6. ALTERNATIVES ANALYSIS

6.1 Purpose of Alternatives Analysis

When addressing the needs identified by transportation stakeholders in Illinois, it is important to look at many different potential solutions to ensure an efficient and coordinated use of resources. While some solutions can be used to address a single identified area of need, other solutions can be used to address multiple needs, which can lead to significant cost savings. A thorough analysis of different alternatives helps to identify the solutions that provide the most benefit while addressing the highest priority problems.

For the purposes of this analysis, the following criteria were considered:

- What potential solutions can address the identified needs?
- How will these solutions address the identified needs?
- Can some solutions address multiple needs?
- What are the potential benefits to the public as a result of implementing these solutions?
- What are the implementation and ongoing operations and maintenance costs associated with these solutions?
- What is the geographic scope of the solution?

Applying these criteria will ensure that Illinois ITS deployments are an efficient use of the state's resources and will provide a substantial benefit to travelers and residents at a reasonable cost.

The alternatives reviewed are all applicable on a statewide level, but often rely on ITS initiatives deployed at the local level to provide their benefit. However, while some solutions may address the identified statewide needs and rank highly against the criteria described above, they may not have been examined in this Statewide ITS Strategic Plan because their benefits are only realized at the local level (e.g., intelligent pedestrian signals). Individual regions will need to determine if such projects address their needs and provide adequate benefit.

For this analysis, the needs identified in Section 3 have been viewed on two geographic levels:

- Statewide: needs that are general throughout the state (including in rural areas), prioritized based on input from stakeholders on a statewide basis
- Regional: needs prioritized for different metropolitan regions with their own MPO or RPC

Some needs apply to more than one geographic level, and some needs can apply in different ways to different geographic levels. While 'transportation safety' is a need that has been identified throughout the state, geographic areas can have different specific needs and require different solutions to address transportation safety issues. For example, while improved transportation safety is an identified statewide need, urban areas may be more concerned about highway/railroad crossings and rural areas more concerned with high crash rates at road sections

due to repeated icing or curves in the road. This identified need requires different ITS solutions to improve traveler safety in different areas.

The needs for these different geographic areas were discussed in Section 3, where they were linked to specific ITS Program Areas. To review, stakeholder outreach prioritized these statewide ITS program areas as follows:

Table 6-1 – Prioritized Statewide Needs by Program Area

Program Area	Rank
Traveler Information	1
Traffic Management	2
Incident Management	3
Interagency Coordination	4
Improved Communications	5
Data Management	6
Commercial Vehicle Operations (CVO)	7
Transportation Safety	8
Construction & Maintenance	9
Transit	10
Standardization	11
System Security	12
Outreach	13
Multi-modal Coordination	14
Asset Sharing and Control	15

Regional ITS priorities are summarized in Section 3, Problem Identification and Prioritization.

6.2 Potential ITS Solutions

6.2.1 NEEDS VS. SOLUTIONS

Based on the needs brought forward by stakeholders, potential ITS solutions have been identified and examined to address those identified needs.

Some solutions address multiple needs. For example, closed circuit television (CCTV) cameras can be deployed near work zones to support traffic management, at transit centers to provide transit security, or at bridges to monitor infrastructure. These systems can address more than one need at once or can be deployed to only focus on one need. This analysis examines where the solutions can be applied. Individual agencies responsible for implementing the solutions through ITS projects will need to determine the specific function(s) of the implemented solution.

While a single solution might address different needs, it might not address them equally. Some provide more benefits in a given program area while having less frequently realized benefits in

another program area. For example, in-vehicle commercial vehicle broadcasts provide traveler information targeted at commercial vehicles, so it is primarily focused on the Advanced Traveler Information Systems and Commercial Vehicle Operations program areas. Additionally, depending on what traveler information is broadcast, it could provide information regarding incidents, construction, or security events. The ITS solution addresses these needs in a secondary manner, at a lower frequency or with less impact. The *Needs vs. Solutions* matrices below note whether a solution addresses a need in a primary (P) or secondary (S) manner.

Solutions can also be used to address needs differently in a statewide or regional level. While CCTV cameras must be deployed at specific locations, they can also provide information on a regional or statewide basis. An image from a camera can be accessed by a local agency, a regional traffic management center (TMC), or placed on a website available to users throughout the state and beyond. Images from locally operated cameras can even be used for regional emergency management operations.

Based on the program areas identified during project outreach, the potential solutions contained in Table 6-2 were identified as potential ways to address ITS stakeholder needs on a statewide or interregional level. These solutions were developed further in this Statewide ITS Strategic Plan.

In addition, a listing of potential *regional* solutions is also provided in Appendix G. These lists are intended to serve as a starting point for ITS stakeholders in Regions 2A through 9 in addressing their ITS needs.

Table 6-2 - Statewide Need (Program Area) vs. Solution Matrix

Potential Solutions	High Priority					Medium Priority					Low Priority/Regional				
	Traveler Information	Traffic Management	Incident Management	Interagency Coordination	Improved Communications	Data Management	Commercial Vehicle Operations	Transportation Safety	Construction & Maintenance	Transit	Standard-ization	System Security	Outreach/ Public Education	Multi-Modal Coord-ination	Asset Sharing & Control
Active Transit Station Signs	P									P				S	
Advanced Railroad Highway Interface Technologies	P	P						P							
Automated Commercial Vehicle Inspection							P					S			
Automatic Vehicle Location (AVL)			P						P	P					
Commercial Vehicle Information Exchange				S		P	P	S							
Computer-Aided Dispatching (CAD)			P							P					
Corridor Action Teams	P	S	S	P				S		S			P	S	P
Crash Investigation Systems			P					S							
Curve Warning Systems		S						P							
Dynamic Speed Warning Signs	P	S						P							
Emergency Vehicle Rail Crossing Safety Systems			P					P							
Emergency Vehicle Traffic Signal Preemption		S	P												
Enabling Backbone Communications Infrastructure	P	P		S	P	S					S				P
Enhanced Communications Links to Field Devices		P	S		P	S				S	S				S
High Volume Rest Area Parking Management	P						P	S							
Illinois Statewide Transportation Information Network (ISTIN)	P	P			S	P					P				
In-vehicle CVO Info	P		S				P		S			S			
In-vehicle Traffic Probes		P				P									S
Integrated Transportation Corridors		P						P			S				
Integration of Communications Channels			S	P	P						S	S			S
Interagency Operations Library		S	S	P		P	S		S		S	S		S	P

Potential Solutions	High Priority					Medium Priority					Low Priority/Regional				
	Traveler Information	Traffic Management	Incident Management	Interagency Coordination	Improved Communications	Data Management	Commercial Vehicle Operations	Transportation Safety	Construction & Maintenance	Transit	Standard-ization	System Security	Outreach/ Public Education	Multi-Modal Coord-ination	Asset Sharing & Control
ITS Design Guidelines/Quantity Purchase Agreements											P				
ITS Infrastructure Deployment	P	P	S			S		S							
ITS Outreach/Public Education													P		
Mobile Network Access	S	P	P			P			P	P		S			S
Overheight Detection Systems							P	S							
Portable Dynamic Message Signs (DMS)	P	S	S						S						S
Portable Speed Detectors		P				S		P	S						
Red Light Running Monitoring		P						P							
Regional Communications Centers	P	P		P	P										
Regional Traffic Signal Coordination		P	S	S											
Regional Paratransit Coordination				P						P	S				P
Security Surveillance			P									P			
Standardization of ITS Transit Initiatives										P	P				
Statewide Advanced Traveler Information Systems	P		S	S		P			S	S				S	
Statewide Communications Center/System One Upgrade	P	S		P	P	S						P			S
Traffic Data Archive	P					P					P				
Traffic Signal System Upgrades		P						S							
TMC Interoperability		P	S	S	S	S					S				S
Training		S	P	P				S			P	S			
Transit Signal Priority		S		S						P					S
Transit Transfer Connection Protection										P					S
Virtual Weigh Stations						S	P		S						
Work Zone Enhancements	S	P				S	S	P	P						

P - Primary
S - Secondary

6.2.2 ITS SOLUTION DESCRIPTIONS

Appendix H contains descriptions of the potential ITS solutions that can be deployed in Illinois to address identified needs, including potential benefits, estimated costs, the needs that each solution would address, and the geographic scope where each solution could be applied. These solutions have been found to typically provide a positive return on investment in deployments in other states. Specific projects can be developed based on the solution concept to address the specific needs of a specific area. These are only concepts and estimates; exact functions and costs will be determined with specific projects.

6.3 Past, Continuing, and Planned Illinois ITS Initiatives

To maximize the benefit of some ITS solutions, they should be integrated with other systems that would enhance their effectiveness. Leveraging existing ITS deployments through this integration can provide data or connections to make implementations more effective. Using systems that are already in the ground can also keep costs more reasonable by reducing the amount of new equipment.

Based on surveys of transportation plans and projects in Illinois as well as stakeholder interviews, a listing of existing or planned projects in Illinois has been compiled. Table 6-3 takes a preliminary look at these existing ITS projects and suggests which ones have integration potential with the ITS solutions described in Section 6.2. ITS projects deployed in or planned for Illinois include:

- Accident Investigation Sites
- Advanced Parking Management System
- ATMS Interface
- CCTV and Surveillance Cameras
- Call Box System
- Communications Center/TMC
- Dynamic Message Sign
- Electronic CVO Credentialing
- Emergency Management Operations Center
- Emergency Phones at Rest Areas
- GPS for Transit
- Highway Advisory Radio (HAR)
- Highway/Railroad Gates
- Incident Detection System
- Integrated Smart Corridors
- Maintenance Management Information System
- Mobile Safety Warning Systems
- Motorist Assistance Programs
- PrePass Weigh-in Motion (WIM)
- Ramp Merge Warning System
- Road Weather Information System (RWIS)
- Tollway Transponders
- Traffic Detection Systems
- Traffic Management System (TIMS)
- Traffic Signal Ramp Queue Detection
- Traveler Information/Condition Phone Number
- Traveler Information Center (Gateway System)
- Traveler Information Websites
- 511 Traveler Information System
- Video Vehicle Detection Stations

Table 6-3 - Potential Existing Project and New Solution Integration

Illinois Existing Projects	Active Transit Station Signs	Advanced RR Highway Xing	Automated Commercial Vehicle Inspection	Automatic Vehicle Location	CV Information Exchange	Computer Aided Dispatch	Corridor Action Teams	Interagency Operations Library	Crash Investigation Systems	Curve Warning Systems	Dynamic Speed Warning	Emergency Vehicle Rail Crossing Safety Systems	Emergency Vehicle Preemption	Enabling Communications Infrastructure	Enhanced Comm. Links	High Volume Rest Area Parking Management	In-vehicle CVO Info	ISTIN	In-vehicle Traffic Probes	Integrated Trans. Corridors	Integration of Comm. Channels	ITS Design Guidelines	ITS Infrastructure Deployment	ITS Outreach/Public Education	Mobile Network Access	Overheight Detection Systems	Portable DMS	Portable Speed Detectors	Red Light Running Monitoring	Regional Communications Centers	Regional Traffic Signal Coordination	Regional Paratransit Coordination	Security Surveillance	Standardization of ITS Transit Initiatives	Statewide 511 Implementation	Statewide Communications Center	Traffic Data Archive	Traffic Signal System Upgrade	Training	Transit Transfer Connection Protection	Transit Signal Priority	TMC Interoperability	Work Zone Enhancements	Virtual Weigh Stations
Intelligent Bus System – Dist 1	X			X		X																		X	X						X		X							X	X			
Accident Investigation Sites – Dist 4							X		X																																		X	
Advanced Parking Management System – Dist 8																						X		X																				
ATMS Interface – Dist 2																						X								X														
Alternate Routes – Dist 2							X	X																		X																	X	
CCTV – Dist 1-9							X			X					X					X		X	X							X											X			
Surveillance Camera – Dist 8															X					X		X											X								X			
Prepass Weigh-in Motion (WIM) – Dist 1-3, 5-9			X		X															X		X				X														X			X
Communications Centers/ TMCs		X					X	X				X		X	X			X		X	X	X	X	X	X		X	X		X	X			X		X	X			X	X	
Dynamic Message Sign – Dist 1-4, 8, Tollway							X								X					X		X	X																		X			
Emergency Management Operations Center – Statewide								X						X	X						X				X		X			X			X			X			X					
Highway Advisory Radio (HAR) – Dist 1-6, 8-9							X										X			X		X	X							X													
Emergency Phone (at rest area) – Dist 1-9																				X																								
Call Box System – Dist 8																				X																								
GPS for Transit – Dist 5	X			X		X															X										X		X							X	X			X
Incident Detection Sys – Dist 2							X			X					X					X		X								X											X			

Illinois Existing Projects	Active Transit Station Signs	Advanced RR Highway Xing	Automated Commercial Vehicle Inspection	Automatic Vehicle Location	CV Information Exchange	Computer Aided Dispatch	Corridor Action Teams	Interagency Operations Library	Crash Investigation Systems	Curve Warning Systems	Dynamic Speed Warning	Emergency Vehicle Rail Crossing Safety Systems	Emergency Vehicle Preemption	Enabling Communications Infrastructure	Enhanced Comm. Links	High Volume Rest Area Parking Management	In-vehicle CVO Info	ISTIN	In-vehicle Traffic Probes	Integrated Trans. Corridors	Integration of Comm. Channels	ITS Design Guidelines	ITS Infrastructure Deployment	ITS Outreach/Public Education	Mobile Network Access	Overheight Detection Systems	Portable DMS	Portable Speed Detectors	Red Light Running Monitoring	Regional Communications Centers	Regional Traffic Signal Coordination	Regional Paratransit Coordination	Security Surveillance	Standardization of ITS Transit Initiatives	Statewide 511 Implementation	Statewide Communications Center	Traffic Data Archive	Traffic Signal System Upgrade	Training	Transit Transfer Connection Protection	Transit Signal Priority	TMC Interoperability	Work Zone Enhancements	Virtual Weigh Stations
Maintenance Management Info System - Statewide														X				X				X			X					X														
Mobile Safety Warning Systems – Statewide (at least 2 per district)							X			X										X		X																					X	
Motorist Assistance Program – Dist 1, 8, Tollway				X		X	X													X				X	X														X			X	
Highway/Railroad Gates – Dist 3, 6		X										X								X		X																						
Smart Corridors – Dist 1		X					X			X	X	X	X		X					X		X	X	X			X			X	X										X		
SSI Systems – District 4															X					X		X								X													
Tollway Transponders - Tollway																						X																					
Traffic Signal Ramp Queue Detection – Dist 4																					X									X													
Traffic Detection Sys – Dist 4							X								X				X	X		X	X	X							X												
Video Vehicle Detection Stations – Dist 8							X								X							X																					
Traffic Management System (TIMS) - Tollway							X	X			X	X		X	X			X	X	X		X	X	X	X		X					X		X			X			X	X	
Transit Radio Upgrade – Dist 8															X						X	X												X							X		
Traveler Info/Condition Phone #							X										X	X				X		X						X					X							
Ramp Merge Warning System – Dist 1																						X																					
Road Weather Info System (RWIS) – Dist 1-8															X					X		X	X							X													
RWIS System (with display on DOT website) – Statewide																	X	X				X		X											X								

Illinois Existing Projects	Active Transit Station Signs	Advanced RR Highway Xing	Automated Commercial Vehicle Inspection	Automatic Vehicle Location	CV Information Exchange	Computer Aided Dispatch	Corridor Action Teams	Interagency Operations Library	Crash Investigation Systems	Curve Warning Systems	Dynamic Speed Warning	Emergency Vehicle Rail Crossing Safety Systems	Emergency Vehicle Preemption	Enabling Communications Infrastructure	Enhanced Comm. Links	High Volume Rest Area Parking Management	In-vehicle CVO Info	ISTIN	In-vehicle Traffic Probes	Integrated Trans. Corridors	Integration of Comm. Channels	ITS Design Guidelines	ITS Infrastructure Deployment	ITS Outreach/Public Education	Mobile Network Access	Overheight Detection Systems	Portable DMS	Portable Speed Detectors	Red Light Running Monitoring	Regional Communications Centers	Regional Traffic Signal Coordination	Regional Paratransit Coordination	Security Surveillance	Standardization of ITS Transit Initiatives	Statewide 511 Implementation	Statewide Communications Center	Traffic Data Archive	Traffic Signal System Upgrade	Training	Transit Transfer Connection Protection	Transit Signal Priority	TMC Interoperability	Work Zone Enhancements	Virtual Weigh Stations
Traveler Info Center (Gateway System) – Dist 1							X								X		X	X	X			X		X						X					X		X						
Traveler Info Website – Statewide, Dist 1, 4 (Construction),							X										X	X	X			X		X						X					X								
Traveler Info (Transit) – Dist 1	X			X			X											X				X		X										X	X					X				X

6.4 Continuing and Planned ITS Initiatives in Neighboring States with Potential for Coordination

In addition to coordinating activities within the state of Illinois, IDOT should also continue to coordinate with neighboring states on statewide initiatives or projects near borders. Illinois and neighboring states (Indiana, Wisconsin, Missouri, Iowa, and Kentucky) share priorities and are already working on similar projects, such as 511 systems and projects that are part of the state CVISN programs. This coordination can help plan for communications between systems in different states, reducing the cost of such system compatibility and increasing the number of customers who can benefit from Illinois ITS projects. For example, coordinating with other states on 511 Traveler Information Systems can allow Illinois residents traveling to other states easy access to information to plan their trip as well as benefiting travelers to Illinois by allowing them to access traveler information from Illinois through a nationally recognized phone number. Motorist assistance service patrols can also be coordinated near state borders so that there is a faster response time to those in need and reducing delays to other travelers.

The following sections outline projects that are being developed in coordination with Illinois or have the potential for coordinating efforts with Illinois. The Illinois Statewide ITS Architecture has been designed to be compatible with the ITS architectures of neighboring states following an inventory of those architectures.

6.4.1 GARY-CHICAGO-MILWAUKEE(GCM) ITS PRIORITY CORRIDOR INITIATIVES

Since 1994, transportation agencies in the sixteen county area in northeastern Illinois, northwestern Indian, and southeastern Wisconsin have pursued coordinated ITS projects and initiatives under the umbrella of the Gary-Chicago-Milwaukee (GCM) ITS Priority Corridor. The states of Illinois, Indiana, and Wisconsin have worked closely on addressing transportation problems in the 130-mile long corridor through deployment and operations of advanced technologies.

The GCM Corridor Coalition, with its established structure and regular work group meetings, provides a good forum for Illinois DOT to coordinate projects with Indiana and Wisconsin. The GCM Corridor does not deploy and operate any project of its own, but acts to coordinate projects between its members. Projects that it has helped influence include:

- GCM Communicator and Public Information Center
- State 511 implementation studies
- Borman Traffic Management Center, Wisconsin DOT MONITOR Traffic Operations Center, and Illinois DOT Traffic Systems Center
- Corridor Action Teams to address construction issues near state borders
- GCM Gateway integration between states
- Wisconsin Gateway Patrol, Illinois DOT Emergency Traffic Patrol, Indiana DOT Hoosier Helper, and Illinois Tollway Highway Emergency Lane Patrol motorist assistance programs
- GCM Corridor ITS Architecture

6.4.2 INDIANA ITS INITIATIVES

Led by the Indiana Department of Transportation (INDOT), intelligent transportation systems have been used in the State of Indiana for a number of years. Initially focused in the northwest part of the state, ITS is now expanding to Indianapolis and other metropolitan areas in Indiana.

Gateway Traveler Information System

The Gateway Traveler Information System is the core system that facilitates the integration and interoperation of ITS within the urban Gary-Chicago-Milwaukee Corridor. The Gateway serves as an information hub for the Center-to-Center interface environment for Illinois, Indiana, and Wisconsin and the GCM home page website (www.gcmtravel.com). The website, available to the public, regularly receives between 5-7 million visits per month and is the most visible product of the Gateway development efforts. The primary function of the Gateway system is to collect and distribute real-time information among the operating agencies. Indiana information will be sent to the Gateway via HTML in the near future, with a high-speed fiber connection planned.

511 Traveler Information System

The Federal Communications Commission designated 511 in June 2001 as the 3-digit telephone number to be used nationwide to provide traveler information. In doing so, the FCC noted that it expects the transportation industry to provide the traveling public with a quality service that has a degree of uniformity across the country. The Indiana DOT is committed to the development and implementation of a 511 traveler information system. The initial effort is focused on Northwest Indiana and is being coordinated with the Illinois and Wisconsin Departments of Transportation as part of the GCM Corridor.

Borman Traffic Management Center

The first advanced traffic management system in Indiana was deployed in the northwestern portion of the state in 2001. The system covers 21 miles of the Borman Expressway (I-90/94) and Interstate 65. The Borman is a critical Interstate link carrying more than 180,000 vehicles per day with truck and commercial vehicle usage among the nation's highest.

Indianapolis Traffic Management Center

The Traffic Management Center (TMC) for the Indianapolis metropolitan area is the focal point for ITS operations in the state, providing support to the Borman TMC and operating DMS at various locations in Indiana. The Indianapolis TMC is located at Indiana State Police Post 52 on the east side of Indianapolis. State Police dispatchers work in close proximity to the Traffic Management Center operators, making emergency response more timely and effective.

Hoosier Helper - Motorist Assistance

The Hoosier Helper Program in Indiana assists motorists by clearing incidents on the road to quickly restore traffic flow. Incident management personnel help motorists by providing fuel, removing debris from the roadway, assisting in towing a vehicle, or offering other services. The Hoosier Helpers help to reduce incident related congestion and enhance motorist safety.

Illinois, Indiana, and Wisconsin recognized that many traffic incidents transcend jurisdictional boundaries and that intergovernmental coordination is essential in managing these events. The three states signed a Memorandum of Understanding to providing inter-jurisdictional cooperation for utilization of incident response resources of the state departments of transportation.

Indiana State Emergency Management Agency Emergency Operations Center

The Indiana State Emergency Management Agency (SEMA) operates and maintains an emergency operations center (EOC) in Indianapolis. Staff at the center track and disseminate information from major disasters from a network of contact across the state. From this central post, SEMA can effectively coordinate response to disasters of varying size. Counties and some municipalities are included in the tracking and dissemination system so that actions can be coordinated for an organized response. Remote access to the agency's server is allowed through protected dial-up connections to allow remote operations by selected staff members. Seventeen counties have been given versions of the tracking software.

Indiana Toll Road

INDOT has deployed dynamic message signs along the entire length of the Indiana Toll Road (I-80/90). Twenty-three signs have been strategically placed along the Interstate to alert motorists about possible traffic hazards and conditions, including weather, accidents, congestion and construction. The initial deployment in November, 2002, provided holiday travelers with travel conditions on the Toll Road and the Borman Expressway in the Gary-Hammond area. In the first month of use, it advised motorists of major snowstorm conditions along the Toll Road and provided information on numerous incidents causing major disruptions.

The solar-powered system consists of portable, dynamic message signs with communication linkage via cellular phone. The signs are controlled using laptop computers by field supervisors. The deployment and operation of the signs is a coordinated effort between the Toll Road District and the Borman Traffic Management Center as part of INDOT's TrafficWise initiative to use intelligent transportation systems to increase safety, improve efficiency, and spread traveler information to the traveling public throughout the state.

Commercial Vehicle Operations

The Indiana DOT in cooperation with the Indiana State Police Commercial Vehicle Enforcement Division (CVED) is working towards implementing a cost effective and customer focused commercial vehicle program in Indiana.

Indiana has developed an extensive Virtual Weigh Station program designed to better monitor the freeway system in Indiana utilizing ITS technology via wireless application. Reducing overweight commercial vehicles will significantly extend the life of the pavement, thereby allowing the Indiana DOT to utilize their funding more effectively.

The Indiana DOT is also working closely with its partners in the GCM Corridor to study and deploy technology that will enable remote screening of commercial vehicles for dangerous materials (radioactive, explosive, hazardous, etc.).

6.4.3 WISCONSIN ITS INITIATIVES

Paralleling Indiana, ITS initiatives in Wisconsin began in southeastern Wisconsin, also part of the GCM Corridor. Intelligent transportation systems have since been deployed across the state.

MONITOR Traffic Management Center

The Wisconsin DOT's sophisticated freeway management system in southeastern Wisconsin is known as MONITOR. Overseen from the WisDOT Traffic Operations Center (TOC) in Milwaukee, MONITOR observes over 130 miles of freeway utilizing 250 detection sites and more than 90 cameras. Additionally, over 100 ramps have meters and 80 percent of the ramps have high occupancy vehicle or carpool bypass lanes. MONITOR also uses 21 freeway DMS, 13 arterial DMS, 4 portable DMS, 5 Highway Advisory Radio sites, and 4 portable radio sites. These systems were used to implement one of the first travel time systems in the country.

Gateway Traveler Information System

See Gateway Traveler Information System described in the above Indiana project descriptions. Wisconsin currently sends information to the Gateway via a dial-up connection, but that is scheduled to change to a fiber connection in the near future.

511 Traveler Information Systems

The Wisconsin DOT is working on a major 511 planning project to create a roadmap for the way the Wisconsin 511 system will be deployed in the future. The vision for Wisconsin 511 is system to ultimately provide convenient up-to-the-minute dial-up information along interstate highway corridors from Illinois to Minnesota and across the Wisconsin backbone highway system.

Commercial Vehicle Operations

Wisconsin is committed to improve CVO transportation, and at the same time, make the roadways safer for all travelers. Wisconsin has achieved Commercial Vehicle Information Systems and Networks (CVISN) Level 1 (core) capabilities in electronic screening, credentials administration, and safety information exchange. Some of the safety and weight enforcement facilities in Wisconsin are equipped with mainline weigh-in-motion and PrePass electronic screening. These features allow trucks to be screened at highway speeds for weight, safety record, and operating credentials.

Electronic credentialing is also available through Wisconsin's automated Oversize/Overweight Vehicle Permitting System. This feature available via the Internet enables permit applicants to generate a route by entering their size/weight and axle configurations, then picking routes or picking start and end points for the trip on the electronic map screen.

Wisconsin has also developed a Commercial Vehicle Information Exchange Window (CVIEW) that serves as the state's data exchange hub for CVO vehicle and carrier data. The result is near real-time CVO data available for enforcement and credentialing purposes.

Gateway Patrol - Motorist Assistance

The Gateway Patrols are specially equipped trucks in Wisconsin dedicated to handling and clearing incidents, especially collisions and disabled vehicles in Kenosha, Racine, and Waukesha counties in Wisconsin. The patrols increase freeway safety, help reduce congestion, and increase freeway efficiency. Like the Hoosier Helpers, Gateway Patrols relocate disabled vehicles from the highway to safer areas, provide small amounts of fuel, handle minor repairs such as changing flat tires and taping hoses, call law enforcement officers to the scene of crashes, remove debris from the freeway and aid law officers and other responders by blocking lanes when necessary. The patrols will relocate a disabled vehicle from the freeway to safe location, or crash investigation site, where the motorist can contact a private towing service for further help.

6.4.4 MISSOURI ITS INITIATIVES

Led by the Missouri Department of Transportation (MoDOT), ITS in Missouri has focused on the three metropolitan areas of St. Louis, Kansas City, and Springfield, as well as interstate corridors across the state.

Gateway Guide

Gateway Guide is part of MoDOT's program designed to improve roadway efficiency and safety through a vast communications network. Aimed at reducing traffic congestion and disseminating traveler information, Gateway Guide utilizes a variety of state-of-the-art devices, including traffic detectors, dynamic message signs, and CCTV cameras, to provide motorists with all the tools and resources they need to effectively navigate in and around St. Louis.

The nerve center of Gateway Guide is the MoDOT District 6 Traffic Management Center (TMC). The TMC is directly linked to the IDOT District 8 Communication Center across the Mississippi River in Collinsville to better share data and coordinate efforts.

Gateway Guide's Motorist Assist and Emergency Response Program

The Motorist Assist and Emergency Response patrols the St. Louis metro area interstates in search of lane obstructions caused by disabled vehicles, debris, and car crashes. They work hand in hand with local law enforcement and private towing agencies to keep traffic moving.

Motorist Assist operators can help change tires, provide fuel and perform other minor, short term repairs. If Motorist Assist cannot get an individual motorist moving again, they will provide a phone to call for additional help. They also help provide a safer situation for stalled motorists by providing a safe buffer with their truck and emergency flashing lights.

511 Traveler Information System

Missouri is anticipating launching a 511 Traveler Information System. Currently, users can receive the latest road condition information and weather-related road conditions for metropolitan areas through MoDOT's Gateway Guide, Kansas City Scout, or Ozarks Traffic websites.

Missouri travelers also have the option of calling the State Highway Patrol for 24-hour winter road conditions on major routes or calling the MoDOT during regular office hours.

CVISN/CVIEW

Due to the relatively high percentage of commercial vehicles traveling on its four interstates, commercial vehicle operations is a high priority for MoDOT. Missouri is pursuing a Commercial Vehicle Information Systems and Network (CVISN) to facilitate the safe and efficient movement of goods throughout the state. The plan has been formally pursued since 1996.

ITS projects deployed related to CVISN include electronic screening, credentials administration, and safety information exchange in place. PrePass detectors have been set up throughout the state, allowing participating carriers to pass some static weigh stations.

6.4.5 IOWA ITS INITIATIVES

Iowa has deployed ITS initiatives at both the statewide and local levels. From 511 traveler information to red light running programs, ITS is a valuable tool used by the Iowa DOT and other transportation mangers in the state.

Electronic Commercial Vehicle Inspection System

Iowa has developed a new cost-free electronic commercial vehicle inspection system. This system allows carriers to certify that all violations noted on an inspection report have been corrected. Paper copies of the certification will no longer need to be mailed to the Department of Transportation. The new system will also have capabilities for motor carriers to view and print all their Iowa inspections.

PrePass Interstate Transportation Management

PrePass is intended to increase the efficiency of commercial motor carriers by allowing drivers with proven safety records to bypass open weigh stations. A transponder in a truck signals a receiver above the highway to determine if the truck may continue traveling. The system allows for concentration on the more high-risk motor carriers who are signaled to stop at the weigh station. PrePass is in use in 24 other states (including Illinois, Indiana, Missouri, and Wisconsin) and allows for more consistent traffic flow on our nation's roadway system.

511 Traveler Information System

In 2002, eight states, from Alaska to Maine, pooled resources and expertise to develop the 511 voice-enabled phone service for travelers. Led by the Iowa Department of Transportation, the multi-state consortium received $700,000 from the Federal Highway Administration to help pay for system design and software development. Each state also provided a 20 percent matching fund, boosting total funds to nearly $900,000. In addition to Iowa, the participating states are Alaska, Kentucky, Maine, Minnesota, New Hampshire, New Mexico, and Vermont.

511 is offered statewide in Iowa, and covers the interstate, U.S. routes, and portions of some state highways. It does not include county roads or city streets. Eventually, this service may be expanded to other roadways.

Integrated Database Development and Packaging

The Iowa Department of Transportation is developing a method to integrate databases within various transportation systems and organizations. By linking existing technology programs, the DOT will be able to maximize resources and minimize overlap between different transportation systems.

Iowa DOT Statewide Communications Study and Plan Development

The Iowa DOT is conducting a study to address the dissemination of information within the state's transportation network to help determine how capital investments and enhancements should be made. The objective is to efficiently share information among all state agencies, local government, emergency management, public defense and the general public. This plan will help to provide the necessary officials with access to ITS information.

6.4.6 KENTUCKY ITS INITIATIVES

A pioneer in ITS applications for commercial vehicle applications, Kentucky has expanded its ITS program to include traveler information and traffic management applications.

511 Traveler Information System

Kentucky launched its 511 service in November 2002. The system provides an interactive voice recognition service that provides callers with accurate, useful and timely traffic, travel and road weather information, 24/7. Callers can request specific information on 8,217 miles of major Kentucky roadways. Information on accidents, construction areas, weather conditions, and road closures allows motorists to make more informed choices for reaching their destination.

The traffic and travel information is available by calling 5-1-1 or via the Web site at www.511.ky.gov. The Web site contains links to Kentucky's surrounding states' traveler information sites.

Commercial Vehicle Information System and Network (CVISN)

The CVISN program, administered by the Kentucky Transportation Cabinet, has been used in Kentucky since 1996. In fact, Kentucky was one of the pilot states chosen for this type of technology and the first state to achieve CVISN Level 1 compliance. Many of Kentucky's weigh stations have electronic monitoring system in place, similar to PrePass. The transponder equipment used in Kentucky is part of the North American Preclearance and Safety System (NORPASS) Company.

The program saves the motor carriers time (and therefore money) when they don't have to leave the highway and wait their turn at the scales. Both the truckers and motorists are also safer when fewer large vehicles are merging in and out of traffic. With increased participation in the transponder program, Kentucky Vehicle Enforcement Officers, who are charged with monitoring commercial traffic, are able to concentrate on the illegal and dangerous vehicles-making the roads safer for all motorists.