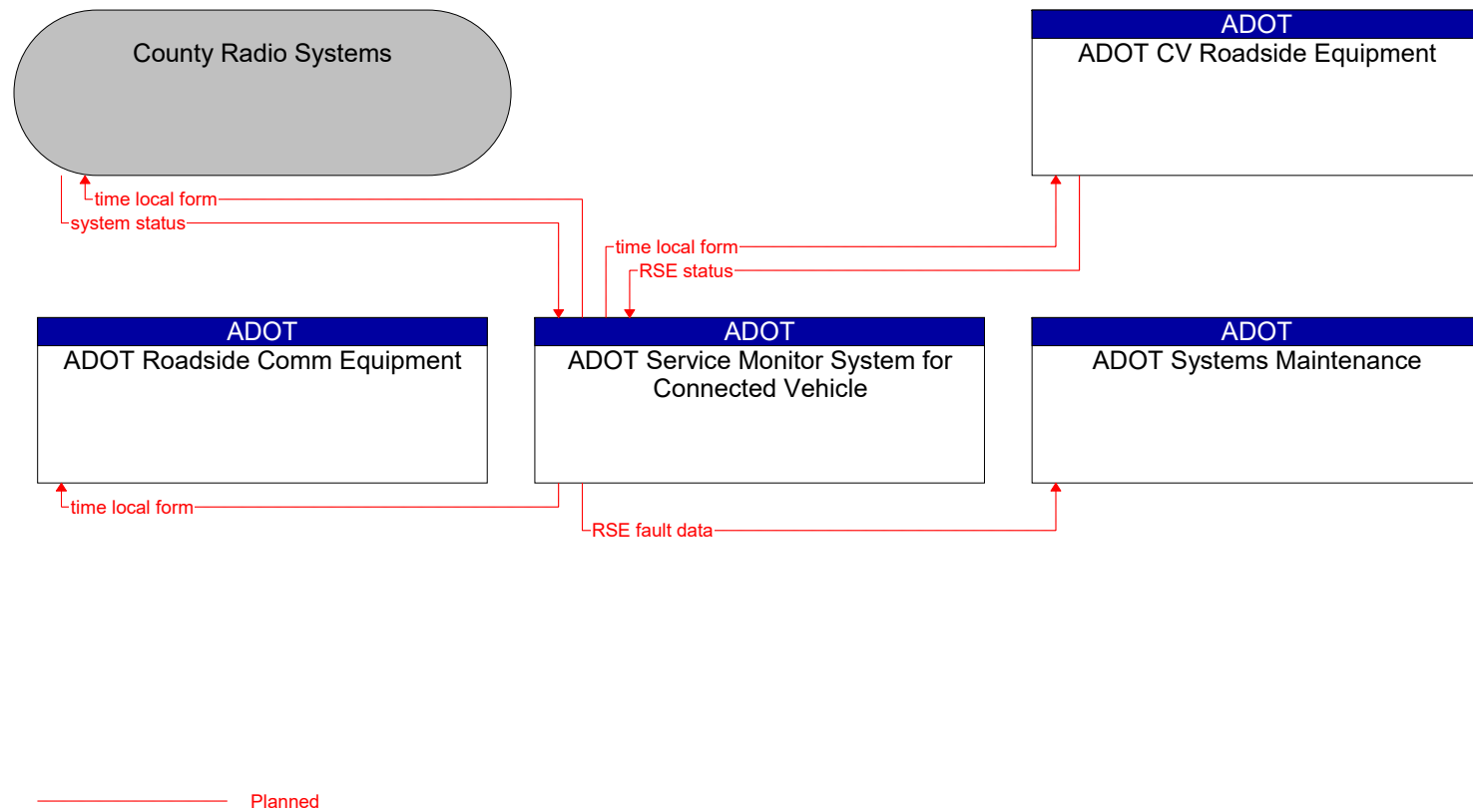


Figure 36: ADOT Service Monitor System for Connected Vehicle Context Diagram

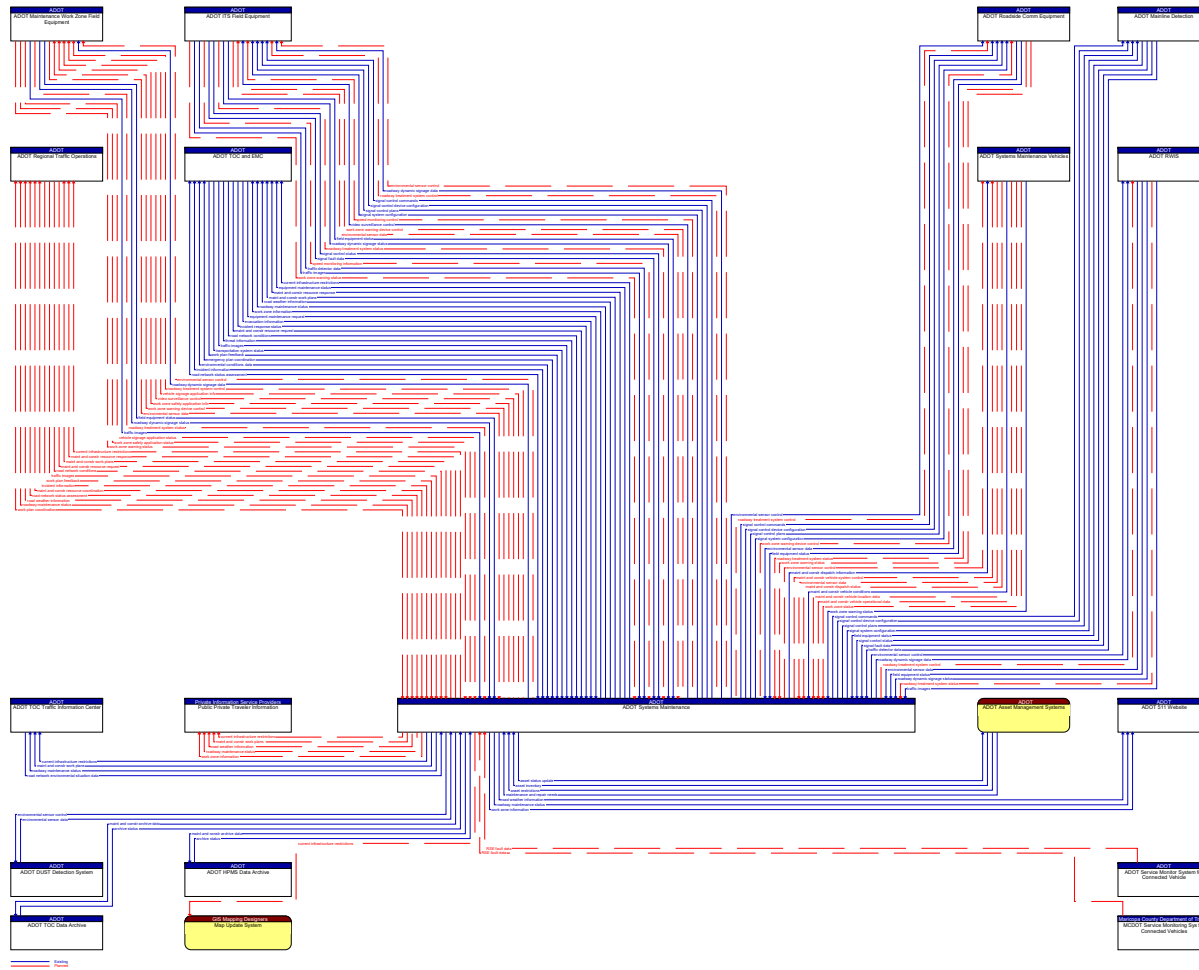


Figure 37: ADOT Systems Maintenance Context Diagram

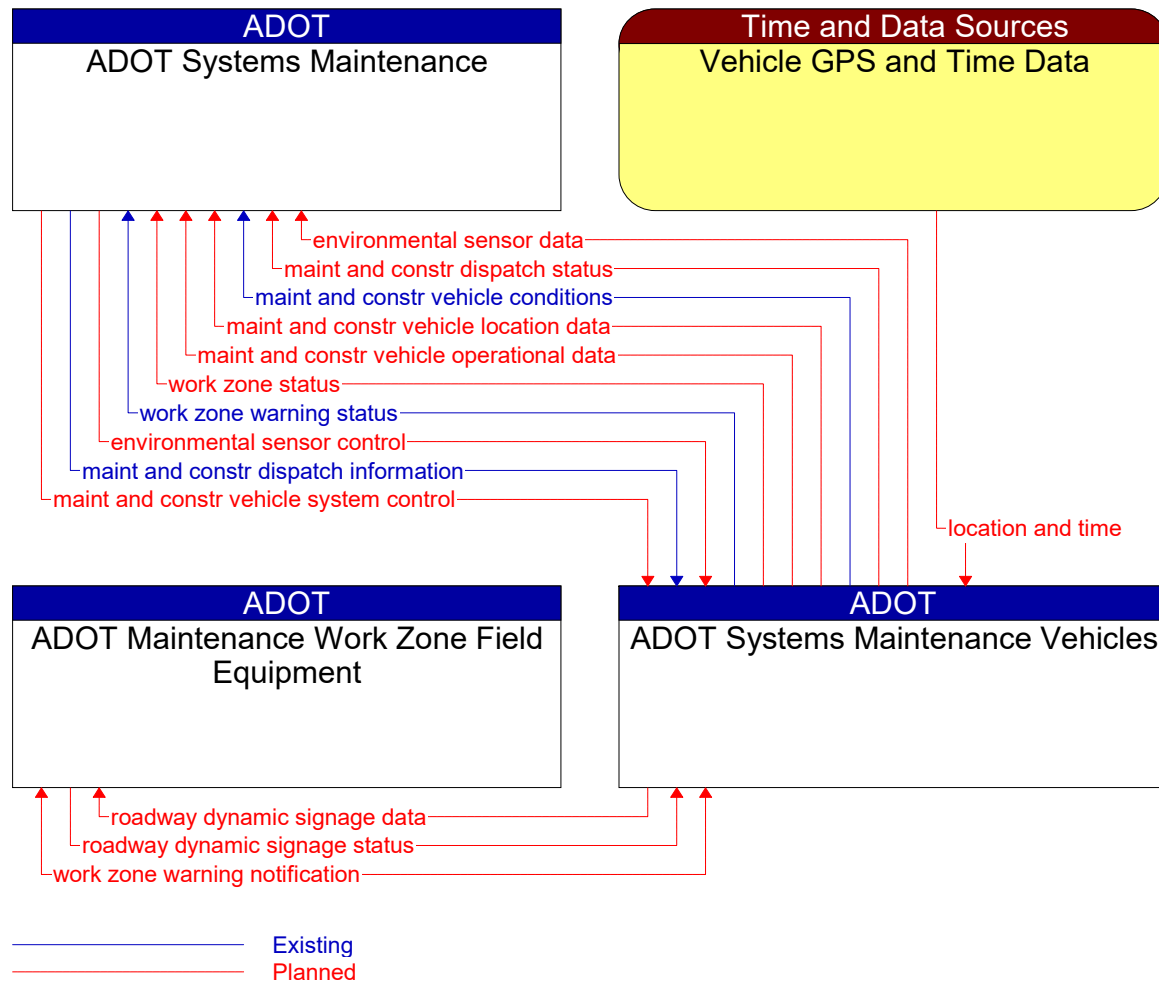


Figure 38: ADOT Systems Maintenance Vehicles Context Diagram

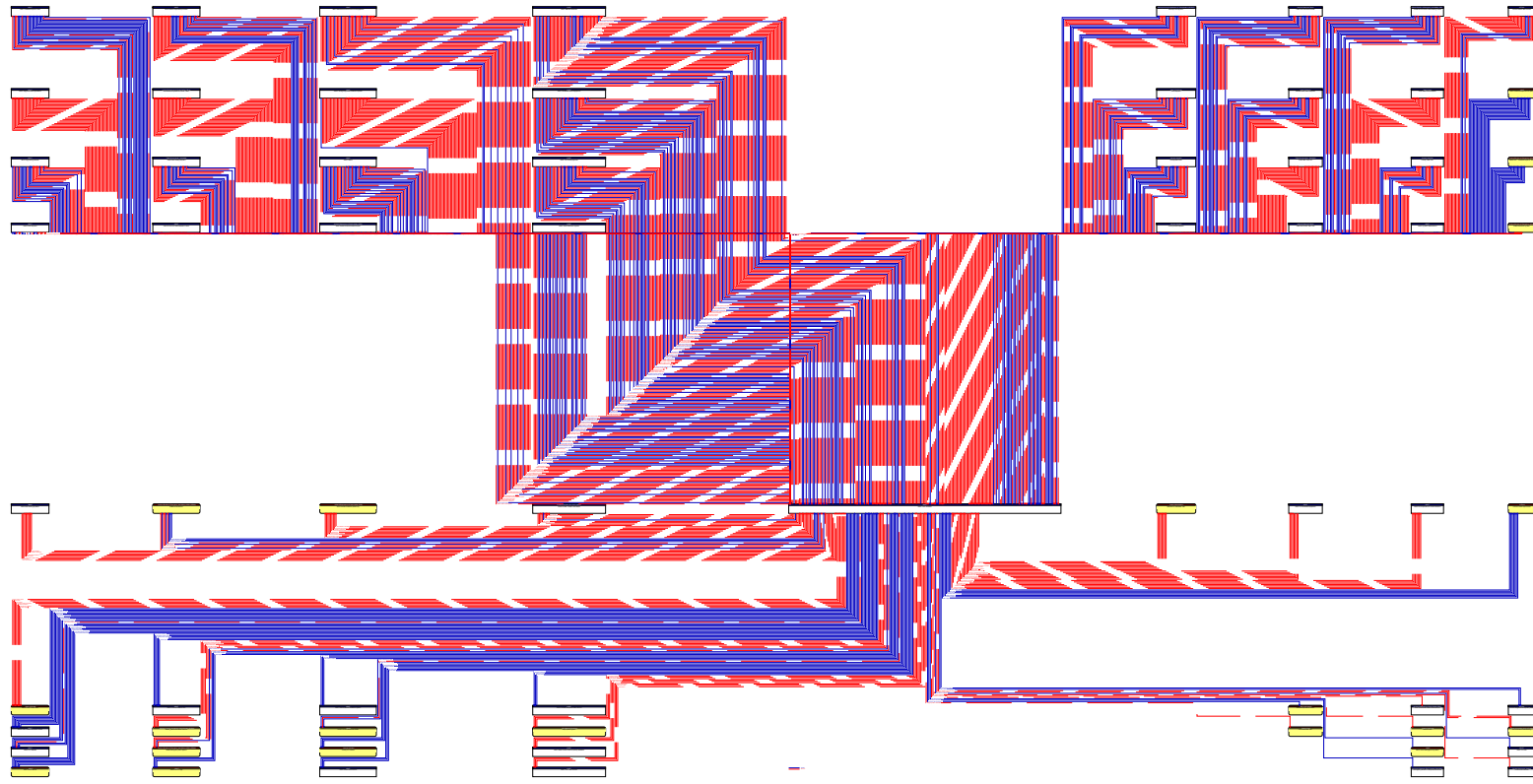


Figure 39: ADOT TOC and EMC Context Diagram

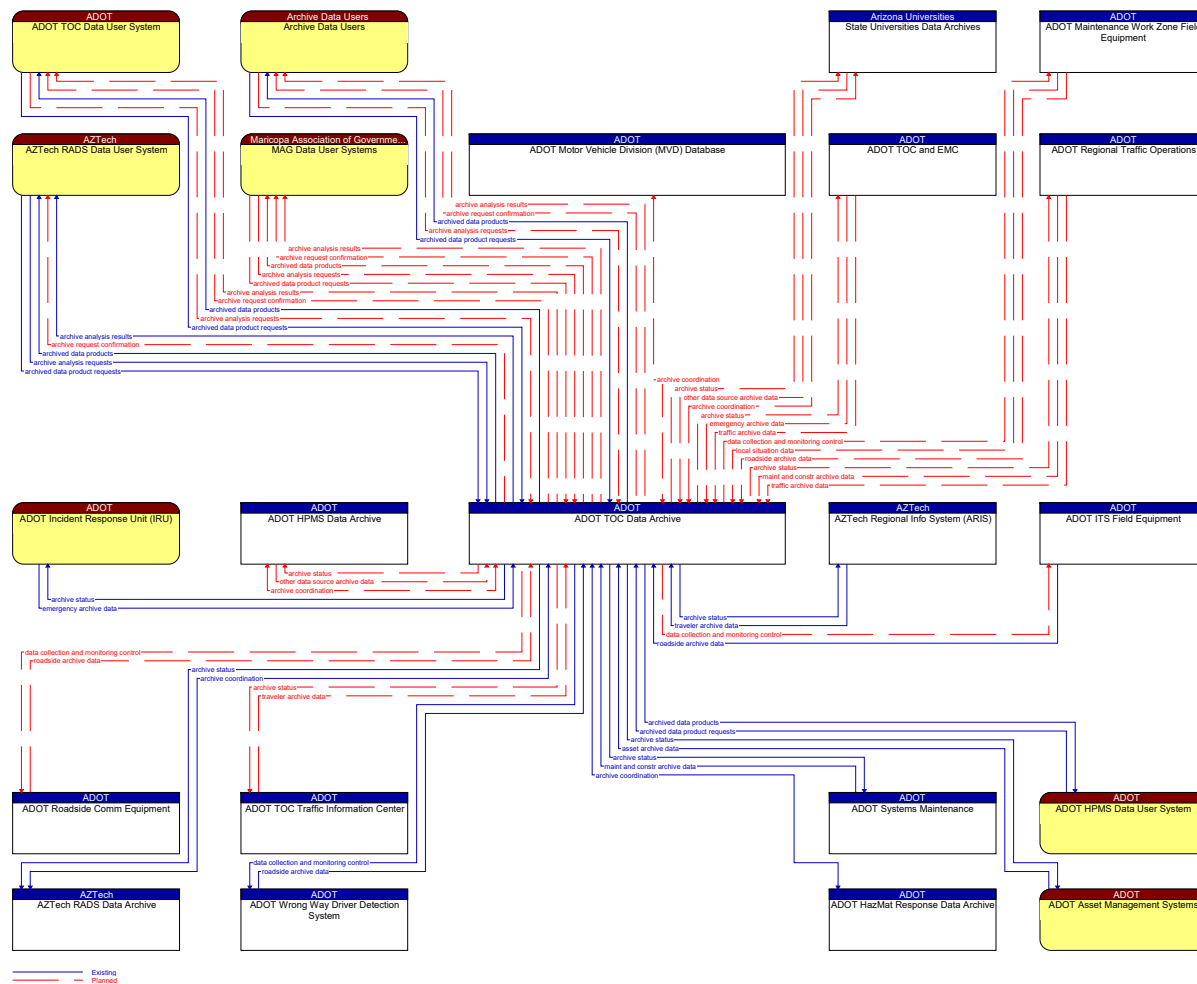


Figure 40: ADOT TOC Data Archive Context Diagram

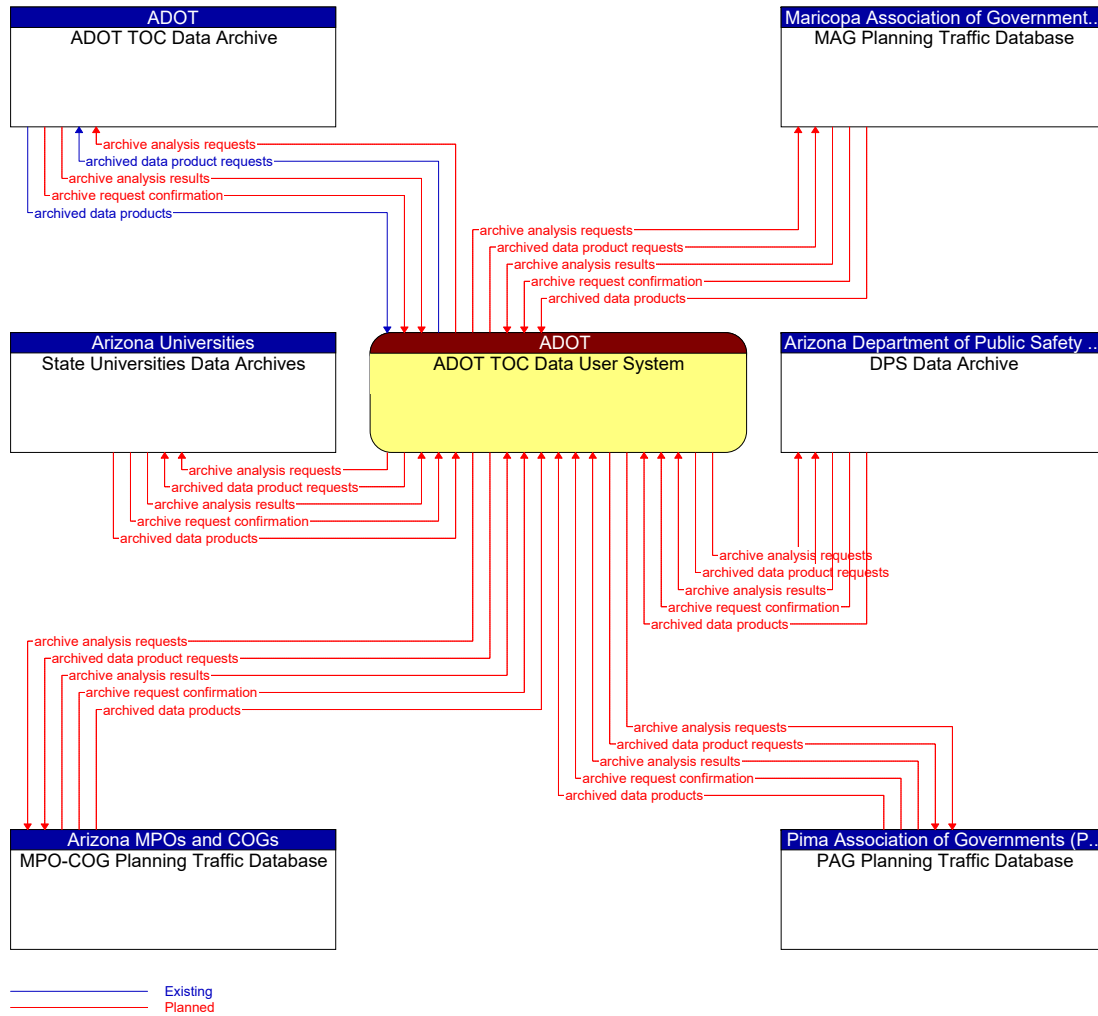


Figure 41: ADOT TOC Data User System Context Diagram

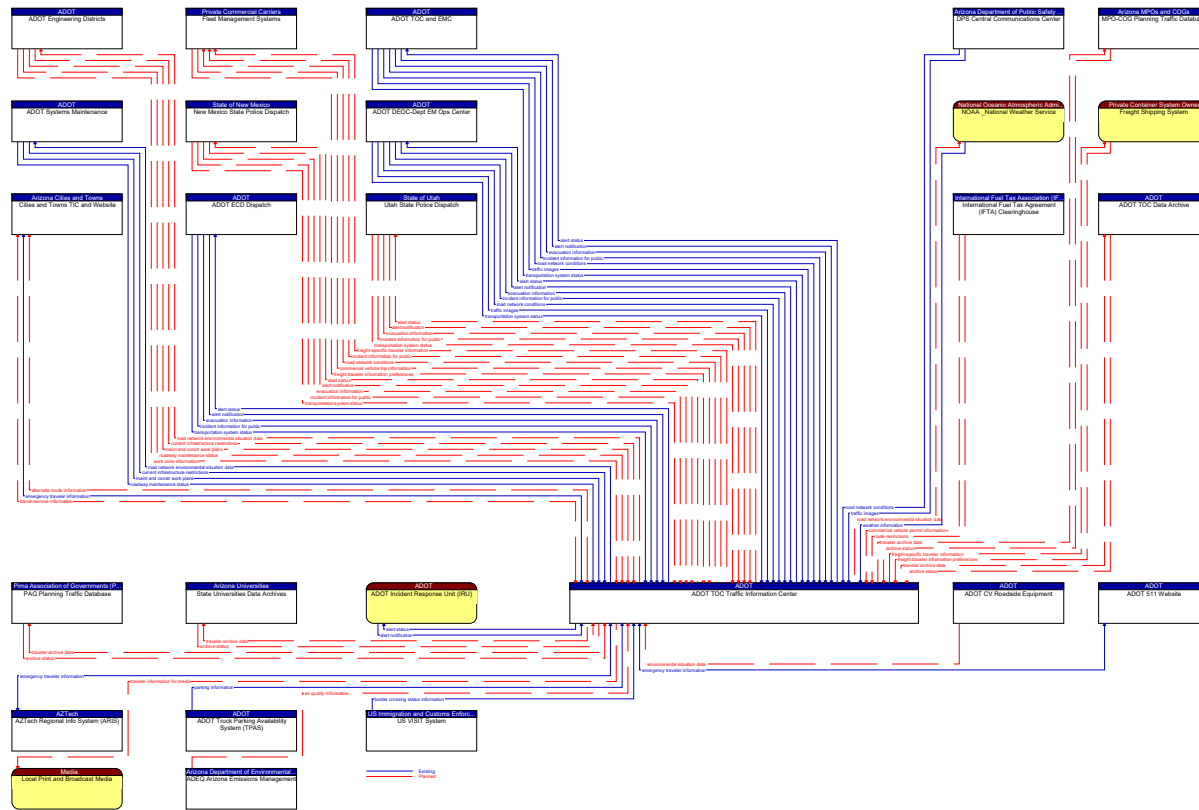


Figure 42: ADOT TOC Traffic Information Center Context Diagram

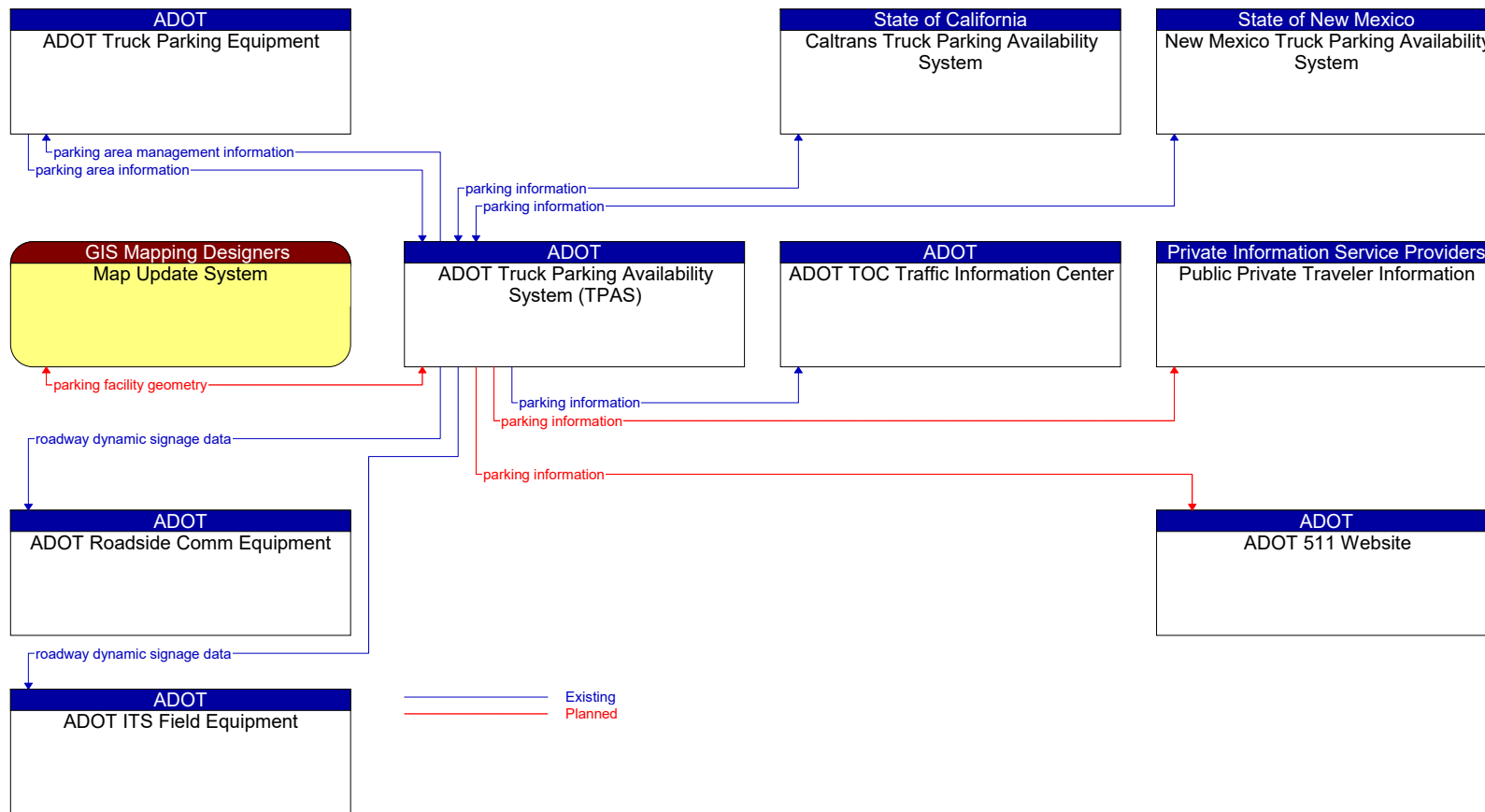


Figure 43: ADOT Truck Parking Availability System (TPAS) Context Diagram

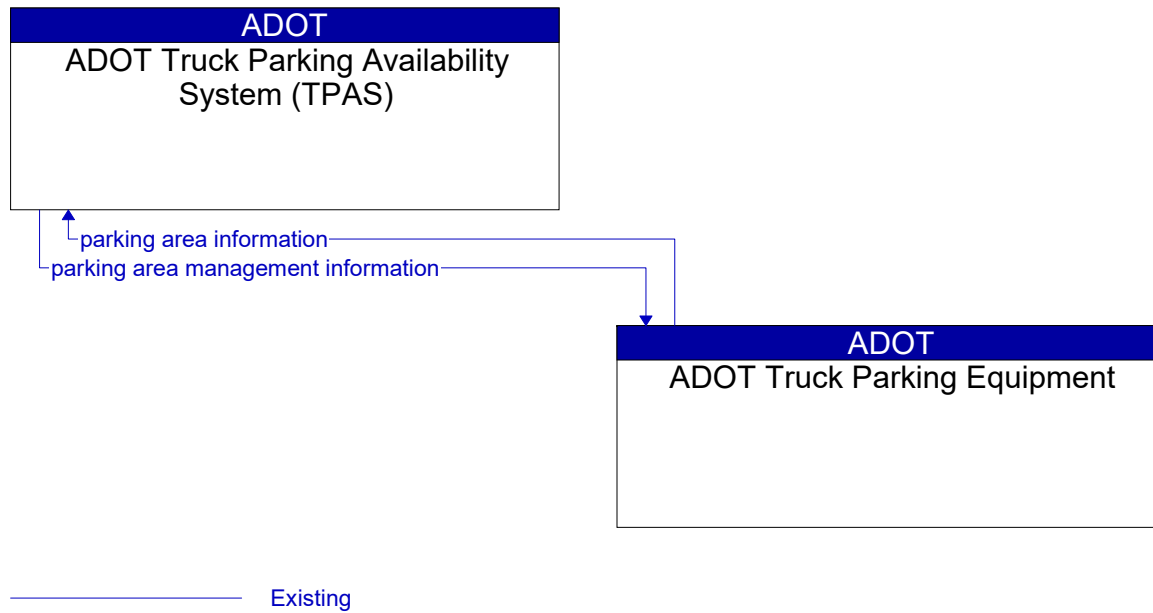


Figure 44: ADOT Truck Parking Equipment Context Diagram

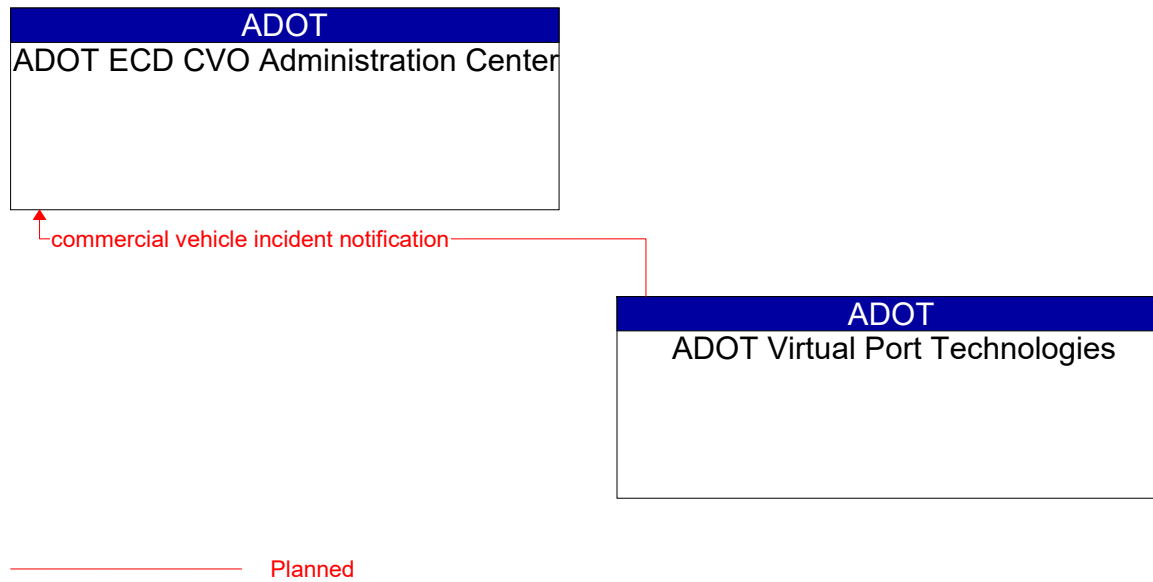


Figure 45: ADOT Virtual Port Technologies Context Diagram

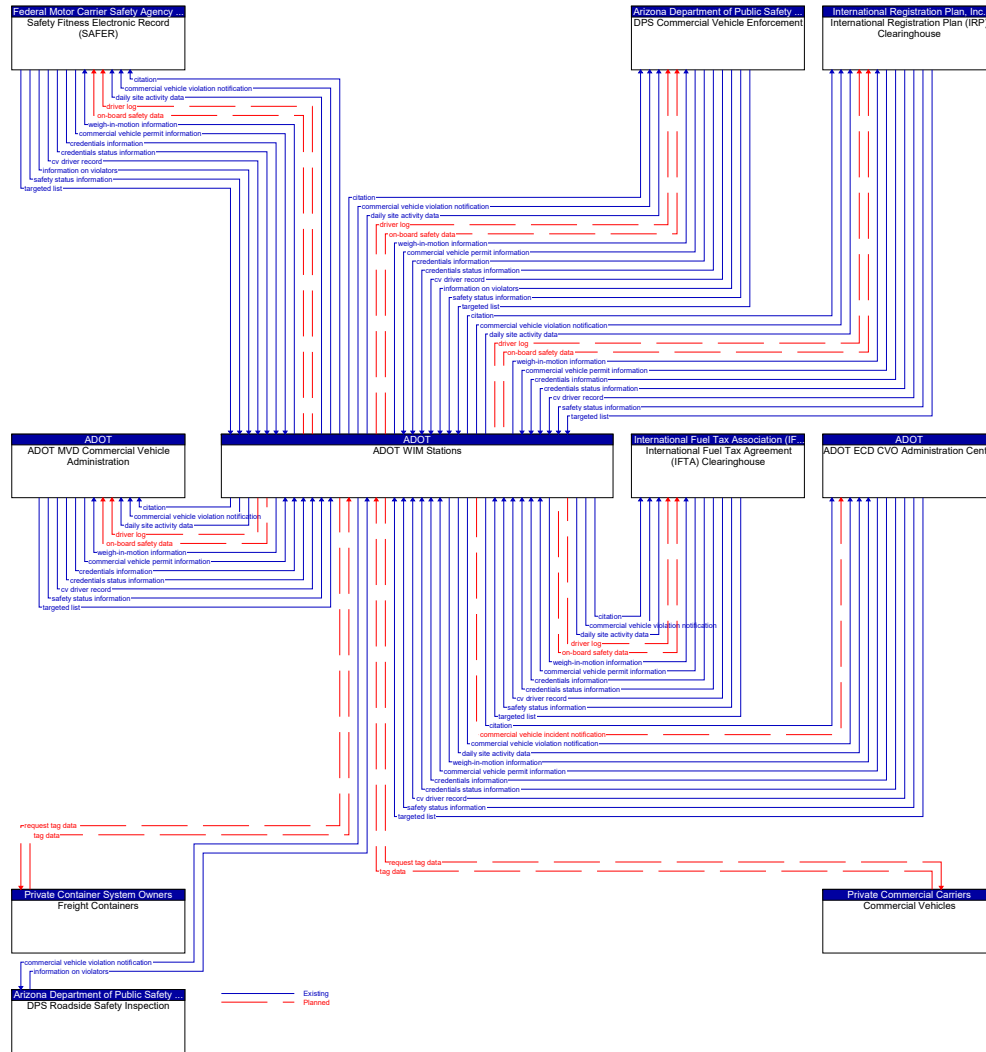


Figure 46: ADOT WIM Stations Context Diagram

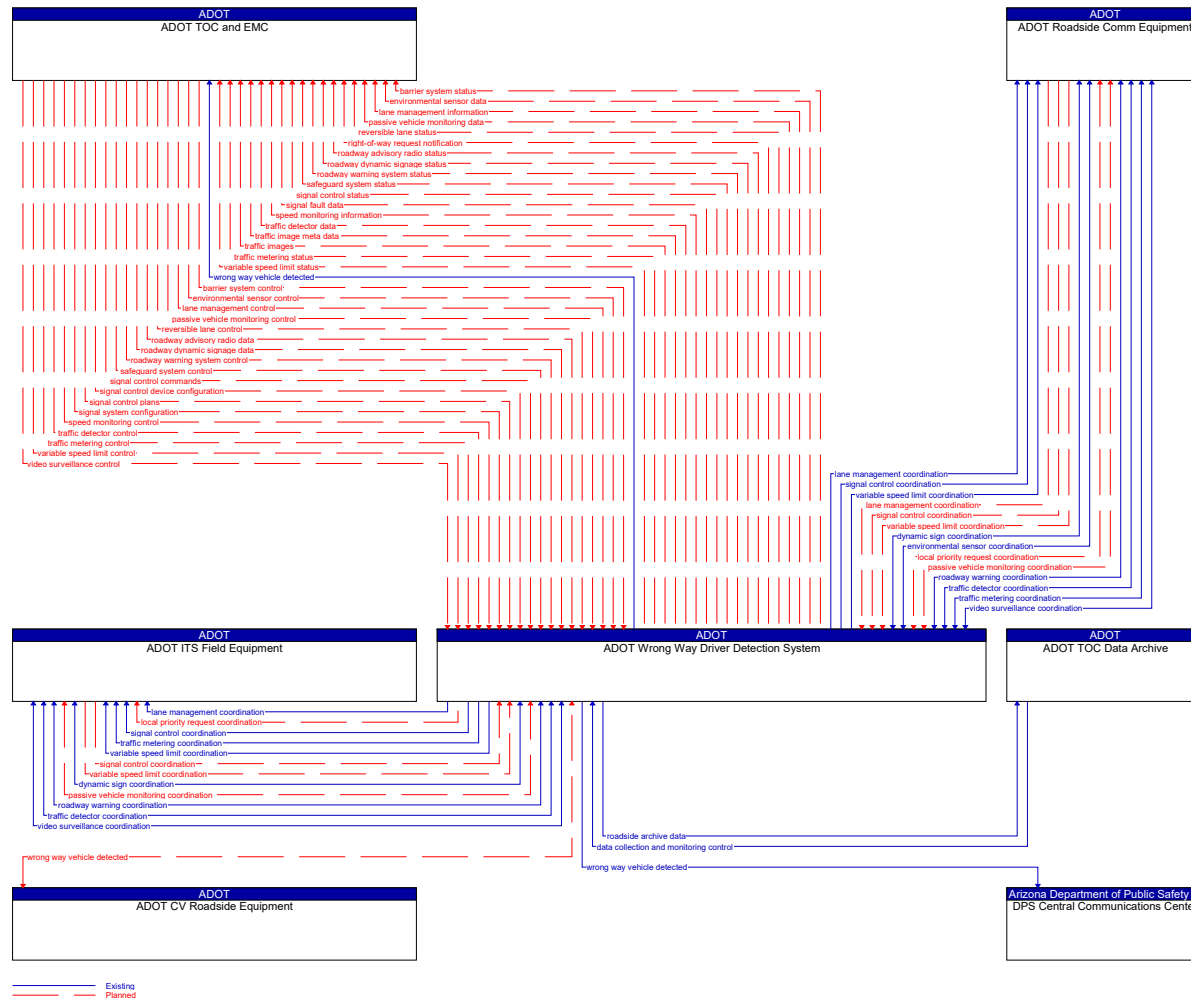


Figure 47: ADOT Wrong Way Driver Detection System Context Diagram

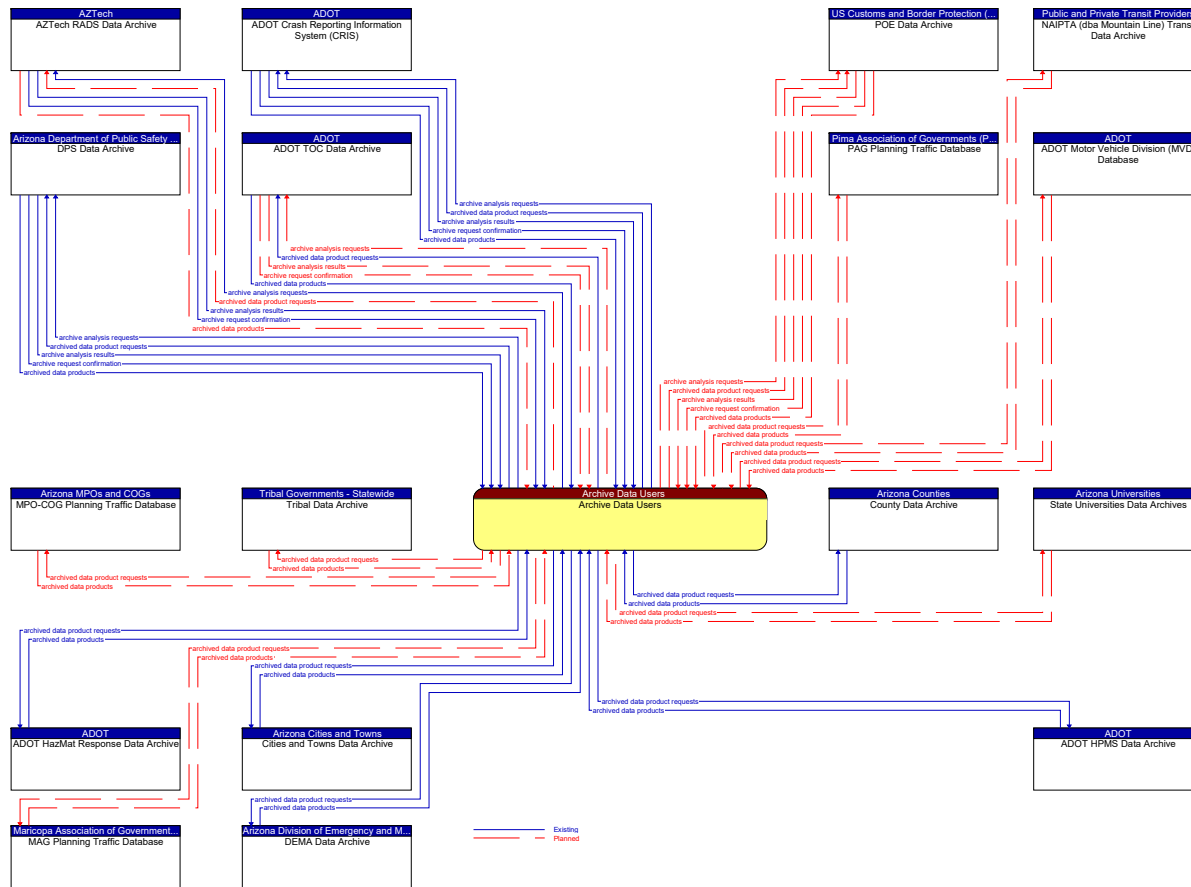


Figure 48: Archive Data Users Context Diagram

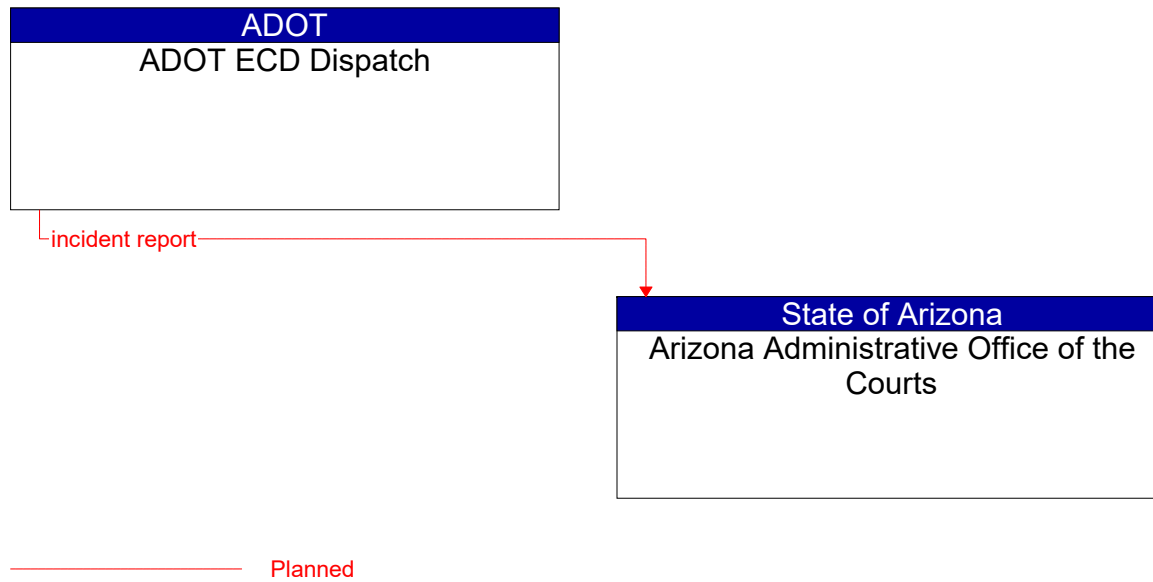


Figure 49: Arizona Administrative Office of the Courts Context Diagram

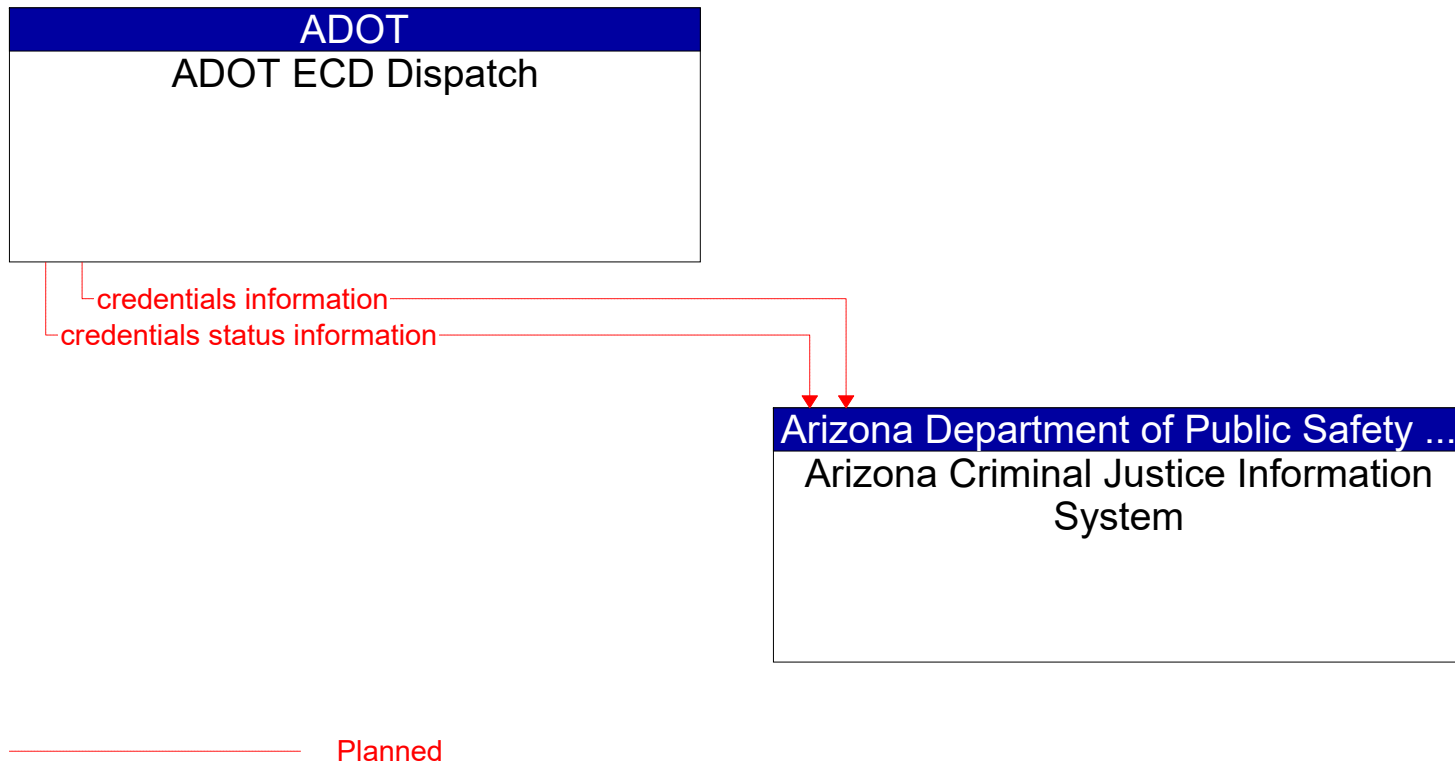


Figure 50: Arizona Criminal Justice Information System Context Diagram

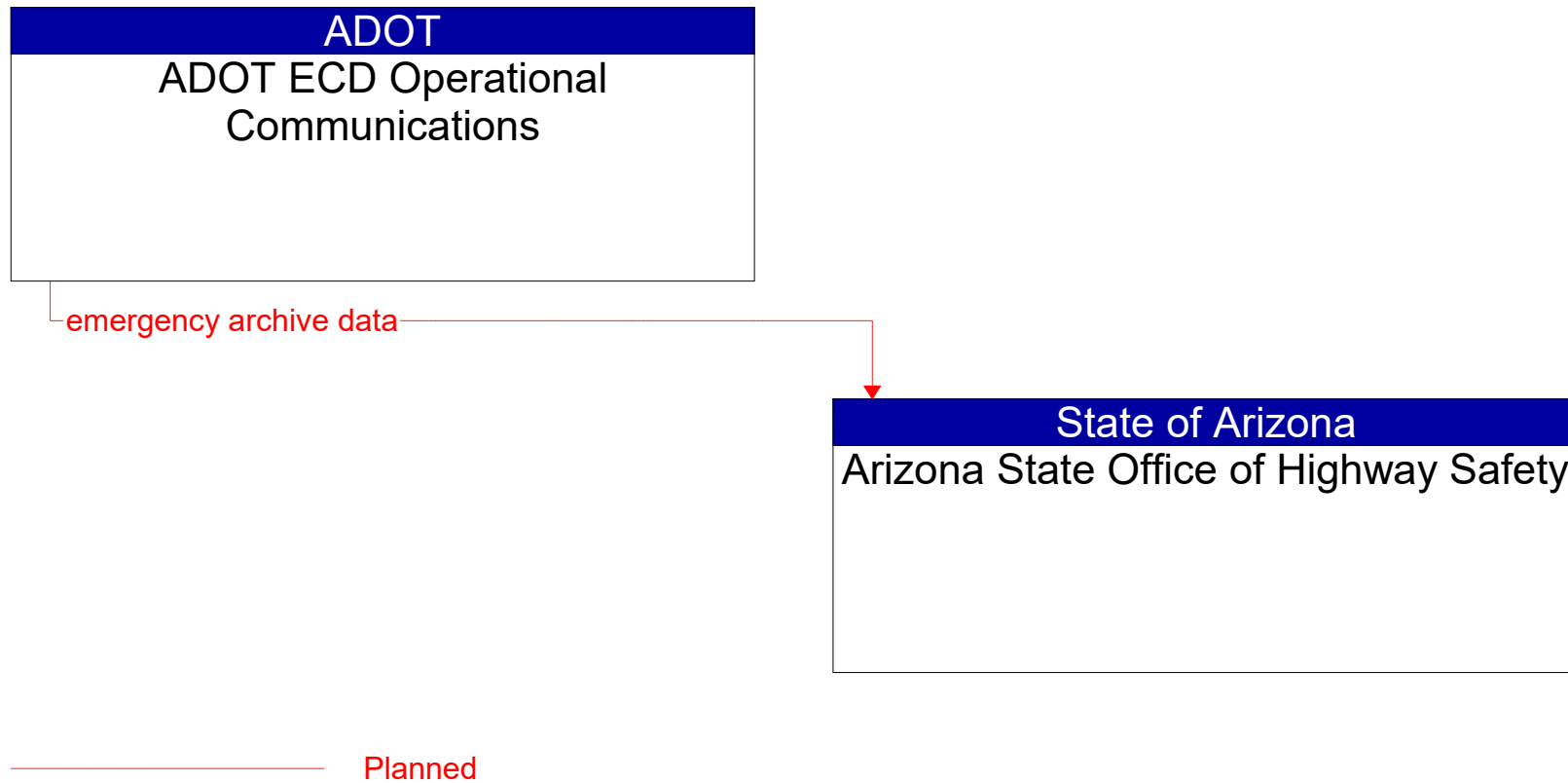


Figure 51: Arizona State Office of Highway Safety Context Diagram

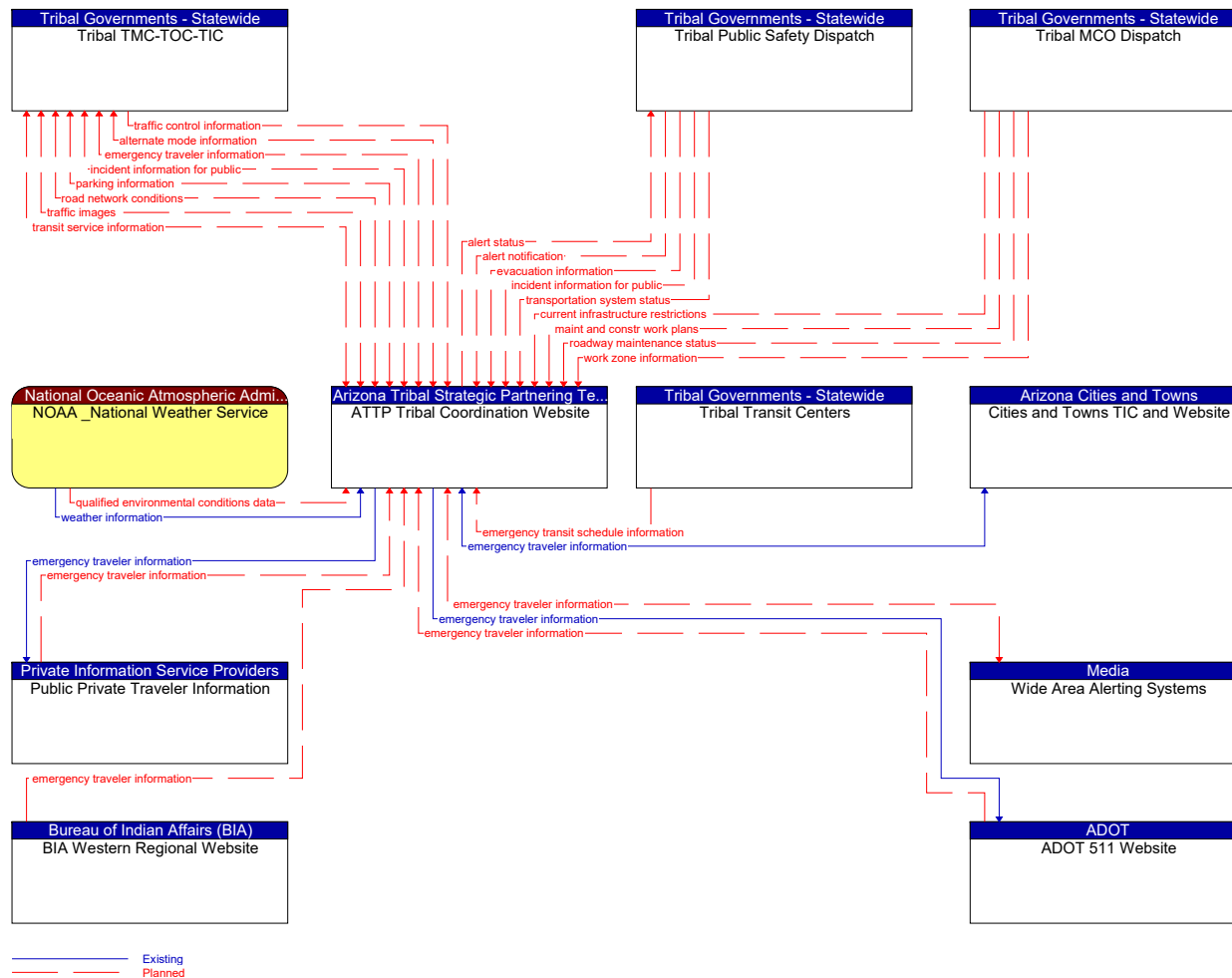


Figure 52: ATTP Tribal Coordination Website Context Diagram

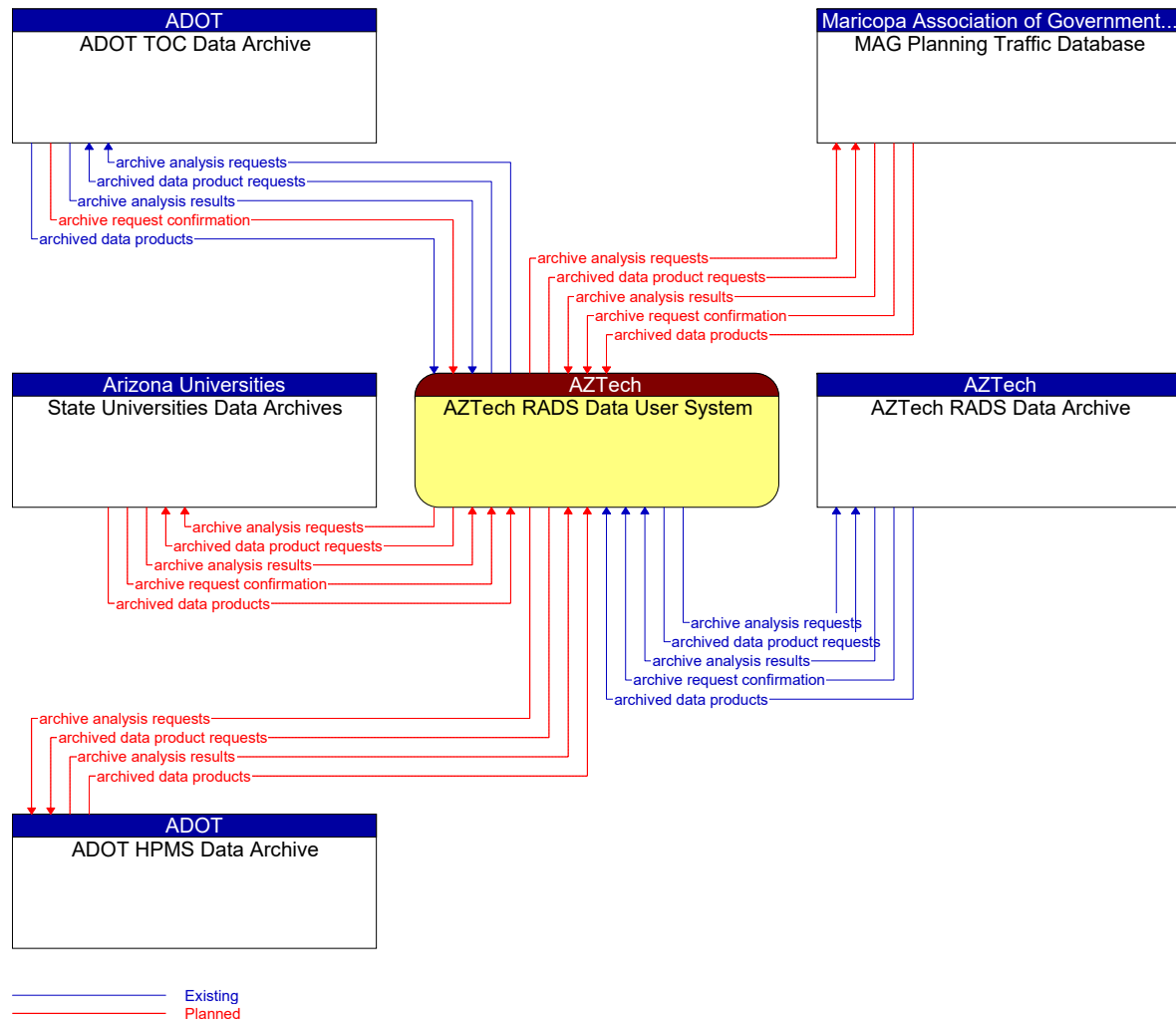


Figure 54: AZTech RADS Data User System Context Diagram

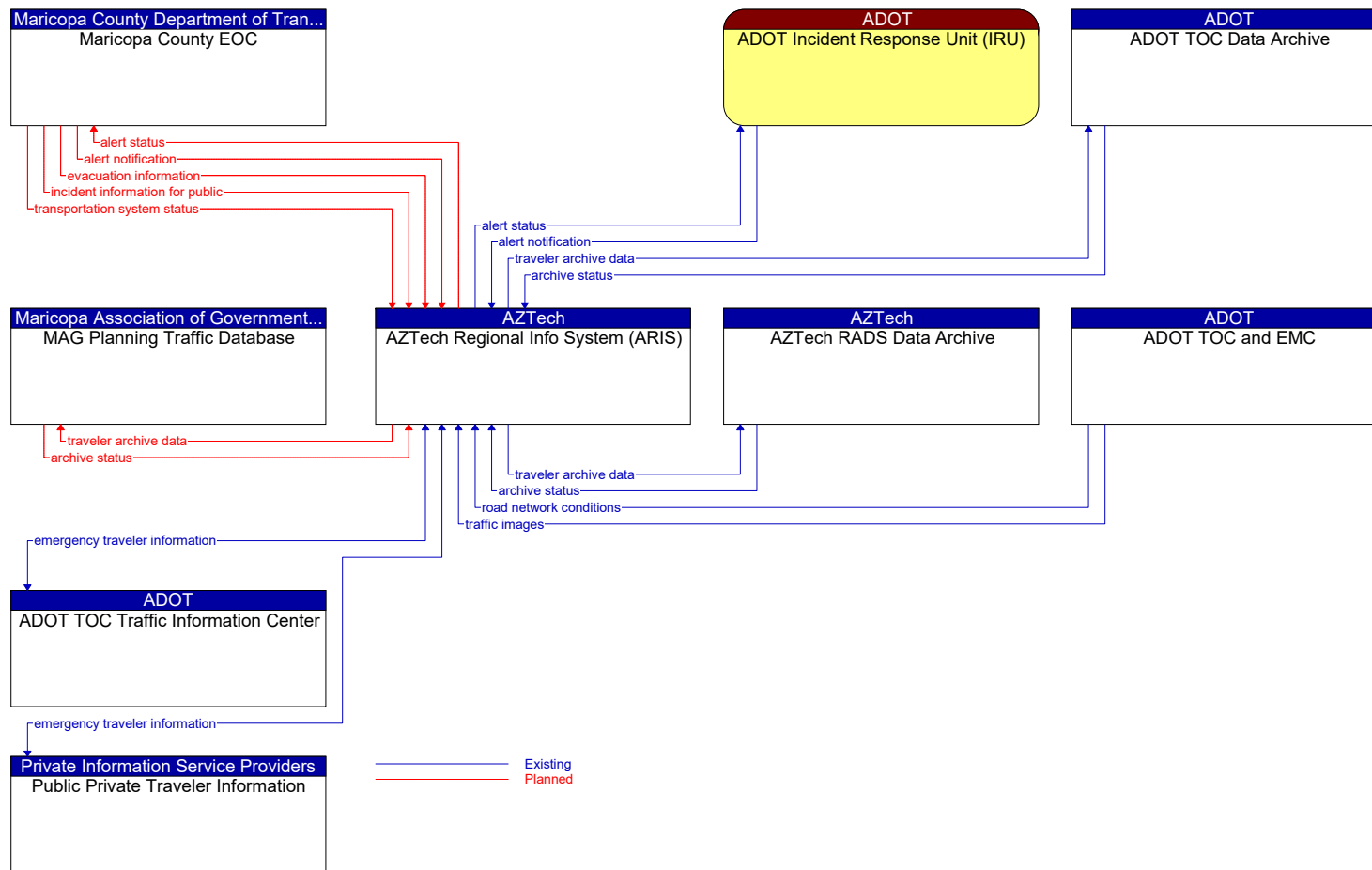


Figure 55: AZTech Regional Info System (ARIS) Context Diagram

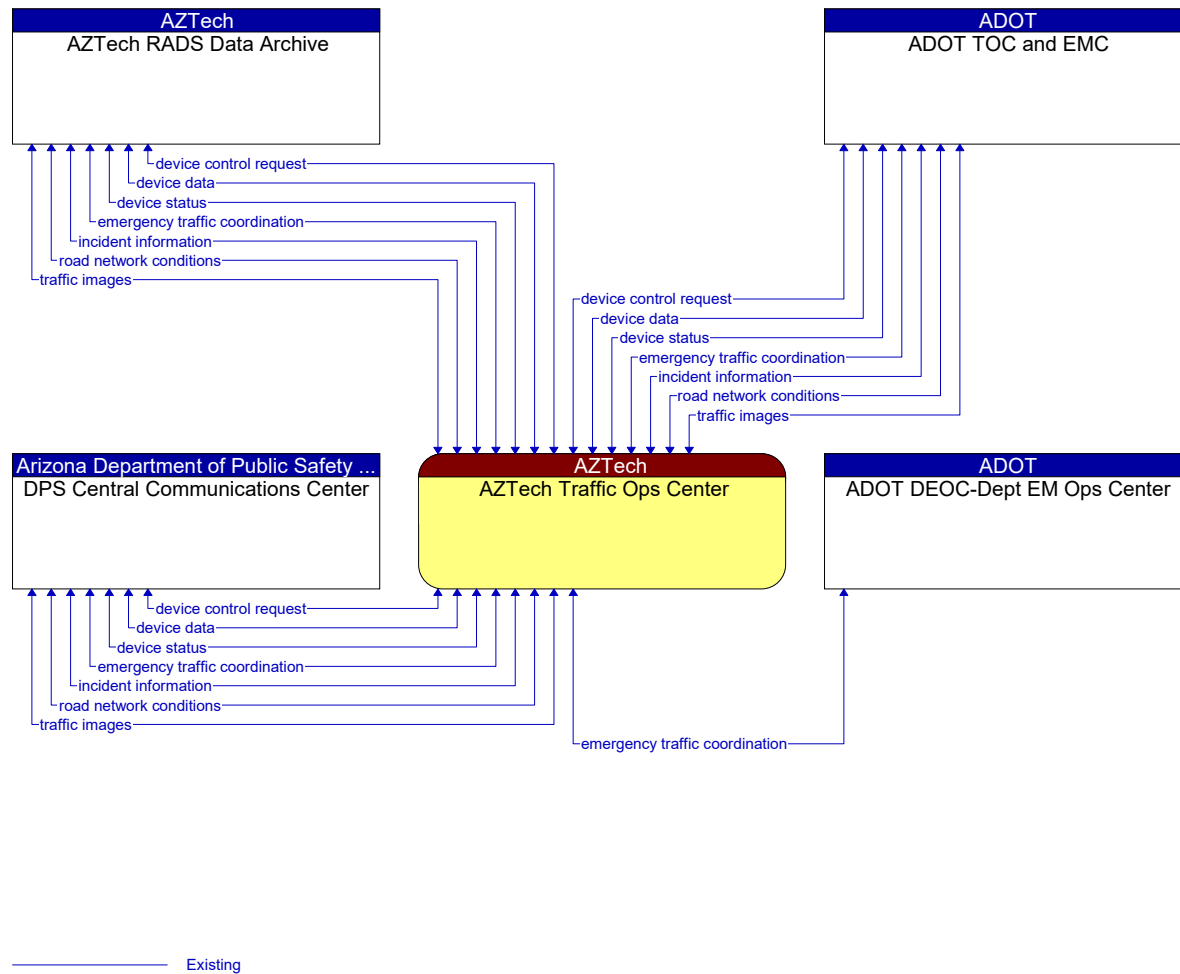


Figure 56: AZTech Traffic Ops Center Context Diagram

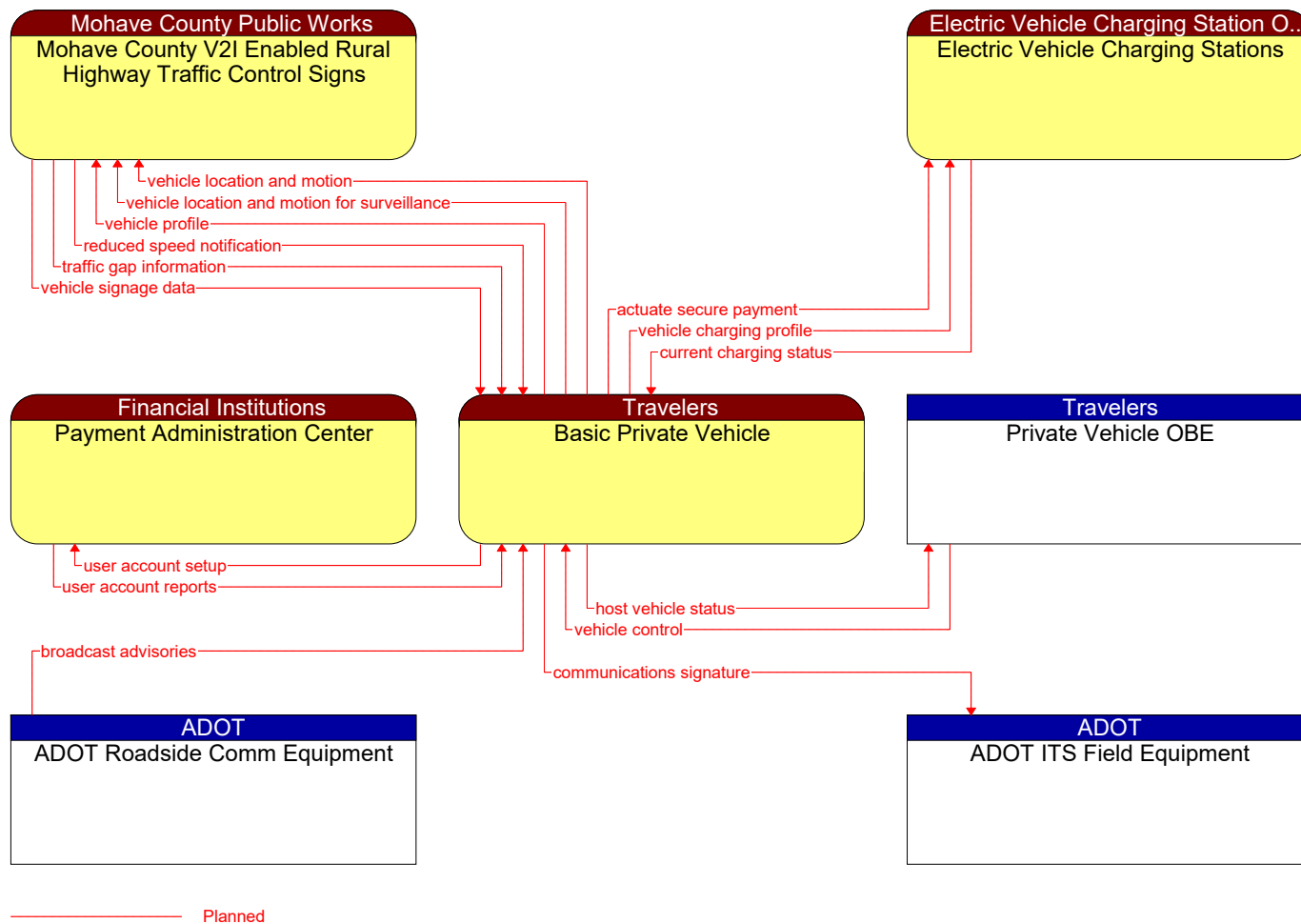


Figure 57: Basic Private Vehicle Context Diagram

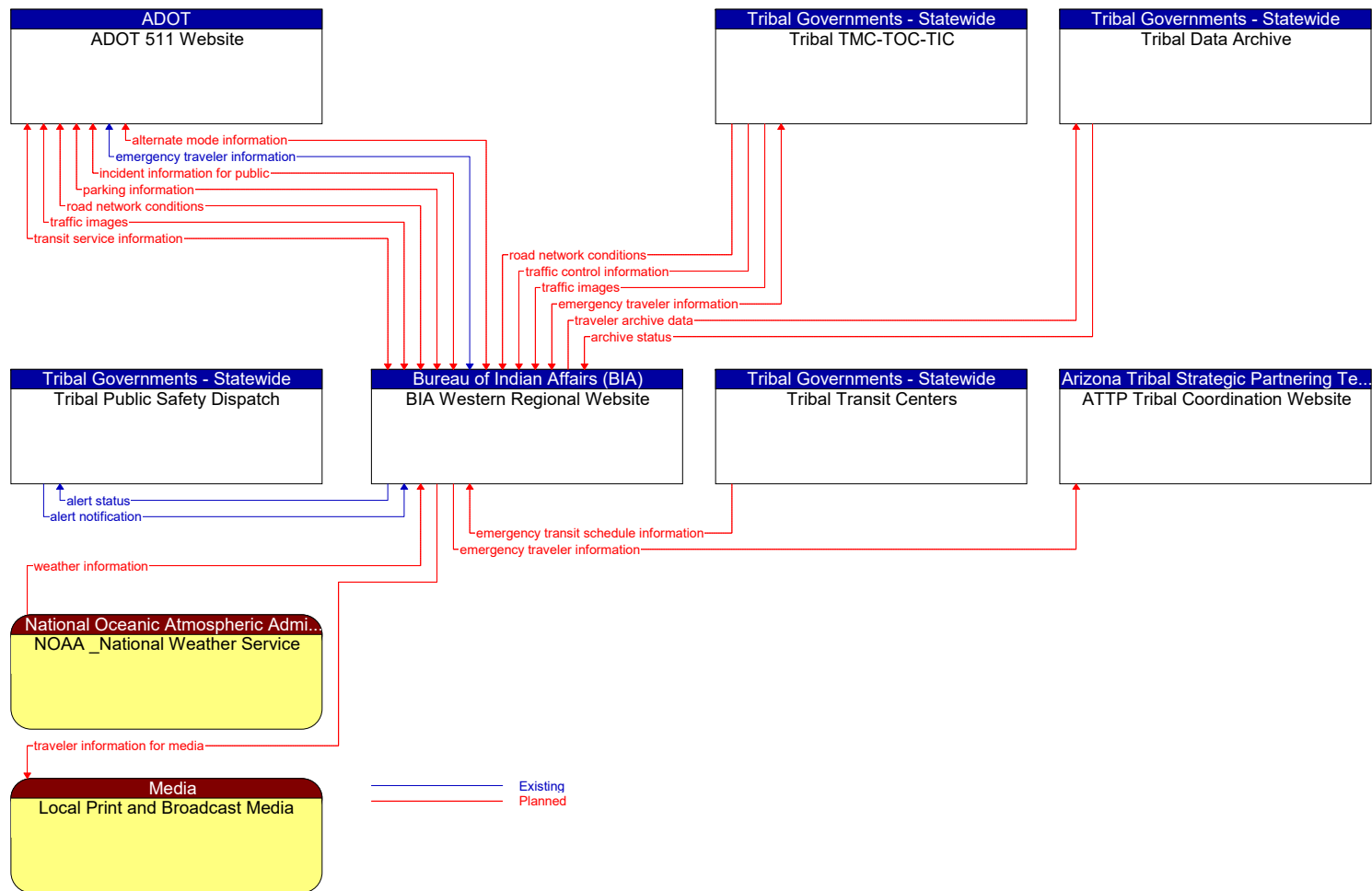


Figure 58: BIA Western Regional Website Context Diagram

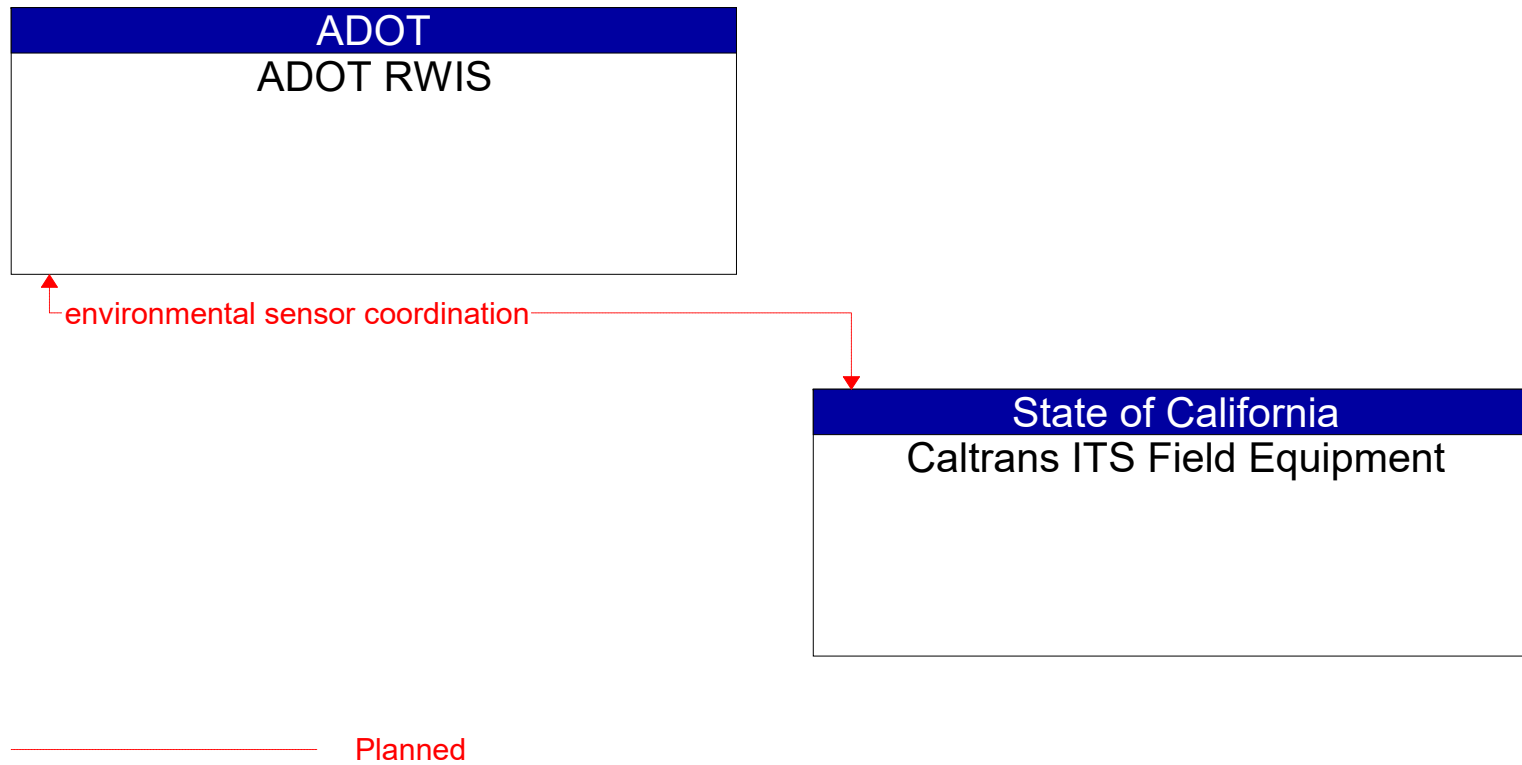


Figure 59: Caltrans ITS Field Equipment Context Diagram

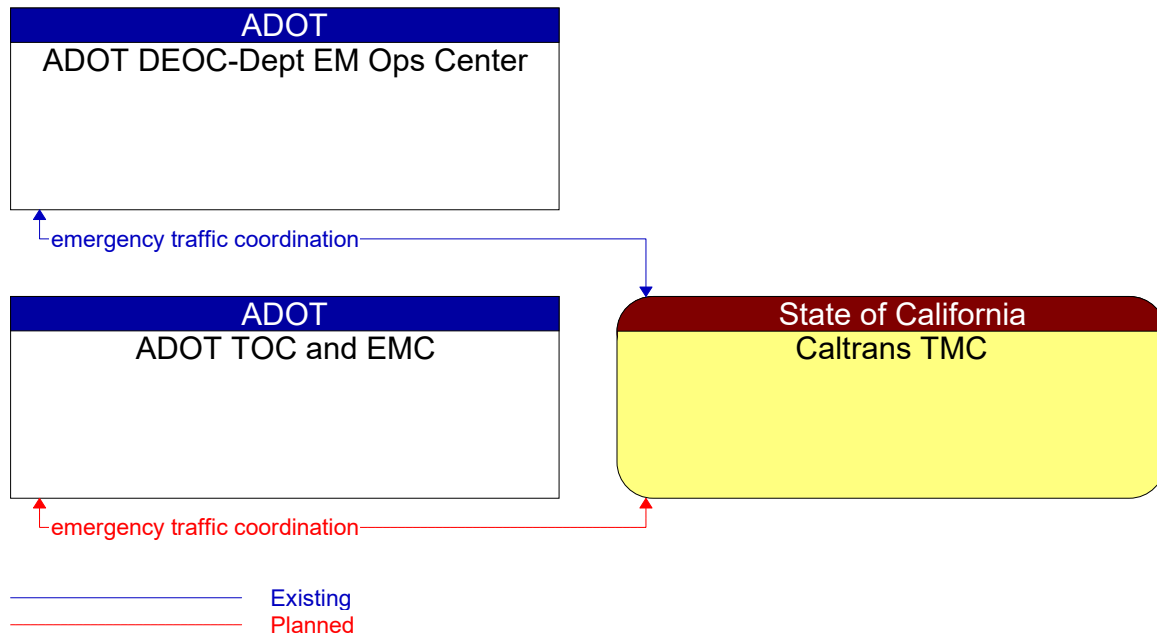


Figure 60: Caltrans TMC Context Diagram

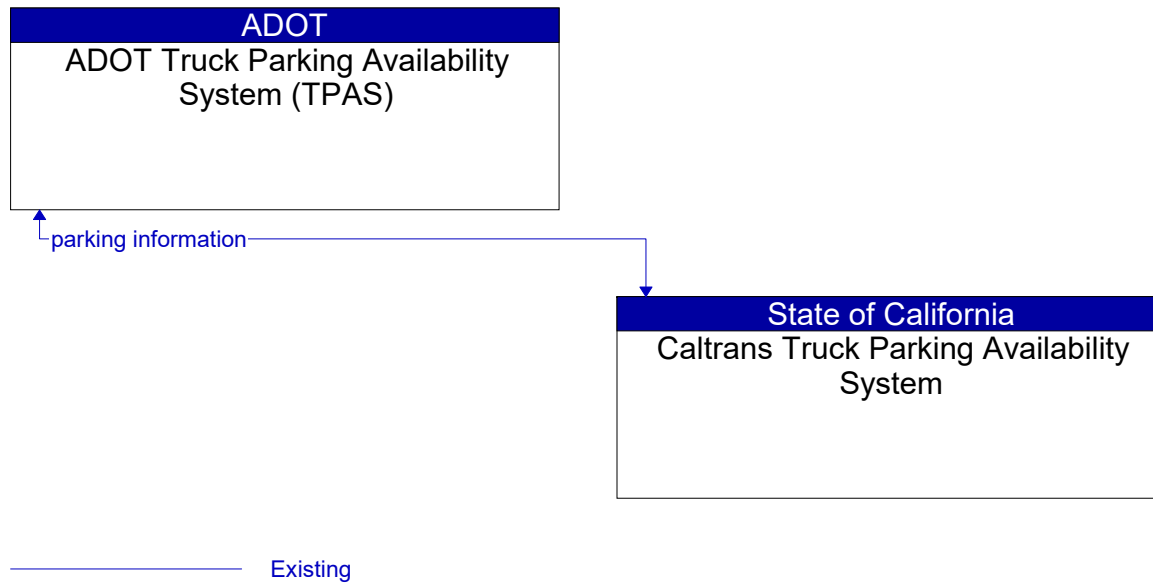


Figure 61: Caltrans Truck Parking Availability System Context Diagram

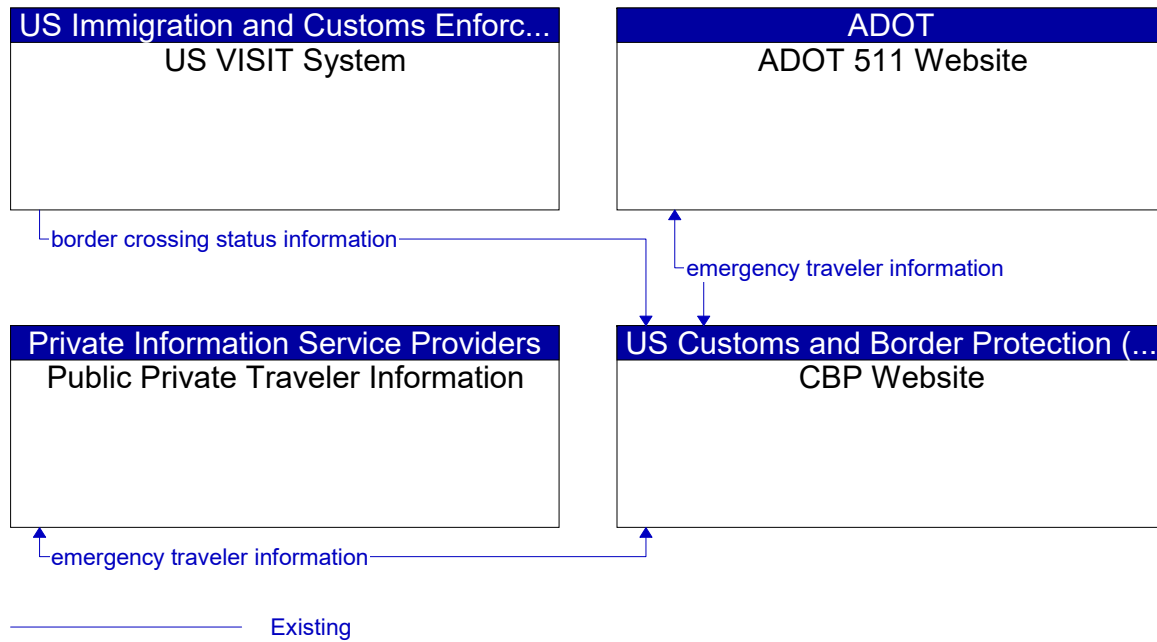


Figure 62: CBP Website Context Diagram

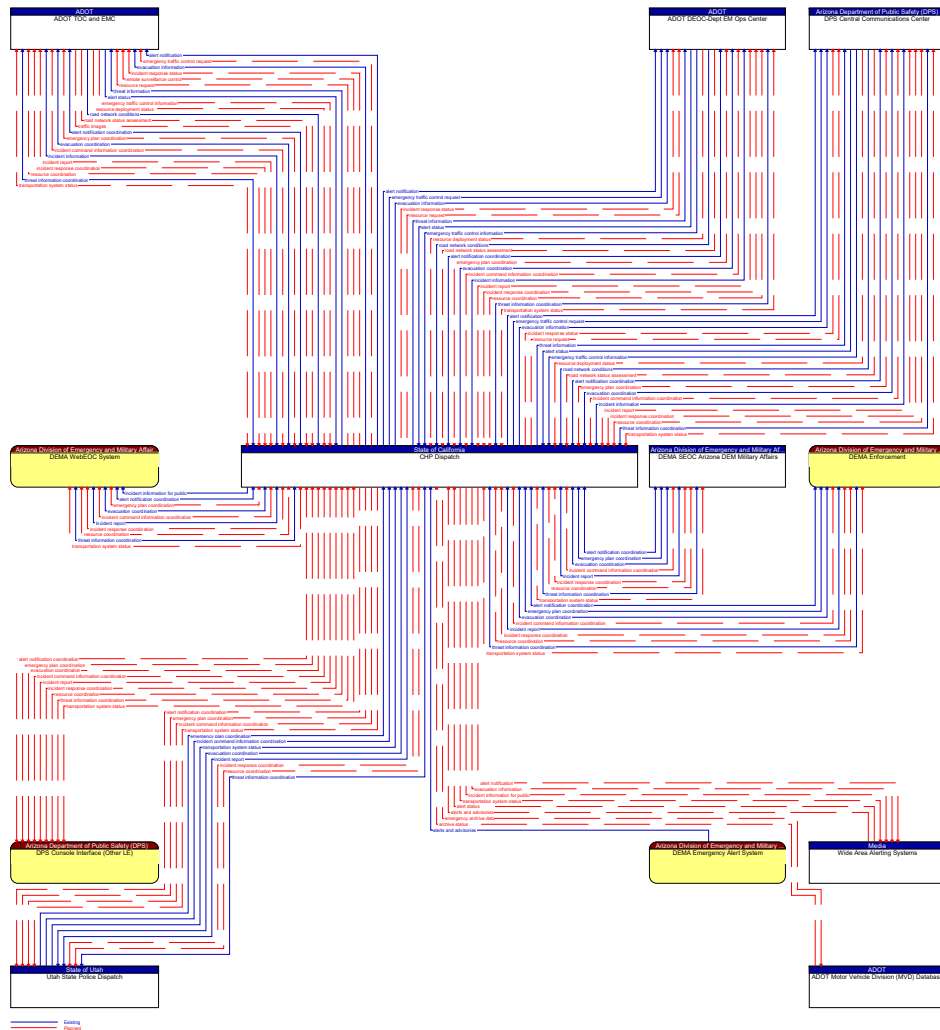


Figure 63: CHP Dispatch Context Diagram

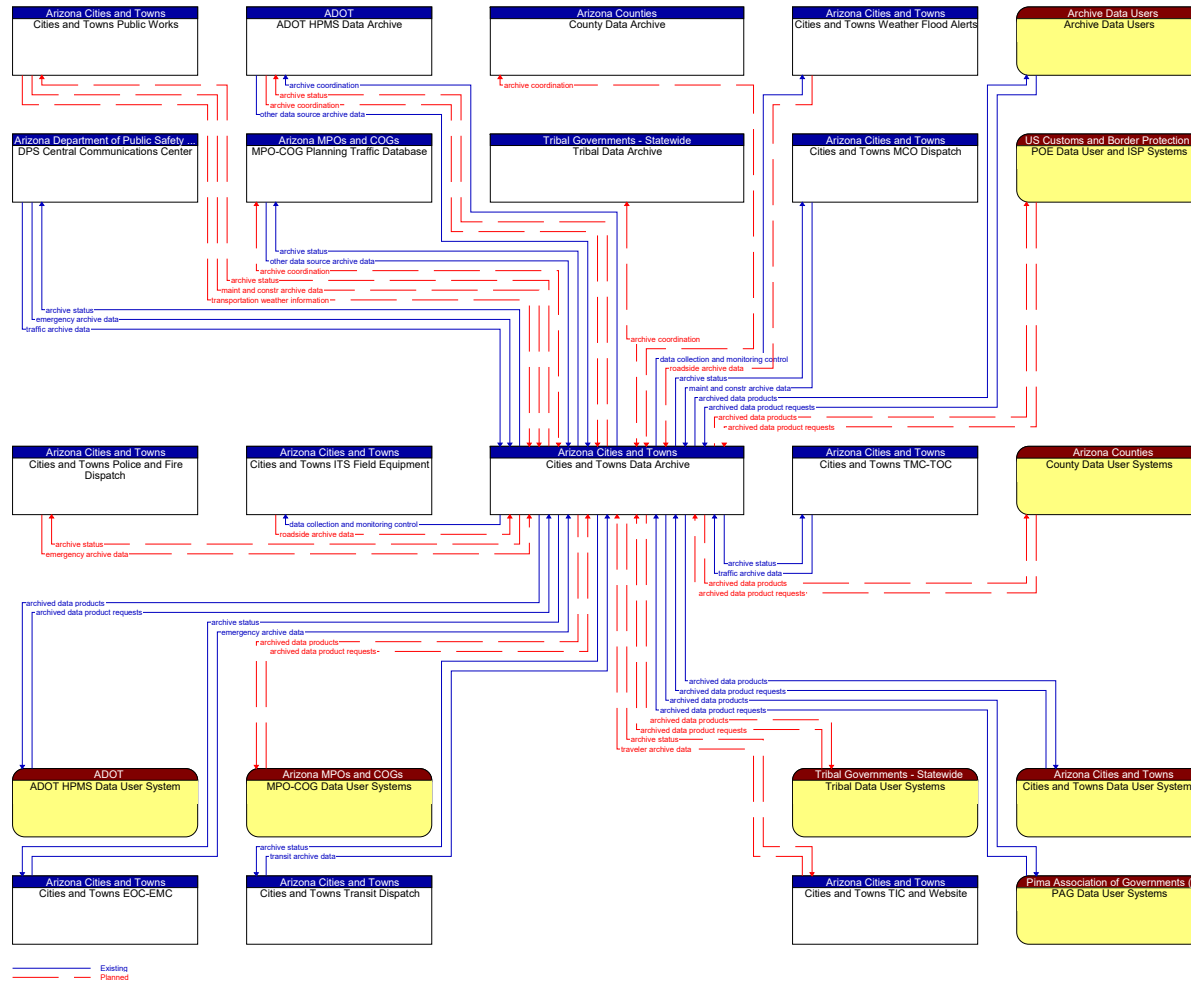


Figure 64: Cities and Towns Data Archive Context Diagram

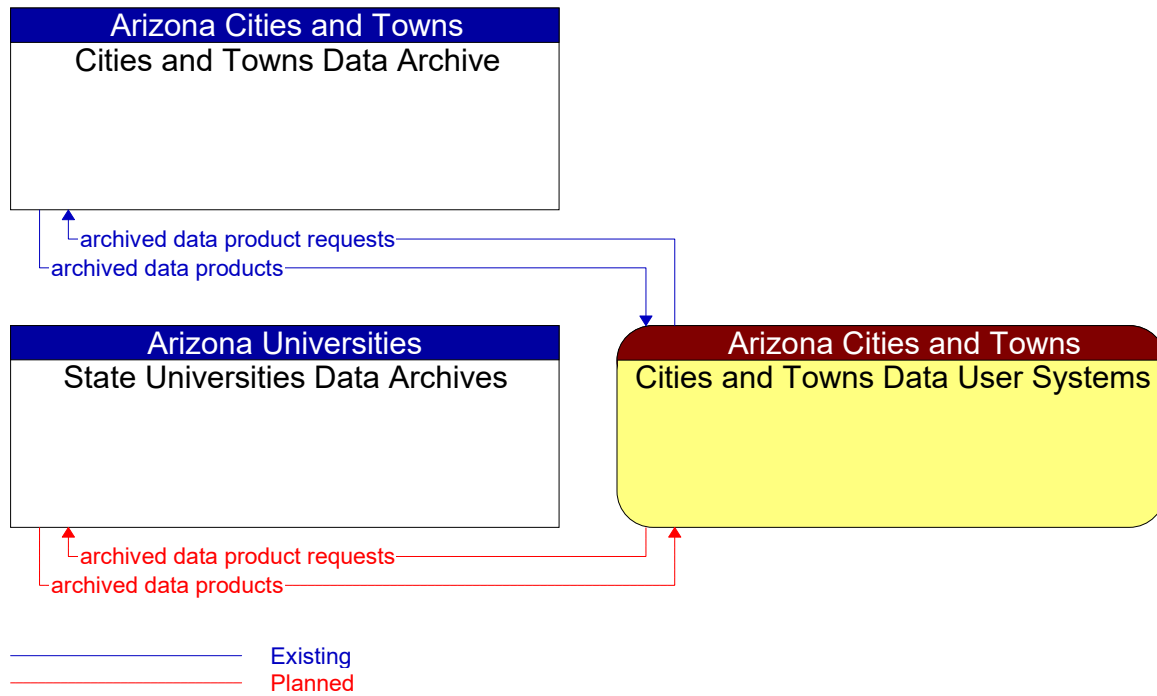


Figure 65: Cities and Towns Data User Systems Context Diagram

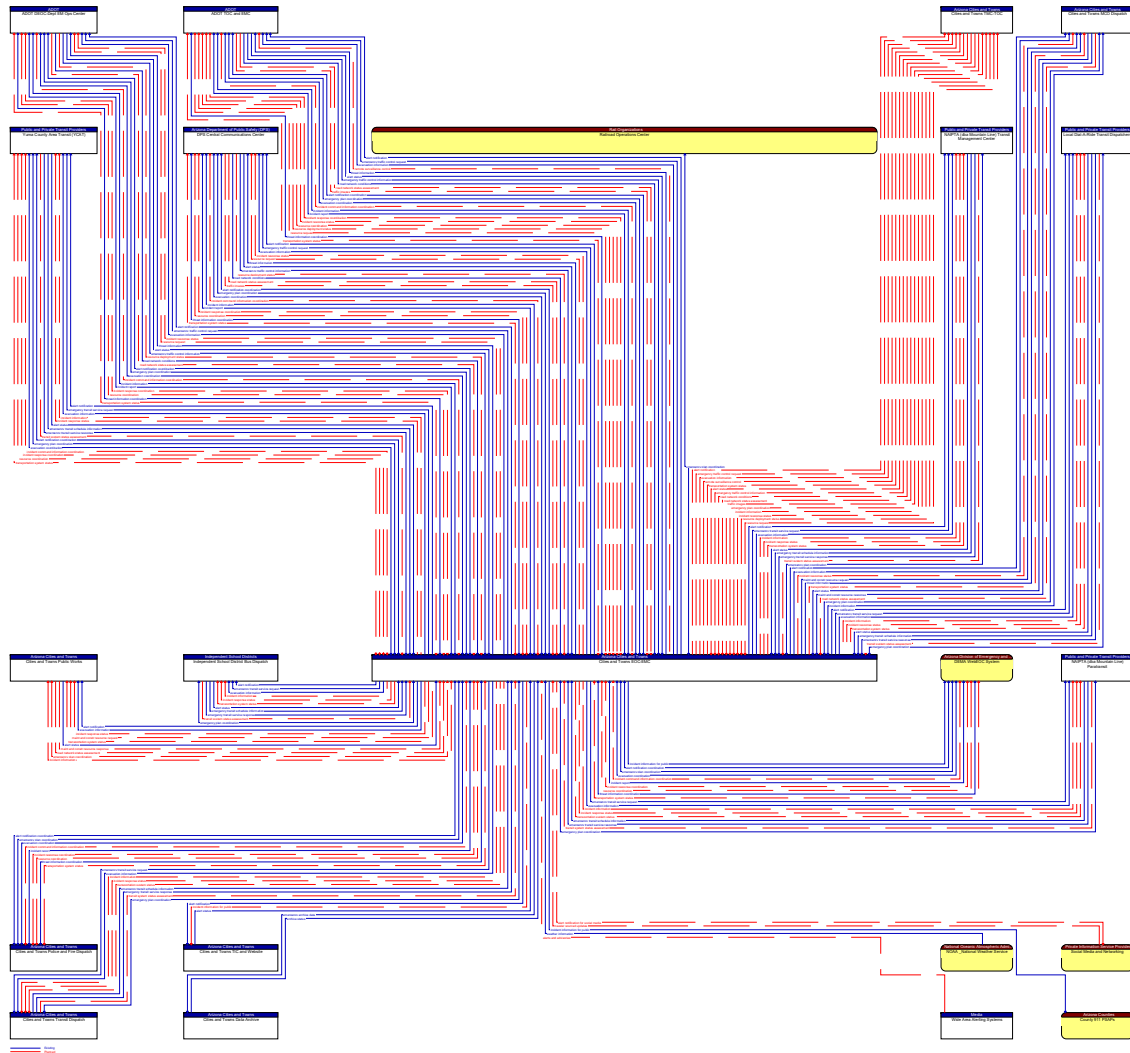


Figure 66: Cities and Towns EOC-EMC Context Diagram

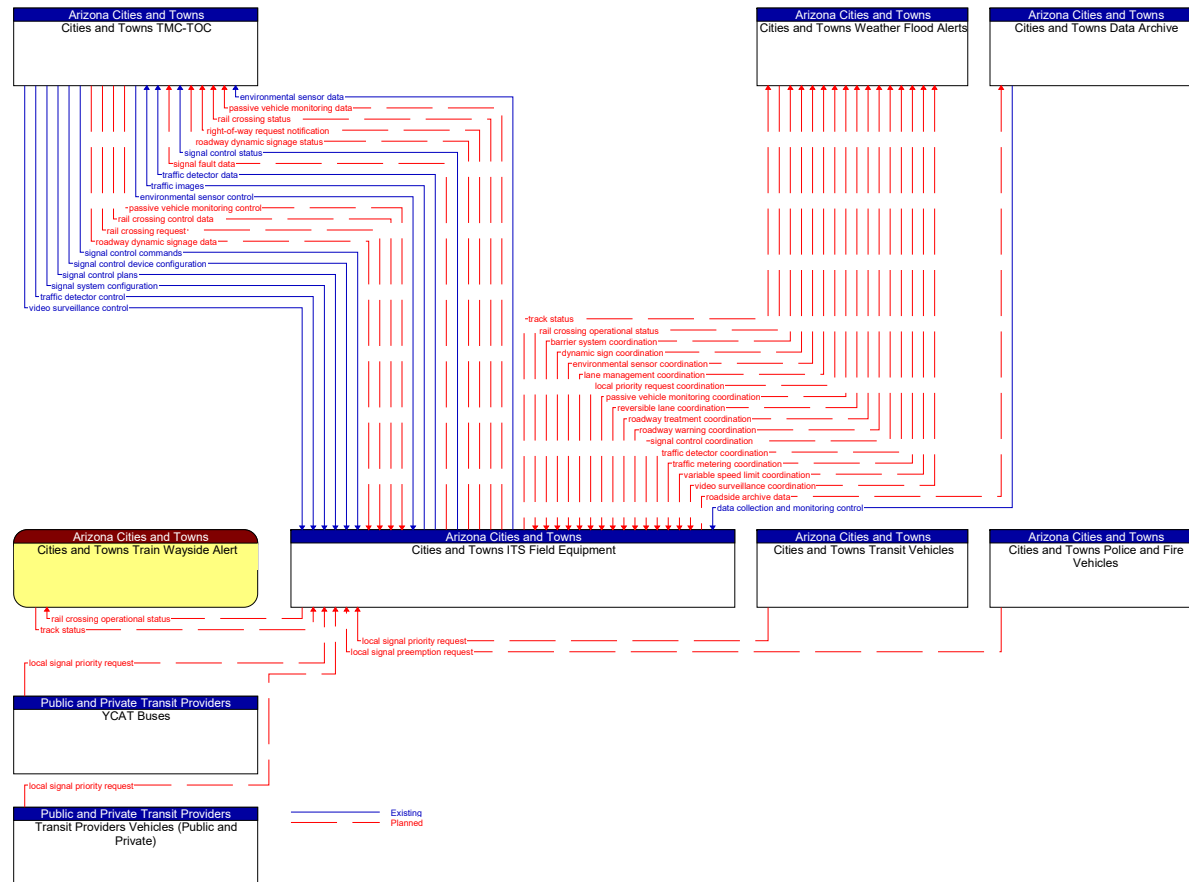


Figure 67: Cities and Towns ITS Field Equipment Context Diagram

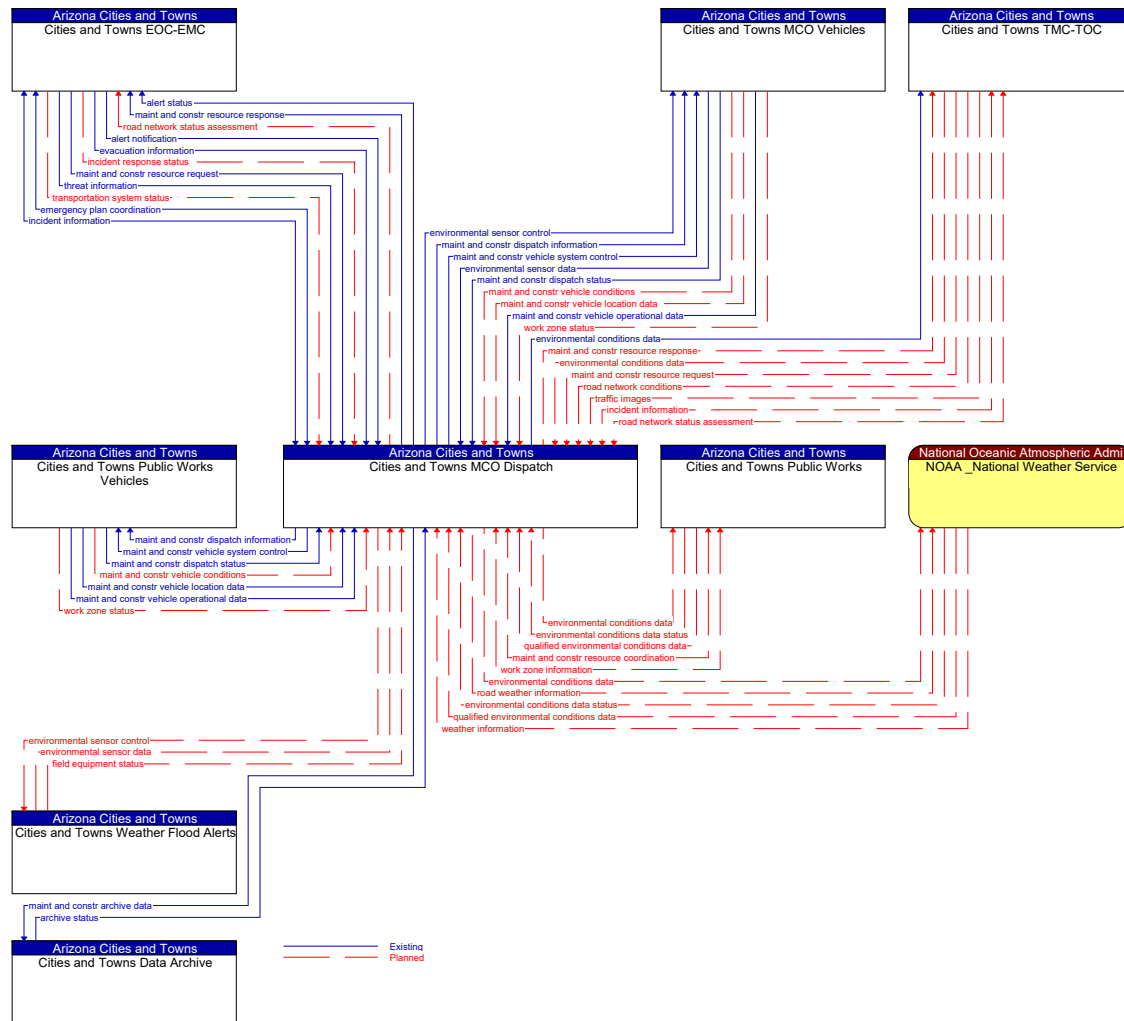


Figure 68: Cities and Towns MCO Dispatch Context Diagram

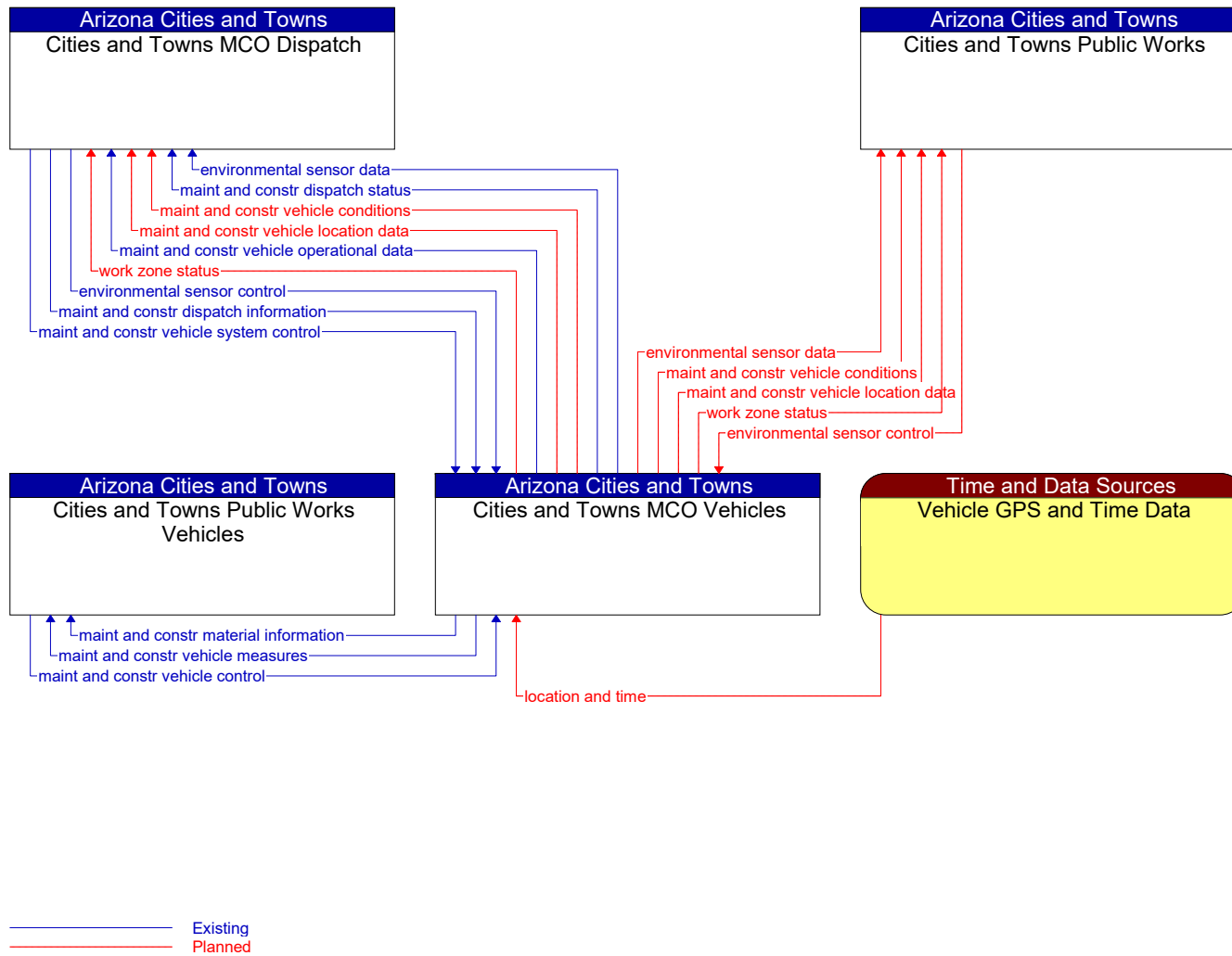


Figure 69: Cities and Towns MCO Vehicles Context Diagram

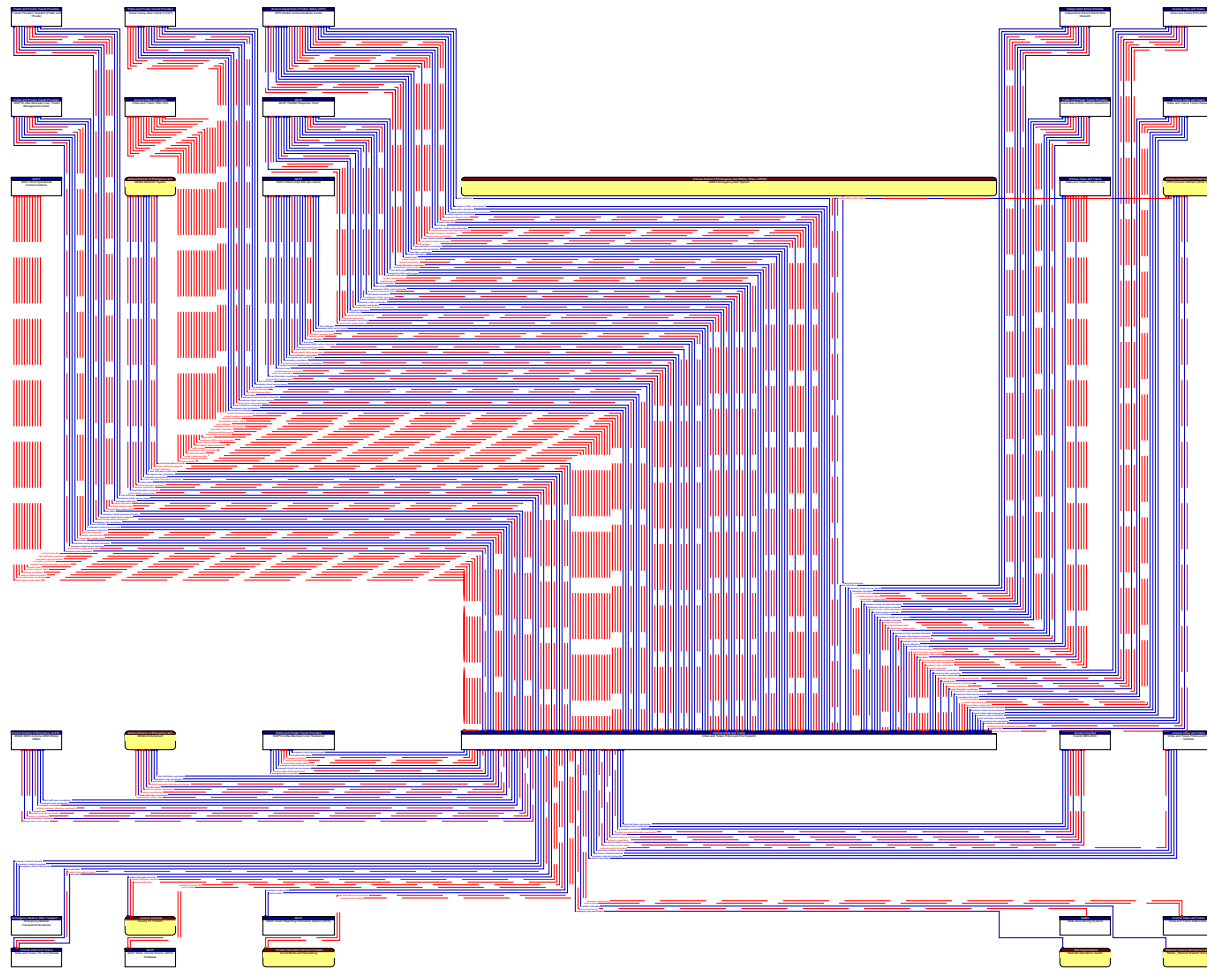


Figure 70: Cities and Towns Police and Fire Dispatch Context Diagram

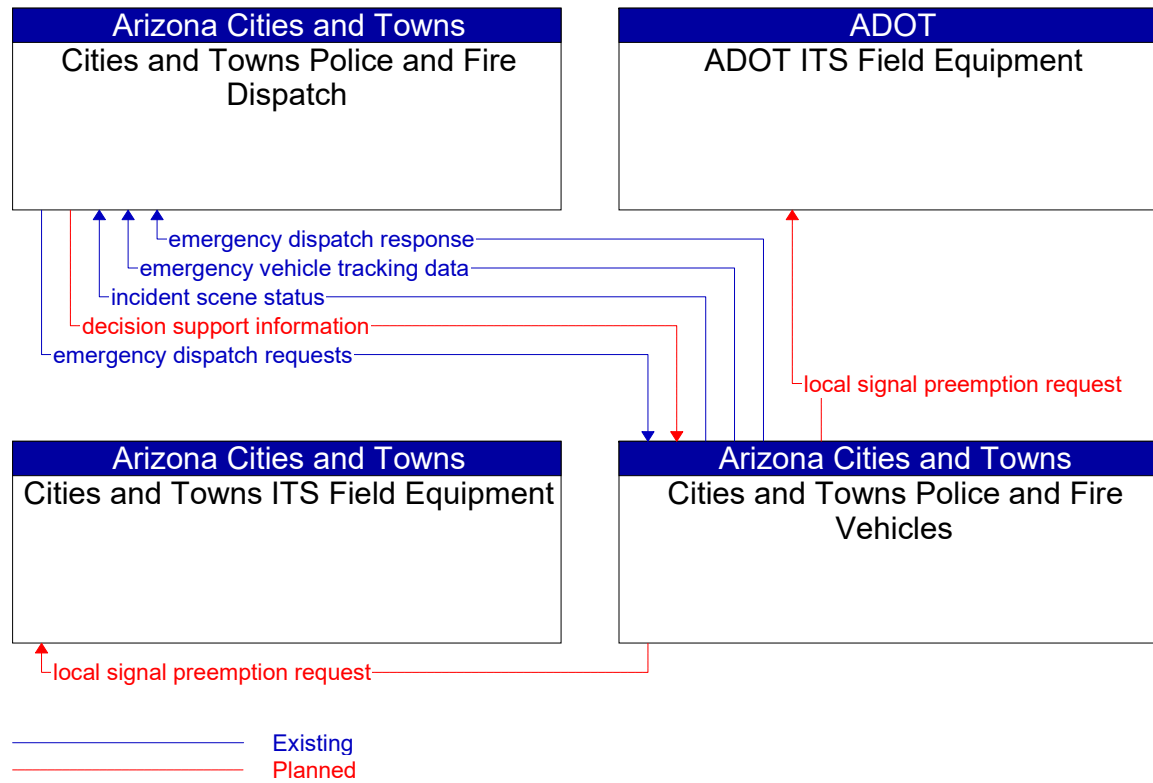


Figure 71: Cities and Towns Police and Fire Vehicles Context Diagram

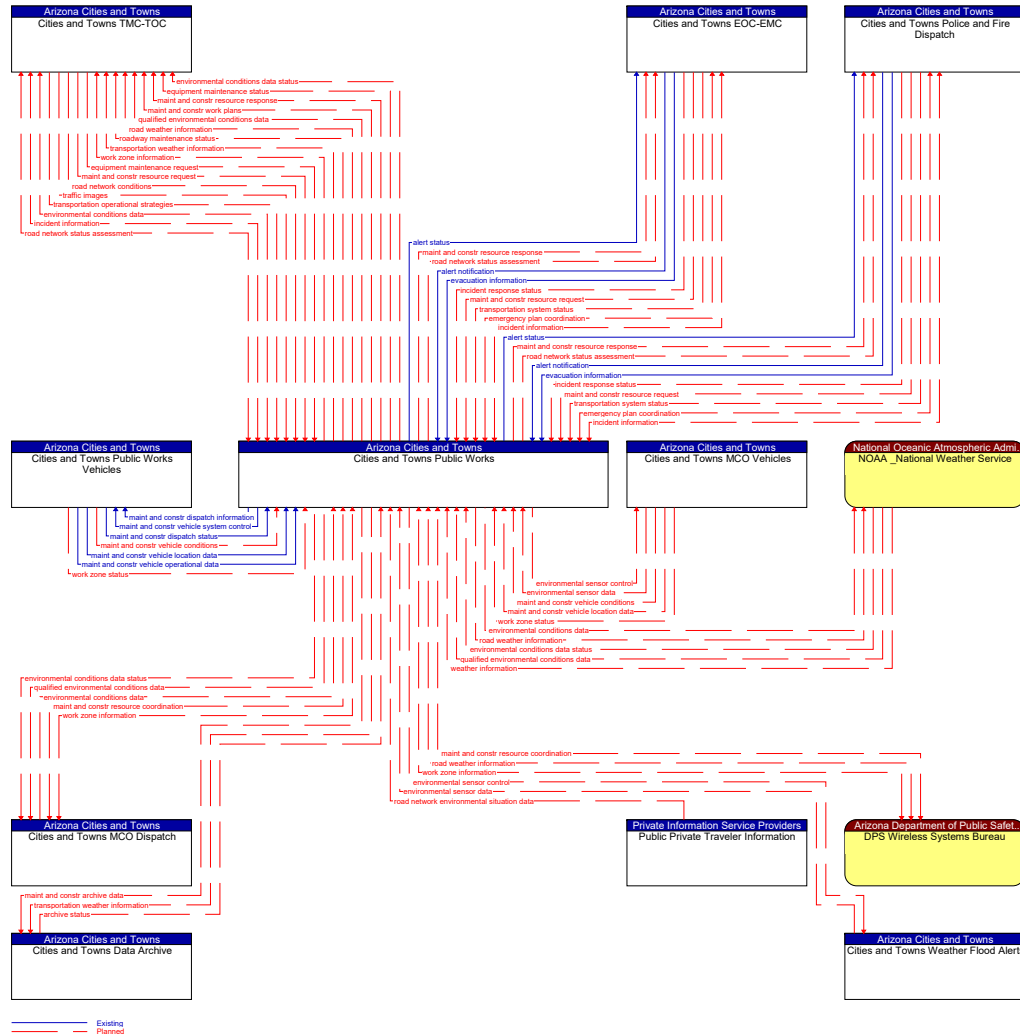


Figure 72: Cities and Towns Public Works Context Diagram

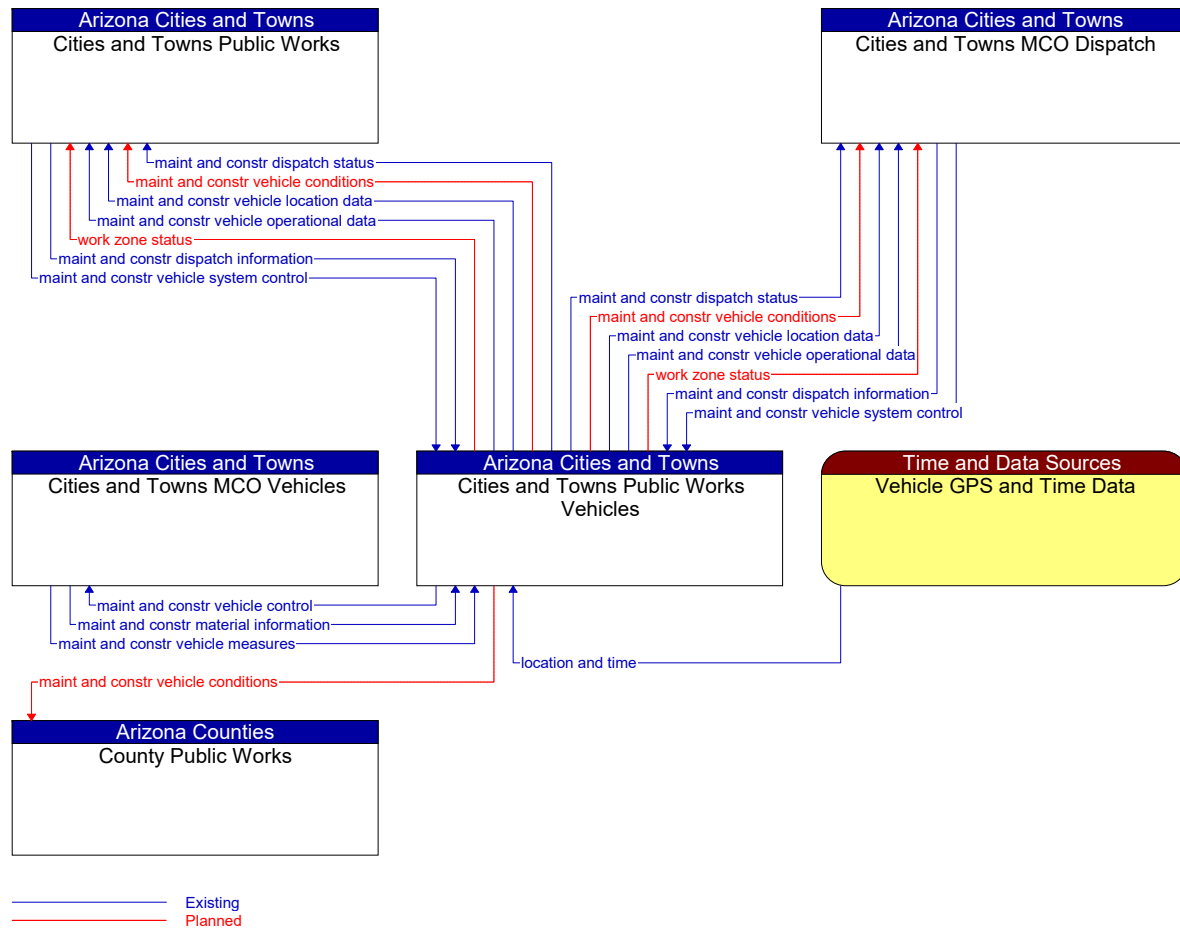


Figure 73: Cities and Towns Public Works Vehicles Context Diagram

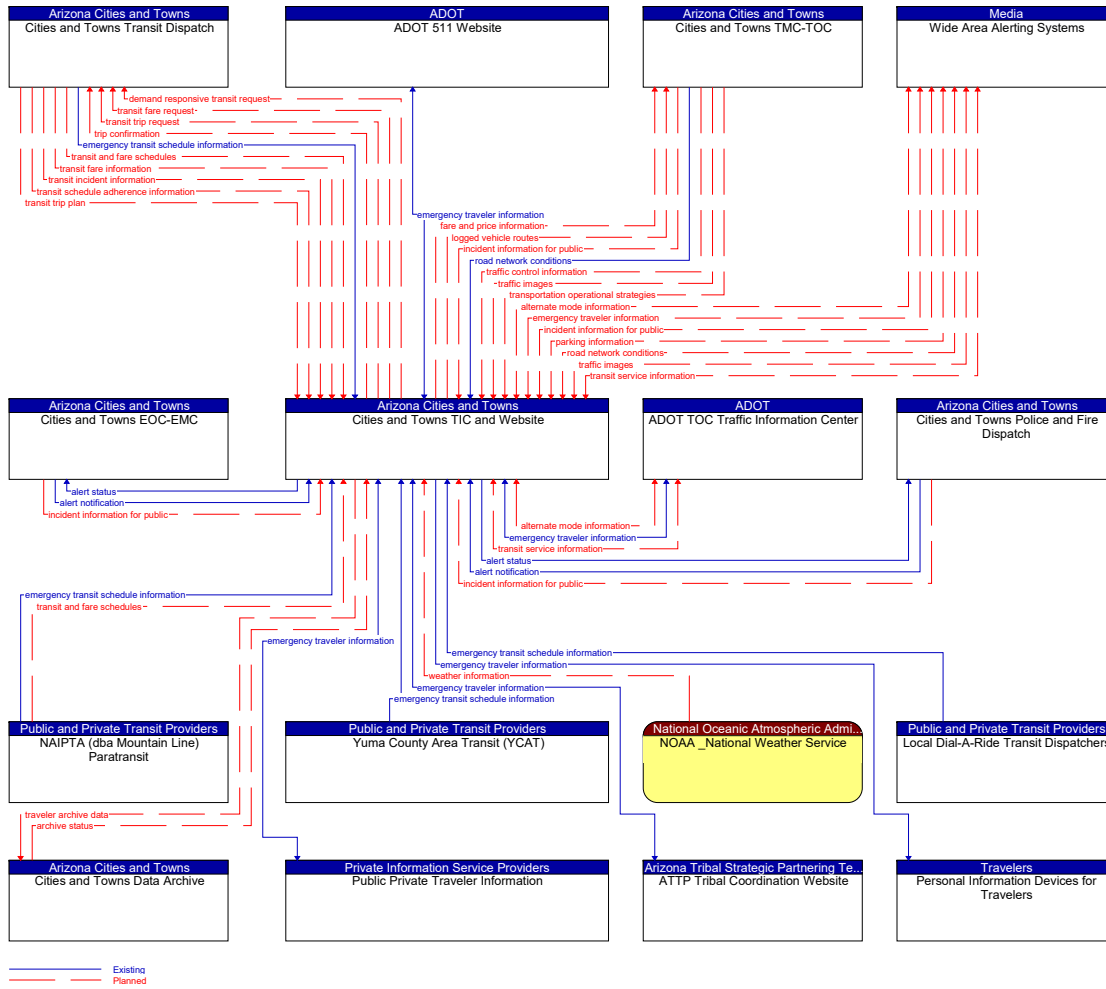


Figure 74: Cities and Towns TIC and Website Context Diagram

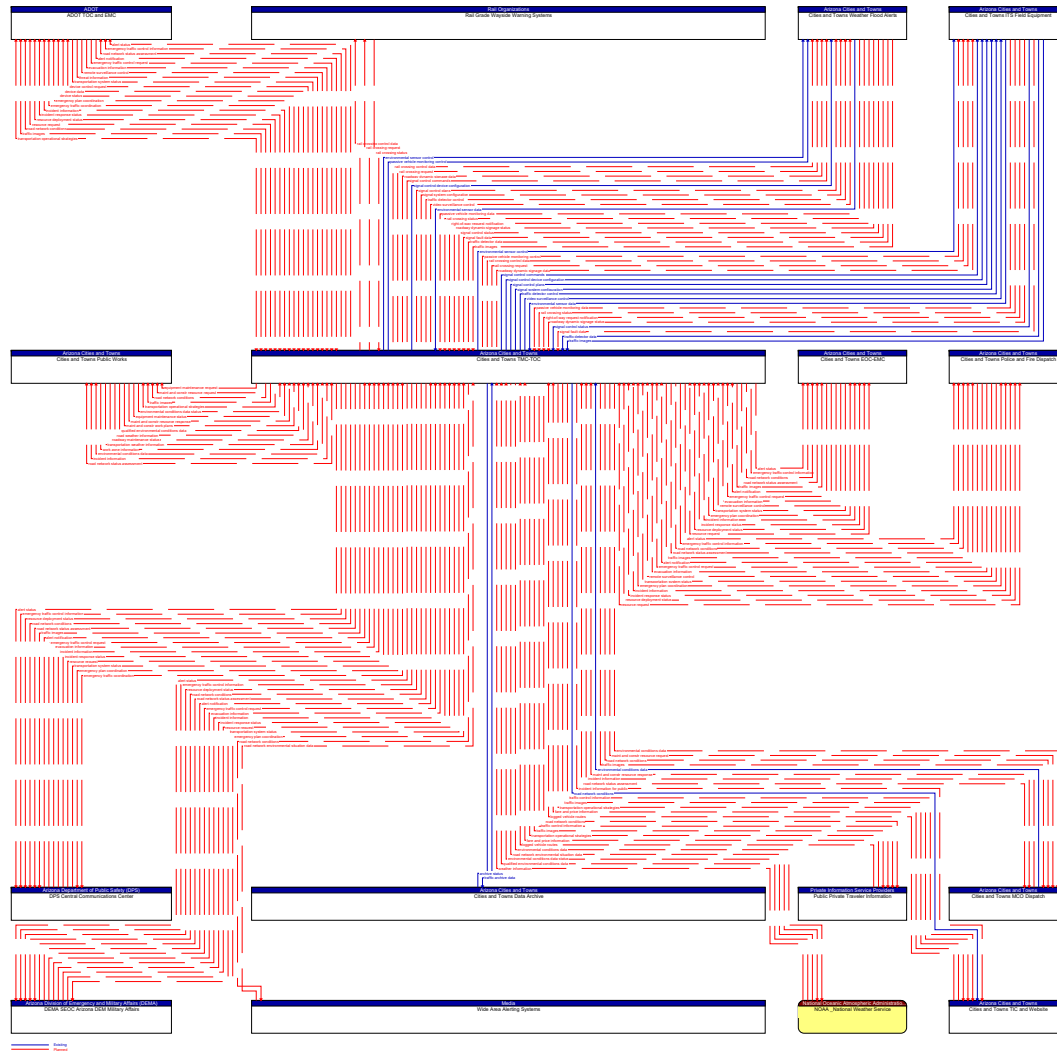


Figure 75: Cities and Towns TMC-TOC Context Diagram

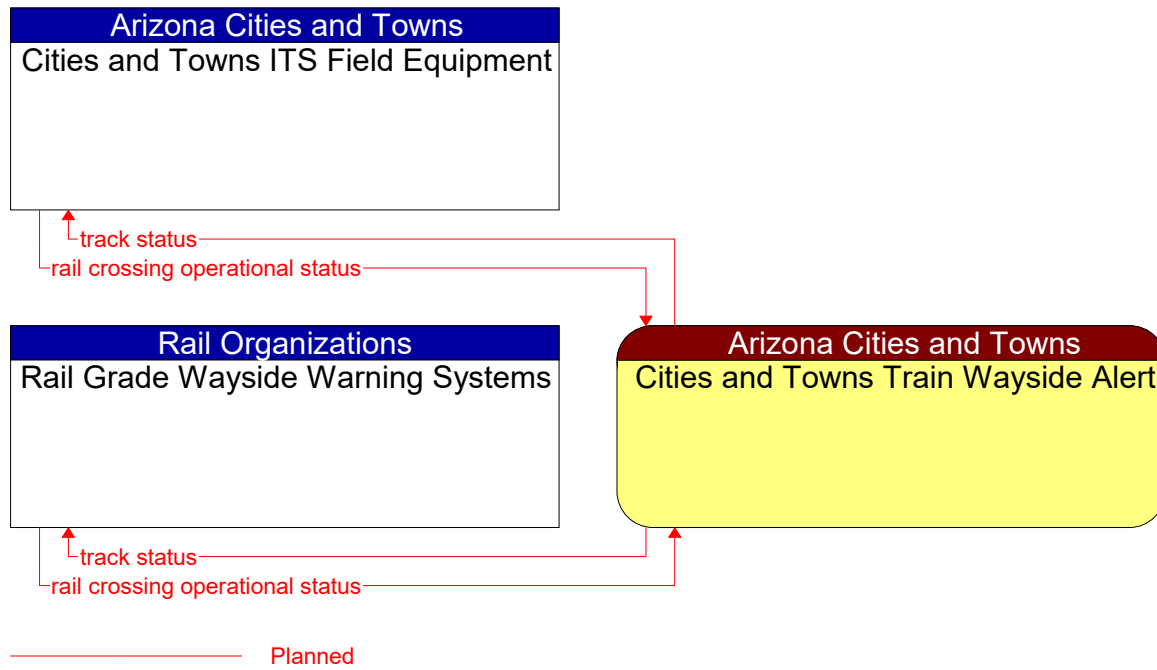


Figure 76: Cities and Towns Train Wayside Alert Context Diagram

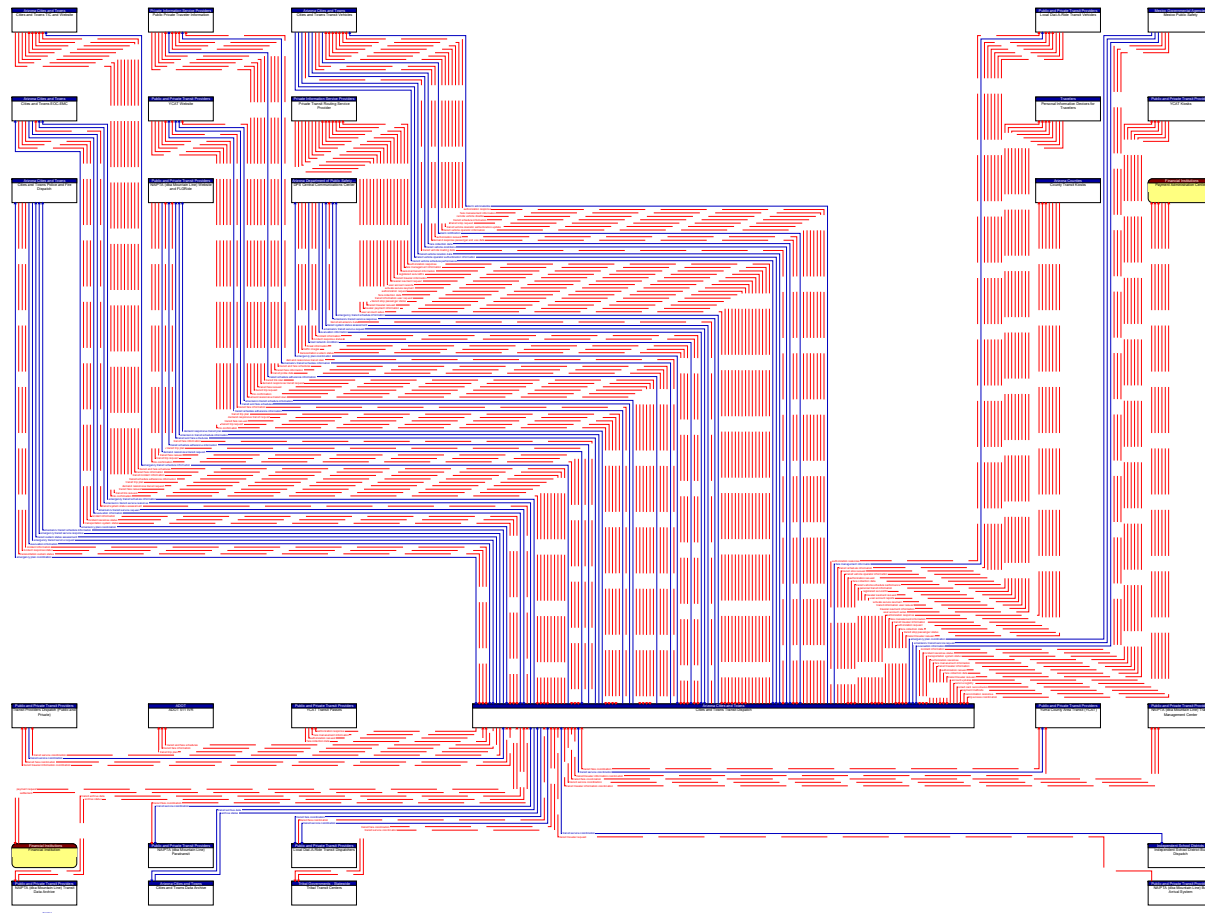


Figure 77: Cities and Towns Transit Dispatch Context Diagram

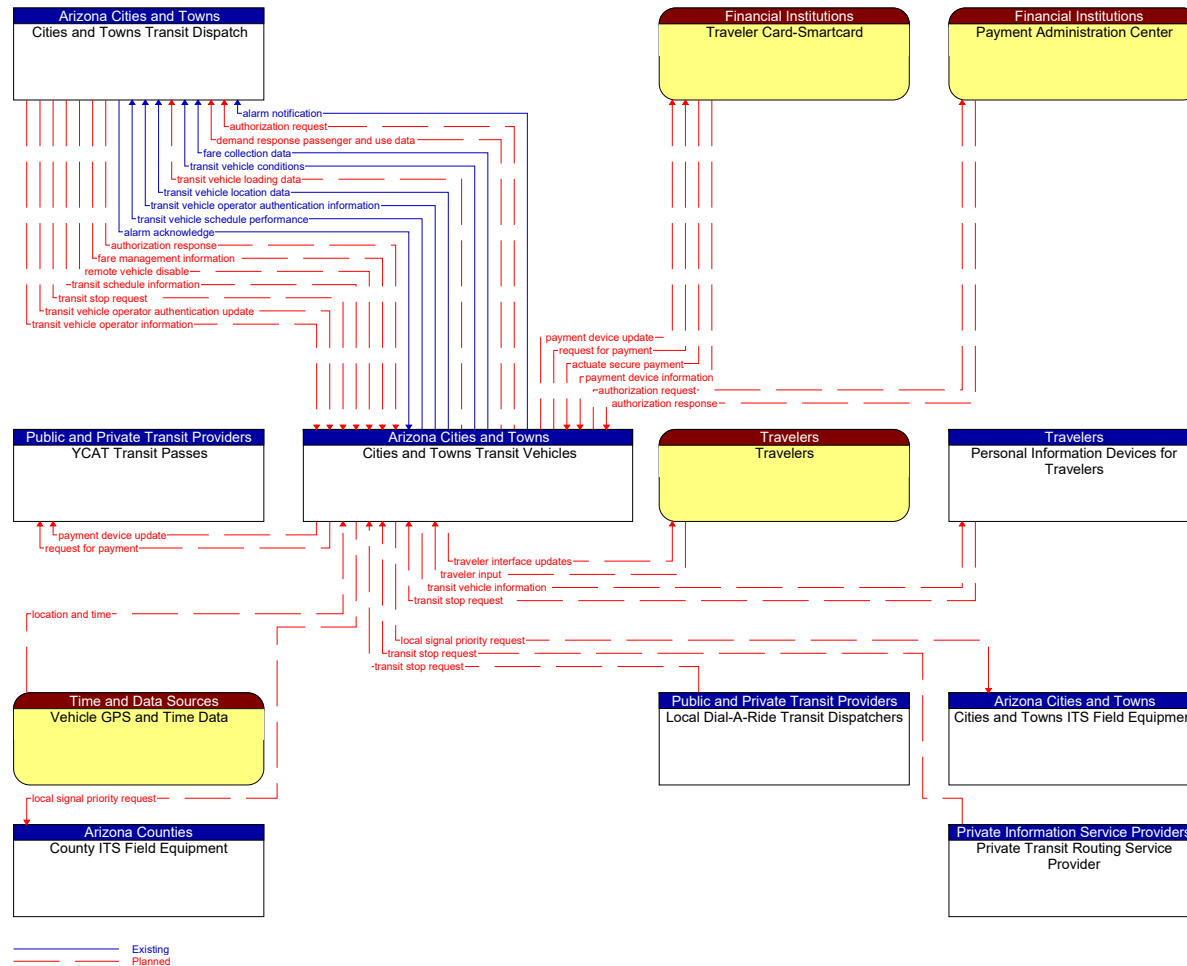


Figure 78: Cities and Towns Transit Vehicles Context Diagram

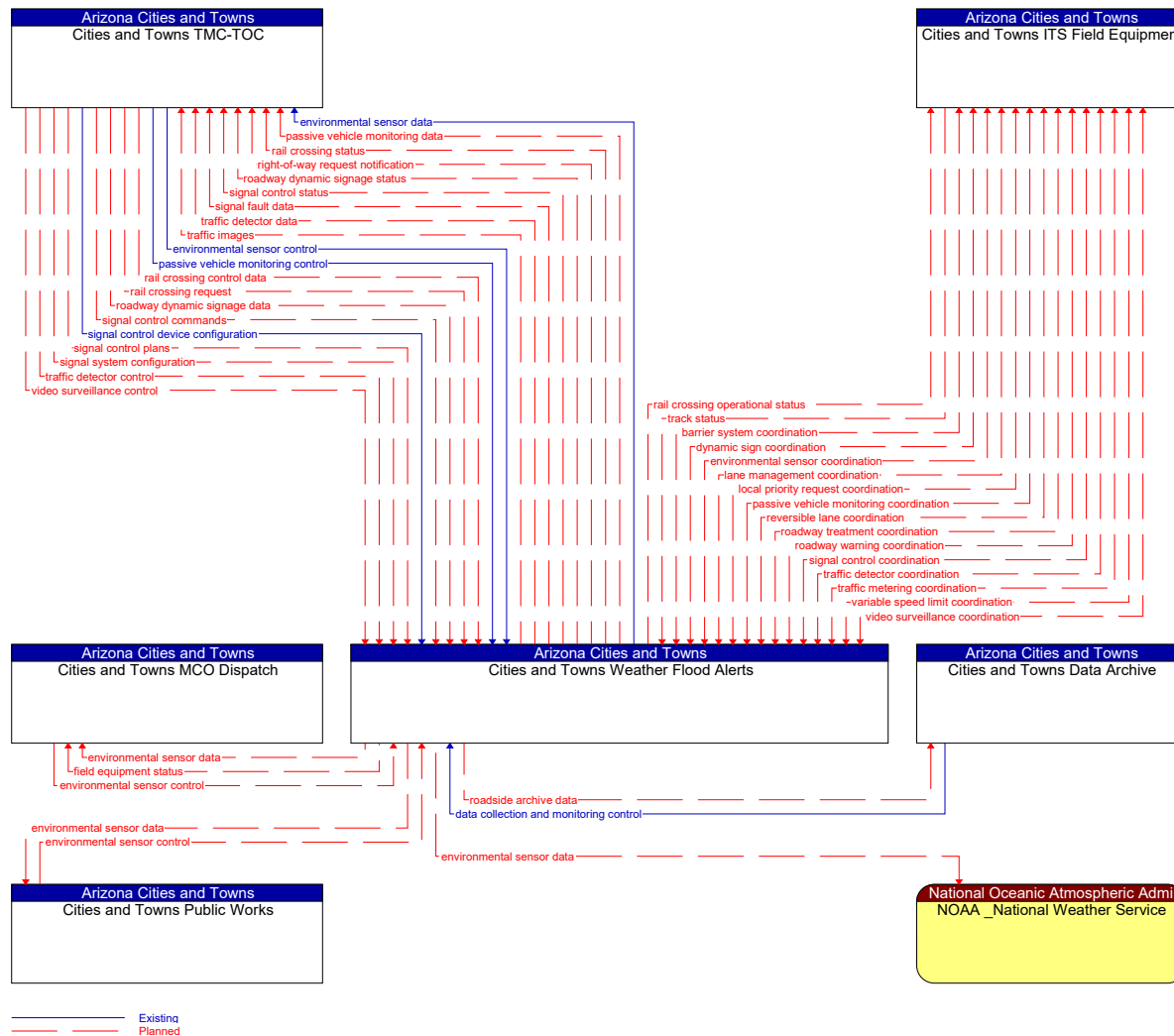


Figure 79: Cities and Towns Weather Flood Alerts Context Diagram

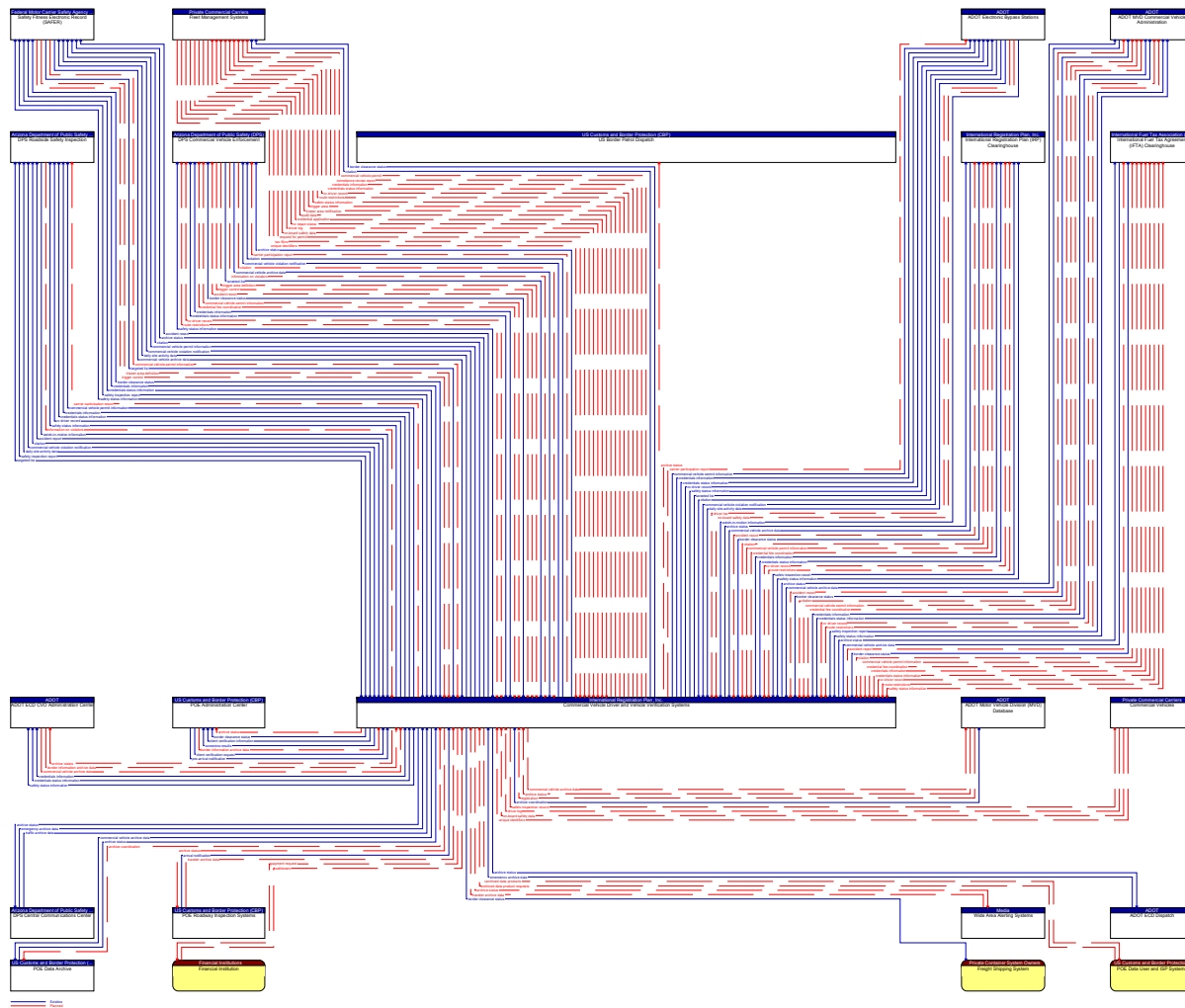


Figure 80: Commercial Vehicle Driver and Vehicle Verification Systems Context Diagram

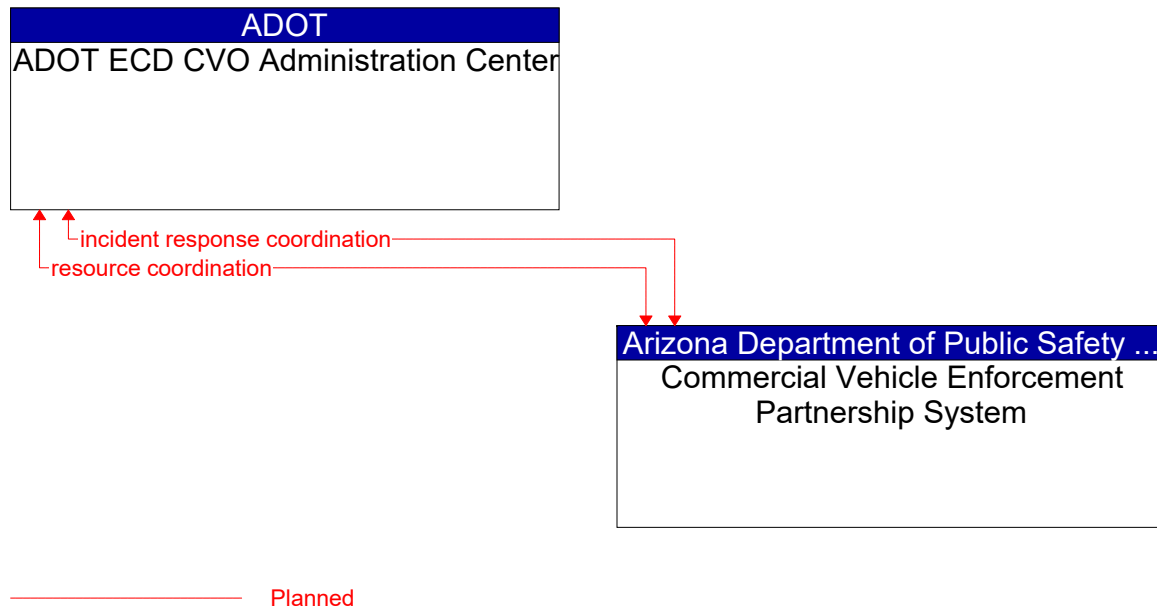


Figure 81: Commercial Vehicle Enforcement Partnership System Context Diagram

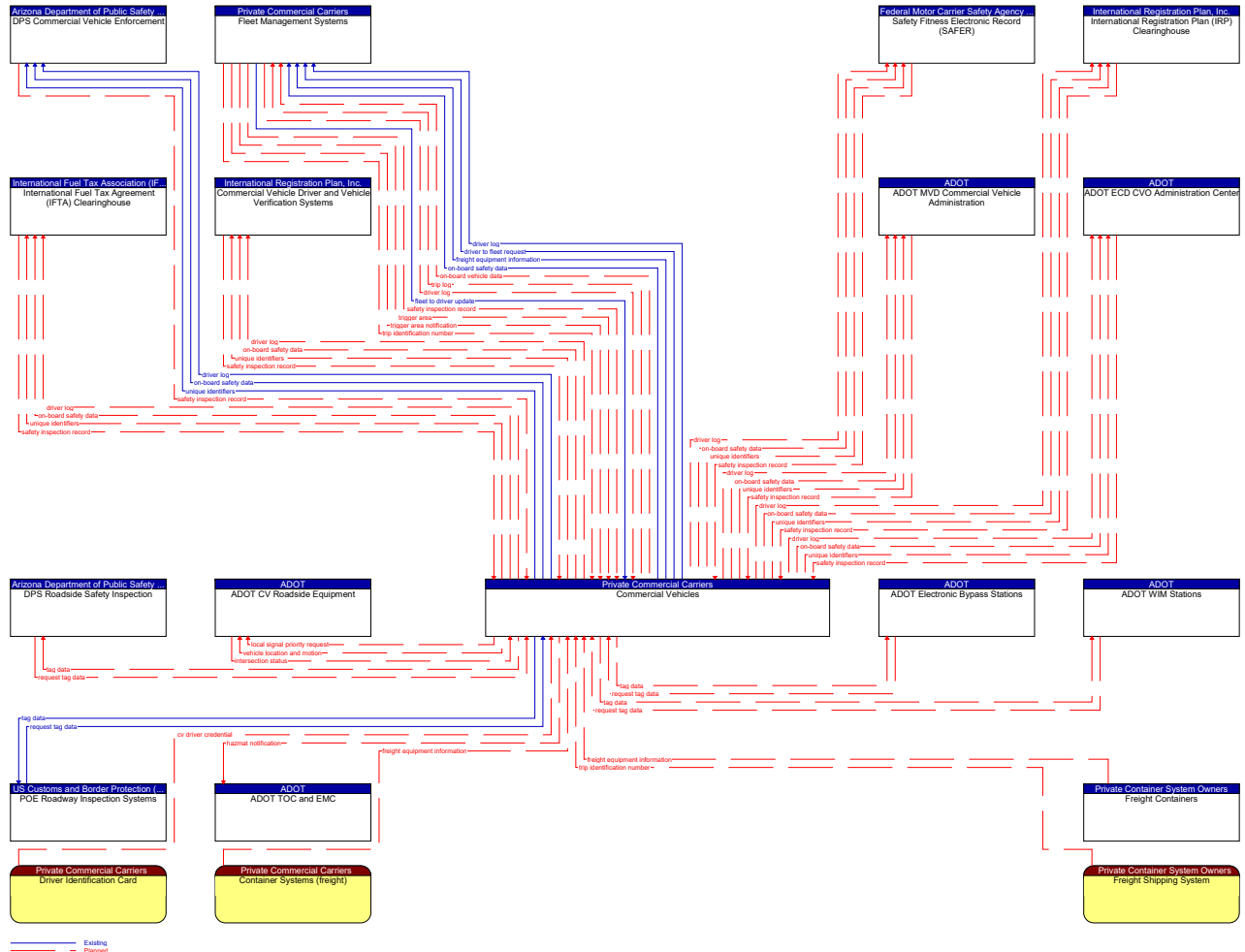


Figure 82: Commercial Vehicles Context Diagram

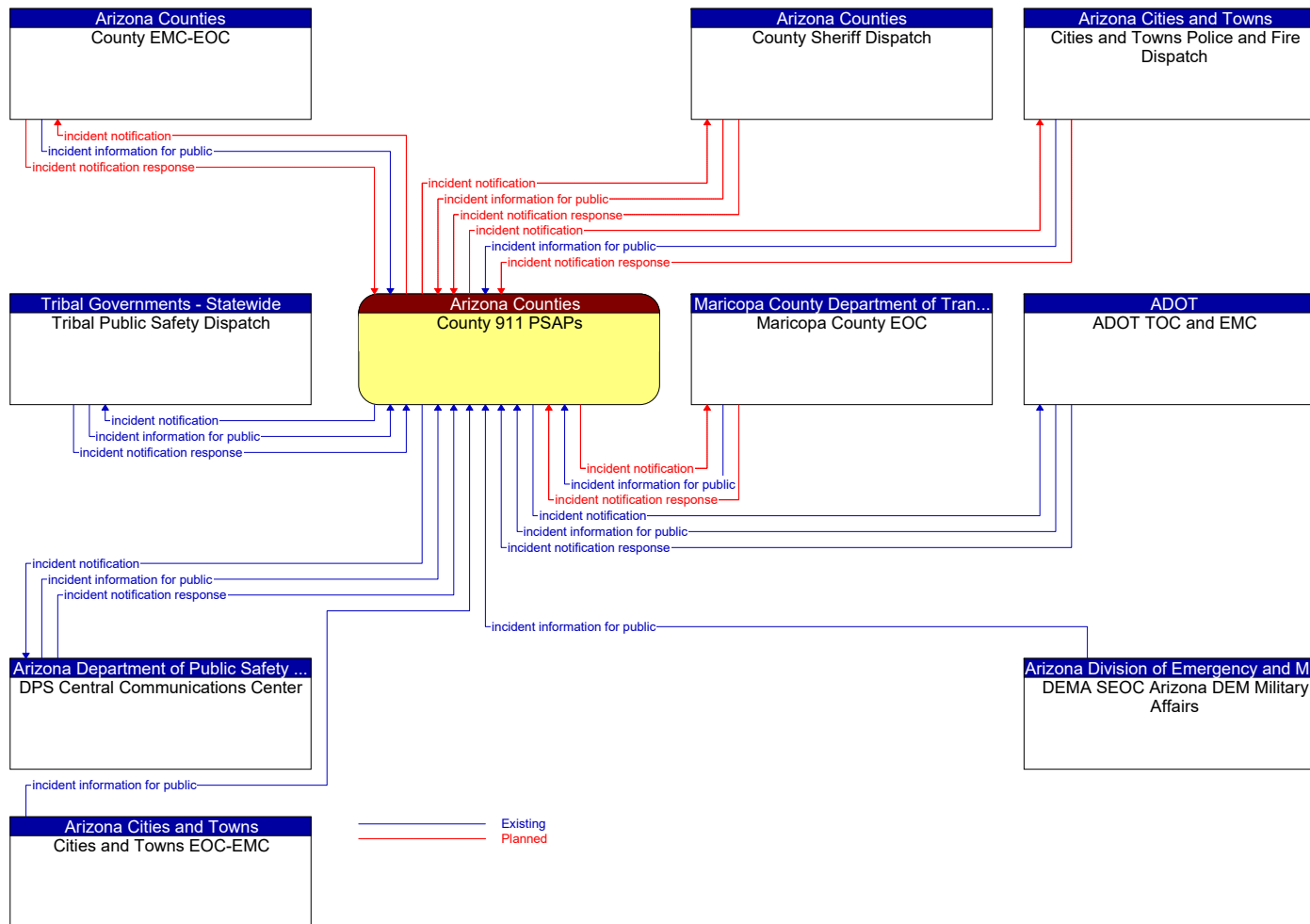


Figure 83: County 911 PSAPs Context Diagram

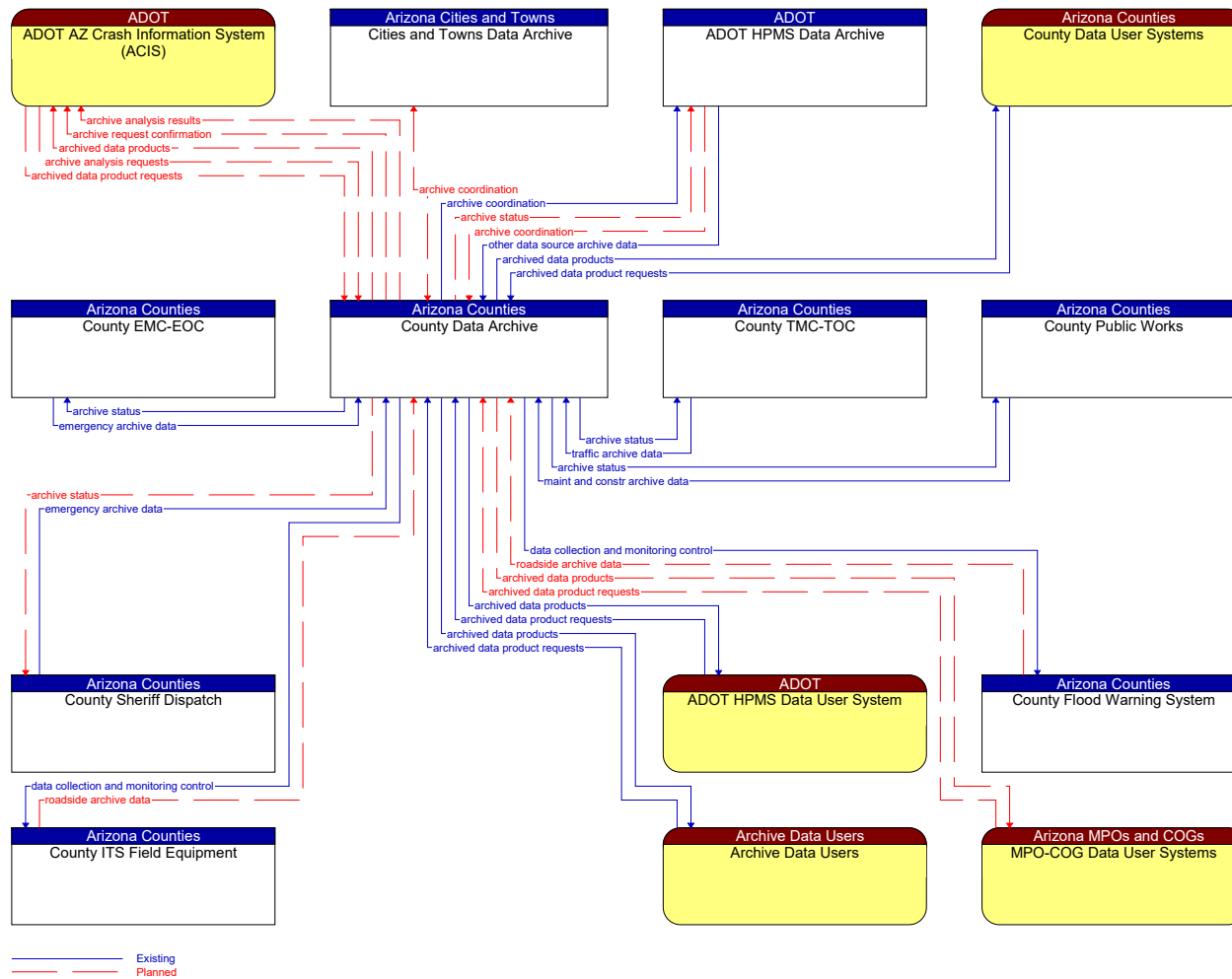


Figure 84: County Data Archive Context Diagram

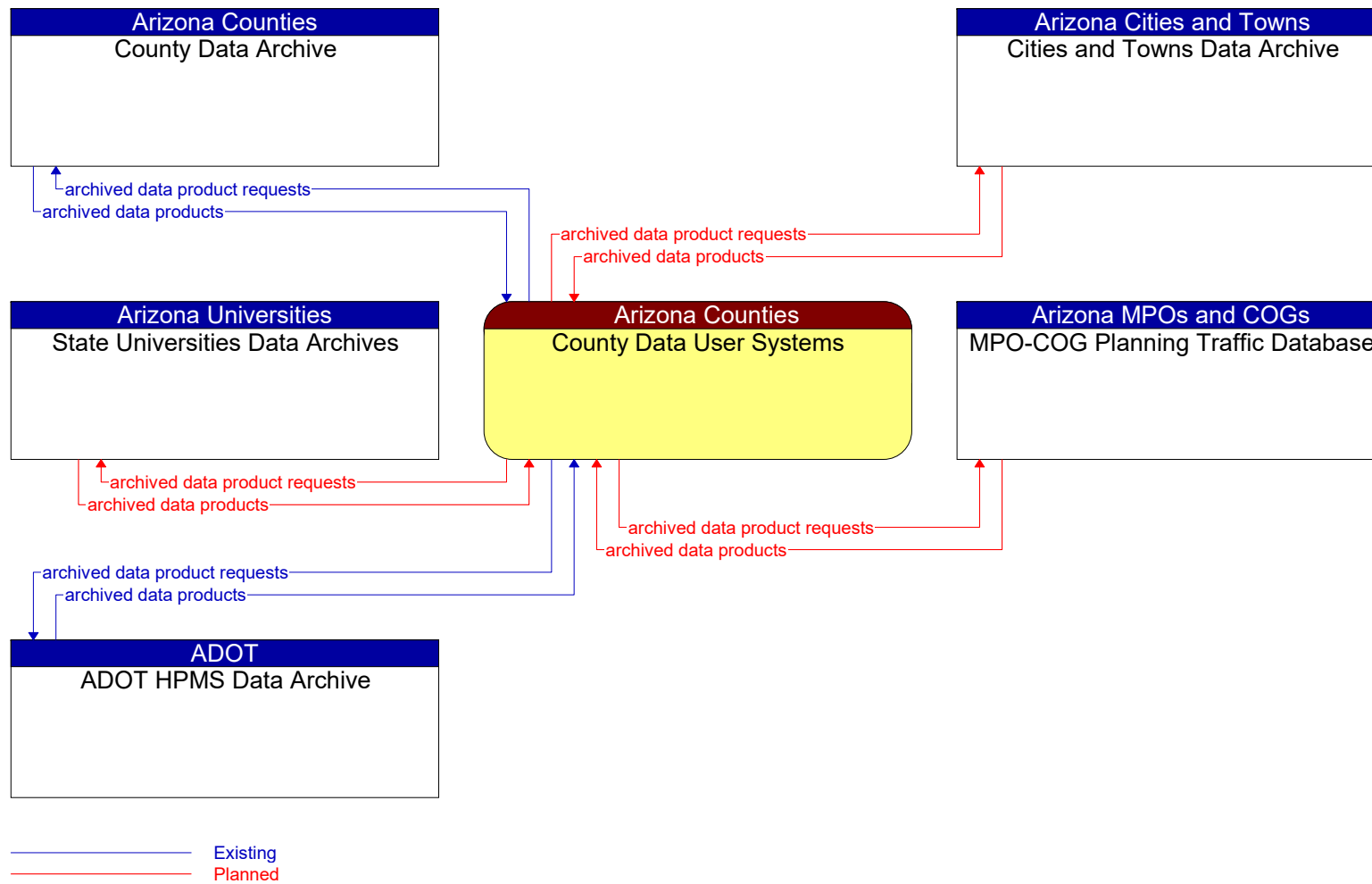


Figure 85: County Data User Systems Context Diagram

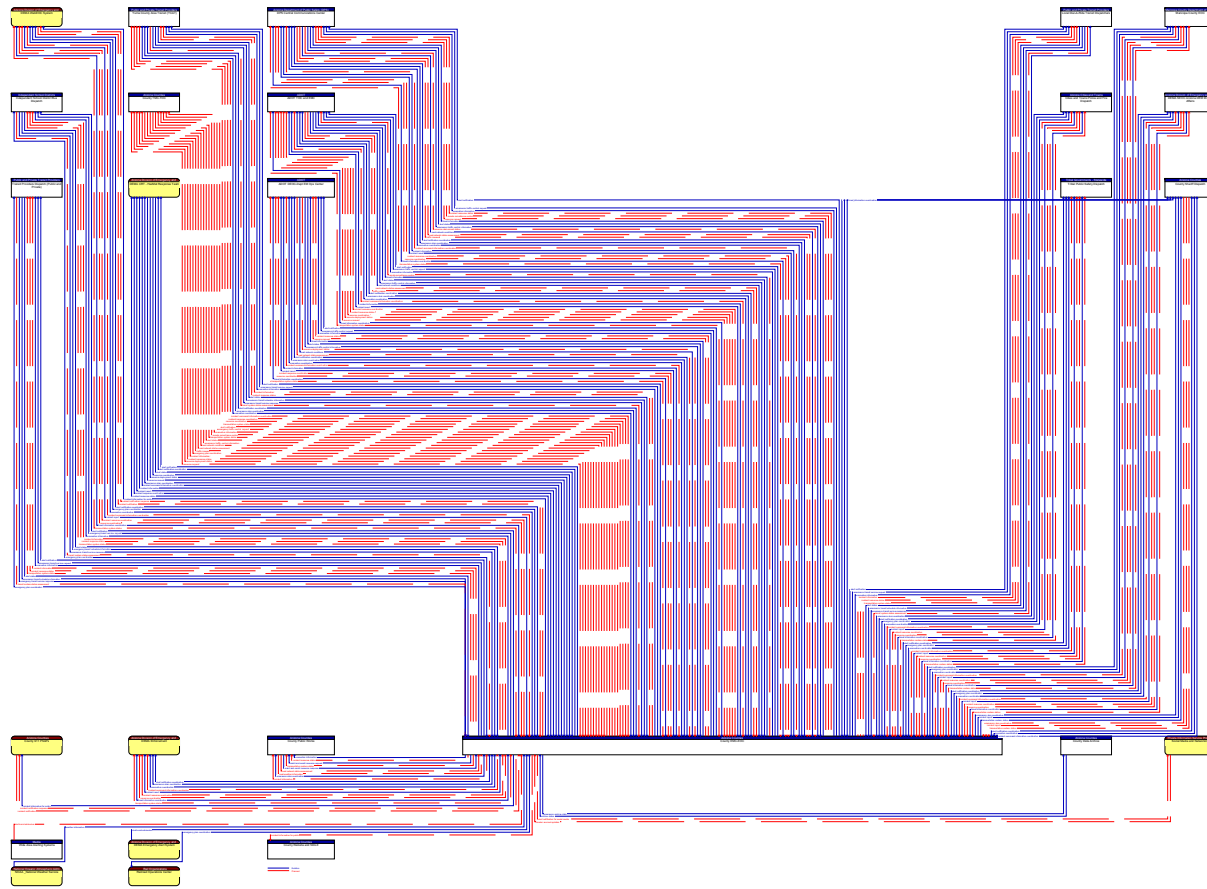


Figure 86: County EMC-EOC Context Diagram

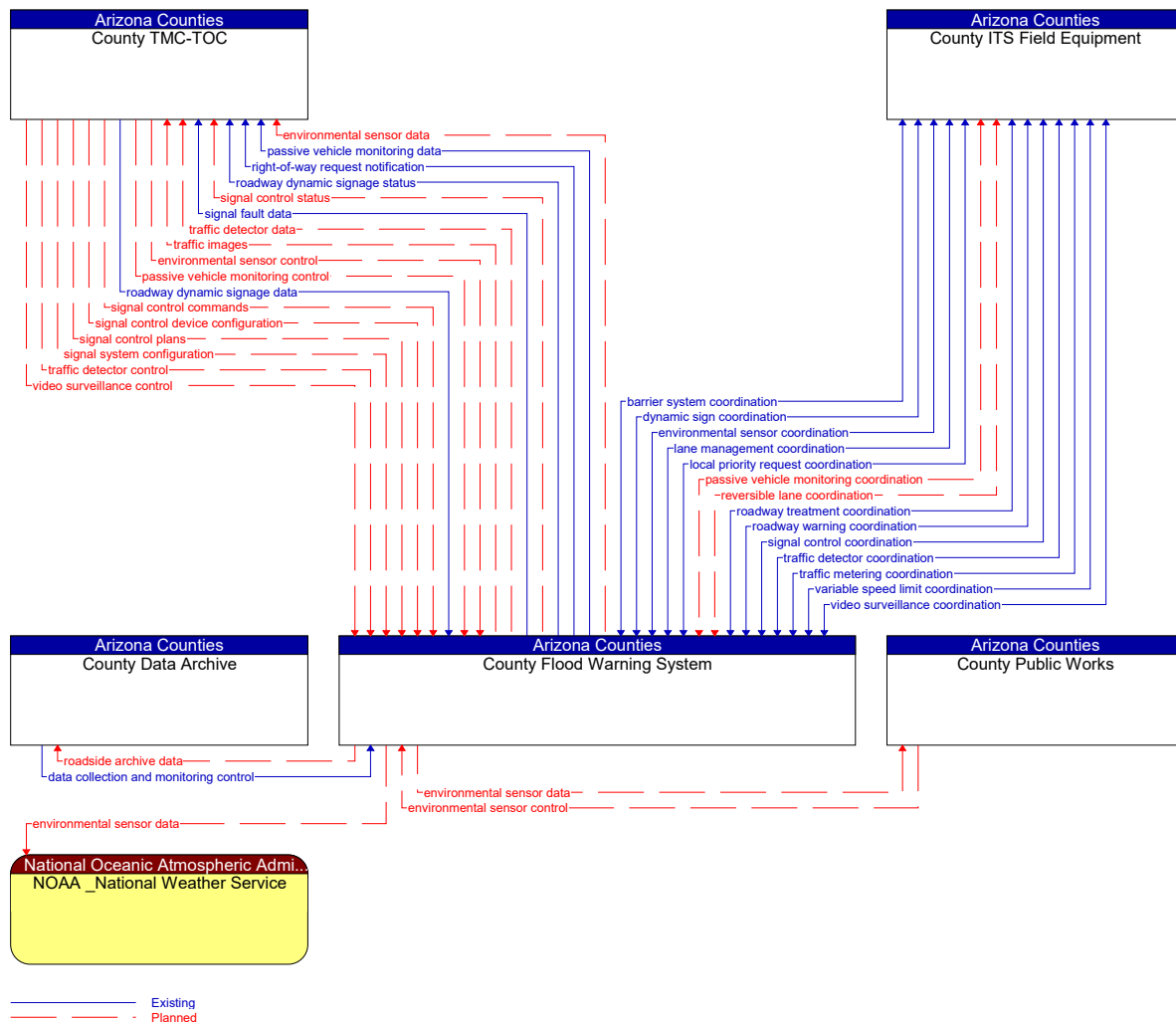


Figure 87: County Flood Warning System Context Diagram

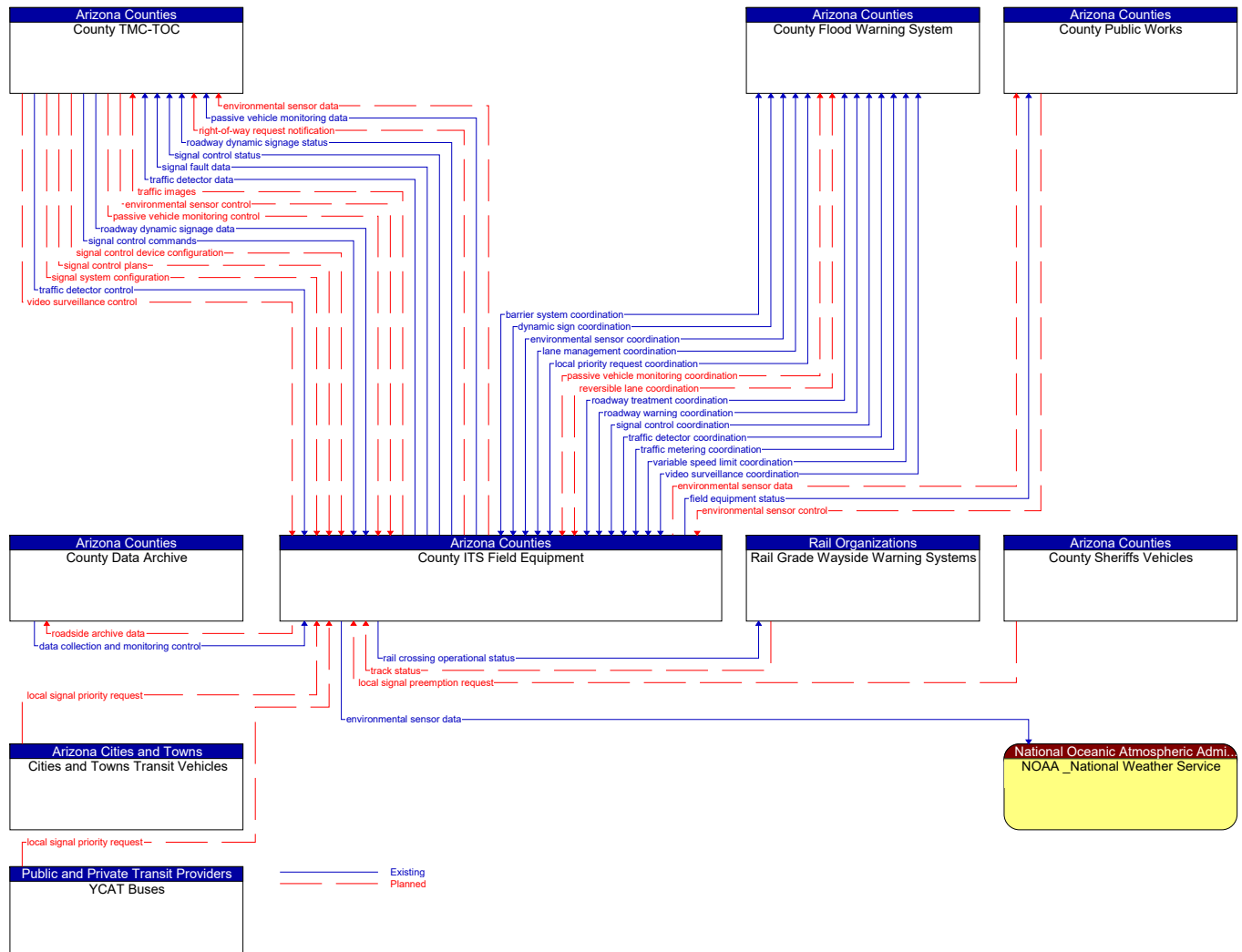


Figure 88: County ITS Field Equipment Context Diagram

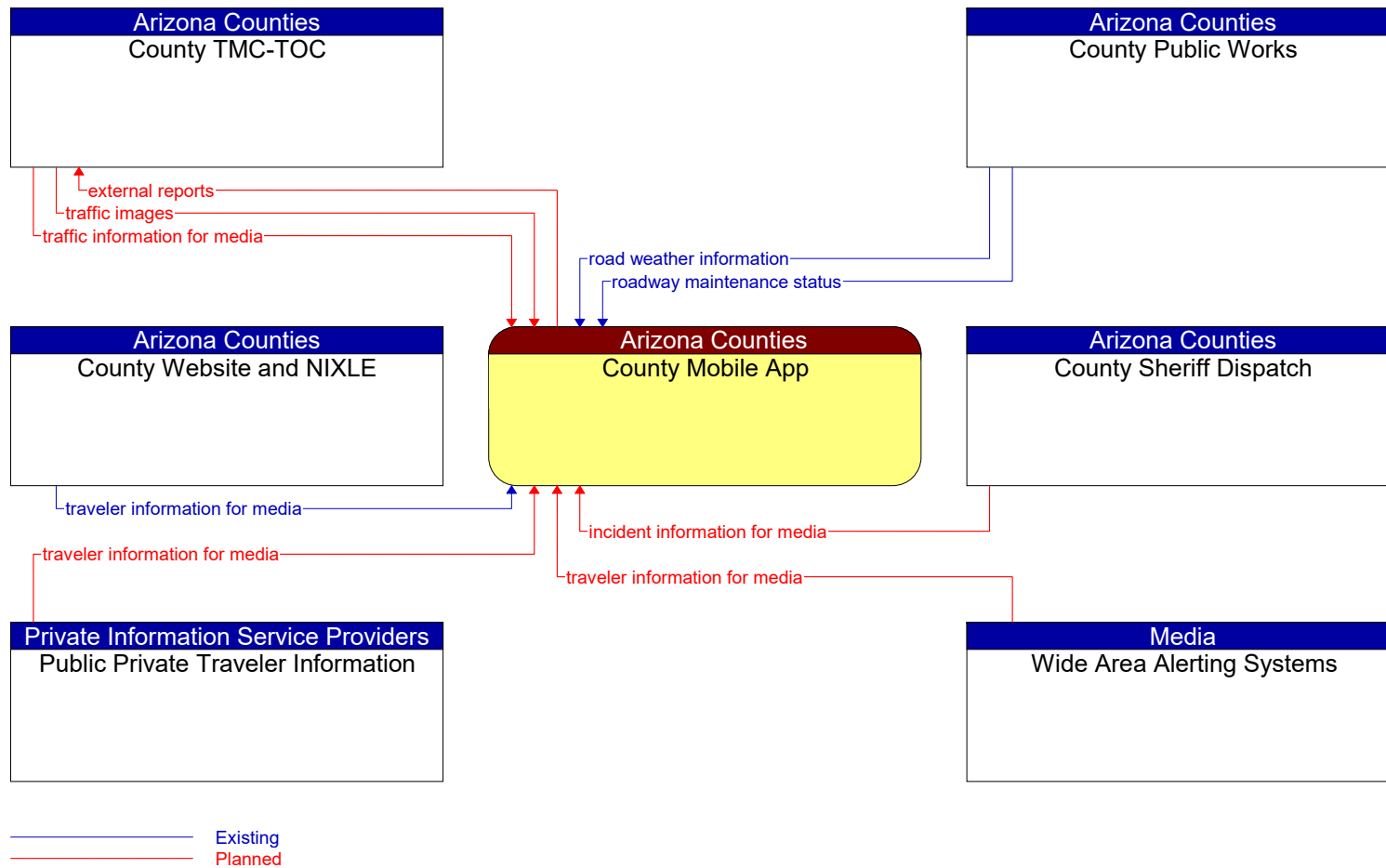


Figure 89: County Mobile App Context Diagram

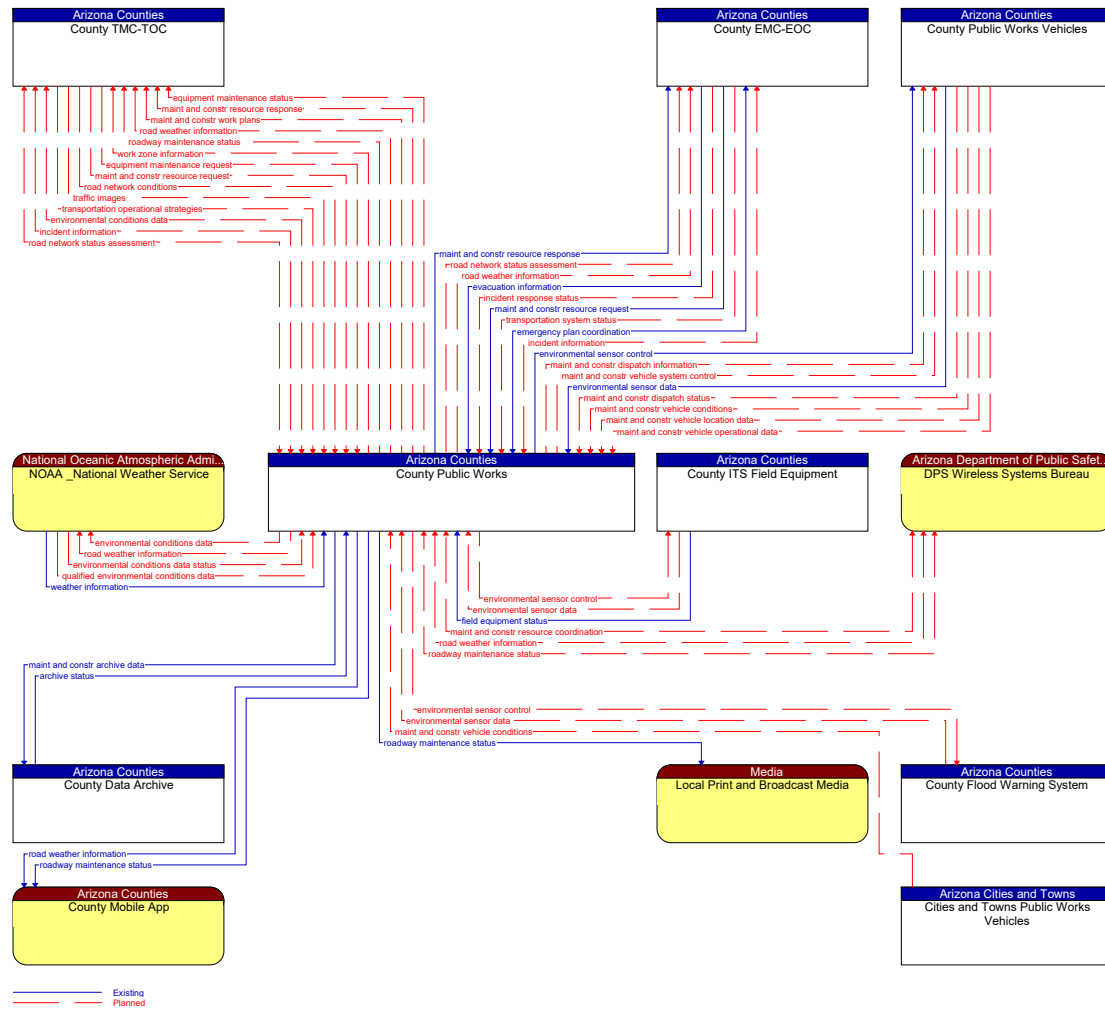


Figure 90: County Public Works Context Diagram

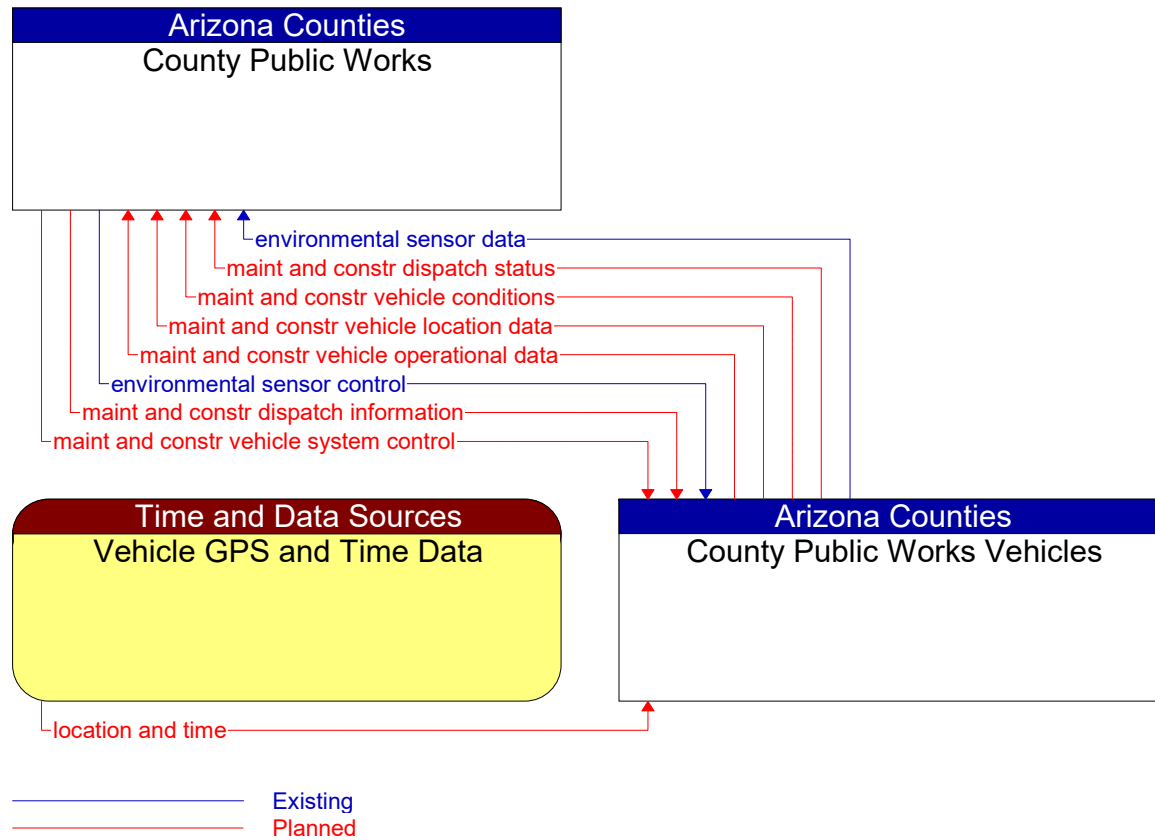


Figure 91: County Public Works Vehicles Context Diagram

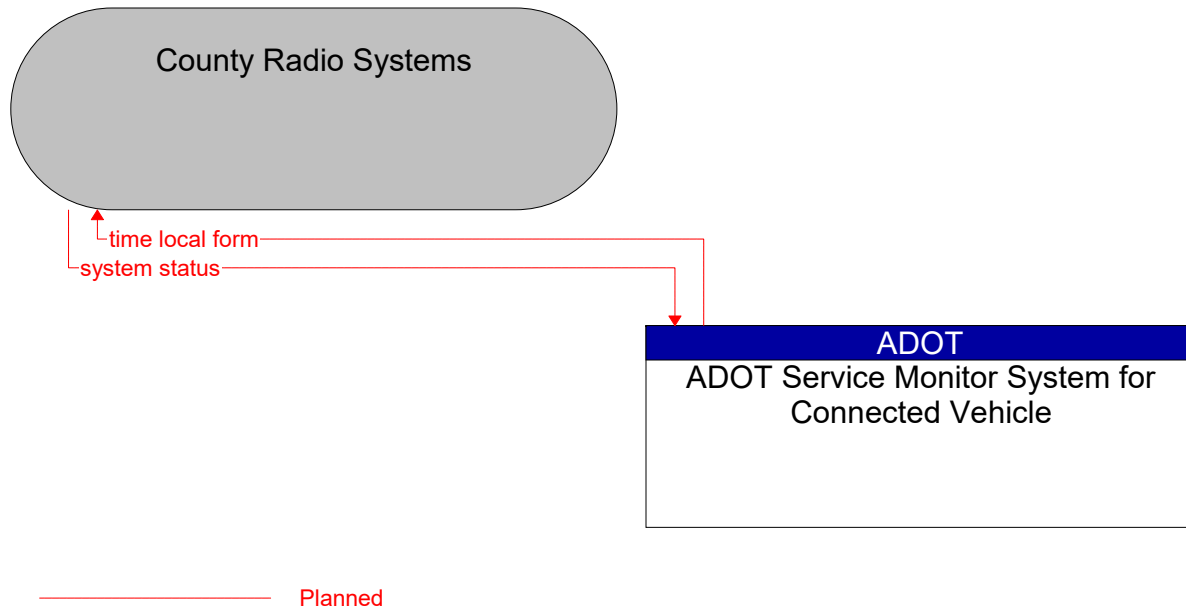


Figure 92: County Radio Systems Context Diagram

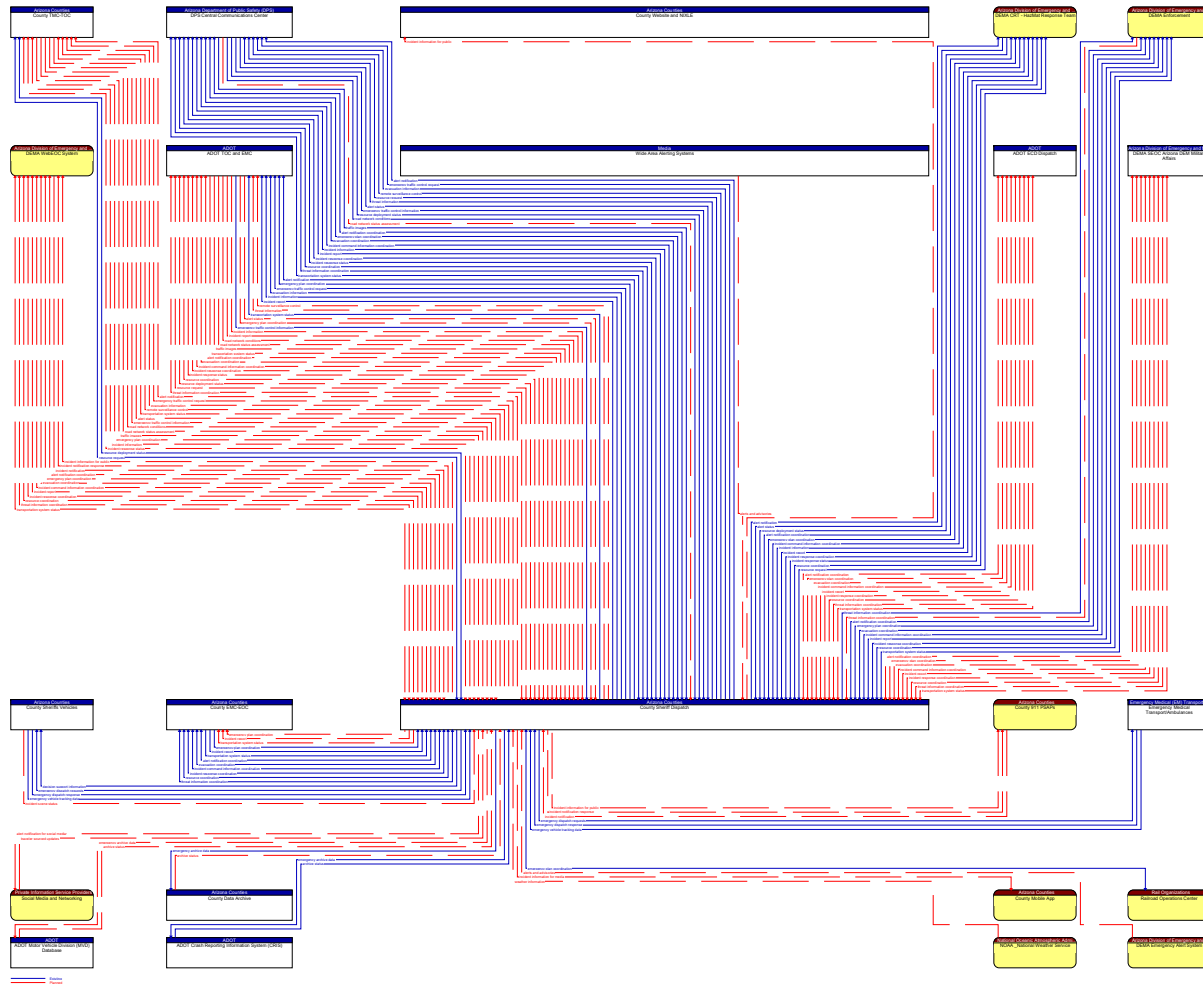


Figure 93: County Sheriff Dispatch Context Diagram

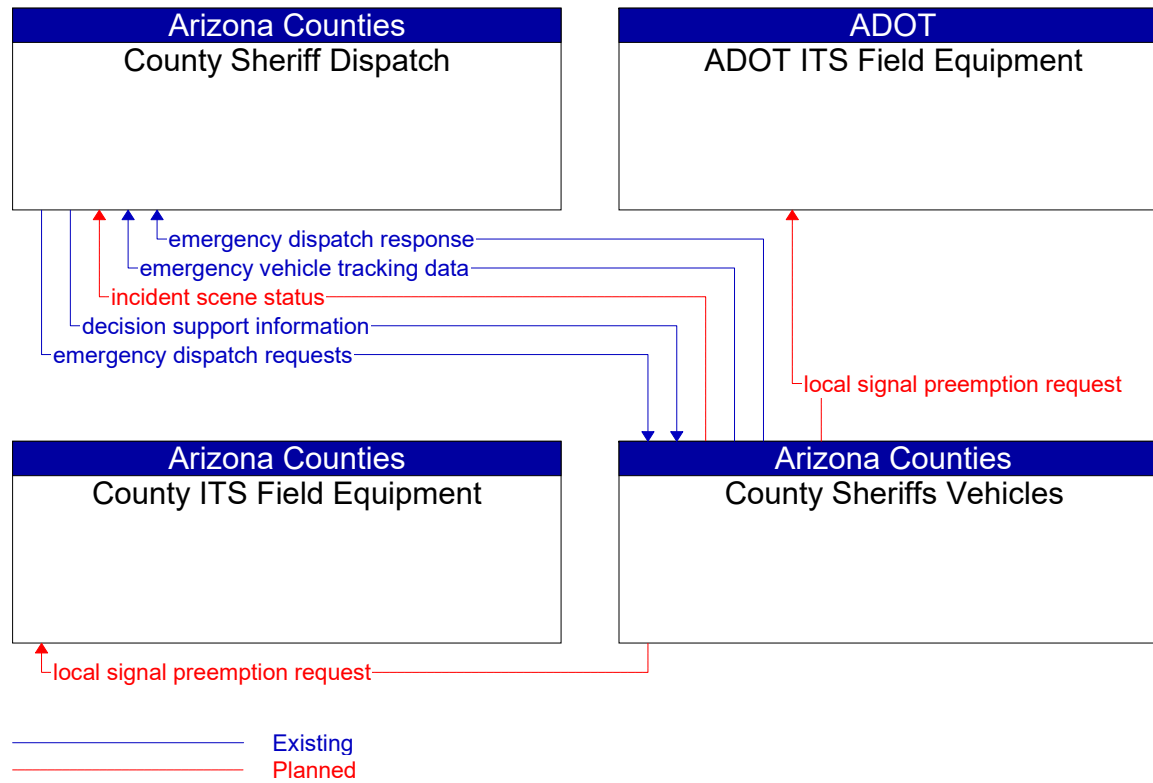


Figure 94: County Sheriffs Vehicles Context Diagram

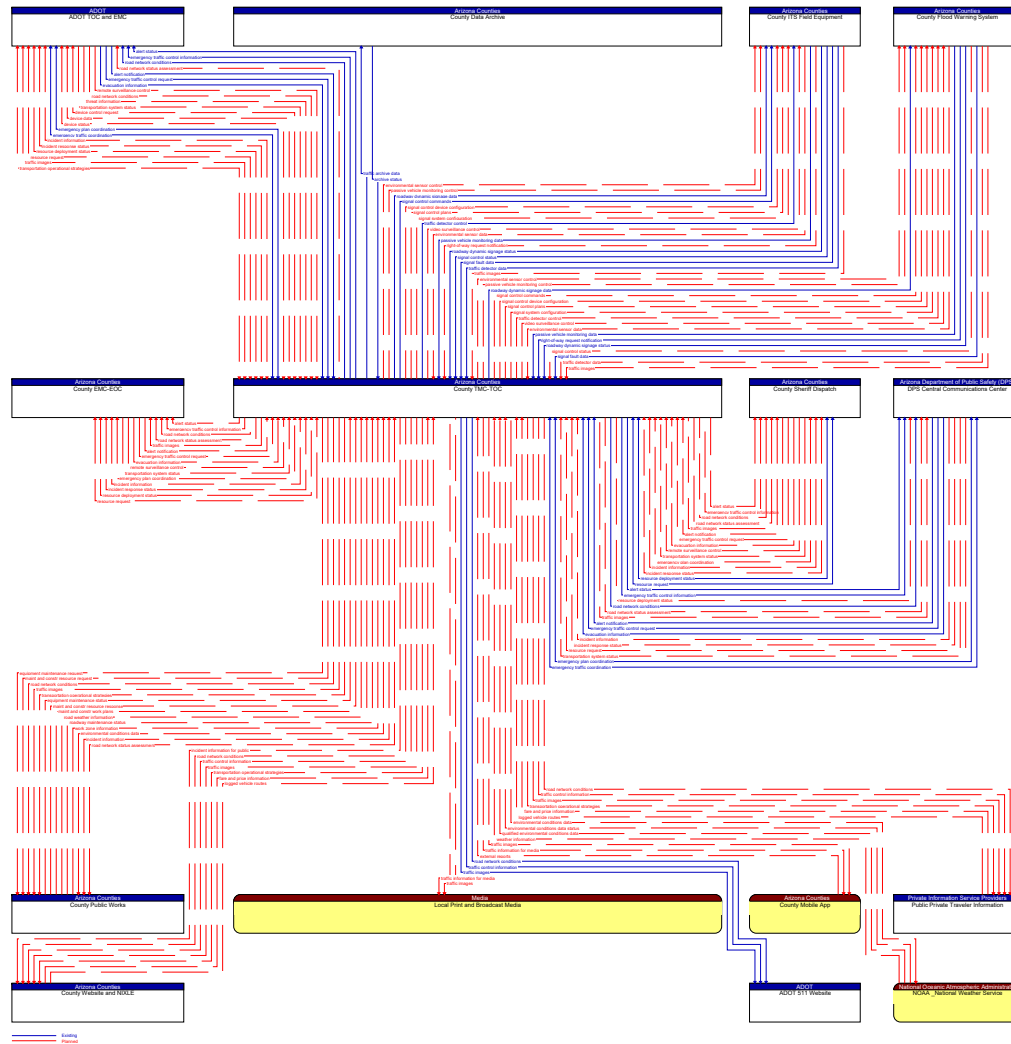


Figure 95: County TMC-TOC Context Diagram

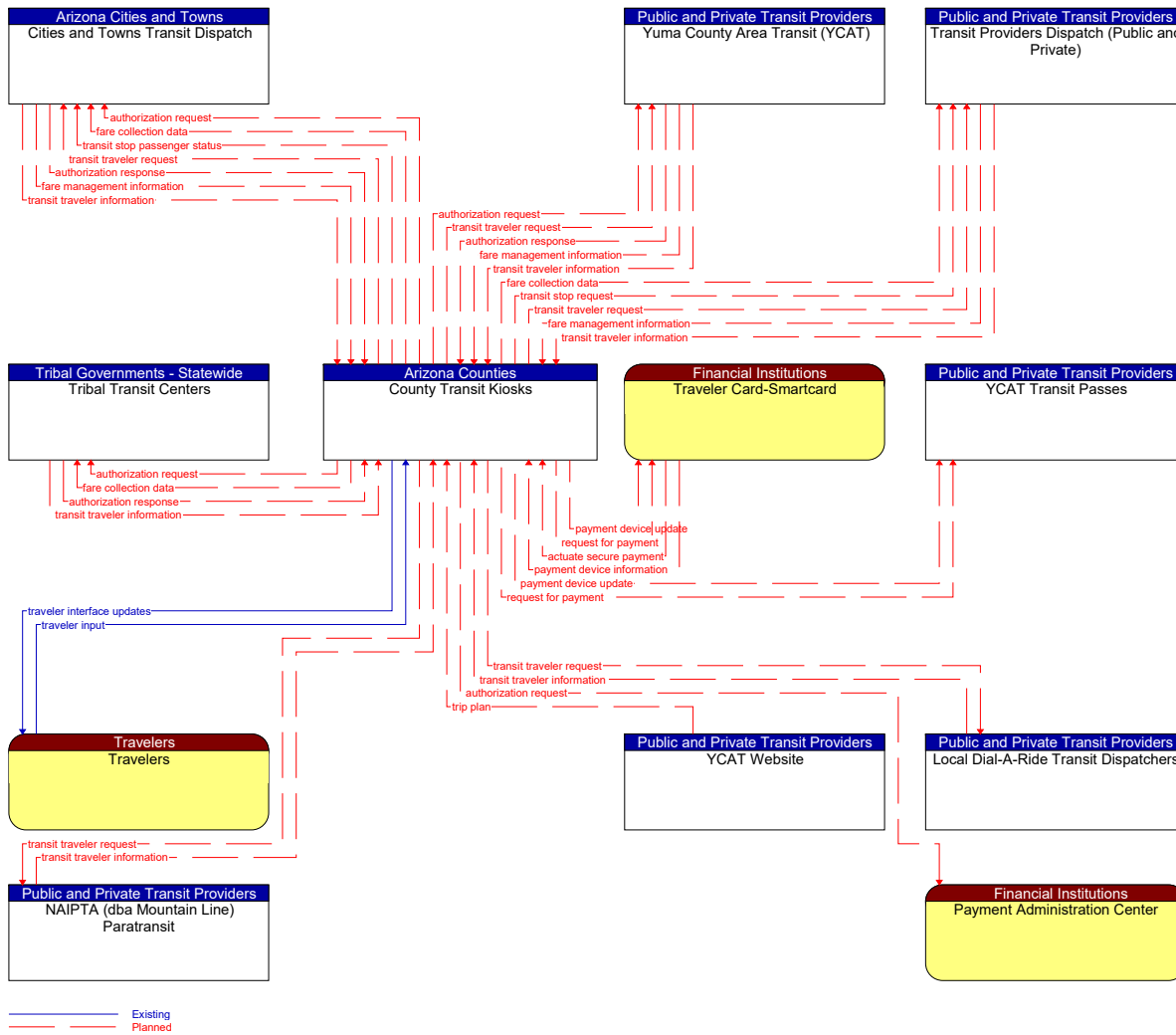


Figure 96: County Transit Kiosks Context Diagram

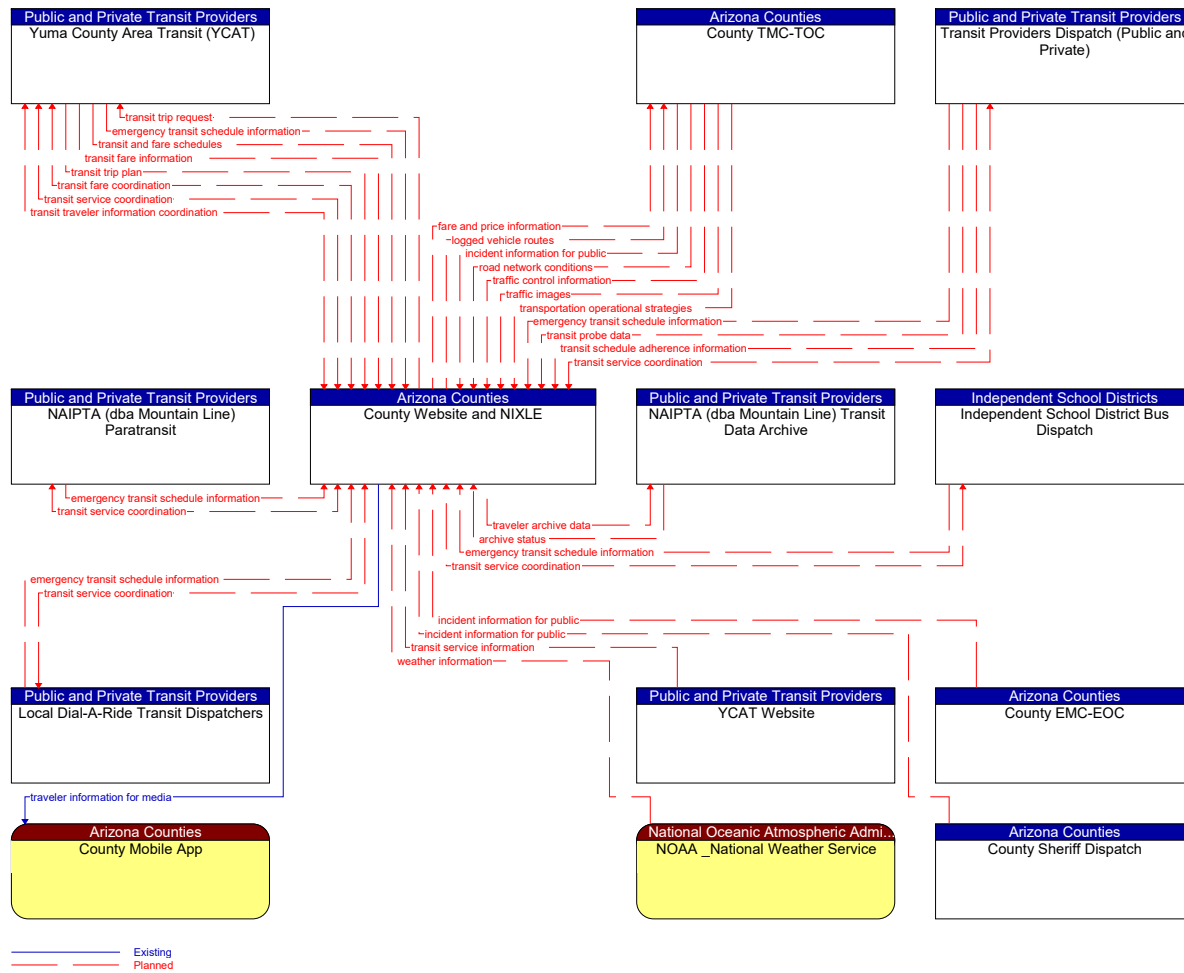


Figure 97: County Website and NIXLE Context Diagram

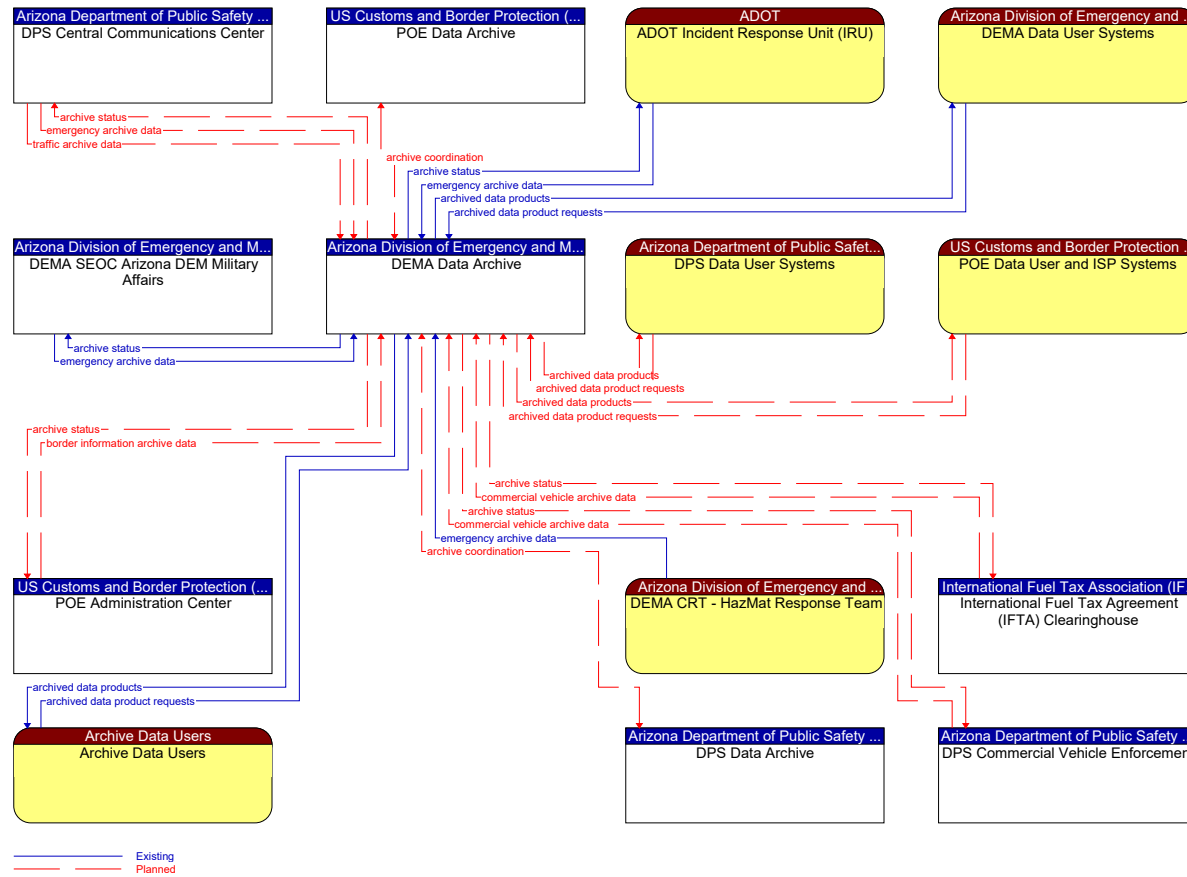


Figure 99: DEMA Data Archive Context Diagram

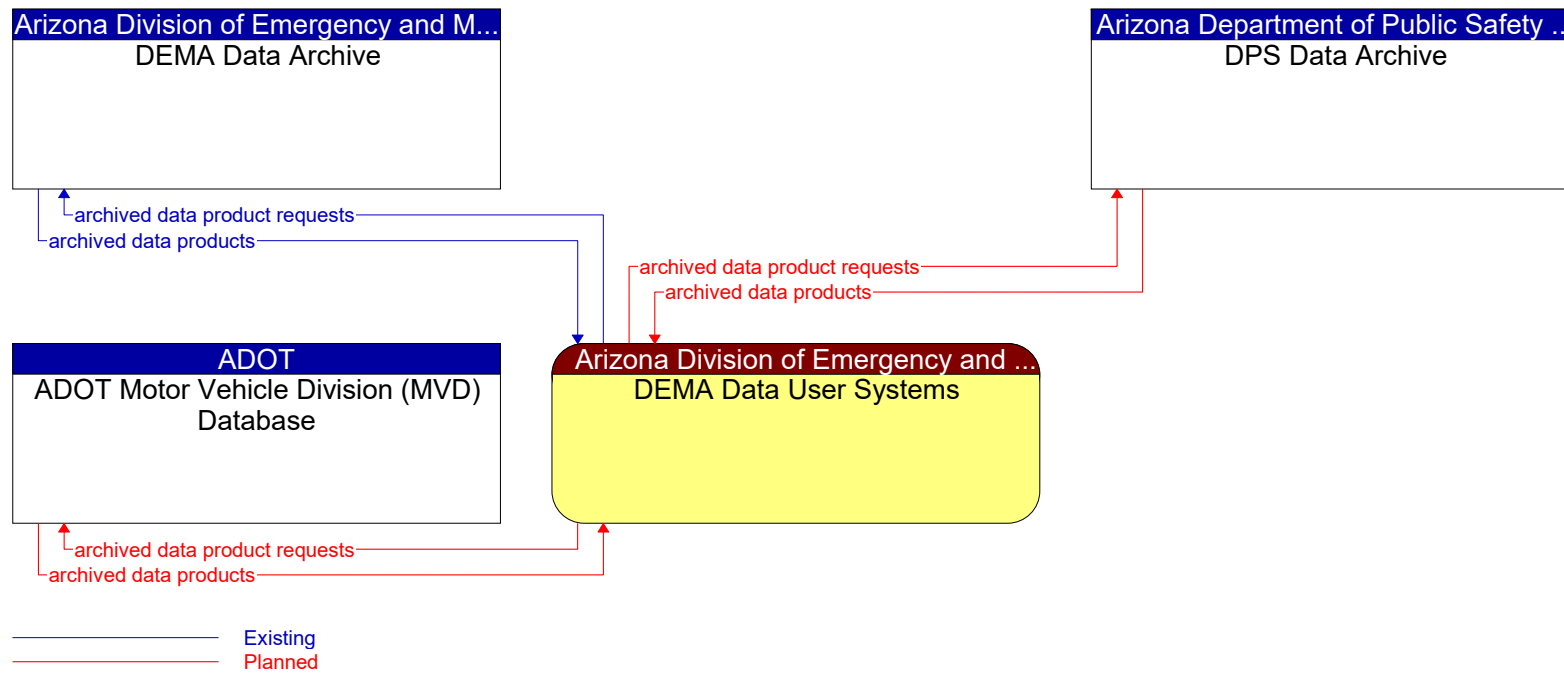


Figure 100: DEMA Data User Systems Context Diagram

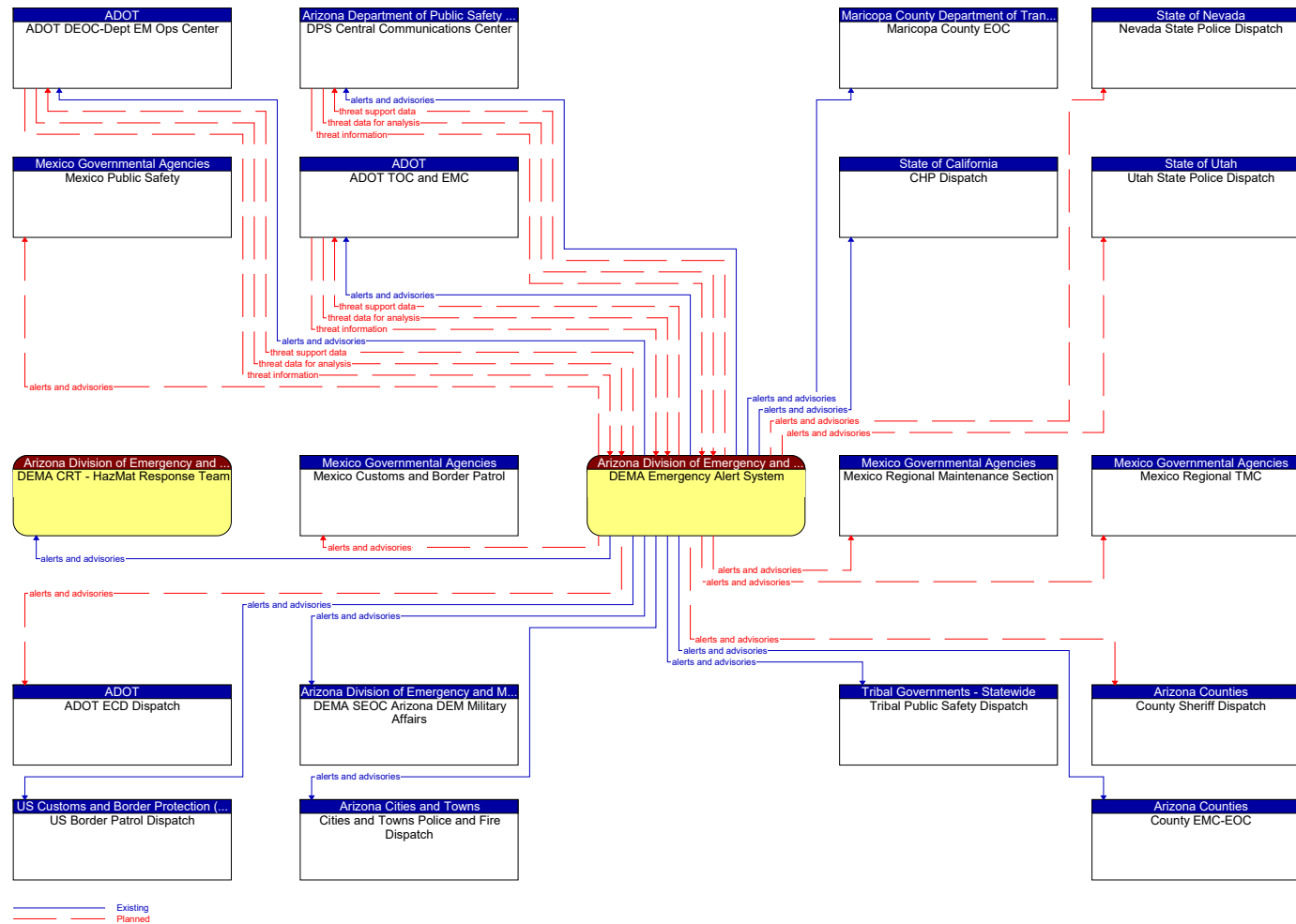


Figure 101: DEMA Emergency Alert System Context Diagram

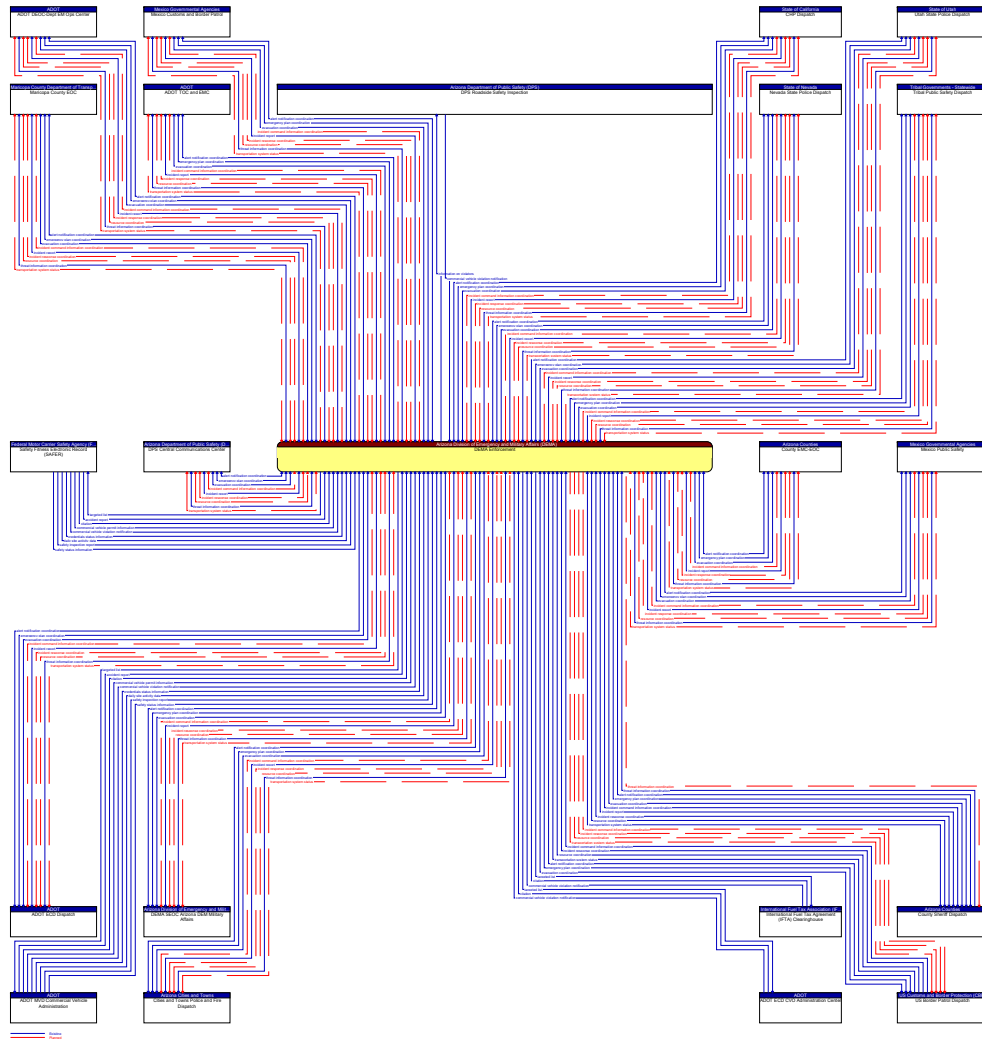


Figure 102: DEMA Enforcement Context Diagram

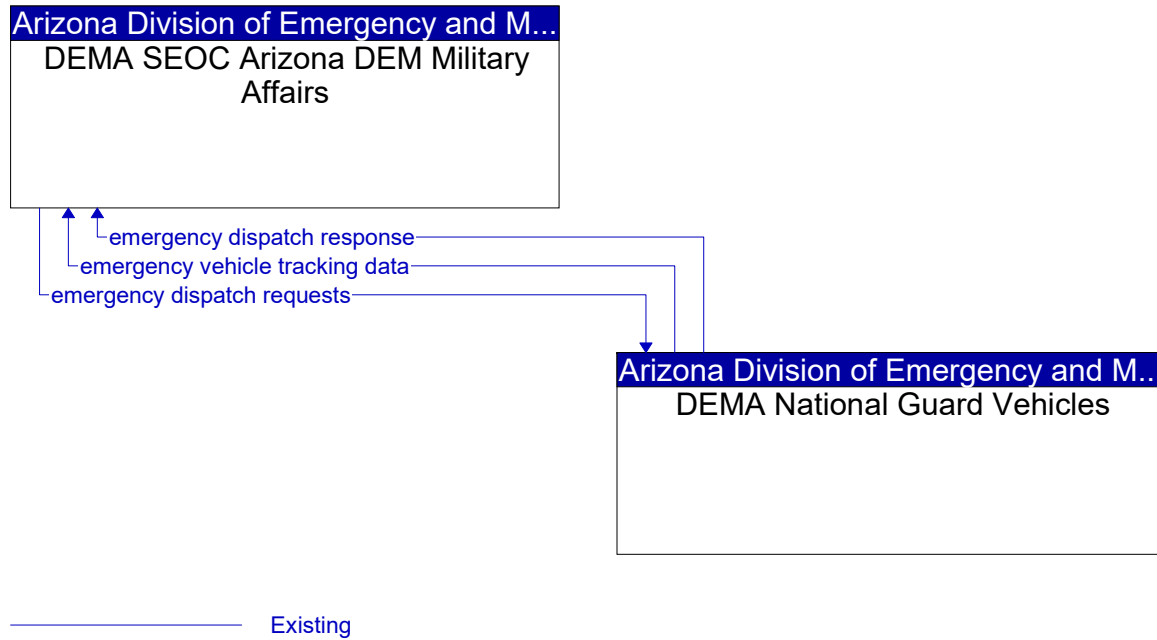


Figure 103: DEMA National Guard Vehicles Context Diagram

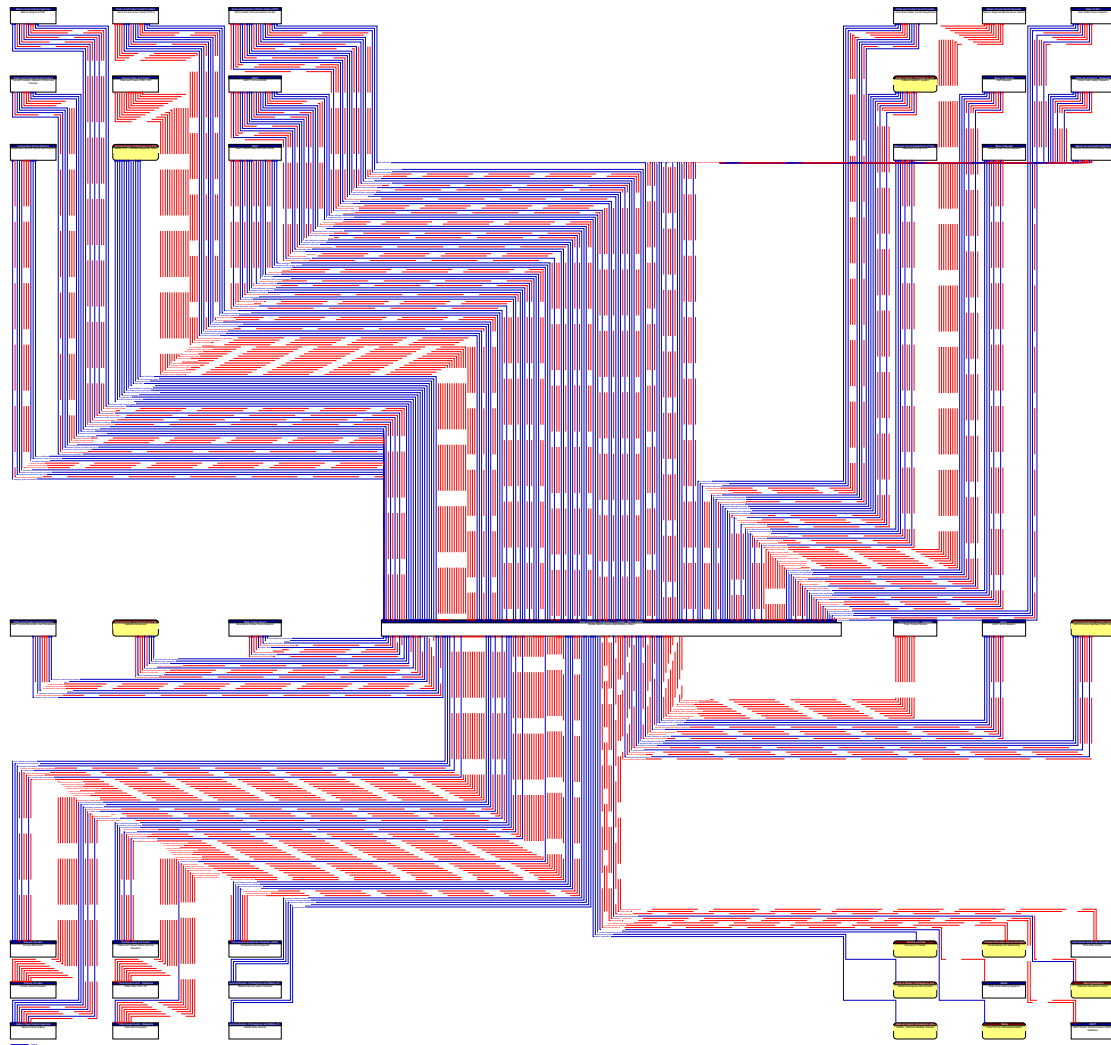


Figure 104: DEMA SEOC Arizona DEM Military Affairs Context Diagram

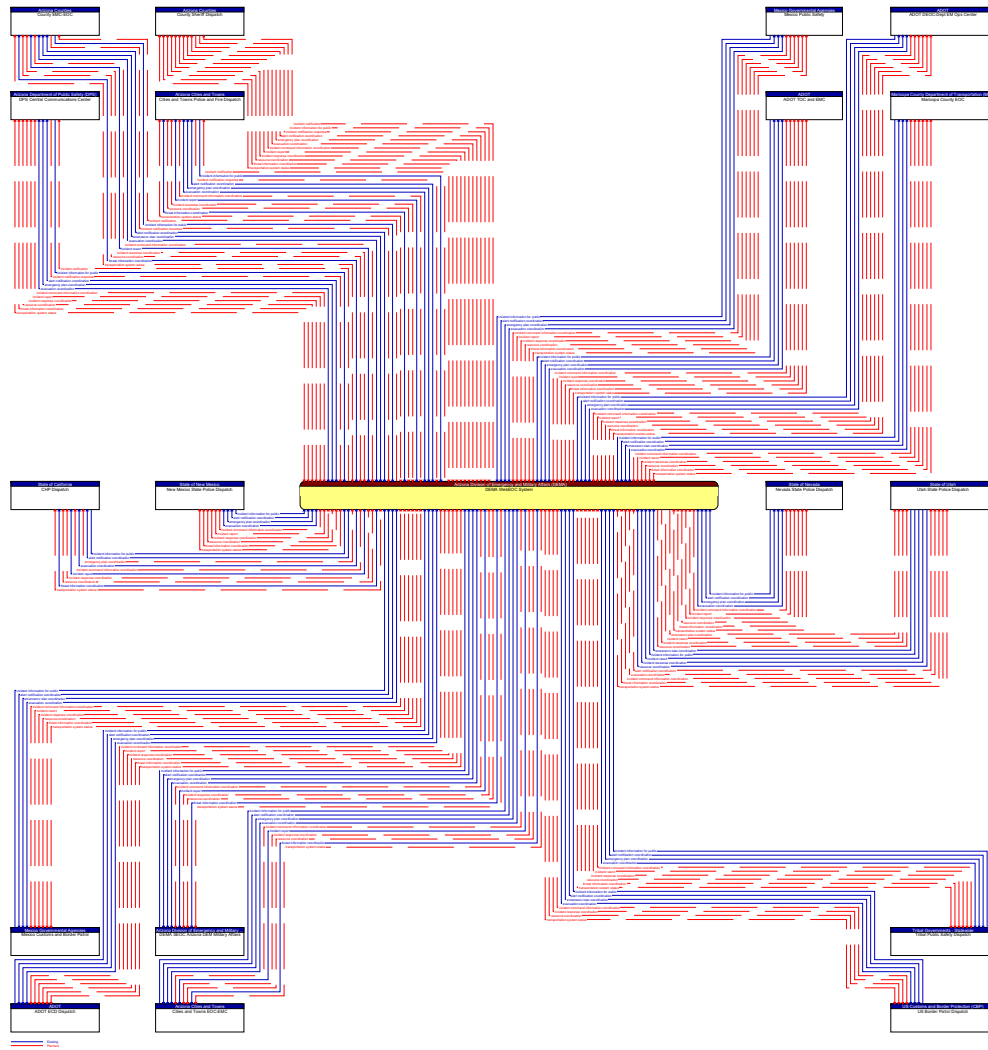


Figure 105: DEMA WebEOC System Context Diagram

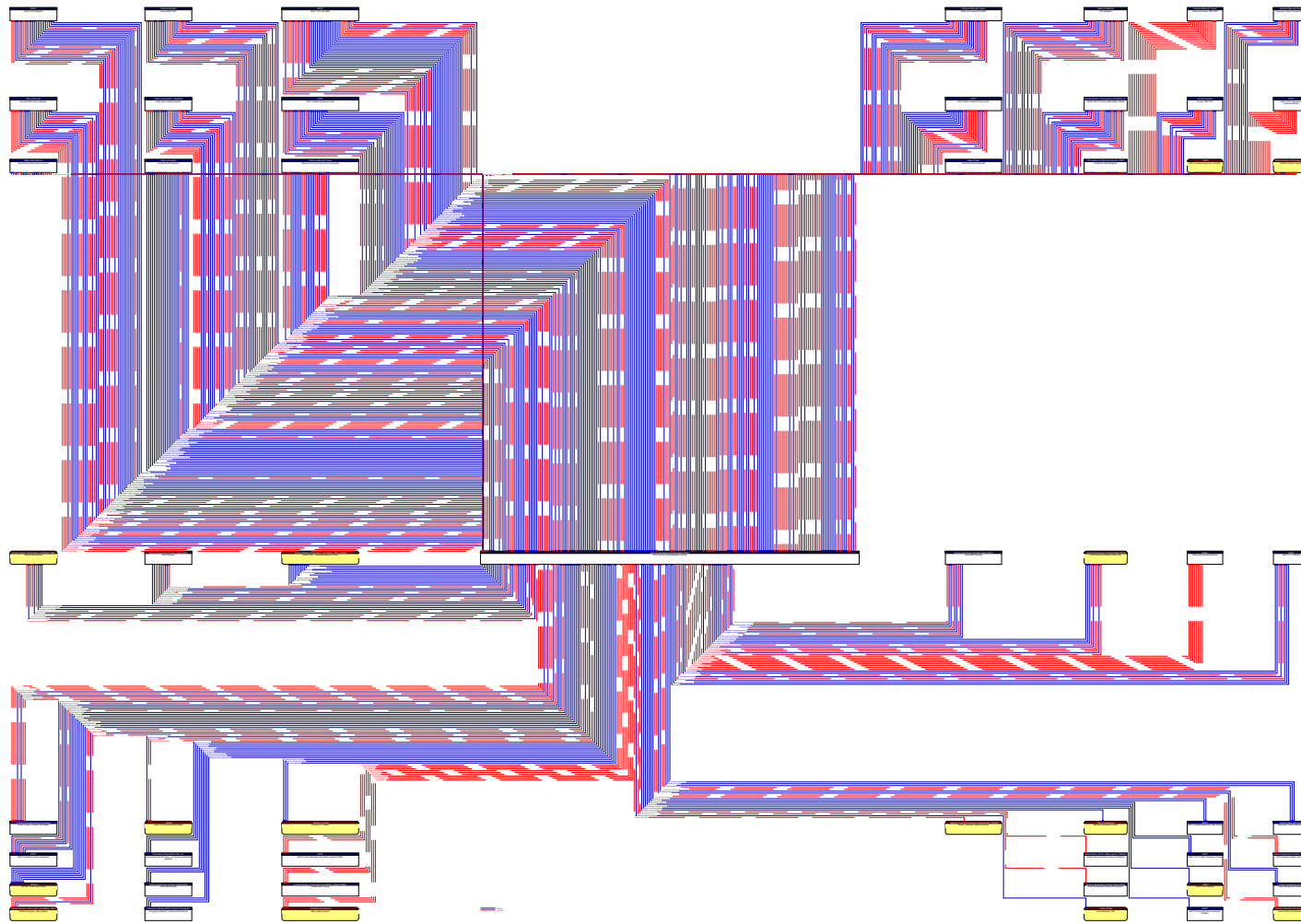


Figure 106: DPS Central Communications Center Context Diagram

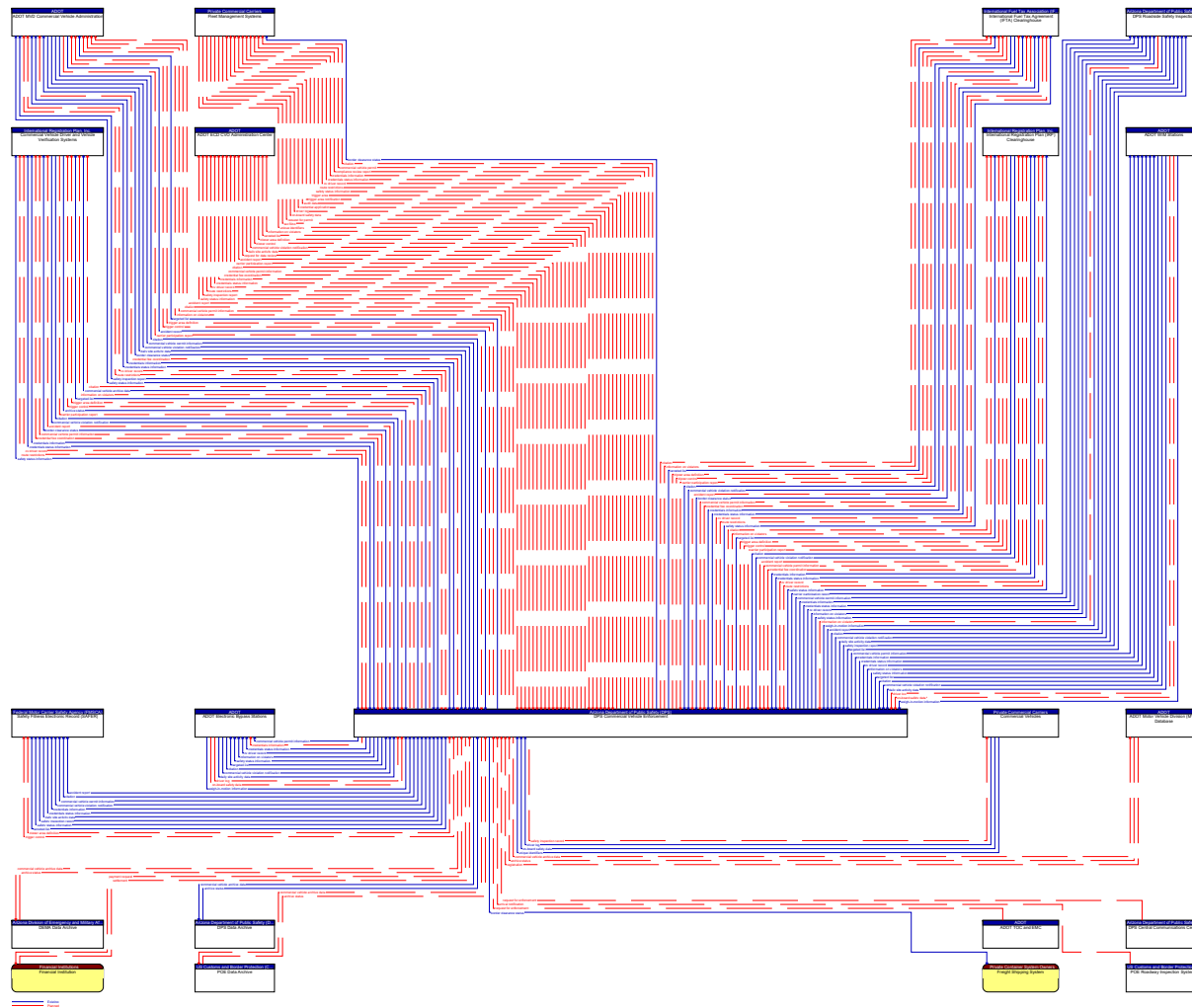


Figure 107: DPS Commercial Vehicle Enforcement Context Diagram

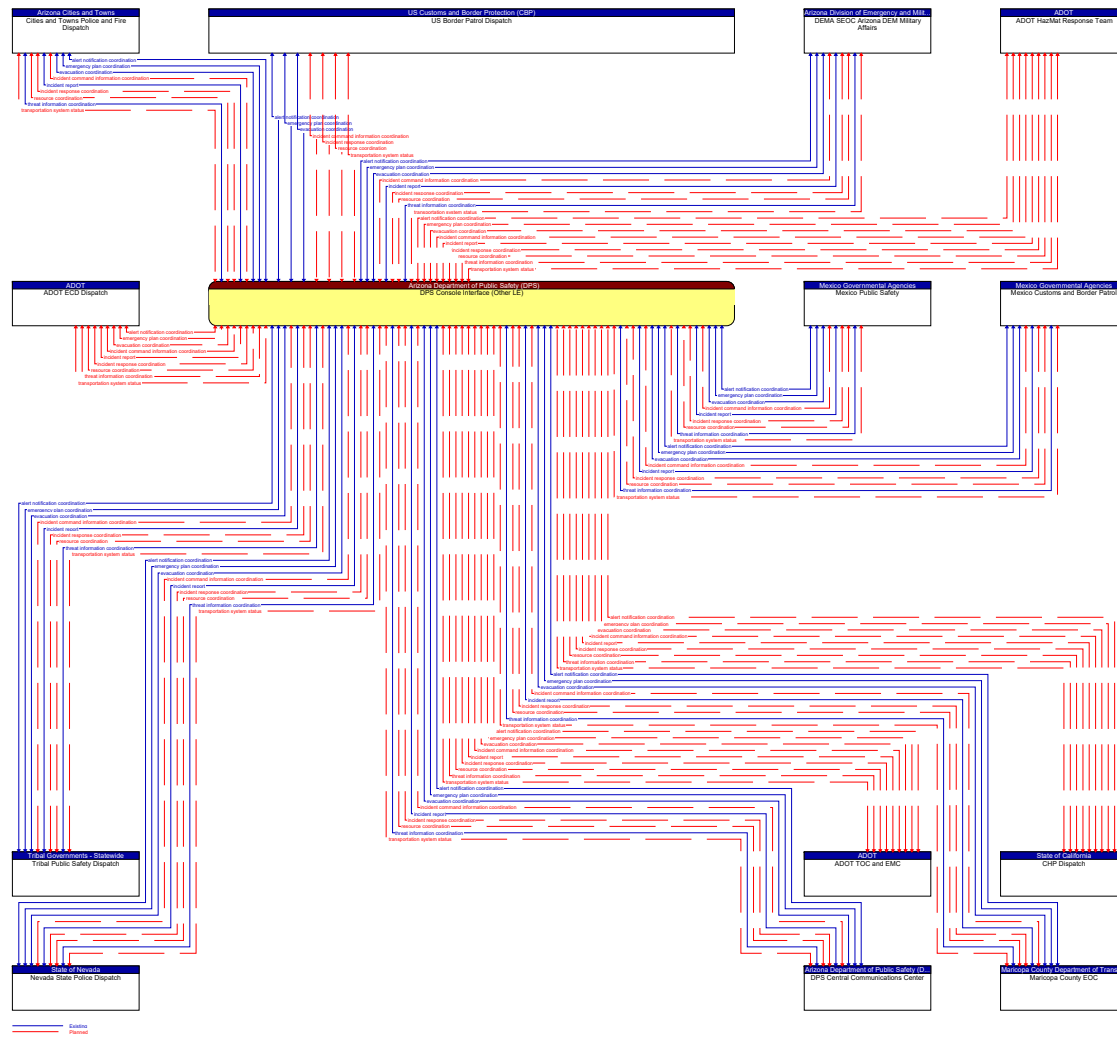


Figure 108: DPS Console Interface (Other LE) Context Diagram

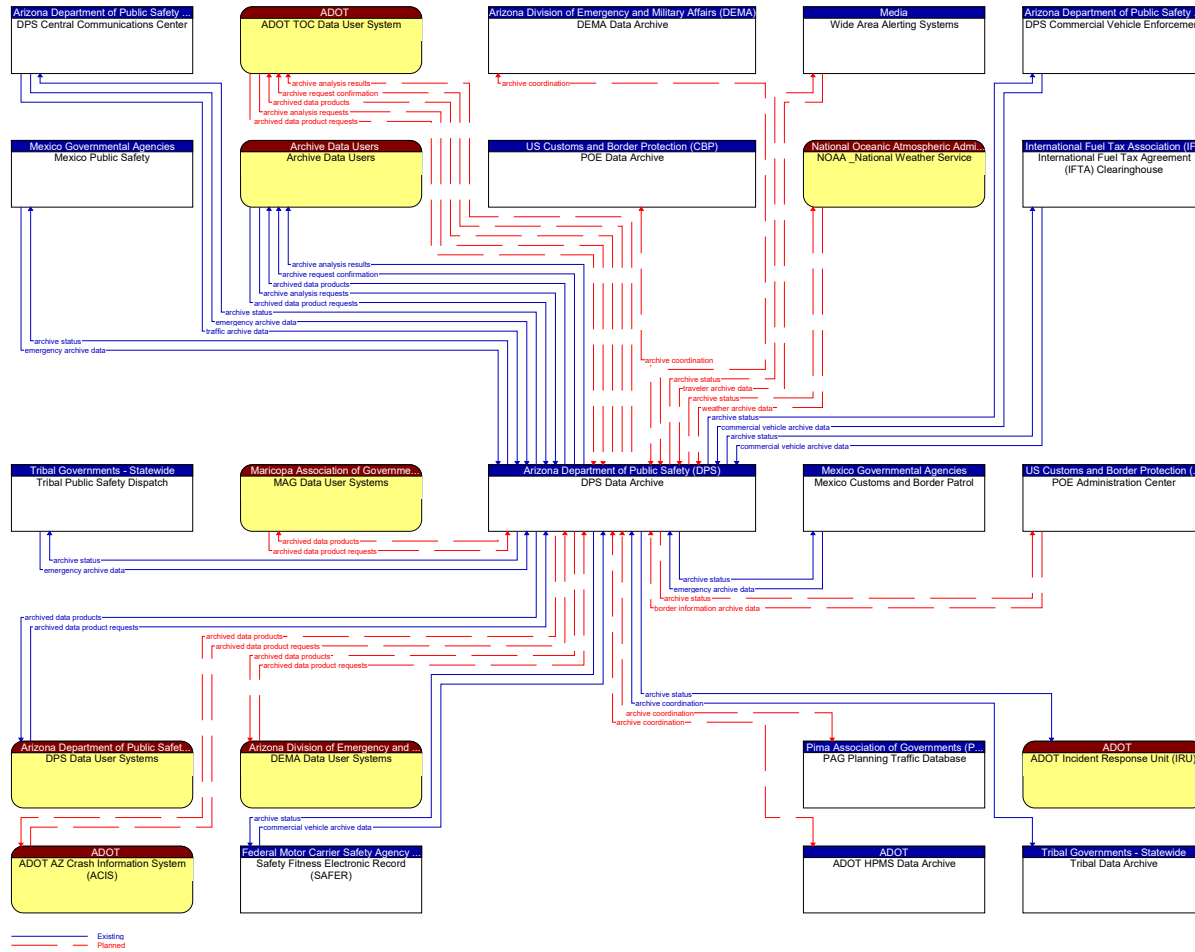


Figure 109: DPS Data Archive Context Diagram

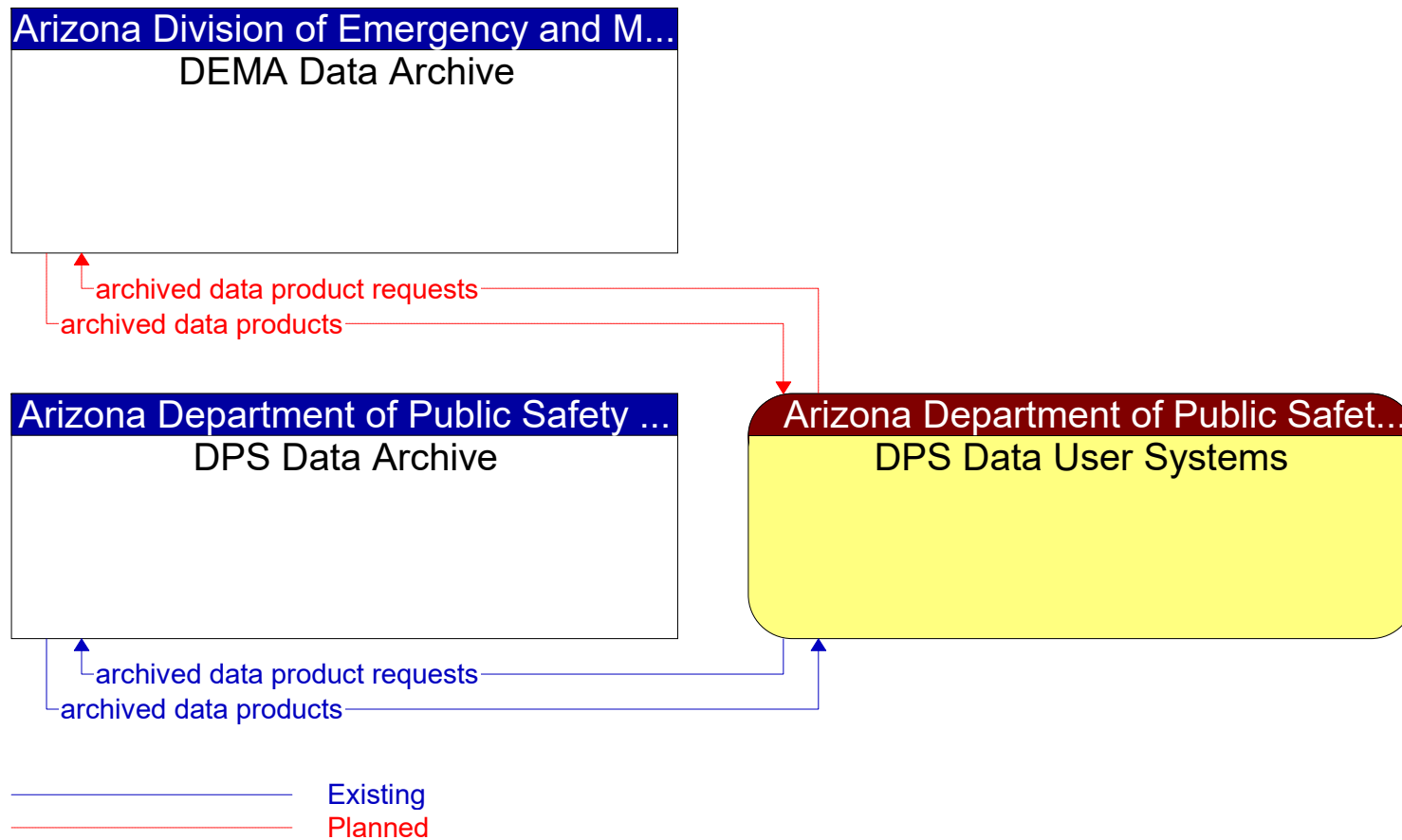


Figure 110: DPS Data User Systems Context Diagram

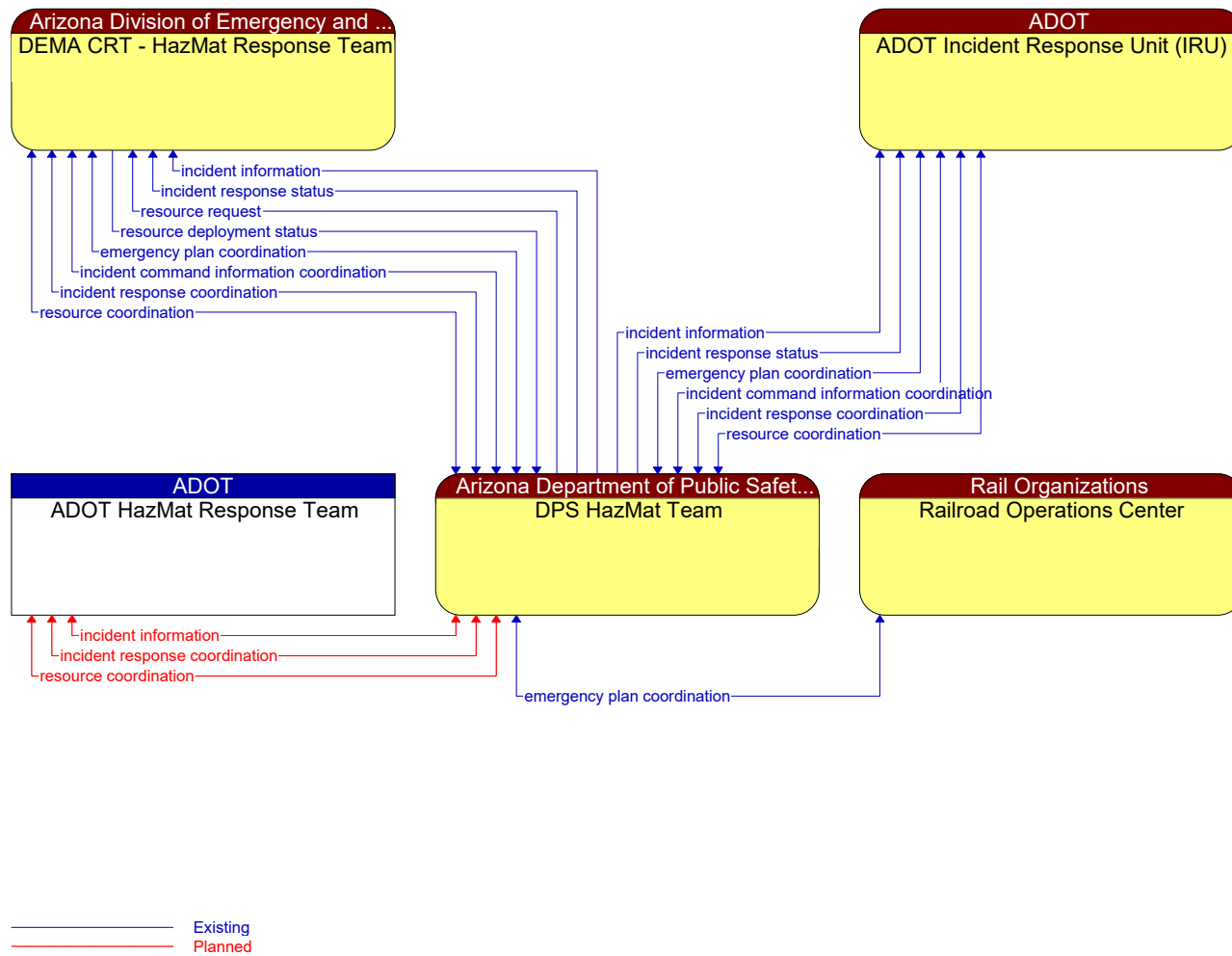


Figure 111: DPS HazMat Team Context Diagram

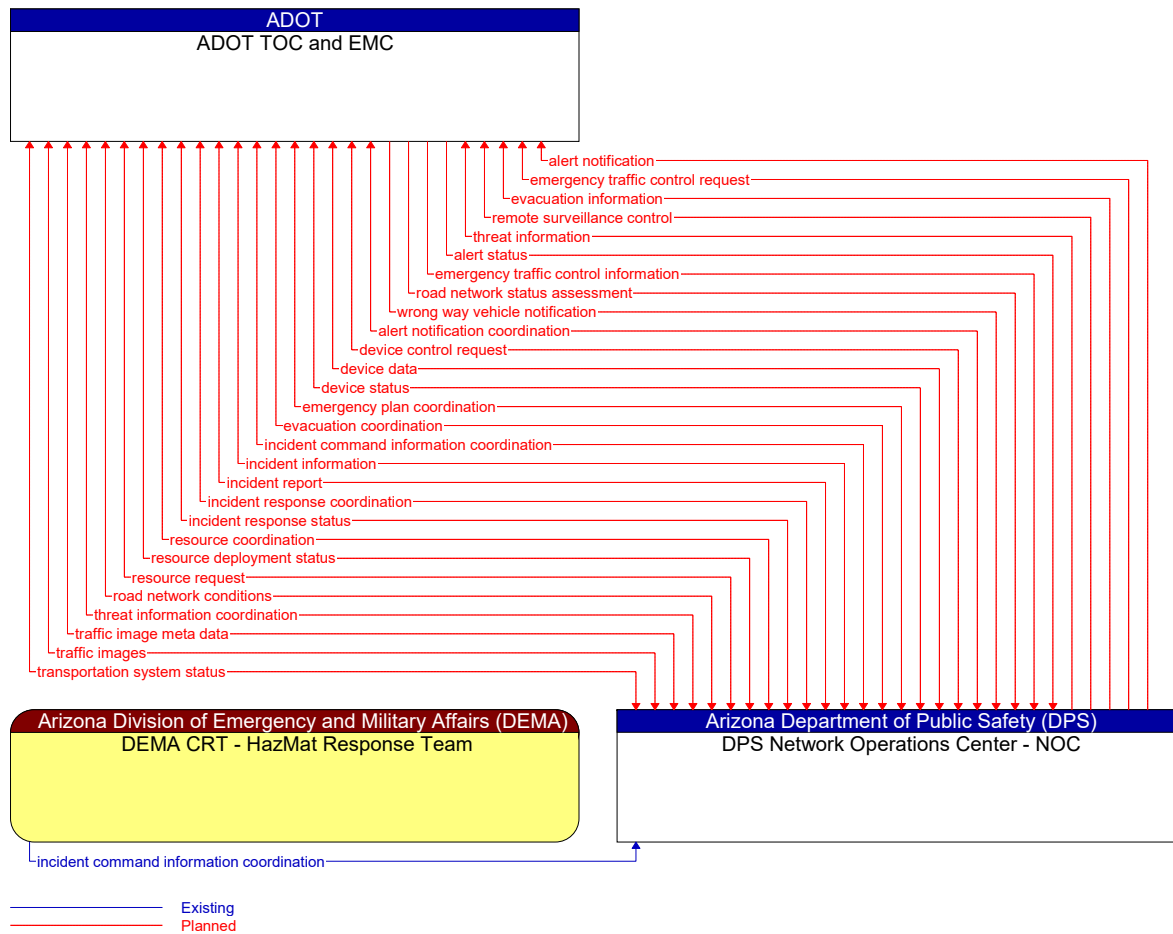


Figure 112: DPS Network Operations Center - NOC Context Diagram

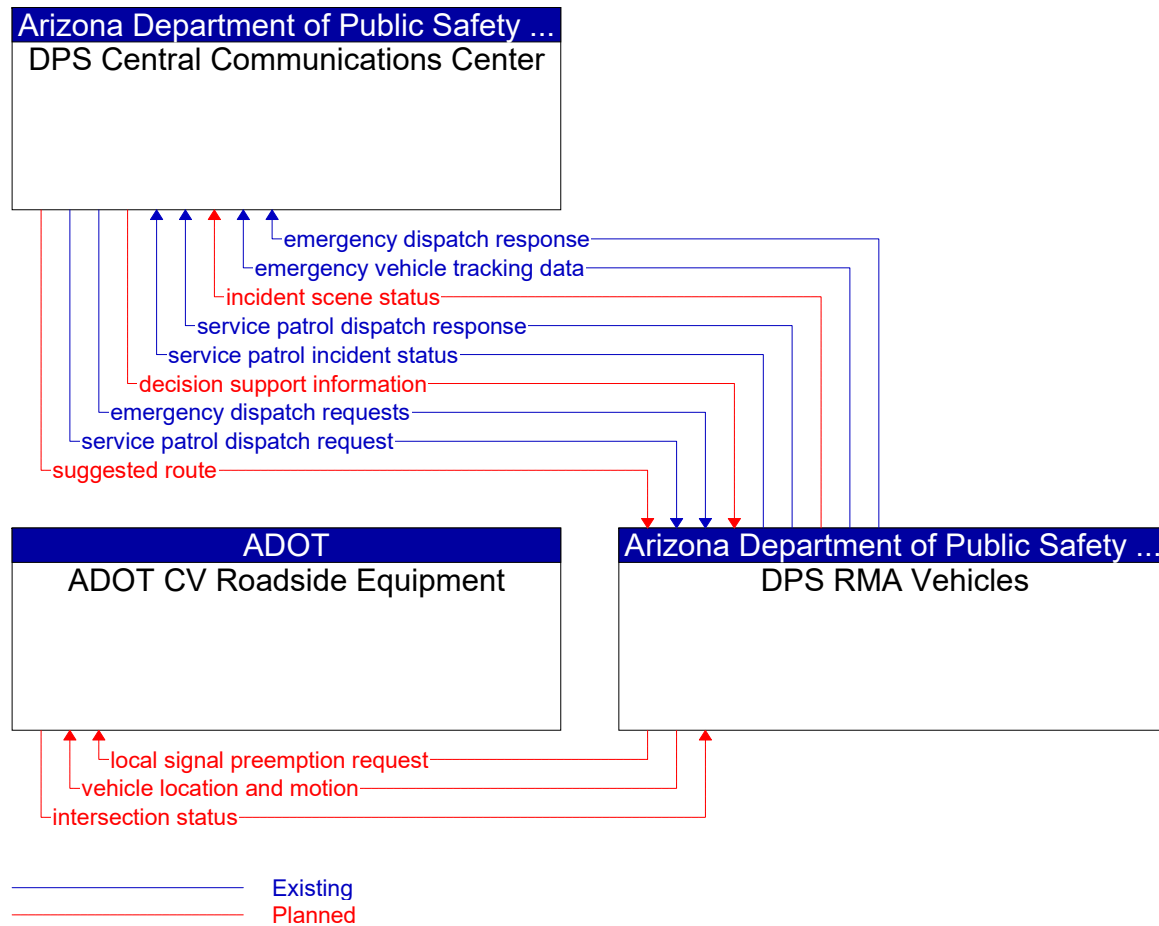


Figure 113: DPS RMA Vehicles Context Diagram

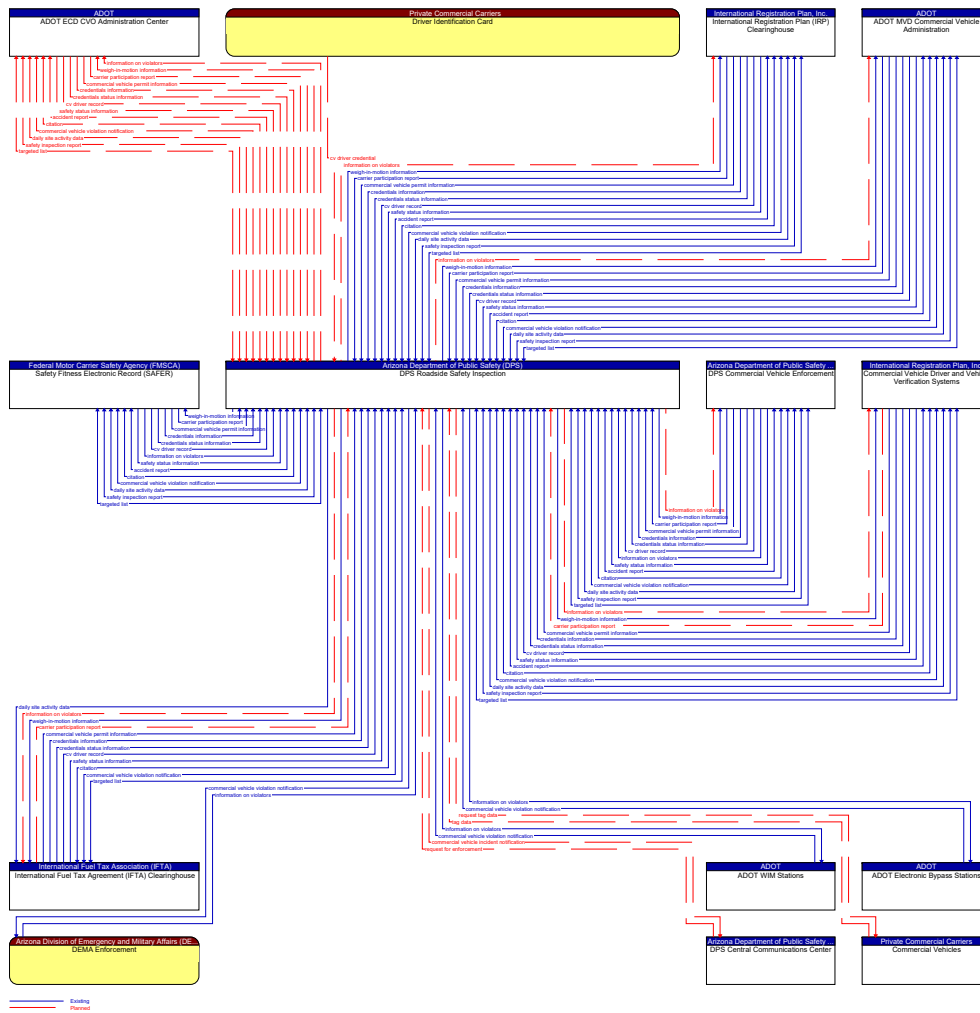


Figure 114: DPS Roadside Safety Inspection Context Diagram

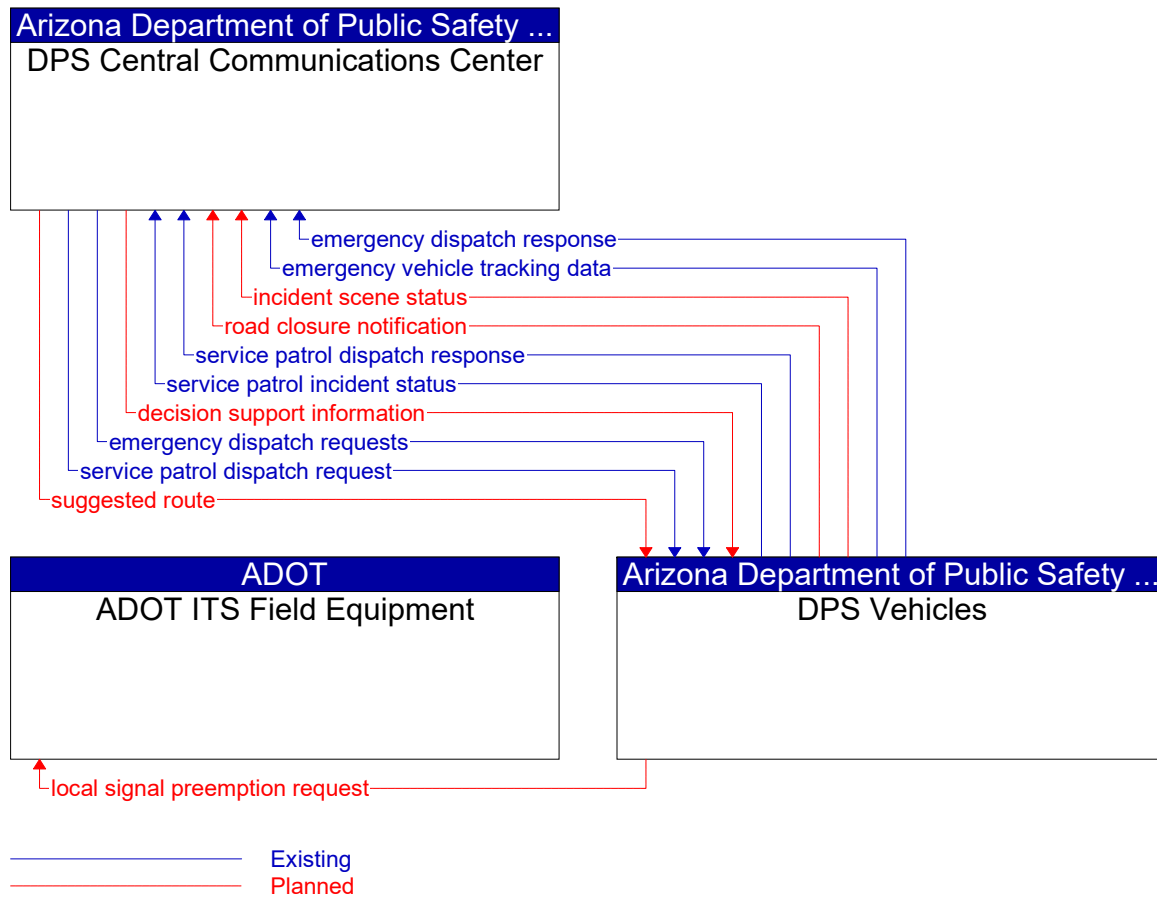


Figure 115: DPS Vehicles Context Diagram

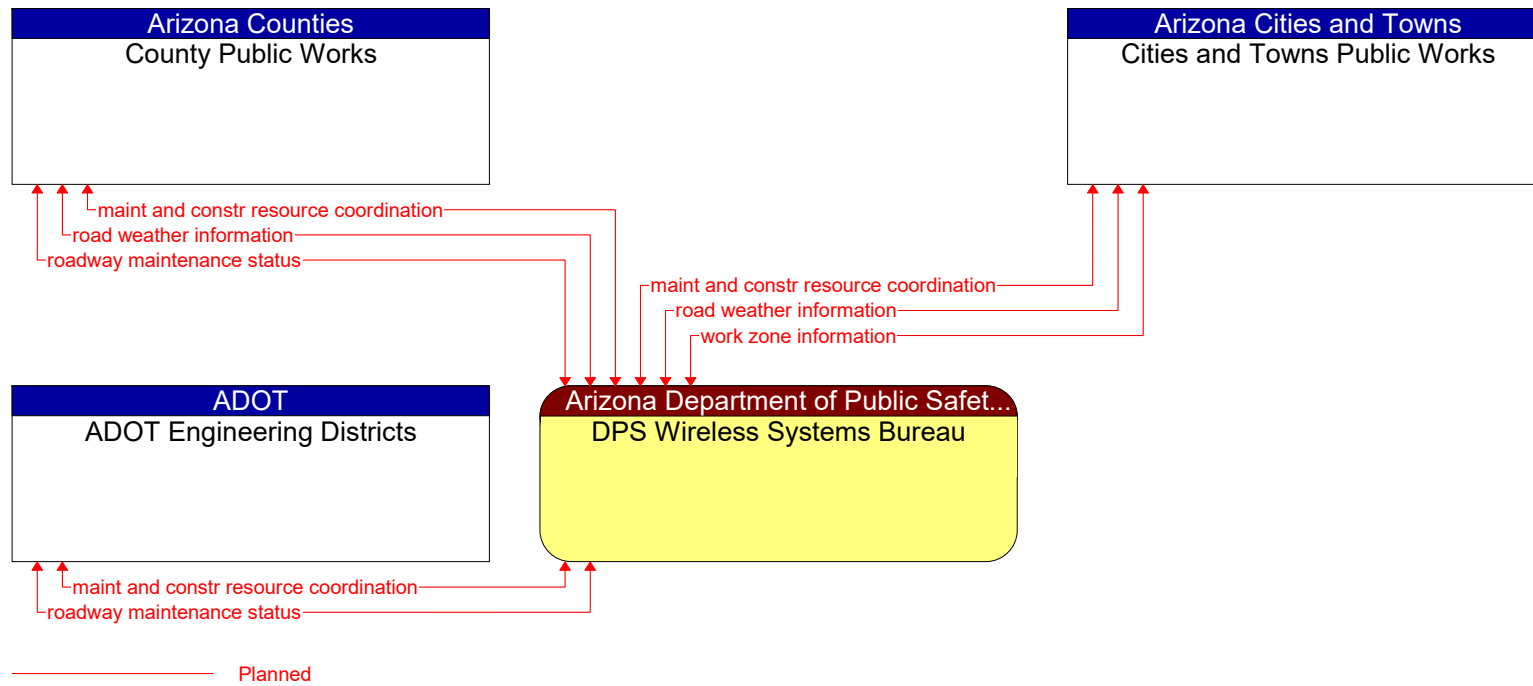


Figure 116: DPS Wireless Systems Bureau Context Diagram

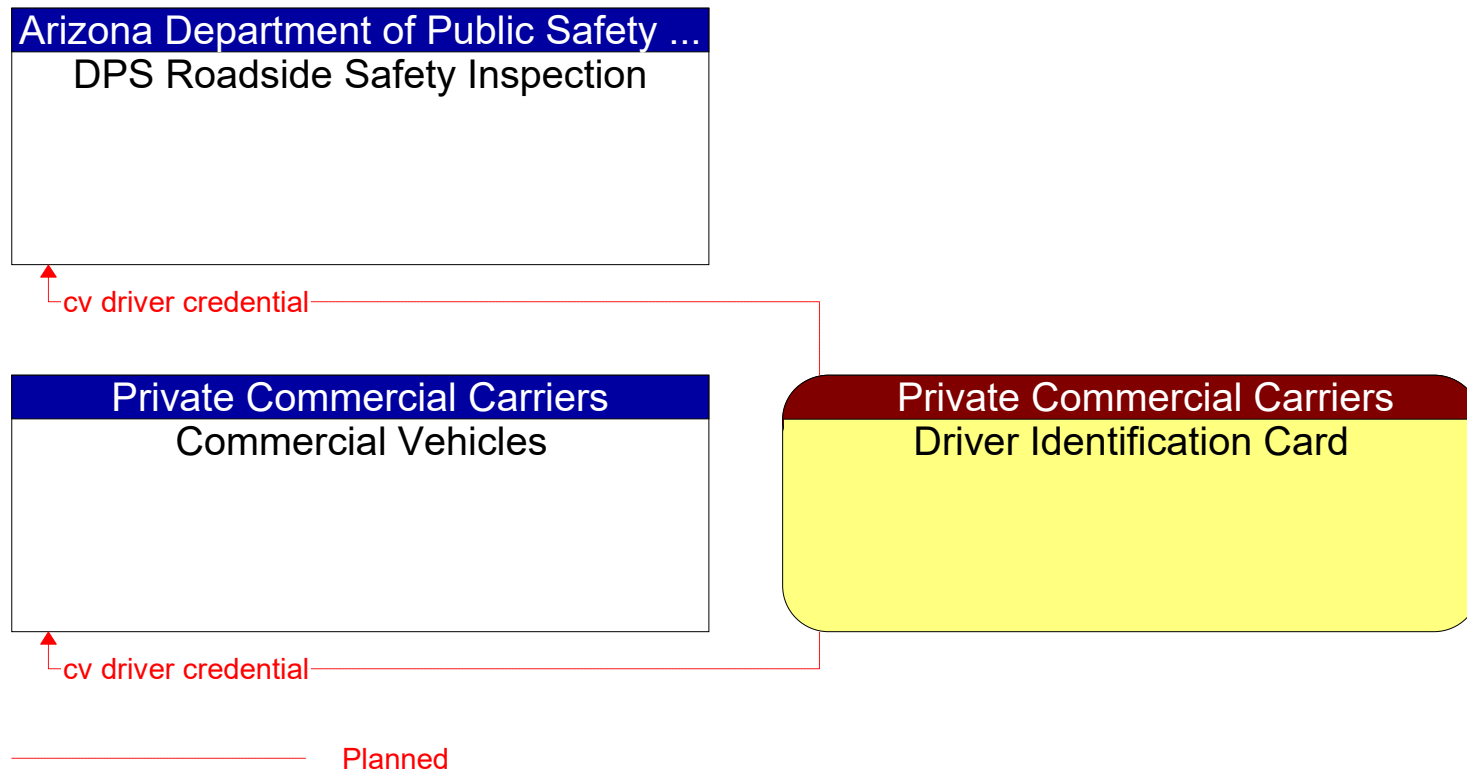


Figure 117: Driver Identification Card Context Diagram

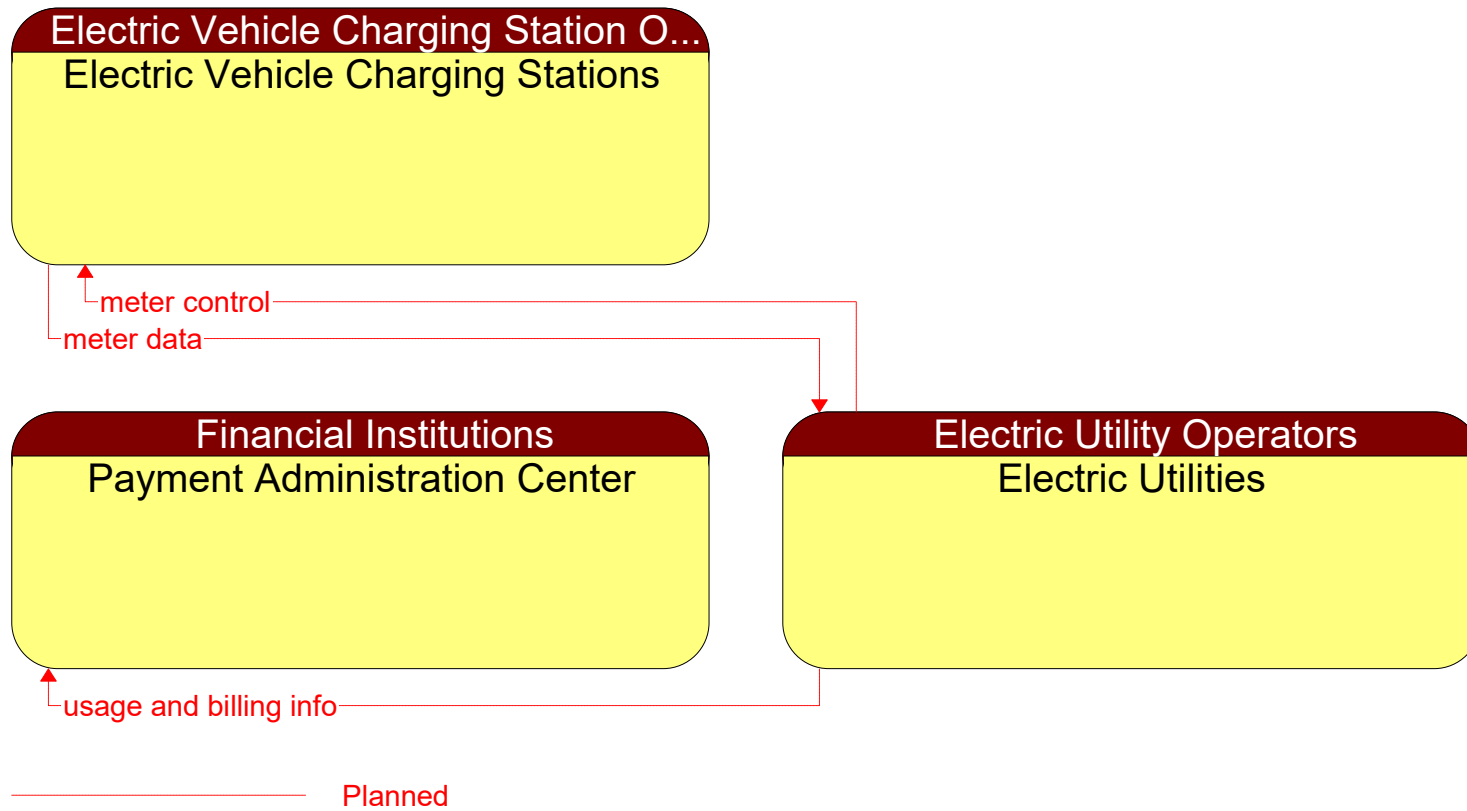


Figure 118: Electric Utilities Context Diagram

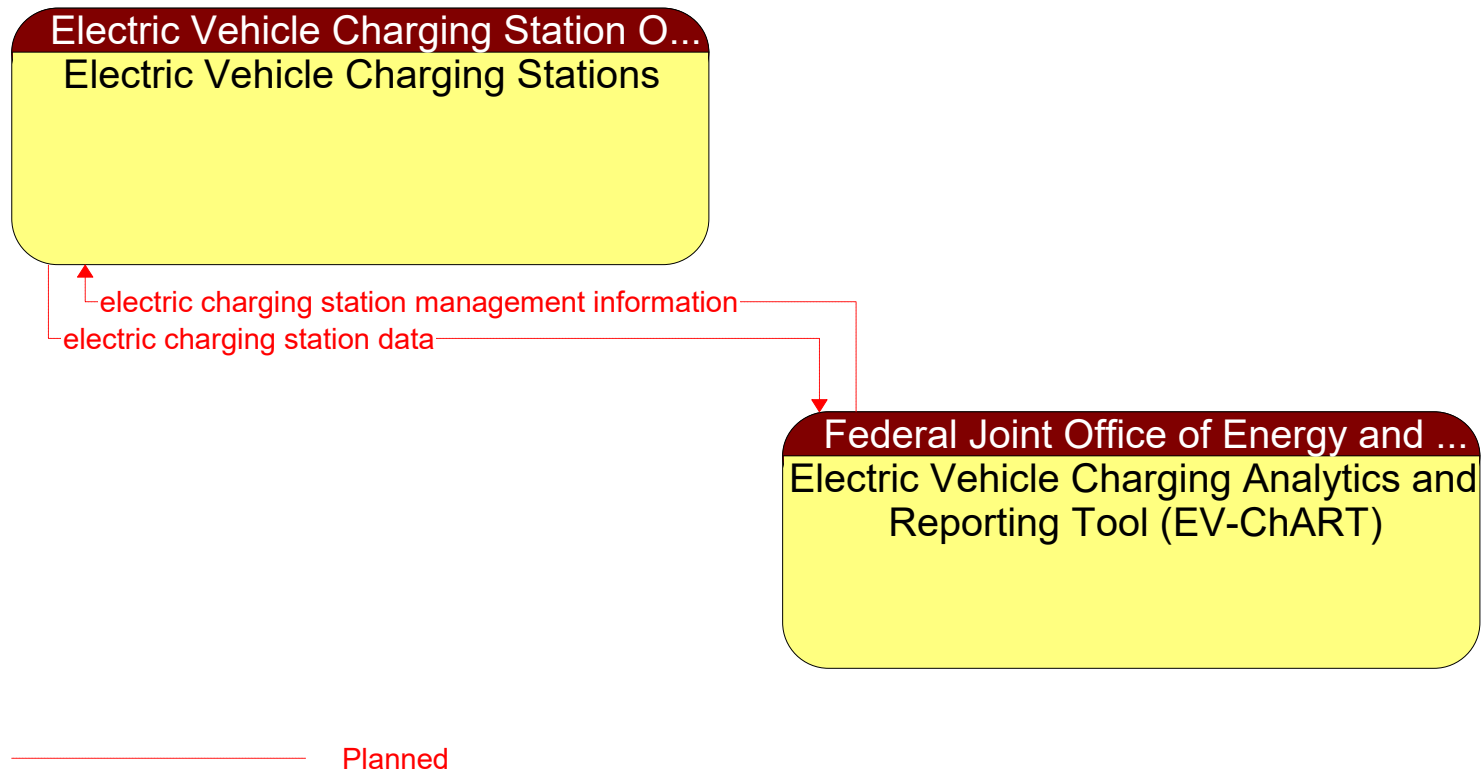


Figure 119: Electric Vehicle Charging Analytics and Reporting Tool (EV-ChART) Context Diagram

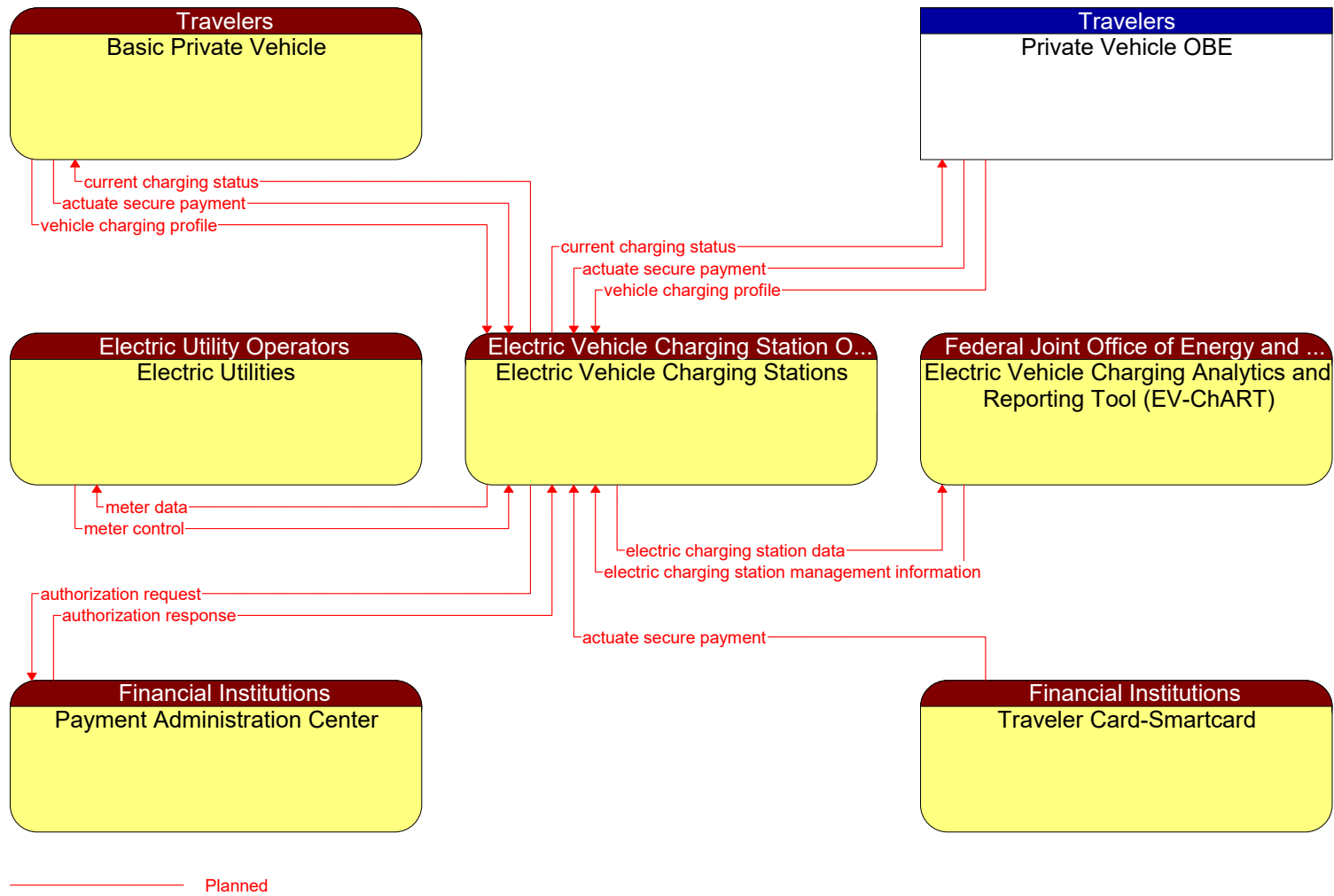


Figure 120: Electric Vehicle Charging Stations Context Diagram

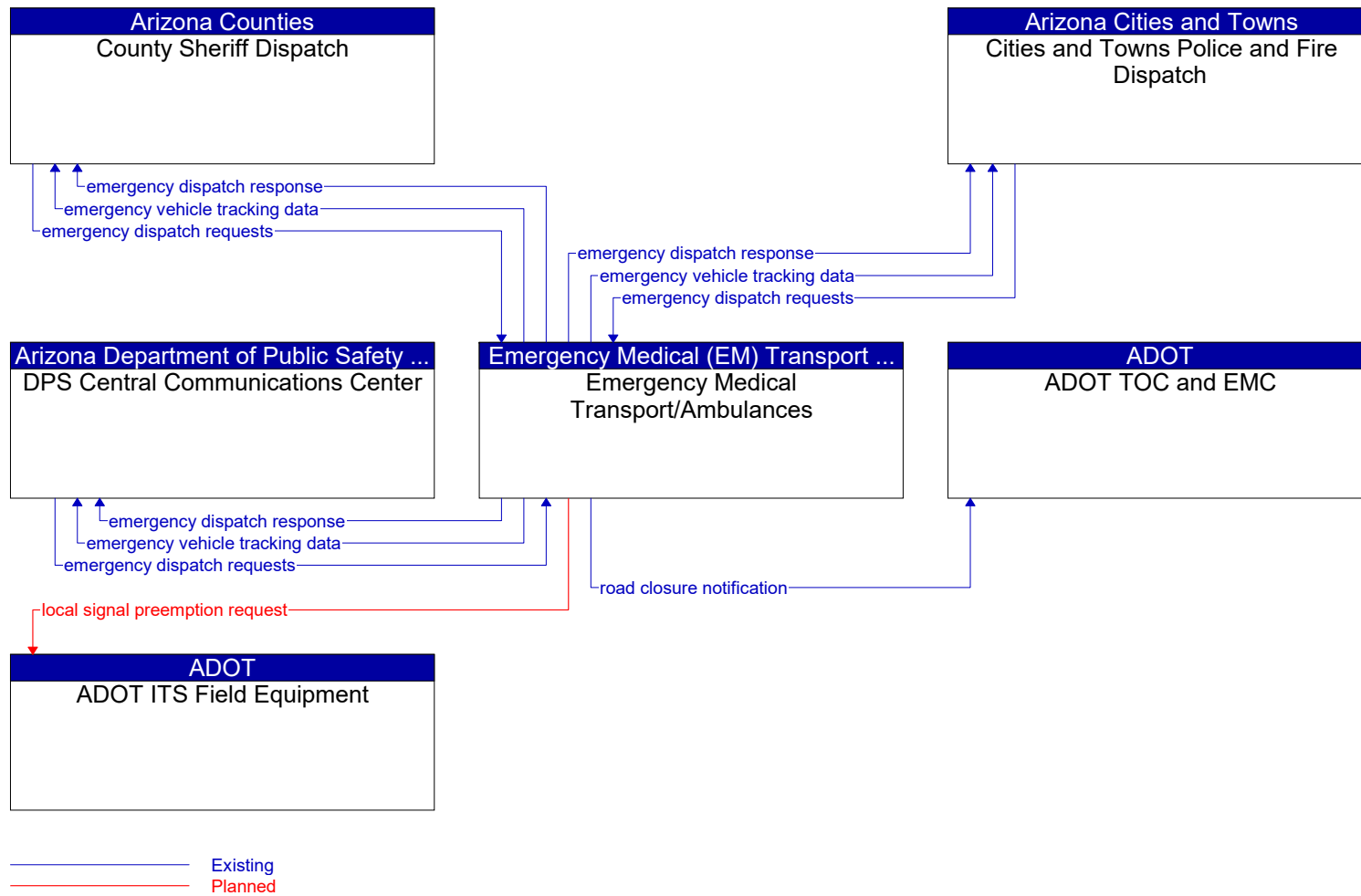


Figure 121: Emergency Medical Transport/Ambulances Context Diagram

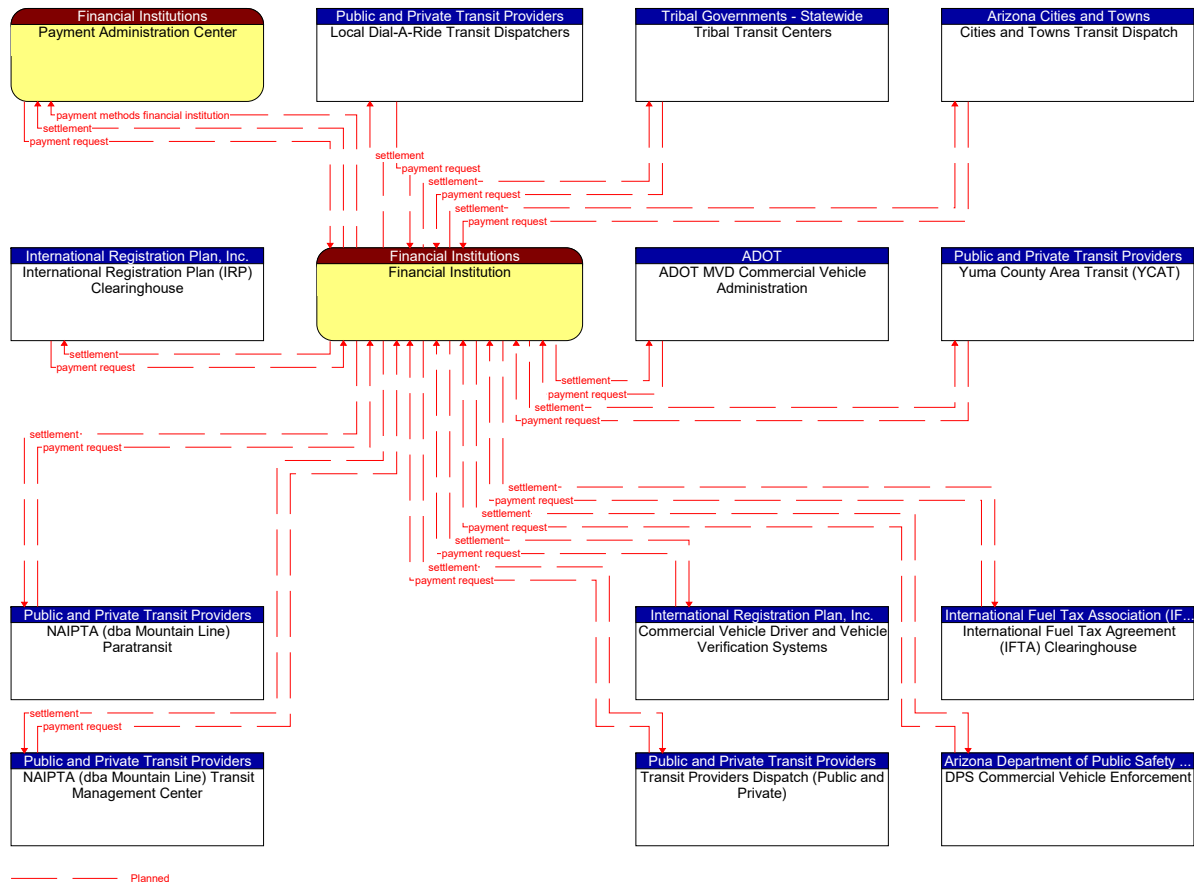


Figure 122: Financial Institution Context Diagram

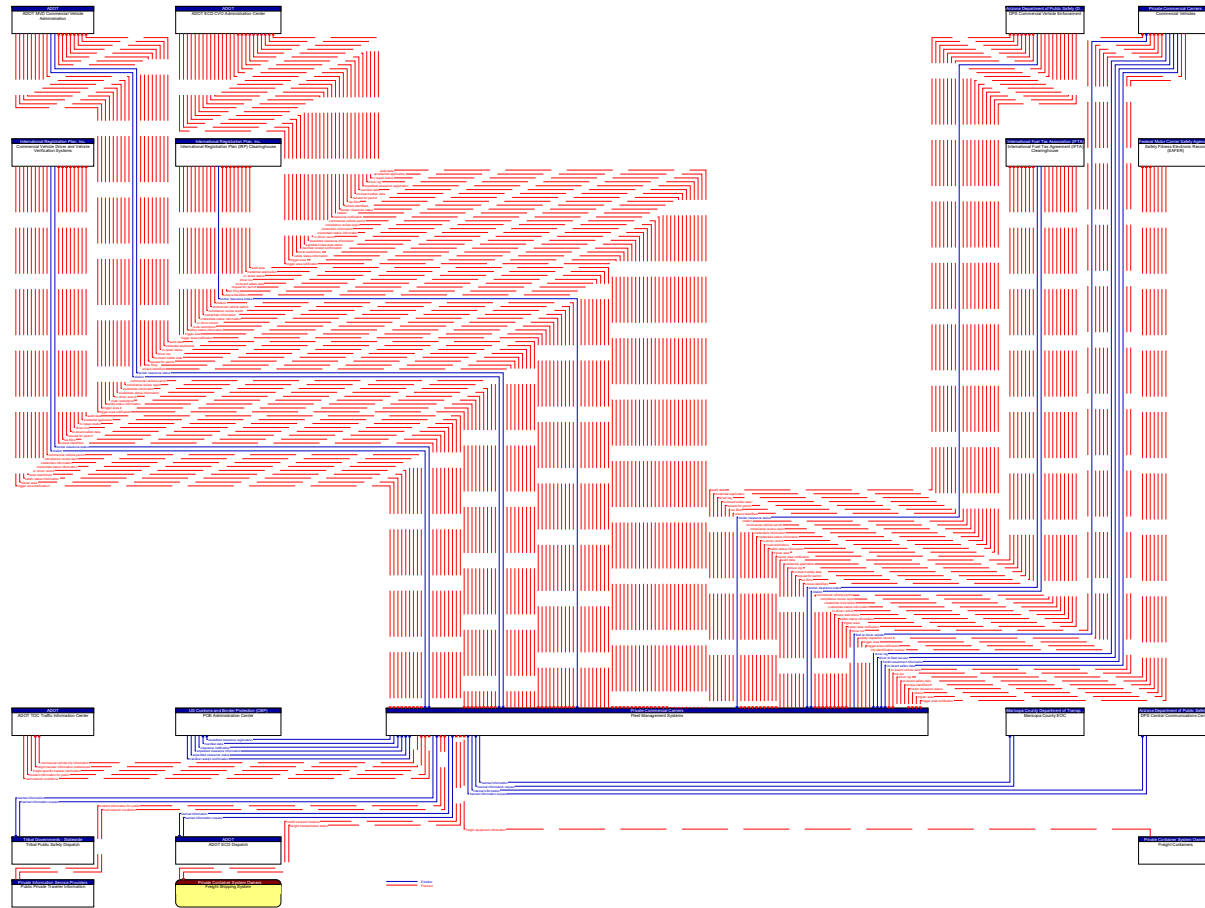


Figure 123: Fleet Management Systems Context Diagram

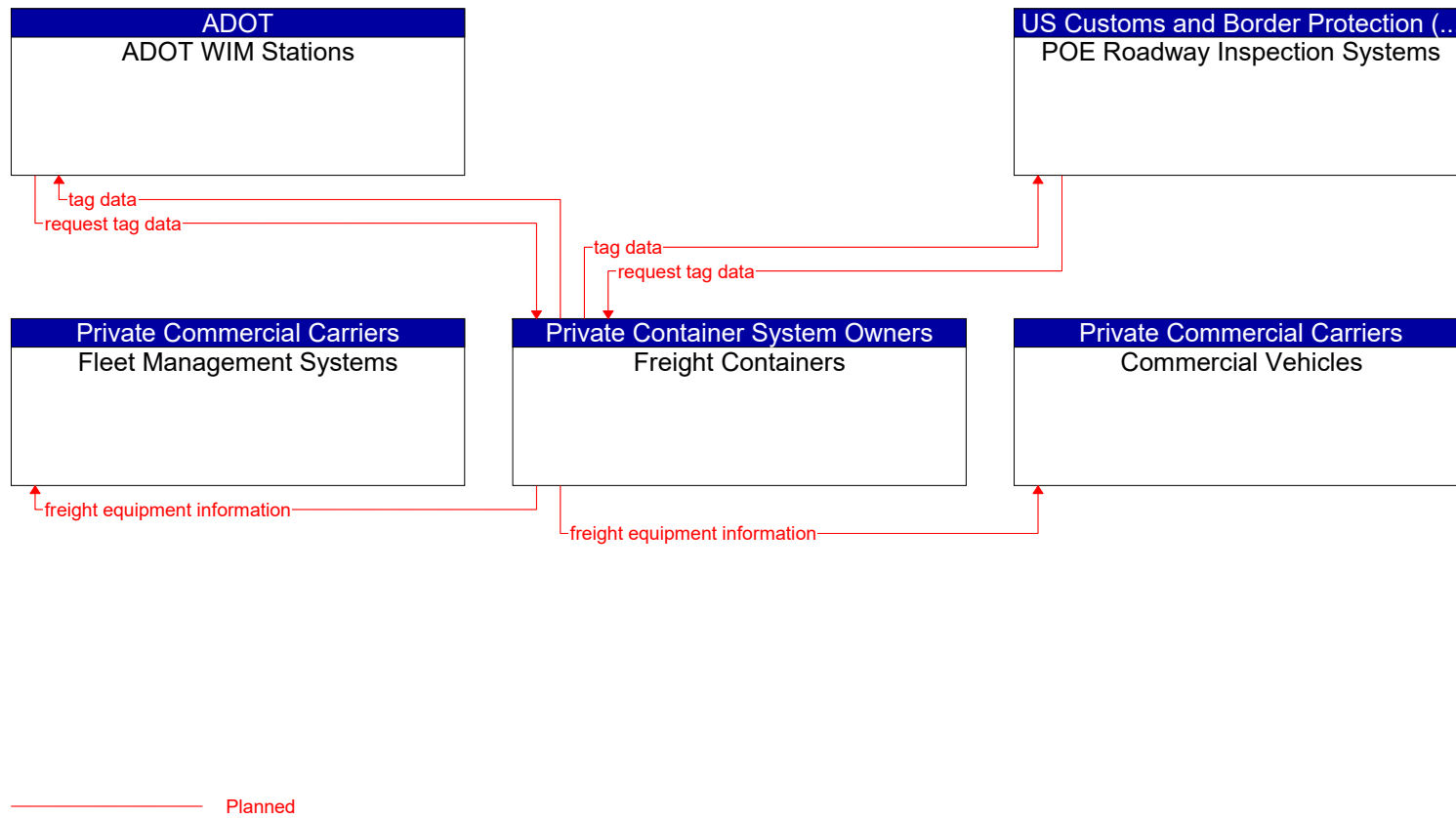


Figure 124: Freight Containers Context Diagram

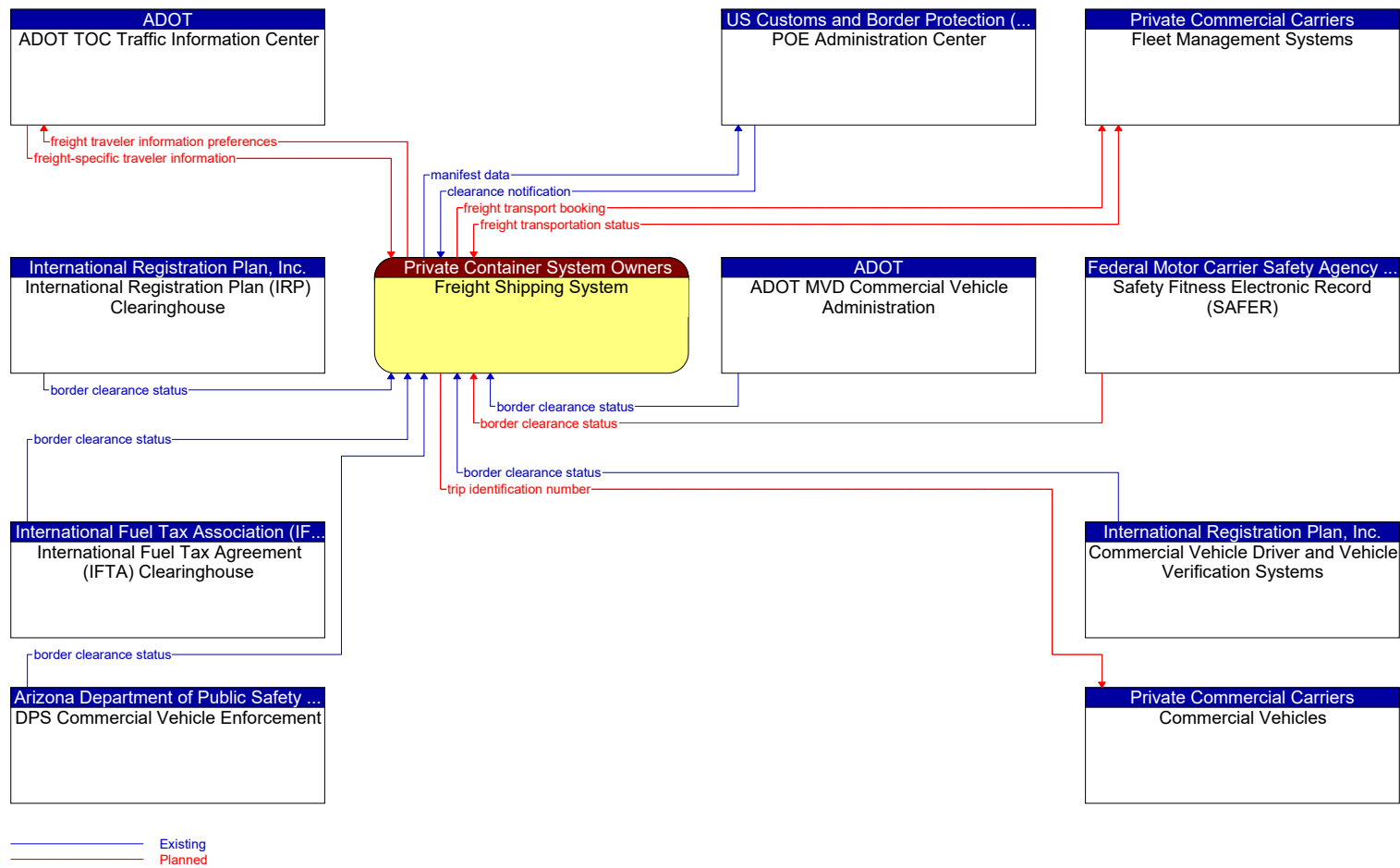


Figure 125: Freight Shipping System Context Diagram

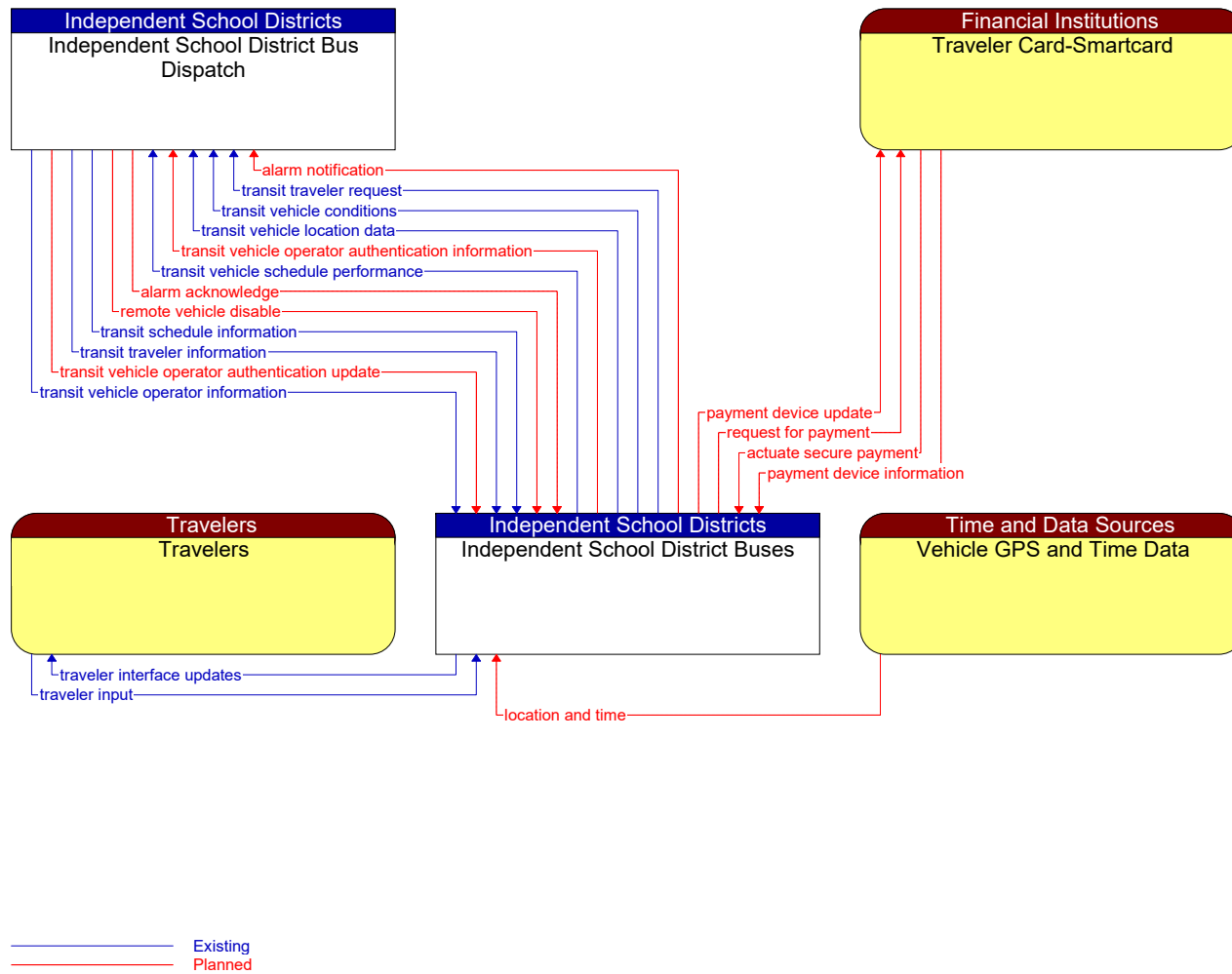


Figure 127: Independent School District Buses Context Diagram

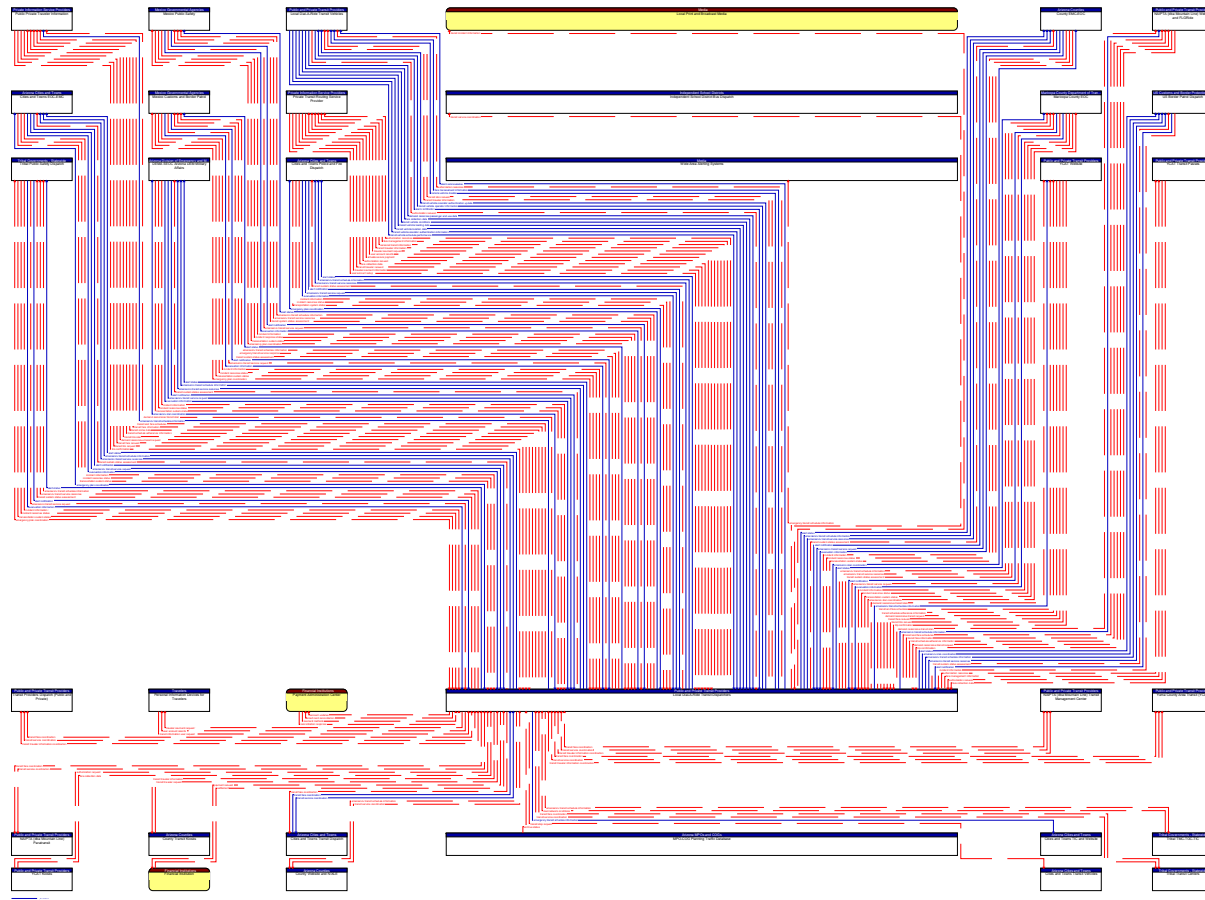


Figure 130: Local Dial-A-Ride Transit Dispatchers Context Diagram

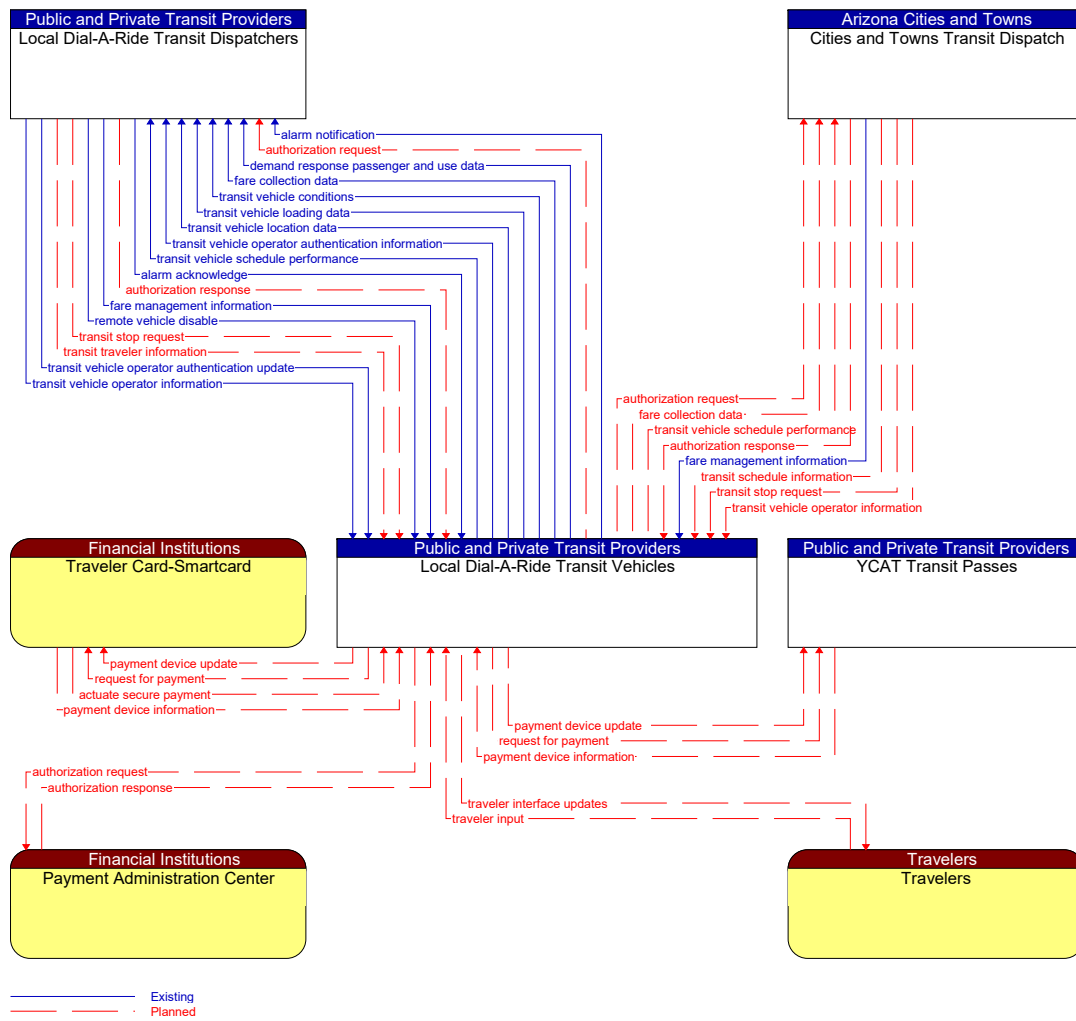


Figure 131: Local Dial-A-Ride Transit Vehicles Context Diagram

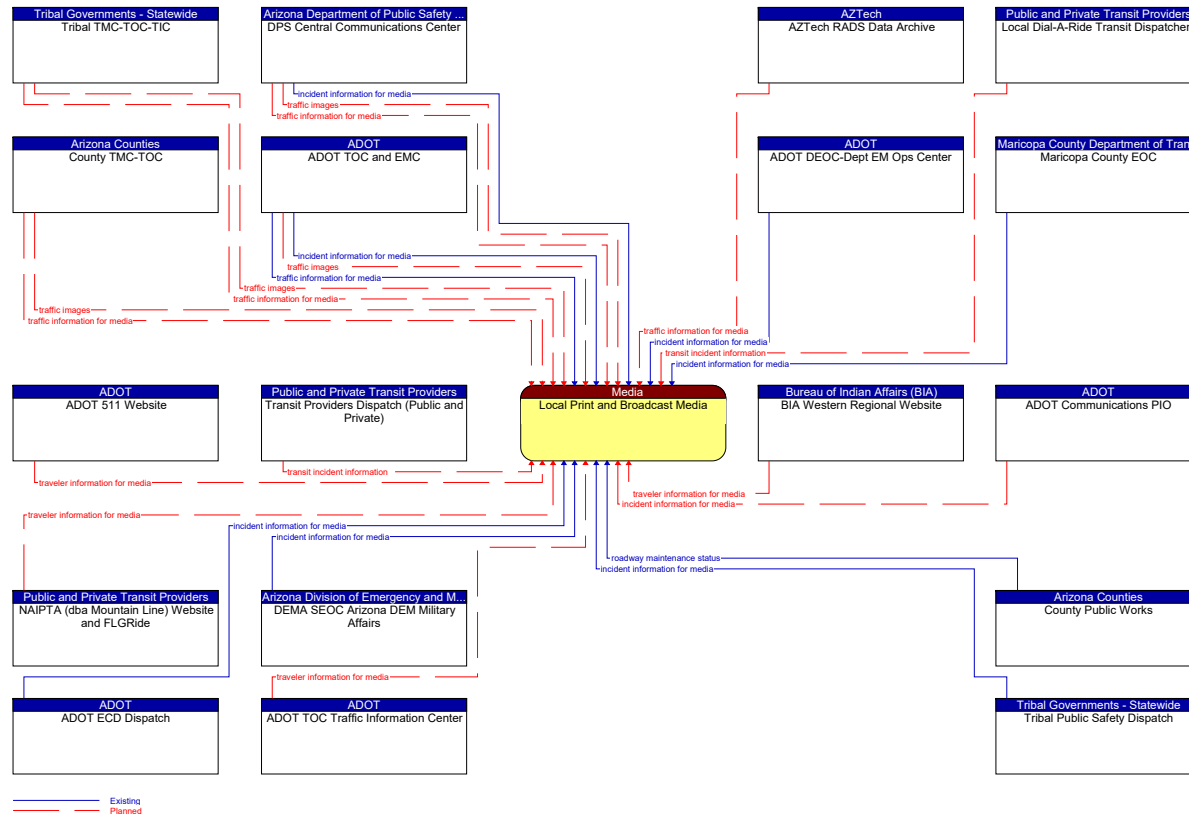


Figure 132: Local Print and Broadcast Media Context Diagram

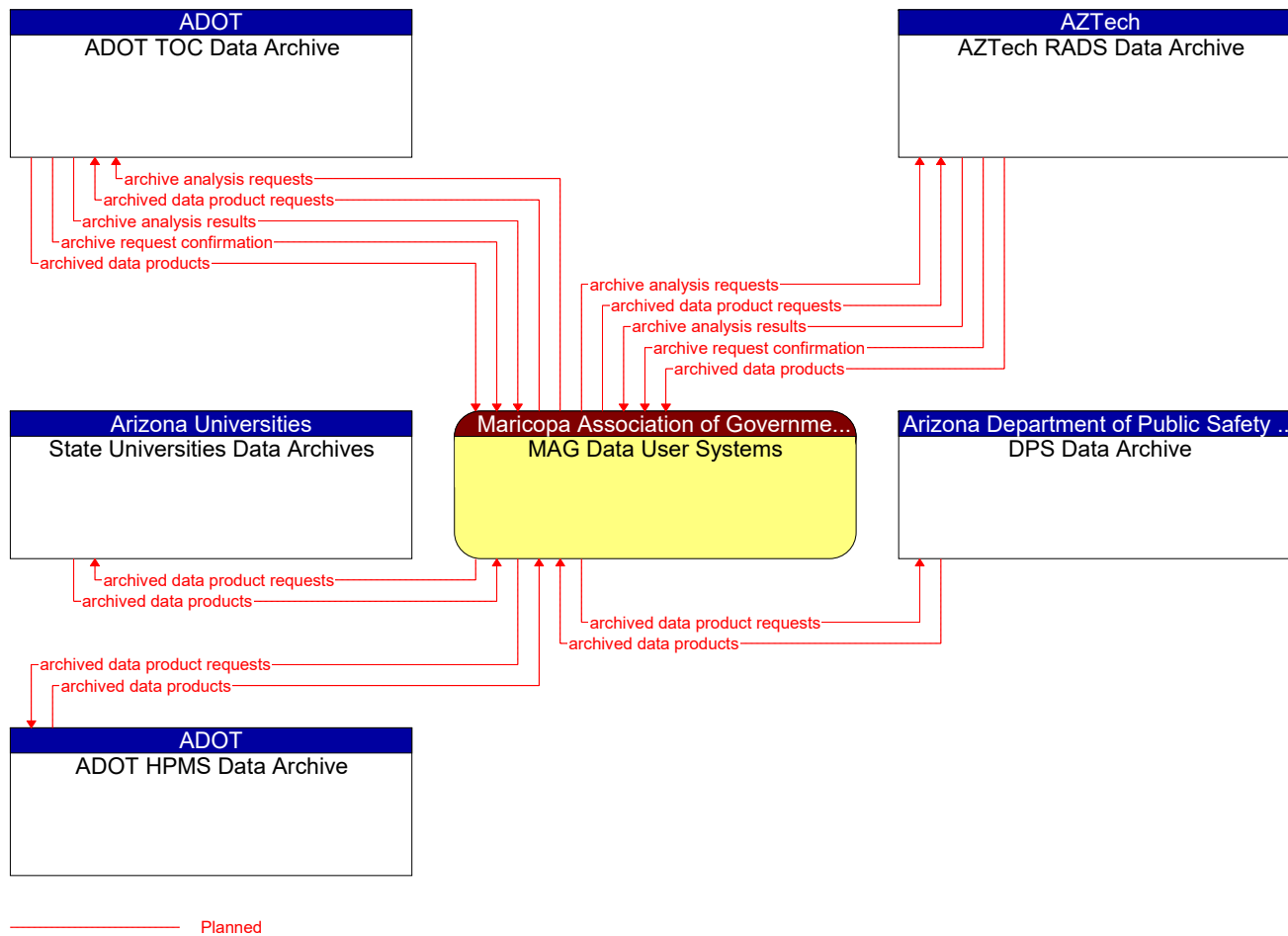


Figure 133: MAG Data User Systems Context Diagram

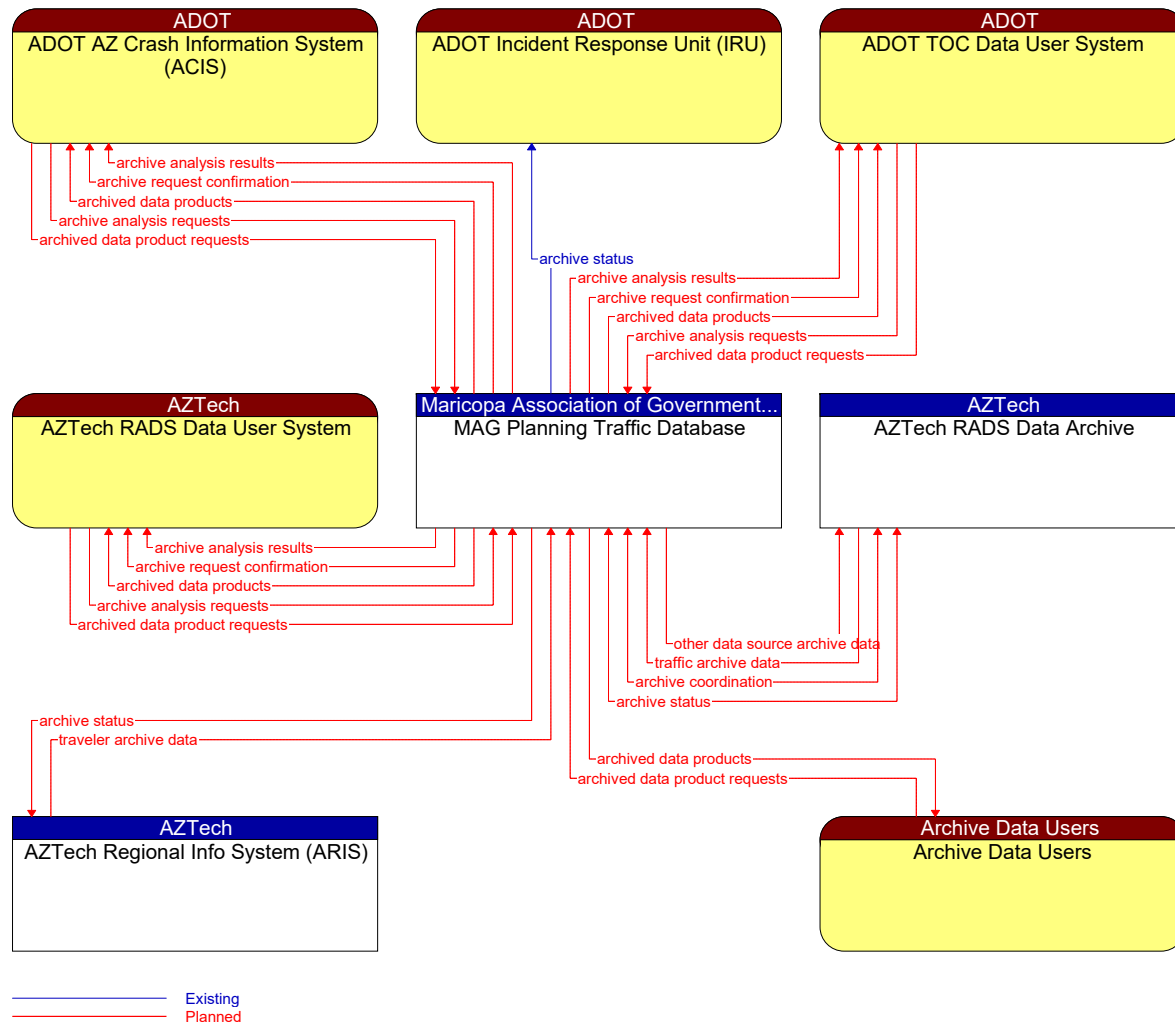


Figure 134: MAG Planning Traffic Database Context Diagram

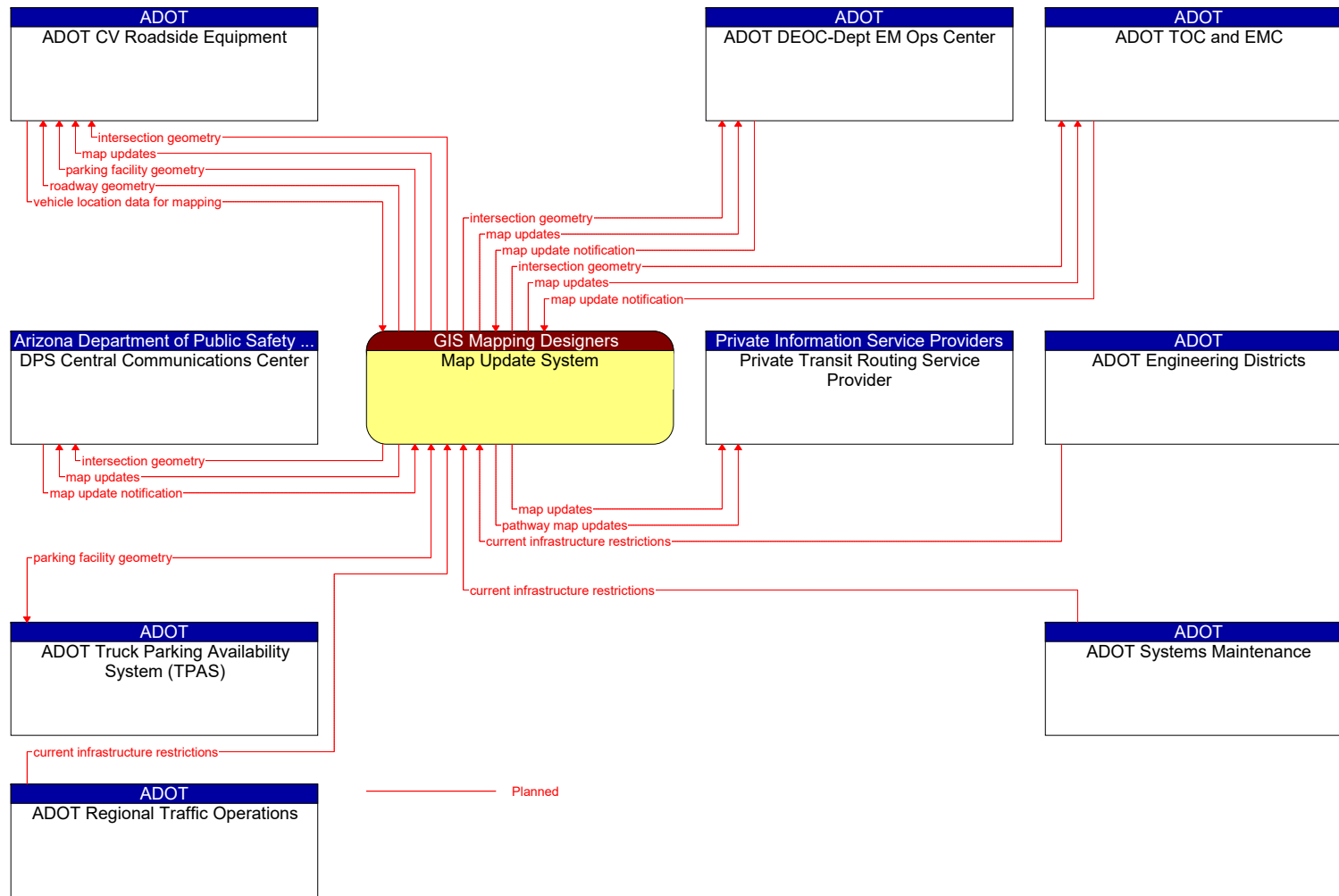


Figure 135: Map Update System Context Diagram

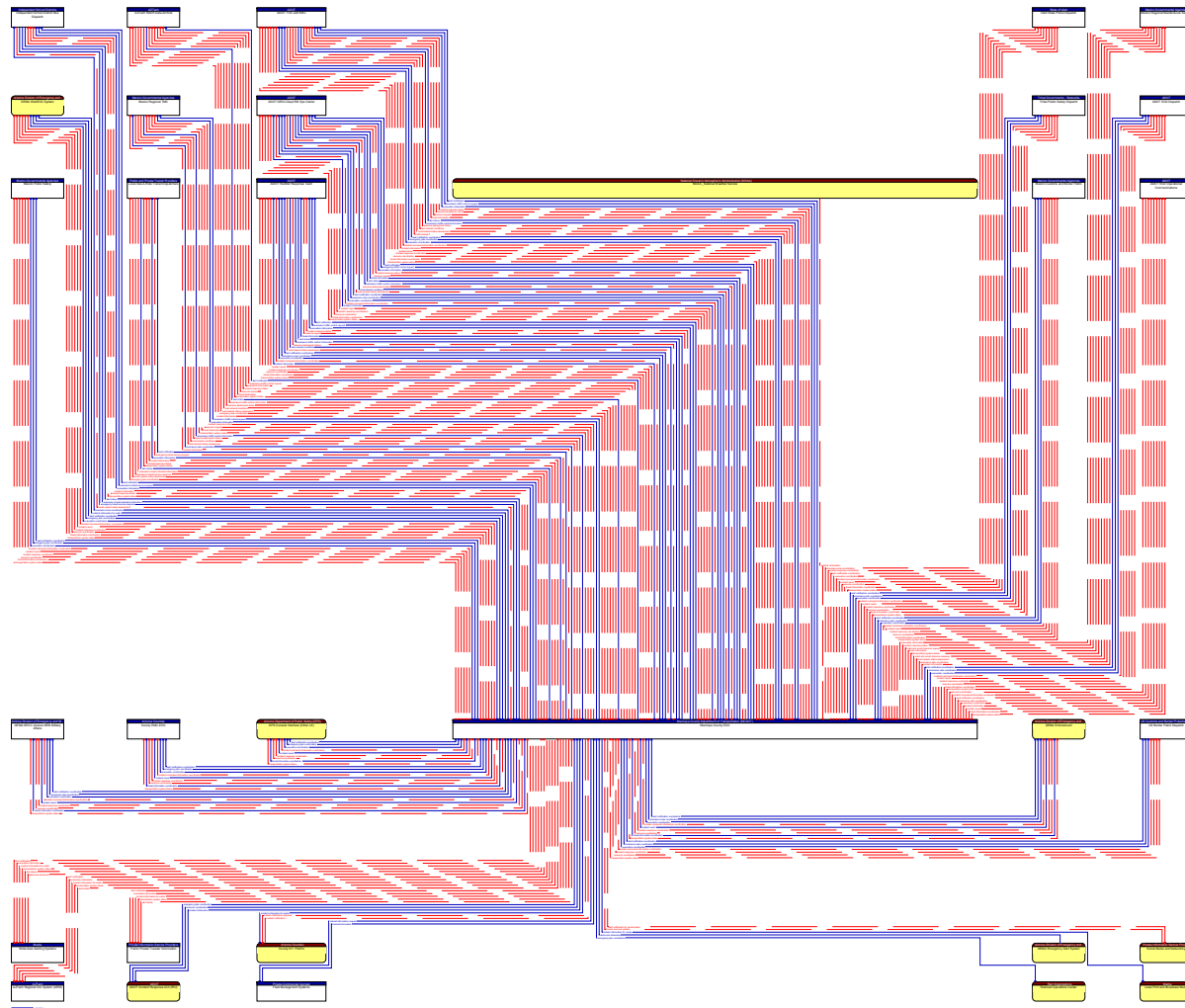


Figure 136: Maricopa County EOC Context Diagram

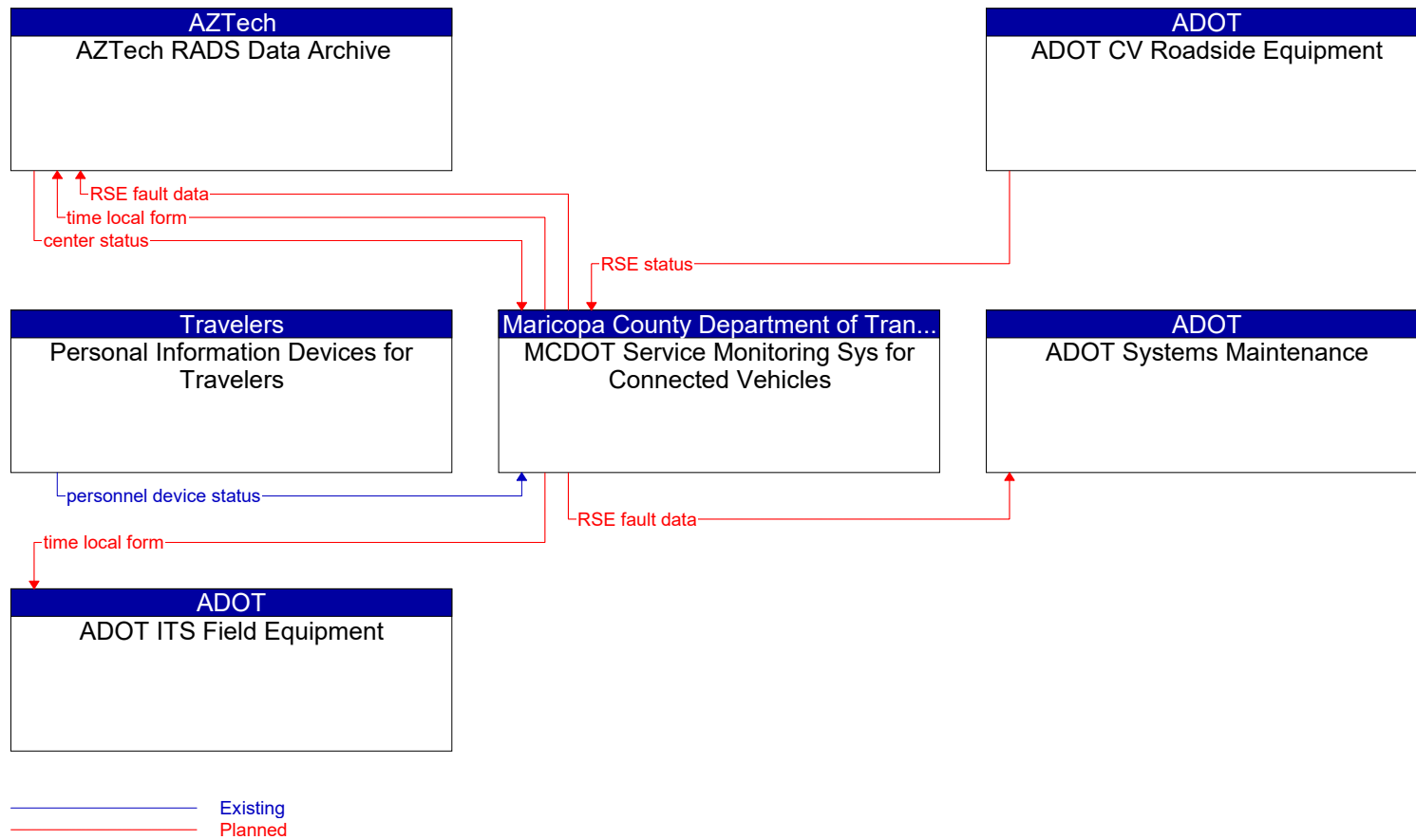


Figure 137: MCDOT Service Monitoring Sys for Connected Vehicles Context Diagram

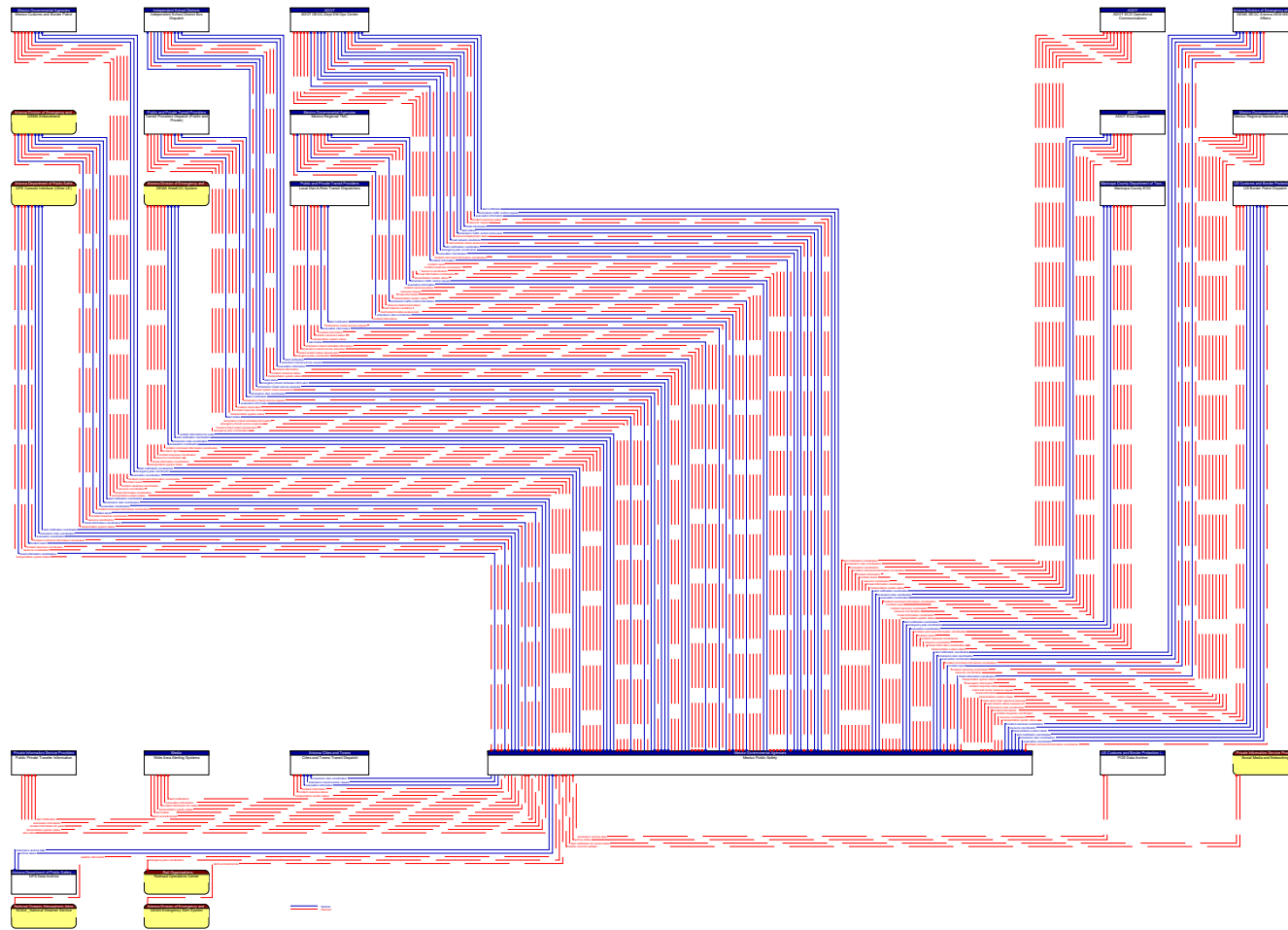


Figure 139: Mexico Public Safety Context Diagram

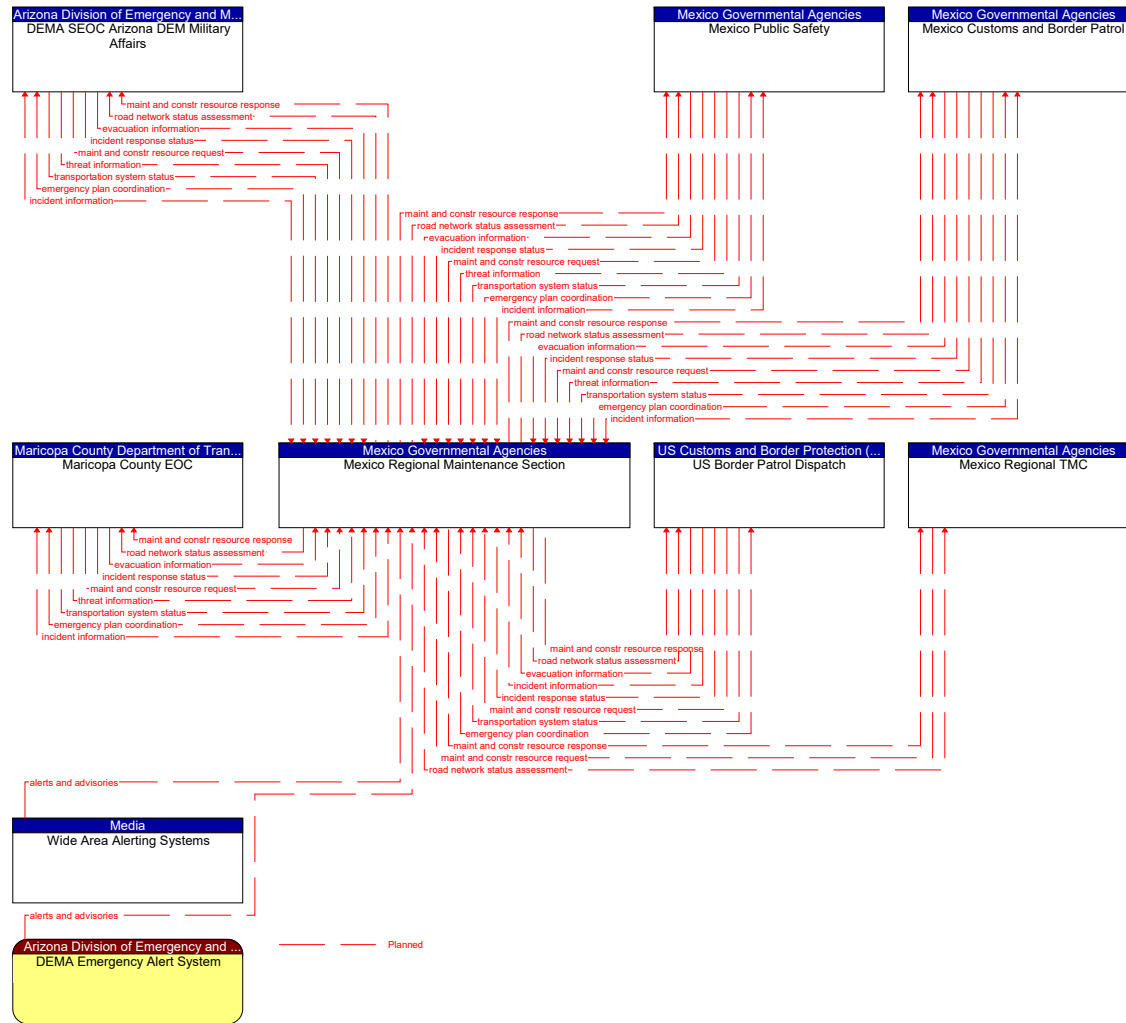


Figure 140: Mexico Regional Maintenance Section Context Diagram

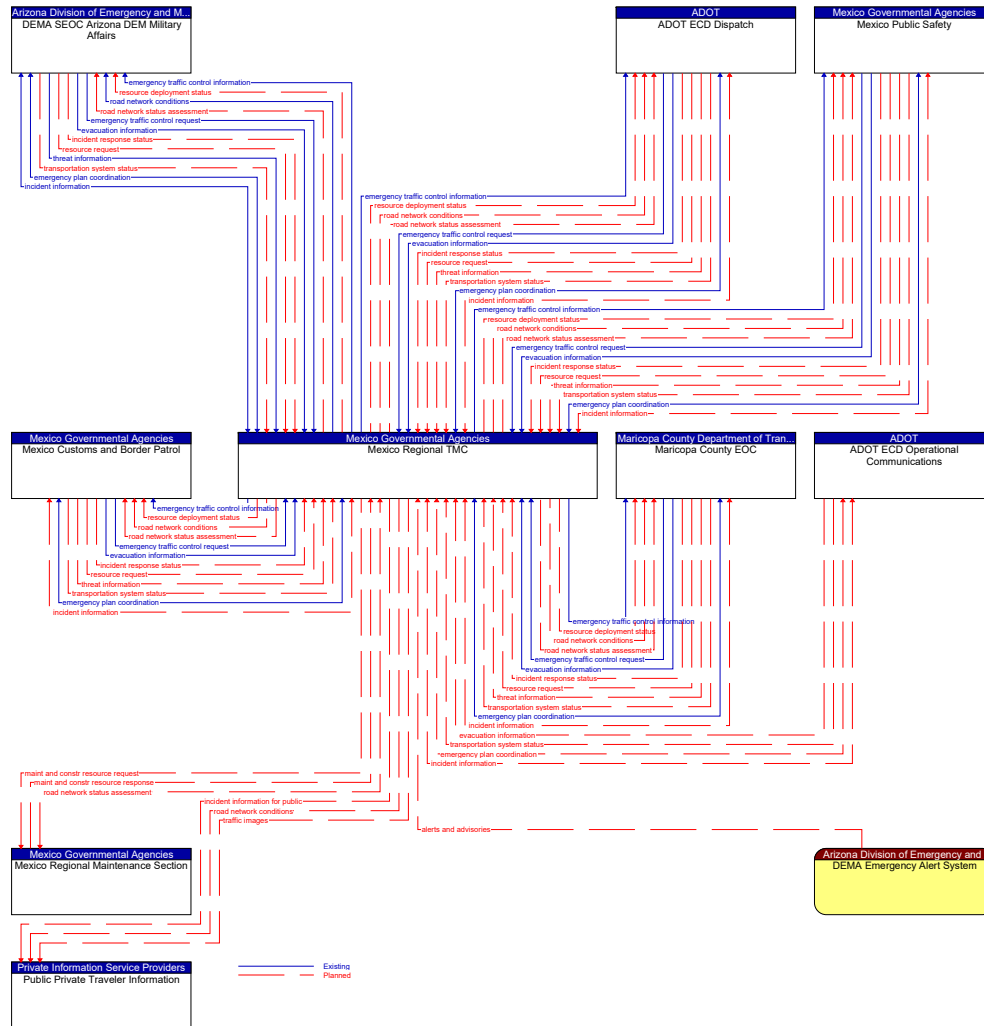


Figure 141: Mexico Regional TMC Context Diagram

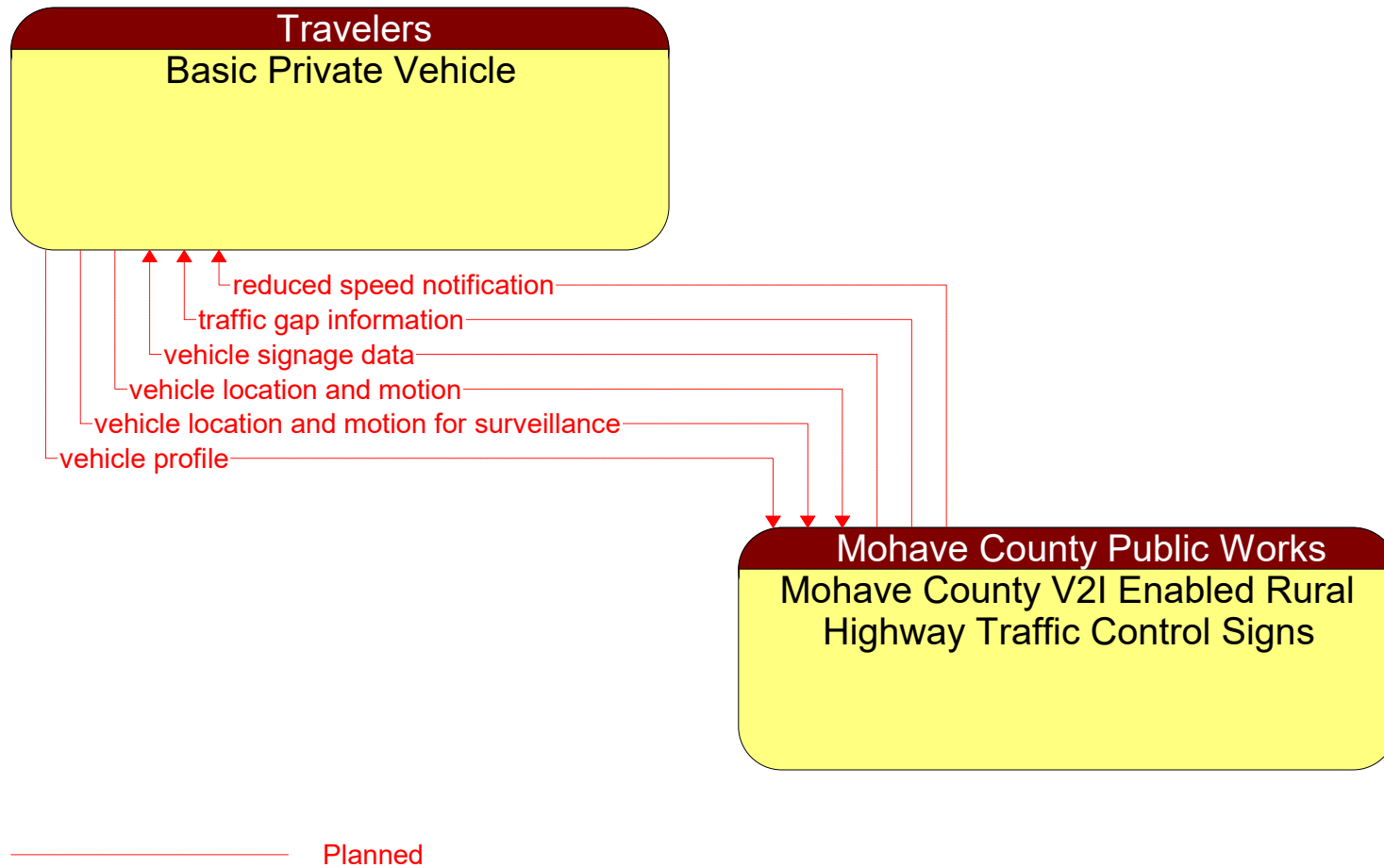


Figure 142: Mohave County V2I Enabled Rural Highway Traffic Control Signs Context Diagram

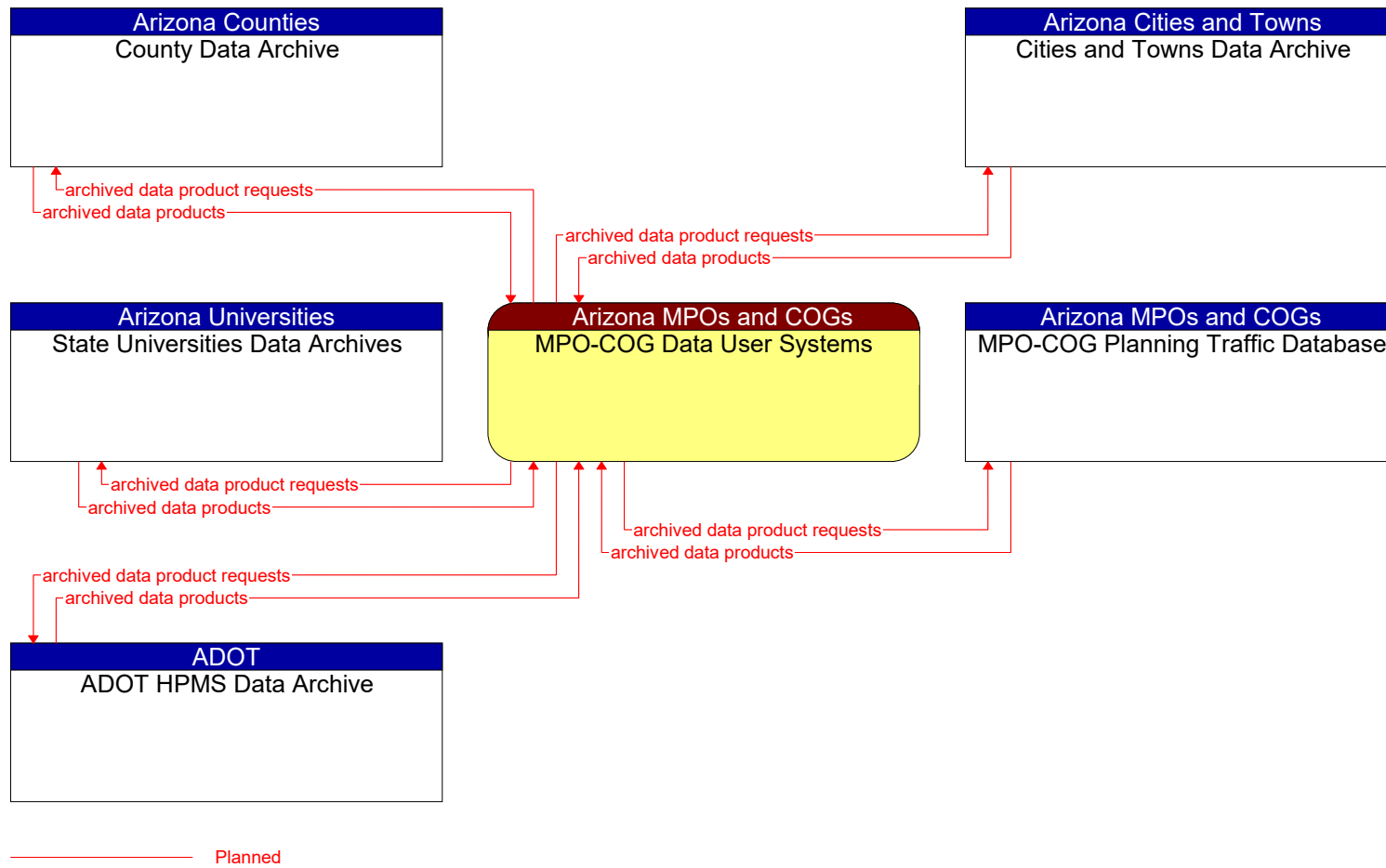


Figure 143: MPO-COG Data User Systems Context Diagram

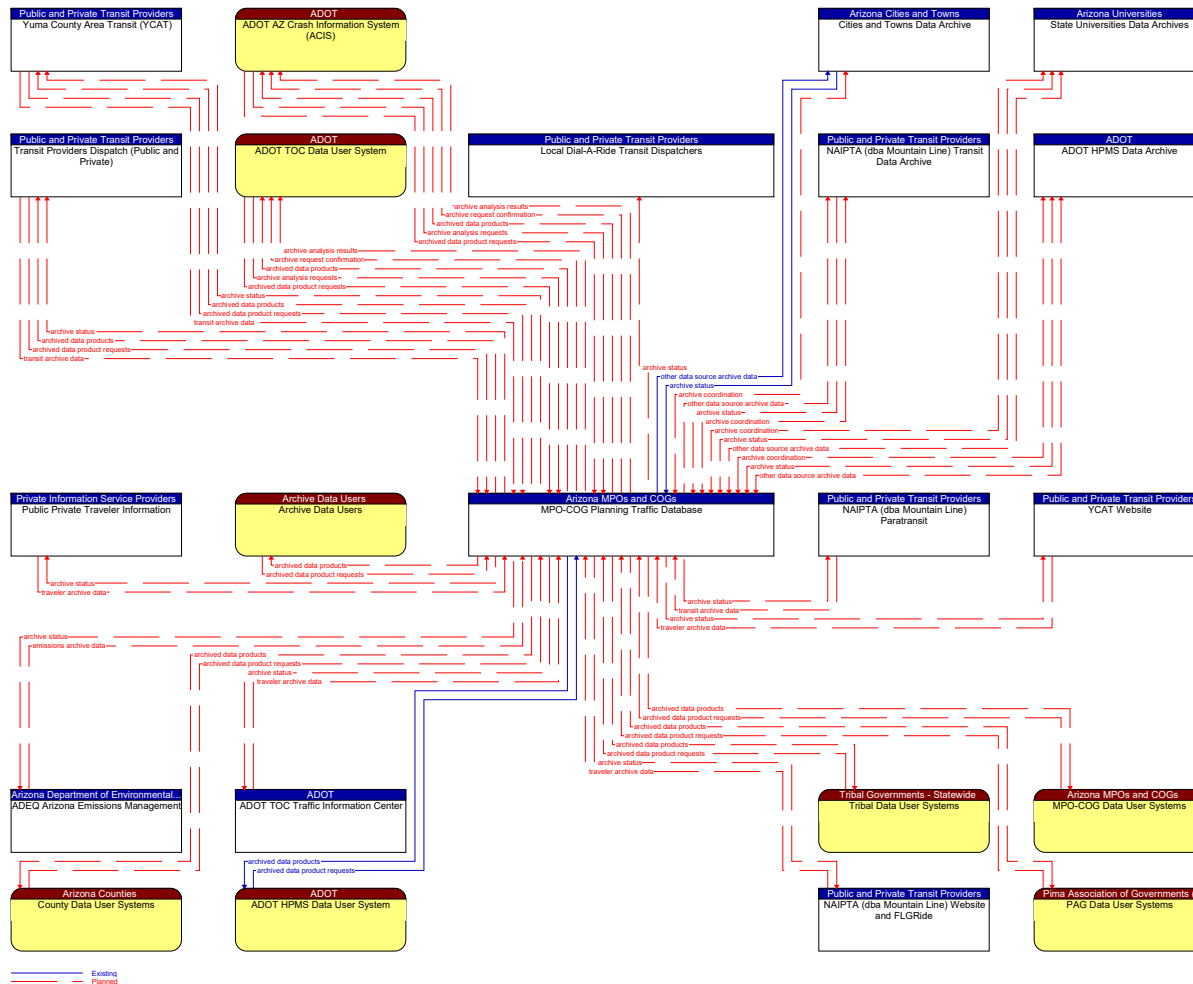


Figure 144: MPO-COG Planning Traffic Database Context Diagram

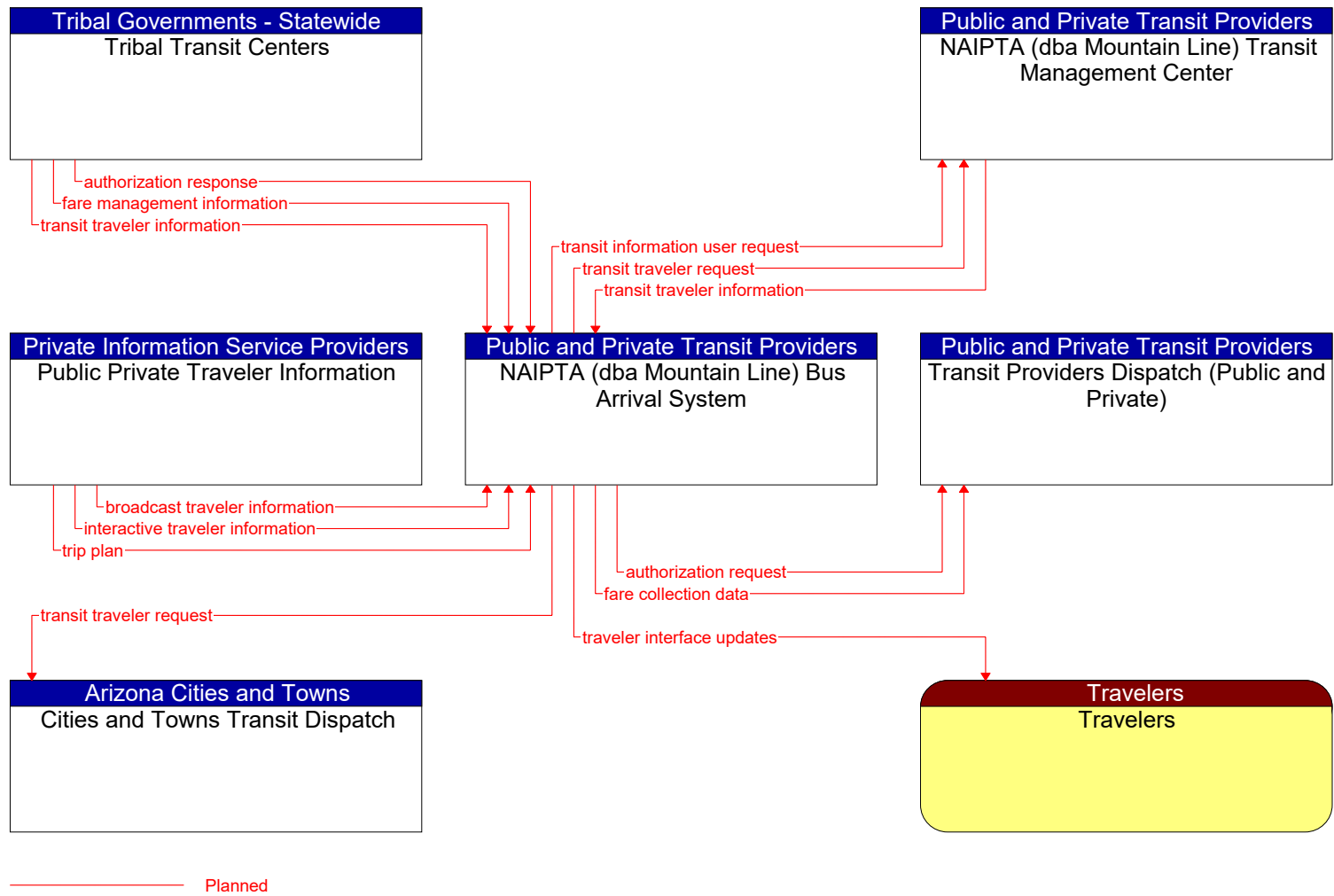


Figure 145: NAIPTA (dba Mountain Line) Bus Arrival System Context Diagram

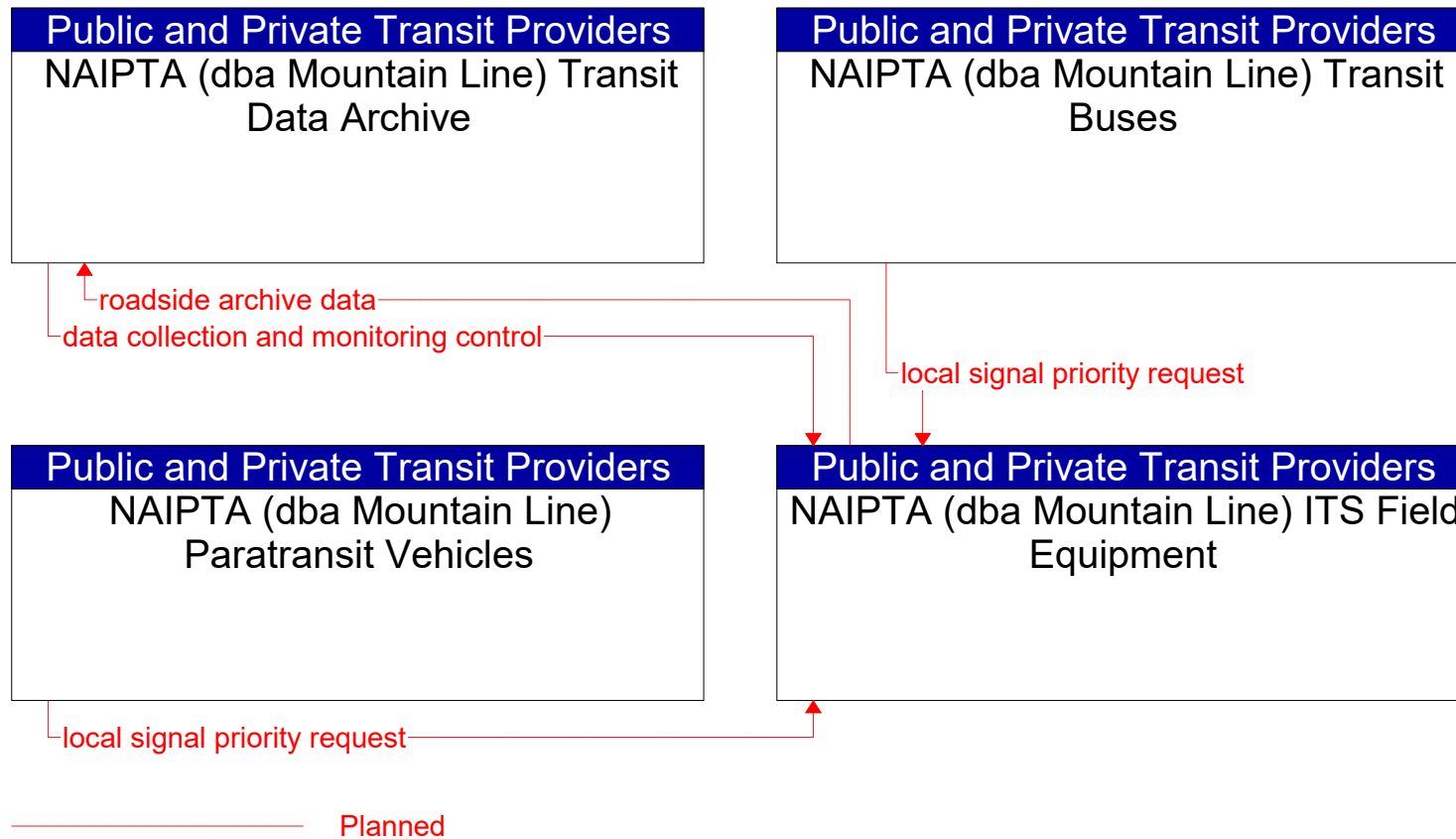


Figure 146: NAIPTA (dba Mountain Line) ITS Field Equipment Context Diagram

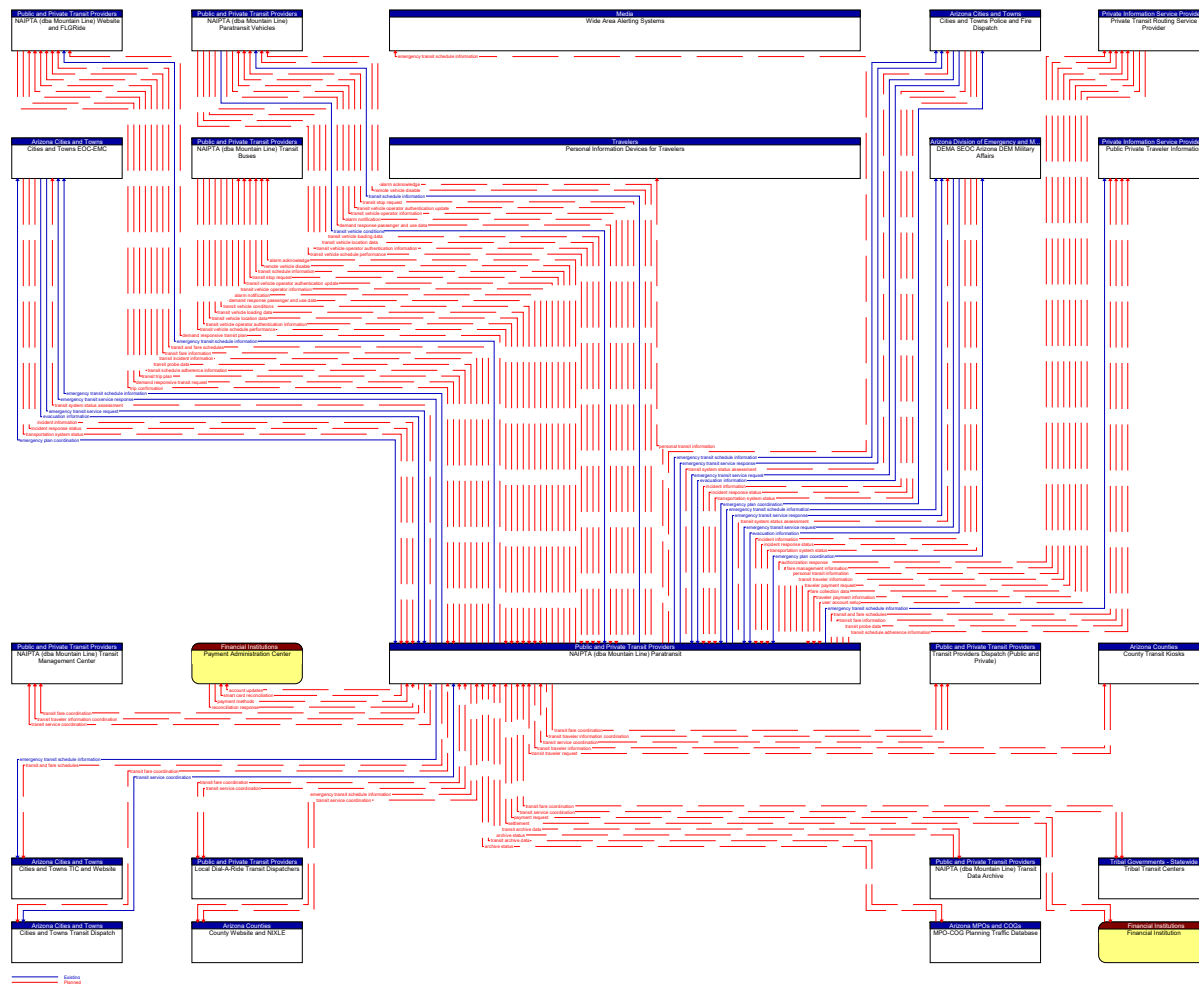


Figure 147: NAIPTA (dba Mountain Line) Paratransit Context Diagram

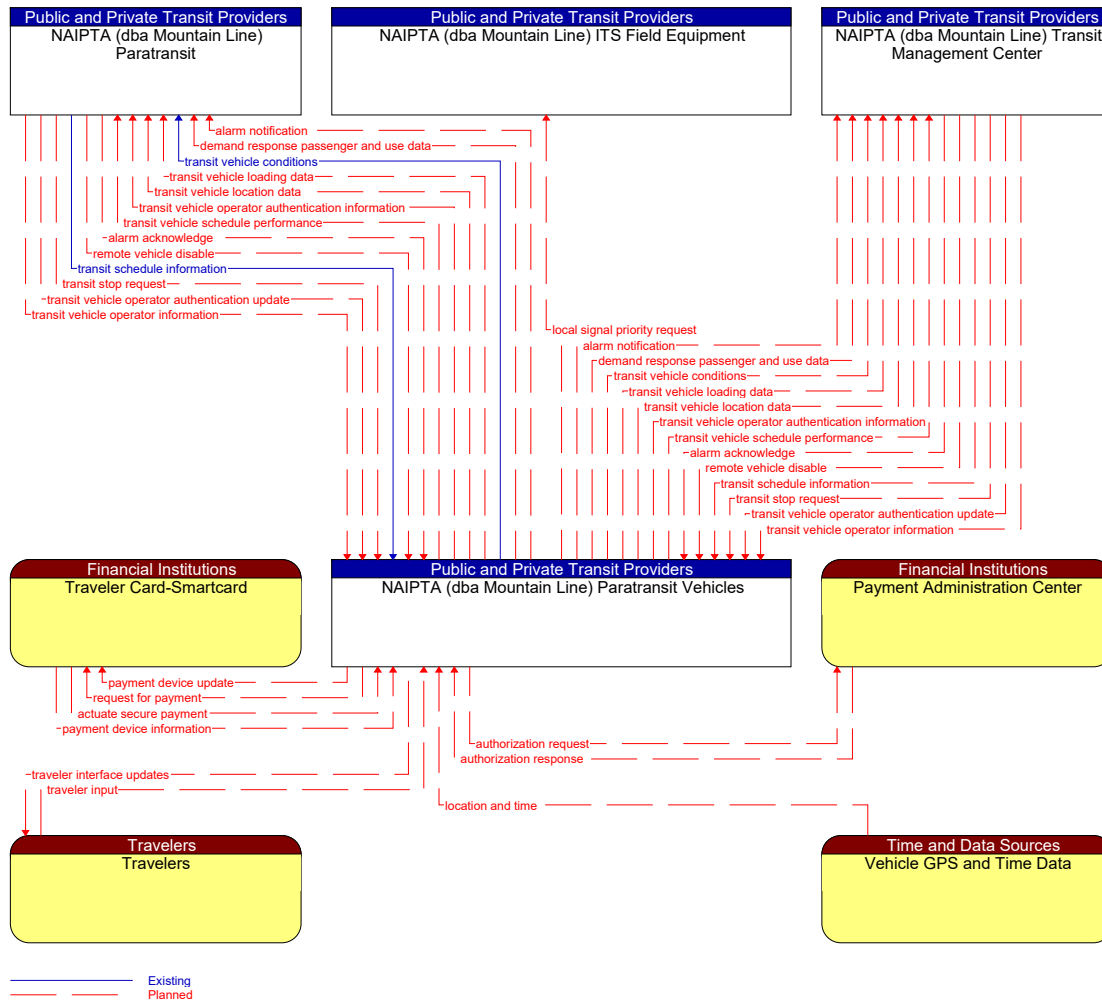


Figure 148: NAIPTA (dba Mountain Line) Paratransit Vehicles Context Diagram



Figure 149: NAIPTA (dba Mountain Line) Transit Buses Context Diagram

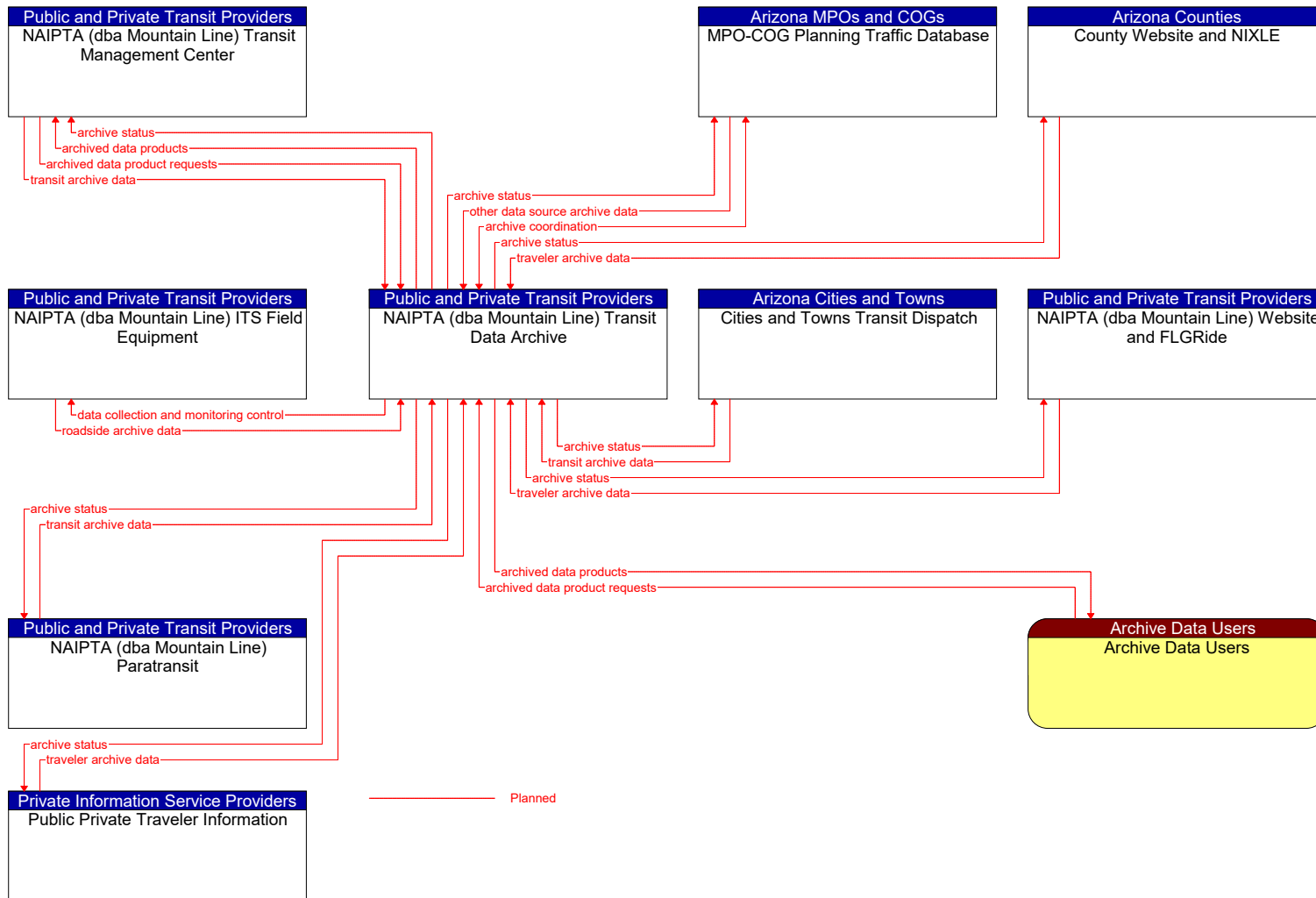


Figure 150: NAIPTA (dba Mountain Line) Transit Data Archive Context Diagram

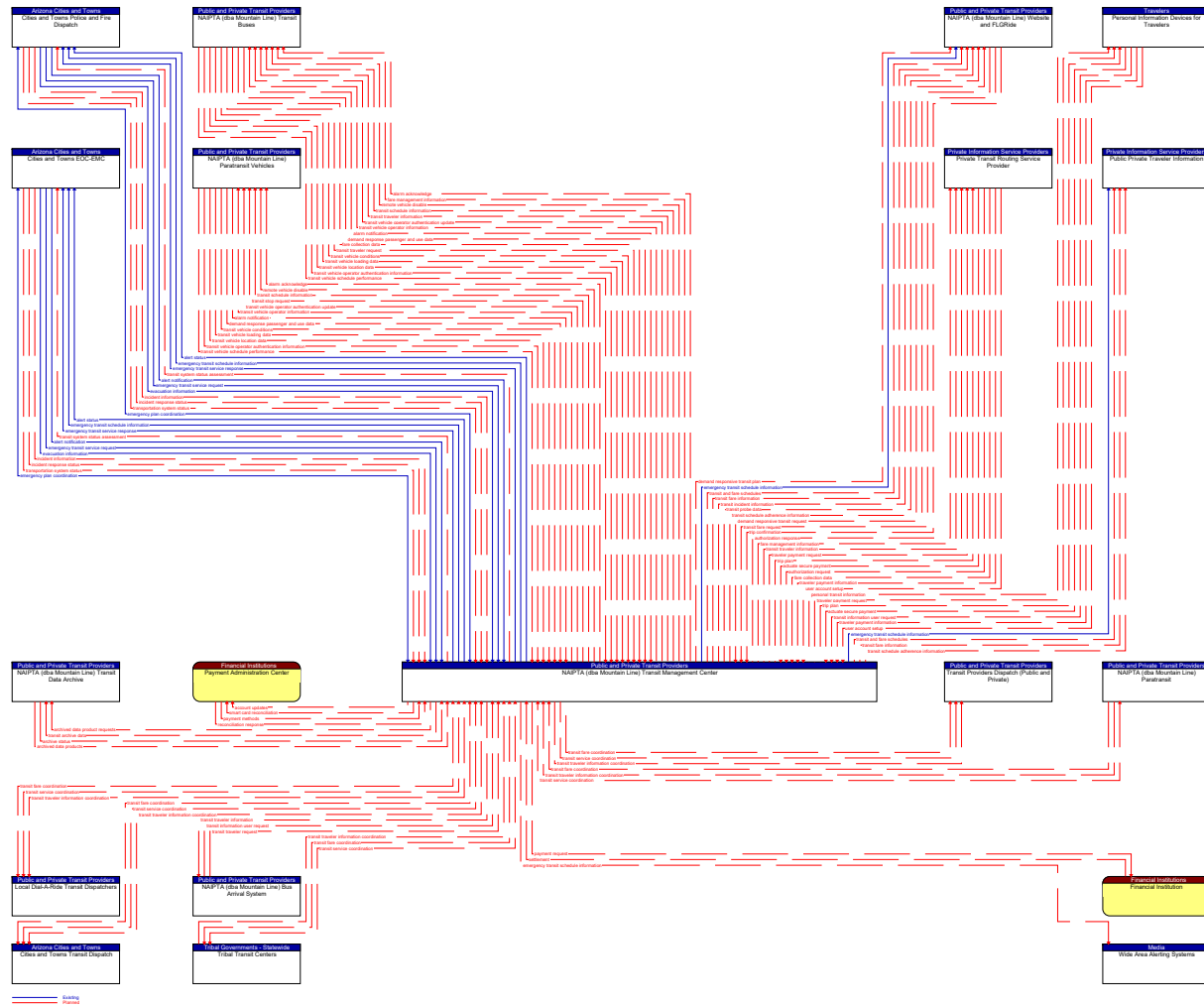


Figure 151: NAIPTA (dba Mountain Line) Transit Management Center Context Diagram

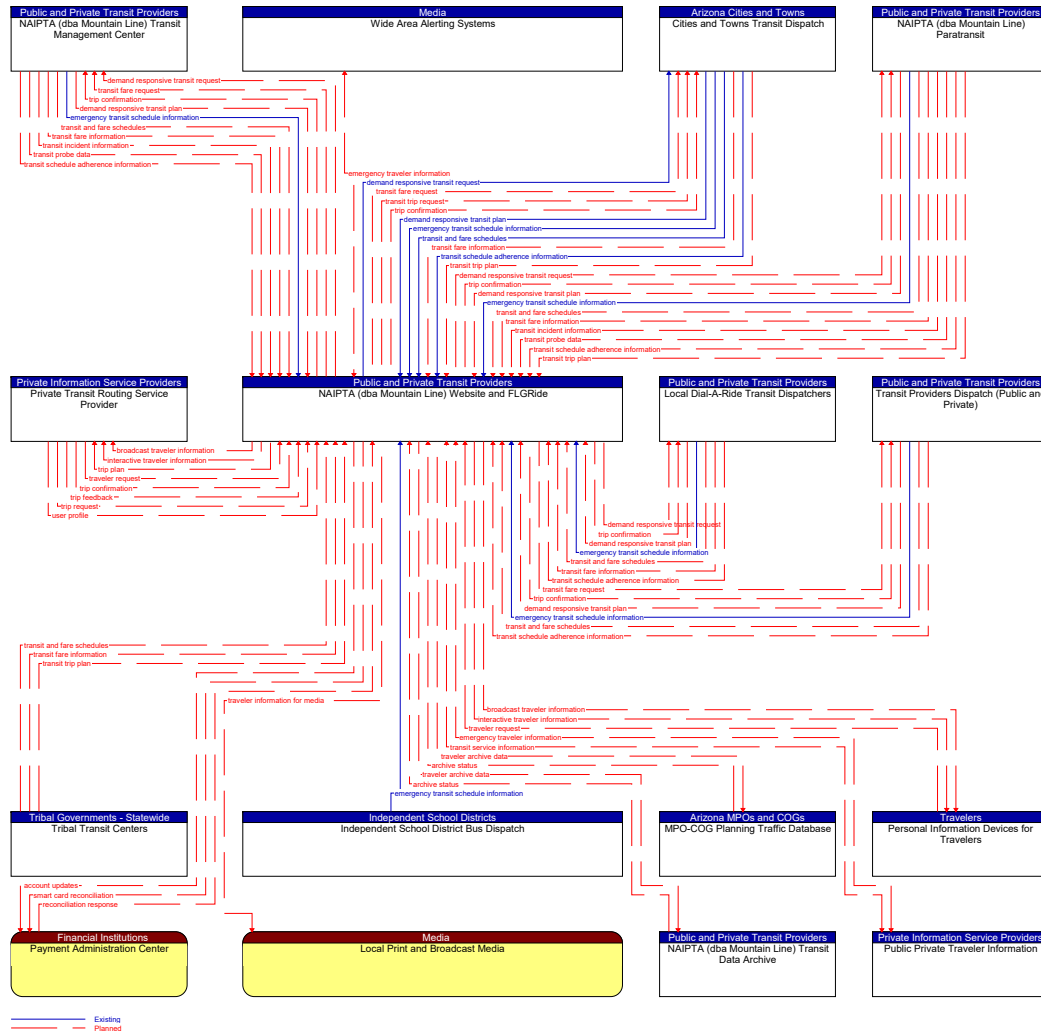


Figure 152: NAIPTA (dba Mountain Line) Website and FLGRide Context Diagram

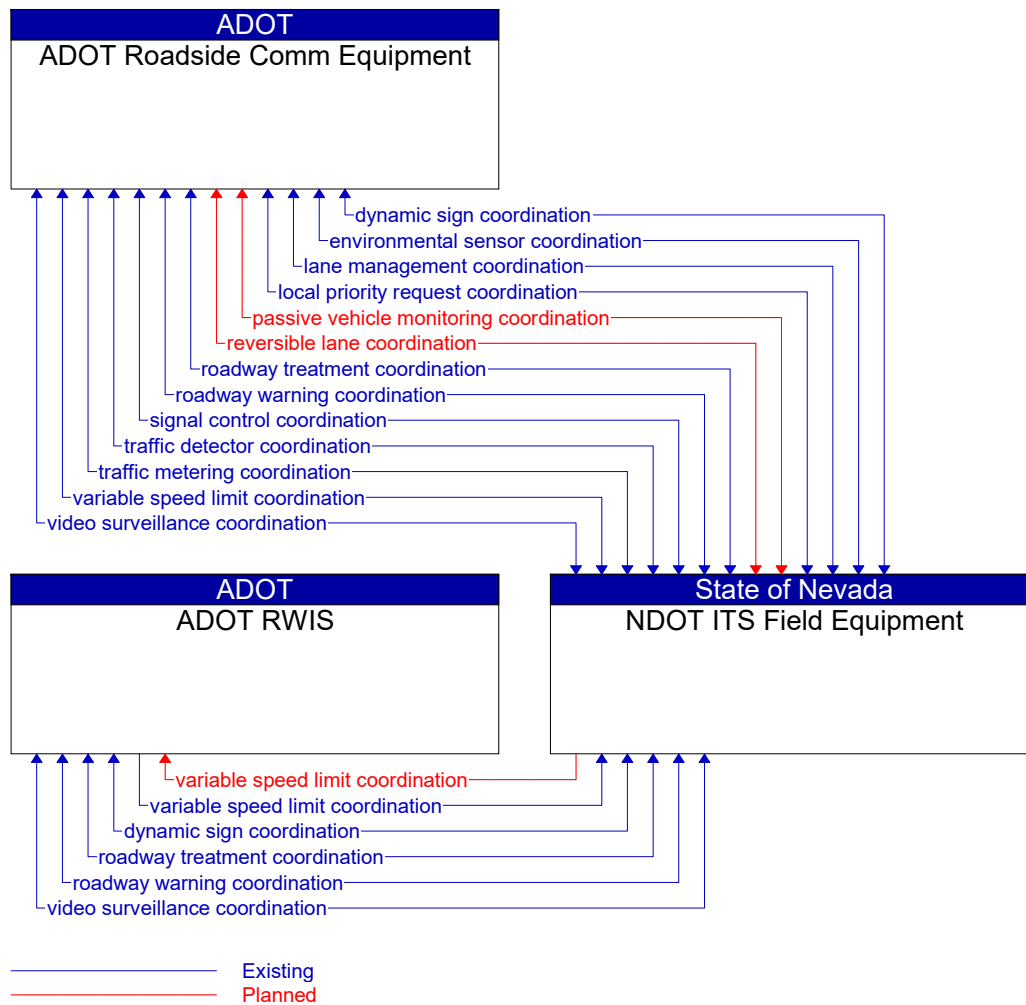


Figure 153: NDOT ITS Field Equipment Context Diagram

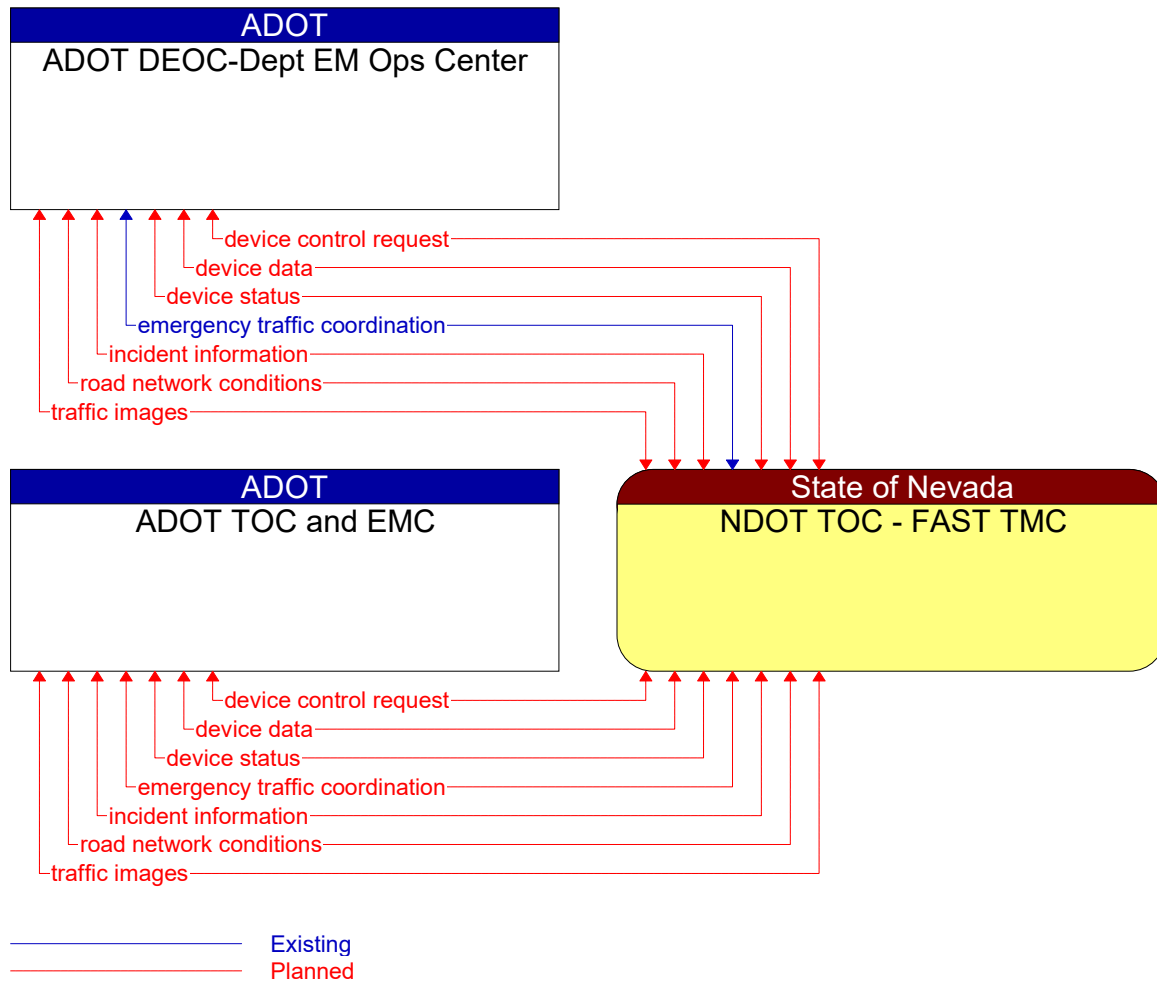


Figure 154: NDOT TOC - FAST TMC Context Diagram

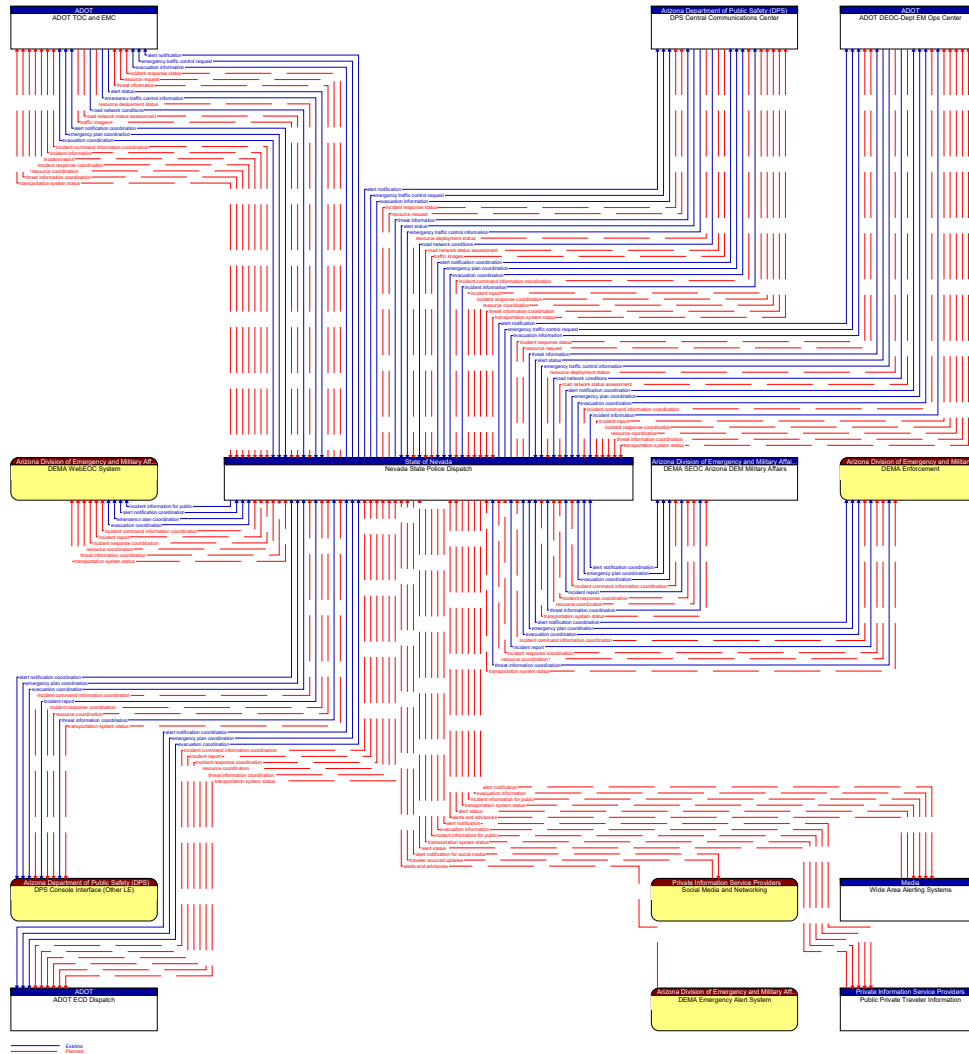


Figure 155: Nevada State Police Dispatch Context Diagram

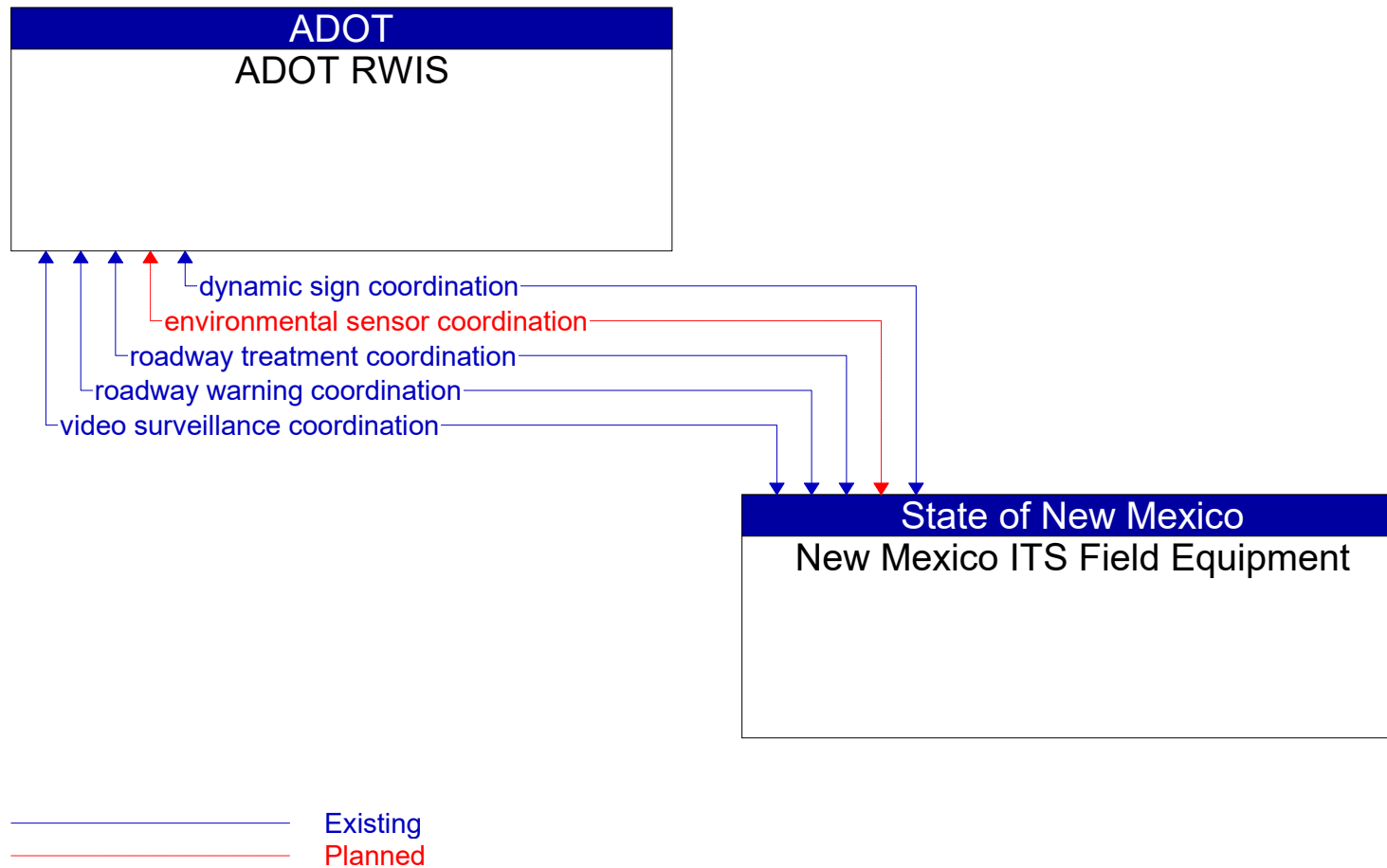


Figure 156: New Mexico ITS Field Equipment Context Diagram

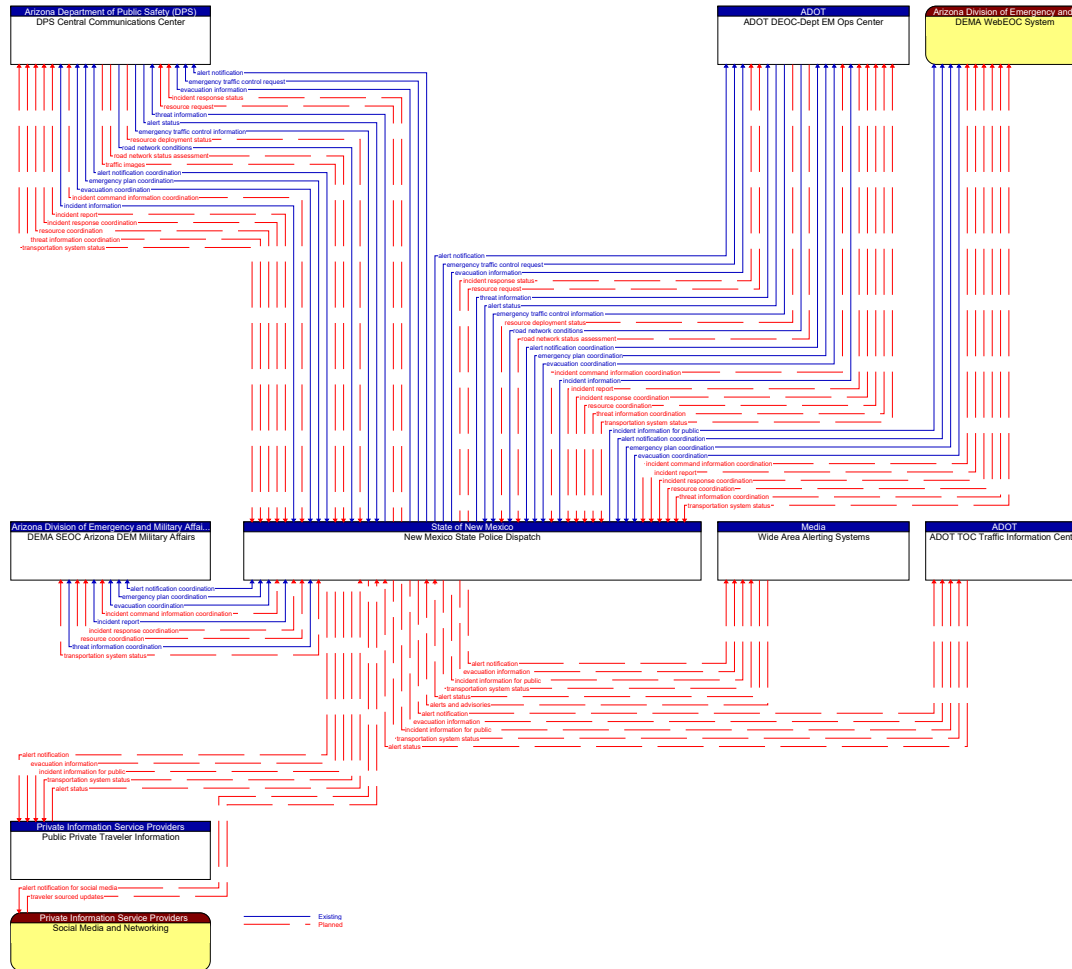


Figure 157: New Mexico State Police Dispatch Context Diagram

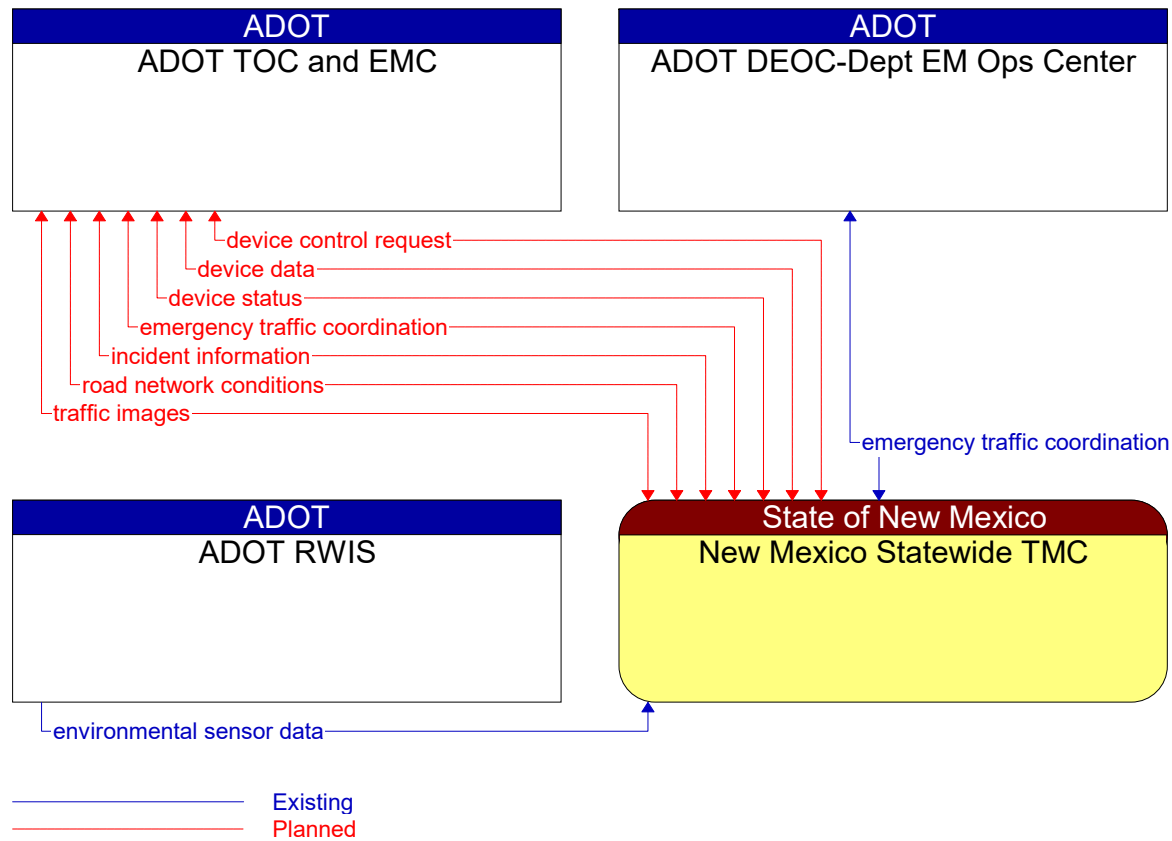


Figure 158: New Mexico Statewide TMC Context Diagram

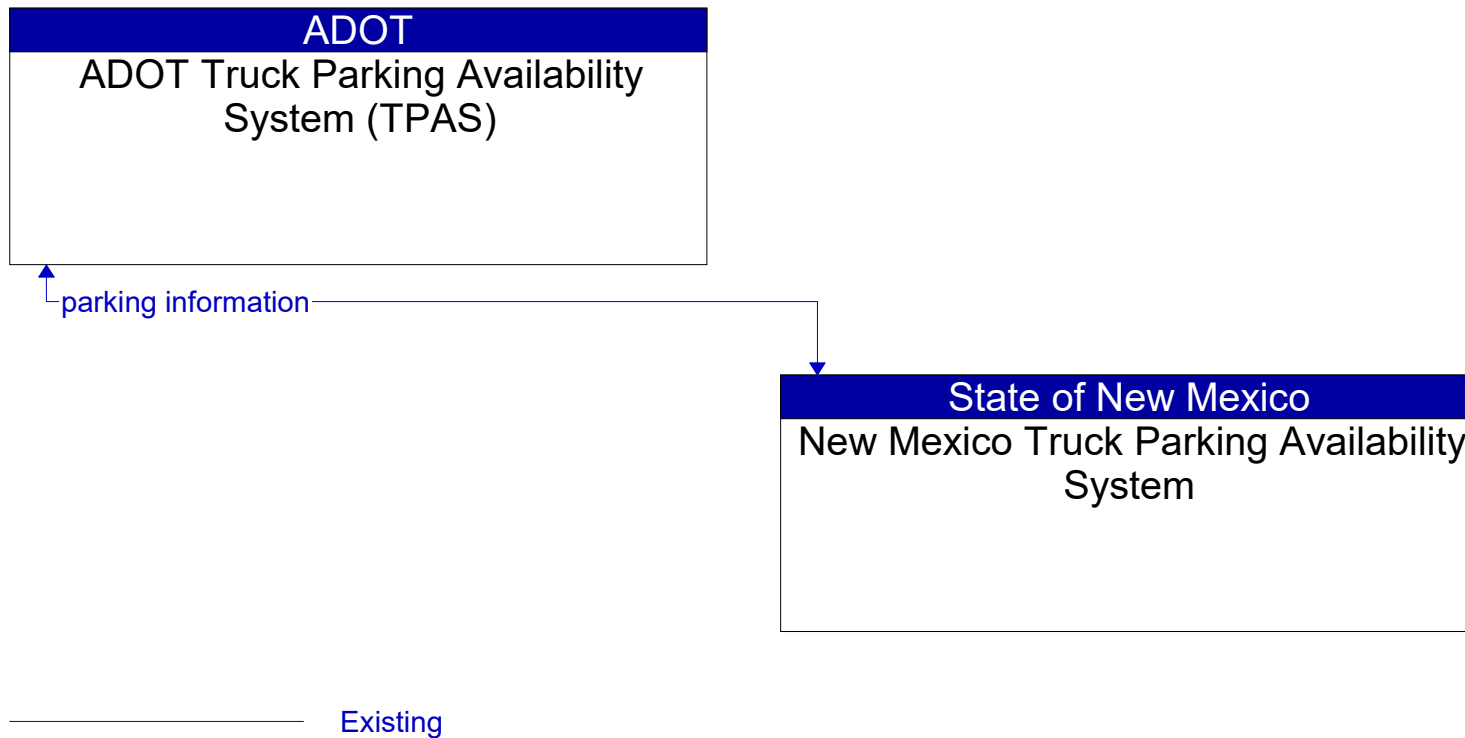


Figure 159: New Mexico Truck Parking Availability System Context Diagram

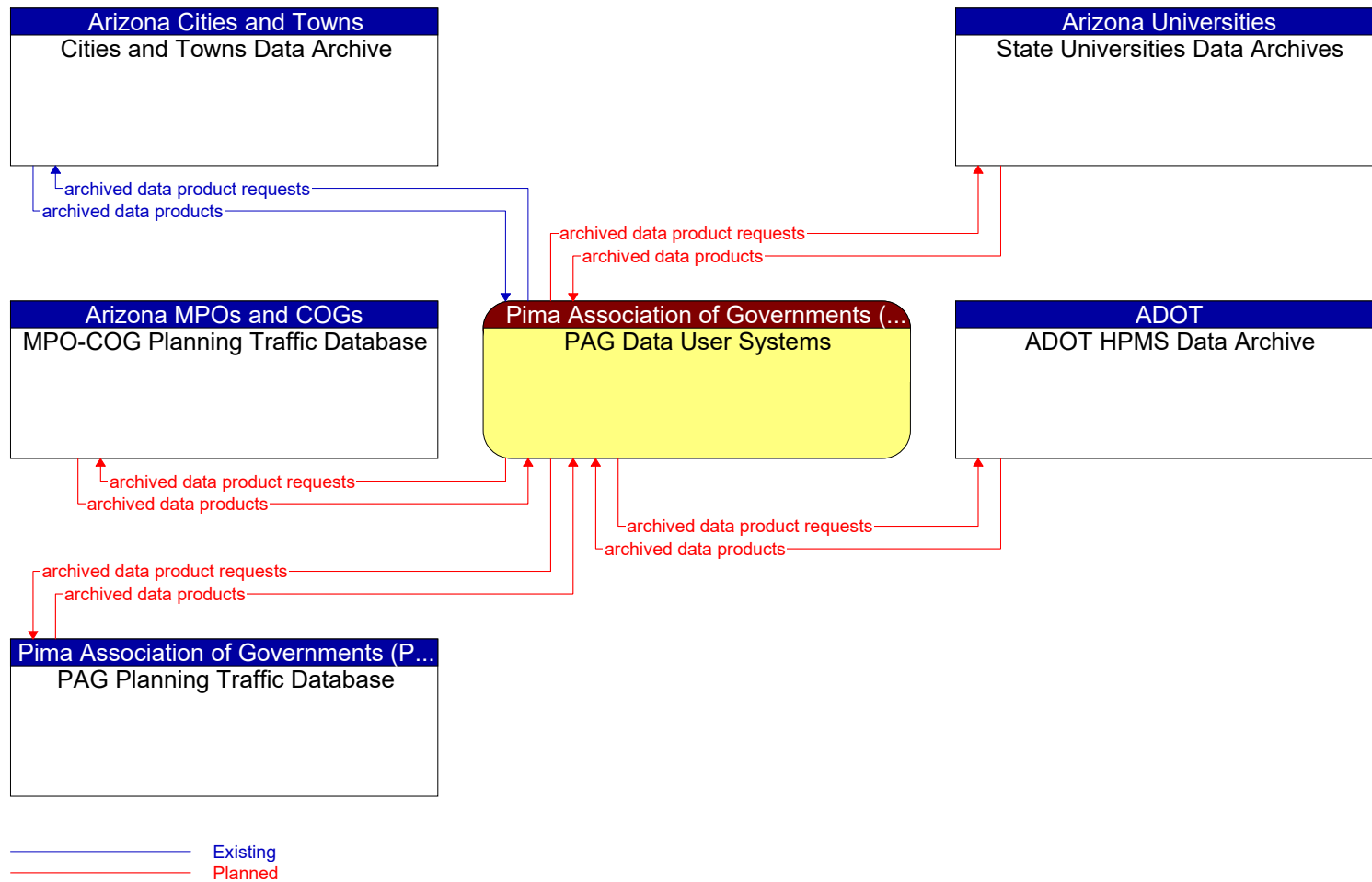


Figure 161: PAG Data User Systems Context Diagram

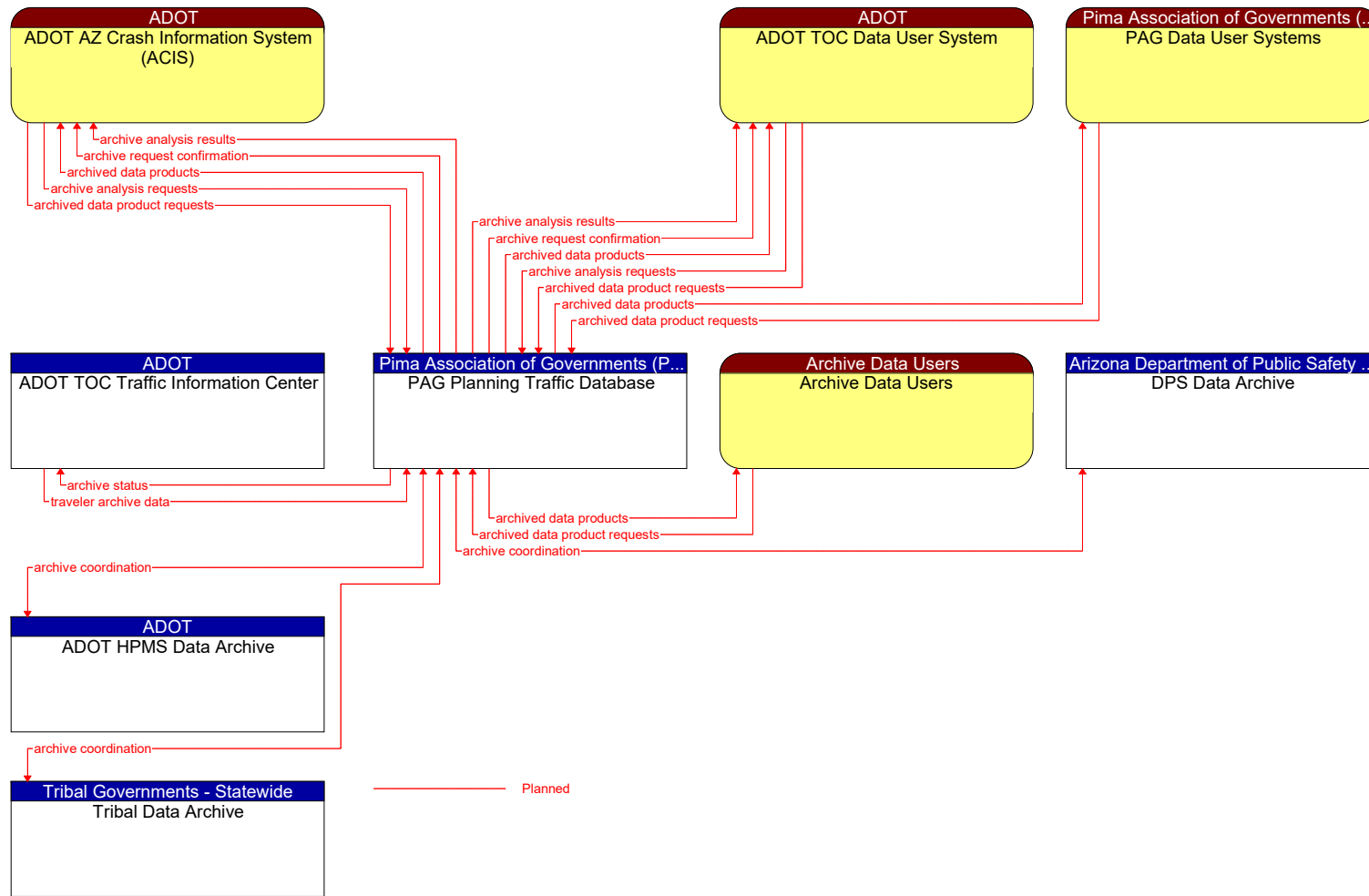


Figure 162: PAG Planning Traffic Database Context Diagram

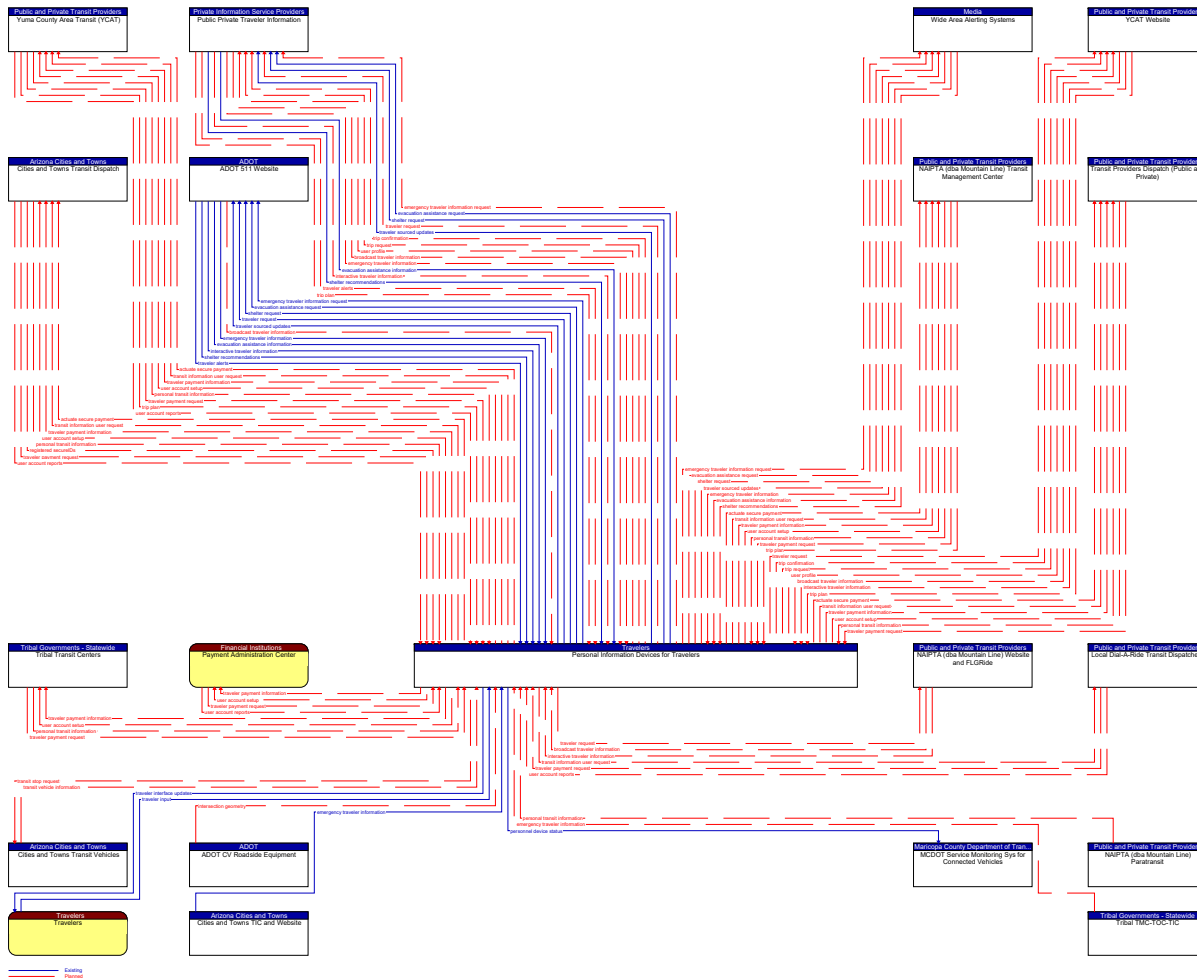


Figure 164: Personal Information Devices for Travelers Context Diagram

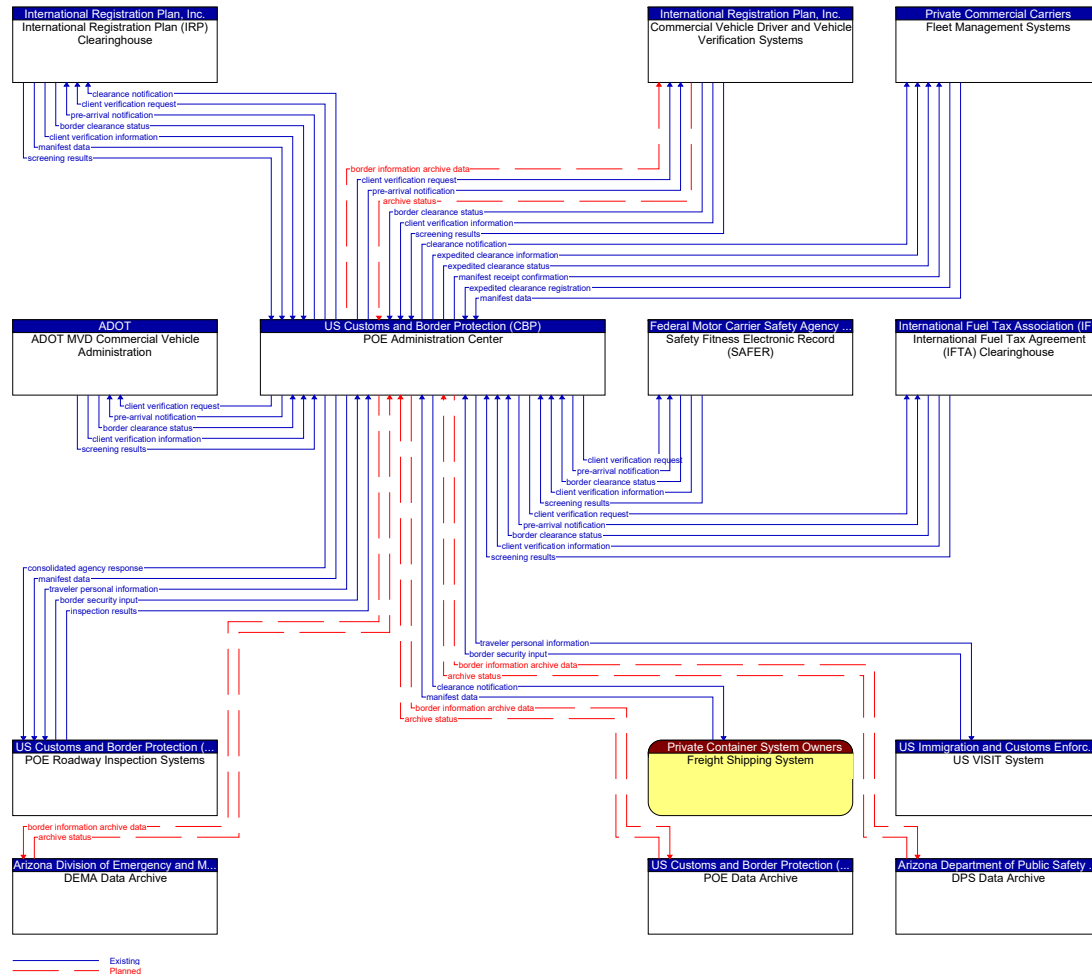


Figure 165: POE Administration Center Context Diagram

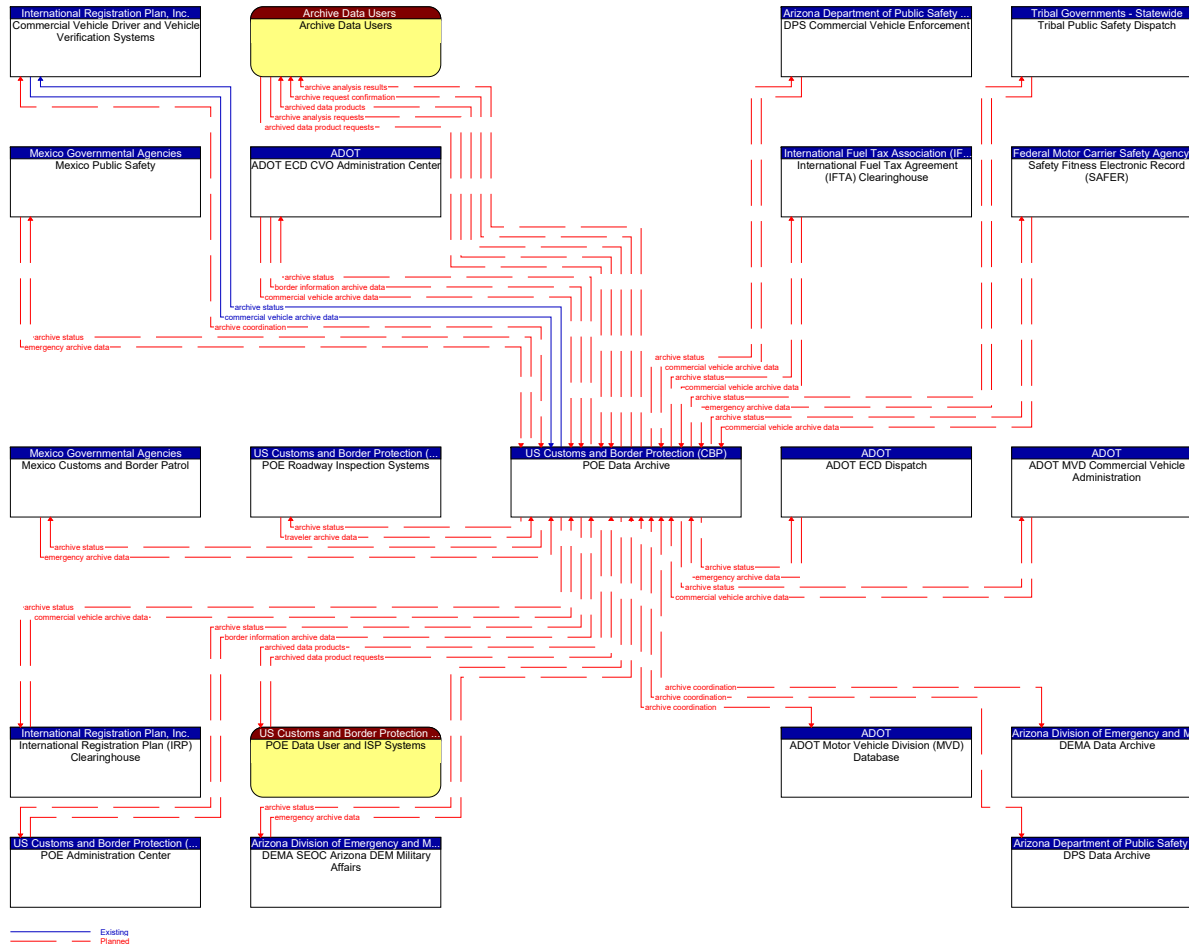


Figure 166: POE Data Archive Context Diagram

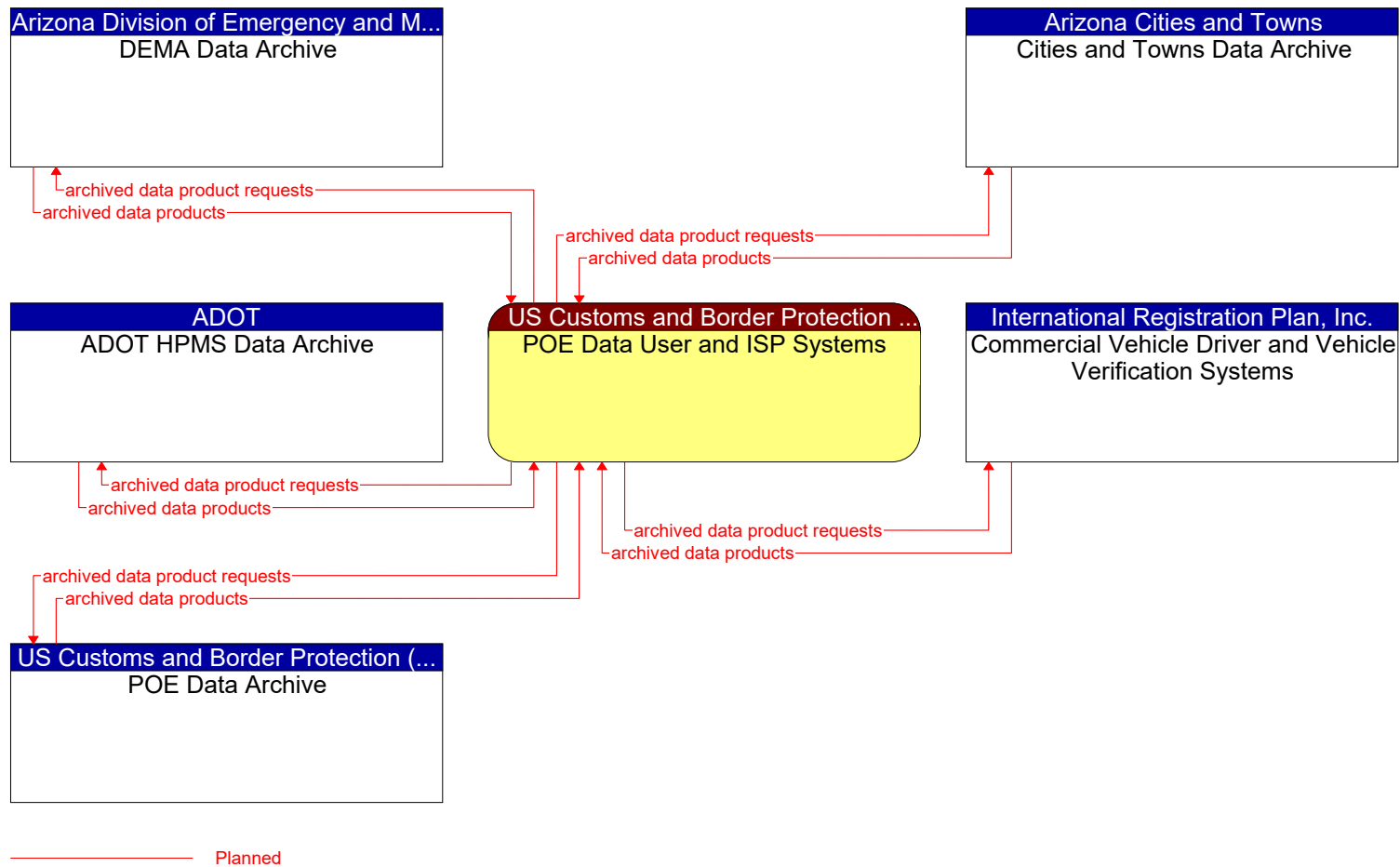


Figure 167: POE Data User and ISP Systems Context Diagram

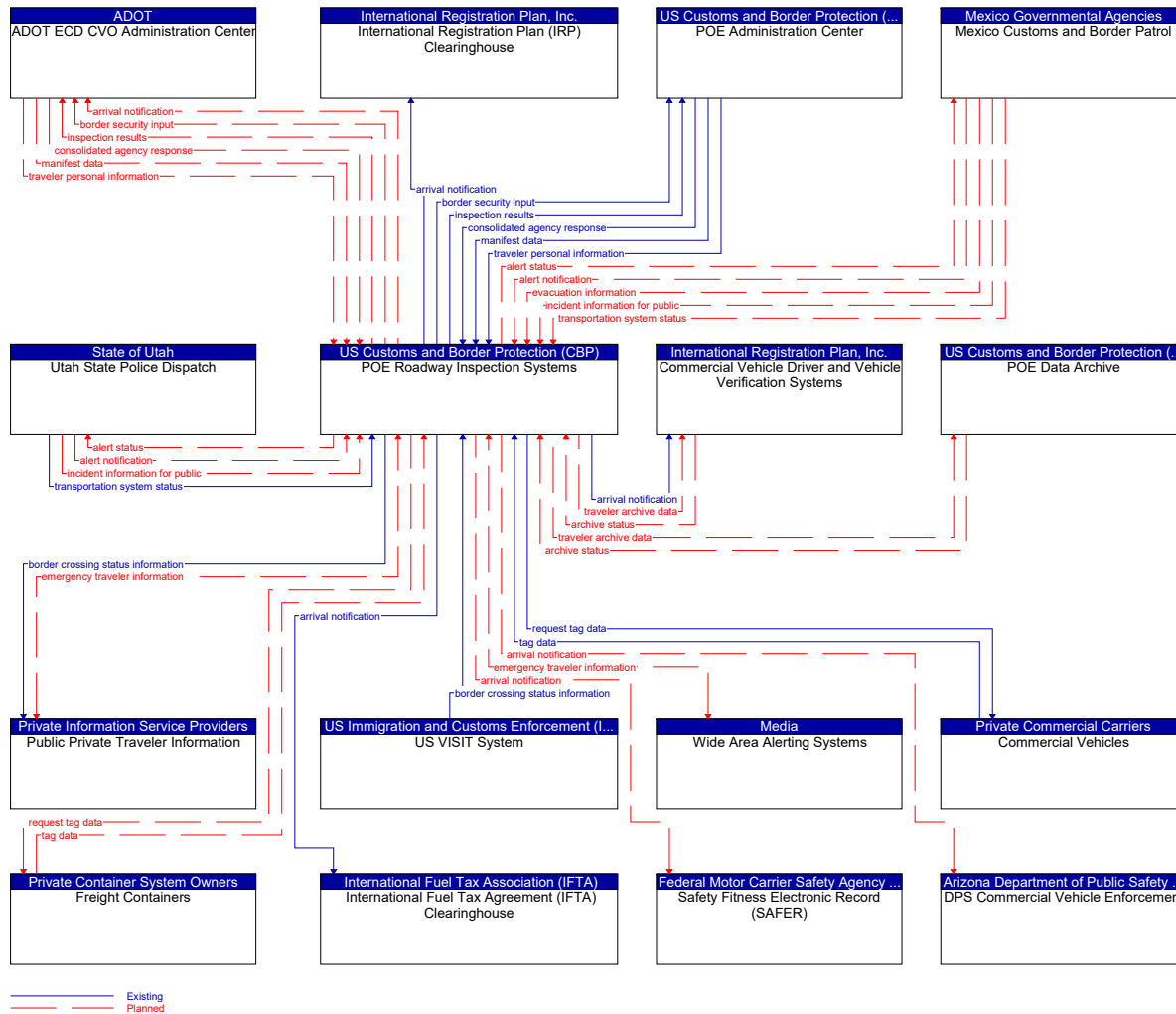


Figure 168: POE Roadway Inspection Systems Context Diagram

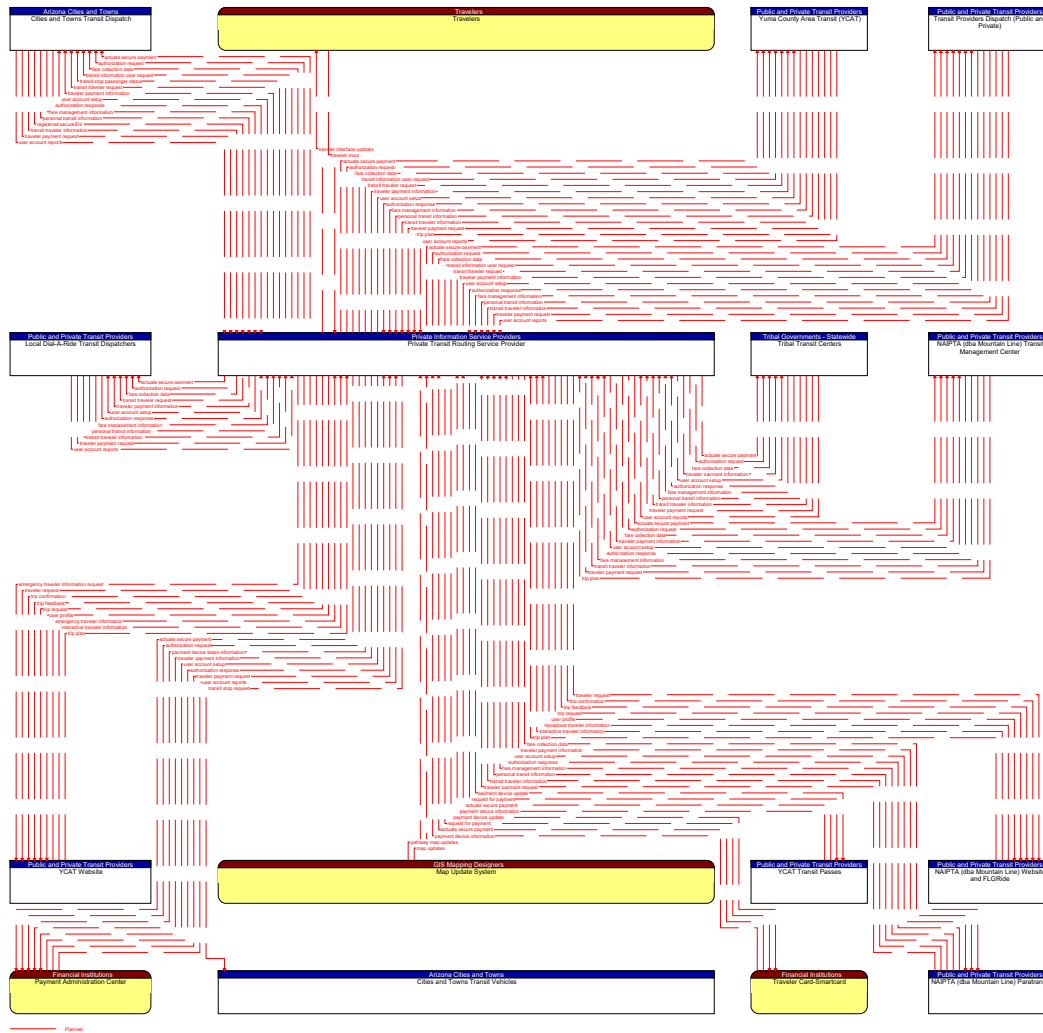


Figure 169: Private Transit Routing Service Provider Context Diagram

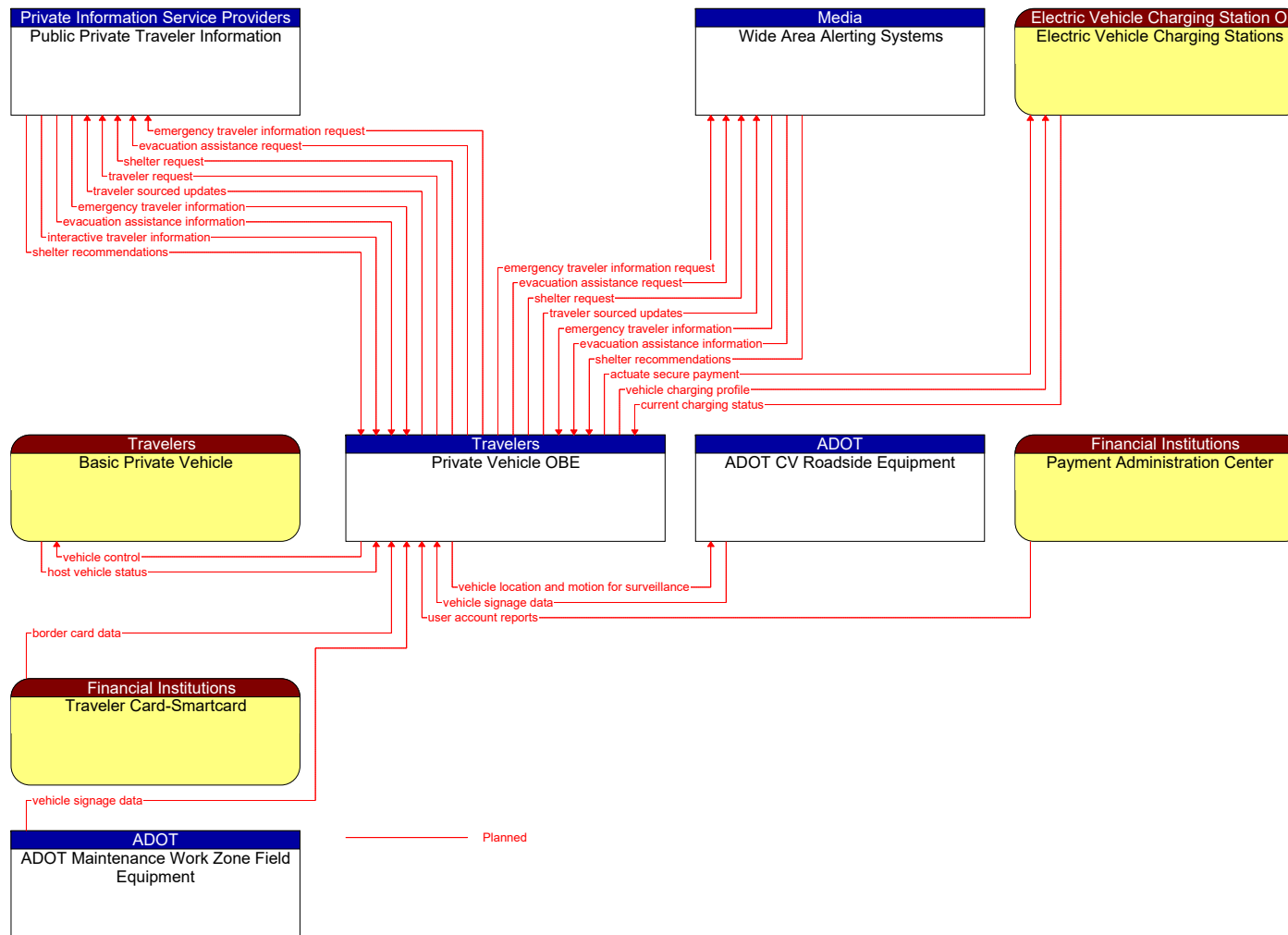


Figure 170: Private Vehicle OBE Context Diagram

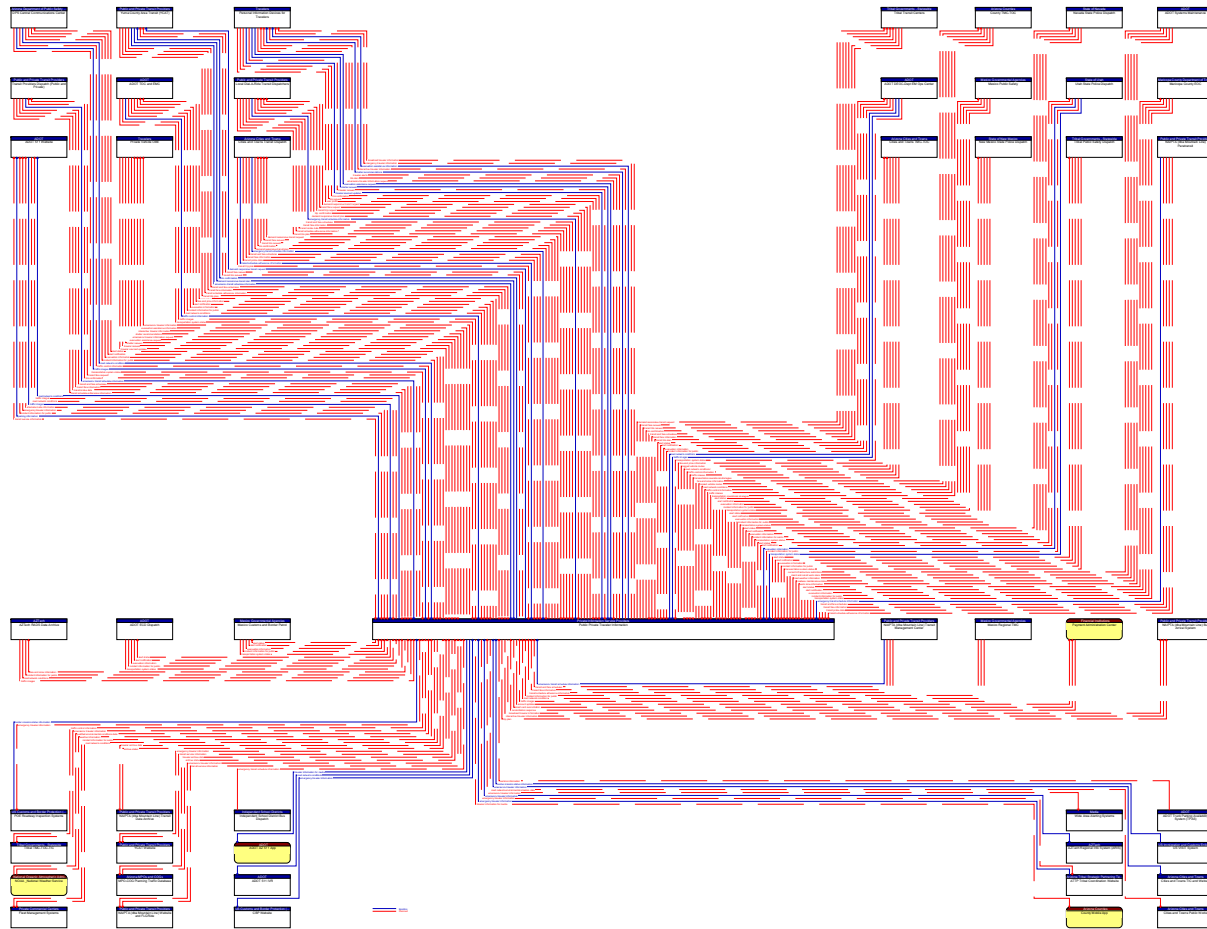


Figure 171: Public Private Traveler Information Context Diagram

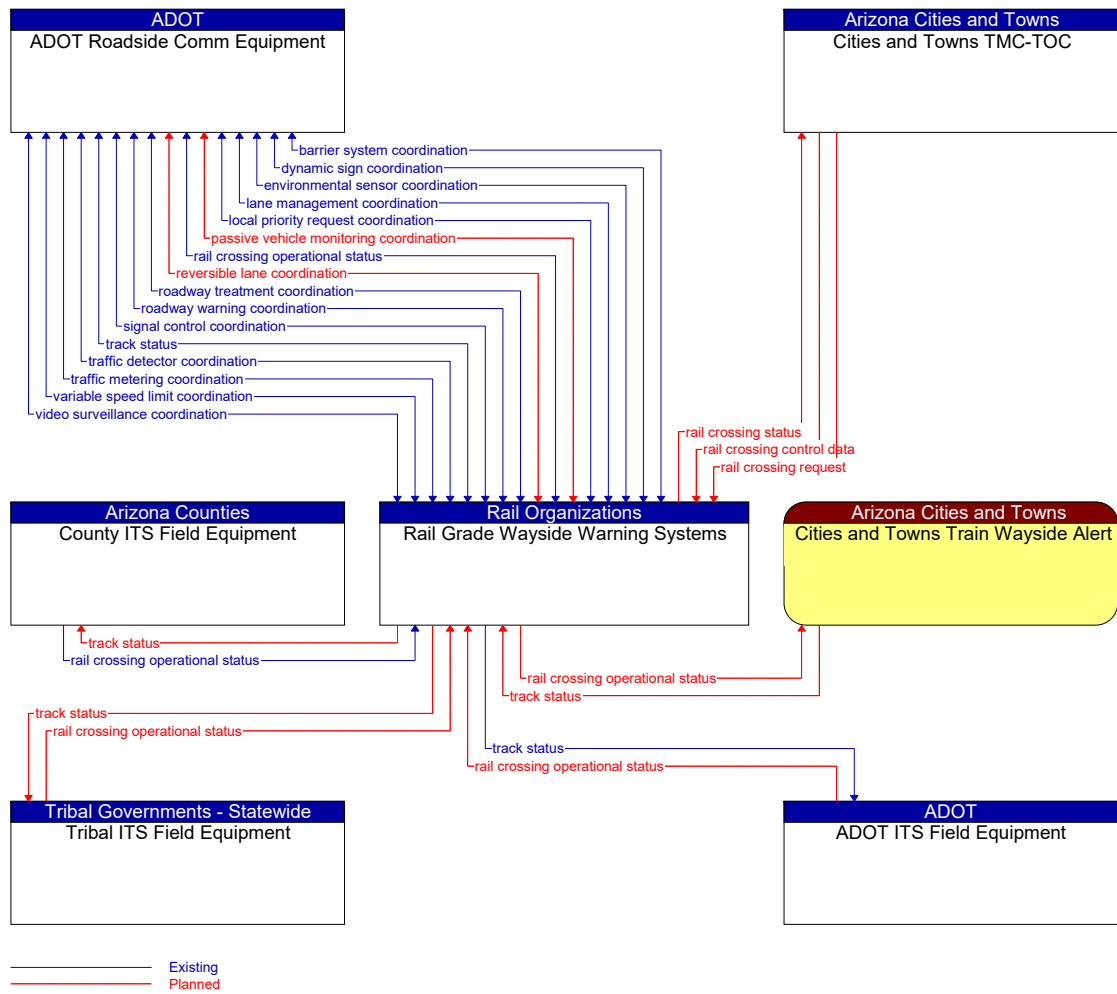


Figure 172: Rail Grade Wayside Warning Systems Context Diagram

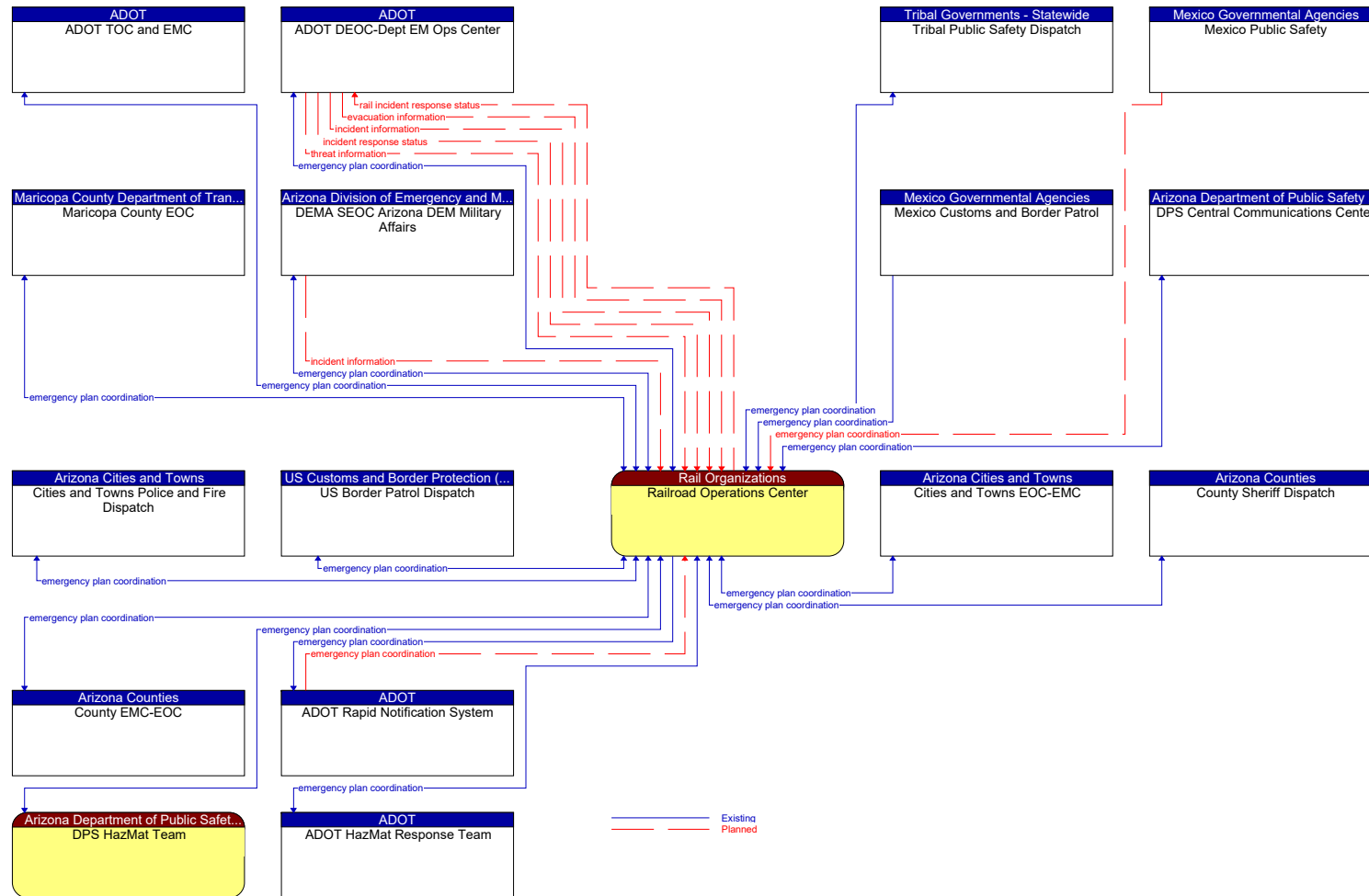


Figure 173: Railroad Operations Center Context Diagram

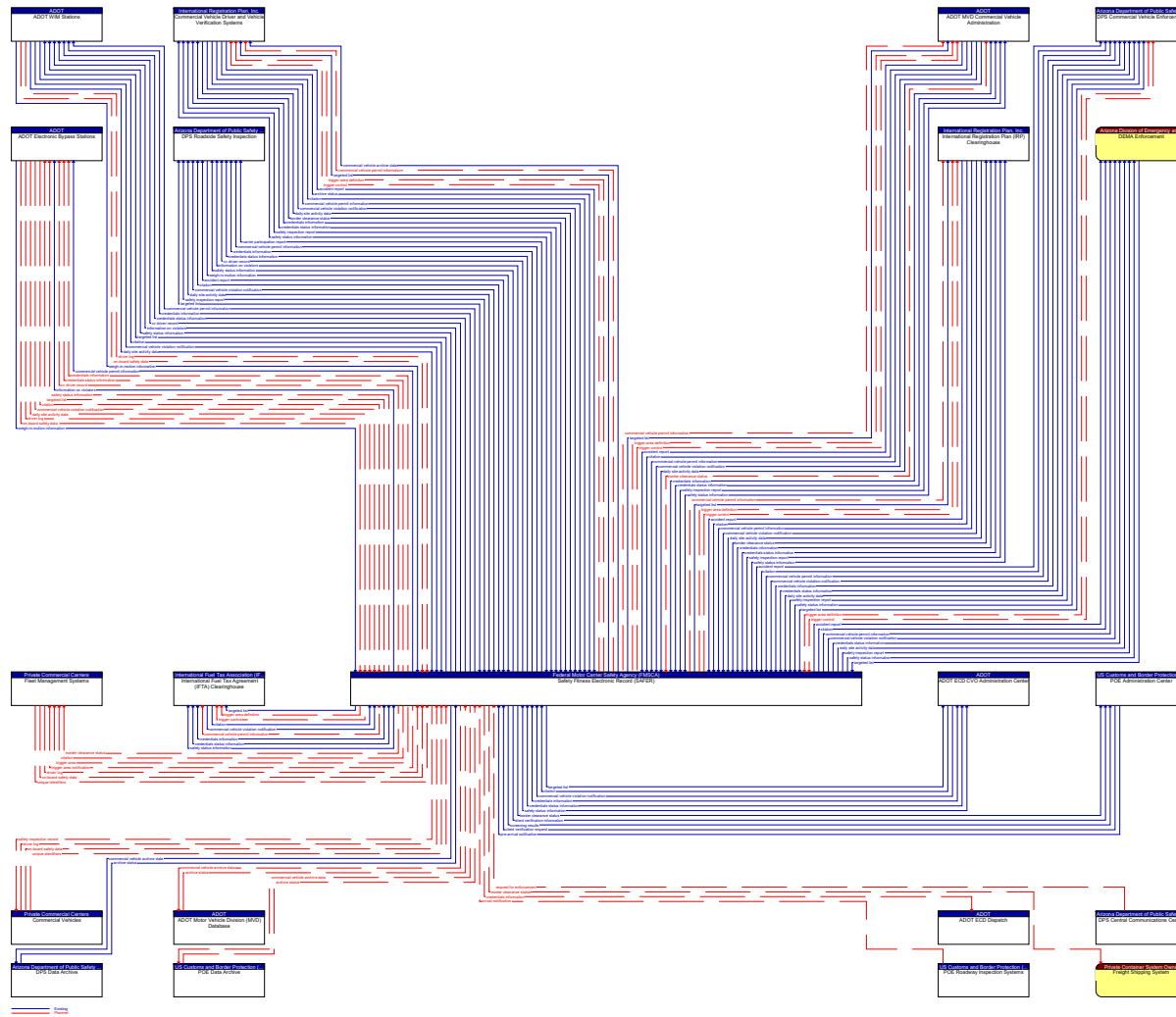


Figure 174: Safety Fitness Electronic Record (SAFER) Context Diagram

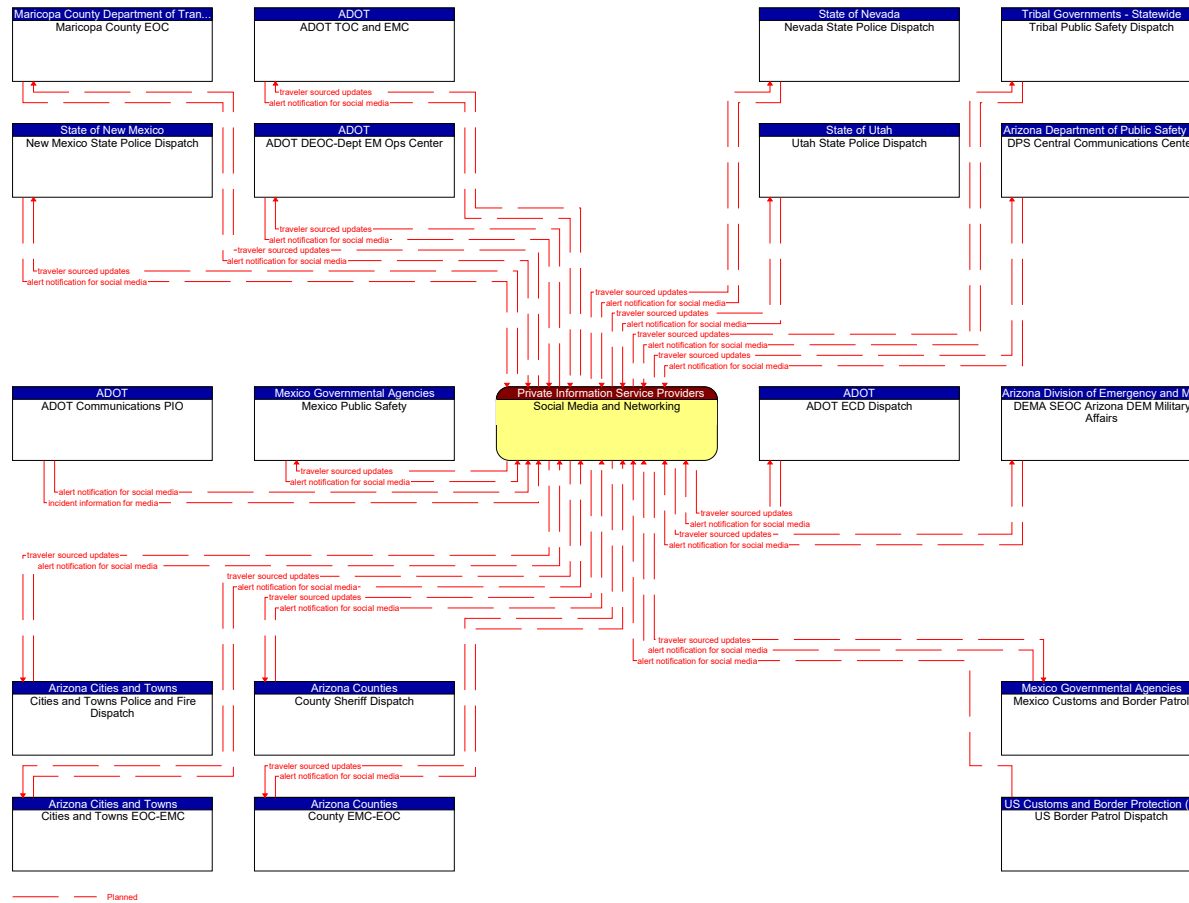


Figure 175: Social Media and Networking Context Diagram

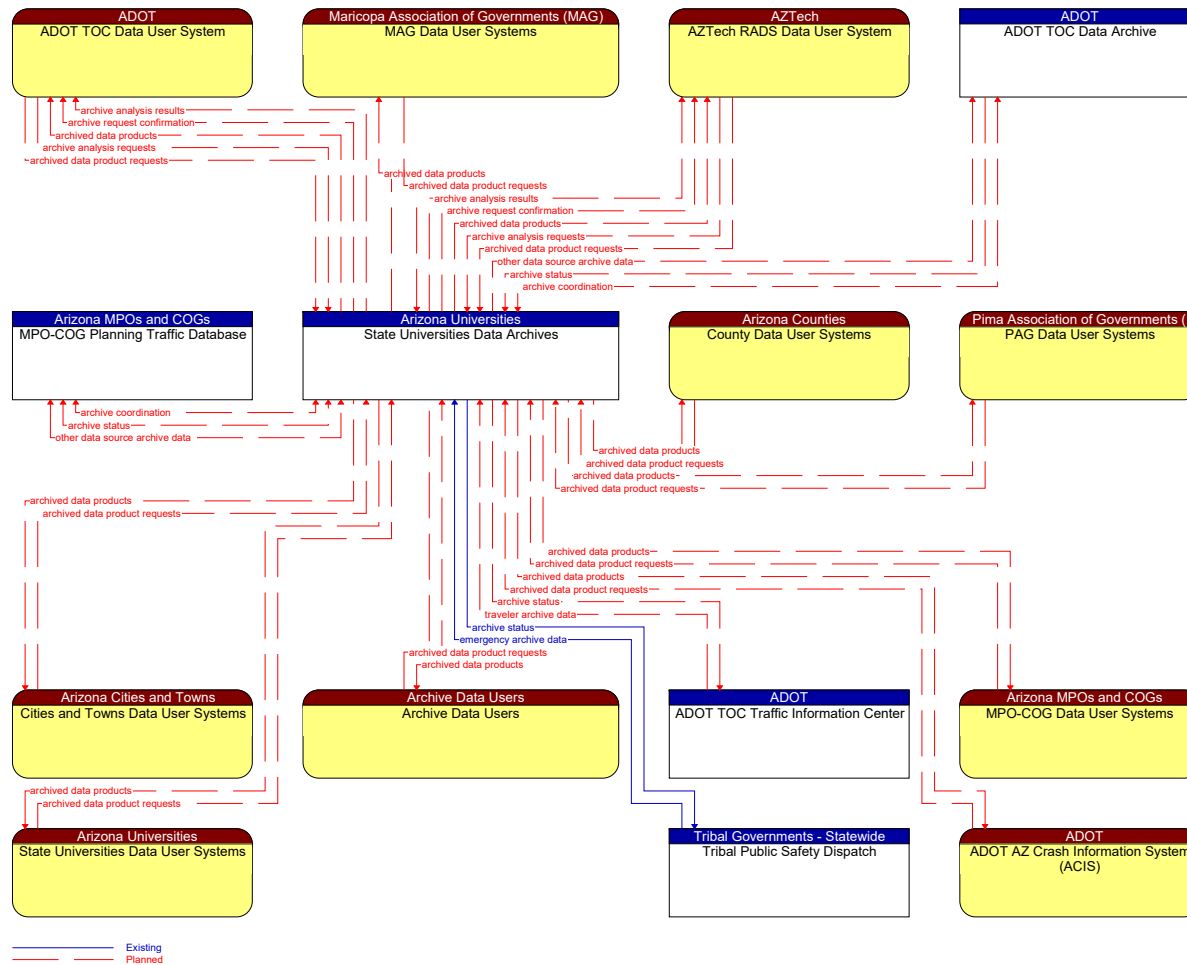


Figure 176: State Universities Data Archives Context Diagram

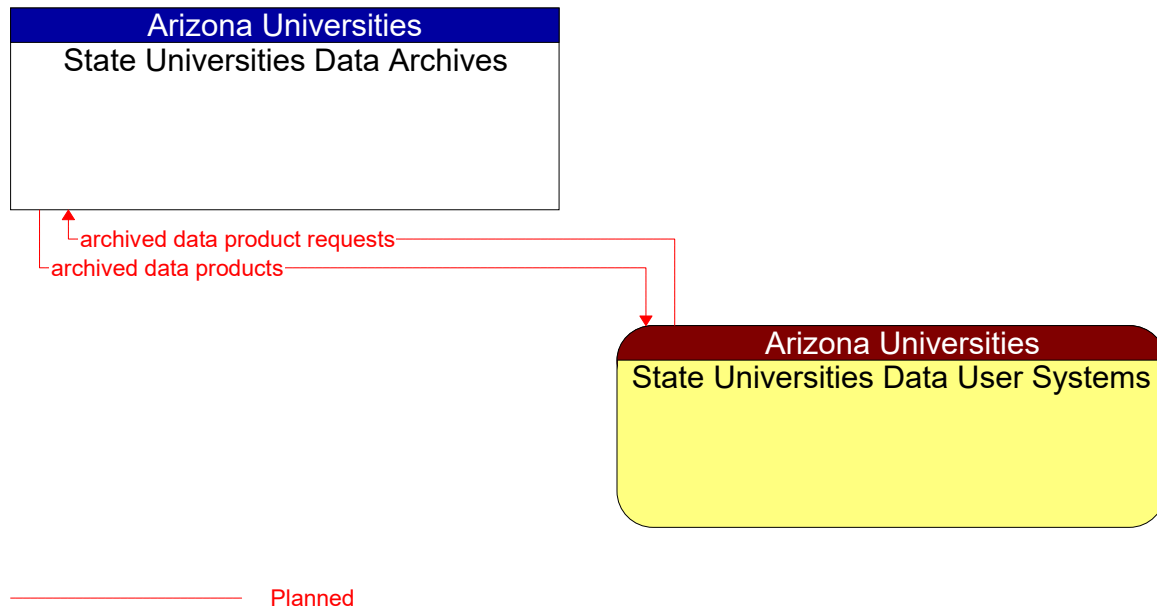


Figure 177: State Universities Data User Systems Context Diagram

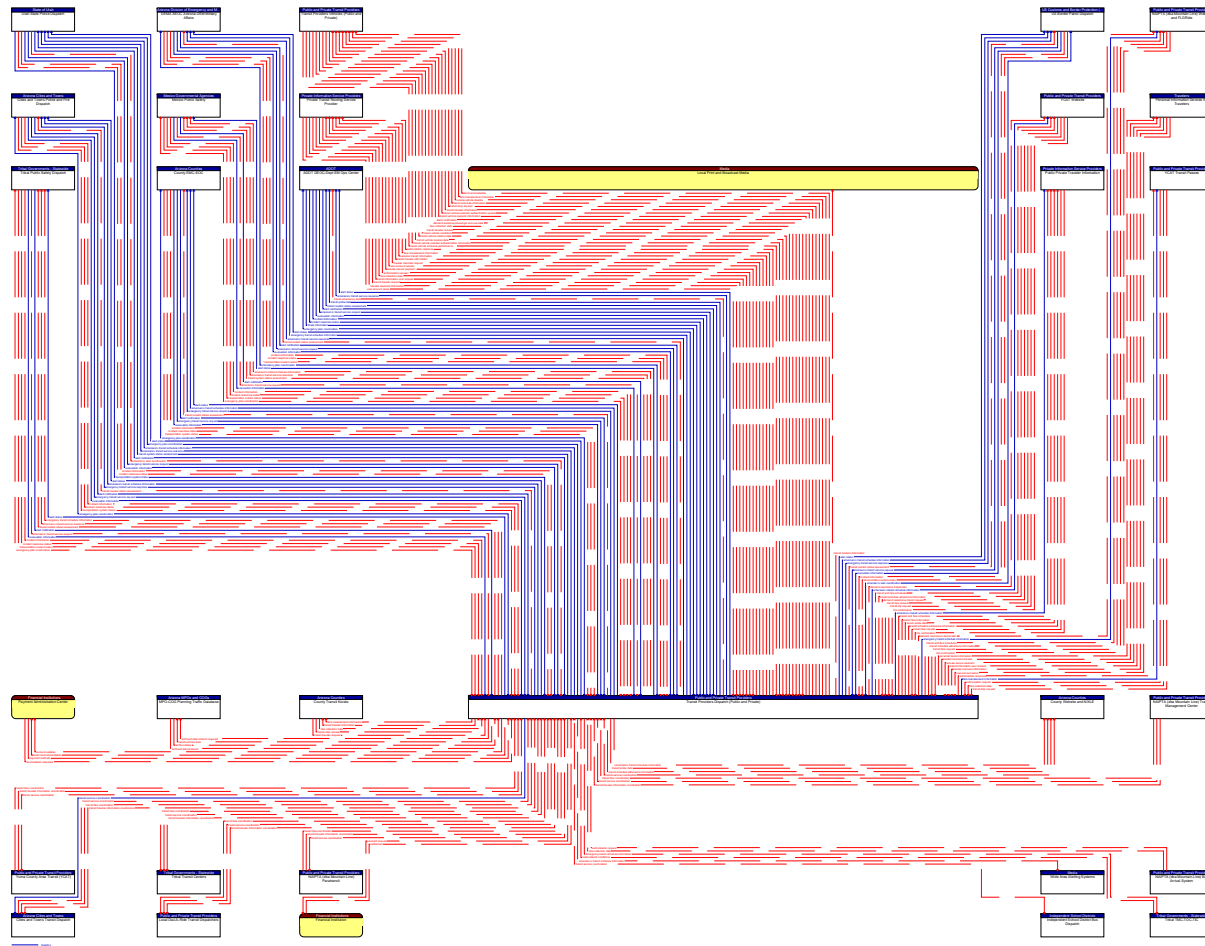


Figure 178: Transit Providers Dispatch (Public and Private) Context Diagram

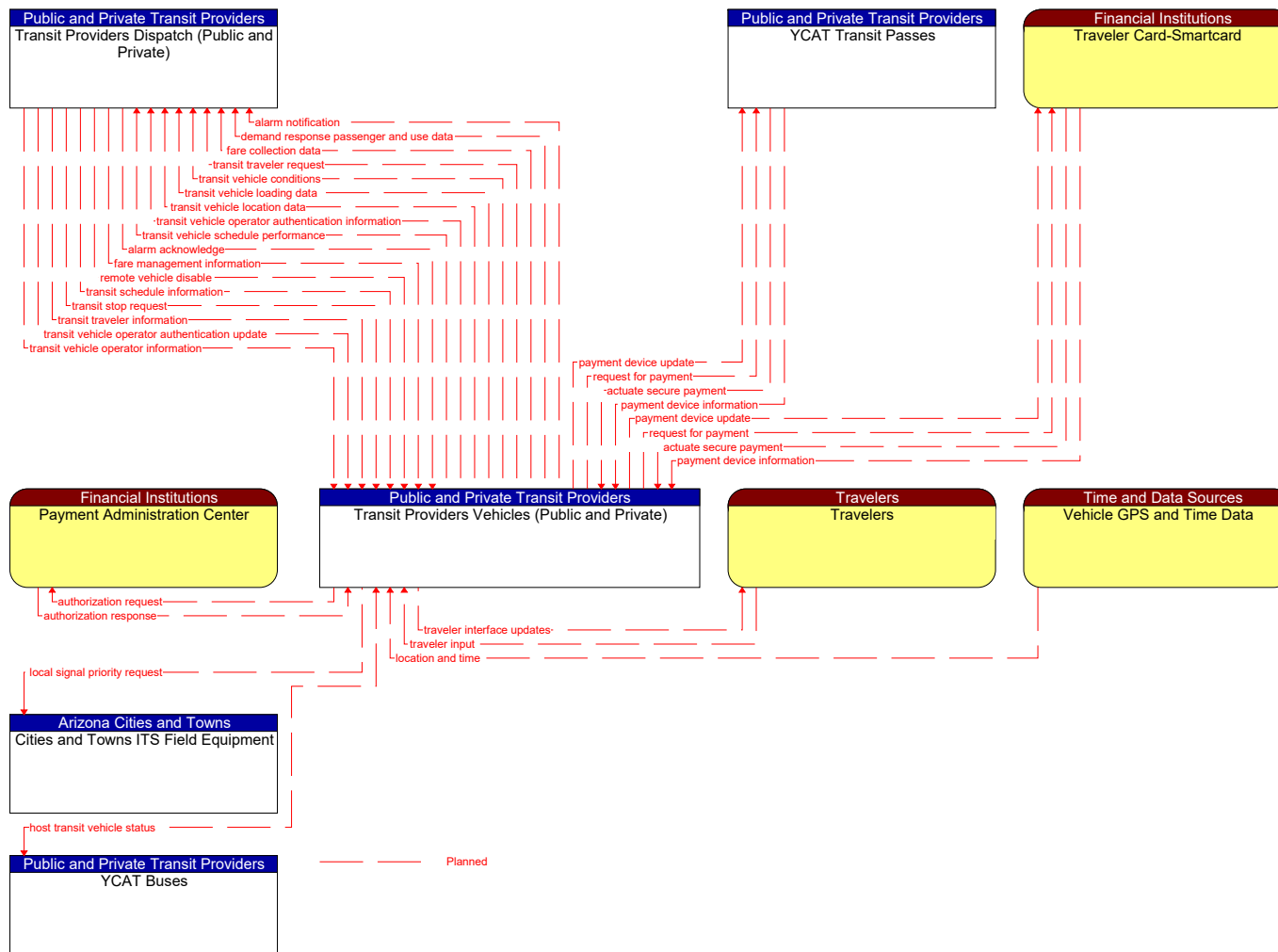


Figure 179: Transit Providers Vehicles (Public and Private) Context Diagram

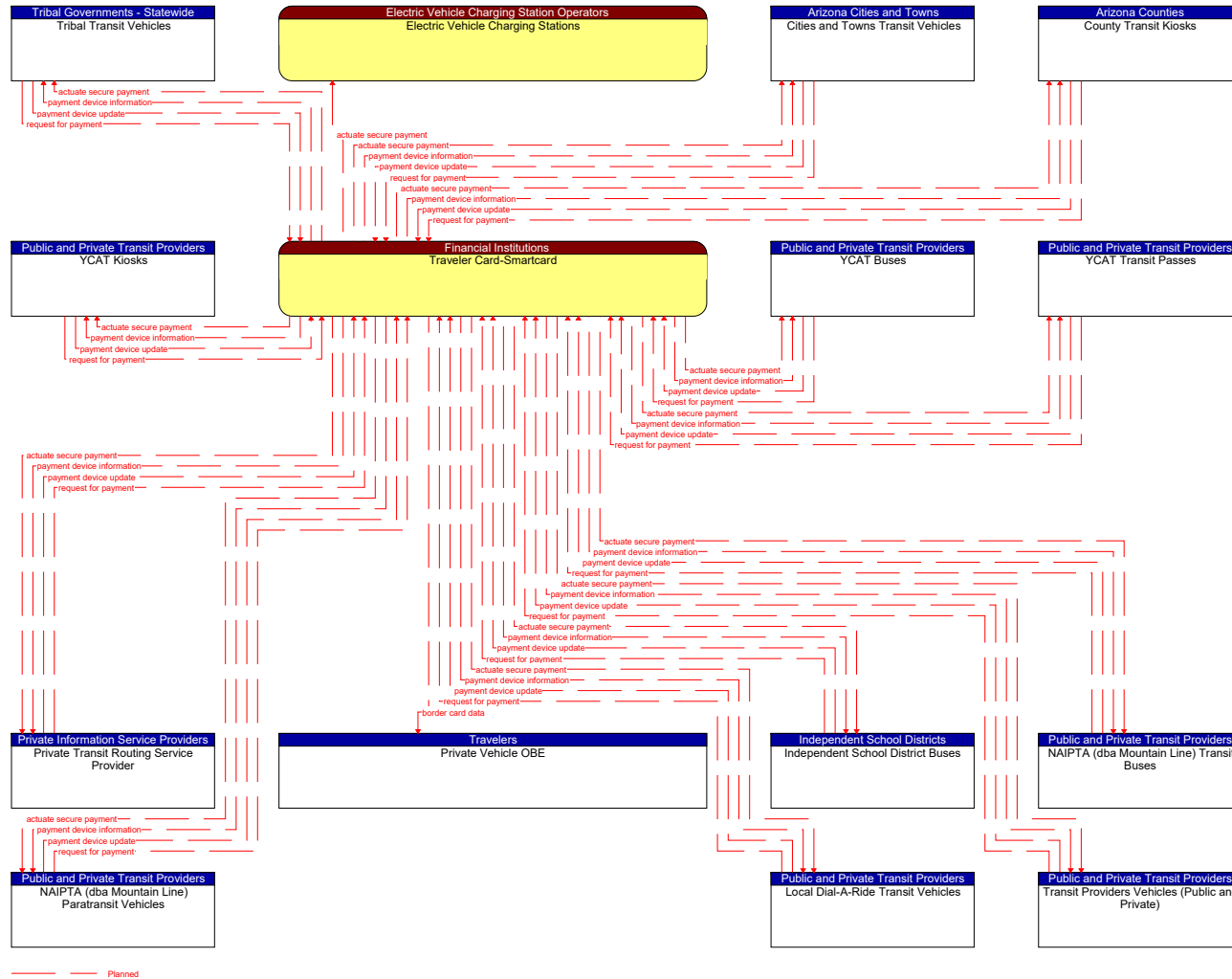


Figure 180: Traveler Card-Smartcard Context Diagram

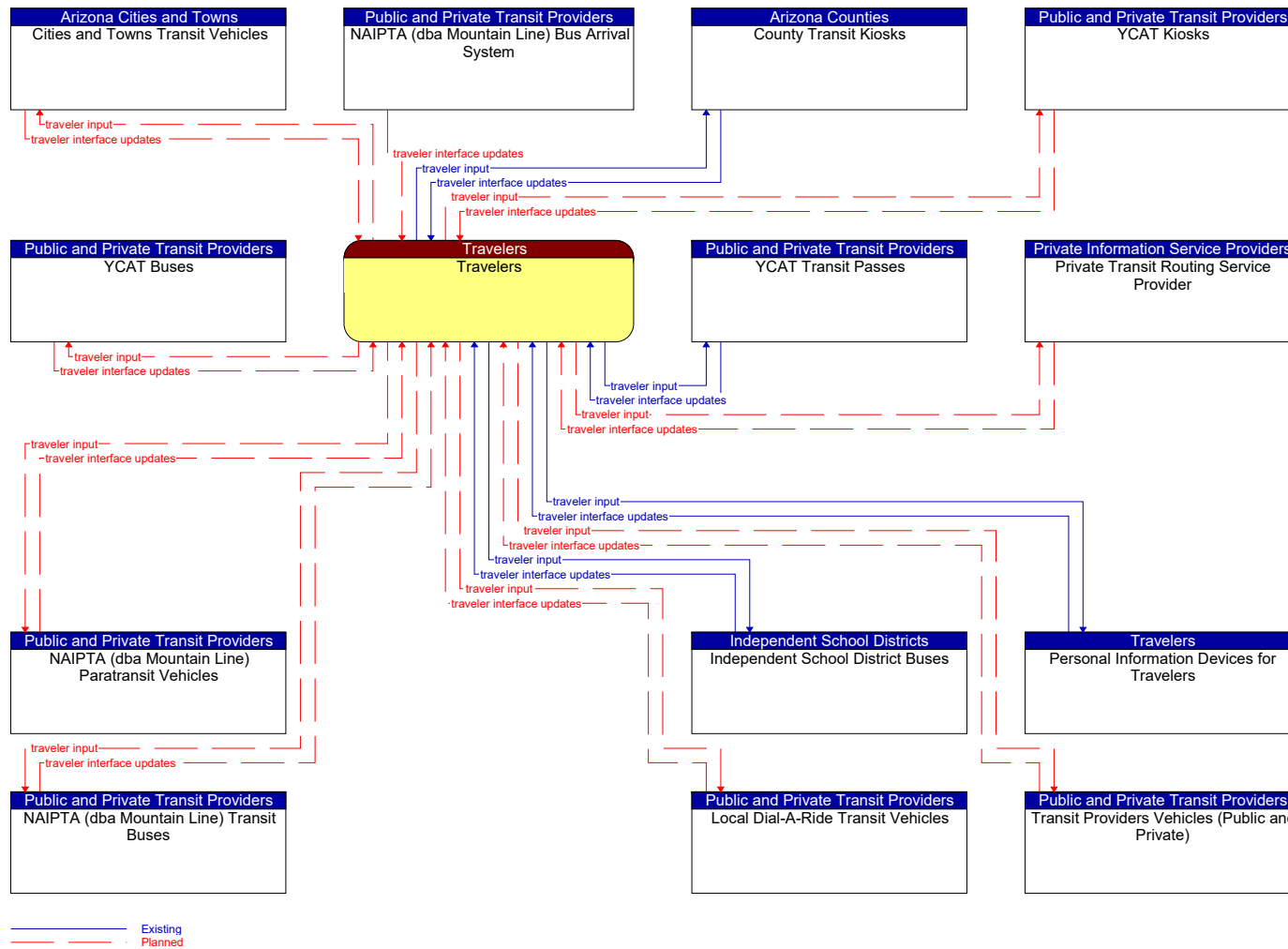


Figure 181: Travelers Context Diagram

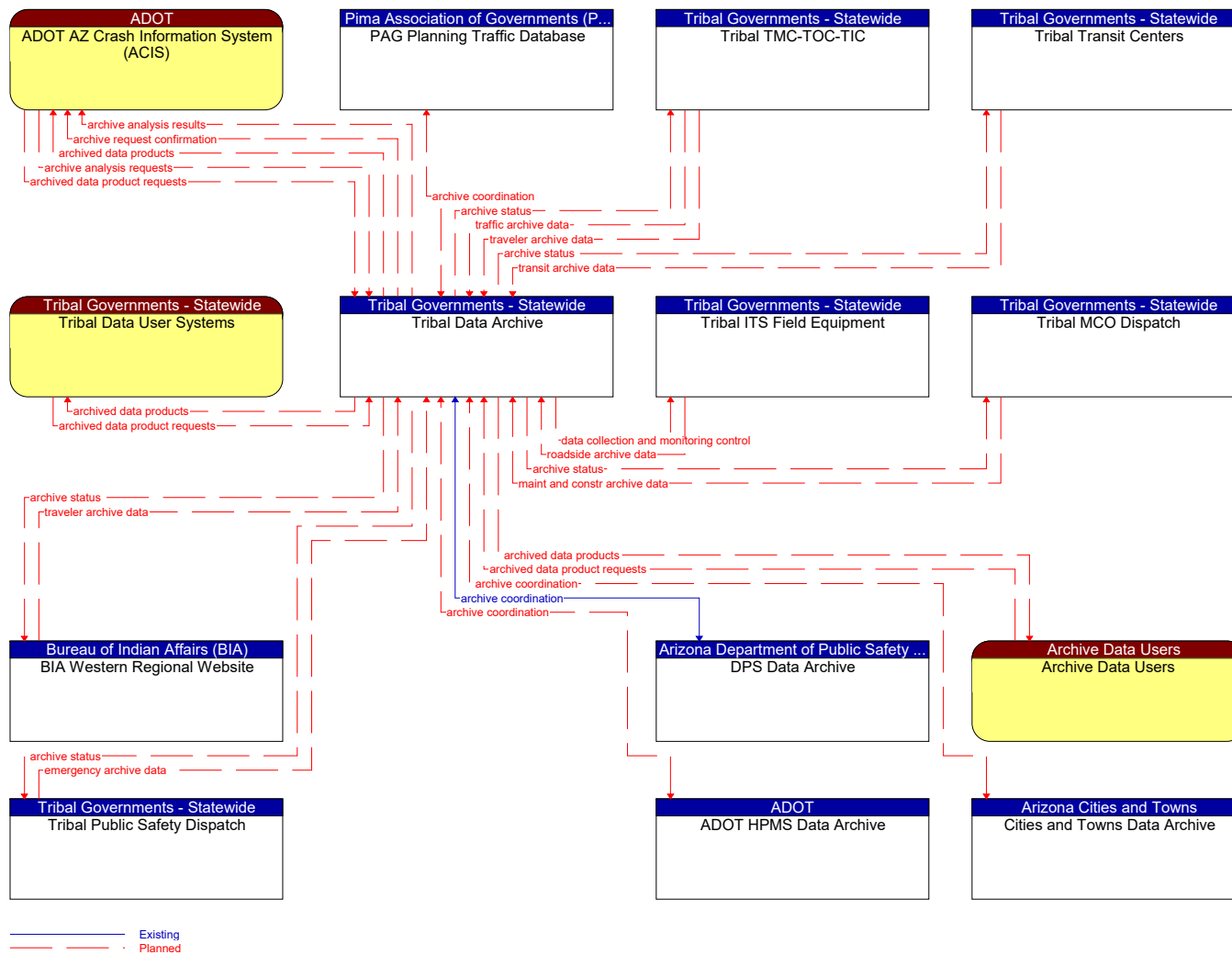


Figure 182: Tribal Data Archive Context Diagram

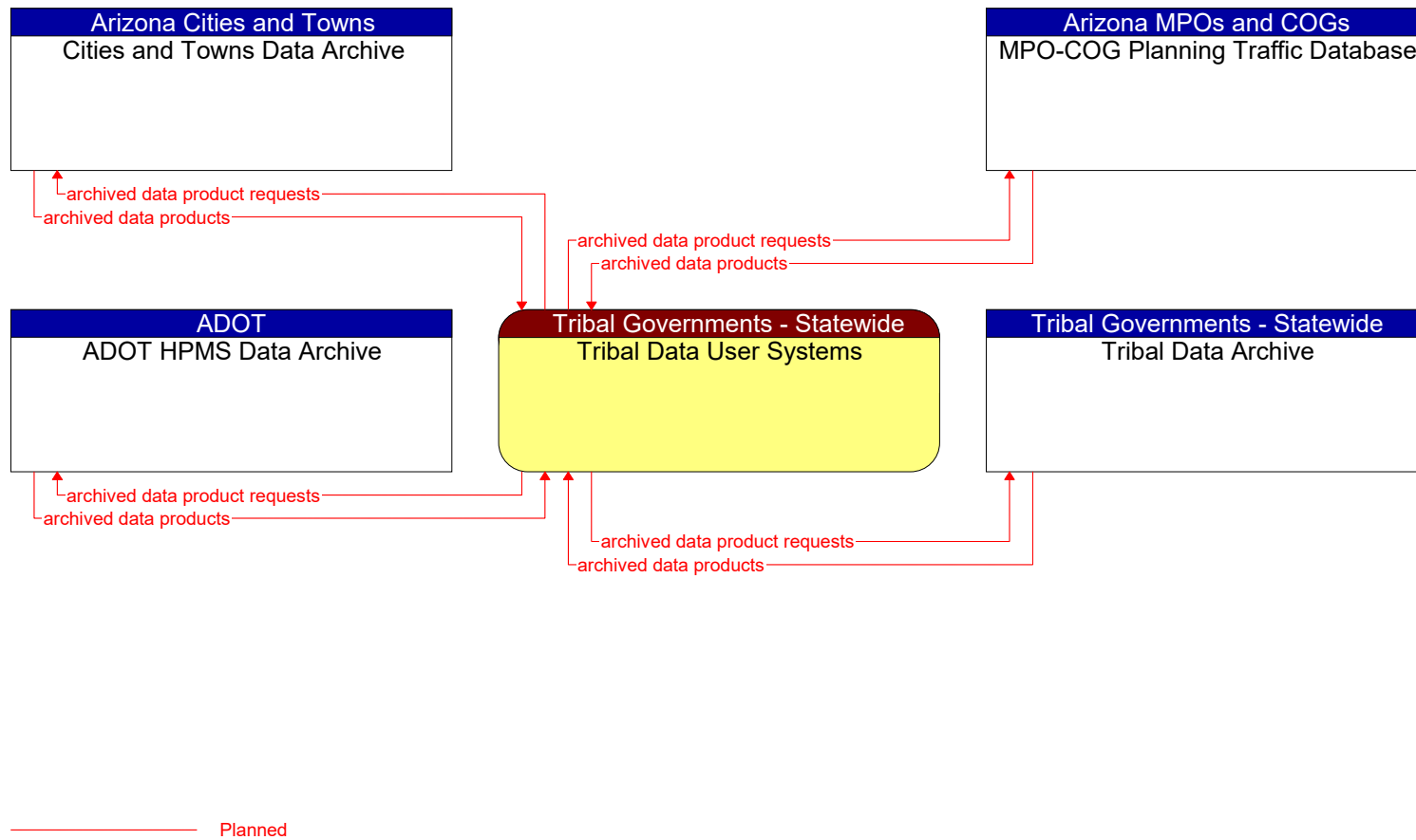


Figure 183: Tribal Data User Systems Context Diagram

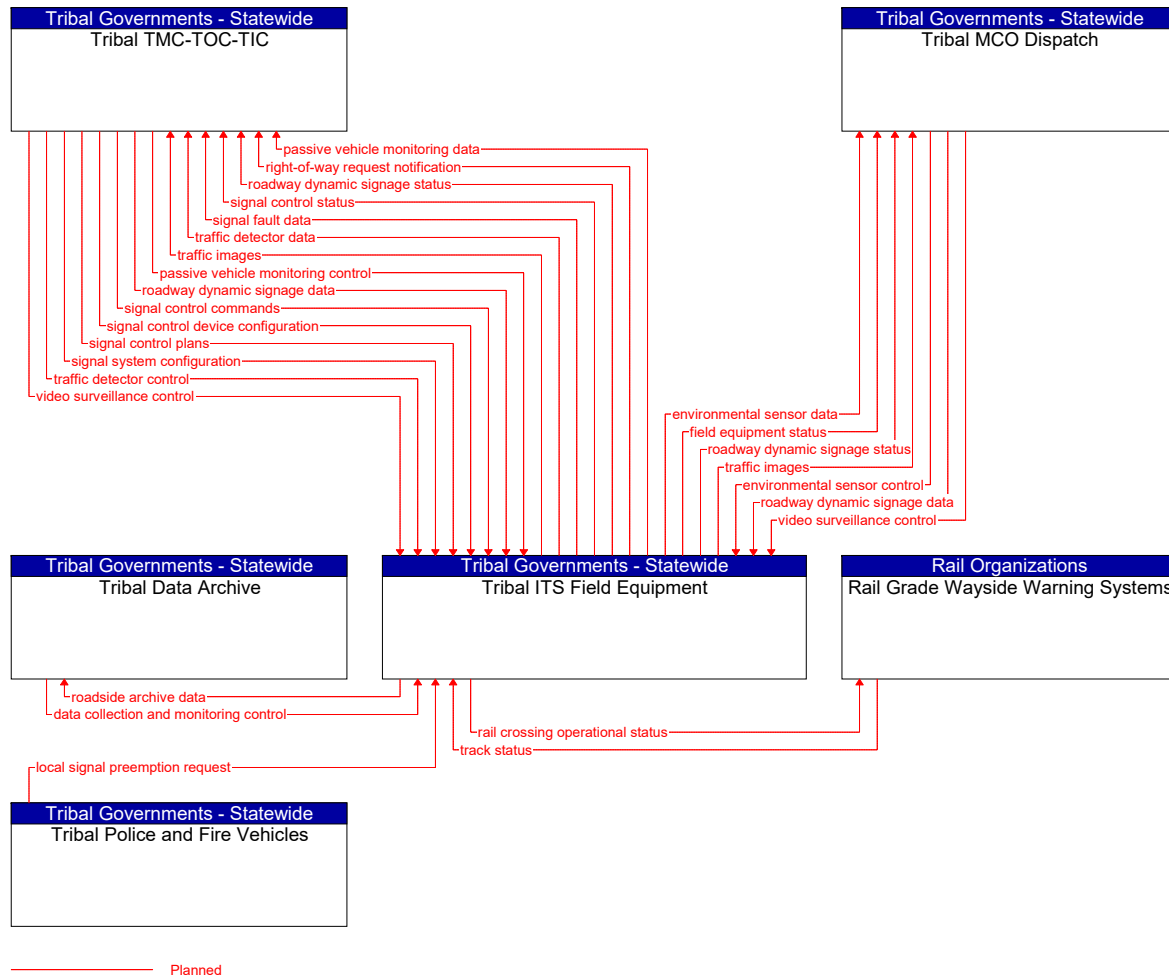


Figure 184: Tribal ITS Field Equipment Context Diagram

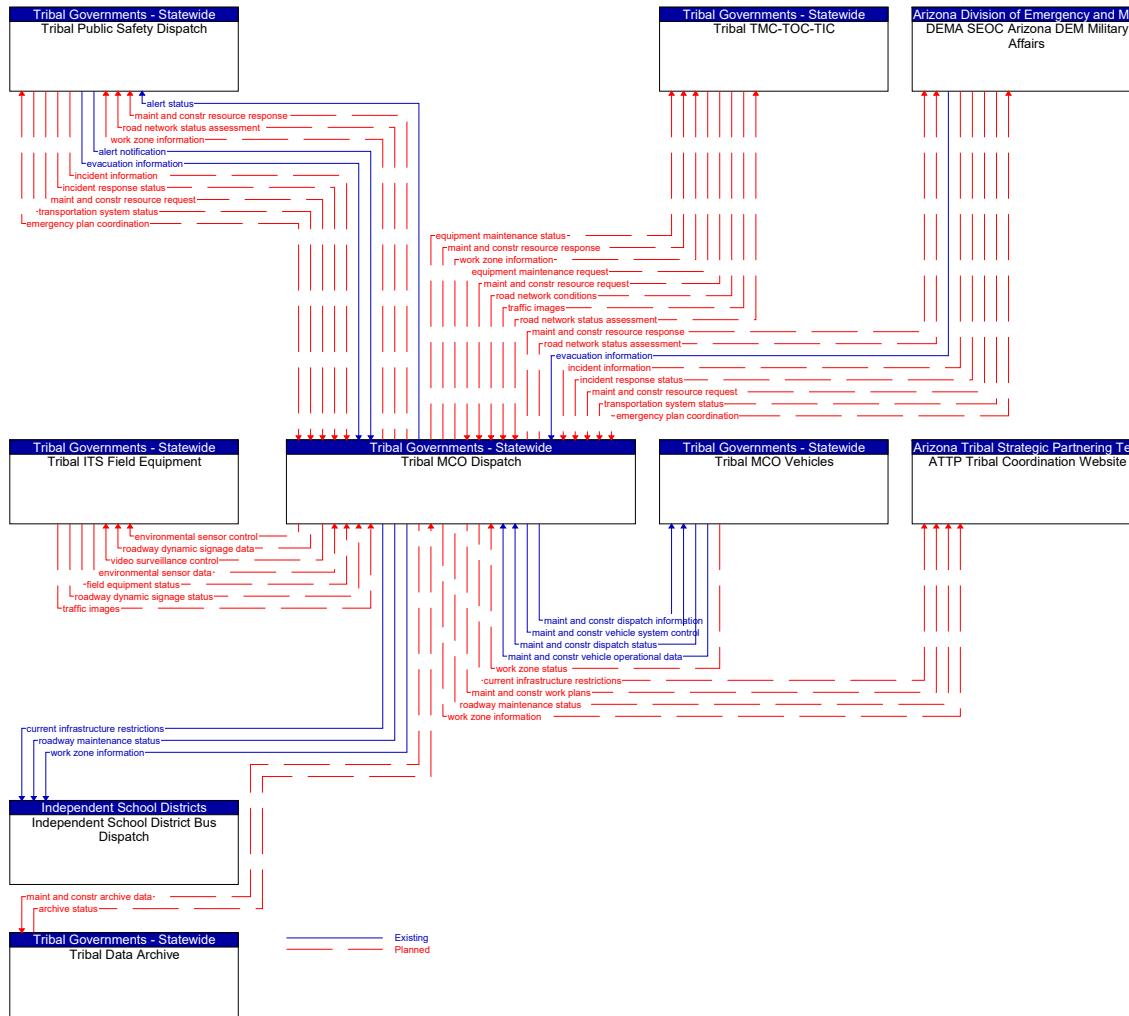


Figure 185: Tribal MCO Dispatch Context Diagram

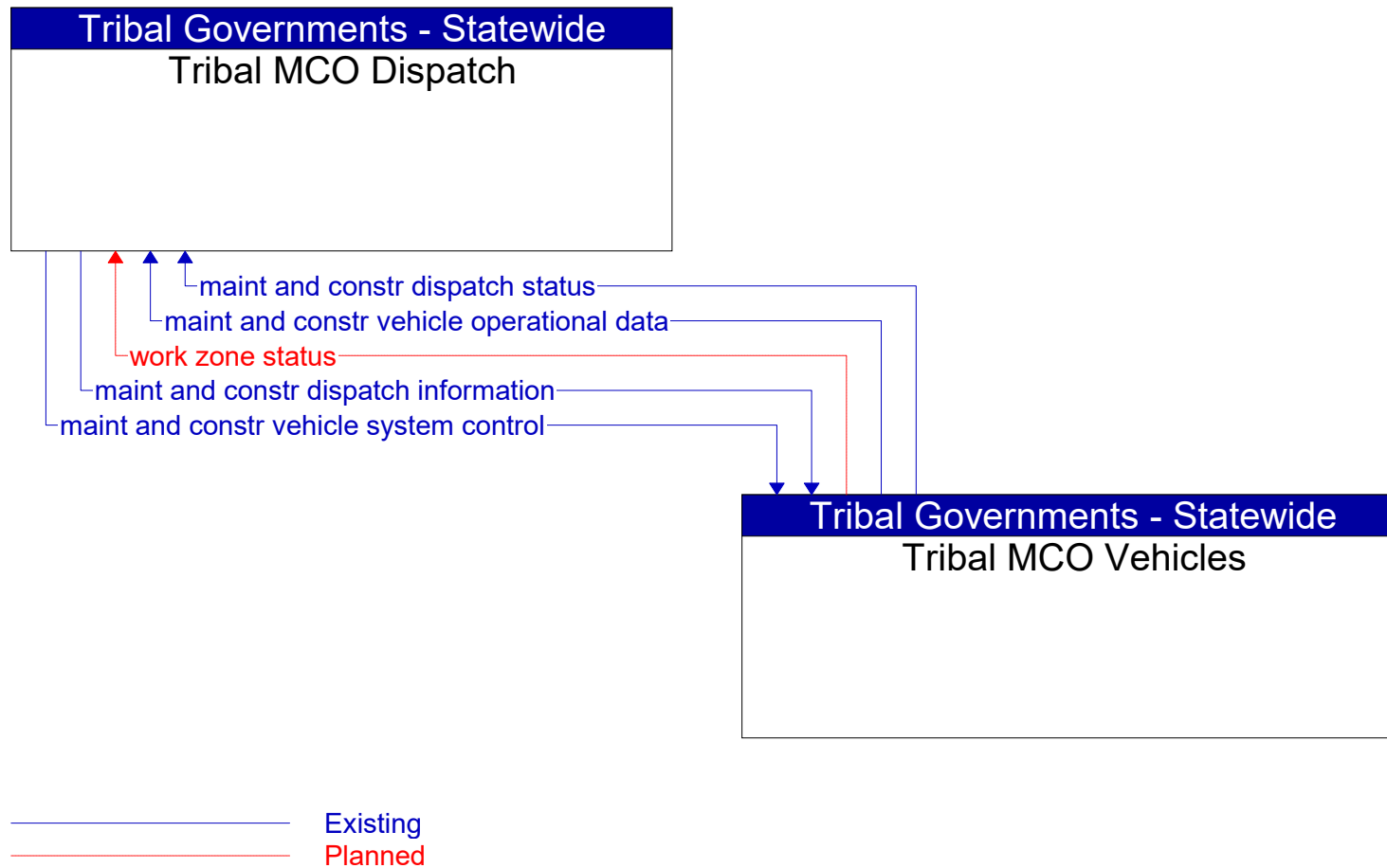


Figure 186: Tribal MCO Vehicles Context Diagram

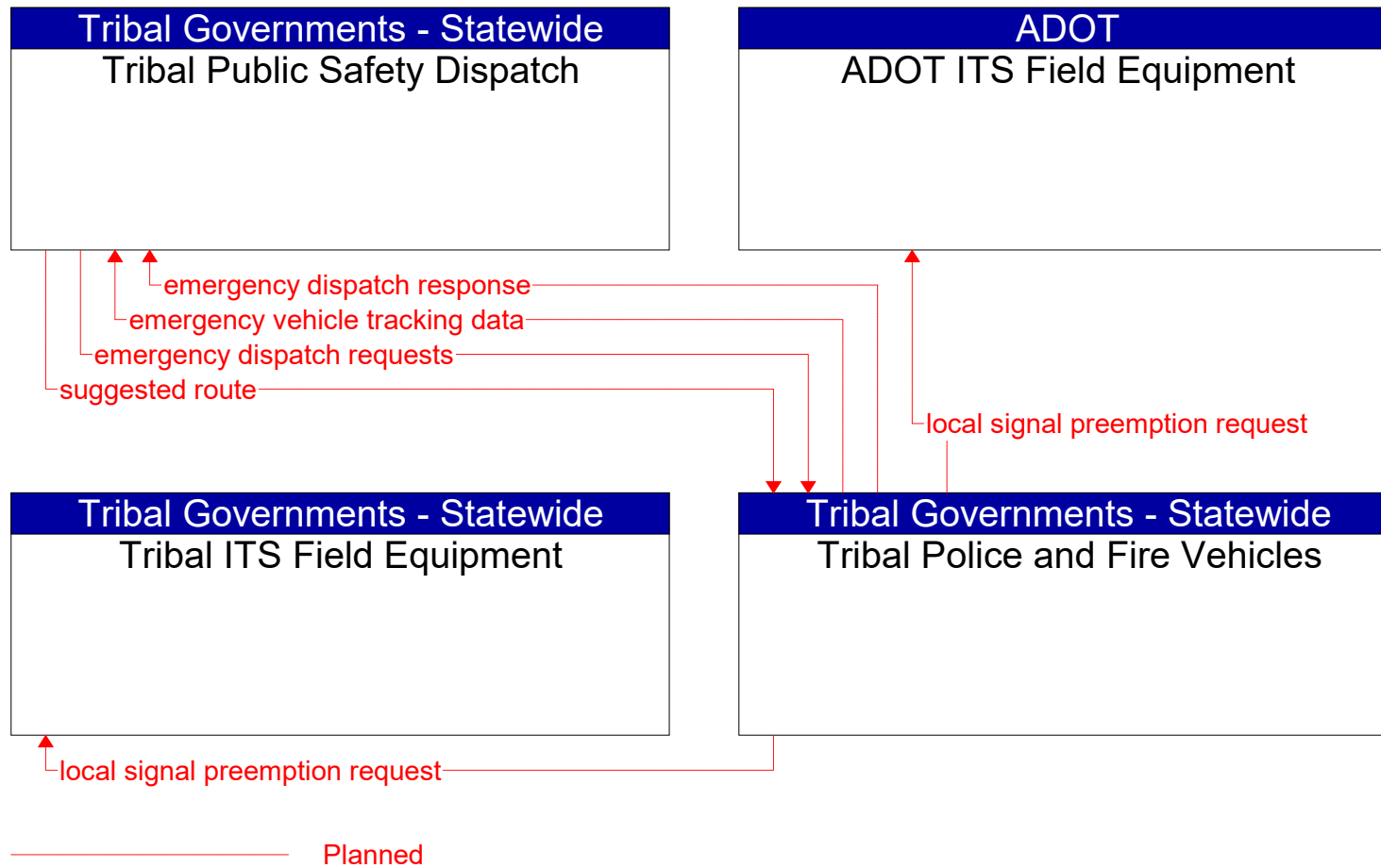


Figure 187: Tribal Police and Fire Vehicles Context Diagram

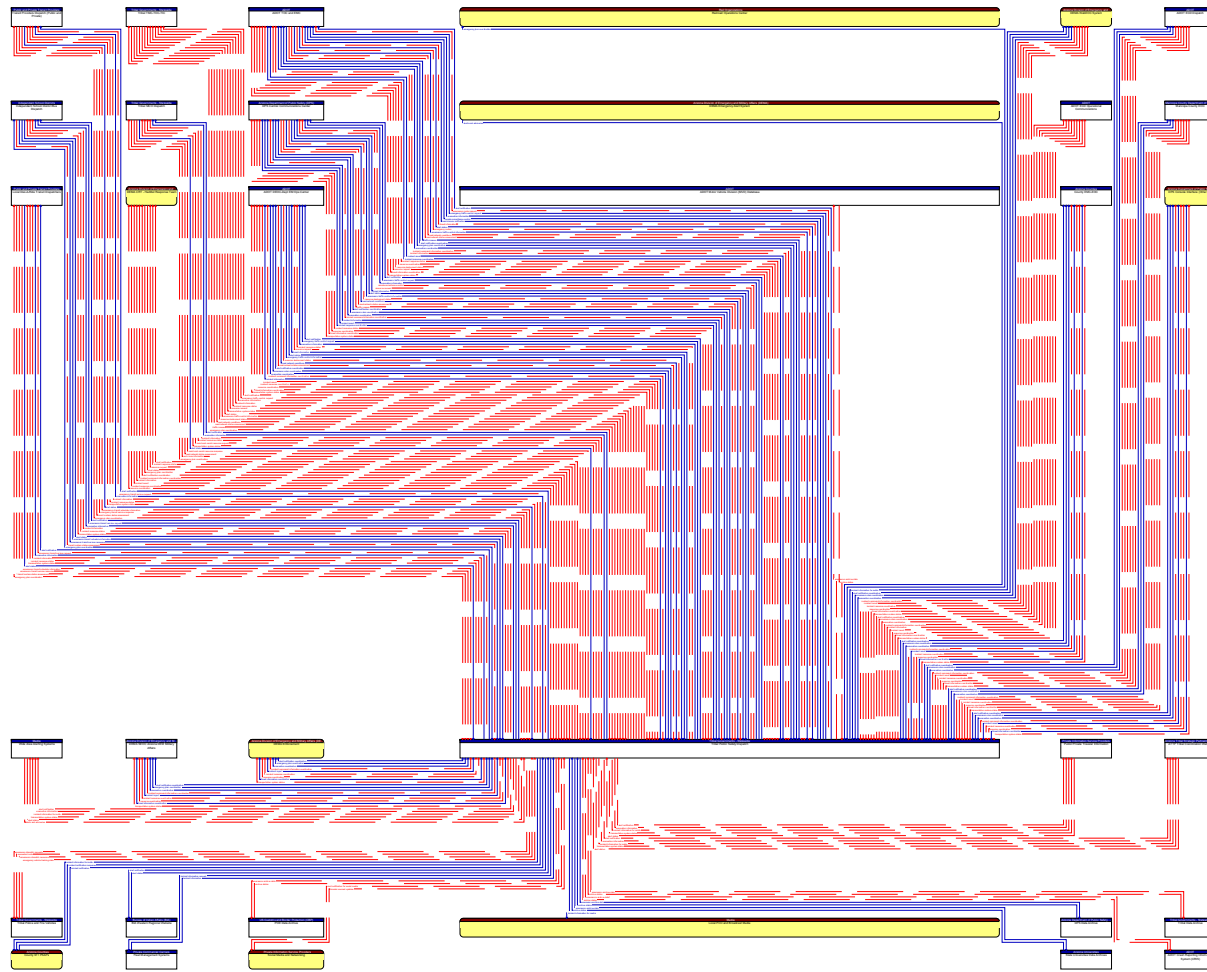


Figure 188: Tribal Public Safety Dispatch Context Diagram

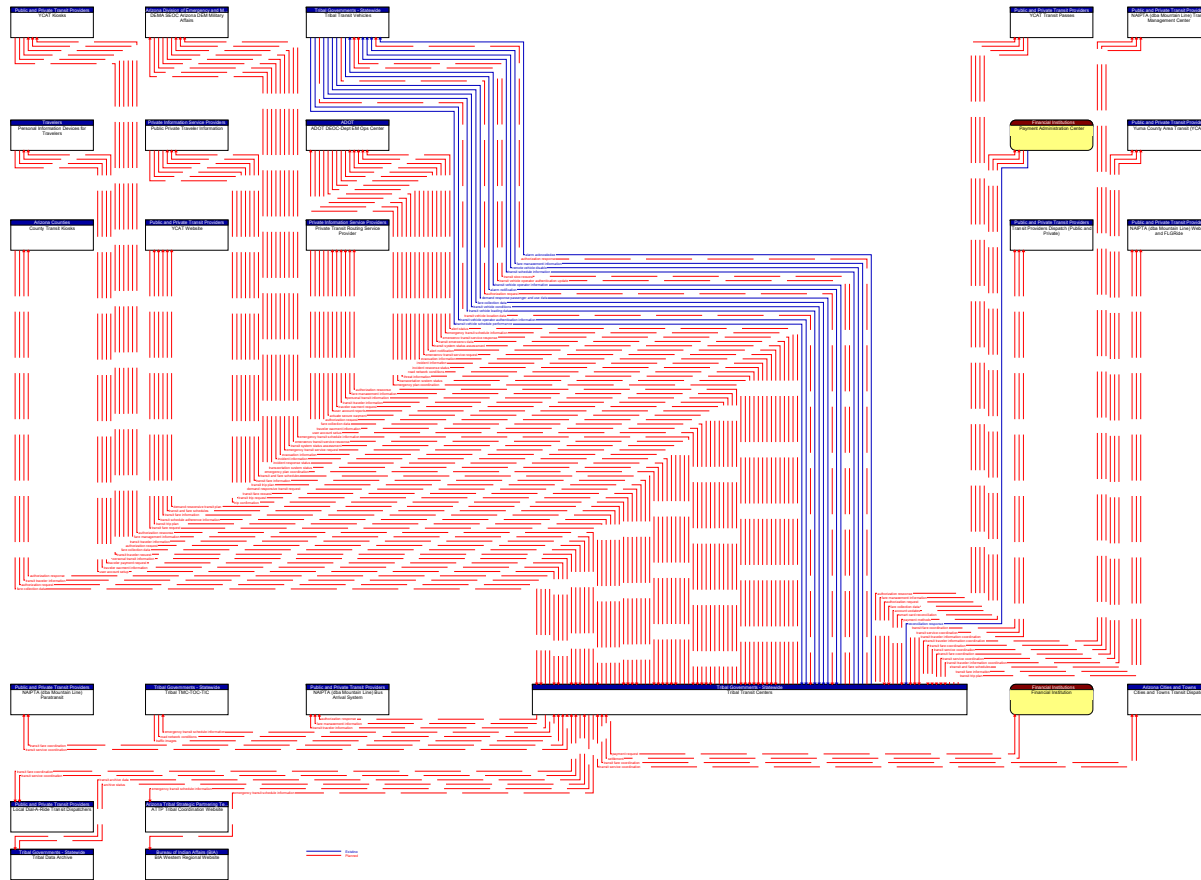


Figure 190: Tribal Transit Centers Context Diagram

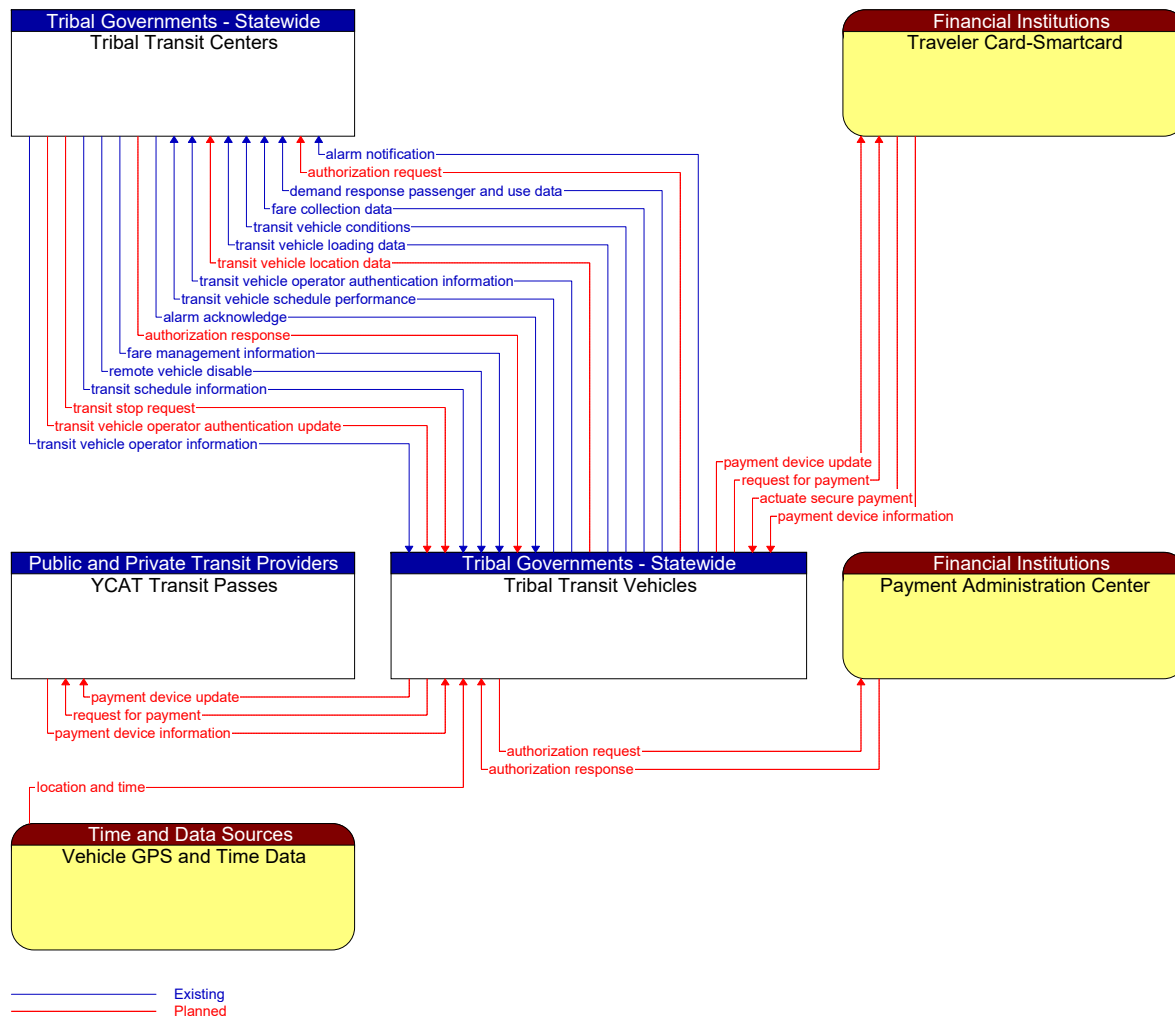


Figure 191: Tribal Transit Vehicles Context Diagram

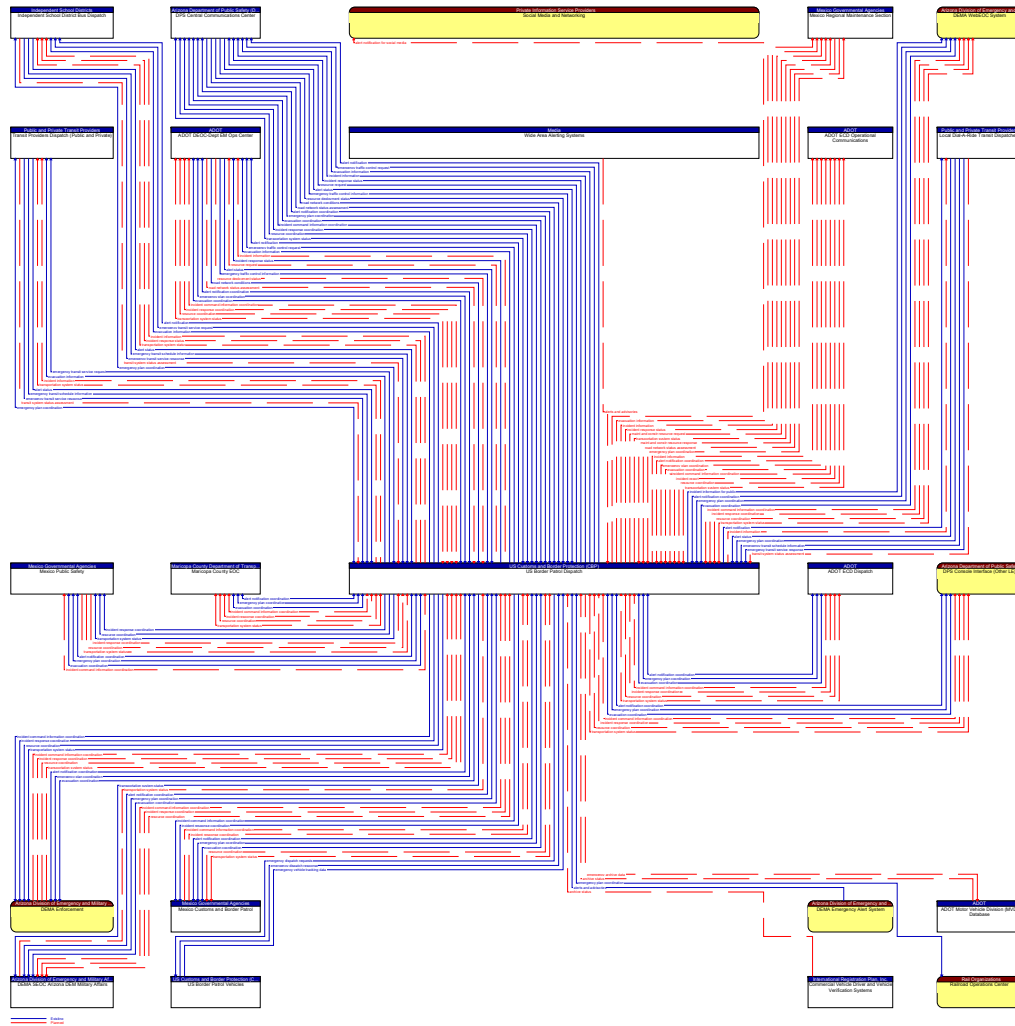


Figure 192: US Border Patrol Dispatch Context Diagram

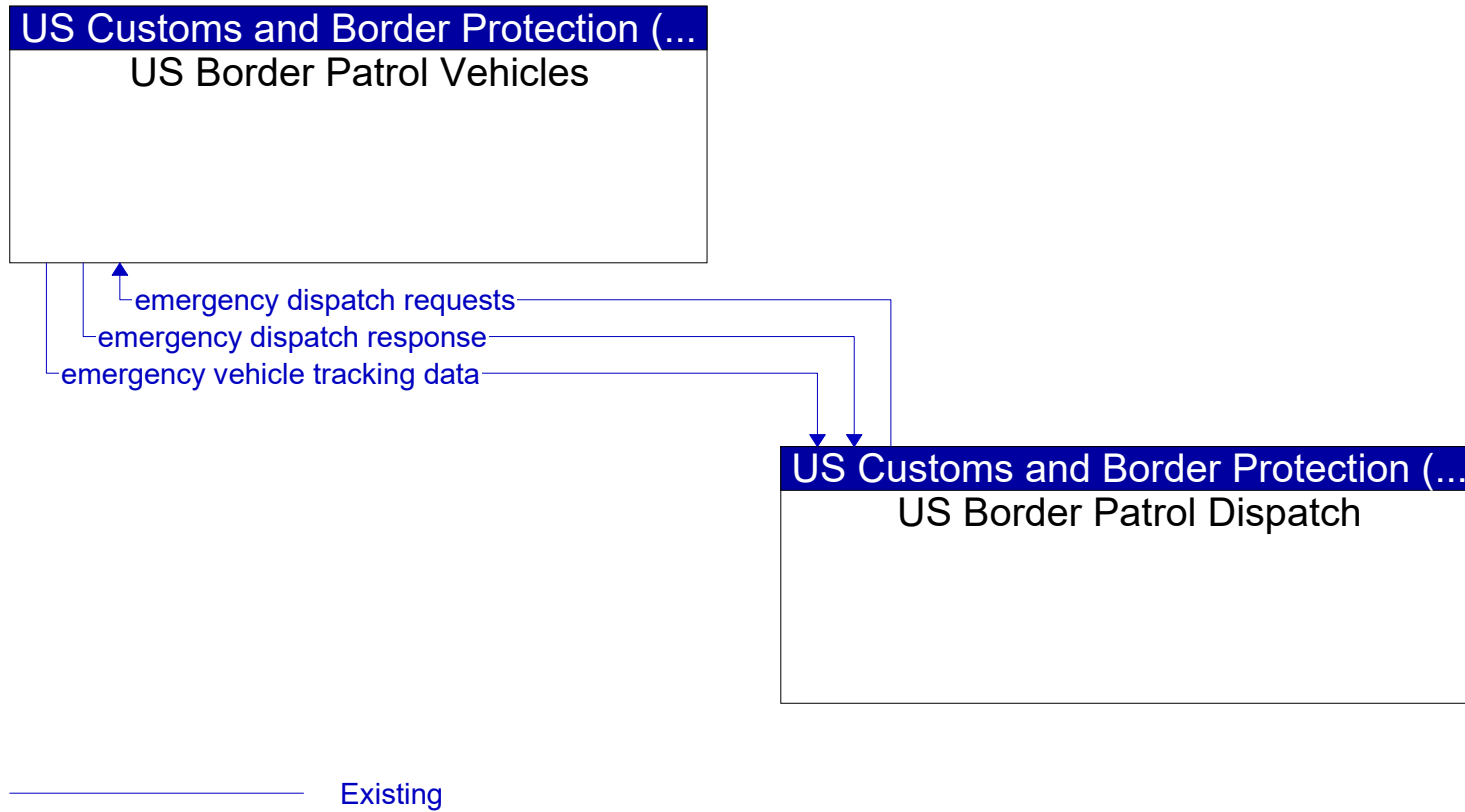


Figure 193: US Border Patrol Vehicles Context Diagram

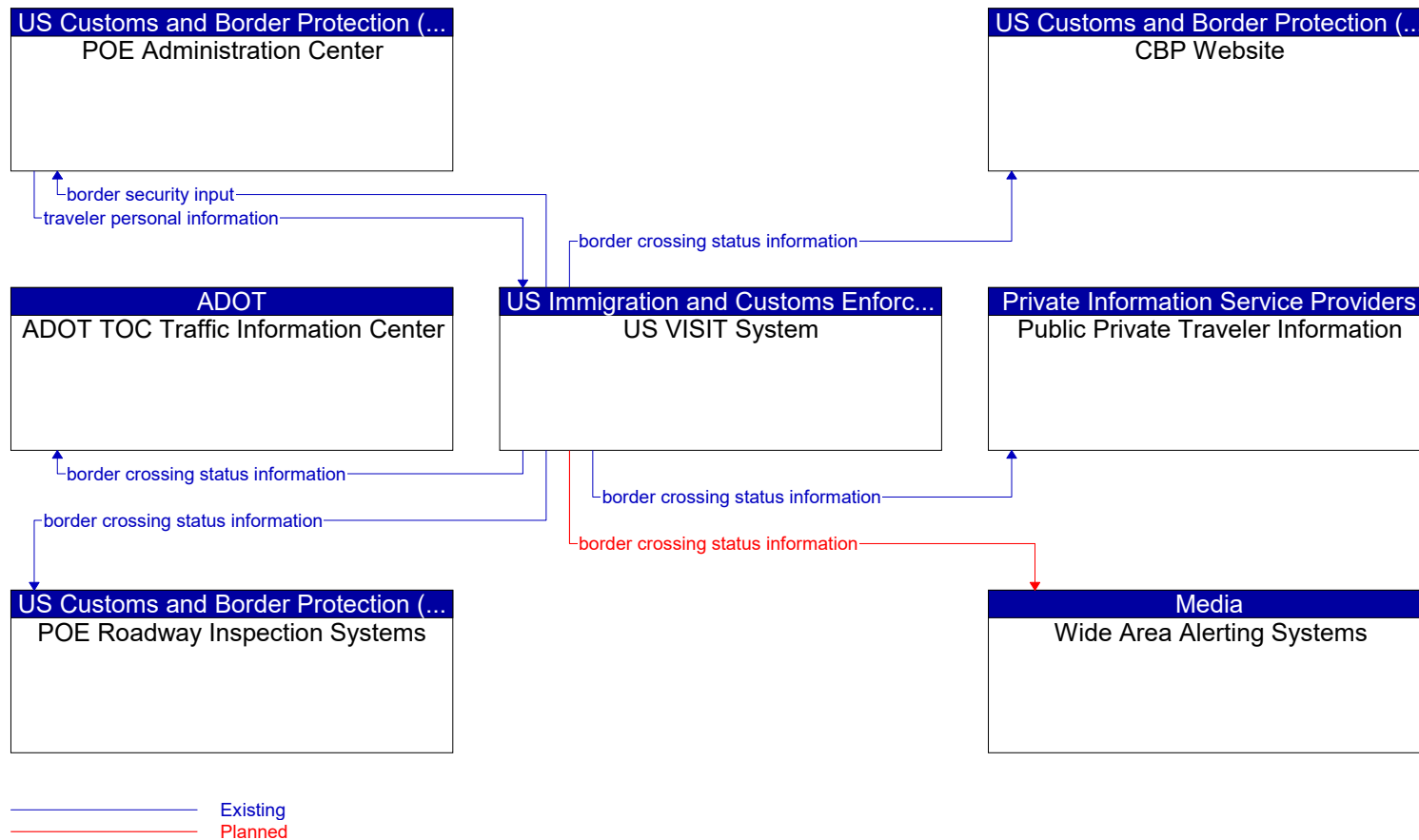


Figure 194: US VISIT System Context Diagram

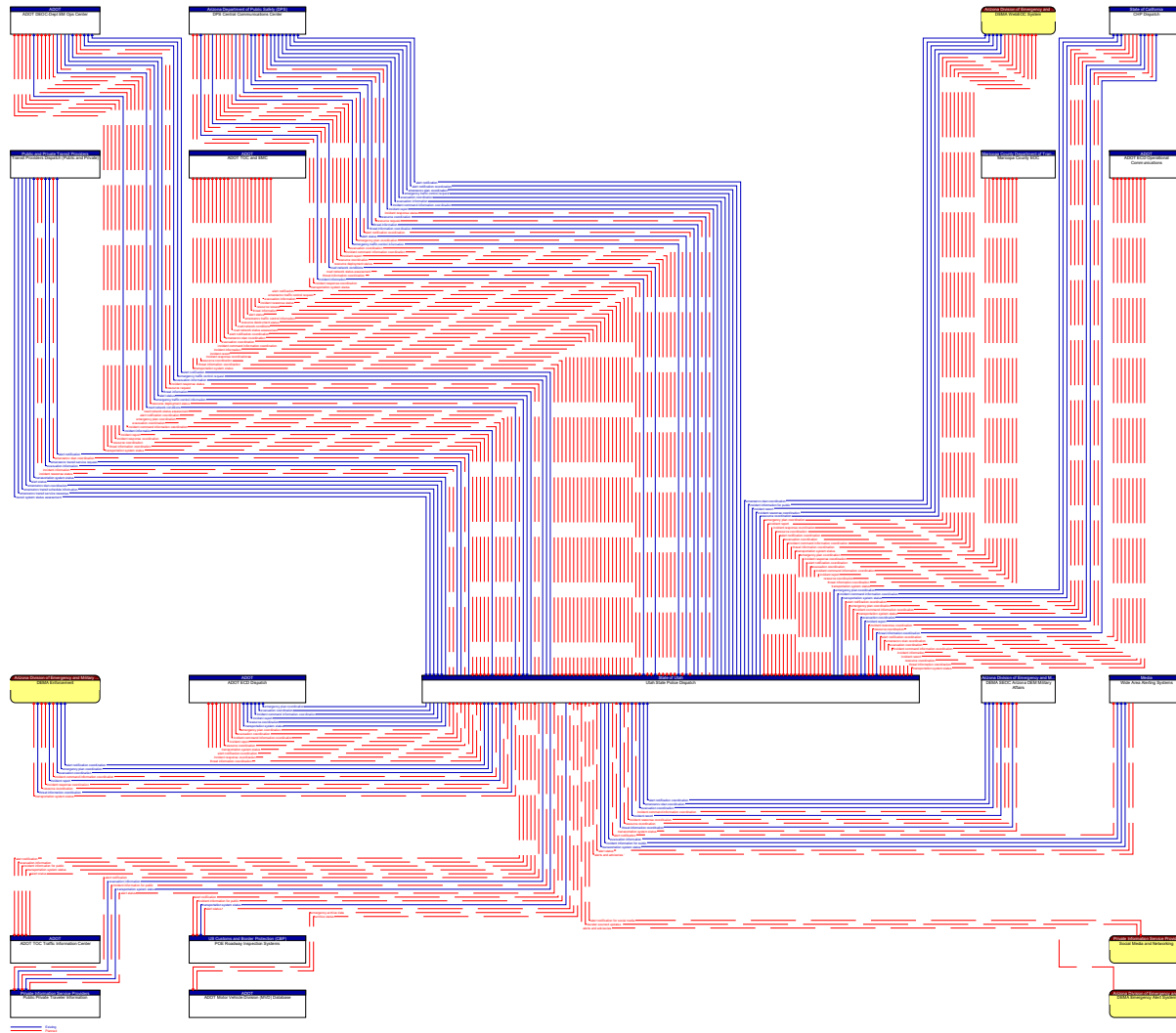


Figure 195: Utah State Police Dispatch Context Diagram

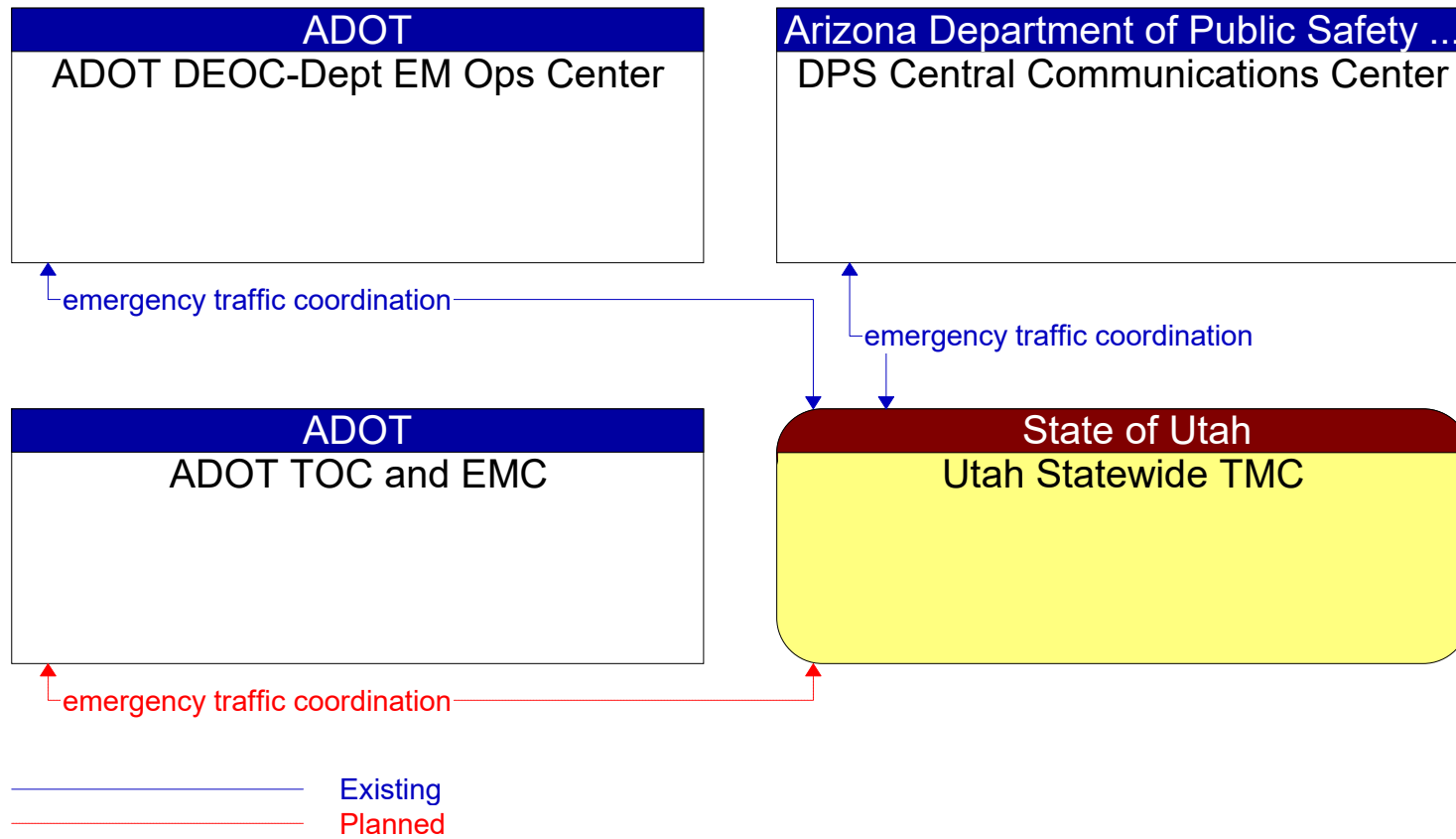


Figure 196: Utah Statewide TMC Context Diagram

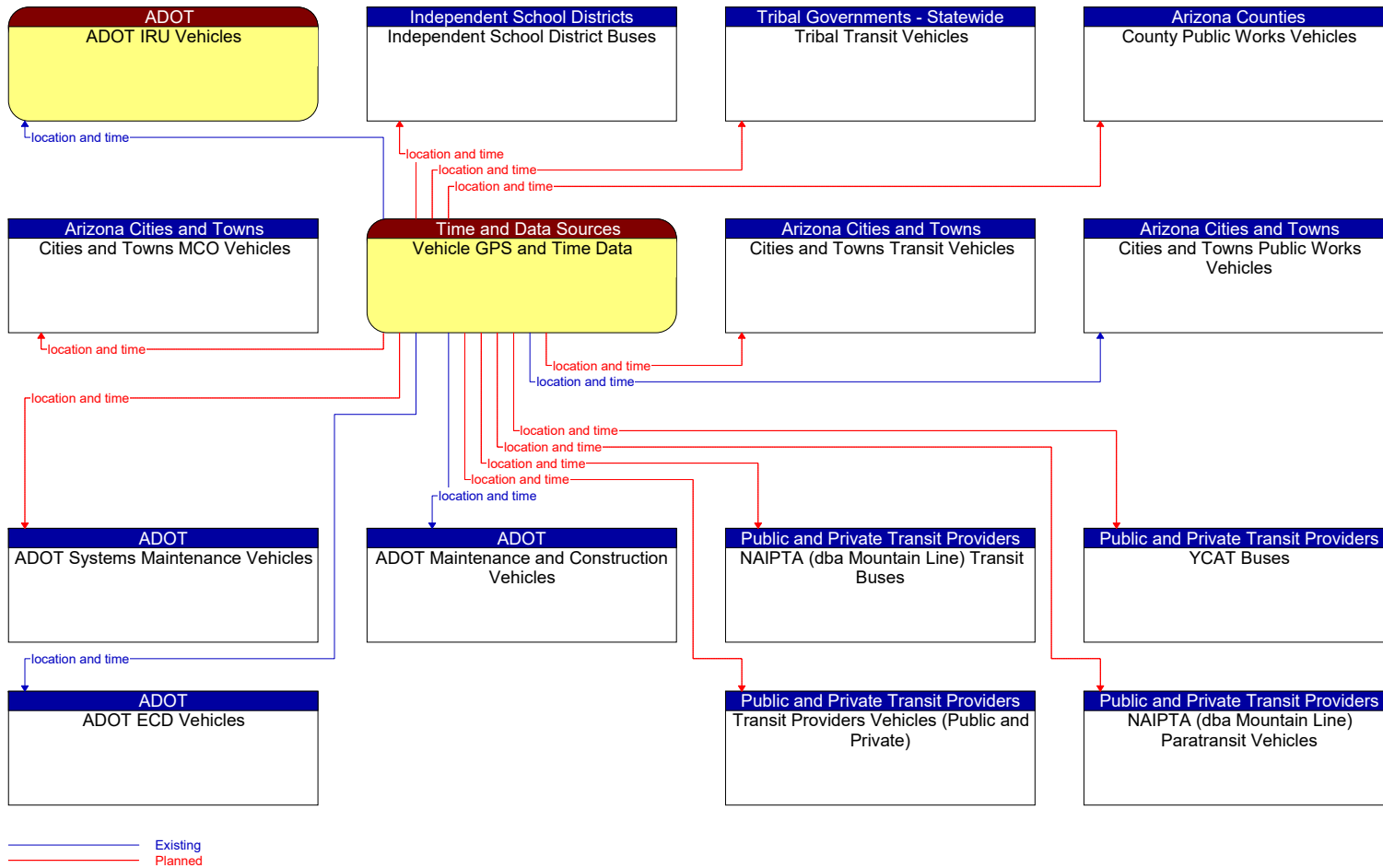


Figure 197: Vehicle GPS and Time Data Context Diagram

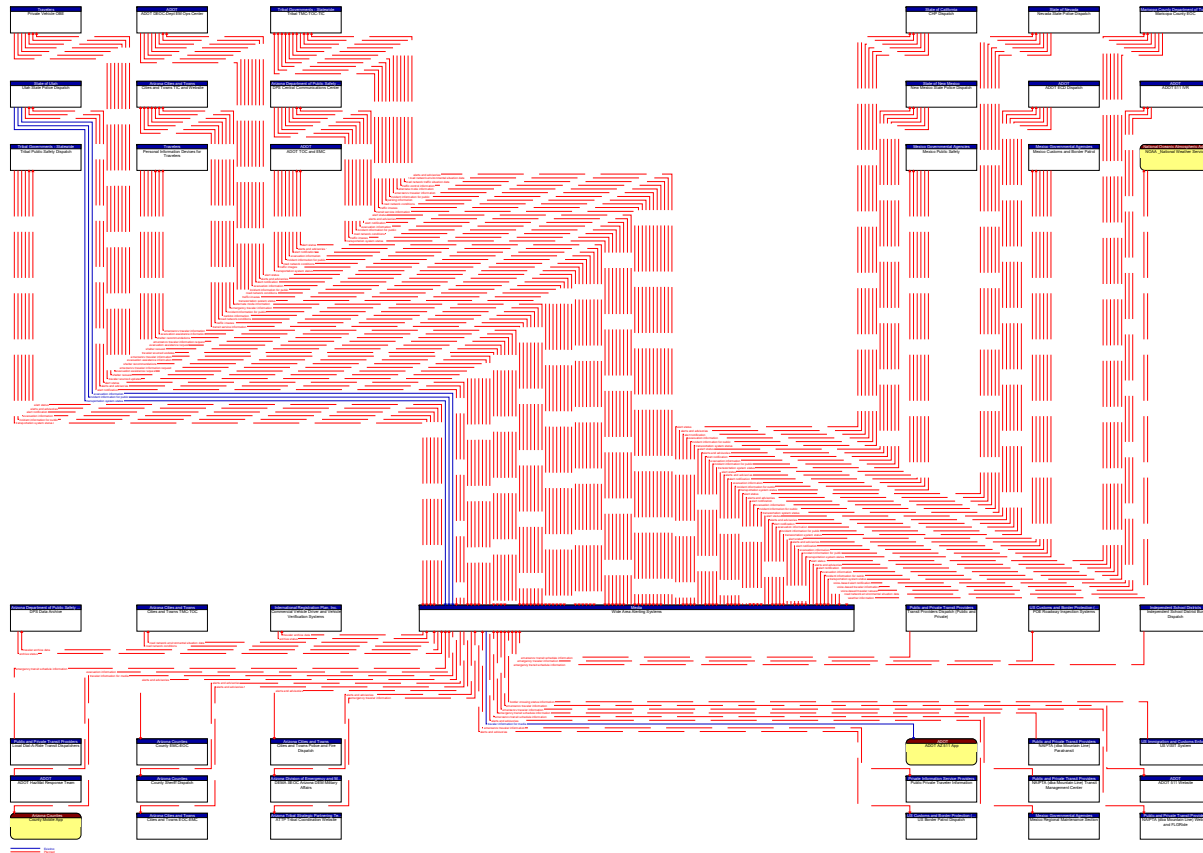


Figure 198: Wide Area Alerting Systems Context Diagram

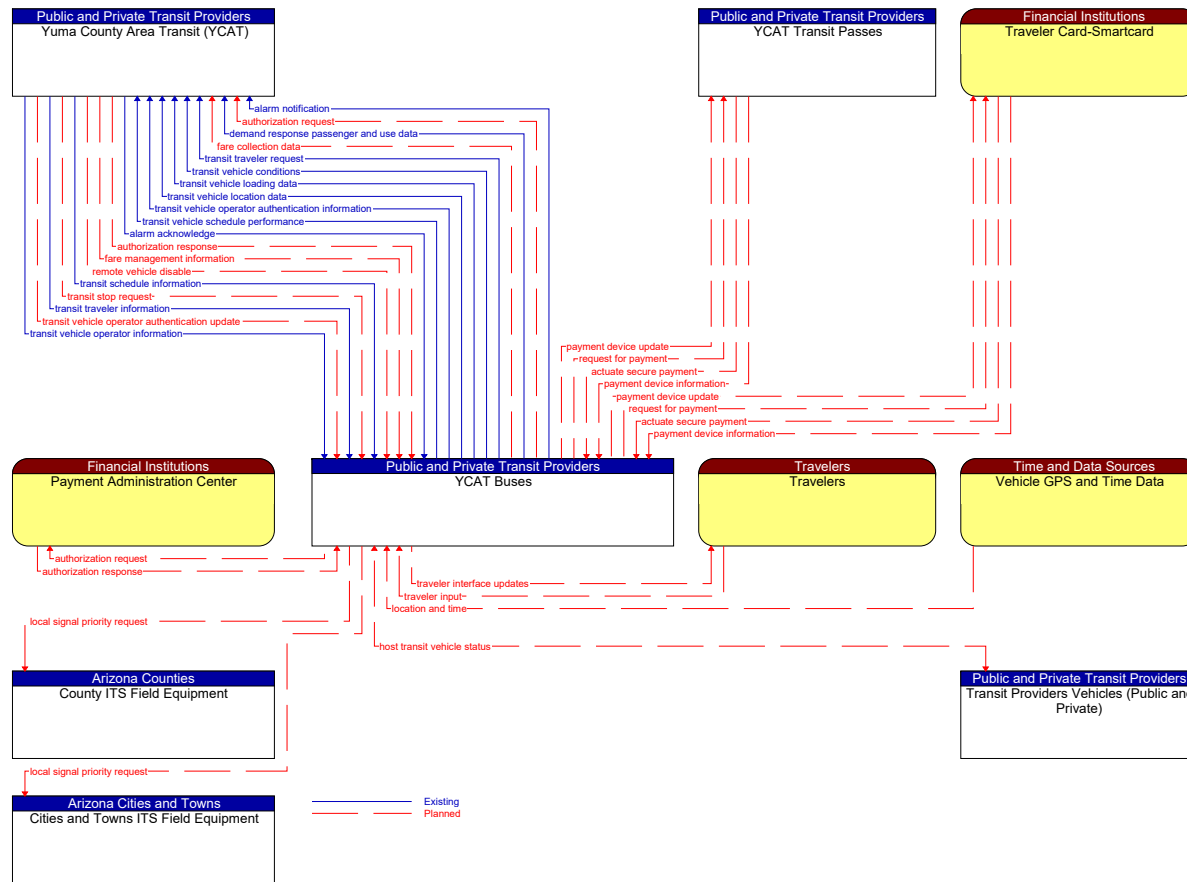


Figure 199: YCAT Buses Context Diagram

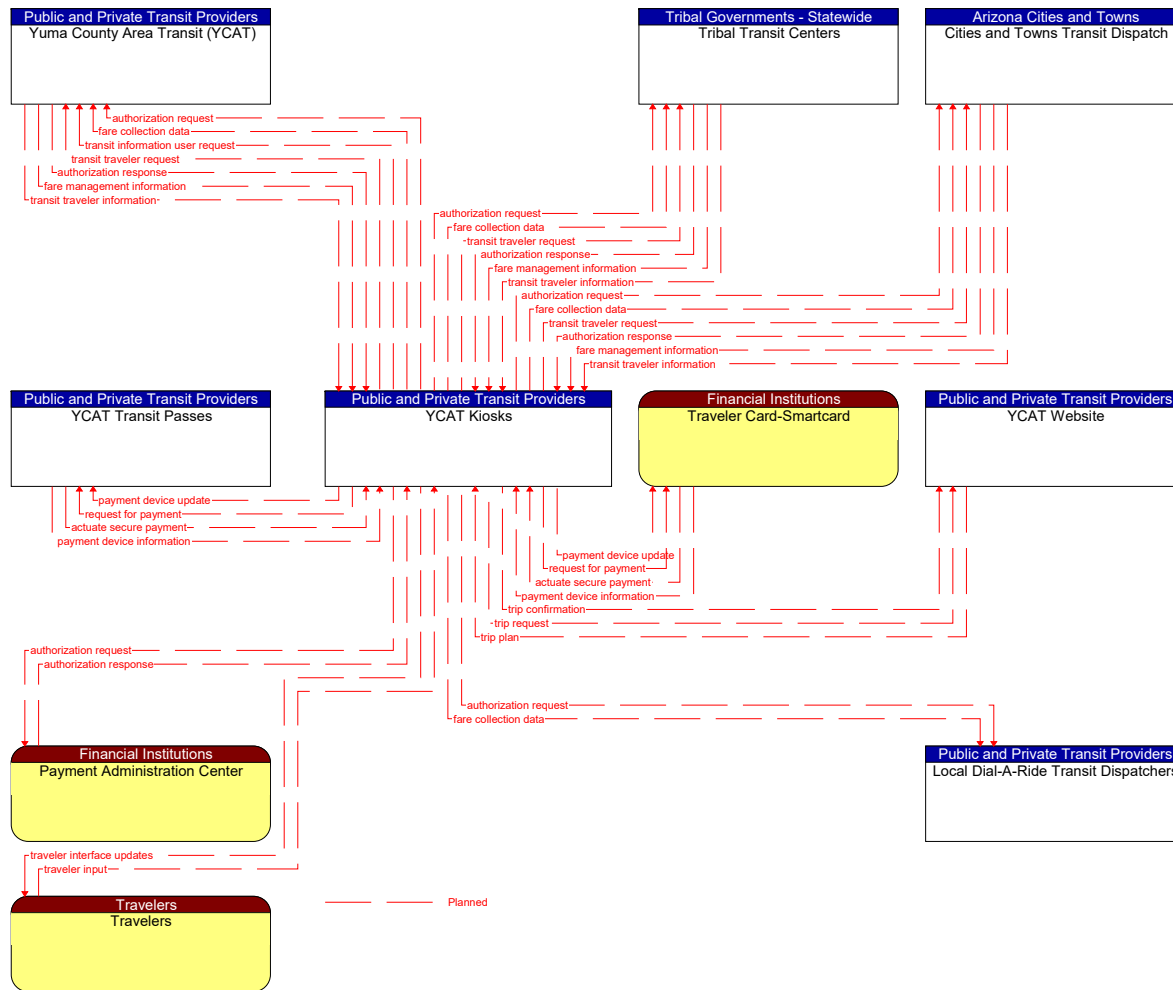


Figure 200: YCAT Kiosks Context Diagram

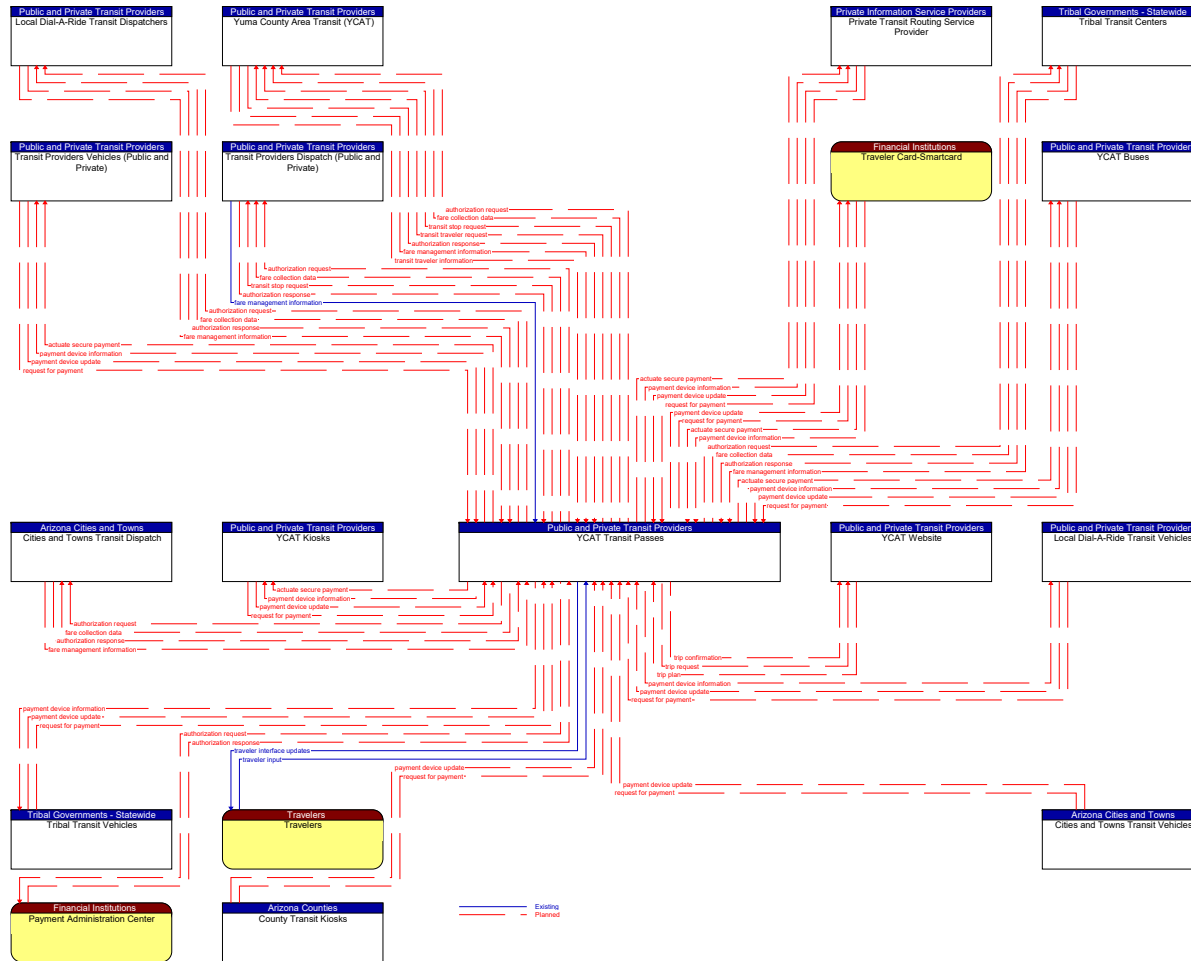


Figure 201: YCAT Transit Passes Context Diagram

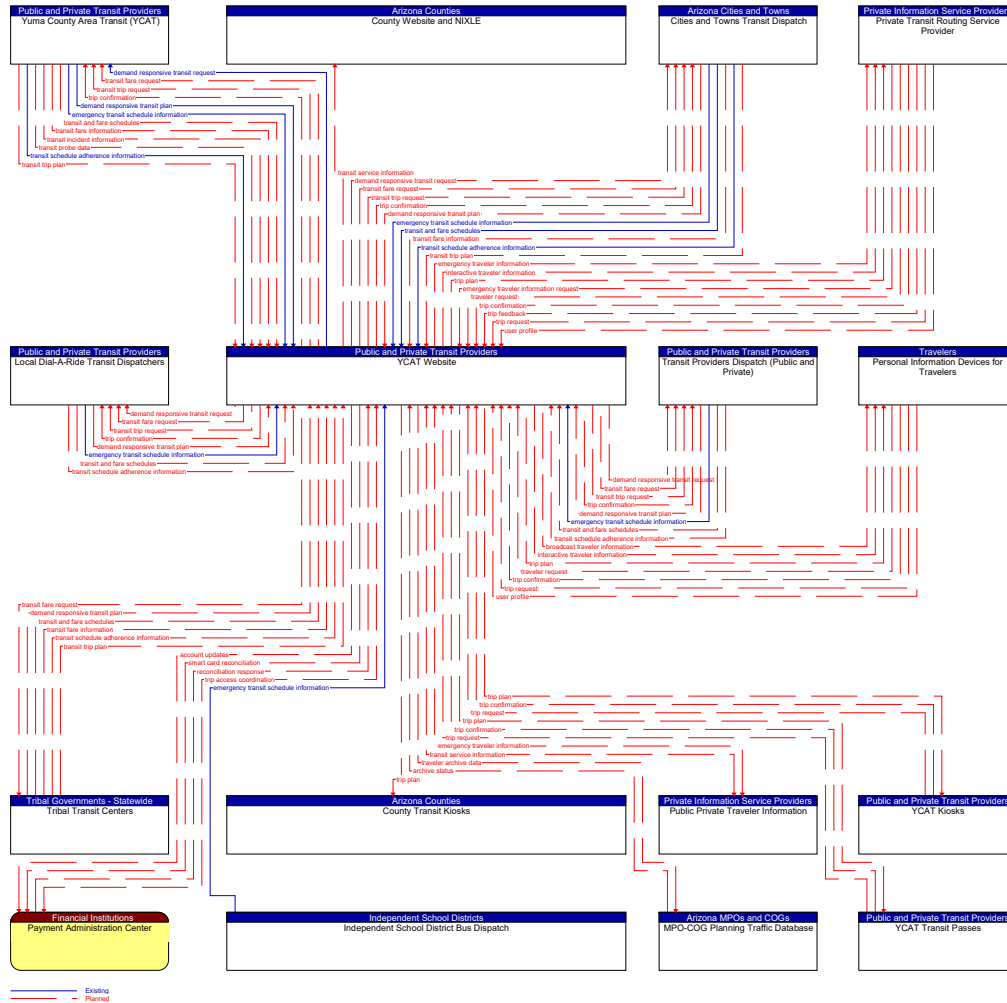


Figure 202: YCAT Website Context Diagram

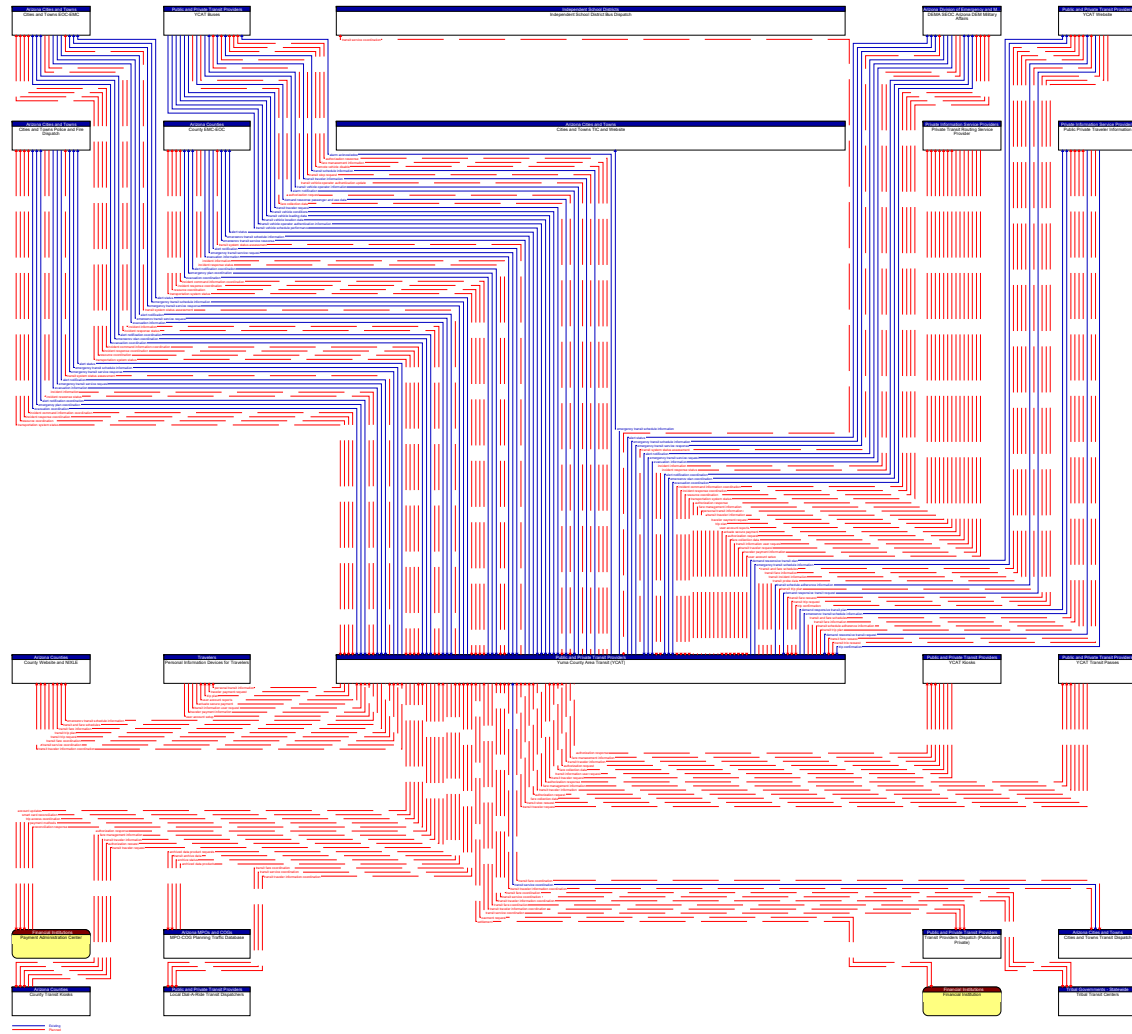


Figure 203: Yuma County Area Transit (YCAT) Context Diagram

Information Flow Definitions

Flow Name	Description
accident report	Report of commercial vehicle safety accident. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.
account updates	Updates to an account, such as purchases, uses, cancellation, secureID changes or similar material changes to account information.
actuate secure payment	Initiation of a payment action, ideally based on an encrypted token or biometric marker. Such a payment action could be a simple validation that the secure token allows the user access to the travel resource, or it could be the initiation of a payment transaction.
air quality information	Aggregated region-wide measured air quality data and possible pollution incident information.
alarm acknowledge	Confirmation that alarm was received, instructions and additional information for the alarm initiator, and requests for additional information.
alarm notification	Notification of activation of an audible or silent alarm by a traveler in a public area or by a transit vehicle operator using an on-board device.
alert notification	Notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The flow identifies 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 flow may also identify specific information that should not be released to the public.
alert notification coordination	Coordination of emergency alerts to be distributed to the public. This includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public and status of the public notification.
alert notification for social media	Notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public via social media. The flow identifies 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 version of the flow contains only publicly available information and is structured and formatted for publication on specific social media platforms and other public-facing sites.
alert status	Information indicating the current status of the emergency alert including identification of the traveler and driver information systems that are being used to provide the alert.
alerts and advisories	Assessments (general incident and vulnerability awareness information), advisories (identification of threats or recommendations to increase preparedness levels), and alerts (information on imminent or in-progress emergencies). This flow also provides supporting descriptive detail on incidents, threats, and vulnerabilities to increase preparedness and support effective response to threats against the surface transportation system.
alternate mode information	Schedule information for alternate mode transportation providers such as air, ferry, and passenger-carrying heavy rail. This also includes details of incidents and other service disruptions that have occurred in the alternative mode. This also includes measures of service demand that supports assessment of their impact on the road network.
archive analysis requests	A user request that initiates data mining, analytical processing, aggregation or summarization, report formulation, or other advanced processing and analysis of archived data. The request also includes information that is used to identify and authenticate the user and support electronic payment requirements, if any.
archive analysis results	Processed information products, supporting meta data, and any associated transaction information resulting from data mining, analytical processing, aggregation or summarization, report formulation, or other on-line processing and analysis of archived data.
archive coordination	Catalog data, meta data, published data, and other information exchanged between archives to support data synchronization and satisfy user data requests.
archive request confirmation	Confirmation that an archive request has been received and processed with information on the disposition of the request.
archive status	Notification that data provided to an archive contains erroneous, missing, or suspicious data or verification that the data provided appears valid. If an error has been detected, the offending data and the nature of the potential problem are identified.
archived data product requests	A user-specified request for archived data products (i.e., data, meta data, or data catalogs). The request also includes information that is used to identify and authenticate the user and support electronic payment requirements, if any.
archived data products	Raw or processed data, meta data, data catalogs and other data products provided to a user system upon request. The response may also include any associated transaction information.

Flow Name	Description
arrival notification	Notification of arrival (and departure) of a motor vehicle at the inspection station.
asset archive data	Information describing transportation assets including pavements, bridges, and all other infrastructure included in the transportation network. In addition, information can cover support assets (support equipment and systems, software, etc.). Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
asset damage assessment	Information indicating the damage sustained by transportation assets, derived from aerial surveillance, field reports, inspections, tests, and analyses.
asset inventory	Information on pavement, bridges, signs and other assets. This includes asset location, installation information, materials information, vendor/contractor information, current maintenance status, and a variety of other information (e.g., video logs) that define the transportation infrastructure.
asset restrictions	Restrictions levied on transportation asset usage based on infrastructure design, surveys, tests, or analyses. This includes standard height, width, and weight restrictions by facility as well as special restrictions such as spring weight restrictions and temporary bridge weight restrictions.
asset status update	Changes to status of pavement, bridges, signs and other assets resulting from maintenance or construction activities or infrastructure monitoring. The updates may include changes in installation information, materials information, vendor/contractor information, condition, and current maintenance status. In addition to infrastructure asset updates, the information provided may also include status of the maintenance and construction support assets, including vehicle and equipment utilization and repair records.
audit data	Information to support a tax audit.
authorization request	Request to determine if a transportation user is authorized to use a particular transportation resource.
authorization response	Notification of status of authorization request.
automated lane control data	Control commands and operating parameters for automated vehicle operations, including tightly coupled platooned groups of vehicles operating in dedicated or mixed-mode lanes. This flow includes platoon parameters including maximum platoon size, target speeds and gaps, and vehicle restrictions.
automated lane status	Current operational status of lanes supporting automated vehicle operations. The flow includes the status of the RSEs, associated field equipment, and vehicles using the facility.
barrier system control	Information used to configure and control barrier systems that are represented by gates, barriers and other automated or remotely controlled systems used to manage entry to roadways.
barrier system coordination	The direct flow of information between field equipment. This includes information used to configure and control barrier systems that are represented by gates, barriers and other automated or remotely controlled systems used to manage entry to roadways. Current operating status of barrier systems is also shared including operating condition and current operational state.
barrier system status	Current operating status of barrier systems. Barrier systems represent gates, barriers and other automated or remotely controlled systems used to manage entry to roadways. Status of the systems includes operating condition and current operational state.
border card data	Personal identification data from ID cards used by travelers at border crossings.
border clearance status	Notification regarding the crossing status of commercial freight shipment scheduled to enter the U.S. Includes portions of border agency and transportation agency clearance results, as those results become available.
border crossing status information	Port of entry status including current wait-times, lane configuration and status including closures and restrictions, and notification of incidents at the border
border information archive data	Border inspection activities data. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
border security input	Information regarding security related events occurring at the border.
broadcast advisories	General broadcast advisories that are provided over wide-area wireless communications direct to the vehicle radio. These analog advisory messages may provide similar content to ITS broadcast information flows, but include no digital data component. Existing Highway-Advisory Radio (HAR) advisory messages are a prime example of this flow.

Flow Name	Description
broadcast traveler information	General traveler information that contains traffic and road conditions, link travel times, incidents, advisories, restrictions, vehicle requirements, work zones, transit service information, weather information, parking information, and other related traveler information.
carrier participation report	Report that summarizes motor carrier participation in CVO programs. Used to identify the level of active participation and to report which enrolled carriers are not participating as expected.
center status	Represents the interactive monitoring of system operations by the Service Monitor. It includes device housekeeping/heartbeat monitoring and network monitoring information, the status of installed applications, and the configuration of managed devices.
citation	Report of commercial vehicle citation. The citation includes references to the statute(s) that was (were) violated. It includes information on the violator and the officer issuing the citation. A citation differs from a violation because it is adjudicated by the courts. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.
clearance notification	Notification that cargo has been cleared through customs.
client verification information	Information about carriers who have made border credential applications such as commercial drivers license information and carrier safety status.
client verification request	Request for information such as commercial drivers license information and carrier safety status.
commercial vehicle archive data	Information describing commercial vehicle travel and commodity flow characteristics. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
commercial vehicle incident notification	Information about a Commercial Vehicle or Freight Equipment breach, non-permitted security sensitive hazmat detected at the roadside, route deviation, or Commercial Vehicle Driver / Commercial Vehicle / Freight Equipment assignment mismatches which includes the location of the Commercial Vehicle and appropriate identities. May carry information that enables incident reporting to responders, and also includes the type of vehicle and cargo concerned.
commercial vehicle permit	Commercial vehicle permits including those for oversize, overweight, or hazmat shipments.
commercial vehicle permit information	Information for commercial vehicle permits for oversize, overweight, or for dangerous goods. The query flow is not explicitly shown.
commercial vehicle trip information	Information about vehicle trips including load information, location, speed, and routing. The information would be sanitized for distribution outside of the commercial vehicle company.
commercial vehicle violation notification	Notification of a violation. The violation notification flow describes the statute or regulation that was violated and how it was violated (e. g., overweight on specific axle by xxx pounds or which brake was out of adjustment and how far out of adjustment it was). A violation differs from a citation because it is not adjudicated by the courts. It specifically includes the date/time and location of the violation and identification of the vehicle, driver, and associated equipment/cargo.
communications signature	Communications from vehicle or personal devices that can be monitored by ITS field equipment to uniquely identify the device. This flow represents communications from devices (via Bluetooth or Wi-Fi) that may be monitored by ITS field equipment or any other passive or active communications from the device that can be used to identify the device. This flow specifically covers passive monitoring of device communications.
compliance review report	Report containing results of carrier compliance review, including concomitant out-of-service notifications, carrier warnings/notifications. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.
consolidated agency response	Electronic manifest data as well as commercial vehicle screening results.
credential application	Application for commercial vehicle credentials. Authorization for payment is included. It contains details about the administrative request for a Freight Vehicle registration. It also carries the acknowledgement that a payment has been placed in the bank account of the administration by the Fleet Operator. This information flow includes fleet operator request ID, vehicle characteristics, transport need (origin and destination), electronic signature and date of payment.
credential fee coordination	Description of fees, taxes and similar charges related to commercial vehicle credentials. In US and Canada, this includes rates for credentials that are exchanged between agencies via IRP, IFTA, etc.

Flow Name	Description
credentials information	Response containing full vehicle fuel tax and registration credentials information. "Response" may be provided in reaction to a real-time query or a standing request for updated information. The query flow is not explicitly shown.
credentials status information	Credentials information such as registration, licensing, insurance, check flags, and electronic screening enrollment data. A unique identifier is included. Corresponds to the credentials portion of CVISN "snapshots." The status information may be provided as a response to a real-time query or as a result of a standing request for updated information (subscription). This may also include information about non-U.S. fleets for use by U.S. authorities, and information regarding U.S. fleets made available to Mexican and Canadian authorities. The query flow is not explicitly shown.
current charging status	Current charging status including current charge rate, estimated time to completion, and cost associated with the charge.
current infrastructure restrictions	Restrictions levied on transportation asset usage based on infrastructure design, surveys, tests, or analyses. This includes standard facility design height, width, and weight restrictions, special restrictions such as spring weight restrictions, and temporary facility restrictions that are imposed during maintenance and construction.
cv driver credential	Driver information (e.g., identity, biometrics, address, date of birth, endorsements, restrictions) stored on a driver's license or other official identification card used to identify a driver of commercial vehicles.
cv driver record	Information typically maintained by a state driver licensing agency about a driver of a commercial vehicle including driver identification data, license data, permit data, and driving history details. The query flow is not explicitly shown.
cv repair status	Information about the completion of a repair to a commercial vehicle.
daily site activity data	Record of daily activities at commercial vehicle check stations including summaries of screening events and inspections.
data collection and monitoring control	Information used to configure and control data collection and monitoring systems.
decision support information	Information provided to support effective and safe incident response, including local traffic, road, and weather conditions, hazardous material information, and the current status of resources (including vehicles, other equipment, supplies) that have been allocated to an incident.
demand response passenger and use data	Data collected on board a demand response vehicle relating to the picking up and discharging of passengers.
demand responsive transit plan	Plan regarding overall demand responsive transit schedules and deployment.
demand responsive transit request	Request for paratransit support.
device control request	Request for device control action
device data	Data from detectors, environmental sensor stations, roadside equipment, and traffic control devices, including device inventory information.
device status	Status information from devices
driver log	A daily log showing hours in service for the current driver. The query flow is not explicitly shown.
driver to fleet request	Requests from the driver and vehicle for routing, payment, and enrollment information.
dynamic sign coordination	The direct flow of information between field equipment. This includes information used to initialize, configure, and control dynamic message signs. This flow can provide message content and delivery attributes, local message store maintenance requests, control mode commands, status queries, and all other commands and associated parameters that support local management of these devices. Current operating status of dynamic message signs is returned.
electric charging station data	Information provided for electric charging stations to the management center identifying the location, operating status, current availability, no-shows, charging capacity, etc.
electric charging station management information	Parameters that support management of an electric charging station. Load balancing, Reservation requests, Hours of operation, display configuration (ads), rules and regulations, etc.

Flow Name	Description
emergency archive data	Logged emergency information including information that characterizes identified incidents (routine highway incidents through disasters), corresponding incident response information, evacuation information, surveillance data, threat data, and resource information. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
emergency dispatch requests	Emergency vehicle dispatch instructions including incident location and available information concerning the incident.
emergency dispatch response	Request for additional emergency dispatch information and provision of en route status.
emergency notification	An emergency request for assistance that is automatically initiated by a vehicle or manually initiated by a vehicle occupant or a traveler (vulnerable road user) with a personal information device. The request includes call-back number, date, time, location, pre-event vehicle heading, vehicle make, model, model year, and fuel type, and crash severity indicators. Crash severity indicators include: airbags deployed, number of impacts, crash delta velocity, principle direction of force, and rollover indication. In addition, seatbelt restraint use, number of occupants, occupant location, and intrusion may be included. For commercial vehicles, this flow may also include freight equipment type (box, flatbed, trailer, container, etc.), type of cargo (refrigerated, non-perishable, liquid, etc.), hazardous material data, quantity of cargo, and cargo permits as applicable (hazmat, special routing permissions).
emergency plan coordination	Information that supports coordination of emergency management plans, continuity of operations plans, emergency response and recovery plans, evacuation plans, and other emergency plans between agencies. This includes general plans that are coordinated prior to an incident and shorter duration tactical plans that are prepared during an incident.
emergency route request	Request for access routes for emergency response vehicles and equipment. This may be a request for ingress or egress routes or other emergency routes. It may also include a request for preemption/priority for the identified vehicle at all signalized intersections along the route.
emergency routes	Suggested ingress and egress routes for access to and between the scene and staging areas or other specialized emergency access routes.
emergency traffic control information	Status of a special traffic control strategy or system activation implemented in response to an emergency traffic control request, a request for emergency access routes, a request for evacuation, a request to activate closure systems, a request to employ driver information systems to support public safety objectives, or other special requests. Identifies the selected traffic control strategy and system control status.
emergency traffic control request	Special request to preempt the current traffic control strategy in effect at one or more signalized intersections or highway segments, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems. For example, this flow can request all signals to red-flash, request a progression of traffic control preemptions along an emergency vehicle route, request a specific evacuation traffic control plan, request activation of a road closure barrier system, or place a public safety or emergency-related message on a dynamic message sign.
emergency traffic coordination	Coordination supporting disaster response including evacuation and reentry. Includes coordination of special traffic control strategies that support efficient evacuation and reentry while protecting and optimizing movement of response vehicles and other resources responding to the emergency.
emergency transit schedule information	Information on transit schedule and service changes that adapt the service to better meet needs of responders and the general public in an emergency situation, including special service schedules supporting evacuation.
emergency transit service request	Request to modify transit service and fare schedules to address emergencies, including requests for transit services to evacuate people from and/or deploy response agency personnel to an emergency scene. The request may poll for resource availability or request pre-staging, staging, or immediate dispatch of transit resources.
emergency transit service response	Response indicating changes to transit service, fares, and/or restrictions that will be made and status of transit resources to be deployed to support emergency response and/or evacuation.
emergency traveler information	Public notification of an emergency such as a natural or man-made disaster, civil emergency, or child abduction. This flow also includes evacuation information including evacuation instructions, evacuation zones, recommended evacuation times, tailored evacuation routes and destinations, traffic and road conditions along the evacuation routes, traveler services and shelter information, and reentry times and instructions.
emergency traveler information request	Request for alerts, evacuation information, and other emergency information provided to the traveling public.

Flow Name	Description
emergency vehicle tracking data	The current location and operating status of the emergency vehicle.
emissions archive data	Air quality and vehicle emissions information that is collected by sensors or derived from models. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
environmental conditions data	Current road conditions (e.g., surface temperature, subsurface temperature, moisture, icing, treatment status) and surface weather conditions (e.g., air temperature, wind speed, precipitation, visibility) as measured and reported by fixed and/or mobile environmental sensors and aggregated by the data collector. Attributes relating to the data collection (and aggregation) are also included.
environmental conditions data status	Status of the data quality of environmental conditions data provided by a data contributor. Includes not only status by sensor, but statistical data regarding the quality checking of data provided.
environmental monitoring application info	Environmental monitoring application parameters and thresholds that control the filtering, aggregation, and range of measures that are collected, derived, and reported. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.
environmental monitoring application status	Environmental monitoring application status reported by the RSE. This includes current operational state and status of the RSE and a record of system operation.
environmental sensor control	Data used to configure and control environmental sensors.
environmental sensor coordination	The direct flow of information between field equipment. This includes configuration and control of environmental sensors and the current road conditions (e.g., surface temperature, subsurface temperature, moisture, icing, treatment status) and surface weather conditions (e.g., air temperature, wind speed, precipitation, visibility) as measured and reported by fixed and/or mobile environmental sensors. Operational status of the sensors is also included.
environmental sensor data	Current road conditions (e.g., surface temperature, subsurface temperature, moisture, icing, treatment status) and surface weather conditions (e.g., air temperature, wind speed, precipitation, visibility) as measured and reported by fixed and/or mobile environmental sensors. Operational status of the sensors is also included.
environmental situation data	Aggregated and filtered vehicle environmental data collected from vehicle safety and convenience systems including measured air temperature, exterior light status, wiper status, sun sensor status, rain sensor status, traction control status, anti-lock brake status, and other collected vehicle system status and sensor information. This information flow represents the aggregated and filtered environmental data sets that are provided by the RSE to the back office center. Depending on the RSE configuration and implementation, the data set may also include environmental sensor station data collected by the RSE.
equipment maintenance request	Identification of field equipment requiring repair and known information about the associated faults.
equipment maintenance status	Current status of field equipment maintenance actions.
evacuation assistance information	Information on evacuation resources including self-evacuation options, anticipated pickup time and location if a transportation asset is to be deployed, destination shelter, and supporting information on what to bring, estimated reentry date/time.
evacuation assistance request	A request for evacuation assistance, which may be registered in advance or issued during an evacuation. It specifies the location, number of people that need to be evacuated, and any special needs/requirements.
evacuation coordination	Coordination of information regarding a pending or in-process evacuation. Includes evacuation zones, evacuation times, evacuation routes, forecast network conditions, and reentry times.
evacuation information	Evacuation instructions and information including evacuation zones, evacuation times, and reentry times.
expedited clearance information	Includes carrier ID, importer ID, broker ID, conveyance ID, driver ID, service options, and associated information that is used to support expedited border clearance.
expedited clearance registration	Registration of the importer, carrier, conveyance, and driver, as applicable, for border clearance programs such as FAST, Customs Self Assessment (Canada), C-TPAT (US), PIP (Canada), ACI (Canada), and ACE (US). Includes electronic filing of forms and associated payment.

Flow Name	Description
expedited clearance status	Status of expedited clearance registration.
external reports	Traffic and incident information that is collected by the media through a variety of mechanisms (e.g., radio station call-in programs, air surveillance).
fare and price information	Current transit, parking, and toll fee schedule information.
fare collection data	Fare collection information including the summary of fare system data and financial payment transaction data.
fare management information	Transit fare information and transaction data used to manage transit fare processing.
field equipment commands	System-level control commands issued to field equipment such as reset and remote diagnostics.
field equipment configuration settings	Control settings and parameters that are used to configure field equipment.
field equipment software install/upgrade	This flow supports installation and update of software residing in ITS roadway equipment. It supports download of the software installation files, including executable code and associated support files.
field equipment status	Reports from field equipment (sensors, signals, signs, controllers, etc.) which indicate current operational status.
fleet to driver update	Updated instructions to the driver including dispatch, routing, travel and parking information, and special instructions. Special instructions include incident management instruction, operational tasks, impacted transport orders in case of an incident, task descriptions with trip/route/load plan, transport order status information, driver information, vehicle information, cargo information and trip information.
freight equipment information	Container, trailer, or chassis information regarding identity, type, location, brake wear data, mileage, seal #, seal type, door open/close status, chassis bare/covered status, tethered / untethered status, temperature, humidity, power, battery levels, brake wear data, and bill of lading/information regarding the cargo/content.
freight transport booking	Booking information for the transport of freight that includes company, contact information, point of origin, pick-up location, drop-off location, and freight equipment identifier.
freight transportation status	A time-stamped status of a freight shipment as it passes through the supply chain from manufacturer through arrival at its final destination; including cargo movement logs, routing information, and cargo ID's. This includes cargo status, current operation, information on incidents associated with the cargo, and identification of delays/penalties.
freight traveler information preferences	Traveler information preferences from fleet and freight management systems or commercial vehicle drivers including: area covered by fleet/driver, types of freight managed (including special restrictions), preferred routes, other travel preferences pertaining to trip costs or tolls. Also covers revised trip planning requirements for trips already underway.
freight-specific traveler information	Traveler information customized for freight users to indicate truck routes, permit information, truck stops, inspection stations, steep grades, high-profile vehicle advisories, etc. Information provided includes freight-related road and weather conditions, parking information, and route plans.
hazmat information	Information about a particular hazmat load including nature of the load and unloading instructions. May also include hazmat vehicle route and route update information.
hazmat information request	Request for information about a particular hazmat load.
hazmat notification	Information provided to emergency response organizations regarding a hazmat load including when cargo sensors detect an issue with the load such as a release of hazardous material. This information will include sensor information, vehicle identification, and carrier identification.
host transit vehicle status	Information provided to the ITS on-board equipment from other systems on the Transit Vehicle Platform.
host vehicle status	Information provided to the ITS on-board equipment from other systems on the vehicle platform. This includes the current status of the powertrain, steering, and braking systems, and status of other safety and convenience systems. In implementations where GPS is not integrated into the Vehicle On-Board Equipment, the host vehicle is also the source for data describing the vehicle's location in three dimensions (latitude, longitude, elevation) and accurate time that can be used for time synchronization across the ITS environment.

Flow Name	Description
incident command information coordination	Information that supports local management of an incident. It includes resource deployment status, hazardous material information, traffic, road, and weather conditions, evacuation advice, and other information that enables emergency or maintenance personnel in the field to implement an effective, safe incident response.
incident information	Notification of existence of incident and expected severity, location, time and nature of incident. As additional information is gathered and the incident evolves, updated incident information is provided. Incidents include any event that impacts transportation system operation ranging from routine incidents (e.g., disabled vehicle at the side of the road) through large-scale natural or human-caused disasters that involve loss of life, injuries, extensive property damage, and multi-jurisdictional response. This also includes special events, closures, and other planned events that may impact the transportation system.
incident information for media	Report of current desensitized incident information prepared for public dissemination through the media.
incident information for public	Report of current desensitized incident information prepared for public dissemination.
incident notification	The notification of an incident including its nature, severity, and location.
incident notification response	Interactive acknowledgement and verification of the incident information received, requests for additional information, and general information on incident response status.
incident report	Report of an identified incident including incident location, type, severity and other information necessary to initiate an appropriate incident response.
incident response coordination	Incident response procedures and current incident response status that are shared between allied response agencies to support a coordinated response to incidents. This flow provides current situation information, including a summary of incident status and its impact on the transportation system and other infrastructure, and current and planned response activities. This flow also coordinates a positive hand off of responsibility for all or part of an incident response between agencies.
incident response status	Status of the current incident response including a summary of incident status and its impact on the transportation system, traffic management strategies implemented at the site (e.g., closures, diversions, traffic signal control overrides), and current and planned response activities.
incident scene images	Real time images or video of an incident scene. This flow includes the images or video and meta data that describes the images.
incident scene status	Information gathered at the incident site that more completely characterizes the incident and provides current incident response status.
information on violators	Information on violators provided by a law enforcement agency. May include information about commercial vehicle violations or other kinds of violations associated with the particular entity. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.
inspection results	Report of results of border inspection on a particular load.
interactive traveler information	Traveler information provided in response to a traveler request. The provided information includes traffic and road conditions, advisories, incidents, restrictions, payment information, transit services, parking information, weather information, and other travel-related data updates and confirmations.
intersection geometry	The physical geometry of an intersection covering the location and width of each approaching lane, egress lane, and valid paths between approaches and egresses. This flow also defines the location of stop lines, cross walks, specific traffic law restrictions for the intersection (e.g., turning movement restrictions), and other elements that support calculation of a safe and legal vehicle path through the intersection.
intersection management application info	Intersection and device configuration data, including intersection geometry, and warning parameters and thresholds. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.
intersection management application status	Infrastructure application status reported by the RSE. This includes current operational state and status of the RSE and a log of operations.
intersection status	Current signal phase and timing information for all lanes at a signalized intersection. This flow identifies active lanes and lanes that are being stopped and specifies the length of time that the current state will persist for each lane. It also identifies signal priority and preemption status and pedestrian crossing status information where applicable.
lane management control	Information used to configure and control dynamic lane management systems.

Flow Name	Description
lane management coordination	The direct flow of information between field equipment. This includes information used to configure and control dynamic lane management systems and the status of managed lanes including current operational state, violations, and logged information. This also includes lane usage information including both traditional traffic flow measures and special information associated with managed lanes such as measured passenger occupancies. It also includes the operational status of the lane management equipment.
lane management information	System status of managed lanes including current operational state, violations, and logged information. This includes lane usage information including both traditional traffic flow measures and special information associated with managed lanes such as measured passenger occupancies. It also includes the operational status of the lane management equipment.
lighting system control data	Information used to configure and control roadside lighting systems.
lighting system status	Status of roadside lighting controls including operating condition and current operational state.
local priority request coordination	The direct flow of information between field equipment. This includes notification of crossing calls from pedestrians and other vulnerable road users and requests for signal prioritization or preemption, and any other request for right-of-way at an intersection. The status of the priority request is also shared. For vulnerable road users, this includes information provided to guide and warn vulnerable road users at crossings including crossing permission status and crossing time remaining.
local signal preemption request	Direct control signal or message to a signalized intersection that results in preemption of the current control plan and grants right-of-way to the requesting vehicle.
local signal priority request	Request from a vehicle to a signalized intersection for priority at that intersection. This flow also allows the vehicle to cancel a priority request (for example, when the vehicle clears the intersection).
local situation data	This general flow represents the traffic, environmental, and emissions situation data that is collected from connected vehicles by an RSE, aggregated, filtered, and provided to a back-office center. It also includes data collected from ITS roadway equipment that provides current intersection and road network status for the area proximate to the RSE.
location and time	The current geographic location in three dimensions (latitude, longitude, elevation) and the current time.
logged vehicle routes	Anticipated route information for guided vehicles, special vehicles (e.g., oversize vehicles) or groups of vehicles (e.g., governor's motorcade) that may require changes in traffic control strategy.
maint and constr archive data	Information describing road construction and maintenance activities identifying the type of activity, the work performed, and work zone information including work zone configuration and safety (e.g., a record of intrusions and vehicle speeds) information. For construction activities, this information also includes a description of the completed infrastructure, including as-built plans as applicable. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
maint and constr dispatch information	Information used to dispatch maintenance and construction vehicles, equipment, and crews and information used to keep work zone crews informed. This information includes routing information, traffic information, road restrictions, incident information, environmental information, decision support information, maintenance schedule data, dispatch instructions, personnel assignments, alert notifications, and corrective actions.
maint and constr dispatch status	Current maintenance and construction status including work data, operator status, crew status, and equipment status.
maint and constr material information	Information on materials stored on the vehicle including quantity and current application rate.
maint and constr resource coordination	Request for road maintenance and construction resources that can be used in the diversion of traffic (cones, portable signs), clearance of a road hazard, repair of ancillary damage, or any other incident response.
maint and constr resource request	Request for road maintenance and construction resources that can be used in the diversion of traffic (cones, portable signs), clearance of a road hazard, repair of ancillary damage, or any other incident response. The request may poll for resource availability or request pre-staging, staging, or immediate dispatch of resources.

Flow Name	Description
maint and constr resource response	Current status of maintenance and construction resources including availability and deployment status. General resource inventory information covering vehicles, equipment, materials, and people and specific resource deployment status may be included.
maint and constr vehicle conditions	Vehicle diagnostics information that is collected, filtered, and selectively reported by a maintenance and construction vehicle. The information includes engine temperature, mileage, tire wear, brake wear, belt wear, and any warnings or alarms concerning the operational condition of the vehicle and ancillary equipment.
maint and constr vehicle control	Control data sent from on-board ITS systems to control maintenance and construction vehicle equipment, including control of materials dispersion rate and other control functions that will vary with vehicle type and application.
maint and constr vehicle location data	The current location and related status (e.g., direction and speed) of the maintenance/construction vehicle.
maint and constr vehicle measures	Raw vehicle diagnostics and operating status data reported by the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures. In addition to this general vehicle status, this flow also includes the status of maintenance and construction-specific systems on the vehicle.
maint and constr vehicle operational data	Data that describes the maintenance and construction activity performed by the vehicle. Operational data includes materials usage (amount stored and current application rate), operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), vehicle safety status, and other measures associated with the operation of a maintenance, construction, or other special purpose vehicle. Operational data may include basic operational status of the vehicle equipment or a more precise record of the work performed (e.g., application of crack sealant with precise locations and application characteristics).
maint and constr vehicle status coordination	Maintenance and construction vehicle status information that is shared between vehicles. This includes environmental conditions and the operational status of the vehicles.
maint and constr vehicle system control	Configure and control data that supports remote control of on-board maintenance and construction vehicle systems and field equipment that is remotely controlled by the vehicle. For example, the data can be used to adjust material application rates and spread patterns.
maint and constr work plans	Future construction and maintenance work schedules and activities including anticipated closures with anticipated impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
maintenance and repair needs	Recommended strategies and schedules for maintenance of the transportation infrastructure.
manifest data	Identifies Port of Entry, date, and information on carrier and goods, origin, etc.
manifest receipt confirmation	Confirmation that a shippers manifest has been received.
map update notification	Notification of maintenance, construction, and other activities that will result in medium to long term changes to road location and configuration that may impact navigable maps. This flow includes the timing of the changes and precise enumeration of the location and configuration changes. It also includes updated static speed limits (perhaps other regulatory rules/signage - no U turns, etc.) and default travel times.
map updates	Map update that could include a new underlying static or real-time map or map layer(s) update. Map layers can include highways, major roads, streets, public transport routes, topography, points of interest, and regulatory information including turn restrictions and speed limits.
meter control	Control of meter to modify reporting data and intervals, and to enable controls over meter use, which could include current limits.
meter data	Report of energy consumption, voltage levels, current, power factor and similar diagnostic and monitoring information.
mixed use safety warning control	Configuration and control of equipment that monitors and manages mixed use crossings and provides visual displays and warnings to drivers when non-motorized users are occupying a cross walk or other mixed use path crossing.
mixed use safety warning status	Current operational status and state of pedestrian crossings and other mixed use path crossing warning systems.
on-board safety data	Safety data measured by on-board sensors. Includes information about the vehicle, vehicle components, cargo, and driver. The query flow is not explicitly shown.

Flow Name	Description
on-board vehicle data	Information about the commercial vehicle stored on-board (for maintenance purposes, gate access, cargo status, lock status, etc.). The request flow is not explicitly shown.
other data source archive data	Data extracted from other data sources. A wide range of ITS and non-ITS data and associated meta data may be provided.
parking area information	Current status for the parking area. This includes information on general parking area status (operating hours, open entrances and exits, entrance queue status, parking operator information, current parking occupancy and availability).
parking area management information	Parameters that support management of a parking area. Hours of operation, parking rules and regulations, parking operator (attendant) information, etc.
parking facility geometry	Precise spatial description of a parking facility that locates each parking space and the ingress and egress routes that are used to travel to and from the spaces.
parking information	General parking information and status, including current parking availability, parking pricing, and parking space availability information, including features like number and type of electric charging spots.
passive vehicle monitoring control	Control commands used to control detection systems that rely on infrastructure-based identification of individual vehicles to measure travel times and other related measures by identifying the same vehicle at different points in the network. Related technologies include Bluetooth readers and license plate recognition systems.
passive vehicle monitoring coordination	The direct flow of information between field equipment. This includes control commands used to control detection systems that rely on infrastructure-based identification of individual vehicles to measure travel times and other related measures by identifying the same vehicle at different points in the network. Related technologies include Bluetooth readers and license plate recognition systems. The coordination also includes sharing of time stamped identifiers that identify the vehicles that have passed through a detection zone.
passive vehicle monitoring data	Time stamped identifiers that identify the vehicles that have passed through a detection zone.
pathway map updates	Pathway map updates that could include a new underlying static or real-time map or map layer(s) update. Map layers can include pedestrian routes, bike lanes, curbs, elevators, escalators, doorways, curb cutouts, indoor facilities, and other relevant features that impact pathway use.
payment device information	Traveler payment information such as card number and previous transactions.
payment device token information	Request for a digital token that can be associated with a credit card number.
payment device update	Information updated concerning traveler's personal data including name, address, user account information, trip records, and profile data.
payment methods	A list of valid payment methods.
payment methods financial institution	A list of valid payment methods accepted by a financial center.
payment request	Request for payment from financial institution or related financial service requests (e.g., balance inquiry)
personal transit information	General and personalized transit information for a particular fixed route, flexible route, or paratransit system.
personnel device status	Monitoring of Personnel Device status including current mode, operational status, and configuration settings. It includes device housekeeping/heartbeat monitoring and includes network information, the status of installed applications, and the configuration of managed devices.
pre-arrival notification	Identification of a vehicle or driver that is approaching a border crossing.
qualified environmental conditions data	Current road conditions (e.g., surface temperature, subsurface temperature, moisture, icing, treatment status) and surface weather conditions (e.g., air temperature, wind speed, precipitation, visibility) that has had quality checks performed on it and has been formatted and consolidated by the Clarus system. Attributes relating to the data collection (and aggregation) are also included.
rail crossing control data	Data required for HRI information transmitted at railroad grade crossings and within railroad operations.

Flow Name	Description
rail crossing operational status	Status of the highway-rail grade crossing equipment including both the current state or mode of operation and the current equipment condition.
rail crossing request	A request for highway-rail intersection status or a specific control request intended to modify HRI operation.
rail crossing status	Status of the highway-rail intersection equipment including both the current state or mode of operation and the current equipment condition.
rail incident response status	Status of the rail system's response to current incidents.
reconciliation response	Response indicating that reconciliation of charges using a smart card have been processed.
reduced speed notification	Reduced speed zone information provided to passing vehicles. This flow provides the reduced speed limit, the location and extent of the reduced speed zone, and associated warning information.
registered secureIDs	Cryptographically protected identifier indicating that the user associated with the identifier is entitled to use a particular service.
registration	Registered owner of vehicle and associated vehicle information.
remote surveillance control	The control commands used to remotely operate another center's sensors or surveillance equipment so that roadside surveillance assets can be shared by more than one agency.
remote vehicle disable	Signal used to remotely disable a transit vehicle.
request for data review	Request that data reported about a motor carrier or driver be reviewed for potential mis-assignment or other error.
request for enforcement	Request for traffic enforcement of speed limits, lane controls, etc. on a roadway including in a work zone or other special situations.
request for payment	Request to deduct cost of service from user's payment account.
request for permit	Request for commercial vehicle permits including oversize, overweight, or hazmat permit. It contains details about the administrative request for conveying hazardous goods. This information flow identifies the freight operator, vehicle dimensions, vehicle weight, hazardous goods characteristics, transport need (origin and destination) and electronic signature.
request tag data	Request for tag information including tag id and associated data.
resource coordination	Coordination of resource inventory information, specific resource status information, resource prioritization and reallocation between jurisdictions, and specific requests for resources and responses that service those requests.
resource deployment status	Status of resource deployment identifying the resources (vehicles, equipment, materials, and personnel) available and their current status. General resource inventory information and specific status of deployed resources may be included.
resource request	A request for resources to implement special traffic control measures, assist in clean up, verify an incident, etc. The request may poll for resource availability or request pre-staging, staging, or immediate deployment of resources. Resources may be explicitly requested or a service may be requested and the specific resource deployment may be determined by the responding agency.
reversible lane control	Control of automated reversible lane configuration and driver information systems.
reversible lane coordination	The direct flow of information between field equipment. This includes control of automated reversible lane configuration and driver information systems and current reversible lane status including the operational status and mode of the reversible lane control equipment.
reversible lane status	Current reversible lane status including traffic sensor and surveillance data and the operational status and mode of the reversible lane control equipment.
right-of-way request notification	Notice that a request has occurred for signal prioritization, signal preemption, pedestrian call, multi-modal crossing activation, or other source for right-of-way.
road closure application info	Road closure signing application configuration data and messaging parameters. This flow identifies the vehicles that may initiate the road closure. This flow also provides access lists, groups, or classifications where selected vehicles are to be allowed access to the closed area.

Flow Name	Description
road closure application status	Road closure application status reported by the RSE. This includes current operational state and status of the RSE, closure status, and a log of closure commands received and issued. For closures that allow entry by selected vehicles, this flow provides an access log identifying vehicles that have requested access with access status.
road closure notification	Notification that agency personnel have closed a road due to adverse weather, major incident, or other reason.
road network conditions	Current and forecasted traffic information, road and weather conditions, and other road network status. Either raw data, processed data, or some combination of both may be provided by this flow. Information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements) in effect is included.
road network environmental situation data	Aggregated environmental situation data collected from vehicles and other sources for the road network. Aggregated information would include measured air temperature, exterior light status, wiper status, sun sensor status, rain sensor status, traction control status, ALB status, and other collected vehicle system status and sensor information for the region.
road network status assessment	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.
road network traffic situation data	Aggregated route usage, travel times, and other aggregated data collected from probe vehicles that can be used to estimate current traffic conditions.
road weather advisories	Segment-specific weather and road conditions including real-time advisories of deteriorating road and weather conditions, medium-term advisories for the next 2-12 hours, and long-term advisories more than 12 hours into the future. The advisories may include advisories that are issued based on locally collected environmental data (e.g., an ice on bridge advisory).
road weather information	Road conditions and weather information that are made available by road maintenance operations to other transportation system operators.
roadside archive data	A broad set of data derived from roadside sensors that includes current traffic conditions, environmental conditions, and any other data that can be directly collected by roadside sensors. This data also indicates the status of the sensors and reports of any identified sensor faults.
roadway advisory radio data	Information used to initialize, configure, and control roadside highway advisory radio. This flow can provide message content and delivery attributes, local message store maintenance requests, control mode commands, status queries, and all other commands and associated parameters that support remote management of these systems.
roadway advisory radio status	Current operating status of highway advisory radios.
roadway dynamic signage data	Information used to initialize, configure, and control dynamic message signs. This flow can provide message content and delivery attributes, local message store maintenance requests, control mode commands, status queries, and all other commands and associated parameters that support remote management of these devices.
roadway dynamic signage status	Current operating status of dynamic message signs.
roadway geometry	The physical geometry of a road segment that specifies the location and width of each lane, including normal lanes as well as special lanes for pedestrians and bicycles, transit vehicles, and trains. This flow also may include the curvature, grade, and superelevation or banking of the road segment.
roadway maintenance status	Summary of maintenance fleet operations affecting the road network. This includes the status of winter maintenance (snow plow schedule and current status).
roadway treatment coordination	The direct flow of information between field equipment. This includes control data for remotely located, automated devices, that treat the road surface (e.g., de-icing applications) and the current operational status of automated roadway treatment devices.
roadway treatment system control	Control data for remotely located, automated devices, that treat the road surface (e.g., de-icing applications).
roadway treatment system status	Current operational status of automated roadway treatment devices (e.g., anti-icing systems).

Flow Name	Description
roadway warning coordination	The direct flow of information between field equipment. This includes information used to configure and control roadway warning systems and the current operating status of roadway warning systems.
roadway warning system control	Information used to configure and control roadway warning systems.
roadway warning system status	Current operating status of roadway warning systems.
route restrictions	Information about routes, road segments, and areas that do not allow the transport of security sensitive hazmat cargoes or include other restrictions (such as height or weight limits).
RSE fault data	RSE fault information that can be used to identify RSEs that require initialization, reconfiguration, repair or replacement. This flow identifies the device, the nature of the fault, and associated error codes and diagnostic data.
RSE status	Monitoring of RSE device status including current mode, operational status, and configuration settings. It includes device housekeeping/heartbeat monitoring and includes network information, the status of installed applications, the configuration of managed devices, cybersecurity and physical security status of the RSE.
safeguard system control	Data that controls safeguard systems (remotely controlled equipment used to mitigate the impact of incidents on transportation infrastructure, such as blast shields, exhaust systems, etc.).
safeguard system status	Current operating status of safeguard systems (remotely controlled equipment used to mitigate the impact of incidents on transportation infrastructure, such as blast shields, exhaust systems, etc.). Status of the systems includes operating condition and current operational state.
safety inspection record	Record containing results of commercial vehicle safety inspection.
safety inspection report	Report containing results of commercial vehicle safety inspection. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.
safety status information	Safety information such as safety ratings, security ratings or flags, inspection summaries, and violation summaries. A unique identifier is included. Corresponds to the safety and security portion of CVISN "snapshots." The status information may be provided as a response to a real-time query or as a result of a standing request for updated information (subscription). This may also include information about non-U.S. fleets for use by U.S. authorities, and information regarding U.S. fleets made available to Mexican and Canadian authorities. The query flow is not explicitly shown.
screening results	Results of commercial vehicle screening event at a border crossing - reports clearance event data regarding action taken at border, including acceptance or override of system decision, and date/time stamp.
service patrol dispatch request	Service patrol dispatch instructions including incident location and available information concerning the incident.
service patrol dispatch response	Request for additional dispatch information and provision of en route status.
service patrol incident status	Information gathered at the incident site by a service patrol vehicle that more completely characterizes the incident, the services provided, and clearance status.
service registry	Catalogue of products and values, access rights and related information.
settlement	Information exchanged to settle charges and distribute or debit accounts appropriate to the authorized charges.
shelter recommendations	Recommendation identifying the shelter or shelters best suited to the requestor. Hotels/motels may also be included as potential sheltering options. This flow may also include shelter assignments/reservations.
shelter request	A request for shelter information, recommendations, or assignment/reservation. Information provided may include name, current location, number of people in the group, additional requirements (e.g., evacuating with pets, needed medical support).
signal control commands	Control of traffic signal controllers or field masters including clock synchronization.

Flow Name	Description
signal control coordination	The direct flow of information between field equipment. This includes configuration and control of traffic signal controllers or field masters. Configuration data and operational status of traffic signal control equipment including operating condition and current indications are returned.
signal control device configuration	Data used to configure traffic signal control equipment including local controllers and system masters.
signal control plans	Traffic signal timing parameters including minimum green time and interval durations for basic operation and cycle length, splits, offset, phase sequence, etc. for coordinated systems.
signal control status	Operational and status data of traffic signal control equipment including operating condition and current indications.
signal fault data	Faults reported by traffic signal control equipment.
signal system configuration	Data used to configure traffic signal systems including configuring control sections and mode of operation (time based or traffic responsive).
smart card reconciliation	Detailed list of charges of the form charge/transport provider, taken from a smart card that need to be applied to the listed providers.
special vehicle restricted use information	Parameters necessary for implementing unrestricted access to controlled access or toll facilities by special vehicles; e.g., maintenance vehicles, emergency vehicles, etc.
speed management application information	Current speed targets, advisories, and limits including time of day, week, or season speed limits as necessary, and application parameters and thresholds. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.
speed management application status	Speed management application status reported by the RSE. This includes current operational state and status of the RSE and a record of measured vehicle speeds and current speed targets, advisories, and limits.
speed monitoring control	Information used to configure and control automated speed monitoring, speed warning, and speed enforcement systems.
speed monitoring information	System status including current operational state and logged information including measured speeds, warning messages displayed, and violation records.
suggested route	Suggested route for a dispatched emergency or maintenance vehicle that may reflect current network conditions and the additional routing options available to en route emergency or maintenance vehicles that are not available to the general public.
system status	Monitoring of system device status including current mode, operational status, and configuration settings. It includes device housekeeping/heartbeat monitoring and includes network information, the status of installed applications, and the configuration of managed devices.
tag data	Unique tag ID and related vehicle information.
targeted list	List of carriers, drivers, and/or vehicles of interest for enforcement purposes.
tax filing	Commercial vehicle tax filing data. Authorization for payment is included.
threat data for analysis	Data from surveillance or sensor equipment in secure areas provided for further analysis.
threat information	Threats regarding transportation infrastructure, facilities, or systems detected by a variety of methods (sensors, surveillance, threat analysis of advisories from outside agencies, etc.
threat information coordination	Sensor, surveillance, and threat data including raw and processed data that is collected by sensor and surveillance equipment located in secure areas.
threat support data	Information provided to help receiving agency identify possible threats, including biometric image processing support data.
time local form	Time local form includes UTC time synchronized with the external source in a format usable by connected vehicle center functions.
track status	Current status of the wayside equipment and notification of an arriving train.
traffic archive data	Information describing the use and vehicle composition on transportation facilities and the traffic control strategies employed. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.

Flow Name	Description
traffic control information	Represents the flow of traffic control and status information between centers. This is reporting only, not actual control. This specifically includes the current state of any demand management strategies that have been implemented.
traffic detector control	Information used to configure and control traffic detector systems such as inductive loop detectors and machine vision sensors.
traffic detector coordination	The direct flow of information between field equipment. This includes information used to configure and control traffic detector systems such as inductive loop detectors and machine vision sensors. Raw and/or processed traffic detector data is returned that allows derivation of traffic flow variables (e.g., speed, volume, and density measures) and associated information (e.g., congestion, potential incidents). This flow includes the traffic data and the operational status of the traffic detectors.
traffic detector data	Raw and/or processed traffic detector data which allows derivation of traffic flow variables (e.g., speed, volume, and density measures) and associated information (e.g., congestion, potential incidents). This flow includes the traffic data and the operational status of the traffic detectors.
traffic gap information	Measured gap to the next approaching vehicle per lane and direction of travel.
traffic image meta data	Meta data that describes traffic images. Traffic images (video) are in another flow.
traffic images	High fidelity, real-time traffic images suitable for surveillance monitoring by the operator or for use in machine vision applications. This flow includes the images. Meta data that describes the images is contained in another flow.
traffic information for media	Report of traffic conditions including traffic incident reports for public dissemination through the media. The reports may also include information on diversions and alternate routes, closures, and special traffic restrictions in effect.
traffic metering control	Control commands and operating parameters for ramp meters, interchange meters, mainline meters, and other systems equipment associated with roadway metering operations.
traffic metering coordination	The direct flow of information between field equipment. This includes control commands and operating parameters for ramp meters, interchange meters, mainline meters, and other systems equipment associated with roadway metering operations. Current operational status of the traffic metering status is also provided.
traffic metering status	Current operational status and operating parameters for ramp meters, interchange meters, mainline meters and other control equipment associated with roadway metering operations.
traffic situation data	Current, aggregate traffic data collected from connected vehicles that can be used to supplement or replace information collected by roadside traffic detectors. It includes raw and/or processed reported vehicle speeds, counts, and other derived measures. Raw and/or filtered vehicle control events may also be included to support incident detection.
transit and fare schedules	Transit service information including routes, schedules, and fare information. This also includes on-demand service information.
transit archive data	Data used to describe and monitor transit demand, fares, operations, and system performance. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
transit emergency data	Initial notification of transit emergency at a transit stop or on transit vehicles and further coordination as additional details become available and the response is coordinated.
transit fare coordination	Fare and pricing information shared between local/regional transit organizations.
transit fare information	Information provided by transit management that supports fare payment transactions.
transit fare request	Request for fare information and transit fare payment.
transit incident information	Information on transit incidents that impact transit services for public dissemination.
transit information user request	Request for special transit routing, real-time schedule information, and availability information.
transit probe data	Aggregate probe data derived from tracking transit vehicles. Data collected could include transit vehicle speeds and travel times for a given link or collection of links.

Flow Name	Description
transit schedule adherence information	Dynamic transit schedule adherence and transit vehicle location information.
transit schedule information	Current and projected transit schedule information used to initialize the transit vehicle with a vehicle assignment, monitor schedule performance, and develop corrective actions on-board.
transit service coordination	Schedule coordination or AVL information shared between local/regional transit organizations. This includes coordination of connections and control parameters between transit properties as well as coordination of transit-related maintenance activities.
transit service information	Transit service information including routes, schedules, and fare information as well as dynamic transit schedule adherence and transit vehicle location information.
transit stop passenger status	The number of passengers waiting at a PT stop with optional route and destination information for waiting passengers to allow current demand at each stop to be monitored and factored into current transit service operations and transit performance monitoring. The stop identity is included.
transit stop request	Notification that a transit stop has been requested by a transit user at a roadside stop. This flow identifies the route, stop, and the time of the request.
transit system status assessment	Assessment of damage sustained by the public transportation system including location and extent of the damage, current operational status including an estimate of remaining capacity and necessary restrictions, and time frame for repair and recovery.
transit traveler information	Transit information prepared to support transit users and other travelers. It contains transit schedules, real-time arrival information, fare schedules, alerts and advisories, and general transit service information.
transit traveler information coordination	Transit schedules, real-time arrival information, fare schedules, and general transit service information shared between transit organizations to support transit traveler information systems.
transit traveler request	Request by a Transit traveler to summon assistance, request transit information, or request any other transit services.
transit trip plan	An origin-destination transit trip that may involve multiple modes and connections.
transit trip request	Request for a transit trip plan that is responsive to traveler requirements such as schedule, cost, or duration.
transit vehicle conditions	Operating conditions of transit vehicle (e.g., engine running, oil pressure, fuel level and usage). It includes status of other on-board systems including user displays, passenger counters, and security systems. This overall status information is also collected from unused (out of service) vehicles.
transit vehicle information	Information about the transit vehicle route and stops, including current location along the route and next stop.
transit vehicle loading data	Data collected on board the transit vehicle relating to passenger boarding and alighting.
transit vehicle location data	Current transit vehicle location and related operational conditions data provided by a transit vehicle.
transit vehicle operator authentication information	Information regarding on-board transit operator authentication
transit vehicle operator authentication update	Results of authentication process or update of on-board authentication database.
transit vehicle operator information	Transit service instructions, wide area alerts, traffic information, road conditions, and other information for both transit and paratransit operators.
transit vehicle schedule performance	Estimated times of arrival and anticipated schedule deviations reported by a transit vehicle.
transportation operational strategies	Operational strategies for each operating agency in a transportation corridor, downtown area, or other travel-impacted area, providing an integrated operations strategy for the freeways, tollways, arterials, transit services, parking facilities, and other transportation-related facilities in the area. These strategies can include dynamic adjustments to transit fares and tolls, parking fees and restrictions, dynamic lane restriction changes, and other active demand management strategies.

Flow Name	Description
transportation system status	Current status and condition of transportation infrastructure (e.g., tunnels, bridges, interchanges, TMC offices, maintenance facilities). In case of disaster or major incident, this flow provides an assessment of damage sustained by the surface transportation system including location and extent of the damage, estimate of remaining capacity and necessary restrictions, and time frame for repair and recovery.
transportation weather information	Current and forecast road conditions and weather information (e.g., surface condition, flooding, wind advisories, visibility, etc.) associated with the transportation network. This information is of a resolution, timeliness, and accuracy to be useful in transportation decision making.
traveler alerts	Traveler information alerts reporting congestion, incidents, adverse road or weather conditions, restrictions, vehicle requirements, parking availability, transit service delays or interruptions, and other information that may impact the traveler. Relevant alerts are provided based on traveler-supplied profile information including trip characteristics and preferences.
traveler archive data	Data associated with traveler information services including service requests, facility usage, rideshare, routing, and traveler payment transaction data. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
traveler information for media	General traveler information regarding incidents, unusual traffic conditions, transit issues, or other advisory information that has been desensitized and provided to the media.
traveler input	User input from a traveler to summon assistance, request travel information, make a reservation, or request any other traveler service.
traveler interface updates	Visual or audio information (e.g., routes, messages, guidance, emergency information) that is provided to the traveler.
traveler payment information	Information provided for payment of road use charges, tolls or parking fees including identification that can be used to identify the payment account or source and related vehicle and service information that are used to determine the type and price of service requested. The information exchange normally supports an account debit to pay fees, but an account credit may be initiated where pricing strategies include incentives.
traveler payment request	Request for information supporting payments. For fee structures that include incentives, the request may support either an account debit or an account credit or reimbursement.
traveler personal information	This flow includes biometric and other data to allow recognition of travelers.
traveler request	A request for traveler information including traffic, transit, toll, parking, road weather conditions, event, and passenger rail information. The request identifies the type of information, the area of interest, parameters that are used to prioritize or filter the returned information, and sorting preferences.
traveler sourced updates	Traveler posts on traffic and road conditions, parking availability, transit services, traveler services, shelter information, hazards, debris, obstacles, and other real-time crowd-sourced data that may be shared with other travelers.
trigger area	A geographic area a commercial motor vehicle crosses into, which initiates a request to compile and transmit a safety data message. May be associated with a time period.
trigger area definition	Information that defines the desired trigger area for wireless roadside inspection safety data message submission.
trigger area notification	Notification to activate wireless roadside inspection safety data message collection.
trigger control	Controls to enable or disable a particular trigger.
trip access coordination	Access token granting the bearer the right to use a given transportation resource; typically used when one payment provider is paid for a trip using multiple travel providers; the token is used by the Traveler to gain access to one or more of the travel provider resource (e.g., a transit ride).
trip confirmation	Acknowledgement by the driver/traveler of acceptance of a trip plan with associated personal and payment information required to confirm reservations. Conversely, this flow may also reject the proposed trip plan. Confirmations include the selected route and subsequent trip confirmation messages will be issued for route changes.
trip feedback	Information provided during or at the conclusion of a trip that supports performance monitoring and system optimization. Information provided may include a record of the trip including HOV/HOT lane usage and user provided feedback at the conclusion of the trip.
trip identification number	The unique trip load number for a specific cross-border shipment.

Flow Name	Description
trip log	Driver's daily log, vehicle location, mileage, and trip activity (includes screening, inspection and border clearance event data as well as fare payments). The request flow is not explicitly shown.
trip plan	A travel itinerary covering single or multimodal travel. The itinerary identifies a route and associated traveler information and instructions identifying recommended trip modes (including indoor and outdoor wayfinding) and transfer information, ride sharing options, and transit and parking reservation information. This flow also includes intermediate information that is provided as the trip plan is interactively created, including identification of alternatives, requests for additional information as well as amenities along the trip.
trip request	Request for trip planning services that identifies the trip origin, destination(s), timing, preferences, and constraints. The request may also include the requestor's location or a request for transit and parking reservations, electric charging station access, and ridesharing options associated with the trip. The trip request also covers requests to revise a previously planned trip and interim updates that are provided as the trip is interactively planned.
unique identifiers	Unique identifiers for the motor carrier, driver, and vehicle. This flow identifies the driver actually operating the vehicle in multi-driver scenarios.
usage and billing info	Account, usage, charging, limits and similar information relevant to electric utility billing.
user account reports	Reports on services offered/provided and associated charges.
user account setup	Billing information, vehicle information (or registration information), and requests for reports. Also includes subsequent account changes.
user profile	Information provided to register for a travel service and create a user account. The provided information includes personal identification, traveler preferences (e.g., travel mode, micro-mobility options, accessibility needs, and assistance needs), priorities for the preferences, device information, a user ID and password, and information to support payment transactions, if applicable.
variable speed limit control	Information used to configure and control variable speed limit systems including the equipment used to provide current speed limits and other information to drivers.
variable speed limit coordination	The direct flow of information between field equipment. This includes information used to configure, control, and monitor variable speed limit systems including the equipment used to provide current speed limits and other information to drivers.
variable speed limit status	Current operating status of the variable speed limit systems including the state of the equipment.
vehicle charging profile	Vehicle information provided to an electric charging station including the operational status of the electrical system, the charging capacity for the vehicle, and % charge complete.
vehicle control	Control commands issued to vehicle actuators that control steering, throttle, and braking and other related commands that support safe transition between manual and automated vehicle control. This flow can also deploy restraints and other safety systems when a collision is unavoidable.
vehicle entries and exits	Information exchanged between an RSE and ITS Roadway Equipment that supports detection of non-equipped vehicles in an automated lane, low emissions zone, or other facility where V2I communications is used to monitor vehicles at entry or exit points. This exchange also supports identification of non-equipped vehicles where an RSE is used for payment collection. This generic exchange can be implemented by any approach that compares vehicle detections with V2I communications by the RSE to identify vehicles that are not equipped or are otherwise unable to communicate with the RSE.
vehicle location and motion	Data describing the vehicle's location in three dimensions, heading, speed, acceleration, braking status, and size.
vehicle location and motion for surveillance	Data describing the vehicle's location in three dimensions, heading, speed, acceleration, braking status, and size. This flow represents monitoring of basic safety data ('vehicle location and motion') broadcast by passing connected vehicles for use in vehicle detection and traffic monitoring applications.
vehicle location data for mapping	Aggregate vehicle location data collected to support map data creation and refinement.
vehicle profile	Information about a vehicle such as vehicle make and model, fuel type, engine type, size and weight, vehicle performance and level of control automation, average emissions, average fuel consumption, passenger occupancy, or other data that can be used to classify vehicle eligibility for access to specific lanes, road segments, or regions or participation in cooperative vehicle control applications.
vehicle signage application info	In-vehicle signing application configuration data and messaging parameters. This flow provides a list of regulatory, warning, and information messages to be displayed and parameters that support scheduling and prioritizing messages to be issued to passing vehicles. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.

Flow Name	Description
vehicle signage application status	In-vehicle signing application status reported by the RSE. This includes current operational state and status of the RSE and a log of messages sent to passing vehicles.
vehicle signage data	In-vehicle signing data that augments regulatory, warning, and informational road signs and signals. The information provided would include static sign information (e.g., stop, curve warning, guide signs, service signs, and directional signs) and dynamic information (e.g., local traffic and road conditions, restrictions, vehicle requirements, work zones, detours, closures, advisories, and warnings).
vehicle signage local data	Information provided by adjacent field equipment to support in-vehicle signing of dynamic information that is currently being displayed to passing drivers. This includes the dynamic information (e.g., local traffic and road conditions, work zone information, lane restrictions, detours, closures, advisories, parking availability, etc.) and control parameters that identify the desired timing, duration, and priority of the signage data.
video surveillance control	Information used to configure and control video surveillance systems.
video surveillance coordination	The direct flow of information between field equipment. This includes information used to configure and control video surveillance systems and the high fidelity, real-time traffic images and associated meta data that are returned.
voice-based alert notification	Information to be distributed to the traveling public via voice regarding a major emergency such as a natural or man-made disaster, civil emergency, severe weather or child abduction. The flow may identify 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. The content of this information flow may be specially formatted for voice-based traveler information.
voice-based traveler information	Traveler information sent to the telecommunications systems for traveler information terminator. This flow may represent the bulk transfer of traveler information, including traffic conditions, incident information, transit information and weather and road condition information. It may be specially formatted for voice-based traveler information.
voice-based traveler request	The electronic traveler information request from the telecommunications systems for traveler information terminator. It may be specifically formatted for voice-based traveler requests. The request can be a general subscription intended to initiate a continuous or regular data stream or a specific request intended to initiate a one-time response from the recipient.
weather archive data	Accumulated forecasted and current weather data (e.g., temperature, pressure, wind speed, wind direction, humidity, precipitation, visibility, light conditions, etc.) as well as qualified environmental sensor data. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.
weather information	Accumulated forecasted and current weather data (e.g., temperature, pressure, wind speed, wind direction, humidity, precipitation, visibility, light conditions, etc.).
weigh-in-motion information	Information from commercial vehicle virtual weigh-in-motion systems including vehicle weight, vehicle dimensions, vehicle identification and driver identification.
work plan coordination	Coordination of work plan schedules and activities between maintenance and construction organizations or systems. This information includes the work plan schedules and comments and suggested changes that are exchanged as work plans are coordinated and finalized.
work plan feedback	Comments and suggested changes to proposed construction and maintenance work schedules and activities. This information influences work plan schedules so that they minimize impact to other system operations and the overall transportation system.
work zone information	Summary of maintenance and construction work zone activities affecting the road network including the nature of the maintenance or construction activity, location, impact to the roadway, expected time(s) and duration of impact, anticipated delays, alternate routes, and suggested speed limits. This information may be augmented with images that provide a visual indication of current work zone status and traffic impacts.
work zone safety application info	Work zone safety application configuration data and warning parameters and thresholds. This includes work zone configuration including geofenced crew areas and travel lanes that provide a safety boundary between work zone personnel and passing vehicles. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.
work zone safety application status	Work zone safety application status reported by the RSE. This includes current operational state and status of the RSE and a record of identified work zone safety alerts and warnings issued.

Flow Name	Description
work zone status	Current work zone status including current location (and future locations for moving work zones), impact to the roadway, required lane shifts, expected time(s) and duration of impact, anticipated delays, alternate routes, and suggested speed limits.
work zone warning device control	Data used to configure and control work zone safety monitoring and warning devices.
work zone warning notification	Notification of a work zone emergency or safety issue. This flow identifies that a work zone emergency or safety issue has occurred so that warnings may be generated by more than one system in the work zone.
work zone warning status	Status of a work zone safety monitoring and warning devices. This flow documents system activations and includes additional supporting information (e.g., an image) that allows verification of the alarm.
wrong way vehicle detected	Notification that a vehicle has been detected traveling in the wrong direction. This can be a direct report by an equipped vehicle that is being driven in the wrong direction or a report of a non-equipped vehicle that has been detected traveling in the wrong direction. It includes the current location, speed, acceleration, and heading of the wrong way vehicle.
wrong way vehicle notification	Notification to public safety that a vehicle has been detected traveling in the wrong direction. It includes information about the vehicle (make, model, color, other identification data) and the current location, speed, acceleration, and heading of the wrong way vehicle.