

Security

The transportation system touches everyone in some way; personal mobility, the movement of raw materials or manufactured materials and the delivery of agriculture and food products are just a few ways the Nation depends on transportation for its livelihood and economic stability. The transportation sector has many interdependencies with critical infrastructure sectors.



The department of Homeland Security has developed a National Infrastructure Protection Plan, which outlines how government and private sector work together to manage risks and achieve security outcomes. The plan is a guide to the national effort to manage risks to the Nation's critical infrastructure. To achieve this end, critical infrastructure partners must collectively identify national priorities; articulate clear goals; mitigate risk; measure progress; and adapt based on feedback and the changing environment.

Northeast Ohio is home to many threats such as severe winter storms, flooding, tornados and severe thunderstorms. The region must also prepare for other risks such as terrorism. The unexpected and complex nature of these incidents requires extensive coordination, collaboration and flexibility among all the agencies and organizations involved in the planning, mitigation, response and recovery. Regional coordination is critical to security and emergency preparedness. The region's many individual municipalities, villages and townships, as well as extensive roadways and bridges, wide-ranging mass transit systems, rail, airports and shipping ports presents significant challenges to coordinating and implementing effective security programs.

Current Conditions

NOACA is not directly involved in security or emergency projects. There are many City and County emergency/evacuation/disaster plans in place. The City of Cleveland, the five County Governments, GCRTA, Municipal Governments, Transit Agencies, Ohio State Patrol, ODOT, the Ohio Turnpike Commission, Hospitals, and School Districts have emergency/evacuation/disaster management plans in place. The Ohio Department of Transportation has also constructed an extensive intelligent transportation system (ITS) along

the interstate system in the NOACA region. The system includes pan, tilt and zoom cameras and dynamic message signs. Greater Cleveland Regional Transit Authority (GCRTA) also has their own Police Force that provides security for the GCRTA transit system, and closed circuit television (CCTV) cameras to monitor transit facilities; including transit stops.

The NOACA Regional ITS Architecture is a roadmap for transportation systems integration in the 5 county (Cuyahoga, Geauga, Lake, Lorain, and Medina) NOACA region over the next 15 years. The architecture was developed through a cooperative effort by the region's transportation agencies, covering all modes and all roads in the region. This architecture is the second update of the NOACA Regional ITS Architecture. The first version of the architecture was developed in October 2000, and the first update was completed in 2003.

The purpose of this architecture is to document how the region envisions that each agency's systems will work together in the future and how sharing of information and resources will help provide a safer, more efficient, and more effective transportation system for travelers in the region.

Future conditions

Comprehensive update of the current ITS Architecture Strategic Plan should be done in the short term. The themes of the US DOT's current ITS Strategic Plan; enable safer vehicles and roadways, enhance mobility, limit environmental impacts, promote innovation and support transportation system information sharing should be included in the comprehensive update.

TABLE 1 Alignment of ITS Strategic Themes with Strategic Goal Areas and MAP-21²

ITS Strategic Plan Strategic Themes	USDOT Strategic Goal Areas						Map-21
	Safety	State of Good Repair	Economic Competitiveness	Livable Communities	Security, Preparedness and Related	Environmental Sustainability	
Enable Safer Vehicles and Roadways	✓	✓	✓	✓	✓		✓
Enhance Mobility	✓	✓	✓	✓	✓	✓	✓
Limit Environmental Impacts			✓	✓		✓	✓
Promote Innovation	✓		✓		✓	✓	✓
Support Transportation System Information Sharing	✓	✓	✓	✓	✓		✓

Source: US DOT

Regional security goals, objectives, performance measures/targets

The NOACA Regional ITS Architecture Report identifies the following Emergency Management needs:

- Improve emergency notification/dispatch and response times
- Improve traffic safety Need to expand remote traveler support services (information plus roadside assistance)

- Improve tracking of emergency vehicles
- Identify alternate routes for emergency vehicles
- Improve evacuation planning
- Monitor the transportation infrastructure for security purposes

Broad stakeholder and public engagement is necessary to develop the security goals, objectives, performance measures and targets which address these, and any further, identified needs, and will be done through the ITS architecture update.

Recommendations

- Coordinate with local, state and federal security and emergency management agencies
- Identification of critical infrastructure
- Identification of alternate transportation routes/modes
- Integrate security among agencies

Implementation Action Areas

- Update the region's ITS architecture strategic plan
- Develop a map of the region's emergency facilities
- Develop projects that create redundancy of critical infrastructure

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Projects By Stakeholder

Stakeholder	Project Name	Status	Timeframe	Priori	ProjectDescription
Akron METRO Regional Transit Authority	GCRTA Passenger Management System	Planned	Short-Term	Priori	System that provides fare reconciliation between peer agencies using a common travel card.
City of Cleveland	City of Cleveland Automated Parking Facilities	Planned	Long-Term	Priori	Possible IntelliDrive applications to assist travelers through on board devices.
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term	Priori	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term	Priori	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	GCRTA Bus Traffic Signal Priority	Planned	Short-Term	Priori	Study key transit corridors for applicability of bus traffic signal priority to improve transit travel time. Implement transit signal priority on traffic signals on identified corridors.
	Municipal Signal Pre-emption	Planned	Long-Term	Priori	Pre-emption signal system for emergency vehicles.
	NOACA Signal System Upgrades	Planned	Long-Term	Priori	Signal upgrade and coordination along the major evacuation routes
	ODOT 511 Information System	Planned	Medium-Term	Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
	Rail Transit Operations - Light Rail Operations Center	Planned			Light rail option for special events occurring at the stadiums to help alleviate special event traffic congestion downtown.
City of Cleveland Department of Port Control	County Commercial Vehicle Operations	Planned	Long-Term	Priori	System collecting data carried in trucks traveling on specific routes.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term	Pr	Automated parking facilities to show available parking at the airport
	ODOT 511 Information System	Planned	Medium-Term	Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
Cleveland Cuyahoga County Port Authority	City of Cleveland / Cuyahoga County Port Security Camera Installation including Vehicle Tracking System (VTS)	Planned	Short-Term	Priori	With the aid of Homeland Security Funding, cameras will be installed underneath existing bridges along the Cuyahoga River to monitor river traffic.
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term	Priori	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Cuyahoga County Port Authority DMS	Planned	Medium-Term	Pr	DMS signs in allocated parking locations to provide incoming flight information to people picking up travelers.
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term	Pr	Automated payment collection.
County Public Safety Agencies	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term	Pr	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.
	Municipal Computer Aided Dispatch to Emergency Vehicles	Planned	Long-Term	Priori	Integrating the computer aided dispatch to the emergency management center that will allow the operators to dispatch emergency response vehicles to the scene more rapidly.
	Municipal Signal Pre-emption	Planned	Long-Term	Priori	Pre-emption signal system for emergency vehicles.

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	ODOT 511 Information System	Planned	Medium-Term Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
Cuyahoga County Emergency Services				
	City of Cleveland / Cuyahoga County Port Security Camera Installation including Vehicle Tracking System (VTS)	Planned	Short-Term Prio	With the aid of Homeland Security Funding, cameras will be installed underneath existing bridges along the Cuyahoga River to monitor river traffic.
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Prio	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
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	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Prio	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
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	ODOT 511 Information System	Planned	Medium-Term Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
Cuyahoga County Engineer				
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Prio	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Prio	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
Financial Institutions				
	City of Cleveland Automated Parking Facilities	Planned	Long-Term Prio	Possible IntelliDrive applications to assist travelers through on board devices.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Pr	Automated parking facilities to show available parking at the airport
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term Pr	Automated payment collection.
General Public				
	City of Cleveland Automated Parking Facilities	Planned	Long-Term Prio	Possible IntelliDrive applications to assist travelers through on board devices.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Pr	Automated parking facilities to show available parking at the airport
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term Pr	Automated payment collection.
	IntelliDrive	Planned	Long-Term Prio	Deployment of IntelliDrive infrastructure, including roadside equipment and controller modifications, to implement vehicle-to-infrastructure (V2I) communications in the 2014-2020 timeframe (as vehicles are equipped). IntelliDrive is a suite of technologie
	ODOT 511 Information System	Planned	Medium-Term Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
Greater Cleveland Regional Transit Authority (RTA)				
	City of Cleveland Automated Parking Facilities	Planned	Long-Term Prio	Possible IntelliDrive applications to assist travelers through on board devices.

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	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term	Pr	Automated parking facilities to show available parking at the airport
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term	Pr	Automated payment collection.
	GCRTA / Laketran AVL System	Planned	Medium-Term	Pr	Installation of AVL on all GCRTA and Laketran vehicles.
	GCRTA / Laketran Transit Vehicle Updates	Planned	Short-Term	Priori	Installation of Wireless Internet Feed on buses, automated signs, and annunciators.
	GCRTA Bus Traffic Signal Priority	Planned	Short-Term	Priori	Study key transit corridors for applicability of bus traffic signal priority to improve transit travel time. Implement transit signal priority on traffic signals on identified corridors.
	GCRTA Clifton Corridor	Planned	Medium-Term	Pr	Similar design to Euclid Corridor for corridor along Clifton Boulevard.
	GCRTA Kiosks at Transfer Points	Planned	Medium-Term	Pr	GCTRA to establish kiosk inside CVG airport to assist out of town users in finding their way using public transit.
	GCRTA Passenger Management System	Planned	Short-Term	Priori	System that provides fare reconciliation between peer agencies using a common travel card.
	GCRTA Surveillance Control	Planned	Short-Term	Priori	To include CCTV at certain locations to provide surveillance at stations and surrounding areas along Euclid Corridor.
	Laketran Advanced Para-Transit Scheduling and Dispatch System	Planned	Short-Term	Priori	Implement an advanced para-transit scheduling and dispatch system at Laketran coordinated with GCRTA.
	Rail Transit Operations - Light Rail Operations Center	Planned			Light rail option for special events occurring at the stadiums to help alleviate special event traffic congestion downtown.
Laketran	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term	Priori	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	GCRTA / Laketran AVL System	Planned	Medium-Term	Pr	Installation of AVL on all GCRTA and Laketran vehicles.
	GCRTA / Laketran Transit Vehicle Updates	Planned	Short-Term	Priori	Installation of Wireless Internet Feed on buses, automated signs, and annunciators.
	GCRTA Passenger Management System	Planned	Short-Term	Priori	System that provides fare reconciliation between peer agencies using a common travel card.
	Laketran Advanced Para-Transit Scheduling and Dispatch System	Planned	Short-Term	Priori	Implement an advanced para-transit scheduling and dispatch system at Laketran coordinated with GCRTA.
	Laketran Google Transit	Planned	Short-Term	Priori	GCRTA will pair with Google to feed information on Google transit.
	Laketran Metro Vehicle Updates	Planned	Medium-Term	Pr	Upgrades in fareboxes hardware will enable accurate passenger counts to have real-time count of population on a bus at a given time.
Municipal Public Safety Agencies	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term	Pr	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.

Stakeholder	Project Name	Status	Timeframe	Priority	ProjectDescription
	Municipal Computer Aided Dispatch to Emergency Vehicles	Planned	Long-Term	Priori	Integrating the computer aided dispatch to the emergency management center that will allow the operators to dispatch emergency response vehicles to the scene more rapidly.
	Municipal Signal Pre-emption	Planned	Long-Term	Priori	Pre-emption signal system for emergency vehicles.
Municipal	Public Works Departments				
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term	Priori	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	GCRTA Bus Traffic Signal Priority	Planned	Short-Term	Priori	Study key transit corridors for applicability of bus traffic signal priority to improve transit travel time. Implement transit signal priority on traffic signals on identified corridors.
	Municipal Signal Pre-emption	Planned	Long-Term	Priori	Pre-emption signal system for emergency vehicles.
	NOACA Signal System Upgrades	Planned	Long-Term	Priori	Signal upgrade and coordination along the major evacuation routes
NOACA					
	NOACA Animal Detection System	Planned	Medium-Term	Pr	Placed at strategic locations where vehicle-animal crashes are frequent, this system can help warn drivers when large animals are present. The system detects motion by large animals using break-the-beam or area-cover sensors and then causes warning light
	ODOT 511 Information System	Planned	Medium-Term	Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
ODOT					
	City of Cleveland Automated Parking Facilities	Planned	Long-Term	Priori	Possible IntelliDrive applications to assist travelers through on board devices.
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term	Priori	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term	Pr	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.
	Connection of Private Providers	Planned	Long-Term	Priori	Private providers to work with ODOT to establish links with private providers to deliver traffic information to more people in different facets.
	CSU Research Program	Planned	Short-Term	Priori	Establish a research program, in conjunction with ODOT, to test new implementation concepts such as crash mitigation or work zone operations systems.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term	Priori	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term	Pr	Automated parking facilities to show available parking at the airport
	IntelliDrive	Planned	Long-Term	Priori	Deployment of IntelliDrive infrastructure, including roadside equipment and controller modifications, to implement vehicle-to-infrastructure (V2I) communications in the 2014-2020 timeframe (as vehicles are equipped). IntelliDrive is a suite of technologie
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	ODOT 511 Information System	Planned	Medium-Term Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
	ODOT DMS	Planned	Medium-Term Pr	Color DMS for inbound traffic.
	ODOT Expand Traveler Information Delivery Methods	Planned	Short-Term Prio	Implement additional traveler information dissemination methods which may include cable TV station; personalized traveler information on a subscription basis delivered to cell phones, pagers, personal computing devices, etc.; connections to private sector
	ODOT FMS Expansion	Planned	Long-Term Prio	Extend ODOT FMS field devices and communications on freeway system. Target the installation to meet needs. Full instrumentation may not be required.
	ODOT Freeway Lane Control	Planned	Long-Term Prio	Permanent overhead signs to facilitate merging/use of shoulders.
	ODOT Highway Advisory Radio Signs	Planned	Medium-Term Pr	Drivers would be warned by flashing beacons to tune their radio to a specific frequency to hear important messages. Recent advances in HAR systems allow adjacent radio transmitters to be synched to avoid interference and broadcast consistent messages.
	ODOT Highway-Rail Intersection Advanced Safety Systems	Planned	Short-Term Prio	Install advanced Highway-Rail Safety Systems at key crossings. A study must be conducted to identify the crossings and the preferred system.
	ODOT Increase Service Patrols	Planned	Short-Term Prio	Increase frequency on existing routes and expand geographic coverage. Purchase additional service patrol vehicles - two additional vehicles in Ohio.
	ODOT Install Information Kiosks	Planned	Long-Term Prio	Implement multi-modal traveler information kiosks connected to Cleveland FMS at airport, key work sites, stadiums, etc. (5 kiosks in Ohio)
	ODOT Maintenance Vehicle Upgrade	Planned	Long-Term Prio	Automatic Vehicle Location for maintenance vehicles.
	ODOT Public Radio Station	Planned	Medium-Term Pr	Purchase a commercial power radio station to be used primarily during rush hour and special events. Consider partnering with CSU.
	ODOT Winter Maintenance	Planned	Long-Term Prio	Install snow and ice detection management and advanced snow plow systems. Pilot project to assess use of road weather information systems integrated with advanced technology snow plows. These systems provide early warning of icing and snow, and meter the
	ODOT Work Zone Safety Improvements	Planned	Medium-Term Pr	Improvements to work zones to reduce collisions. Ability to alert drivers of a construction zone, roadway hazard, or speed change.
	Regional ODOT Freeway Management System	Existing	Short Term Prio	To include TMC, DMS, CCTV, Flow detection, freeway service patrols, hybrid communications system, HAR, ramp metering, web-based services and inter-agency communications network. Many agencies (GCRTA, CECOMS, Cuyahoga County Emergency Management, etc) exp
Ohio State Highway Patrol	City of Cleveland / Cuyahoga County Port Security Camera Installation including Vehicle Tracking System (VTS)	Planned	Short-Term Prio	With the aid of Homeland Security Funding, cameras will be installed underneath existing bridges along the Cuyahoga River to monitor river traffic.
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Prio	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.

Stakeholder	Project Name	Status	Timeframe	ProjectDescription
	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term Pr	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Prio	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	ODOT 511 Information System	Planned	Medium-Term Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
Ohio Turnpike Commission				
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Prio	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Pr	Automated parking facilities to show available parking at the airport
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term Pr	Automated payment collection.
	NOACA Animal Detection System	Planned	Medium-Term Pr	Placed at strategic locations where vehicle-animal crashes are frequent, this system can help warn drivers when large animals are present. The system detects motion by large animals using break-the-beam or area-cover sensors and then causes warning light
	Regional ODOT Freeway Management System	Existing	Short Term Prio	To include TMC, DMS, CCTV, Flow detection, freeway service patrols, hybrid communications system, HAR, ramp metering, web-based services and inter-agency communications network. Many agencies (GCRTA, CECOMS, Cuyahoga County Emergency Management, etc) exp
Private Tow, Wreckers and Cleanup Service Providers				
	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term Pr	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.
Private Traveler Information Providers				
	City of Cleveland Automated Parking Facilities	Planned	Long-Term Prio	Possible IntelliDrive applications to assist travelers through on board devices.
	Connection of Private Providers	Planned	Long-Term Prio	Private providers to work with ODOT to establish links with private providers to deliver traffic information to more people in different facets.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Pr	Automated parking facilities to show available parking at the airport
	IntelliDrive	Planned	Long-Term Prio	Deployment of IntelliDrive infrastructure, including roadside equipment and controller modifications, to implement vehicle-to-infrastructure (V2I) communications in the 2014-2020 timeframe (as vehicles are equipped). IntelliDrive is a suite of technologie
	Laketrans Google Transit	Planned	Short-Term Prio	GCRTA will pair with Google to feed information on Google transit.
	ODOT 511 Information System	Planned	Medium-Term Pr	Traveler information by dialing 511 number; provided by ODOT and private partnership.
	ODOT Expand Traveler Information Delivery Methods	Planned	Short-Term Prio	Implement additional traveler information dissemination methods which may include cable TV station; personalized traveler information on a subscription basis delivered to cell phones, pagers, personal computing devices, etc.; connections to private sector

Stakeholder	Project Name	Status	Timeframe	ProjectDescription
Railroad Operators	ODOT Highway-Rail Intersection Advanced Safety Systems	Planned	Short-Term	Priori Install advanced Highway-Rail Safety Systems at key crossings. A study must be conducted to identify the crossings and the preferred system.
School Districts	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term	Priori Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
Special Police Districts	City of Cleveland Special Event Traffic Planning	Planned	Long-Term	Priori Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
U.S. Coast Guard	City of Cleveland / Cuyahoga County Port Security Camera Installation including Vehicle Tracking System (VTS)	Planned	Short-Term	Priori With the aid of Homeland Security Funding, cameras will be installed underneath existing bridges along the Cuyahoga River to monitor river traffic.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term	Priori Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.

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City of Cleveland	Rail Transit Operations - Light Rail Operations Center	Planned		Light rail option for special events occurring at the stadiums to help alleviate special event traffic congestion downtown.
	City of Cleveland Automated Parking Facilities	Planned	Long-Term Priority	Possible IntelliDrive applications to assist travelers through on board devices.
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Priority	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Municipal Signal Pre-emption	Planned	Long-Term Priority	Pre-emption signal system for emergency vehicles.
	NOACA Signal System Upgrades	Planned	Long-Term Priority	Signal upgrade and coordination along the major evacuation routes
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	GCRTA Bus Traffic Signal Priority	Planned	Short-Term Priority	Study key transit corridors for applicability of bus traffic signal priority to improve transit travel time. Implement transit signal priority on traffic signals on identified corridors.
City of Cleveland Department of Port Control	County Commercial Vehicle Operations	Planned	Long-Term Priority	System collecting data carried in trucks traveling on specific routes.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Priority	Automated parking facilities to show available parking at the airport

	ODOT 511 Information System	Planned	Medium-Term Priority	Traveler information by dialing 511 number; provided by ODOT and private partnership.
Cleveland Cuyahoga County Port Authority	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Priority	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Cuyahoga County Port Authority DMS	Planned	Medium-Term Priority	DMS signs in allocated parking locations to provide incoming flight information to people picking up travelers.
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term Priority	Automated payment collection.
	City of Cleveland / Cuyahoga County Port Security Camera Installation including Vehicle Tracking System (VTS)	Planned	Short-Term Priority	With the aid of Homeland Security Funding, cameras will be installed underneath existing bridges along the Cuyahoga River to monitor river traffic.
County Public Safety Agencies	Municipal Computer Aided Dispatch to Emergency Vehicles	Planned	Long-Term Priority	Integrating the computer aided dispatch to the emergency management center that will allow the operators to dispatch emergency response vehicles to the scene more rapidly.
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Cuyahoga County Emergency Services	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Priority	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
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Financial Institutions	City of Cleveland Automated Parking Facilities	Planned	Long-Term Priority	Possible IntelliDrive applications to assist travelers through on board devices.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Priority	Automated parking facilities to show available parking at the airport
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term Priority	Automated payment collection.
General Public	City of Cleveland Automated Parking Facilities	Planned	Long-Term Priority	Possible IntelliDrive applications to assist travelers through on board devices.
	IntelliDrive	Planned	Long-Term Priority	Deployment of IntelliDrive infrastructure, including roadside equipment and controller modifications, to implement vehicle-to-infrastructure (V2I) communications in the 2014-2020 timeframe (as vehicles are equipped). IntelliDrive is a suite of technologies
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	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Priority	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Priority	Automated parking facilities to show available parking at the airport
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term Priority	Automated payment collection.
	GCRTA / Laketran AVL System	Planned	Medium-Term Priority	Installation of AVL on all GCRTA and Laketran vehicles.
	GCRTA Clifton Corridor	Planned	Medium-Term Priority	Similar design to Euclid Corridor for corridor along Clifton Boulevard.
	GCRTA Kiosks at Transfer Points	Planned	Medium-Term Priority	GCRTA to establish kiosk inside CVG airport to assist out of town users in finding their way using public transit.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	GCRTA / Laketran Transit Vehicle Updates	Planned	Short-Term Priority	Installation of Wireless Internet Feed on buses, automated signs, and annunciators.
	GCRTA Bus Traffic Signal Priority	Planned	Short-Term Priority	Study key transit corridors for applicability of bus traffic signal priority to improve transit travel time. Implement transit signal priority on traffic signals on identified corridors.
	GCRTA Passenger Management System	Planned	Short-Term Priority	System that provides fare reconciliation between peer agencies using a common travel card.
	GCRTA Surveillance Control	Planned	Short-Term Priority	To include CCTV at certain locations to provide surveillance at stations and surrounding areas along Euclid Corridor.

	Laketran Advanced Para-Transit Scheduling and Dispatch System	Planned	Short-Term Priority	Implement an advanced para-transit scheduling and dispatch system at Laketran coordinated with GCRTA.
Laketran	GCRTA / Laketran AVL System	Planned	Medium-Term Priority	Installation of AVL on all GCRTA and Laketran vehicles.
	Laketran Metro Vehicle Updates	Planned	Medium-Term Priority	Upgrades in fareboxes hardware will enable accurate passenger counts to have real-time count of population on a bus at a given time.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	GCRTA / Laketran Transit Vehicle Updates	Planned	Short-Term Priority	Installation of Wireless Internet Feed on buses, automated signs, and annunciators.
	GCRTA Passenger Management System	Planned	Short-Term Priority	System that provides fare reconciliation between peer agencies using a common travel card.
	Laketran Advanced Para-Transit Scheduling and Dispatch System	Planned	Short-Term Priority	Implement an advanced para-transit scheduling and dispatch system at Laketran coordinated with GCRTA.
	Laketran Google Transit	Planned	Short-Term Priority	GCRTA will pair with Google to feed information on Google transit.
Municipal Public Safety Agencies	Municipal Computer Aided Dispatch to Emergency Vehicles	Planned	Long-Term Priority	Integrating the computer aided dispatch to the emergency management center that will allow the operators to dispatch emergency response vehicles to the scene more rapidly.
	Municipal Signal Pre-emption	Planned	Long-Term Priority	Pre-emption signal system for emergency vehicles.
	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term Priority	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional

				connections. Consider City of Cleveland.
Municipal Public Works Departments	Municipal Signal Pre-emption	Planned	Long-Term Priority	Pre-emption signal system for emergency vehicles.
	NOACA Signal System Upgrades	Planned	Long-Term Priority	Signal upgrade and coordination along the major evacuation routes
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	GCRTA Bus Traffic Signal Priority	Planned	Short-Term Priority	Study key transit corridors for applicability of bus traffic signal priority to improve transit travel time. Implement transit signal priority on traffic signals on identified corridors.
NOACA	NOACA Animal Detection System	Planned	Medium-Term Priority	Placed at strategic locations where vehicle-animal crashes are frequent, this system can help warn drivers when large animals are present. The system detects motion by large animals using break-the-beam or area-cover sensors and then causes warning light
	ODOT 511 Information System	Planned	Medium-Term Priority	Traveler information by dialing 511 number; provided by ODOT and private partnership.
ODOT	City of Cleveland Automated Parking Facilities	Planned	Long-Term Priority	Possible IntelliDrive applications to assist travelers through on board devices.
	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Priority	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Connection of Private Providers	Planned	Long-Term Priority	Private providers to work with ODOT to establish links with private providers to deliver traffic information to more people in different facets.
	IntelliDrive	Planned	Long-Term Priority	Deployment of IntelliDrive infrastructure, including roadside

				equipment and controller modifications, to implement vehicle-to-infrastructure (V2I) communications in the 2014-2020 timeframe (as vehicles are equipped). IntelliDrive is a suite of technologie
	ODOT FMS Expansion	Planned	Long-Term Priority	Extend ODOT FMS field devices and communications on freeway system. Target the installation to meet needs. Full instrumentation may not be required.
	ODOT Freeway Lane Control	Planned	Long-Term Priority	Permanent overhead signs to facilitate merging/use of shoulders.
	ODOT Install Information Kiosks	Planned	Long-Term Priority	Implement multi-modal traveler information kiosks connected to Cleveland FMS at airport, key work sites, stadiums, etc. (5 kiosks in Ohio)
	ODOT Maintenance Vehicle Upgrade	Planned	Long-Term Priority	Automatic Vehicle Location for maintenance vehicles.
	ODOT Winter Maintenance	Planned	Long-Term Priority	Install snow and ice detection management and advanced snow plow systems. Pilot project to assess use of road weather information systems integrated with advanced technology snow plows. These systems provide early warning of icing and snow, and meter the
	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term Priority	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Priority	Automated parking facilities to show available parking at the airport
	NOACA Animal Detection System	Planned	Medium-Term Priority	Placed at strategic locations where vehicle-animal crashes are frequent, this system can help warn drivers when large animals

				are present. The system detects motion by large animals using break-the-beam or area-cover sensors and then causes warning light
	ODOT 511 Information System	Planned	Medium-Term Priority	Traveler information by dialing 511 number; provided by ODOT and private partnership.
	ODOT DMS	Planned	Medium-Term Priority	Color DMS for inbound traffic.
	ODOT Highway Advisory Radio Signs	Planned	Medium-Term Priority	Drivers would be warned by flashing beacons to tune their radio to a specific frequency to hear important messages. Recent advances in HAR systems allow adjacent radio transmitters to be synched to avoid interference and broadcast consistent messages.
	ODOT Public Radio Station	Planned	Medium-Term Priority	Purchase a commercial power radio station to be used primarily during rush hour and special events. Consider partnering with CSU.
	ODOT Work Zone Safety Improvements	Planned	Medium-Term Priority	Improvements to work zones to reduce collisions. Ability to alert drivers of a construction zone, roadway hazard, or speed change.
	Regional ODOT Freeway Management System	Existing	Short Term Priority	To include TMC, DMS, CCTV, Flow detection, freeway service patrols, hybrid communications system, HAR, ramp metering, web-based services and inter-agency communications network. Many agencies (GCRTA, CECOMS, Cuyahoga County Emergency Management, etc) exp
	CSU Research Program	Planned	Short-Term Priority	Establish a research program, in conjunction with ODOT, to test new implementation concepts such as crash mitigation or work zone operations systems.

	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
	ODOT Expand Traveler Information Delivery Methods	Planned	Short-Term Priority	Implement additional traveler information dissemination methods which may include cable TV station; personalized traveler information on a subscription basis delivered to cell phones, pagers, personal computing devices, etc.; connections to private sector
	ODOT Highway-Rail Intersection Advanced Safety Systems	Planned	Short-Term Priority	Install advanced Highway-Rail Safety Systems at key crossings. A study must be conducted to identify the crossings and the preferred system.
	ODOT Increase Service Patrols	Planned	Short-Term Priority	Increase frequency on existing routes and expand geographic coverage. Purchase additional service patrol vehicles - two additional vehicles in Ohio.
Ohio State Highway Patrol	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Priority	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term Priority	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.
	ODOT 511 Information System	Planned	Medium-Term Priority	Traveler information by dialing 511 number; provided by ODOT and private partnership.
	City of Cleveland / Cuyahoga County Port Security Camera Installation including Vehicle Tracking System (VTS)	Planned	Short-Term Priority	With the aid of Homeland Security Funding, cameras will be installed underneath existing bridges along the Cuyahoga River to monitor river traffic.

	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
Ohio Turnpike Commission	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Priority	Automated parking facilities to show available parking at the airport
	Cuyahoga County Port Authority Electronic Payment Collection	Planned	Medium-Term Priority	Automated payment collection.
	NOACA Animal Detection System	Planned	Medium-Term Priority	Placed at strategic locations where vehicle-animal crashes are frequent, this system can help warn drivers when large animals are present. The system detects motion by large animals using break-the-beam or area-cover sensors and then causes warning light
	Regional ODOT Freeway Management System	Existing	Short Term Priority	To include TMC, DMS, CCTV, Flow detection, freeway service patrols, hybrid communications system, HAR, ramp metering, web-based services and inter-agency communications network. Many agencies (GCRTA, CECOMS, Cuyahoga County Emergency Management, etc) exp
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.
Private Tow, Wreckers and Cleanup Service Providers	Computer Aided Dispatch Integration with ODOT FMS	Planned	Medium-Term Priority	Develop software to export traffic incidents input to CAD systems, and import the information to ODOT. Assumes 3 different CAD vendors, and 5 additional connections. Consider City of Cleveland.
Private Traveler	City of Cleveland Automated Parking Facilities	Planned	Long-Term Priority	Possible IntelliDrive applications to assist travelers through on board devices.

Information Providers	Connection of Private Providers	Planned	Long-Term Priority	Private providers to work with ODOT to establish links with private providers to deliver traffic information to more people in different facets.
	IntelliDrive	Planned	Long-Term Priority	Deployment of IntelliDrive infrastructure, including roadside equipment and controller modifications, to implement vehicle-to-infrastructure (V2I) communications in the 2014-2020 timeframe (as vehicles are equipped). IntelliDrive is a suite of technologies
	Cuyahoga County Port Authority Automated Parking Facilities	Planned	Medium-Term Priority	Automated parking facilities to show available parking at the airport
	ODOT 511 Information System	Planned	Medium-Term Priority	Traveler information by dialing 511 number; provided by ODOT and private partnership.
	Laketran Google Transit	Planned	Short-Term Priority	GCRTA will pair with Google to feed information on Google transit.
	ODOT Expand Traveler Information Delivery Methods	Planned	Short-Term Priority	Implement additional traveler information dissemination methods which may include cable TV station; personalized traveler information on a subscription basis delivered to cell phones, pagers, personal computing devices, etc.; connections to private sector
Railroad Operators	ODOT Highway-Rail Intersection Advanced Safety Systems	Planned	Short-Term Priority	Install advanced Highway-Rail Safety Systems at key crossings. A study must be conducted to identify the crossings and the preferred system.
School Districts	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.

Special Police Districts	City of Cleveland Special Event Traffic Planning	Planned	Long-Term Priority	Development of plans, procedures and systems to improve traffic conditions associated with special events such as concerts, sporting events, or festivals.
U.S. Coast Guard	City of Cleveland / Cuyahoga County Port Security Camera Installation including Vehicle Tracking System (VTS)	Planned	Short-Term Priority	With the aid of Homeland Security Funding, cameras will be installed underneath existing bridges along the Cuyahoga River to monitor river traffic.
	Cuyahoga County Evacuation Plan Updates	Planned	Short-Term Priority	Study and development of plan to evacuate Cuyahoga County in case of an emergency affecting mass area.

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