ITS Category		H=High, M=Medium, L=Lov	
Arterial / Traffic			Relative
Management		Needs	Priority
Examples:	1	Improve system operation monitoring	Н
Signal Coordination, Centralized Control Vehicle	2	Improve signal optimization	Н
Detection Systems, Video	3	Improve traffic flow monitoring	Н
Systems, Adaptive Signal Control, Traffic Management Systems / Centers, Hiohway	4	Provide more widespread centralized computer control	М
Rail Intersection Technologies	5	Improve hardware issues in interconnecting signal systems between agencies	L
	6	Improve signal control and timing	Н
	7	Improve/implement ability to remotely modify signal timing	Н
	8	Reduce emergency vehicle delays at signals	М
	9	Reduce transit vehicle delays at signals	М
	10	Better balance signal timings favoring local traffic over through traffic	L
	11	Improve inter-jurisdictional continuity	Н
	12	Upgrade signal hardware	Н
	13	Remote monitoring of signal system status / operations by public safety agencies	М
	14	Reduce vehicle traffic delays at grade crossings	Н
	15	Better coordinate grade crossing operations with signals	Н

ITS Category		H=High, M=	-Medium, L=Low
Freeway Management		Needs	Relative Priority
Examples:	16	Deploy additional vehicle detection coverage	М
Vehicle Speed Detection Systems Video Systems	17	Implement additional field device interconnect	L
Ramp Metering, Variable	18	Improve collection of traffic demand data	М
Message Signs, Highway Advisory Radio, Traffic Management Systems/Centers	19	Improve information exchange between Caltrans District 8 and other Caltrans Districts	М
management Systems, Centers	20	Improve information exchange between Caltrans and Nevada DOT and Arizona DOT	М
	21	Improve information exchange between Caltrans District 8 and other local agencies	Н
	22	Improve incident response, especially in rural areas	М
	23	Better manage periods of high traffic demand in poor roadway conditions	L

ITS Category		H=High, M=Medium, L=	
Public Transportation Management		Needs	Relative Priority
Examples:	24	Improve regional and interregional trip planning	М
Public Transportation Management, En-route Transit Information,	25	Improve patron safety (in-vehicle and at stations / waypoints)	М
Personalized Public Transit,	26	Provide transit priority at signals	М
Public Traveler Safety, Traveler Service Information	27	Implement bus queue jump lanes	М
Traveler Service Information, Ride Matching and Reservations, Smart Card Payment/Transaction Systems	28	Improve transit transfers within and between systems and modes to improve service delivery	Н
	29	Enable dissemination / display of bus arrival times	М
	30	Enable transit agencies to locate bus fleet (AVI/AVL)	Н
	31	Improve information exchange between/among transit agencies	Н
	32	Improve information exchange between transit agencies and freeway / arterial management centers	L
	33	Disseminate better rail information and arrival times (connectivity issues)	Н
	34	Enable emergency information dissemination to transit operators	М

ITS Category		H=High, M=Medium, L=	
Emergency Management		Needs	Relative Priority
Examples:	35	Reduce response delays at signals	М
Incident Detection, Incident	36	Improve response to weather events	М
Management, Hazarabus Materials Response and Handling, Emergency	37	Improve incident response coordination between agencies	М
Notification and Personal Security Emergency Vehicle	38	Improve incident detection	М
Management, Advanced	39	Improve incident response times	М
Dispatching and Response Systems	40	Improve communications in mountain and rural areas of the region	М
	41	Provide better information dissemination regarding diversion of traffic and alternative routing	L
	42	Improve traffic management during wildfires (evacuation, response, suppression, etc.)	L
	43	Improve response to hazardous materials spills / incidents (better manage resulting traffic congestion, improve clean-up time)	М
	44	Increase use of portable traffic control equipment (CMS, HAR, etc.)	L

ITS Category		H=High, M=	=Medium, L=Low
Maintenance and			
Construction Operations		Needs	Priority
Examples: Advanced Work Zone Management and Traffic	45	Provide automated vehicle location systems for maintenance and construction operations vehicles	L
Control, Vehicle Detection	46	Improve / enhance work zone traffic handling plans	М
Systems, Viaeo Systems, Vehicle / Speed Detection Systems, Variable Message	47	Improve detection and removal of falling rocks, snow, mud and trees on roadways	М
Signs, Highway Advisory Radio, Integration with Traffic Management Systems (48	Improve coordination on construction notification and information distribution	Н
Centers, Advanced Dispatching and Routing Systems, Advanced Vehicle Tracking Systems, Fleet	49	Improve fleet information / management (maintenance schedules, mileage accumulations, tracking snow removal vehicles w/AVL)	L
Maintenance and Management Systems	50	Coordinate traffic control plans between jurisdictions	М
	51	Increase use of portable traffic control equipment (CMS, HAR, etc.)	М
	52	Provide signal preemption for some maintenance fleet vehicles	L

ITS Category		H=High, M=Medium,			
Regional Traveler			Relative		
Information		Needs	Priority		
Examples: En-route Traveler Information_Pre-trip	53 Provide quality real time congestion related information		Н		
Traveler Information,	54	Expand traveler information delivery methods	М		
Portable Event Management Systems, In-vehicle Route	55	Improve method of disseminating Caltrans delay and incident data	Н		
Signs, Highway Advisory Radio, Internet, Media,	56	Use public access cable television to disseminate traffic and weather information	L		
Tourist Information Systems	57	Improve quality and timeliness of communications	М		
	58	Provide timely, accurate information on road conditions	Н		
	59	Provide better notification of recreational routes closed in winter	М		
	60	Develop interstate / inter-region traveler information covering a wide area (targeted to CVO)	М		
	61	Improve targeted traveler information for tourists and recreation travelers at visitor information areas / rest stops, etc.	L		
	62	Provide weather and road info access at rest stops	L		
	63	Provide more data source locations for the National Weather Service	М		
	64	Provide information distribution to private/commercial information service providers (ISPs)	М		
	65	Provide better road construction information and notification	Н		
	66	Improve traveler information/directions (suggested routing for travelers not familiar with the region)	М		

ITS Category		H=High, M=	=Medium, L=Low
Commercial Vehicle			Relative
Operations		Needs	Priority
Examples: Commercial Vehicle	67	Provide interstate / inter-region traveler information covering a wide area (targeted to CVO)	М
Automated Roadside Safety	68	Provide tracking of hazmat vehicles	L
Inspection, On-board Safety Monitoring, Commercial Vehicle Administration Processes, Hazardous	69	Provide better information dissemination of winter vehicle restrictions (Chain control issues (ON/OFF))	L
Material Incident Response, Commercial Vehicle Fleet Management	70	Improve truck storage / parking information (during major road closures)	М
	71	Disseminate better information regarding limited alternative routes	М
	72	Improve congestion management during seasonal/local events	М

ITS Category		H=High, M=	=Medium, L=Low
Electronic Payment			Relative
Systems		Needs	Priority
Examples:	73	Improve transit fare payment systems	М
Electronic Toll Collection Systems, Electronic Transit Fare Payment Systems (Smart	74	Deploy Universal Card (parking / transit / tolls)	L
Cards)	l		

ITS Category		H=High, M=Medium, L=Lov			
Advanced Vehicle Control and Safety Systems		Needs	Relative Priority		
Examples:	75	Provide snow plow tracking project	L		
Longitudinal Collision Avoidance, Lateral Collision Avoidance, Intersection	76	Deploy advanced warning signs for road icing, excess speed, etc.	М		
Collision Avoidance, Vision Enhancement for Crash Avoidance, Safety Readiness, Pre-crash Restraint Deployment, Automated Highway System	77	Reduce red light running	Н		

ITS Category		H=High, M=Medium,			
			Relative		
Integration		Needs	Priority		
Examples:	78	Improve information sharing among agencies	Н		
Integration of Systems, Integration With Traffic	79	Improve communication limitations	М		
Management Centers, Central	80	Reduce dependency on proprietary systems	М		
vs. Distributed Control,	81	Provide central information clearinghouse	М		
<i>Communications</i> Infrastructure, Integration of Agencies, Institutional Issues	82	Reduce impacts of different operating systems for signal control	М		
	83	Develop integrated GIS for Region	М		
	84	Develop political agreements (MOUs)	М		
	85	Improve system compatibility	М		

INLAND EMPIRE REGIONAL ITS ARCHITECTURE PROJECT ** ITS SERVICES ** (IN MARKET PACKAGE TERMS)

ARCHIVED	DATA MANAGEMENT	VEHICLE SAFETY			
Archived Dat	a(AD)	Advanced Ve	hicle Safety Systems (AVSS)		
AD1	ITS Data Mart	AVSS01	Vehicle Safety Monitoring		
AD2	ITS Data Warehouse	AVSS02	Driver Safety Monitoring		
AD3	ITS Virtual Data Warehouse	AVSS03	Longitudinal Safety Warning		
PUBLIC TR	ANSPORTATION	AVSS04	Lateral Safety Warning		
Advanced Pu	blic Transportation Systems (APTS)	AVSS05	Intersection Safety Warning		
APTS1	Transit Vehicle Tracking	AVSS06	Pre-Crash Restraint Deployment		
APTS2	Transit Fixed-Route Operations	AVSS07	Driver Visibility Improvement		
APTS3	Demand Response Transit Operations	AVSS08	Advanced Vehicle Longitudinal Control		
APTS4	Transit Passenger and Fare Management	AVSS09	Advanced Vehicle Lateral Control		
APTS5	Transit Security	AVSS10	Intersection Collision Avoidance		
APTS6	Transit Maintenance	AVSS11	Automated Highway System		
APTS7	Multi-modal Coordination	COMMERC	TAL VEHICLE OPERATIONS		
APTS8	Transit Traveler Information	Commercial	Vehicle Operations (CVO)		
		CVO01	Fleet Administration		
TRAVELER	INFORMATION	CVO02	Freight Administration		
Advanced Tra	weler Information Systems (ATIS)	CVO03	Electronic Clearance		
ATIS1	Broadcast Traveler Information	CVO04	CV Administrative Processes		
ATIS2	Interactive Traveler Information	CVO05	International Border Electronic Clearance		
ATIS3	Autonomous Route Guidance	CVO06	Weigh-In-Motion		
ATIS4	Dynamic Route Guidance	CVO07	Roadside CVO Safety		
ATIS5	ISP Based Route Guidance	CVO08	On-board CVO Safety		
ATIS6	Integrated Transportation	CVO09	CVO Fleet Maintenance		
	Management/Route Guidance	CVO10	HAZMAT Management		
	-				
ATIS7	Yellow Pages and Reservation	EMERGEN	CY MANAGEMENT		
ATIS7 ATIS8	Yellow Pages and Reservation Dynamic Ridesharing	EMERGEN Emergency M	CY MANAGEMENT Management (EM)		
ATIS7 ATIS8 ATIS9	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing	EMERGEN Emergency M EM1	CY MANAGEMENT Management (EM) Emergency Response		
ATIS7 ATIS8 ATIS9 TRAFFIC M	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing	EMERGEN Emergency M EM1 EM2	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing ANAGEMENT Insportation Management Systems (ATMS)	EMERGEN Emergency M EM1 EM2 EM3	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance	EMERGEN Emergency M EM1 EM2 EM3 EM4	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support Roadway Service Patrols		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance	EMERGEN Emergency M EM1 EM2 EM3 EM4	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support Roadway Service Patrols		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols ANCE & CONSTRUCTION OPERATIONS		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing INANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols MCE & CONSTRUCTION OPERATIONS & Construction Operations (MCO)		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols MCE & CONSTRUCTION OPERATIONS & Construction Operations (MCO) Maintenance and Construction Vehicle		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing ANAGEMENT <i>insportation Management Systems (ATMS)</i> Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS & Construction Operations (MCO) Maintenance and Construction Vehicle Tracking		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS07	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing ANAGEMENT <i>insportation Management Systems (ATMS)</i> Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS & Construction Operations (MCO) Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS07 ATMS08	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IN Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS & Construction Operations (MCO) Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS06 ATMS07 ATMS08 ATMS09	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IN Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS & Construction Operations (MCO) Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra AtMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS06 ATMS07 ATMS08 ATMS09 ATMS10	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IN Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04	CY MANAGEMENT Management (EM) Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS & Construction Operations (MCO) Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and		
ATIS7 ATIS8 ATIS9 TRAFFIC M <i>Advanced Tra</i> ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS06 ATMS07 ATMS08 ATMS09 ATMS10 ATMS11	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IN Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols INCE & CONSTRUCTION OPERATIONS & <i>Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS06 ATMS07 ATMS08 ATMS08 ATMS09 ATMS10 ATMS11 ATMS12	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing IN Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS & <i>Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS06 ATMS07 ATMS08 ATMS08 ATMS09 ATMS10 ATMS11 ATMS12 ATMS13	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing ANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data Standard Railroad Grade Crossing	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05 MC06	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols ANCE & CONSTRUCTION OPERATIONS & <i>Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS04 ATMS05 ATMS06 ATMS06 ATMS07 ATMS08 ATMS09 ATMS10 ATMS11 ATMS12 ATMS13 ATMS14	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing INVAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data Standard Railroad Grade Crossing Advanced Railroad Grade Crossing	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05 MC06 MC07	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS & <i>Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Road Waintenance and Construction		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS03 ATMS04 ATMS05 ATMS06 ATMS07 ATMS06 ATMS07 ATMS08 ATMS09 ATMS10 ATMS11 ATMS12 ATMS13 ATMS14 ATMS15	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing INVAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data Standard Railroad Grade Crossing Advanced Railroad Grade Crossing Railroad Operations Coordination	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05 MC06 MC07 MC08	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS <i>& Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Road Waintenance and Construction Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Roadway Maintenance and Construction Work Zone Management		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS03 ATMS04 ATMS05 ATMS05 ATMS06 ATMS07 ATMS08 ATMS07 ATMS08 ATMS09 ATMS10 ATMS11 ATMS12 ATMS13 ATMS14 ATMS15 ATMS16	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing In Vehicle Signing IANAGEMENT Insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data Standard Railroad Grade Crossing Advanced Railroad Grade Crossing Railroad Operations Coordination Parking Facility Management	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05 MC06 MC07 MC08 MC09	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS <i>& Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Road Waintenance and Construction Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Roadway Maintenance and Construction Work Zone Management Work Zone Safety Monitoring		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS03 ATMS04 ATMS05 ATMS06 ATMS07 ATMS06 ATMS07 ATMS08 ATMS09 ATMS10 ATMS11 ATMS12 ATMS13 ATMS14 ATMS15 ATMS16 ATMS17	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing ANAGEMENT insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data Standard Railroad Grade Crossing Advanced Railroad Grade Crossing Railroad Operations Coordination Parking Facility Management Regional Parking Management	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05 MC06 MC07 MC08 MC09 MC10	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS <i>& Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Road Waintenance and Construction Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Roadway Maintenance and Construction Work Zone Management Work Zone Safety Monitoring Maintenance and Construction Activity		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS03 ATMS04 ATMS05 ATMS05 ATMS06 ATMS07 ATMS08 ATMS07 ATMS08 ATMS09 ATMS10 ATMS11 ATMS12 ATMS13 ATMS14 ATMS15 ATMS16 ATMS18	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing ANAGEMENT insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data Standard Railroad Grade Crossing Advanced Railroad Grade Crossing Railroad Operations Coordination Parking Facility Management Regional Parking Management	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05 MC06 MC07 MC08 MC09 MC10	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS <i>& Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Road Waintenance and Construction Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Roadway Maintenance and Construction Work Zone Management Work Zone Safety Monitoring Maintenance and Construction Activity Coordination		
ATIS7 ATIS8 ATIS9 TRAFFIC M Advanced Tra ATMS01 ATMS02 ATMS03 ATMS03 ATMS04 ATMS05 ATMS06 ATMS05 ATMS06 ATMS07 ATMS08 ATMS09 ATMS10 ATMS10 ATMS11 ATMS13 ATMS14 ATMS15 ATMS16 ATMS19	Yellow Pages and Reservation Dynamic Ridesharing In Vehicle Signing ANAGEMENT insportation Management Systems (ATMS) Network Surveillance Probe Surveillance Surface Street Control Freeway Control HOV Lane Management Traffic Information Dissemination Regional Traffic Control Incident Management System Traffic Forecast and Demand Management Electronic Toll Collection Emissions Monitoring and Management Virtual TMC and Smart Probe Data Standard Railroad Grade Crossing Advanced Railroad Grade Crossing Railroad Operations Coordination Parking Facility Management Regional Parking Management Reversible Lane Management Speed Monitoring	EMERGEN Emergency M EM1 EM2 EM3 EM4 MAINTENA Maintenance MC01 MC02 MC03 MC04 MC05 MC06 MC07 MC08 MC09 MC10	CY MANAGEMENT <i>Management (EM)</i> Emergency Response Emergency Routing Mayday Support Roadway Service Patrols NCE & CONSTRUCTION OPERATIONS <i>& Construction Operations (MCO)</i> Maintenance and Construction Vehicle Tracking Maintenance and Construction Vehicle Maintenance Road Weather Data Collection Weather Information Processing and Distribution Roadway Automated Treatment Winter Maintenance Roadway Maintenance and Construction Work Zone Management Work Zone Safety Monitoring Maintenance and Construction Activity Coordination		

	Moritot Destrogog	Existing or Planned in the Inland	Identified Inland Empire	No Inland Empire	Inland Empire Need
	MARKEL PACKAGES	Empire	Ineeu	Ineed	Indeterminate
Archived D	ata (AD)				
AD1	ITS Data Mart	\checkmark			
AD2	ITS Data Warehouse		\checkmark		
AD3	ITS Virtual Data Warehouse				\checkmark
PUBLIC T	RANSPORTATION				
Advanced F	Public Transportation Systems				
(APTS)					
APTS1	Transit Vehicle Tracking	√			
APTS2	Transit Fixed-Route Operations	\checkmark			
APTS3	Demand Response Transit Operations	✓			
APTS4	Transit Passenger and Fare	1			
	Management	•			
APTS5	Transit Security	✓			
APTS6	Transit Maintenance	\checkmark			
APTS7	Multi-modal Coordination		✓		
APTS8	Transit Traveler Information		✓		
TRAVELE	CR INFORMATION				
Advanced T	Traveler Information Systems (ATIS)				
ATIST	Broadcast Traveler Information	▼			
ATIS2	Interactive Traveler Information	√			
ATIS3	Autonomous Route Guidance	√			
ATIS4	Dynamic Route Guidance				✓
ATIS5	ISP Based Route Guidance	✓			
ATIS6	Integrated Transportation Management/Route Guidance				✓
ATIS7	Yellow Pages and Reservation				\checkmark
ATIS8	Dynamic Ridesharing	\checkmark			
ATIS9	In Vehicle Signing				\checkmark
TRAFFIC	MANAGEMENT				
Advanced T (ATMS)	Fransportation Management Systems				
ATMS01	Network Surveillance	\checkmark			
ATMS02	Probe Surveillance				\checkmark
ATMS03	Surface Street Control	\checkmark			
ATMS04	Freeway Control	\checkmark			
ATMS05	HOV Lane Management	\checkmark			
ATMS06	Traffic Information Dissemination	\checkmark			
ATMS07	Regional Traffic Control		✓		
ATMS08	Incident Management System		✓		
ATMS09	Traffic Forecast and Demand				./
	Management				v
ATMS10	Electronic Toll Collection				✓

		Existing or Planned in the Inland	Identified Inland Empire	No Inland Empire	Inland Empire Need
	Market Packages	Empire	Need	Need	Indeterminate
ATMS11	Emissions Monitoring and	1			1
	Management	•			•
ATMS12	Virtual TMC and Smart Probe				\checkmark
ATMS13	Data Standard Bailroad Grade Crossing				
ATMS13	Advanced Bailroad Grade Crossing	•			
ATMS14	Railroad Operations Coordination		· ·		
ATMS15	Parking Facility Management		•		
ATMS10	Pagional Parking Management	•			
ATMS17	Regional Farking Wanagement				v
ATMS10	Speed Monitoring			•	
ATMS19	Dreubridge Monogement		•		
ATM520				v	
Advanced V	SAFEIY Johicle Safety Systems (AVSS)				
AVSS01	Vehicle Safety Monitoring				✓
AVSS02	Driver Safety Monitoring				
AVSS03	Longitudinal Safety Warning				
AVSS04	Lateral Safety Warning				
AVSS05	Intersection Safety Warning				
AVSS06	Pre-Crash Restraint Deployment				
AVSS07	Driver Visibility Improvement				
AVSS08	Advanced Vehicle Longitudinal				
111 5500	Control				✓
AVSS09	Advanced Vehicle Lateral Control				\checkmark
AVSS10	Intersection Collision Avoidance				\checkmark
AVSS11	Automated Highway System				\checkmark
COMMERCIAL VEHICLE OPERATIONS					
Commercia	l Vehicle Operations (CVO)				
CVO01	Fleet Administration	✓			
CVO02	Freight Administration	,			✓
CVO03	Electronic Clearance	✓			
CVO04	CV Administrative Processes	✓			
CVO05	International Border Electronic Clearance				✓
CVO06	Weigh-In-Motion	\checkmark			
CVO07	Roadside CVO Safety	✓			
CVO08	On-board CVO Safety				\checkmark
CVO09	CVO Fleet Maintenance				\checkmark
CVO10	HAZMAT Management		 ✓ 		
EMERGE	NCY MANAGEMENT				
Emergency Management (EM)					
EM1	Emergency Response	✓ _			
EM2	Emergency Routing				✓
EM3	Mayday Support				\checkmark

		Existing or Planned in the Inland	Identified Inland Empire	No Inland Empire	Inland Empire
Market Packages		Empire	Need	Need	Indeterminate
EM4	Roadway Service Patrols	\checkmark			
MAINTENANCE & CONSTRUCTION OPERATIONS Maintenance & Construction Operations (MCO)					
MC01	Maintenance and Construction Vehicle Tracking			~	
MC02	Maintenance and Construction Vehicle Maintenance				✓
MC03	Road Weather Data Collection	\checkmark			
MC04	Weather Information Processing and Distribution	✓			
MC05	Roadway Automated Treatment				\checkmark
MC06	Winter Maintenance	✓			
MC07	Roadway Maintenance and Construction	✓			
MC08	Work Zone Management		\checkmark		
MC09	Work Zone Safety Monitoring		\checkmark		
MC10	Maintenance and Construction Activity Coordination		\checkmark		