INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PLAN FOR THE KERN REGION

FINAL DELIVERABLE NO. 12
REGIONAL ITS PLAN
APPENDIX A: ITS USER NEEDS ASSESSMENT RESULTS

JUNE 2018

Kern Council of Governments

Kern Council of Governments
1401 19th Street, Suite 300
Bakersfield, CA 93301
www.kerncog.org
661-635-2900
Fax 661-324-8215

http://www.kerncog.org/category/docs/its/

Prepared by:
Kimley-Horn & Associates, Inc.
765 The City Drive, Suite 200
Orange, CA 92868

Appendix A.   ITS USER NEEDS ASSESSMENT RESULTS

Need	Priority					Category/Service Area
	Red High (5)	Green Medium (3)	Yellow Low (1)	Blue Not Needed	Total	
Provide routing (detour) information to travelers during incident, construction, weather events, special events, etc.	22	6	1		129	Traveler Information
Provide/enhance road weather conditions information to travelers	21	5	2		122	Traveler Information
Improve signal timing/coordination	18	9	1		118	Arterial Management
Provide roadway closure/restriction information	20	5	1		116	Traveler Information
Improve information exchange between Caltrans and local transportation agencies	20	5	1		116	Data Management and Sharing
Coordinate construction and maintenance project schedules within and between agencies	17	9	1		113	Road Weather
Reduce recurring traffic congestion	17	7	1		107	Arterial Management
Provide real-time traffic information to emergency responders	18	4	1		103	Emergency Management
Warn work crews of errant vehicles	16	7	1	1	102	Road Weather
Provide incident information to travelers	12	13	1	1	100	Traveler Information
Share congestion information with other agencies	14	9	2	1	99	Data Management and Sharing
Improve a multi-agency, system-coordinated response to major incidents	17	4	2		99	Emergency Management
Provide incident information to emergency management agencies	14	8	3		97	Data Management and Sharing
Reduce incident clearance time	16	5	2		97	Emergency Management
Reduce recurring traffic congestion	16	5	1	1	96	Freeway Management
Receive real-time roadway congestion information	13	9	4		96	Transit Management

Need	Priority					Category/Service Area
	Red High (5)	Green Medium (3)	Yellow Low (1)	Blue Not Needed	Total	
Provide/enhance congestion information to travelers	12	11	3	1	96	Traveler Information
Receive roadway construction/closure/detour information	12	11	2	1	95	Transit Management
Improve quality, consistency and thoroughness of traveler information	12	11	2		95	Traveler Information
Improve information exchange between transportation and transit agencies	13	9	3		95	Data Management and Sharing
Use archived data for planning, modeling, analysis and traffic management strategy development	13	9	3		95	Data Management and Sharing
Improve communications in rural areas	16	4	3		95	Emergency Management
Improve interagency communications	15	6	2		95	Emergency Management
Provide more timely incident information to travelers	11	12	3		94	Traveler Information
Provide information on roadway construction and maintenance activities	13	8	4	1	93	Traveler Information
Provide advisory to warn traffic of a stopped queue in/near work zones	14	6	5		93	Road Weather
Improve incident notification to agencies	15	5	3		93	Emergency Management
Improve response to HAZMAT incidents	15	5	3		93	Emergency Management
Improve data collection and archiving	12	10	2		92	Data Management and Sharing
Provide/enhance enforcement in work zones	12	9	4		91	Road Weather
Monitor transportation infrastructure	11	11	3		91	Road Weather
Improve incident response	13	8	2		91	Emergency Management
Improve incident detection	13	8	2		91	Emergency Management
Provide/enhance speed enforcement at high risk locations	11	11	2		90	Arterial Management
Use social media for traveler information dissemination	12	8	5	1	89	Traveler Information
Provide travel times/delays through work zones	12	8	5	2	89	Traveler Information

Need	Priority					Category/Service Area
	Red High (5)	Green Medium (3)	Yellow Low (1)	Blue Not Needed	Total	
Improve 511 system/web site	9	13	5		89	Traveler Information
Share public safety/computer aided dispatch (CAD) data with transportation agencies	10	12	3		89	Data Management and Sharing
Coordinate timed transfers between routes, providers and modes	13	6	5		88	Transit Management
Expand coverage of environmental/weather/road conditions detection/monitoring systems	7	17	2		88	Road Weather
Develop mobile apps to provide static and real-time transit information	11	9	5		87	Transit Management
Implement regional smart card for transit fare payment	14	4	4	1	86	Transit Management
Expand/enhance/upgrade computer aided dispatch (CAD) system	12	7	5		86	Transit Management
Provide roadway flood warnings	12	7	5		86	Road Weather
Reduce traffic congestion during incidents	11	9	3		85	Arterial Management
Provide transit information using social media	13	5	5	1	85	Transit Management
Send email alerts of major incidents to major employers	8	12	9		85	Traveler Information
Conduct outreach/education activities to promote awareness of traveler information services	8	13	6	1	85	Traveler Information
Enhance 511 to provide static and real-time transit information	9	11	6		84	Traveler Information
Implement a central information/data clearinghouse	10	10	4	1	84	Data Management and Sharing
Enhance computer aided dispatch (CAD) systems	12	7	3	1	84	Emergency Management
Receive roadway incident information	8	13	4		83	Transit Management
Upgrade signal hardware	8	13	3		82	Arterial Management
Expand emergency vehicle preemption	12	6	4		82	Emergency Management
Reduce traffic congestion during incidents	9	12		2	81	Freeway Management

Need	Priority					Category/Service Area
Implement/enhance web-based trip planner	10	10	1	2	81	Transit Management
Share incident information with other agencies	8	13	2	1	81	Data Management and Sharing

Need	Priority					
	Red High (5)	Green Medium (3)	Yellow Low (1)	Blue Not Needed	Total	Category/Service Area
Coordinate arterial and freeway management strategies	10	9	3	1	80	Arterial Management
Provide/enhance speed enforcement at high risk locations	11	7	4	1	80	Freeway Management
Improve/implement ability to remotely modify signal timing	10	8	5	1	79	Arterial Management
Provide real-time transit arrival/departure information on web site	11	7	3	3	79	Transit Management
Provide/enhance mobile data terminals for emergency vehicles	11	7	2	2	78	Emergency Management
Expand/enhance/upgrade automatic vehicle location (AVL) system	8	11	3	1	76	Transit Management
Provide real-time transit arrival/departure information at bus stops	9	9	3	3	75	Transit Management
Expand security cameras on transit vehicles, at transit stations/stops and park-and-ride facilities	10	7	4	1	75	Transit Management
Provide freeway/expressway travel times	9	9	3	5	75	Traveler Information
Provide better vehicle restrictions and roadway closure information to commercial vehicles	8	11	2		75	Commercial Vehicle Operations
Implement transit signal priority technology	7	11	6	1	74	Transit Management
Provide arterial travel times (on major arterials)	6	12	8	2	74	Traveler Information
Implement intersection collision warning/avoidance systems	6	13	4		73	Arterial Management
Provide/enhance automatic vehicle location (AVL) for emergency vehicles	9	8	3	2	72	Emergency Management
Provide tracking of HAZMAT vehicles	10	5	7	1	72	Commercial Vehicle Operations
Staffing	6	12	5	2	71	Arterial Management
Improve ridesharing program/website	6	12	5	2	71	Transit Management

Need	Priority					Category/Service Area
	Red High (5)	Green Medium (3)	Yellow Low (1)	Blue Not Needed	Total	
Share surveillance video and data with PSAPs/emergency responders	7	10	6	2	71	Data Management and Sharing
Share surveillance video and data with PSAPs/emergency responders	7	10	6	2	71	Data Management and Sharing
Enhance arterial traffic map	6	10	10	1	70	Traveler Information
Monitor queue lengths in/near work zones	6	11	7	1	70	Road Weather
Expand CCTV camera coverage on arterials	7	9	7		69	Arterial Management
Implement/improve incident detection capabilities	5	14	2	2	69	Freeway Management
Enhance freeway/expressway traffic map	6	10	9	2	69	Traveler Information
Implement Smart Work Zone technology	6	12	3	1	69	Road Weather
Provide target enforcement at locations with history of violations	6	11	6		69	Commercial Vehicle Operations
Develop/implement system-wide arterial management strategies	7	10	3		68	Arterial Management
Monitor/collect air quality data	8	7	7	2	68	Arterial Management
Implement red-light-running technology	8	7	7	1	68	Arterial Management
Implement/enhance remote monitoring of transit vehicle mechanical condition	5	13	4	1	68	Transit Management
Provide on-line reservation system for demand-responsive transit services	5	12	5	1	66	Transit Management
Provide information on planned special events	4	13	7	3	66	Traveler Information
Provide curve speed warning	7	8	7		66	Road Weather
Improve data collection capabilities	8	6	7	1	65	Arterial Management
Provide on-board automated enunciators	8	7	3	4	64	Transit Management
Reduce vehicle delays at rail grade crossings	6	9	6	1	63	Arterial Management
Expand freeway/expressway dynamic message signs (DMS)	4	12	5	1	61	Freeway Management

Provide vehicle-over-height detection/warnings	5	10	6	1	61	Road Weather
Expand CCTV coverage on freeways/expressways	6	8	5	1	59	Freeway Management

Need	**Priority**					
	Red High (5)	**Green Medium (3)**	**Yellow Low (1)**	**Blue Not Needed**	**Total**	**Category/Service Area**
Expand/upgrade automated passenger counters	4	10	9	1	59	Transit Management
Reduce commercial vehicle weight, width and height violations	7	6	6	2	59	Commercial Vehicle Operations
Provide information on commercial vehicle operations (CVO) permit restrictions	5	9	6	1	58	Commercial Vehicle Operations
Improve data collection on freeways/expressways	6	7	6	1	57	Freeway Management
Monitor/collect air quality data	6	6	9	3	57	Freeway Management
Provide directions to parking facilities	4	8	13	3	57	Traveler Information
Install/upgrade automatic vehicle location (AVL) on freeway service patrol vehicles	6	7	5	3	56	Freeway Management
Implement/expand dynamic message sign (DMS) installations on arterials	5	6	11	1	54	Arterial Management
Provide interstate/inter-regional traveler information for commercial vehicles	5	7	8	1	54	Commercial Vehicle Operations
Implement/improve inter-jurisdictional signal coordination	6	5	8	2	53	Arterial Management
Implement/upgrade computer aided dispatch (CAD) system for freeway service patrol	6	5	8	3	53	Freeway Management
Provide information on available truck parking facilities	3	9	11	3	53	Traveler Information
Provide health monitoring of traffic signal equipment at intersections and rail crossings	3	9	10		52	Arterial Management
Deploy weigh-in-motion/mobile weigh enforcement technology	2	11	9		52	Commercial Vehicle Operations
Improve/expand vehicle detection coverage on freeways/expressways	4	9	4	2	51	Freeway Management

Need	Priority					Category/Service Area
Warn travelers about trucks entering/existing work zones	4	7	10	4	51	Road Weather
Implement variable speed limits	2	11	7	2	50	Freeway Management

Need	Red High (5)	Green Medium (3)	Yellow Low (1)	Blue Not Needed	Total	**Category/Service Area**
Provide information on truck parking and availability	3	9	8	2	50	Commercial Vehicle Operations
Monitor queue lengths at ramp locations	2	12	3	3	49	Freeway Management
Expand highway advisory radio (HAR) coverage on freeways/expressways	4	6	7	3	45	Freeway Management
Provide information on parking availability		10	15	2	45	Traveler Information
Improve ramp metering operations	4	5	9	2	44	Freeway Management
Track locations of maintenance fleet	1	10	8	6	43	Road Weather
Implement advanced parking management systems		3	15	2	24	Arterial Management
Implement automated/remote control gate systems		2	12	6	18	Freeway Management