Tracking the Deployment of the Integrated Metropolitan ITS Infrastructure in Cleveland, Akron, Lorain

FY99 Results

For additional information, please contact:

Joseph I. Peters, Ph.D.
ITS Program Assessment Coordinator
ITS Joint Program Office, Room 3416
400 Seventh St., S.W.
Washington, D.C. 20590
(202) 366-2202
FAX: (202) 493-2027
E-mail: joe.peters@fhwa.dot.gov

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Part 1 - Background and Purpose

In January 1996, Secretary Peña set a goal of deploying the integrated metropolitan Intelligent Transportation System (ITS) infrastructure in 75[1] of the nation's largest metropolitan areas by 2006:

> *"I'm setting a national goal: to build an intelligent transportation infrastructure across the United States to save time and lives, and improve the quality of life for Americans. I believe that what we do, we must measure . . . Let us set a very tangible target that will focus our attention . . . I want 75 of our largest metropolitan areas outfitted with a complete intelligent transportation infrastructure in 10 years."*[2]
>
> -- *Secretary Peña, 1996*

In 1997, the U.S. Department of Transportation initiated an effort to track progress toward fulfillment of this goal by conducting a survey of deployment in the nation's largest metropolitan areas. Traditionally, the product of a transportation infrastructure investment consists of a fixed asset such as a highway, bridge, or public transportation vehicle developed, constructed, or purchased by a single agency. Tracking the level of deployment for such traditional fixed assets can be accomplished by simply counting the number of such assets deployed. Measuring the deployment of the metropolitan ITS infrastructure is more complex because it consists of a set of systems, often deployed by multiple agencies, and integrated through a combination of complex institutional and technical arrangements. In brief, it is often difficult to simply count the number of systems deployed without first devising a measurement approach that captures the essential features of such systems in a consistent fashion across many deployment environments.

In order to track progress toward fulfillment of the Secretary's goal for deployment, the U.S. Department of Transportation ITS Joint Program Office developed the metropolitan ITS deployment tracking methodology. This methodology tracks deployment of the nine components that make up the Metropolitan ITS infrastructure: Freeway Management; Incident Management; Arterial Management; Emergency Management; Transit Management; Electronic Toll Collection; Electronic Fare Payment; Highway-Rail Intersections; and Regional Multimodal Traveler Information. Through a set of indicators tied to the major functions of each component, the level of deployment is tracked for the nation's largest metropolitan areas. In addition, the integration links between agencies operating the infrastructure are also tracked. The details of

[1] Since Secretary Peña's speech, the number of metropolitan areas that DOT will measure has been increased from 75 to 78. However, to maintain reporting consistency across the 10-year goal period, this report considers only the original 75 metropolitan areas.

[2] Excerpt of a speech delivered by Secretary of Transportation Peña at the Transportation Research Board in Washington, DC on January 10, 1996.

the methodology are explained elsewhere.[3]

During the summer and fall of 1999, the U.S. DOT undertook a new data collection effort for the purpose of examining ITS deployment progress in the nation's largest metropolitan areas. The Cleveland, Akron, Lorain metropolitan area was among the areas surveyed in 1997 and again in 1999. This report presents the results of the 1999 survey efforts and compares the results of the 1997 survey against those observed in 1999. The overall response rate for the surveys administered in the Cleveland, Akron, Lorain region was 90% in 1997 and 77% in 1999.

Part 2 contains a summary of the 1999 survey results, and Part 3 provides a comparison of 1999 survey results and the 1997 survey results.

The report also contains a set of appendices containing a map of the survey area, the list of local contacts surveyed along with a status of their response to the survey and a summary of the data collected from the surveys.

Agencies are encouraged to review the data presented in this report for completeness and accuracy and to direct any comments or corrections to the data provided to the contacts listed below:

Steve Gordon
Oak Ridge National Laboratory
P.O. Box 2008, 4500N, MS-6207
Oak Ridge, TN 37831-6207
(865) 576-8416 (voice)
(865) 574-3895 (fax)
gordonsr@ornl.gov

Jeff Trombly
Science Applications International Corporation
301 Laboratory Road
Oak Ridge, TN 37831-2501
(865) 481-8563 (voice)
(865) 481-2941 (fax)
jeffrey.w.trombly@saic.com

[3] Additional Resources: "Measuring ITS Deployment and Integration" (Electronic Document Number: 4372). U.S. Department of Transportation, Joint Program Office for Intelligent Transportation Systems, 400 Seventh St., SW (HVH-1), Washington, DC 20590, Phone: 202-366-9536, Fax: 202-366-3302, Web: http://www.its.dot.gov.

Part 2 - Summary 1999 Survey Results

Deployment indicators have been developed for two broad areas of interest: (1) the individual components, including their basic functions and characteristics and (2) integration of components, including how these components work together to provide coordinated regional service. As mentioned earlier, these indicators are expressed as percentages of the possible deployment opportunity and not necessarily what should be deployed based on local needs. Requirements for deployment and integration between each component will vary based on local conditions and cannot be assigned without extensive coordination with individual metropolitan areas.

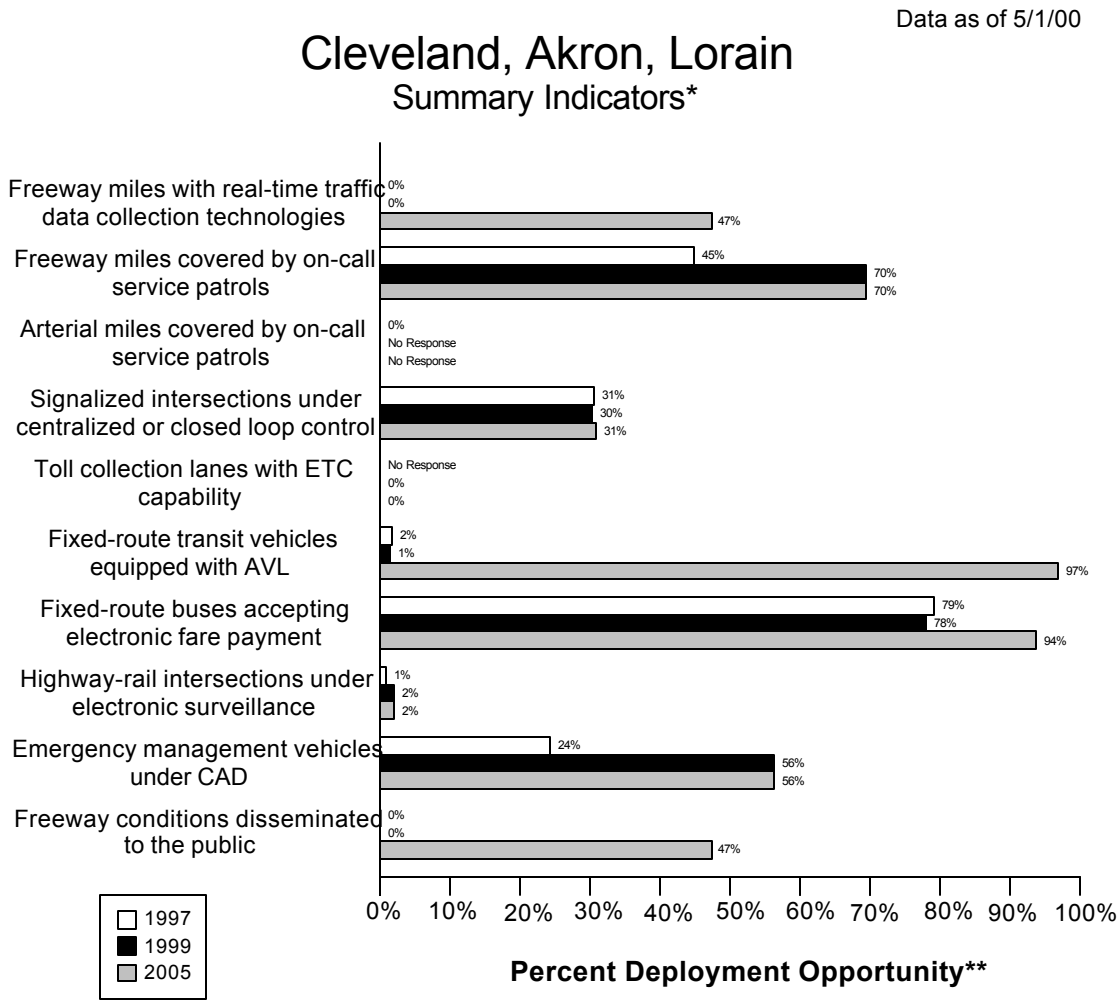
The following two figures portray the surrogate indicators for each of the nine components in Cleveland, Akron, Lorain and the same indicators at the national level. These are judged to be the single best representative of a component and are being used as summary indicator for component. The summary indicators are expressed as a percentage; however, because deployment goals have yet to be established, these indicators should not be read as a comparison of what is deployed versus eventual deployment goals. Instead, they only reflect what is deployed compared to full market saturation (i.e., opportunity for deployment).

Each component indicator was selected to reflect a critical function of the individual components. For example, in the case of Freeway Management, three basic functions were defined: surveillance, traffic control, and information display. The three indicators developed to reflect these functions are: percentage of freeway centerline miles under electronic surveillance (surveillance function), percentage of freeway entrance ramps managed by ramp meters (traffic control function), and percentage of freeway centerline miles covered by permanent VMS, HAR, or in-vehicle signing (information display function). The indicators are surrogates that do not necessarily reflect the full breadth of metropolitan ITS deployment activity.

A critical aspect of ITS that provides much of its capability is the integration of individual components to form a unified regional traffic control system. Individual ITS components routinely collect information that is used for purposes internal to that component. For example, the Arterial Management component monitors arterial conditions to revise signal timing and to convey these conditions to travelers through such technologies as variable message signs and highway advisory radio. Other ITS components can make use of this information in formulating their control strategies. For example, Transit Management may alter routes and schedules based on real-time information on arterial traffic conditions, and Freeway Management may alter ramp metering or diversion recommendations based on the same information.

As with the component indicators, definitions for inter- and intra-component integration were developed for each component, and indicators, derived from these definitions, were produced for each component. A total of 34 individual integration indicators was specified and is portrayed in the third figure which follows. Each integration indicator has been assigned a number and an origin/destination path from one ITS infrastructure component to another. For example, the

integration of information from the Freeway Management component to the Regional Multimodal Traveler Information component is identified by the number "10."

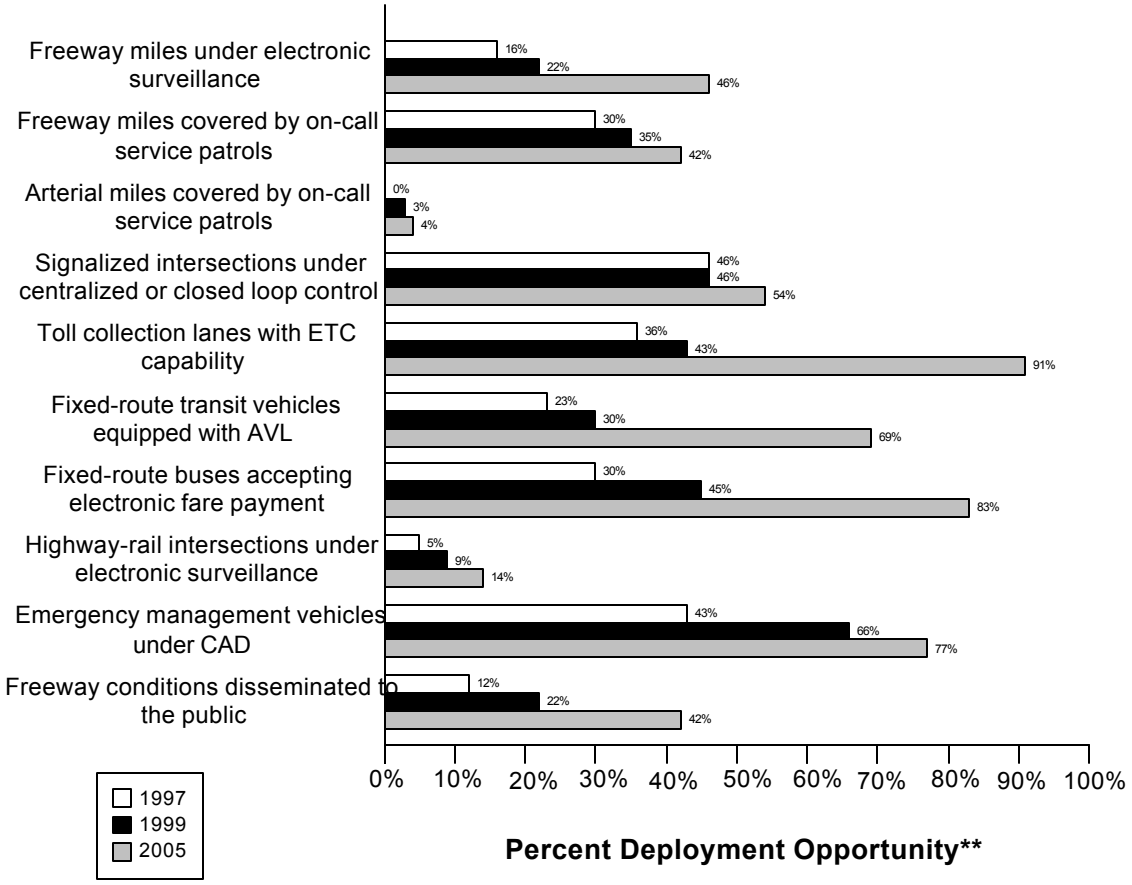


* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.
** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

Data as of 5/1/00

National

Summary Indicators*



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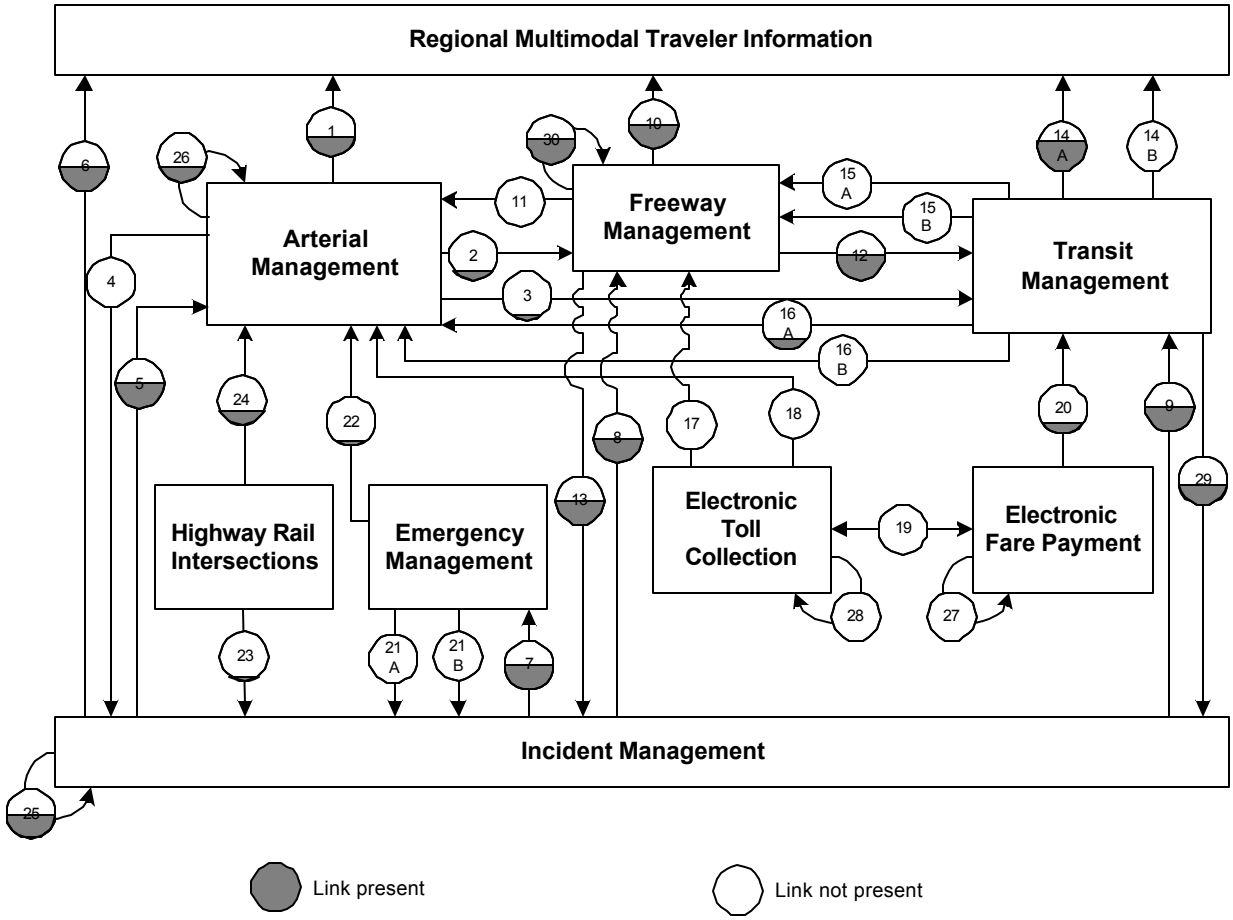
Cleveland, Akron, Lorain Integration Links



Note: Shading indicates the value of the link. For example a circle half shaded equals 50%

Link	Description	Link	Description
1	Arterial Management to Regional Multimodal Traveler Information	2	Arterial Management to Freeway Management
3	Arterial Management to Transit Management	4	Arterial Management to Incident Management
5	Incident Management to Arterial Management	6	Incident Management to Regional Multimodal Traveler Information
7	Incident Management to Emergency Management.	8	Incident Management to Freeway Management
9	Incident Management to Transit Management	10	Freeway Management to Regional Multimodal Traveler Information

Link	Description	Link	Description
11	Freeway Management to Arterial Management	12	Freeway Management to Transit Management
13	Freeway Management to Incident Management	14a 14b	Transit Management to Regional Multimodal Traveler Information (static route information) Transit Management to Regional Multimodal Traveler Information (schedule adherence information)
15a 15b	Transit Management to Freeway Management Transit Management to Freeway Management (transit vehicle probes)	16a 16b	Transit Management to Arterial Management Transit Management to Arterial Management (transit vehicle probes)
17	Electronic Toll Collection to Freeway Management (ETC equipped probes)	18	Electronic Toll Collection to Arterial Management (ETC equipped probes)
19	Electronic Fare Payment and Electronic Toll Collection	20	Electronic Fare Payment to Transit Management
21a 21b	Emergency Management to Incident Management (incident notification) Emergency Management to Incident Management (incident clearance)	22	Emergency Management to Arterial Management
23	Highway-rail intersections to Incident Management (crossing status)	24	Highway-rail intersections to Arterial Management (crossing status)
25	Incident Management intra component	26	Arterial Management intra component
27	Electronic Fare Payment intra component.	28	Electronic Toll Collection intra component
29	Transit Management to Incident Management (incident reporting)	30	Freeway Management intra component

Part 3 - Detailed 1999 Survey Results

The following figures and tables summarize the complete set of component and integration indicators developed for the Cleveland, Akron, Lorain metropolitan area. The figures summarizing the component indicators consist of a bar chart portraying the deployment levels for 1997, 1999, and 2005 accompanied by detailed tables of the data used to calculate each component indicator value (*Num* stands for numerator and *Den* stands for denominator; blank space indicates that no response was received.)

Example: Calculating Component Indicators for Freeway Management

Consider a metropolitan area with 100 miles of freeway and 25 freeway entrance ramps. The area has no ramp meters, 10 freeway miles for which traffic data are collected electronically, and 5 freeway miles, which are covered by highway advisory radio.

The component indicator for electronic surveillance is calculated as (10/100) or 10%.

The component indicator for ramp meter control is calculated as (0/25) or 0%.

The component indicator for HAR coverage is calculated as (5/100) or 5%.

The summary indicator for the metropolitan area is calculated as (10%+0%+5%)/3 = 5%.

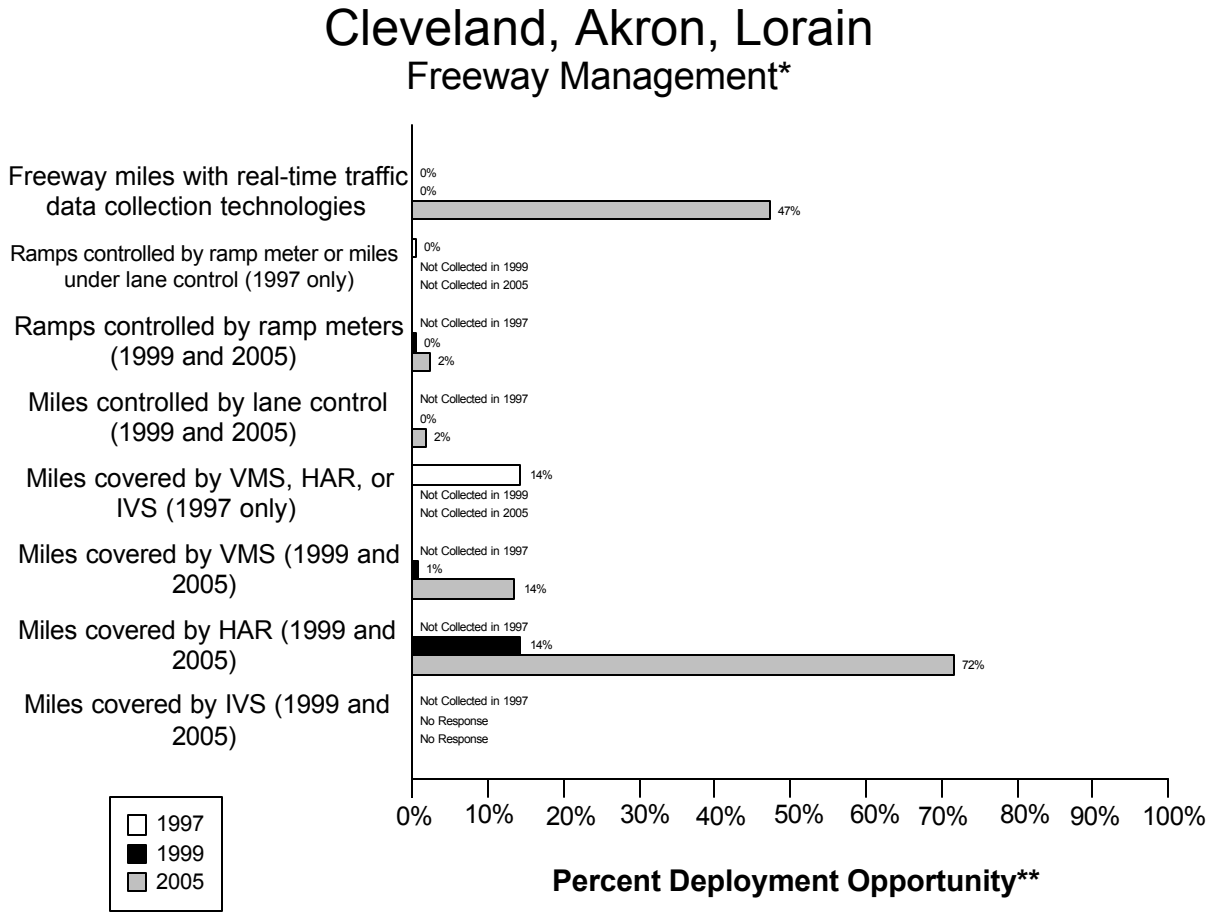
The figures summarizing the integration indicators consist of a diagram for each of the nine metropolitan ITS components portraying the integration level for 1999 (*italic*) and 2005 (**bold**), accompanied by tables providing an explanation of the data and calculations performed to develop each integration indicator value for 1999 and 2005. Each diagram portrays the proportion of agencies providing information to a component (e.g., the flow of incident information from Incident Management to Freeway Management) and the proportion of agencies providing information from one component to other components (e.g., the flow of freeway travel condition information from Freeway Management to Arterial Management).

Example: Calculating Integration between Arterial Management and Regional Multimodal Traveler Information

Consider a metropolitan area with three arterial management agencies. One out of three provides information to the public using a Regional Multimodal Traveler Information Media (e.g., internet, kiosk, pager, etc...). The integration indicator is 1/3 or 33%.

Freeway Management Component Indicators

Data as of 5/1/00



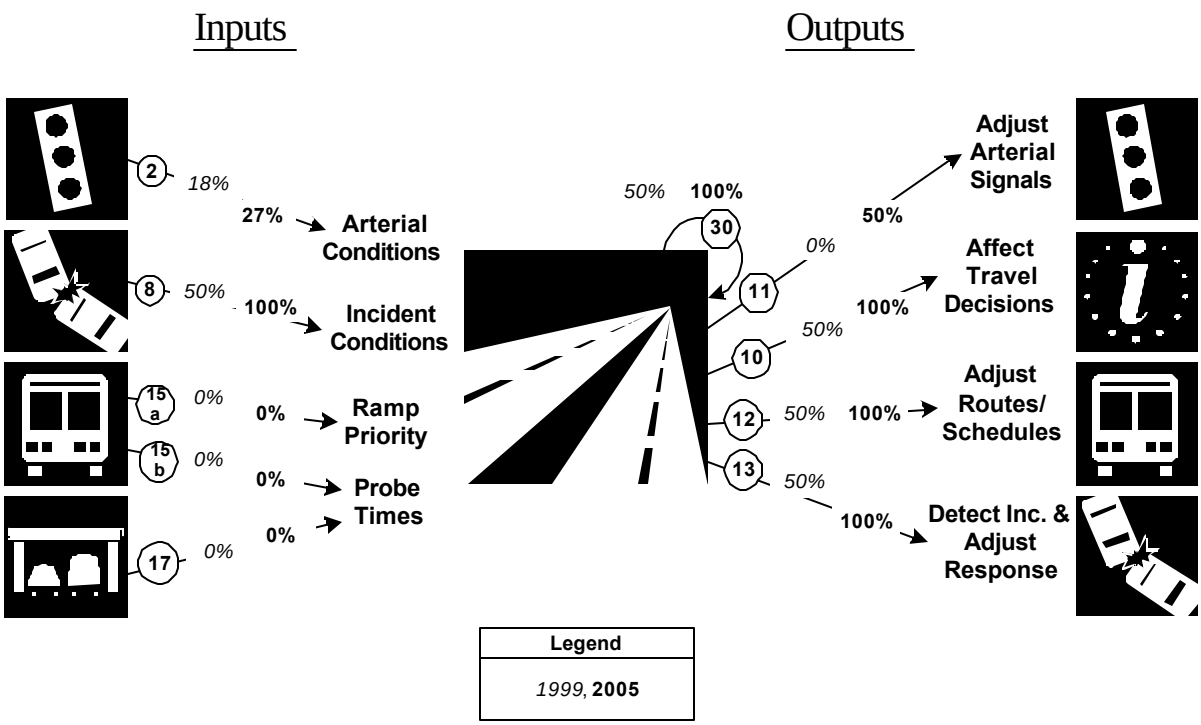
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.
** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway centerline miles are under electronic surveillance for monitoring traffic flow	0	279	0%	0	279	0%	132	279	47%
Freeway entrance ramps are controlled by ramp meters or miles under lane control	2	406	0%						

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway entrance ramps are controlled by ramp meters				2	406	0%	10	406	2%
Freeway centerline miles will be controlled by lane control				0	279	0%	5	279	2%
Freeway miles are covered by VMS, HAR, or IVS	40	279	14%						
Freeway miles are covered by VMS				2	279	1%	38	279	14%
Freeway miles are covered by HAR				40	279	14%	200	279	72%
Freeway miles are covered by IVS					279			279	

Freeway Management Integration Indicators

Cleveland, Akron, Lorain
Freeway Management Integration*



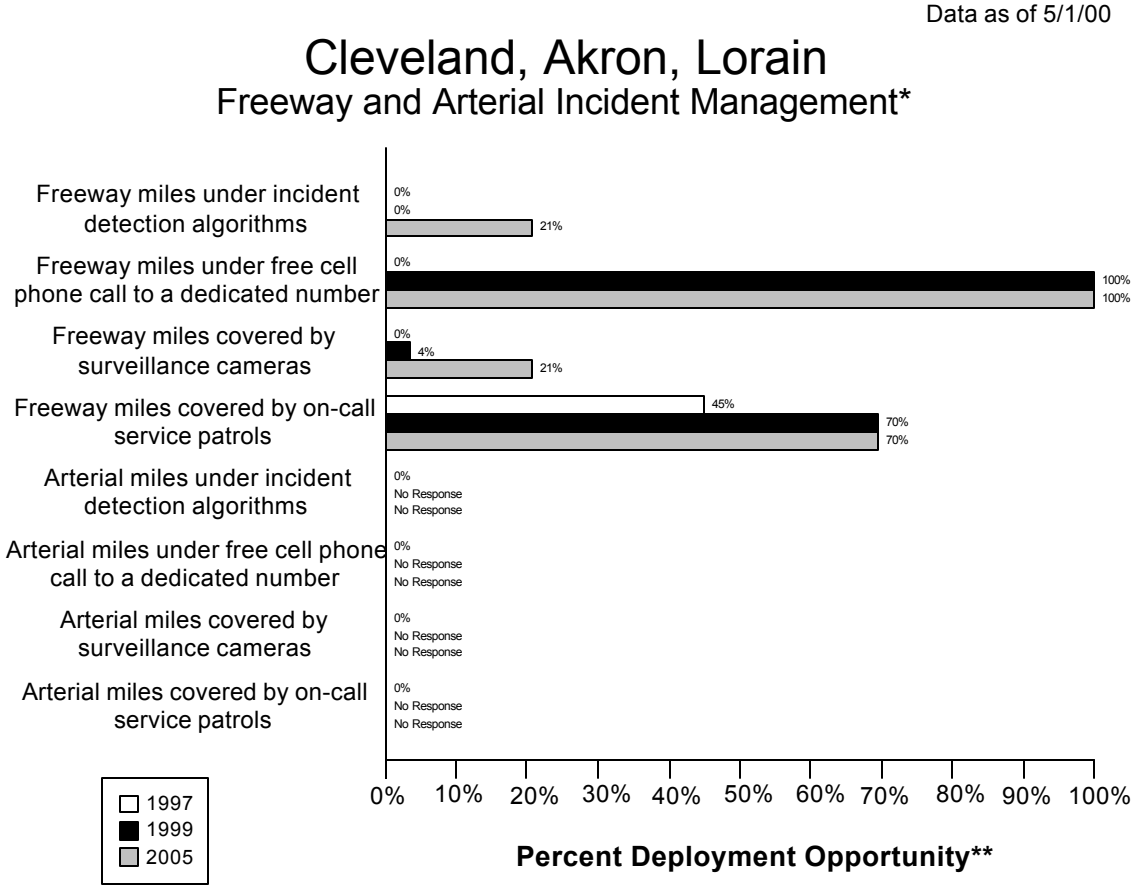
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
2. Arterial Management agencies sending information to Freeway Management	(2/ 11) 18%	(3/ 11) 27%
8. Incident Management agencies sending information to Freeway Management	(1/ 2) 50%	(2/ 2) 100%
15a. Transit management agencies with vehicles equipped with ramp meter priority	(0/ 5) 0%	(0/ 5) 0%
15b. Transit Management agencies with vehicles equipped as probes	(0/ 5) 0%	(0/ 5) 0%
17. Freeway Management agencies receiving freeway conditions from vehicle probes	(0/ 2) 0%	(0/ 2) 0%
30. Freeway Management agencies sending information to another Freeway Management agency	(1/ 2) 50%	(2/ 2) 100%
11. Freeway Management agencies sending information to Arterial Management	(0/ 2) 0%	(1/ 2) 50%

Link Description	1999	2005
10. Freeway Management agencies disseminating freeway conditions to the public	(1/ 2) 50%	(2/ 2) 100%
12. Freeway Management agencies sending freeway conditions to Transit Management	(1/ 2) 50%	(2/ 2) 100%
13. Freeway Management agencies sending freeway conditions to Incident Management	(1/ 2) 50%	(2/ 2) 100%

Incident Management Component Indicators

Data as of 5/1/00



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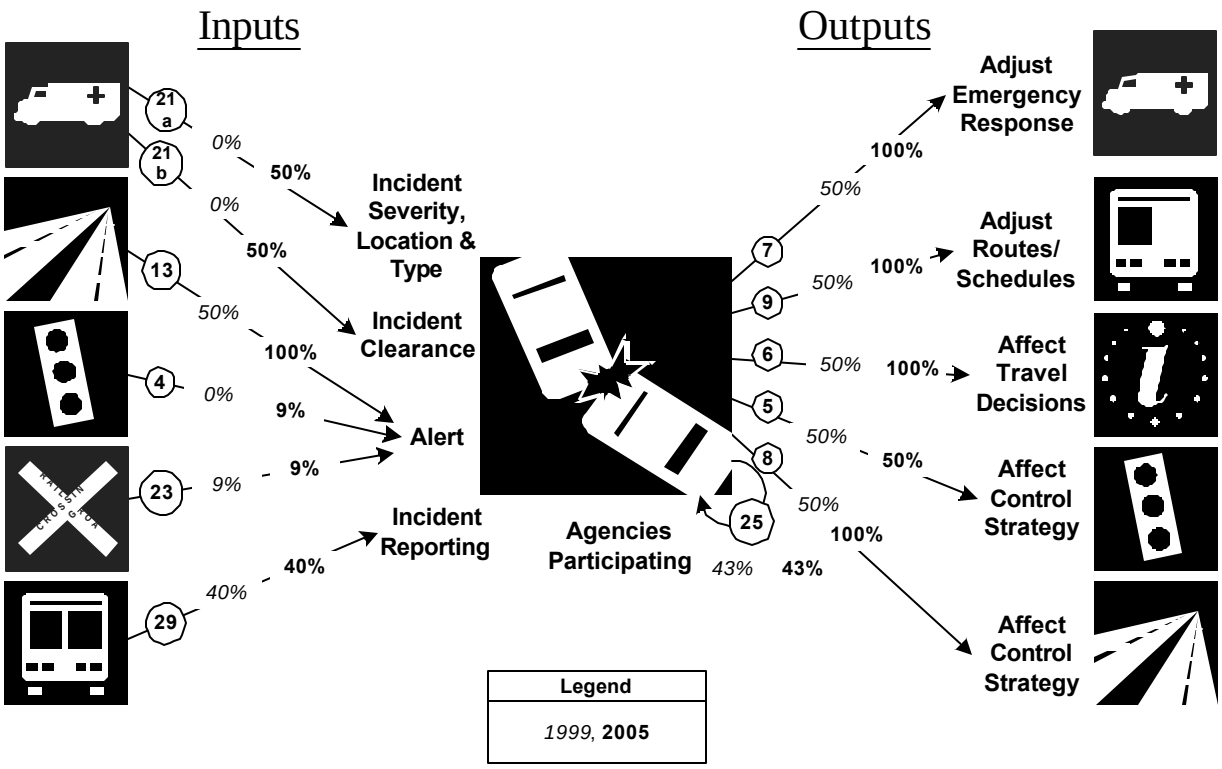
	1997			1999			2005		
Description	Num	Den	%	Num	Den	%	Num	Den	%
Freeway miles are covered by incident detection algorithms	0	279	0%	0	279	0%	58	279	21%
Freeway miles are covered by free cellular phone calls to a dedicated number	0	279	0%	279	279	100 %	279	279	100%
Freeway miles are covered by surveillance cameras.	0	279	0%	10	279	4%	58	279	21%

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway miles are covered by on-call publicly-sponsored service patrol or towing services.	125	279	45%	194	279	70%	194	279	70%
Arterial miles are covered by incident detection algorithms	0	1163	0%		1163			1163	
Arterial miles are covered by free cellular phone calls to a dedicated number	0	1163	0%		1163			1163	
Arterial miles are covered by surveillance cameras	0	1163	0%		1163			1163	
Arterial miles are covered by on-call publicly-sponsored service patrol or towing services	0	1163	0%		1163			1163	

Incident Management Integration Indicators

Cleveland, Akron, Lorain

Incident Management Integration*



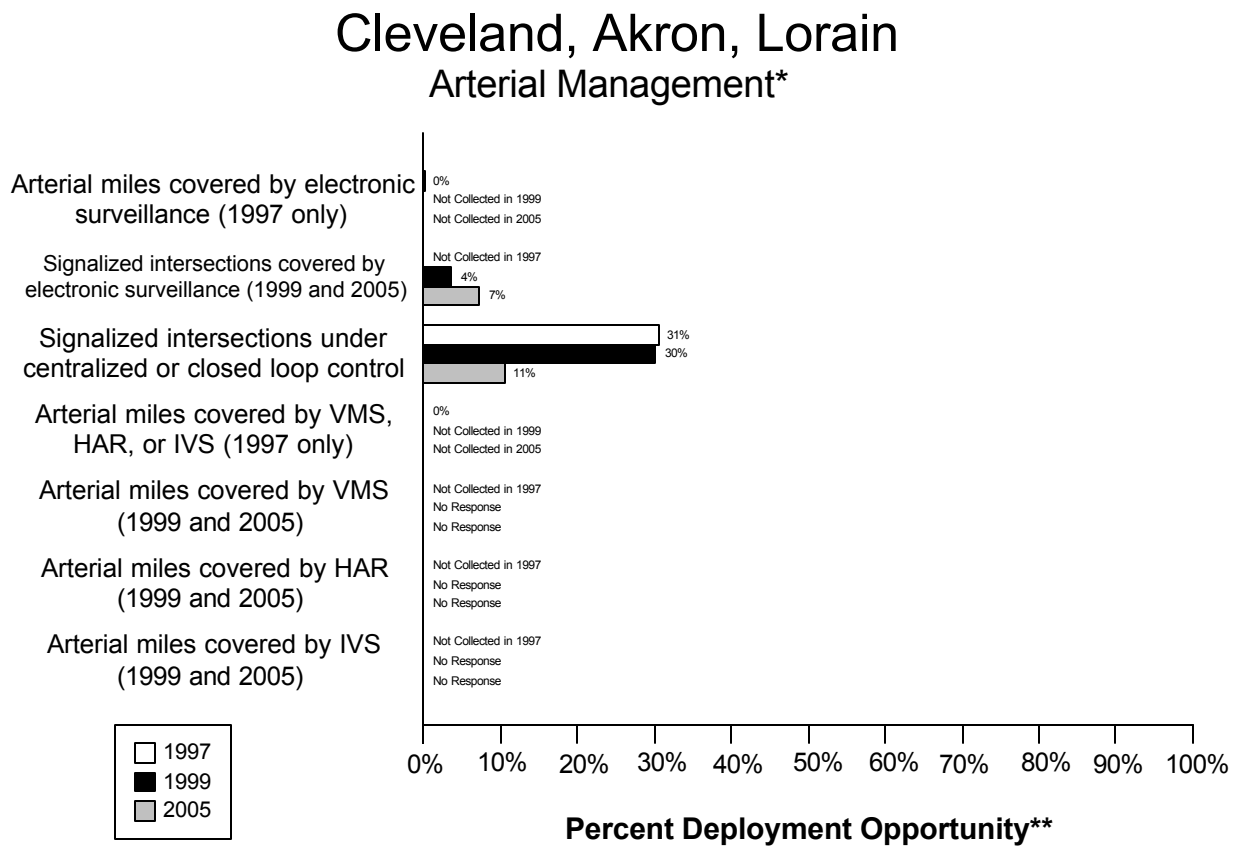
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
21a. Incident management agencies receiving incident severity from Emergency Management	(0/ 2) 0%	(1/ 2) 50%
21b. Incident management agencies receiving incident clearance activities from Emergency Management	(0/ 2) 0%	(1/ 2) 50%
13. Freeway Management agencies sending freeway conditions to Incident Management	(1/ 2) 50%	(2/ 2) 100%
4. Arterial Management agencies sending arterial conditions to Incident Management	(0/ 11) 0%	(1/ 11) 9%
23. Arterial Management agencies receive information on highway-rail intersection crossing blockages for the purpose of managing incident response	(1/ 11) 9%	(1/ 11) 9%
29. Transit Management agencies report traffic incidents as part of an organized regional incident management program	(2/ 5) 40%	(2/ 5) 40%

Link Description	1999	2005
7. Incident management agencies transfer information describing incident severity, location, and type to Emergency Management agencies	(1/ 2) 50%	(2/ 2) 100%
9. Incident Management agencies transfer information describing incident severity, location, and type to Transit Management agencies	(1/ 2) 50%	(2/ 2) 100%
6. Incident Management agencies disseminate information describing incident severity, location, and type to the public	(1/ 2) 50%	(2/ 2) 100%
5. Incident Management agencies transfer information describing incident severity, location, and type to Arterial Management agencies	(1/ 2) 50%	(1/ 2) 50%
8. Incident Management agencies transfer information describing incident severity, location, and type to Freeway Management agencies	(1/ 2) 50%	(2/ 2) 100%
25. Police, fire, and EMS agencies participating in a formal incident management plan/team	(9/ 21) 43%	(9/ 21) 43%

Arterial Management Component Indicators

Data as of 5/1/00



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** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

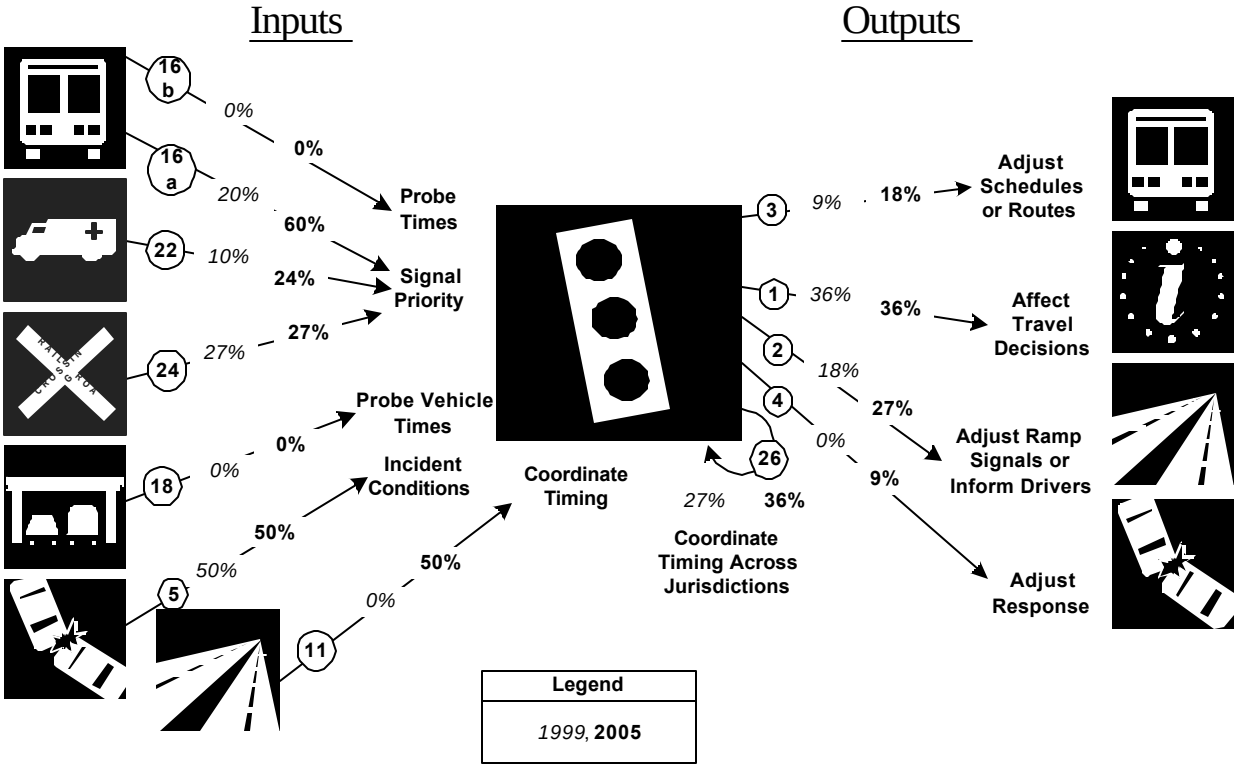
	1997			1999			2005		
Description	Num	Den	%	Num	Den	%	Num	Den	%
Arterial miles covered by electronic surveillance	2	1163	0%						
Signalized intersections are covered by electronic surveillance for monitoring traffic flow				34	939	4%	36	495	7%
Signalized intersections are under centralized or closed loop control	269	880	31%	283	939	30%	52	495	11%

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Arterial miles are covered by VMS, HAR, or IVS	0	1163	0%						
Arterial miles are covered by VMS					1163			1163	
Arterial miles are covered by HAR					1163			1163	
Arterial miles are covered by IVS					1163			1163	

Arterial Management Integration Indicators

Cleveland, Akron, Lorain

Arterial Management Integration*



* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
16a. Transit management agencies with vehicles equipped with traffic signal priority	(1/ 5) 20%	(3/ 5) 60%
16b. Transit Management agencies have vehicles equipped as probes on arterials	(0/ 5) 0%	(0/ 5) 0%
22. Emergency Management agencies have vehicles equipped with traffic signal preemption capability	(2/ 21) 10%	(5/ 21) 24%
24. Arterial Management agencies have traffic signals within 200 feet of a highway rail intersection with the capability of having their signal timing adjusted in response to a train crossing	(3/ 11) 27%	(3/ 11) 27%
18. Number of Arterial Management agencies receiving information from vehicle probes	(0/ 11) 0%	(0/ 11) 0%
5. Incident Management agencies transfer information describing incident severity, location, and type to Arterial Management	(1/ 2) 50%	(1/ 2) 50%

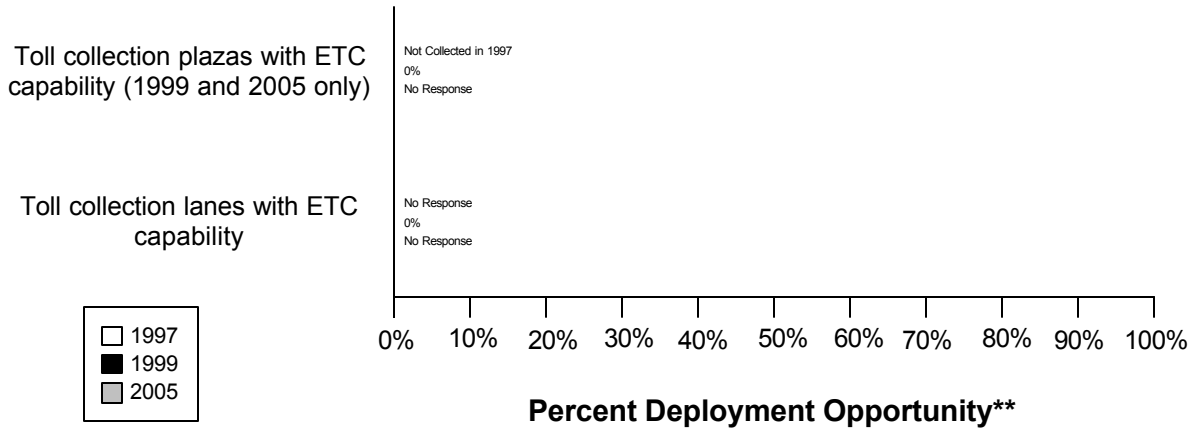
Link Description	1999	2005
11. Freeway Management agencies transfer freeway travel times, speeds, and conditions to Arterial Management agencies	(0/ 2) 0%	(1/ 2) 50%
3. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Transit Management	(1/ 11) 9%	(2/ 11) 18%
1. Arterial Management agencies disseminate arterial travel times, speeds, and conditions to the public	(4/ 11) 36%	(4/ 11) 36%
2. Arterial Management agencies send traffic condition information to Freeway Management	(2/ 11) 18%	(3/ 11) 27%
4. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Incident Management	(0/ 11) 0%	(1/ 11) 9%
26. Arterial Management agencies under cooperative agreement to share traffic signal timing for coordinated response	(3/ 11) 27%	(4/ 11) 36%

Electronic Toll Collection Component Indicators

Data as of 5/1/00

Cleveland, Akron, Lorain

Electronic Toll Collection*



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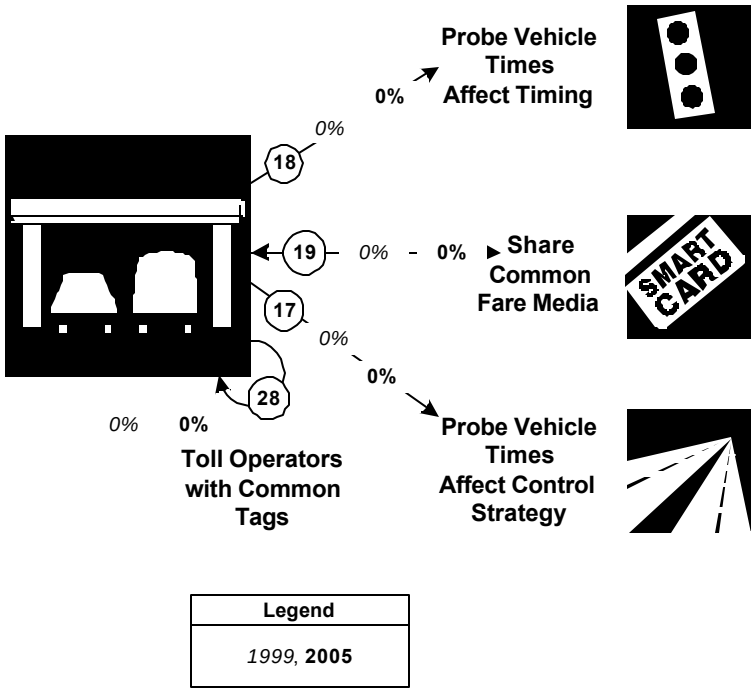
** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

	1997			1999			2005		
Description	Num	Den	%	Num	Den	%	Num	Den	%
Toll collection plazas with ETC capability				0	6	0%	0	0	
Toll collection lanes with ETC capability				0	17	0%	0	0	

Electronic Toll Collection Integration Indicators

Cleveland, Akron, Lorain
Electronic Toll Collection Integration*

Inputs Outputs

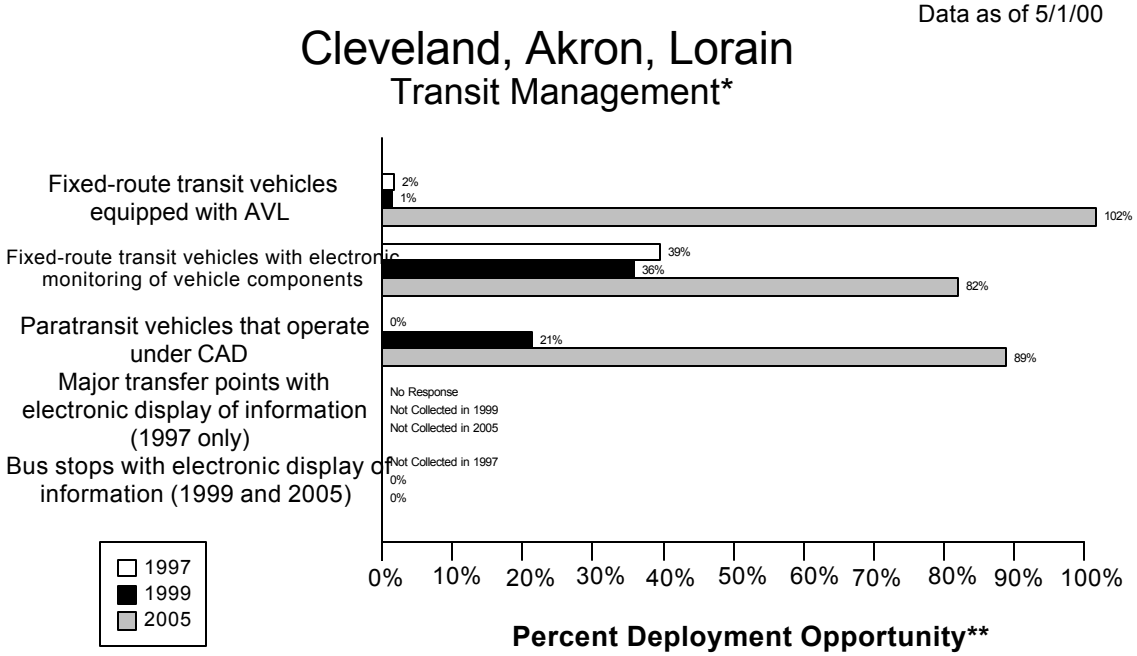


* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
18. Number of Arterial Management agencies receiving information from vehicle probes	(0/ 11) 0%	(0/ 11) 0%
19. Transit agencies that accept electronic payment through the use of electronic toll collection media	(0/ 5) 0%	(0/ 5) 0%
17. Freeway Management agencies receiving information from vehicle probes	(0/ 2) 0%	(0/ 2) 0%
28. Toll operators using common toll tag technology	(0/ 1) 0%	(0/ 1) 0%

Transit Management Component Indicators

Data as of 5/1/00



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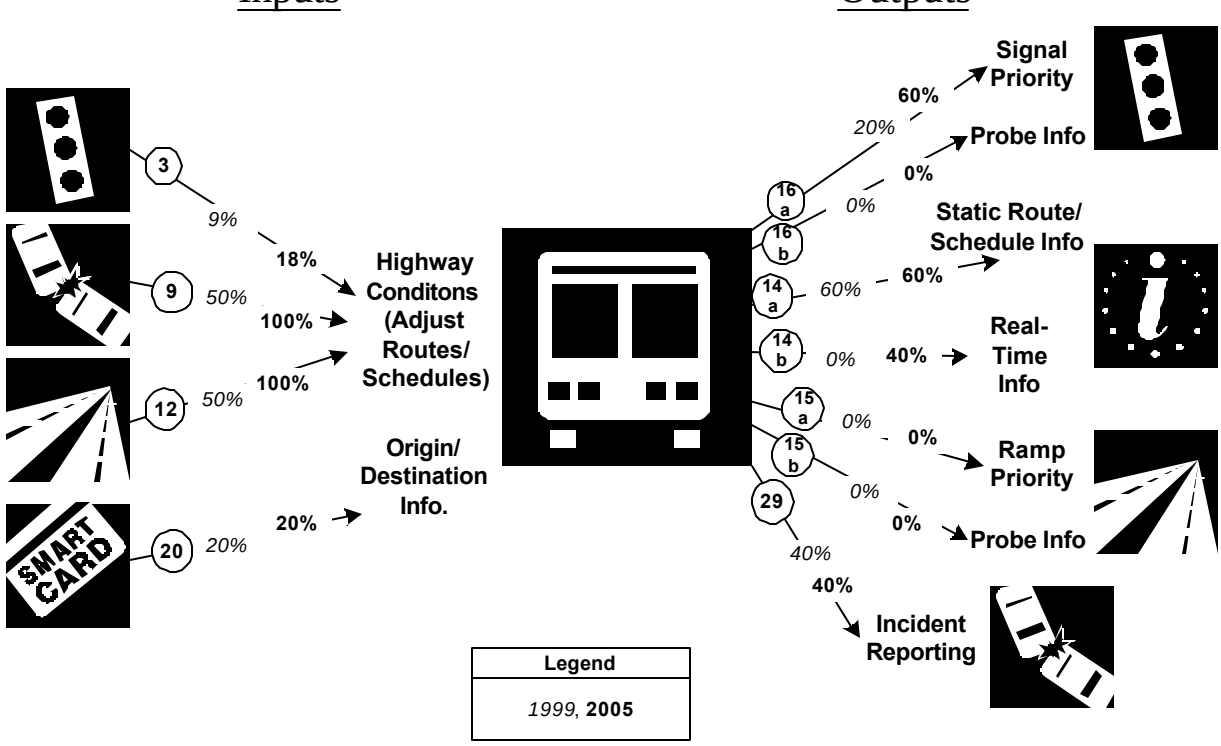
	1997			1999			2005		
Description	Num	Den	%	Num	Den	%	Num	Den	%
Fixed-route transit vehicles are equipped with AVL	15	947	2%	14	978	1%	947	933	102%
Fixed-route transit vehicles are equipped with electronic monitoring of vehicle component	355	899	39%	351	978	36%	765	933	82%
Paratransit vehicles operate under computer-aided dispatch	0	279	0%	68	317	21%	220	248	89%
Percent fixed-route transfer locations with electronic display of information	0	0							
Bus stops display information to the public				0	8500	0%	10	8200	0%

Transit Management Integration Indicators

Cleveland, Akron, Lorain
Transit Management Integration*



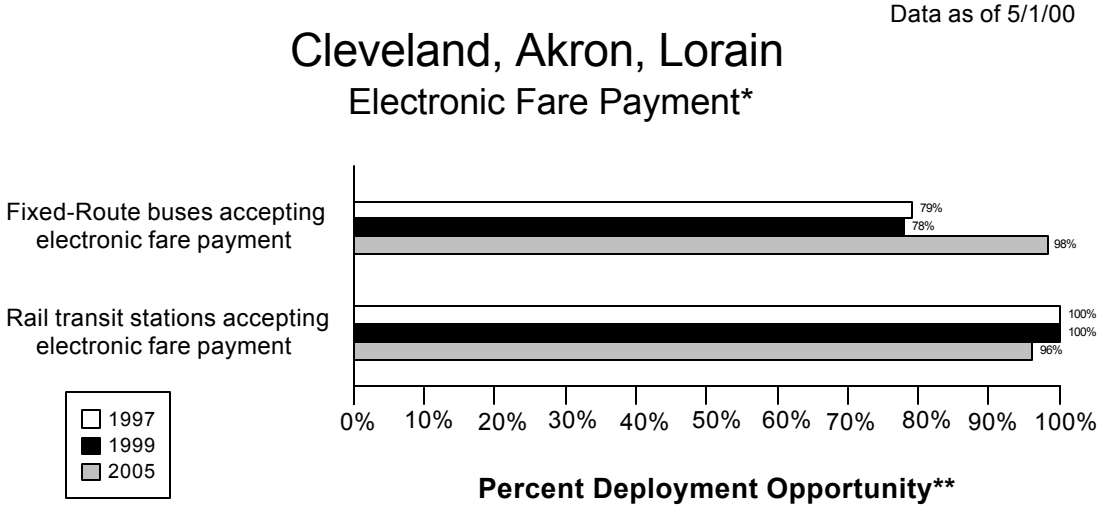
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
3. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Transit Management	(1/ 11) 9%	(2/ 11) 18%
9. Incident management agencies transfer information describing incident severity, location, and type to Transit Management	(1/ 2) 50%	(2/ 2) 100%
12. Freeway Management agencies transfer freeway travel times, speeds, and conditions to Transit Management	(1/ 2) 50%	(2/ 2) 100%
20. Transit Management agencies using Electronic Fare Payment data in transit service planning	(1/ 5) 20%	(1/ 5) 20%
16a. Transit Management agencies have vehicles equipped with traffic signal priority capability	(1/ 5) 20%	(3/ 5) 60%
16b. Transit Management agencies have vehicles equipped as probes on arterials	(0/ 5) 0%	(0/ 5) 0%
14a. Transit Management agencies disseminate information describing transit routes, schedules, and fares to travelers	(3/ 5) 60%	(3/ 5) 60%

Link Description	1999	2005
14b. Transit Management agencies disseminate information describing schedule/route adherence to travelers	(0/ 5) 0%	(2/ 5) 40%
15a. Transit Management agencies have vehicles equipped with ramp meter priority capability	(0/ 5) 0%	(0/ 5) 0%
15b. Transit Management agencies have vehicles equipped as probes on freeways	(0/ 5) 0%	(0/ 5) 0%
29. Transit Management agencies that report traffic incidents as part of an organized regional Incident Management program	(2/ 5) 40%	(2/ 5) 40%

Electronic Fare Payment Component Indicators

Data as of 5/1/00



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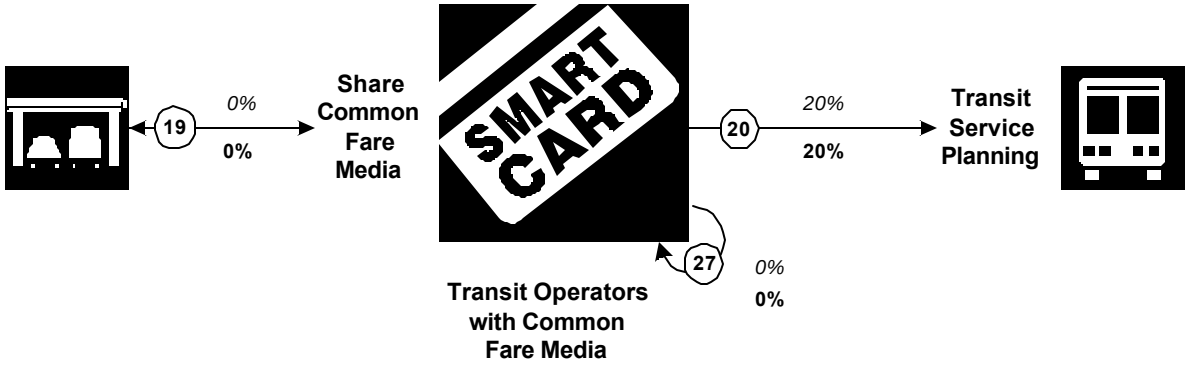
	1997			1999			2005		
Description	Num	Den	%	Num	Den	%	Num	Den	%
Fixed-route transit vehicles that accept electronic payment	750	947	79%	764	978	78%	917	933	98%
Rail transit stations that accept electronic payment	18	18	100%	51	51	100%	51	53	96%

Electronic Fare Payment Integration Indicators

Cleveland, Akron, Lorain
Electronic Fare Payment Integration*

Inputs Outputs



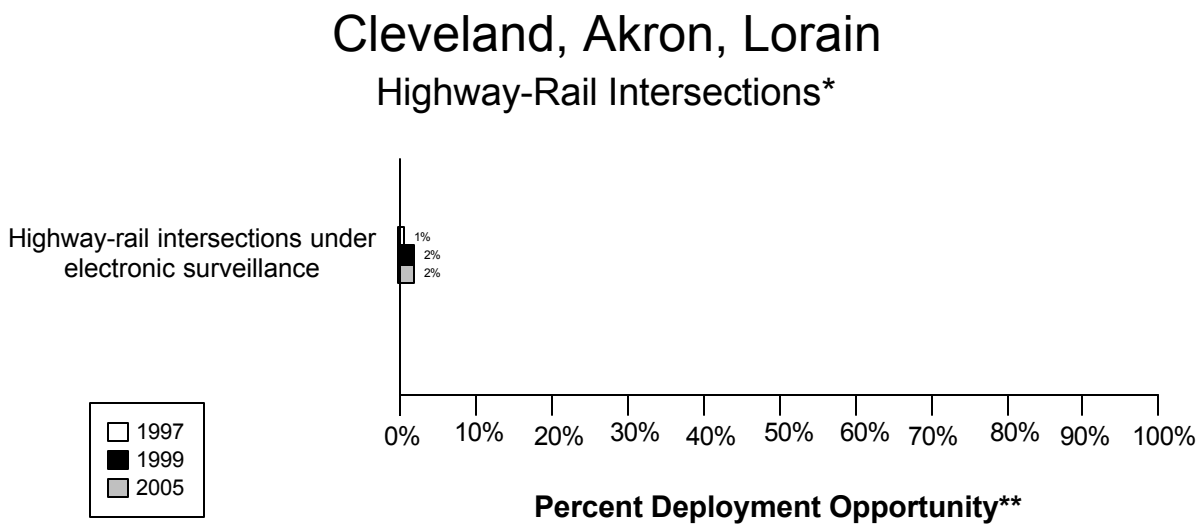
Legend
1999
2005

* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
19. Transit agencies that accept electronic payment through the use of electronic toll collection media	(0/ 5) 0%	(0/ 5) 0%
20. Transit Management agencies use Electronic Fare Payment data in transit service planning	(1/ 5) 20%	(1/ 5) 20%
27. Transit Management agencies that use the same electronic payment system	(0/ 5) 0%	(0/ 5) 0%

Highway Rail Intersection Component Indicators

Data as of 5/1/00



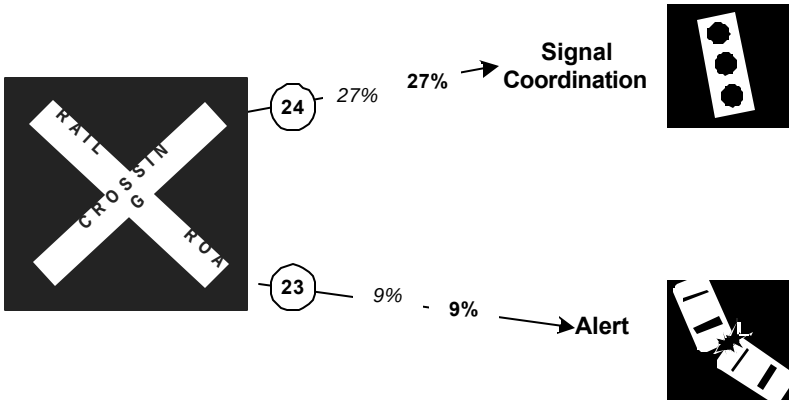
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.
** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

	1997			1999			2005		
Description	Num	Den	%	Num	Den	%	Num	Den	%
Highway-rail intersections are under electronic surveillance	1	145	1%	1	51	2%	1	51	2%

Highway Rail Intersection Integration Indicators

Cleveland, Akron, Lorain
Highway Rail Intersections Integration*

Inputs Outputs



* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

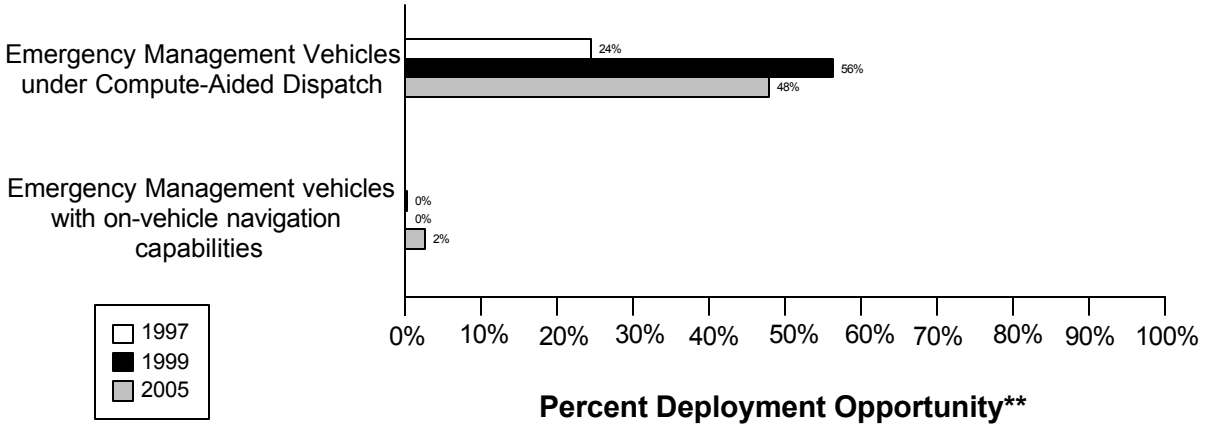
Link Description	1999	2005
24. Arterial Management agencies with traffic signals within 200 feet of a highway rail intersection with the capability of having their signal timing adjusted in response to a train crossing	(3/ 11) 27%	(3/ 11) 27%
23. Arterial Management agencies receive information on highway-rail intersection crossing blockages for the purpose of managing incident response	(1/ 11) 9%	(1/ 11) 9%

Emergency Management Component Indicators

Data as of 5/1/00

Cleveland, Akron, Lorain

Emergency Management*

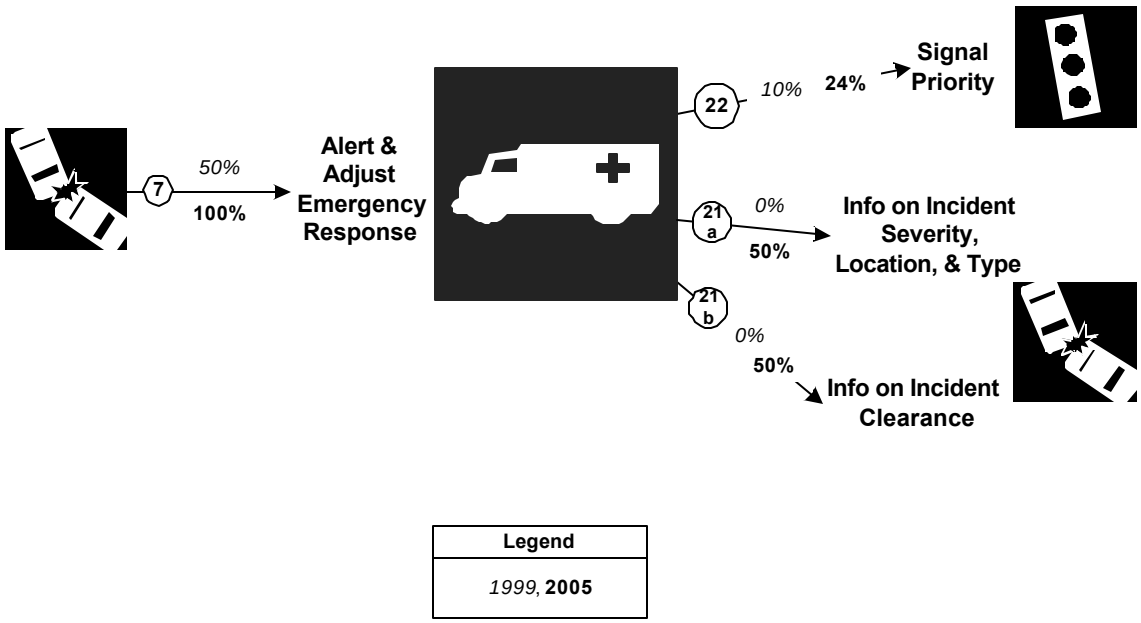


* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.
** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Public sector emergency vehicles that operate under computer-aided dispatch	323	1328	24%	765	1361	56%	570	1194	48%
Public sector emergency vehicles that have in-vehicle route guidance capability	1	1328	0%	0	1361	0%	28	1194	2%

Emergency Management Integration Indicators

Cleveland, Akron, Lorain
Emergency Management Integration*



* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

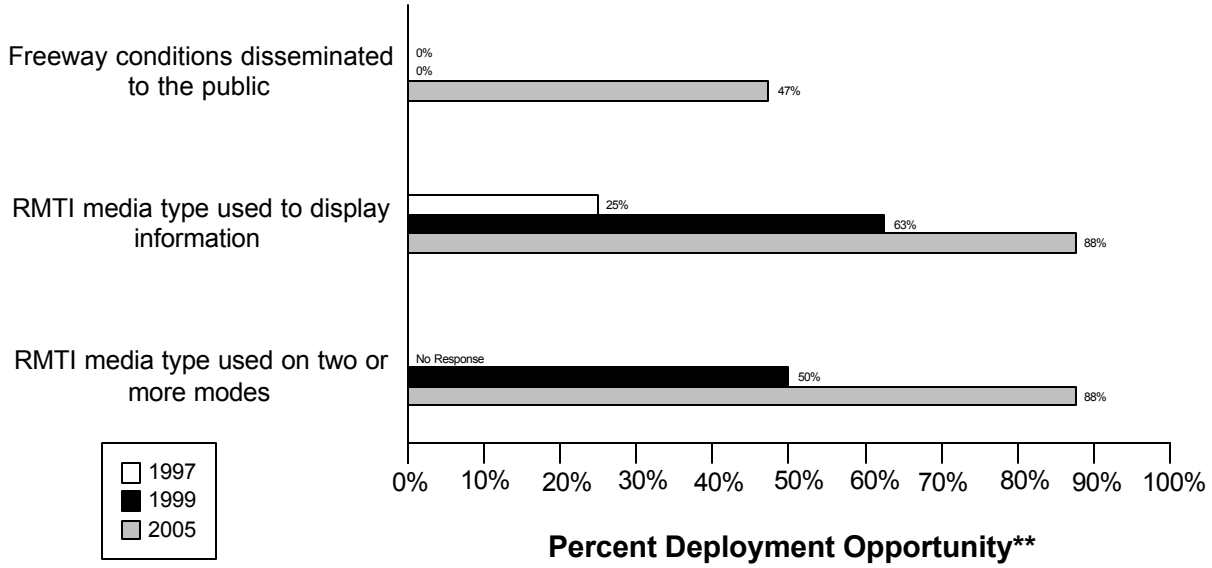
Link Description	1999	2005
7. Freeway Management agencies transfer information describing incident severity, location, and type to Emergency Management agencies	(1/ 2) 50%	(2/ 2) 100%
22. Emergency Management agencies have vehicles equipped with traffic signal preemption capability	(2/ 21) 10%	(5/ 21) 24%
21a. Freeway Management agencies receive incident severity, location, and type data from Emergency Management agencies	(0/ 2) 0%	(1/ 2) 50%
21b. Freeway Management agencies receive incident clearance activities information from Emergency Management agencies	(0/ 2) 0%	(1/ 2) 50%

Regional Multimodal Traveler Information Component Indicators

Data as of 5/1/00

Cleveland, Akron, Lorain

Regional Multimodal Traveler Information*



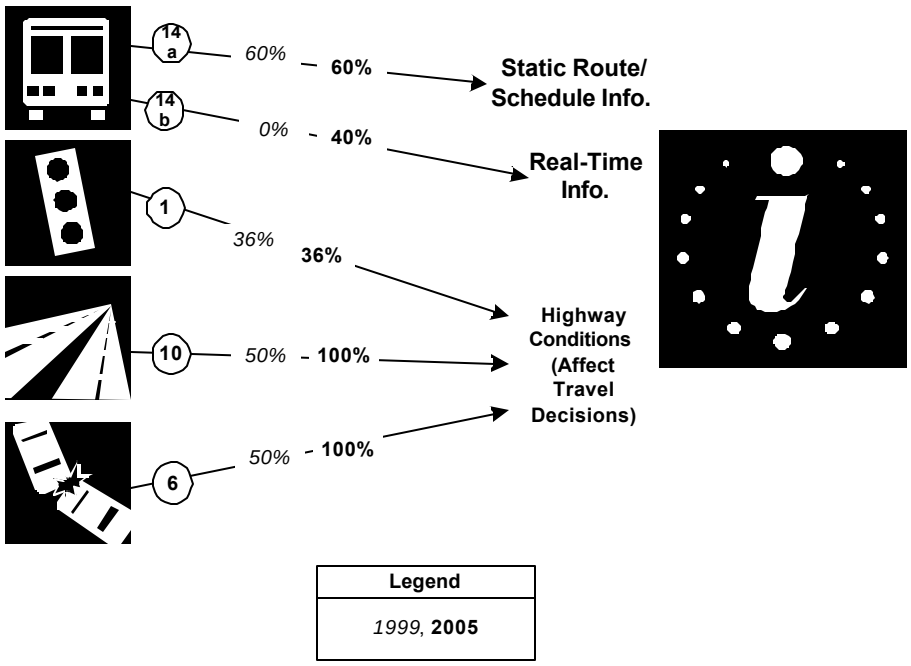
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.
** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

	1997			1999			2005		
Description	Num	Den	%	Num	Den	%	Num	Den	%
Freeway conditions disseminated to travelers	0	279	0%	0	279	0%	132	279	47%
Possible RMTI media types are used to display information to travelers	2	8	25%	5	8	63%	7	8	88%
Possible RMTI media are used to display information on *two or more modes* to travelers				4	8	50%	7	8	88%

Regional Multimodal Traveler Information Integration Indicators

Cleveland, Akron, Lorain
Regional Multimodal Traveler Information Integration*

Inputs Outputs

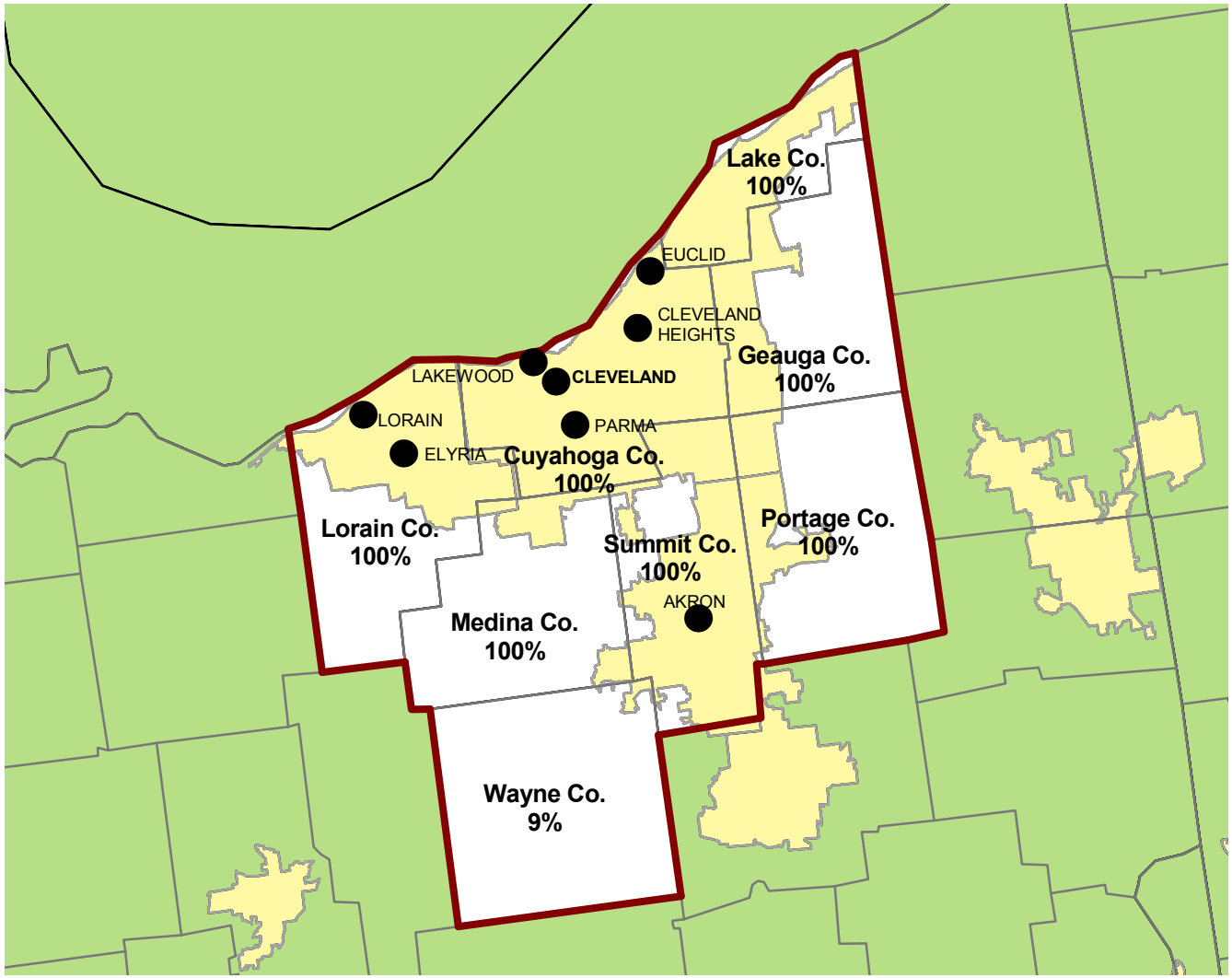


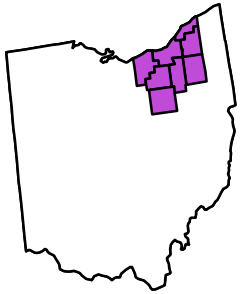
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
14a. Transit Management agencies that disseminate information describing transit routes, schedules, and fares to travelers	(3/ 5) 60%	(3/ 5) 60%
14b. Transit Management agencies that disseminate information describing schedule/route adherence to travelers	(0/ 5) 0%	(2/ 5) 40%
1. Arterial Management agencies that disseminate arterial travel times, speeds, and conditions to the public	(4/ 11) 36%	(4/ 11) 36%
10. Freeway Management agencies that disseminate freeway travel times, speeds, and conditions to travelers	(1/ 2) 50%	(2/ 2) 100%
6. Incident Management agencies that disseminate information describing incident severity, location, and type to the public	(1/ 2) 50%	(2/ 2) 100%

Appendix A
Survey Coverage Area

NORTHEAST OHIO AREAWIDE COORDINATING AGENCY POLICY BOARD,
POLICY COMMITTEE OF THE AKRON METROPOLITAN AREA TRANSPORTATION, OH





City Included in Surveys

Metropolitan Planning Area Boundary

County Boundary

Urbanlized Area

Outside Survey Area

Percentage on the Map Represents Percentage of County Population Included within MPO Boundary

Appendix B
Surveyed Agencies

Surveyed Agencies

Agency Name	Phone	Fax	1999		1997	
			Out	In	Out	In
CLEVELAND, AKRON, LORAIN						
Arterial Management						
Akron City	(330) 375-2851	(330) 375-2307	7/29/1999	10/15/1999	07/23/1997	08/18/1997
Cleveland City	(216) 664-2231	(216) 664-2198	7/29/1999		07/22/1997	
Cleveland Heights City	(216) 291-3737	(216) 291-5803	7/29/1999	10/8/1999	07/23/1997	10/10/197
Cuyahoga County	(216) 348-3867	(216) 348-3896	7/29/1999	9/17/1999	07/23/1997	08/08/1997
Elyria City	(440) 322-5464	(440) 322-5956	7/29/1999	8/18/1999	07/24/1997	08/04/1997
Euclid City	(216) 289-8563	(216) 289-8566	7/29/1999		07/23/1997	
Geauga County	(440) 286-3936	(440) 285-9864	7/29/1999		07/22/1997	10/28/1997
Lake County	(440) 350-2770	(440) 352-8133	7/29/1999	10/11/1999	07/22/1997	
Lakewood City	(216) 521-7580	(216) 521-1379	7/29/1999	10/21/1999	07/24/1997	
Lorain City	(440) 244-3829	(440) 244-6920	7/29/1999		07/23/1997	09/09/1997
Lorain County	(440) 329-5586	(440) 329-5587	7/29/1999	8/13/1999	07/24/1997	10/15/1997
Medina County	(330) 723-9555	(330) 723-9661	7/29/1999		07/24/1997	07/24/1997
Ohio Department of Transportation District 12	(216) 581-2333	(216) 581-0549	7/29/1999	1/26/2000	07/22/1997	08/29/1997
Ohio Department of Transportation District 3	(419) 281-0513	(419) 281-0874	7/29/1999	10/18/1999	07/22/1997	08/29/1997
Ohio Department of Transportation District 4	(330) 297-0801	(330) 297-1848	7/29/1999	10/20/1999		
Parma City	(440) 885-8177	(440) 885-8125	7/29/1999		07/22/1997	
Portage County	(330) 296-6411	(330) 296-2303	7/29/1999		07/22/1997	07/29/1997
Summit County	(330) 643-2850	(330) 762-7829	7/29/1999	8/9/1999	07/22/1997	09/02/1997
Electronic Toll Collection						
Ohio Turnpike Commission	(440) 234-2081	(440) 234-7273	9/8/1999	9/27/1999	07/22/1997	10/14/1997
Emergency Management						
Akron City Fire Department	(330) 375-2411	(330) 375-2146	6/24/1999	7/2/1999	07/23/1997	07/30/1997
Akron City Fire Department (Emergency	(330) 375-2411	(330) 375-2146	6/24/1999	7/2/1999	07/23/1997	07/30/1997
Akron City Police Department	(330) 375-2503	(330) 375-2089	6/24/1999	6/30/1999	07/23/1997	07/28/1997
Cleveland City Emergency Medical Services	216-664-2099	216-623-4599	8/26/1999	10/23/1999	07/23/1997	
Cleveland City Fire Department	216-664-6350	216-664-2597	8/26/1999	8/30/1999	07/23/1997	
Cleveland City Police Department	(216) 623-5814	(216) 623-5729	6/24/1999	7/2/1999	07/23/1997	08/12/1997
Cleveland Heights City Fire Department	(216) 291-2885	(216) 752-1214	6/24/1999	8/25/1999	07/23/1997	07/24/1997
Cleveland Heights City Police Department	(216) 291-4983	(216) 691-0742	6/24/1999	9/2/1999	07/23/1997	05/14/1998
Cuyahoga County Sheriff Department	(216) 443-6009	(216) 348-4353	6/24/1999	8/26/1999	07/24/1997	05/15/1998
Elyria City Fire Department	440-323-1024	440-323-0464	6/24/1999	6/25/1999	07/23/1997	05/14/1998
Elyria City Police Department	440-323-1144	440-326-1338	6/24/1999	7/2/1999	07/23/1997	08/06/1997

Agency Name	Phone	Fax	1999		1997	
			Out	In	Out	In
Euclid City Fire Department	(216) 289-8405	(216) 289-8419	6/24/1999	6/25/1999	07/23/1997	07/24/1997
Euclid City Fire Department (Emergency	(216) 289-8405	(216) 289-8419	6/24/1999	6/25/1999	07/23/1997	07/24/1997
Euclid City Police Department	(216) 289-8486	(216) 289-8327	6/24/1999	7/1/1999	07/23/1997	07/23/1997
Lorain City Fire Department	(440) 204-2221	(440) 244-1778	6/24/1999	8/12/1999	07/23/1997	05/15/1998
Lorain City Police Department	440-246-6001	440-244-0084	6/24/1999	6/25/1999	07/23/1997	07/25/1997
Parma City Fire Department	(440) 885-8829	(440) 885-8166	6/24/1999	8/10/1999	07/23/1997	07/29/1997
Parma City Fire Department (Emergency	(440) 885-8829	(440) 885-8166	6/24/1999	8/10/1999	07/22/1997	07/29/1997
Parma City Police Department	(440) 888-3211	(440) 885-8986	6/24/1999	6/29/1999	07/22/1997	05/14/1998
Summit County Sheriff Department	(330) 643-5455	(330) 434-2701	6/24/1999	8/30/1999	07/24/1997	05/15/1998
Freeway Management						
Ohio Department of Transportation District 12	(216) 581-2333	(216) 581-0549	7/29/1999	10/13/1999	10/14/1997	10/30/1997
Ohio Department of Transportation District 4	(330) 297-0801	(330) 297-1848	7/29/1999		07/22/1997	08/29/1997
Ohio Turnpike Commission	(440) 234-2081	(440) 234-7273	7/29/1999	9/23/1999	07/23/1997	08/01/1997
MPO						
Akron Metropolitan Transportation Study	(330) 375-2436	(330) 375-2275	7/15/1999	8/16/1999		
Northeast Ohio Areawide Coordinating Agency	(216) 241-2414	(216) 621-3024	7/15/1999	7/28/1999		
Transit Management						
Laketran	(440) 350-1000	(440) 350-1020	8/9/1999	9/23/1999	07/16/1997	10/24/1997
Lorain County Transit	(440) 233-7868	(440) 233-7903	8/9/1999	11/22/1999	07/16/1997	09/10/1997
Greater Cleveland Regional Transit	(216) 566-5038	(216) 781-4726	8/9/1999	10/6/1999	07/30/1997	07/31/1997
Campus Bus Service	(330) 672-7433	(330) 672-3662	8/9/1999	12/9/1999	07/17/1997	11/05/1997
Metro Regional Transit Authority	(330) 762-7267	(330) 762-0854	8/9/1999	8/19/1999	07/17/1997	07/24/1997

Appendix C
Freeway Management Components

Freeway Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 12		Ohio Turnpike Commission		Totals	
	1999	2005	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes		2	
FREEWAY MANAGEMENT SECTION						
Number of freeway centerline miles that agency owns or maintains	250		74		324	
Number of freeway centerline miles that is used for planning	250		74		324	
Number of freeway entrance ramps that agency owns, operates or maintains	NR		18		18	
Number of freeway entrance ramps that is used for planning	NR		18		18	
Type of facilities used to conduct freeway/incident management activities						
Activities housed in a free-standing dedicated building?	No		No		0	
Activities housed in a building shared with other activities?	No		No		0	
Activities conducted in a dedicated control room?	No		Yes		1	
Control room contains operator console(s)?	No		Yes		1	
Control room contains electronic wall map?	No		No		0	
Control room contains CCTV display(s)?	No		No		0	
Activities conducted in a room containing workstations or PCs that manage traffic?	No		Yes		1	
Facilities are electronically linked to other transportation mgt facilities?	No		No		0	
Staffing and hours of operation of freeway/incident management activities						
Number of full-time agency staff members	NR		NR		0	
Number of full time contractor staff members	NR		NR		0	
Number of part-time agency staff members	NR		NR		0	
Number of part-time contractor staff members	NR		NR		0	
Staffed 24 hours day by agency staff or by others	NR		agency			
Staffed during peak hours only by agency staff or by others	NR		NR		0	
Staffed by others during off-peak hours	No		No		0	
Agency staff perform transportation management as an ancillary duty	No		No		0	
Agency staff dedicated to transportation management duty	No		No		0	
Types of operations conducted for freeway/incident management						
Incident detection and management?	No		No		0	
This metropolitan area?	No		No		0	
Other metropolitan area?	No		No		0	
Statewide?	No		No		0	
Monitoring and troubleshooting status of system components?	No		No		0	
Manual override of ramp metering rates at freeway on-ramps?	No		No		0	
Operating transportation management roadside devices?	No		No		0	
Radio communications with other agencies?	No		Yes		1	
Exchange of electronic data with other agencies such as computer aided dispatch?	No		No		0	
Real-Time Traffic Data Collection Technologies						

Freeway Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 12		Ohio Turnpike Commission		**Totals**	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**
Total number of miles under surveillance with real-time data collection tech.	0	58	0	74	0	132
Number of Stations with data collection technologies						
Loop detectors	0	0	0	0	0	0
Video imaging detectors	0	0	0	0	0	0
Probe readers (elec. toll tags, transit vehicles, other technology)	0	0	0	10	0	10
Microwave radar	0	0	0	0	0	0
Other (e.g., acoustic detectors)	0	0	0	0	0	0
Number of Miles covered with data collection technologies						
Loop detectors	0	0	0	0	0	0
Video imaging detectors	0	0	0	74	0	74
Probe readers (elec. toll tags, transit vehicles, other technology)	0	0	0	74	0	74
Microwave radar	0	0	0	0	0	0
Other (e.g., acoustic detectors)	0	0	0	0	0	0
Variable Message Signs (VMS) on Freeways						
Candidate locations for deployment of VMS where VMS has been deployed	1	10	NR	5	1	15
Candidate locations for deployment of VMS	0	15	NR	5	0	20
Roadside Technologies used to Distribute Traveler Information						
Total number of miles where information is distributed	40	200	NR	NR	40	200
Number deployed						
Highway advisory radio	4	1	0	0	4	1
In-vehicle signing	0	0	0	0	0	0
Portable variable message signs	0	5	NR	10	0	15
Other	0	0	0	0	0	0
Miles covered						
Highway advisory radio	40	200	0	0	40	200
In-vehicle signing	0	0	0	0	0	0
Portable variable message signs	NR	NR	NR	NR	0	0
Other	0	0	0	0	0	0
Ramp Meters on Freeways						
Number of entrance ramp meters operated under isolated control	NR	NR	NR	NR	0	0
Number of entrance ramp meters operated under central control	NR	NR	NR	NR	0	0
Number of entrance ramp meters that provide preemption for emergency vehicles	NR	NR	NR	NR	0	0
Number of entrance ramp meters that provide priority for transit vehicles	NR	NR	NR	NR	0	0
Total number of metered ramps	2	10	NR	NR	2	10
Freeway centerline miles under lane control	0	5	NR	NR	0	5
Communication Links						
Freeway centerline miles covered by the following type of communication						
Twisted pair cable	0	0	0	0	0	0
Coaxial cable	0	0	0	0	0	0
Fiber-optic cable	0	0	NR	NR	0	0
Microwave radio	0	0	NR	NR	0	0

Freeway Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 12		Ohio Turnpike Commission		Totals	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**
Other	0	0	0	0	0	0
ITS Standards Used Related to Freeway Management						
ATMS Data Dictionary Sections 1 and 2 (ITE TM 1.01)	No		No		0	
ATMS Data Dictionary Sections 3 and 4 (ITE TM 1.02)	No		No		0	
Message Set for External TMC Communication (ITE-9604-1)	No		No		0	
NTCIP Class B Profile (AASHTO TS 3.3)	No		No		0	
NTCIP Data Collection and Monitoring Devices (AASHTO TS 3.DCM)	No		No		0	
NTCIP Object Definitions for Environmental Sensor Stations (AASHTO TS 3.7)	No		No		0	
NTICP Object Definitions for Dynamic Message Signs (AASHTO TS 3.6)	No		No		0	
NTICP Object Definitions for Highway Advisory Radio (AASHTO TS 3.HAR)	No		No		0	
NTICP Object Definitions for Ramp Meter Control (AASHTO TS 3.RMC)	No		No		0	
NTICP Object Definitions for Transportation Sensor Systems (AASHTO TS 3.TSS)	No		No		0	
NTICP Object Definitions for Video Camera Control (AASHTO TS 3.VCC)	No		No		0	
Would agency be willing to participate in testing of ITS Standards?	NR		No		0	
Have agreements in place with other agencies to use similar hardware						
and software to aid maintenance and interoperability?	NR		No		0	
INCIDENT MANAGEMENT SECTION						
Use of Service Patrols to Assist in Detection and Response to Incidents						
Publicly operated service patrol vehicles	Yes		No		1	
Privately operated service patrol vehicles operated under public contract	No		No		0	
Total number of freeway miles patrolled by these services	120	120	74	74	194	194
Miles Covered by Methods to Detect and Verify Incidents						
Free cellular phone call to a dedicated phone number other than 911	0	200	74	74	74	274
Police patrols	NR	NR	74	74	74	74
Computer algorithms linked to traffic surveillance equipment	0	58	NR	NR	0	58
CCTV	10	58	NR	NR	10	58
Private sector sources (e.g., Shadow Traffic, SmartRoutes)	NR	NR	NR	NR	0	0
Other (e.g., free cell phone call to an area radio system, etc.)	200	200	NR	NR	200	200
Procedures in place for Freeway Incident Response?						
Working agreement(s)/arrangement(s) with other agencies	No		Yes		1	
Inter-agency incident management admin. team that meets regularly	No		No		0	
Major incident response team that responds to major incidents	No		No		0	
Set of goals/objectives for incident mgt that has been adopted by agencies in region	No		No		0	
Central focal point for facilitating the two-way flow of information						
among agencies responding to an incident?						
The central focal point is a Freeway or Traffic Management Center	No		No		0	
The central focal point is a Police, Fire or joint dispatch center	No		Yes		1	
The central focal point is another center	No		No		0	

Freeway Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 12		Ohio Turnpike Commission		Totals	
	1999	2005	1999	2005	1999	2005
Methods of Communication Used On-Site at an Incident						
Police						
Two-way radio	Yes		No		1	
800 MHz trunked radio	No		No		0	
Cellular telephone	Yes		No		1	
Hand-held (i.e., walkie-talkie)	Yes		No		1	
Automated data systems (i.e., CAD)	No		No		0	
Fire						
Two-way radio	Yes		No		1	
800 MHz trunked radio	No		No		0	
Cellular telephone	Yes		No		1	
Hand-held (i.e., walkie-talkie)	Yes		No		1	
Automated data systems (i.e., CAD)	No		No		0	
DOT						
Two-way radio	No		No		0	
800 MHz trunked radio	No		No		0	
Cellular telephone	Yes		No		1	
Hand-held (i.e., walkie-talkie)	No		No		0	
Automated data systems (i.e., CAD)	No		No		0	
Towing						
Two-way radio	No		No		0	
800 MHz trunked radio	No		No		0	
Cellular telephone	Yes		No		1	
Hand-held (i.e., walkie-talkie)	No		No		0	
Automated data systems (i.e., CAD)	No		No		0	
Which police agencies typically respond to incidents on freeways?						
State Police	No		Yes		1	
County Police or Sheriff	No		No		0	
City Police	Yes		No		1	
Who provides on-site emergency medical response?						
Fire	Yes		Yes		2	
Emergency Management Service Agency	Yes		No		1	
Private hospital	No		No		0	
Has a multi-agency contact list been developed in area containing the						
names, phone numbers, etc. for the appropriate response personnel?	No		Yes		1	
Is the Incident Command System used to manage incident scenes?	Yes		DK		1	
Is there a legal specification by state law or formal agreement as to who						

Freeway Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 12		Ohio Turnpike Commission		Totals	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**
is "in charge" at the incident scene?						
Specified by state law?	Yes		Yes		2	
Formal agreement?	No		No		0	
Not specified or don't know?	No		No		0	
On-scene command post used to manage activities of responding agencies?	Yes		Yes		2	
Are there communication linkages to a communications traffic/freeway mgt center?	No		Yes		1	
Plan developed and adopted by responding agencies for staging and parking						
response vehicles and equip. at incident site that minimizes lane blockage						
and facilitates the re-opening of lanes?	No		Yes		1	
Respondents protected through law or court opinion for liability claims						
for damages to vehicles or cargoes during clearance activities?	No		DK		0	
Are overturned tank trucks, which are intact and not leaking, uprighted						
without first off-loading?	NR		Yes		1	
Does your state or local jurisdiction have a law that requires drivers						
involved in property-damage-only accidents to move the vehicles						
from travel lanes to a safe location to exchange info and wait for police?	No		NR		0	
Have laws or policies regarding the removal of stalled/abandoned vehicles						
from freeway shoulders?	Yes		Yes		2	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	>36		0-24			
Have policies or procedures for quick removal of vehicles?	Yes		Yes		2	
Is Total Station equipment used to investigate major incidents?	Yes		DK		1	
Handling of Towing Responses to Incidents						
Formal contract based on qualifications?	No		Yes		1	
Rotation with companies under contract?	No		No		0	
Separate lists kept for light and heavy response and for specialty recovery?	Yes		NR		1	
Rotation list with minimal qualifications?	Yes		No		1	
In towing qualifications, do you require towers to be certified under the						
Towing and Recovery Ass. of America's National Drivers Cert. Program?	DK		No		0	
_____						
DK: Don't know						
NR: No Response						
Leg: Legislation or action being planned						

Appendix D
Freeway Management Integration

Agency Name	Ohio Department of Transportation District 12	
	1999	**2005**
Agency Returned Survey?	Yes	
Freeway Management Section		
Agencies your agency provides freeway travel times, speeds, and		
conditions information, share infrastructure or coordinates operation		
Freeway Management Agencies		
Provide Information	None listed	Akron City, Ohio Department of Transportation District 3, Ohio Turnpike Commission, Ohio Department of Transportation District 4
Share Infrastructure	None listed	Ohio Department of Transportation District 3, Ohio Department of Transportation District 4
Coordinate Operation	None listed	Akron City, Ohio Department of Transportation District 3, Ohio Turnpike Commission, Ohio Department of Transportation District 4
Incident Management Agencies		
Provide Information	None listed	Akron City, Ohio Department of Transportation District 3, Ohio Turnpike Commission, Ohio Department of Transportation District 4
Share Infrastructure	None listed	Ohio Department of Transportation District 3, Ohio Department of Transportation District 4
Coordinate Operation	None listed	Akron City, Ohio Department of Transportation District 3, Ohio Turnpike Commission, Ohio Department of Transportation District 4
Arterial Management Agencies		
Provide Information	None listed	Cleveland Heights City, Ohio Department of Transportation District 4, Lake County, Geauga County, Cuyahoga County, Cleveland City
Share Infrastructure	None listed	Cleveland Heights City, Ohio Department of Transportation District 4, Lake County, Geauga County, Cuyahoga County, Cleveland City
Coordinate Operation	None listed	Cleveland Heights City, Ohio Department of Transportation District 4, Lake County, Geauga County, Cuyahoga County, Cleveland City
Public Transit Operators		
Provide Information	None listed	Lorain County Transit, Metro Regional Transit Authority, Laketran, Greater Cleveland Regional Transit

Agency Name	Ohio Department of Transportation District 12	
	1999	**2005**
Share Infrastructure	None listed	Lorain County Transit, Metro Regional Transit Authority, Laketran, Greater Cleveland Regional Transit
Coordinate Operation	None listed	Lorain County Transit, Metro Regional Transit Authority, Laketran, Greater Cleveland Regional Transit
Receiving real-time information via electronic means from others		
Incident Management agencies from which your agency receives		
incident severity, location, and type information	Cleveland City, Suburban Communities	Akron City, Ohio Department of Transportation District 3, Ohio Turnpike Commission, Ohio Department of Transportation District 4, Cleveland City, Suburban Communities
Arterial Management agencies from which your agency receives		
arterial travel times, speeds, and conditions	None listed	Cleveland Heights City, Cleveland City, Cuyahoga County, Geauga County
Public Transit operators from which your agency receives		
freeway travel times derived from vehicle probes	None listed	Greater Cleveland Regional Transit
Toll Collection agencies from which your agency receives freeway travel		
times derived from vehicles probes	None listed	None listed
Freeway Incident Management Section		
Agencies your agency provides incident severity, location, and type info.		
and/or shares infrastructure and/or coordinates operation		
Arterial Management Agencies		
Provide Information	Geauga County, Cuyahoga County	Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Department of Transportation District 12, Geauga County, Cuyahoga County, Cleveland City, Akron City
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	Geauga County, Cuyahoga County, Cleveland City
Emergency Management Agencies		
Provide Information	None listed	Parma City Police Department, Euclid City Fire Department (Emergency Medical), Euclid City Fire Department, Cleveland City Fire Department, Parma City Fire Department, Cleveland Heights City Police Department, Euclid City Fire Department (Emergency Medical), Cleveland City Emergency Medical Services, Cleveland City Police Department, Cleveland Heights City Fire Department, Parma City Fire Department (Emergency Medical)
Share Infrastructure	None listed	None listed

Freeway Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Department of Transportation District 12	
	1999	**2005**
Coordinate Operation	None listed	Cleveland City Fire Department
Freeway Management Agencies		
Provide Information	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Share Infrastructure	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Coordinate Operation	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Public Transit Operators		
Provide Information	None listed	Laketran, Greater Cleveland Regional Transit
Share Infrastructure	None listed	Laketran, Greater Cleveland Regional Transit
Coordinate Operation	None listed	Laketran, Greater Cleveland Regional Transit
Receiving real-time information via electronic means from others		
Emergency Management agencies from which your agency receives		
incident clearance and/or incident severity and type		
Receive Arterial Incident Clearance Information	None listed	Cleveland City Fire Department, Cleveland City Emergency Medical Services, Cleveland City Police Department
Receive Arterial Incident Severity Information	None listed	Cleveland City Fire Department, Cleveland City Emergency Medical Services, Cleveland City Police Department
Arterial Management agencies from which your agency receives		
arterial travel times, speeds, and conditions	None listed	None listed
Freeway Management agencies from which your agency receives		
freeway travel times, speeds, and conditions	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 4, Ohio Department of Transportation District 3

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Agency Name	Ohio Turnpike Commission	
	1999	**2005**
Agency Returned Survey?	Yes	
Freeway Management Section		
Agencies your agency provides freeway travel times, speeds, and		
conditions information, share infrastructure or coordinates operation		
Freeway Management Agencies		
Provide Information	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Share Infrastructure	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Coordinate Operation	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Incident Management Agencies		
Provide Information	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Share Infrastructure	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Coordinate Operation	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Arterial Management Agencies		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Public Transit Operators		
Provide Information	Greater Cleveland Regional Transit	None listed

Agency Name	Ohio Turnpike Commission	
	1999	**2005**
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Receiving real-time information via electronic means from others		
Incident Management agencies from which your agency receives		
incident severity, location, and type information	None listed	None listed
Arterial Management agencies from which your agency receives		
arterial travel times, speeds, and conditions	None listed	None listed
Public Transit operators from which your agency receives		
freeway travel times derived from vehicle probes	None listed	None listed
Toll Collection agencies from which your agency receives freeway travel		
times derived from vehicles probes	None listed	None listed
Freeway Incident Management Section		
Agencies your agency provides incident severity, location, and type info.		
and/or shares infrastructure and/or coordinates operation		
Arterial Management Agencies		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Emergency Management Agencies		
Provide Information	Summit County Sheriff Department, Euclid City Fire Department	None listed
Share Infrastructure	Summit County Sheriff Department, Euclid City Fire Department	None listed

Freeway Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Turnpike Commission	
	1999	**2005**
Coordinate Operation	Summit County Sheriff Department, Euclid City Fire Department	None listed
Freeway Management Agencies		
Provide Information	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Share Infrastructure	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Coordinate Operation	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed
Public Transit Operators		
Provide Information	Greater Cleveland Regional Transit	None listed
Share Infrastructure	Greater Cleveland Regional Transit	None listed
Coordinate Operation	Greater Cleveland Regional Transit	None listed
Receiving real-time information via electronic means from others		
Emergency Management agencies from which your agency receives		
incident clearance and/or incident severity and type		
Receive Arterial Incident Clearance Information	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed
Arterial Management agencies from which your agency receives		
arterial travel times, speeds, and conditions	None listed	None listed
Freeway Management agencies from which your agency receives		
freeway travel times, speeds, and conditions	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4	None listed

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Appendix E
Freeway Management Information Collection and Dissemination

Data Collection and Dissemination: Freeway Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Department of Transportation District 12		Ohio Turnpike Commission	
Agency Returned Survey?	Yes		Yes	
Freeway Management Section				
Data collected, archived, and/or transferred to another agency				
Collected by your agency	Traffic volumes, Vehicle classification, Weather conditions, Current work zones, Scheduled work zones	Traffic volumes, Vehicle classification, Weather conditions, Current work zones, Scheduled work zones	Traffic volumes, Vehicle classification, Road conditions, Weather conditions, Incidents, Current work zones, Scheduled work zones	NR
Archived by your agency	Traffic volumes, Vehicle classification, Weather conditions	Traffic volumes, Vehicle classification, Weather conditions	NR	NR
Transferred to another agency by your agency	Traffic volumes, Vehicle classification	Traffic volumes, Vehicle classification	NR	NR
Importance of making information available to the public				
Ranked High	Current work zones, Scheduled work zones		Road conditions, Weather conditions, Incidents, Current work zones, Scheduled work zones	
Ranked Medium	NR		Traffic volumes	
Ranked Low	Traffic volumes, Vehicle classification, Weather conditions		Vehicle classification	
Groups that make requests for the data	State DOT personnel, MPOs, Consultants		Media (I.e., TV stations, radio stations), Consultants	
What is the data used for?	Traffic analysis, Construction impact determination, Roadway impact analysis		Planning, Construction impact determination, Dissemination to the public	
Methods used to disseminate freeway information to the public				
Technologies your agency uses to disseminate:	NR	Telephone system, Internet Web sites, Pagers or personal data assistants, Kiosks, E-mail or other direct PC communication	Telephone system, Internet Web sites, Pagers or personal data assistants, E-mail or other direct PC communication, Cell phone/voice, Facsimile	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting freeway conditions	NR		www.ohioturnpike.org	
Telephone system for reporting freeway information to the public	NR		1-88-turnpike	
Organizations your agency sends information for dissemination to the public	NR		media	
Freeway Incident Management Section				
Methods used to distribute incident location and severity information				
to the public				

Data Collection and Dissemination: Freeway Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Department of Transportation District 12		Ohio Turnpike Commission	
Technologies your agency uses to disseminate:	NR	Telephone system, Internet Web sites, Pagers or personal data assistants, Kiosks, E-mail or other direct PC communication	Telephone system, Internet Web sites, Kiosks	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting incident information	http://webapp2.dot.state.oh.us/otis/winter/default.asp		www.ohioturnpike.org	
Telephone system for reporting incident information to the public	NR		1-88-turnpike	
Organizations your agency sends information for dissemination to the public	metro works see page 8		local press and media	

Appendix F
Arterial Management Components

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Akron City		Cleveland Heights City		Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes		Yes		Yes	
ARTERIAL MANAGEMENT SECTION								
Number of arterial miles that agency owns or maintains	NR		27		4		187	
Number of arterial miles that is used for planning	NR		15		0		NR	
Number of highway-rail intersections that agency maintains	NR		0		3		17	
Number of highway-rail intersections that is used for planning	NR		0		0		NR	
Type of facilities used to conduct arterial management activities								
Activities housed in a free-standing dedicated building?	No		No		No		No	
Activities housed in a building shared with other activities?	No		Yes		No		No	
Activities conducted in a dedicated control room?	No		No		No		No	
Control room contains operator console(s)?	No		No		No		No	
Control room contains electronic wall map?	No		No		No		No	
Control room contains CCTV display(s)?	No		No		No		No	
Activities conducted in a room containing workstations or PCs that manage traffic?	No		Yes		No		No	
Facilities are electronically linked to other transportation mgt facilities?	No		No		No		No	
Staffing and hours of operation of arterial management activities								
Number of full-time agency staff members	12		2		NR		NR	
Number of full time contractor staff members	NR		NR		NR		NR	
Number of part-time agency staff members	2		NR		NR		NR	
Number of part-time contractor staff members	NR		NR		NR		NR	
Staffed 24 hours day by agency staff or by others	agency		NR		NR		NR	
Staffed during peak hours only by agency staff or by others	agency		NR		NR		NR	
Staffed by others during off-peak hours	No		No		No		No	
Agency staff perform transportation management as an ancillary duty	No		No		No		No	
Agency staff dedicated to transportation management duty	No		No		No		No	
Types of operations conducted for arterial management								
Incident detection and management?	No		No		No		No	
This metropolitan area?	No		No		No		No	
Other metropolitan area?	No		No		No		No	
Monitoring and troubleshooting status of system components?	Yes		Yes		No		No	
Radio communications with other agencies?	No		No		No		No	
Exchange of electronic data with other agencies such as computer aided dispatch?	No		No		No		No	
Manual override of traffic signal timing plans	Yes		No		No		No	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	No		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Akron City		Cleveland Heights City		Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Describe agency's role in traffic signal control	All roads in incorporated area		All roads in incorporated area		Operate traffic signals on county roads only our side of incorporated area (<25 sq. miles		NR	
Traffic Signals Operated by Agency								
Number of signalized intersections operated and owned by agency	391	NR	78	78	5	5	NR	NR
Number of signalized intersections operated by agency but owned by another	NR	NR	0	0	0	0	NR	NR
Total number of signalized intersections operated by agency	391	NR	78	78	5	5	86	92
Characteristics of signalized intersections that agency operates								
Under closed loop or central system control	187	NR	24	35	0	0	1	2
Under real-time traffic adaptive control using advanced software	0	NR	0	70	0	0	0	0
Using SCOOT	No		No		No		No	
Using SCATS	No		No		No		No	
Name of software	NR		NR		NR		NR	
Allow signal preemption for emergency vehicles	253	NR	7	17	1	1	6	8
Allow signal priority for transit vehicles	4	NR	0	0	0	0	0	0
Within 200 feet of a highway-rail intersection	6	NR	0	0	0	0	1	1
Within 200 feet of a highway-rail intersection that adjust signal timing	1	NR	0	0	0	0	1	1
Software used to control the signals agency operates								
Date of last upgrade to traffic signal control system software?	NR		June 1992		1998		NR	
How often do you update signal timing?	NR		When required by council		rarely		NR	
Software used and number of signalized intersections under control (1999, 2005)	NR		EAGLE, 2, 2 MINNESOTA MICROTRONICS, 8, 8 SAFETRAN, 5, 5 WAPITI REVISION 4.75 170 UNITS, 16, 28		TRANSLINK (WAP171), 5, 5 QUICKVIEW (BI-TRAN), 0, 0		NR	
Controllers used to control signals								
NEMA	70	NR	15	15	0	0	0	0
170/179	0	0	29	42	5	5	0	0
2070 controller	0	0	0	0	0	0	0	0
Other	321	0	34	21	0	0	86	92
Technologies Associated with Highway-Rail Intersections								
Total number of highway-rail intersections under electronic surveillance	NR	NR	NR	NR	NR	NR	1	1
Highway-Rail intersection capapbilities								
Video surveillance	0	0	0	0	0	0	0	0
Electronic surveillance other than video	0	0	0	0	0	0	1	1
Ability to predict train arrival electronically	0	0	0	0	0	0	0	0
Equipped with electronic traffic violator devices	0	0	0	0	0	0	0	0

	Akron City		Cleveland Heights City		Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Other	0	0	0	0	0	0	0	0
Real-Time Electronic Traffic Data Collection Technologies								
Total number of signalized intersections covered by electronic surveillance	NR	NR	NR	NR	NR	NR	NR	NR
Number of signalized intersections with data collection technologies								
Loop detectors	0	0	0	0	0	0	0	0
Video detection cameras	0	0	0	0	0	0	0	0
Probe readers reading toll tags	0	0	0	0	0	0	0	0
Probe readers reading license plates	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Roadside Technologies used to Distribute Traveler Information								
Number deployed								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	NR	NR
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	NR	NR
VMS controlling parking access	NR	NR	NR	NR	NR	NR	NR	NR
Miles covered								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	NR	NR
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	NR	NR
Variable Message Signs (VMS) on Arterials								
Candidate locations for deployment of VMS where VMS has been deployed	NR	NR	NR	NR	NR	NR	NR	NR
Candidate locations for deployment of VMS	NR	NR	NR	NR	NR	NR	NR	NR
Communication Technologies								
Signalized intersections communicated with by each type of communication								
Twisted pair cable	253	NR	24	12	0	0	0	0
Coaxial cable	0	0	0	0	0	0	0	0
Fiber-optic cable	0	0	NR	12	0	0	0	0
Other (e.g., wireless, dial-up modems, leased lines, etc.)	0	0	24	36	5	5	0	0
Does agency convey information on highway-rail intersection crossing								
status to travelers via roadside media such as VMS or HAR?	No		No		No		No	
ITS Standards Used Related to Traffic Signal Control								
Advanced Transportation Controller (ATC) Software Application Interface (ITE 9603-1)	No		No		No		No	
ATC Physical Cabinet Functional Design (ITE-9603-2)	No		No		No		No	
ATC Functionality and Interface Definitions (ITE-9603-3)	No		No		No		No	
Natl. Trans. Communications for ITS Protocol (NTCIP) Class B Profile (AASHTO TS 3.3)	No		No		No		No	
NTCIP Data Collection and Monitoring Devices (AASHTO TS 3.DCM)	No		No		No		No	
NTCIP Object Definitions for Video Camera Control (AASHTO TS 3.VCC)	No		No		No		No	
NTCIP Object Definitions for Actuated Traffic Signal Controller Units (AASHTO TS 3.5)	No		No		No		No	
Would agency be willing to participate in testing of ITS Standards?	NR		No		No		No	
Have agreements in place with other agencies to use similar hardware								
and software to aid maintenance and interoperability?	NR		Yes		No		No	
INCIDENT MANAGEMENT ON ARTERIAL STREETS								
Receive information on highway-rail intersection crossing blockages for								
the purpose of managing incident response?	No		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Akron City		Cleveland Heights City		Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Use of Service Patrols to Assist in Detection and Response to Incidents								
Publicly operated service patrol vehicles	No		No		No		No	
Privately operated service patrol vehicles operated under public contract	No		No		No		No	
Total number of arterial miles patrolled by these services	NR	NR	NR	NR	NR	NR	NR	NR
Miles Covered by Methods to Detect and Verify Incidents								
Free cellular phone call to a dedicated phone number other than 911	0	0	0	0	0	0	0	0
Free cellular phone call to an area radio station	0	0	0	0	0	0	0	0
Police patrols	0	0	27	27	0	0	0	0
Computer algorithms linked to traffic surveillance equipment	0	0	0	0	0	0	0	0
CCTV	0	0	0	0	0	0	0	0
Private sector sources (e.g., Shadow Traffic, Smart Routes)	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Procedures in place for Arterial Incident Response?								
Working agreement(s)/arrangement(s) with other agencies	No		Yes		No		No	
Inter-agency incident management admin. team that meets regularly	No		Yes		No		No	
Major incident response team that responds to major incidents	No		Yes		No		No	
Set of goals/objectives for incident mgt that has been adopted by agencies in region	No		No		No		No	
Methods of Communication Used On-Site at an Incident								
Police								
Two-way radio	No		Yes		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		Yes		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
Fire								
Two-way radio	No		Yes		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		Yes		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
DOT								
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		No		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
Towing								

	Akron City		Cleveland Heights City		Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		No		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
Which police agencies typically respond to incidents on arterials?								
State Police	No		No		No		No	
County Police or Sheriff	No		No		No		No	
City Police	No		Yes		No		No	
Who provides on-site emergency medical response?								
Fire	No		Yes		No		No	
Emergency Management Service Agency	No		No		No		No	
Private hospital	No		No		No		No	
Has a multi-agency contact list been developed in area containing the								
names, phone numbers, etc. for the appropriate response personnel?	NR		Yes		NR		NR	
Is the Incident Command System used to manage incident scenes?	NR		NR		NR		NR	
Is there a legal specification by state law or formal agreement as to who								
is "in charge" at the incident scene?								
Specified by state law?	No		No		No		No	
Formal agreement?	No		No		No		No	
Not specified or don't know?	No		Yes		No		No	
On-scene command post used to manage activities of responding agencies?	NR		Yes		NR		NR	
Are there communication linkages to a communications traffic/freeway mgt center?	NR		NR		NR		NR	
Plan developed and adopted by responding agencies for staging and parking								
response vehicles and equip. at incident site that minimizes lane blockage								
and facilitates the re-opening of lanes?	NR		Yes		NR		NR	
Respondents protected through law or court opinion for liability claims								
for damages to vehicles or cargoes during clearance activities?	NR		DK		NR		NR	
Are overturned tank trucks, which are intact and not leaking, uprighted								
without first off-loading?	NR		NR		NR		NR	
Does your state or local jurisdiction have a law that requires drivers								
involved in property-damage-only accidents to move the vehicles								
from travel lanes to a safe location to exchange info and wait for police?	NR		No		NR		NR	
Have laws or policies regarding the removal of stalled/abandoned vehicles								
from freeway shoulders?	NR		No		NR		NR	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	NR		DK		NR		NR	
Have policies or procedures for quick removal of vehicles?	NR		No		NR		NR	
Is Total Station equipment used to investigate major incidents?	NR		No		NR		NR	
Handling of Towing Responses to Incidents								
Formal contract based on qualifications?	No		Yes		No		No	
Rotation with companies under contract?	No		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Akron City		Cleveland Heights City		Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Separate lists kept for light and heavy response and for specialty recovery?	NR		NR		NR		NR	
Rotation list with minimal qualifications?	No		No		No		No	
In towing qualifications, do you require towers to be certified under the								
Towing and Recovery Ass. of America's National Drivers Cert. Program?	NR		DK		NR		NR	
_____								
DK: Don't know								
NR: No Response								
Leg: Legislation or action being planned								

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Lake County		Lakewood City		Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes		Yes		Yes	
ARTERIAL MANAGEMENT SECTION								
Number of arterial miles that agency owns or maintains	153		NR		49		NR	
Number of arterial miles that is used for planning	0		NR		NR		NR	
Number of highway-rail intersections that agency maintains	0		NR		28		NR	
Number of highway-rail intersections that is used for planning	0		NR		NR		NR	
Type of facilities used to conduct arterial management activities								
Activities housed in a free-standing dedicated building?	No		No		No		No	
Activities housed in a building shared with other activities?	No		No		No		No	
Activities conducted in a dedicated control room?	No		No		No		No	
Control room contains operator console(s)?	No		No		No		No	
Control room contains electronic wall map?	No		No		No		No	
Control room contains CCTV display(s)?	No		No		No		No	
Activities conducted in a room containing workstations or PCs that manage traffic?	No		No		No		No	
Facilities are electronically linked to other transportation mgt facilities?	No		No		No		No	
Staffing and hours of operation of arterial management activities								
Number of full-time agency staff members	NR		NR		NR		NR	
Number of full time contractor staff members	NR		NR		NR		NR	
Number of part-time agency staff members	NR		NR		NR		NR	
Number of part-time contractor staff members	NR		NR		NR		NR	
Staffed 24 hours day by agency staff or by others	NR		NR		NR		NR	
Staffed during peak hours only by agency staff or by others	NR		NR		NR		NR	
Staffed by others during off-peak hours	No		No		No		No	
Agency staff perform transportation management as an ancillary duty	No		No		No		No	
Agency staff dedicated to transportation management duty	No		No		No		No	
Types of operations conducted for arterial management								
Incident detection and management?	No		No		No		No	
This metropolitan area?	No		No		No		No	
Other metropolitan area?	No		No		No		No	
Monitoring and troubleshooting status of system components?	No		No		No		No	
Radio communications with other agencies?	Yes		No		No		No	
Exchange of electronic data with other agencies such as computer aided dispatch?	No		No		No		No	
Manual override of traffic signal timing plans	No		No		No		No	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	No		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Lake County		Lakewood City		Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Describe agency's role in traffic signal control	County routes only		NR		County routes only		Only operate signals outside of cities and villages on state routes.	
Traffic Signals Operated by Agency								
Number of signalized intersections operated and owned by agency	3	5	NR	NR	8	10	83	85
Number of signalized intersections operated by agency but owned by another	NR	NR	NR	NR	NR	NR	0	0
Total number of signalized intersections operated by agency	3	5	101	NR	8	10	83	85
Characteristics of signalized intersections that agency operates								
Under closed loop or central system control	3	5	65	NR	0	0	0	1
Under real-time traffic adaptive control using advanced software	NR	NR	0	NR	NR	NR	0	0
Using SCOOT	No		No		No		No	
Using SCATS	No		No		No		No	
Name of software	NR		NR		NR		NR	
Allow signal preemption for emergency vehicles	NR	NR	0	NR	NR	NR	1	2
Allow signal priority for transit vehicles	1	2	0	NR	NR	NR	0	0
Within 200 feet of a highway-rail intersection	1	1	0	NR	NR	NR	1	0
Within 200 feet of a highway-rail intersection that adjust signal timing	NR	NR	0	NR	NR	NR	1	0
Software used to control the signals agency operates								
Date of last upgrade to traffic signal control system software?	NR		NR		2/99		TSI to 170	
How often do you update signal timing?	NR		NR		Annually		review every year	
Software used and number of signalized intersections under control (1999, 2005)	Peek 3000, 3, NR		NR		TRANSIT, 8, 10		170, NR, 1 TSI, 83, NR	
Controllers used to control signals								
NEMA	0	0	0	0	8	10	83	66
170/179	0	0	0	0	0	0	0	16
2070 controller	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Technologies Associated with Highway-Rail Intersections								
Total number of highway-rail intersections under electronic surveillance	NR	NR	NR	NR	NR	NR	NR	NR
Highway-Rail intersection capapbilities								
Video surveillance	0	0	0	0	0	0	0	0
Electronic surveillance other than video	0	0	0	0	0	0	0	0
Ability to predict train arrival electronically	0	0	0	0	0	0	0	0
Equipped with electronic traffic violator devices	0	0	0	0	0	0	0	0

	Lake County		Lakewood City		Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Other	0	0	0	0	0	0	0	0
Real-Time Electronic Traffic Data Collection Technologies								
Total number of signalized intersections covered by electronic surveillance	NR	NR	NR	NR	NR	NR	NR	NR
Number of signalized intersections with data collection technologies								
Loop detectors	0	0	0	0	0	0	0	0
Video detection cameras	0	0	0	0	0	0	0	0
Probe readers reading toll tags	0	0	0	0	0	0	0	0
Probe readers reading license plates	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Roadside Technologies used to Distribute Traveler Information								
Number deployed								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	NR	NR
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	NR	NR
VMS controlling parking access	NR	NR	NR	NR	NR	NR	NR	NR
Miles covered								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	NR	NR
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	NR	NR
Variable Message Signs (VMS) on Arterials								
Candidate locations for deployment of VMS where VMS has been deployed	NR	NR	NR	NR	NR	NR	NR	NR
Candidate locations for deployment of VMS	NR	NR	NR	NR	NR	NR	NR	NR
Communication Technologies								
Signalized intersections communicated with by each type of communication								
Twisted pair cable	0	0	0	0	0	0	NR	NR
Coaxial cable	0	0	0	0	0	0	0	0
Fiber-optic cable	0	0	0	0	0	0	0	0
Other (e.g., wireless, dial-up modems, leased lines, etc.)	1	2	0	0	0	0	0	0
Does agency convey information on highway-rail intersection crossing								
status to travelers via roadside media such as VMS or HAR?	No		No		No		No	
ITS Standards Used Related to Traffic Signal Control								
Advanced Transportation Controller (ATC) Software Application Interface (ITE 9603-1)	No		No		No		No	
ATC Physical Cabinet Functional Design (ITE-9603-2)	No		No		No		No	
ATC Functionality and Interface Definitions (ITE-9603-3)	No		No		No		No	
Natl. Trans. Communications for ITS Protocol (NTCIP) Class B Profile (AASHTO TS 3.3)	No		No		No		No	
NTCIP Data Collection and Monitoring Devices (AASHTO TS 3.DCM)	No		No		No		No	
NTCIP Object Definitions for Video Camera Control (AASHTO TS 3.VCC)	No		No		No		No	
NTCIP Object Definitions for Actuated Traffic Signal Controller Units (AASHTO TS 3.5)	No		No		No		No	
Would agency be willing to participate in testing of ITS Standards?	NR		NR		Yes		Yes	
Have agreements in place with other agencies to use similar hardware								
and software to aid maintenance and interoperability?	No		NR		No		No	
INCIDENT MANAGEMENT ON ARTERIAL STREETS								
Receive information on highway-rail intersection crossing blockages for								
the purpose of managing incident response?	Yes		No		No		No	

	Lake County		Lakewood City		Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Use of Service Patrols to Assist in Detection and Response to Incidents								
Publicly operated service patrol vehicles	No		No		No		No	
Privately operated service patrol vehicles operated under public contract	No		No		No		No	
Total number of arterial miles patrolled by these services	NR	NR	NR	NR	NR	NR	NR	NR
Miles Covered by Methods to Detect and Verify Incidents								
Free cellular phone call to a dedicated phone number other than 911	0	0	0	0	0	0	0	0
Free cellular phone call to an area radio station	0	0	0	0	0	0	0	0
Police patrols	0	0	0	0	0	0	0	0
Computer algorithms linked to traffic surveillance equipment	0	0	0	0	0	0	0	0
CCTV	0	0	0	0	0	0	0	0
Private sector sources (e.g., Shadow Traffic, Smart Routes)	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Procedures in place for Arterial Incident Response?								
Working agreement(s)/arrangement(s) with other agencies	No		No		No		No	
Inter-agency incident management admin. team that meets regularly	No		No		No		No	
Major incident response team that responds to major incidents	No		No		No		No	
Set of goals/objectives for incident mgt that has been adopted by agencies in region	No		No		No		No	
Methods of Communication Used On-Site at an Incident								
Police								
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		No		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
Fire								
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		No		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
DOT								
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		No		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
Towing								

	Lake County		Lakewood City		Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	No		No		No		No	
Hand-held (i.e., walkie-talkie)	No		No		No		No	
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
Which police agencies typically respond to incidents on arterials?								
State Police	Yes		No		No		No	
County Police or Sheriff	Yes		No		No		No	
City Police	No		No		No		No	
Who provides on-site emergency medical response?								
Fire	Yes		No		No		No	
Emergency Management Service Agency	No		No		No		No	
Private hospital	No		No		No		No	
Has a multi-agency contact list been developed in area containing the								
names, phone numbers, etc. for the appropriate response personnel?	Yes		NR		NR		NR	
Is the Incident Command System used to manage incident scenes?	Yes		NR		NR		NR	
Is there a legal specification by state law or formal agreement as to who								
is "in charge" at the incident scene?								
Specified by state law?	No		No		No		No	
Formal agreement?	No		No		No		No	
Not specified or don't know?	Yes		No		No		No	
On-scene command post used to manage activities of responding agencies?	Yes		NR		NR		NR	
Are there communication linkages to a communications traffic/freeway mgt center?	No		NR		NR		NR	
Plan developed and adopted by responding agencies for staging and parking								
response vehicles and equip. at incident site that minimizes lane blockage								
and facilitates the re-opening of lanes?	DK		NR		NR		NR	
Respondents protected through law or court opinion for liability claims								
for damages to vehicles or cargoes during clearance activities?	DK		NR		NR		NR	
Are overturned tank trucks, which are intact and not leaking, uprighted								
without first off-loading?	NR		NR		NR		NR	
Does your state or local jurisdiction have a law that requires drivers								
involved in property-damage-only accidents to move the vehicles								
from travel lanes to a safe location to exchange info and wait for police?	Yes		NR		NR		NR	
Have laws or policies regarding the removal of stalled/abandoned vehicles								
from freeway shoulders?	Yes		NR		NR		NR	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	DK		NR		NR		NR	
Have policies or procedures for quick removal of vehicles?	No		NR		NR		NR	
Is Total Station equipment used to investigate major incidents?	DK		NR		NR		NR	
Handling of Towing Responses to Incidents								
Formal contract based on qualifications?	No		No		No		No	
Rotation with companies under contract?	Yes		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Lake County		Lakewood City		Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Separate lists kept for light and heavy response and for specialty recovery?	NR		NR		NR		NR	
Rotation list with minimal qualifications?	No		No		No		No	
In towing qualifications, do you require towers to be certified under the								
Towing and Recovery Ass. of America's National Drivers Cert. Program?	DK		NR		NR		NR	
_____								
DK: Don't know								
NR: No Response								
Leg: Legislation or action being planned								

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4		Summit County		**Totals**	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes		Yes		11	
ARTERIAL MANAGEMENT SECTION								
Number of arterial miles that agency owns or maintains	NR		100		233		753	
Number of arterial miles that is used for planning	NR		75		NR		90	
Number of highway-rail intersections that agency maintains	NR		3		NR		51	
Number of highway-rail intersections that is used for planning	NR		NR		NR		0	
Type of facilities used to conduct arterial management activities								
Activities housed in a free-standing dedicated building?	No		No		No		0	
Activities housed in a building shared with other activities?	No		No		Yes		2	
Activities conducted in a dedicated control room?	No		No		No		0	
Control room contains operator console(s)?	No		No		No		0	
Control room contains electronic wall map?	No		No		No		0	
Control room contains CCTV display(s)?	No		No		No		0	
Activities conducted in a room containing workstations or PCs that manage traffic?	No		Yes		No		2	
Facilities are electronically linked to other transportation mgt facilities?	No		No		No		0	
Staffing and hours of operation of arterial management activities								
Number of full-time agency staff members	NR		NR		NR		14	
Number of full time contractor staff members	NR		NR		NR		0	
Number of part-time agency staff members	NR		NR		NR		0	
Number of part-time contractor staff members	NR		NR		NR		0	
Staffed 24 hours day by agency staff or by others	NR		NR		NR		0	
Staffed during peak hours only by agency staff or by others	NR		NR		NR		0	
Staffed by others during off-peak hours	No		No		No		0	
Agency staff perform transportation management as an ancillary duty	No		Yes		No		1	
Agency staff dedicated to transportation management duty	No		No		No		0	
Types of operations conducted for arterial management								
Incident detection and management?	No		No		No		0	
This metropolitan area?	No		No		No		0	
Other metropolitan area?	No		No		No		0	
Monitoring and troubleshooting status of system components?	No		No		No		2	
Radio communications with other agencies?	No		No		No		1	
Exchange of electronic data with other agencies such as computer aided dispatch?	No		No		No		0	
Manual override of traffic signal timing plans	No		No		No		1	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	No		Yes		No		1	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4		Summit County		**Totals**	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Describe agency's role in traffic signal control	NR		State routes only		County routes only			
Traffic Signals Operated by Agency								
Number of signalized intersections operated and owned by agency	NR	NR	59	69	34	36	661	288
Number of signalized intersections operated by agency but owned by another	NR	NR	0	0	0	0	0	0
Total number of signalized intersections operated by agency	91	115	59	69	34	36	939	495
Characteristics of signalized intersections that agency operates								
Under closed loop or central system control	0	1	3	8	0	0	283	52
Under real-time traffic adaptive control using advanced software	0	0	0	0	0	0	0	70
Using SCOOT	No		No		No		0	
Using SCATS	No		No		No		0	
Name of software	NR		NR		NR			
Allow signal preemption for emergency vehicles	1	1	4	8	2	2	275	39
Allow signal priority for transit vehicles	0	0	0	0	NR	NR	5	2
Within 200 feet of a highway-rail intersection	0	0	0	0	NR	NR	9	2
Within 200 feet of a highway-rail intersection that adjust signal timing	0	0	0	0	NR	NR	3	1
Software used to control the signals agency operates								
Date of last upgrade to traffic signal control system software?	NR		1998		don't know			
How often do you update signal timing?	NR		regularly, as needs dictate		don't know			
Software used and number of signalized intersections under control (1999, 2005)	NR		Peek CL Mats, 0, 8 PEEK SMARTWAYS, 3, 0		NR			
Controllers used to control signals								
NEMA	0	0	59	NR	34	36	269	127
170/179	0	0	0	0	0	0	34	63
2070 controller	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	441	113
Technologies Associated with Highway-Rail Intersections								
Total number of highway-rail intersections under electronic surveillance	NR	NR	NR	NR	NR	NR	1	1
Highway-Rail intersection capapbilities								
Video surveillance	0	0	0	0	0	0	0	0
Electronic surveillance other than video	0	0	0	0	0	0	1	1
Ability to predict train arrival electronically	0	0	0	0	0	0	0	0
Equipped with electronic traffic violator devices	0	0	0	0	0	0	0	0

	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4		Summit County		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
Other	0	0	0	0	0	0	0	0
Real-Time Electronic Traffic Data Collection Technologies								
Total number of signalized intersections covered by electronic surveillance	NR	NR	NR	NR	34	36	34	36
Number of signalized intersections with data collection technologies								
Loop detectors	0	0	0	0	34	36	34	36
Video detection cameras	0	0	0	0	0	0	0	0
Probe readers reading toll tags	0	0	0	0	0	0	0	0
Probe readers reading license plates	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Roadside Technologies used to Distribute Traveler Information								
Number deployed								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	0	0
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	0	0
VMS controlling parking access	NR	NR	NR	NR	NR	NR	0	0
Miles covered								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	0	0
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	0	0
Variable Message Signs (VMS) on Arterials								
Candidate locations for deployment of VMS where VMS has been deployed	NR	NR	NR	NR	NR	NR	0	0
Candidate locations for deployment of VMS	NR	NR	NR	NR	NR	NR	0	0
Communication Technologies								
Signalized intersections communicated with by each type of communication								
Twisted pair cable	0	0	0	0	0	0	277	12
Coaxial cable	0	0	0	0	0	0	0	0
Fiber-optic cable	0	0	3	8	0	0	3	20
Other (e.g., wireless, dial-up modems, leased lines, etc.)	0	0	3	8	2	0	35	51
Does agency convey information on highway-rail intersection crossing								
status to travelers via roadside media such as VMS or HAR?	No		No		No		0	
ITS Standards Used Related to Traffic Signal Control								
Advanced Transportation Controller (ATC) Software Application Interface (ITE 9603-1)	No		No		No		0	
ATC Physical Cabinet Functional Design (ITE-9603-2)	No		No		No		0	
ATC Functionality and Interface Definitions (ITE-9603-3)	No		No		No		0	
Natl. Trans. Communications for ITS Protocol (NTCIP) Class B Profile (AASHTO TS 3.3)	No		No		No		0	
NTCIP Data Collection and Monitoring Devices (AASHTO TS 3.DCM)	No		No		No		0	
NTCIP Object Definitions for Video Camera Control (AASHTO TS 3.VCC)	No		No		No		0	
NTCIP Object Definitions for Actuated Traffic Signal Controller Units (AASHTO TS 3.5)	No		No		No		0	
Would agency be willing to participate in testing of ITS Standards?	NR		Yes		NR		3	
Have agreements in place with other agencies to use similar hardware								
and software to aid maintenance and interoperability?	NR		Yes		No		2	
INCIDENT MANAGEMENT ON ARTERIAL STREETS								
Receive information on highway-rail intersection crossing blockages for								
the purpose of managing incident response?	No		No		No		1	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4		Summit County		**Totals**	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Use of Service Patrols to Assist in Detection and Response to Incidents								
Publicly operated service patrol vehicles	No		No		No		0	
Privately operated service patrol vehicles operated under public contract	No		No		No		0	
Total number of arterial miles patrolled by these services	NR	NR	NR	NR	NR	NR	0	0
Miles Covered by Methods to Detect and Verify Incidents								
Free cellular phone call to a dedicated phone number other than 911	0	0	0	0	0	0	0	0
Free cellular phone call to an area radio station	0	0	0	0	0	0	0	0
Police patrols	0	0	0	0	0	0	27	27
Computer algorithms linked to traffic surveillance equipment	0	0	0	0	0	0	0	0
CCTV	0	0	0	0	0	0	0	0
Private sector sources (e.g., Shadow Traffic, Smart Routes)	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Procedures in place for Arterial Incident Response?								
Working agreement(s)/arrangement(s) with other agencies	No		Yes		No		2	
Inter-agency incident management admin. team that meets regularly	No		No		No		1	
Major incident response team that responds to major incidents	No		No		No		1	
Set of goals/objectives for incident mgt that has been adopted by agencies in region	No		No		No		0	
Methods of Communication Used On-Site at an Incident								
Police								
Two-way radio	No		No		No		1	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		1	
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
Fire								
Two-way radio	No		No		No		1	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		1	
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
DOT								
Two-way radio	No		No		No		0	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		0	
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
Towing								

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4		Summit County		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
Two-way radio	No		No		No		0	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		0	
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
Which police agencies typically respond to incidents on arterials?								
State Police	No		No		No		1	
County Police or Sheriff	No		No		No		1	
City Police	No		No		No		1	
Who provides on-site emergency medical response?								
Fire	No		No		No		2	
Emergency Management Service Agency	No		No		No		0	
Private hospital	No		No		No		0	
Has a multi-agency contact list been developed in area containing the								
names, phone numbers, etc. for the appropriate response personnel?	NR		NR		NR		2	
Is the Incident Command System used to manage incident scenes?	NR		NR		NR		1	
Is there a legal specification by state law or formal agreement as to who								
is "in charge" at the incident scene?								
Specified by state law?	No		No		No		0	
Formal agreement?	No		No		No		0	
Not specified or don't know?	No		No		No		2	
On-scene command post used to manage activities of responding agencies?	NR		NR		NR		2	
Are there communication linkages to a communications traffic/freeway mgt center?	NR		NR		NR		0	
Plan developed and adopted by responding agencies for staging and parking								
response vehicles and equip. at incident site that minimizes lane blockage								
and facilitates the re-opening of lanes?	NR		NR		NR		1	
Respondents protected through law or court opinion for liability claims								
for damages to vehicles or cargoes during clearance activities?	NR		NR		NR		0	
Are overturned tank trucks, which are intact and not leaking, uprighted								
without first off-loading?	NR		NR		NR		0	
Does your state or local jurisdiction have a law that requires drivers								
involved in property-damage-only accidents to move the vehicles								
from travel lanes to a safe location to exchange info and wait for police?	NR		NR		NR		1	
Have laws or policies regarding the removal of stalled/abandoned vehicles								
from freeway shoulders?	NR		NR		NR		1	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	NR		NR		NR		0	
Have policies or procedures for quick removal of vehicles?	NR		NR		NR		0	
Is Total Station equipment used to investigate major incidents?	NR		NR		NR		0	
Handling of Towing Responses to Incidents								
Formal contract based on qualifications?	No		No		No		1	
Rotation with companies under contract?	No		No		No		1	

Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4		Summit County		**Totals**	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Separate lists kept for light and heavy response and for specialty recovery?	NR		NR		NR		0	
Rotation list with minimal qualifications?	No		No		No		0	
In towing qualifications, do you require towers to be certified under the								
Towing and Recovery Ass. of America's National Drivers Cert. Program?	NR		NR		NR		0	
_____								
DK: Don't know								
NR: No Response								
Leg: Legislation or action being planned								

Appendix G
Arterial Management Integration

Agency Name	Akron City		Cleveland Heights City	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Arterial Mgt. agencies in metropolitan area with which you share info.				
Share Timing Plans Information	None listed	None listed	None listed	None listed
Coordinate Changes to Timing Plans	None listed	None listed	None listed	None listed
Turn over Control of Signals	None listed	None listed	None listed	None listed
Agencies your agency provides arterial travel times, speeds, and				
conditions information, share infrastructure or coordinates operation				
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Incident Management Agencies				

Agency Name	Akron City		Cleveland Heights City	
	1999	**2005**	**1999**	**2005**
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Arterial Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Freeway Management agencies from which your agency receives				

Agency Name	Akron City		Cleveland Heights City	
	1999	**2005**	**1999**	**2005**
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Public Transit operators from which your agency receives				
arterial travel times derived from vehicle probes	None listed	None listed	None listed	None listed
Incident Management agencies from which your agency receives				
incident clearance and/or incident severity, location, and type information				
Receive information on Incident Clearance	None listed	None listed	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed	None listed	None listed
Toll Collection agencies from which your agency receives arterial travel				
times derived from vehicles probes	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
and/or shares infrastructure and/or coordinates operation				
Emergency Management Agencies				
Provide Information	None listed	None listed	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Akron City		Cleveland Heights City	
	1999	**2005**	**1999**	**2005**
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Emergency Management agencies from which your agency receives				
arterial incident clearance and/or arterial incident severity				
Receive Arterial Incident Clearance Information	None listed	None listed	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed	None listed	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Agency Name	Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Arterial Mgt. agencies in metropolitan area with which you share info.				
Share Timing Plans Information	None listed	None listed	None listed	None listed
Coordinate Changes to Timing Plans	None listed	None listed	None listed	None listed
Turn over Control of Signals	None listed	None listed	None listed	None listed
Agencies your agency provides arterial travel times, speeds, and				
conditions information, share infrastructure or coordinates operation				
Freeway Management Agencies				
Provide Information	None listed	None listed	Ohio Department of Transportation District 3	Ohio Department of Transportation District 3
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Incident Management Agencies				

Agency Name	Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators Agencies				
Provide Information	None listed	None listed	Lorain County Transit	Lorain County Transit
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Arterial Management Agencies				
Provide Information	None listed	None listed	Lorain County	Lorain County
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Freeway Management agencies from which your agency receives				

Agency Name	Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**
freeway travel times, speeds, and conditions	None listed	None listed	Ohio Department of Transportation District 3	Ohio Department of Transportation District 3
Public Transit operators from which your agency receives				
arterial travel times derived from vehicle probes	None listed	None listed	None listed	None listed
Incident Management agencies from which your agency receives				
incident clearance and/or incident severity, location, and type information				
Receive information on Incident Clearance	None listed	None listed	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed	None listed	None listed
Toll Collection agencies from which your agency receives arterial travel				
times derived from vehicles probes	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
and/or shares infrastructure and/or coordinates operation				
Emergency Management Agencies				
Provide Information	None listed	None listed	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Emergency Management agencies from which your agency receives				
arterial incident clearance and/or arterial incident severity				
Receive Arterial Incident Clearance Information	None listed	None listed	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed	None listed	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Agency Name	Lake County		Lakewood City	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Arterial Mgt. agencies in metropolitan area with which you share info.				
Share Timing Plans Information	None listed	None listed	None listed	None listed
Coordinate Changes to Timing Plans	None listed	None listed	None listed	None listed
Turn over Control of Signals	None listed	None listed	None listed	None listed
Agencies your agency provides arterial travel times, speeds, and				
conditions information, share infrastructure or coordinates operation				
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Incident Management Agencies				

Agency Name	Lake County		Lakewood City	
	1999	**2005**	**1999**	**2005**
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Arterial Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Freeway Management agencies from which your agency receives				

Agency Name	Lake County		Lakewood City	
	1999	**2005**	**1999**	**2005**
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Public Transit operators from which your agency receives				
arterial travel times derived from vehicle probes	None listed	None listed	None listed	None listed
Incident Management agencies from which your agency receives				
incident clearance and/or incident severity, location, and type information				
Receive information on Incident Clearance	None listed	None listed	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed	None listed	None listed
Toll Collection agencies from which your agency receives arterial travel				
times derived from vehicles probes	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
and/or shares infrastructure and/or coordinates operation				
Emergency Management Agencies				
Provide Information	Lake County Sheriff, Lake Fire Department	None listed	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lake County		Lakewood City	
	1999	**2005**	**1999**	**2005**
Share Infrastructure	Lake County Sheriff, Lake Fire Department	None listed	None listed	None listed
Coordinate Operation	Lake County Sheriff, Lake Fire Department	None listed	None listed	None listed
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Emergency Management agencies from which your agency receives				
arterial incident clearance and/or arterial incident severity				
Receive Arterial Incident Clearance Information	Emergency Operation Center	None listed	None listed	None listed
Receive Arterial Incident Severity Information	Emergency Operation Center	None listed	short survey	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Agency Name	Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Arterial Mgt. agencies in metropolitan area with which you share info.				
Share Timing Plans Information	None listed	None listed	None listed	Ohio Department of Transportation District 12
Coordinate Changes to Timing Plans	None listed	None listed	None listed	Cleveland City, Cuyahoga County, Ohio Department of Transportation District 12
Turn over Control of Signals	None listed	None listed	None listed	None listed
Agencies your agency provides arterial travel times, speeds, and				
conditions information, share infrastructure or coordinates operation				
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Share Infrastructure	None listed	None listed	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4
Coordinate Operation	None listed	None listed	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Incident Management Agencies				

Agency Name	Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**
Provide Information	None listed	None listed	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4
Public Transit Operators Agencies				
Provide Information	None listed	None listed	None listed	Greater Cleveland Regional Transit, Laketran, Lorain County Transit
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	Greater Cleveland Regional Transit, Laketran, Lorain County Transit
Arterial Management Agencies				
Provide Information	None listed	None listed	None listed	Cuyahoga County, Ohio Department of Transportation District 12
Share Infrastructure	None listed	None listed	None listed	Ohio Department of Transportation District 12
Coordinate Operation	None listed	None listed	None listed	Cuyahoga County, Ohio Department of Transportation District 12
Receiving real-time information via electronic means from others				
Freeway Management agencies from which your agency receives				

Agency Name	Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**
freeway travel times, speeds, and conditions	None listed	None listed	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Public Transit operators from which your agency receives				
arterial travel times derived from vehicle probes	None listed	None listed	None listed	Greater Cleveland Regional Transit, Laketran, Lorain County Transit
Incident Management agencies from which your agency receives				
incident clearance and/or incident severity, location, and type information				
Receive information on Incident Clearance	None listed	None listed	None listed	Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Receive information on Incident Severity, Location, and Type	None listed	None listed	None listed	Akron City, Ohio Department of Transportation District 12, Ohio Department of Transportation District 3, Ohio Department of Transportation District 4, Ohio Turnpike Commission
Toll Collection agencies from which your agency receives arterial travel				
times derived from vehicles probes	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
and/or shares infrastructure and/or coordinates operation				
Emergency Management Agencies				
Provide Information	None listed	None listed	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Emergency Management agencies from which your agency receives				
arterial incident clearance and/or arterial incident severity				
Receive Arterial Incident Clearance Information	None listed	None listed	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed	None listed	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Agency Name	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Arterial Mgt. agencies in metropolitan area with which you share info.				
Share Timing Plans Information	short survey	None listed	Summit County Traffic Department, Fairlawn City	Fairlawn City
Coordinate Changes to Timing Plans	short survey	None listed	Summit County Traffic Department, Fairlawn City	Summit County Traffic Department, Fairlawn City
Turn over Control of Signals	short survey	None listed	Various Interstate Ramps	Various Interstate Ramps
Agencies your agency provides arterial travel times, speeds, and				
conditions information, share infrastructure or coordinates operation				
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Incident Management Agencies				

Agency Name	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4	
	1999	**2005**	**1999**	**2005**
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Arterial Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Freeway Management agencies from which your agency receives				

Agency Name	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4	
	1999	**2005**	**1999**	**2005**
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Public Transit operators from which your agency receives				
arterial travel times derived from vehicle probes	None listed	None listed	None listed	None listed
Incident Management agencies from which your agency receives				
incident clearance and/or incident severity, location, and type information				
Receive information on Incident Clearance	None listed	None listed	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed	None listed	None listed
Toll Collection agencies from which your agency receives arterial travel				
times derived from vehicles probes	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
and/or shares infrastructure and/or coordinates operation				
Emergency Management Agencies				
Provide Information	None listed	None listed	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4	
	1999	**2005**	**1999**	**2005**
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Freeway Management Agencies				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Public Transit Operators				
Provide Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
Emergency Management agencies from which your agency receives				
arterial incident clearance and/or arterial incident severity				
Receive Arterial Incident Clearance Information	None listed	None listed	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed	None listed	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	None listed	None listed	None listed	None listed
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions	None listed	None listed	None listed	None listed

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Agency Name	Summit County	
	1999	**2005**
Agency Returned Survey?	Yes	
Arterial Management Section		
Arterial Mgt. agencies in metropolitan area with which you share info.		
Share Timing Plans Information	Ohio Department of Transportation District 4	Ohio Department of Transportation District 4
Coordinate Changes to Timing Plans	Ohio Department of Transportation District 4	Ohio Department of Transportation District 4
Turn over Control of Signals	None listed	None listed
Agencies your agency provides arterial travel times, speeds, and		
conditions information, share infrastructure or coordinates operation		
Freeway Management Agencies		
Provide Information	Ohio Department of Transportation District 4	Ohio Department of Transportation District 4
Share Infrastructure	Ohio Department of Transportation District 4	Ohio Department of Transportation District 4
Coordinate Operation	None listed	None listed
Incident Management Agencies		

Agency Name	Summit County	
	1999	**2005**
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Public Transit Operators Agencies		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Arterial Management Agencies		
Provide Information	Ohio Department of Transportation District 4	Ohio Department of Transportation District 4
Share Infrastructure	None listed	None listed
Coordinate Operation	Ohio Department of Transportation District 4	Ohio Department of Transportation District 4
Receiving real-time information via electronic means from others		
Freeway Management agencies from which your agency receives		

Agency Name	Summit County	
	1999	**2005**
freeway travel times, speeds, and conditions	None listed	None listed
Public Transit operators from which your agency receives		
arterial travel times derived from vehicle probes	None listed	None listed
Incident Management agencies from which your agency receives		
incident clearance and/or incident severity, location, and type information		
Receive information on Incident Clearance	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed
Toll Collection agencies from which your agency receives arterial travel		
times derived from vehicles probes	None listed	None listed
Arterial Incident Management Section		
Agencies your agency provides incident severity, location, and type info.		
and/or shares infrastructure and/or coordinates operation		
Emergency Management Agencies		
Provide Information	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Summit County	
	1999	**2005**
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Freeway Management Agencies		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Public Transit Operators		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Receiving real-time information via electronic means from others		
Emergency Management agencies from which your agency receives		
arterial incident clearance and/or arterial incident severity		
Receive Arterial Incident Clearance Information	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed
Arterial Management agencies from which your agency receives		
arterial travel times, speeds, and conditions	None listed	None listed
Freeway Management agencies from which your agency receives		
freeway travel times, speeds, and conditions	None listed	None listed

*short survey: Agency responded using a short survey. The survey did not include names of individual agencies, but only identified whether integration exists.

Appendix H
Arterial Management Information Collection and Dissemination

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Akron City		Cleveland Heights City	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Data collected, archived, and/or transferred to another agency				
Collected by your agency	Traffic speeds, Phasing/cycle lengths, Transit vehicle signal priority	Traffic volumes	Traffic volumes, Phasing/cycle lengths, Incidents	Traffic volumes, Phasing/cycle lengths, Incidents
Archived by your agency	Traffic speeds, Phasing/cycle lengths, Transit vehicle signal priority	Traffic volumes	Traffic volumes, Phasing/cycle lengths, Incidents	Traffic volumes, Phasing/cycle lengths, Incidents
Transferred to another agency by your agency	NR	NR	NR	NR
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Akron City		Cleveland Heights City	
	1999	**2005**	**1999**	**2005**
Ranked High	NR		NR	
Ranked Medium	Traffic volumes, Traffic speeds, Phasing/cycle lengths		Traffic volumes	
Ranked Low	Transit vehicle signal priority		Phasing/cycle lengths, Incidents	
Groups that make requests for the data	NR		Consultants, Courts & Insurance Agencies/Council	
What is the data used for?	NR		Traffic analysis, Planning, Court Cases	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting arterial conditions	NR		NR	
Telephone system for reporting arterial information to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Akron City		Cleveland Heights City	
	1999	**2005**	**1999**	**2005**
Organizations your agency sends information for dissemination to the public	NR		NR	
Arterial Incident Management Section				
Methods used to distribute incident location and severity information				
to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting incident information	NR		NR	
Telephone system for reporting incident information to the public	NR		NR	
Organizations your agency sends information for dissemination to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Data collected, archived, and/or transferred to another agency				
Collected by your agency	Traffic volumes, Turning movements	NR	Traffic volumes, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Current work zones	NR
Archived by your agency	Traffic volumes, Turning movements	NR	Traffic volumes, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Current work zones	NR
Transferred to another agency by your agency	Traffic volumes, Turning movements	NR	NR	NR
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**
Ranked High	Traffic volumes, Turning movements		NR	
Ranked Medium	NR		Current work zones	
Ranked Low	NR		Traffic volumes, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption	
Groups that make requests for the data	State DOT personnel, Media (I.e., TV stations, radio stations), MPOs, Consultants, Real Estate Developers/Engineers		Consultants	
What is the data used for?	Traffic analysis, Planning, Dissemination to the public, Market Analysis		Traffic analysis, Planning	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting arterial conditions	NR		NR	
Telephone system for reporting arterial information to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Cuyahoga County		Elyria City	
	1999	**2005**	**1999**	**2005**
Organizations your agency sends information for dissemination to the public	NR		NR	
Arterial Incident Management Section				
Methods used to distribute incident location and severity information				
to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting incident information	NR		NR	
Telephone system for reporting incident information to the public	NR		NR	
Organizations your agency sends information for dissemination to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lake County		Lakewood City	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Data collected, archived, and/or transferred to another agency				
Collected by your agency	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Road conditions, Route designations (snow emergency, etc.), Weather conditions, Current work zones, Scheduled work zones, Highway operations coordination information, Incidents	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption, Route designations (snow emergency, etc.), Weather conditions, Current work zones, Scheduled work zones, Highway operations coordination information, Incidents	NR	NR
Archived by your agency	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Road conditions, Route designations (snow emergency, etc.), Weather conditions, Current work zones, Highway operations coordination information, Incidents	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption, Route designations (snow emergency, etc.), Weather conditions, Current work zones, Highway operations coordination information, Incidents	NR	NR
Transferred to another agency by your agency	NR	NR	NR	NR
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lake County		Lakewood City	
	1999	**2005**	**1999**	**2005**
Ranked High	Scheduled work zones, Highway operations coordination information		NR	
Ranked Medium	Emergency vehicle signal preemption, Current work zones		NR	
Ranked Low	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Road conditions, Route designations (snow emergency, etc.), Weather conditions, Incidents		NR	
Groups that make requests for the data	State DOT personnel, Media (I.e., TV stations, radio stations), Consultants		NR	
What is the data used for?	Do not know, Traffic analysis, Construction impact determination, Planning, Roadway impact analysis, Dissemination to the public		NR	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	Internet Web sites	Internet Web sites	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	Dedicated cable TV	Dedicated cable TV	NR	NR
Internet web site reporting arterial conditions	NR		NR	
Telephone system for reporting arterial information to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lake County		Lakewood City	
	1999	**2005**	**1999**	**2005**
Organizations your agency sends information for dissemination to the public	NR		NR	
Arterial Incident Management Section				
Methods used to distribute incident location and severity information				
to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting incident information	NR		NR	
Telephone system for reporting incident information to the public	NR		NR	
Organizations your agency sends information for dissemination to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Data collected, archived, and/or transferred to another agency				
Collected by your agency	Traffic volumes, Phasing/cycle lengths, Scheduled work zones	Traffic speeds, Vehicle classification, Turning movements	Weather conditions, Current work zones, Scheduled work zones	Weather conditions, Current work zones, Scheduled work zones, Highway operations coordination information
Archived by your agency	Traffic volumes, Phasing/cycle lengths, Scheduled work zones	Traffic speeds, Vehicle classification, Turning movements	Current work zones	Weather conditions, Current work zones, Highway operations coordination information
Transferred to another agency by your agency	Scheduled work zones	NR	NR	Weather conditions, Scheduled work zones, Highway operations coordination information
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**
Ranked High	Traffic volumes, Scheduled work zones		Current work zones, Scheduled work zones, Highway operations coordination information	
Ranked Medium	NR		Weather conditions	
Ranked Low	Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths		NR	
Groups that make requests for the data	Universities, State DOT personnel, Media (I.e., TV stations, radio stations), MPOs, Consultants, Developers		State DOT personnel, MPOs, Consultants	
What is the data used for?	Traffic analysis, Construction impact determination, Planning, Roadway impact analysis		Traffic analysis, Construction impact determination, Planning, Roadway impact analysis	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	Telephone system, Facsimile	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting arterial conditions	NR		NR	
Telephone system for reporting arterial information to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Lorain County		Ohio Department of Transportation District 12	
	1999	**2005**	**1999**	**2005**
Organizations your agency sends information for dissemination to the public	Local Newspapers□ Radio Stations		NR	
Arterial Incident Management Section				
Methods used to distribute incident location and severity information				
to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting incident information	NR		NR	
Telephone system for reporting incident information to the public	NR		NR	
Organizations your agency sends information for dissemination to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
Data collected, archived, and/or transferred to another agency				
Collected by your agency	NR	NR	NR	NR
Archived by your agency	NR	NR	NR	NR
Transferred to another agency by your agency	NR	NR	NR	NR
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4	
	1999	**2005**	**1999**	**2005**
Ranked High	NR		NR	
Ranked Medium	NR		NR	
Ranked Low	NR		NR	
Groups that make requests for the data	NR		NR	
What is the data used for?	NR		NR	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	NR	NR	Telephone system, Internet Web sites, E-mail or other direct PC communication	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting arterial conditions	NR		www.dot.state.oh.us - The following is used for construction information only on freeways and arterials.	
Telephone system for reporting arterial information to the public	NR		1-800-603-1054 - The number is used for construction information only on freeways and arterials.	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Ohio Department of Transportation District 3		Ohio Department of Transportation District 4	
	1999	**2005**	**1999**	**2005**
Organizations your agency sends information for dissemination to the public	NR		We have established fax network that provides construction information (at minimum weekly) for all ODOT projects within the district. Fax updates also accompany any changes that have traffic impacts, such as changes in lane closures on a particular proje	
Arterial Incident Management Section				
Methods used to distribute incident location and severity information				
to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting incident information	NR		NR	
Telephone system for reporting incident information to the public	NR		NR	
Organizations your agency sends information for dissemination to the public	NR		NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Summit County	
	1999	**2005**
Agency Returned Survey?	Yes	
Arterial Management Section		
Data collected, archived, and/or transferred to another agency		
Collected by your agency	Traffic volumes, Traffic speeds, Probe vehicles, Phasing/cycle lengths, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Probe vehicles, Phasing/cycle lengths, Current work zones, Scheduled work zones
Archived by your agency	Traffic volumes, Traffic speeds, Probe vehicles, Phasing/cycle lengths, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Probe vehicles, Phasing/cycle lengths, Current work zones, Scheduled work zones
Transferred to another agency by your agency	Traffic volumes, Traffic speeds, Probe vehicles, Phasing/cycle lengths, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Probe vehicles, Phasing/cycle lengths, Current work zones, Scheduled work zones
Importance of making information available to the public		

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Summit County	
	1999	**2005**
Ranked High	Traffic volumes, Traffic speeds, Probe vehicles, Phasing/cycle lengths, Current work zones, Scheduled work zones	
Ranked Medium	NR	
Ranked Low	NR	
Groups that make requests for the data	Media (I.e., TV stations, radio stations), Consultants, AMATS	
What is the data used for?	Traffic analysis, Planning, Dissemination to the public	
Methods used to disseminate arterial information to the public		
Technologies your agency uses to disseminate:	Radio	Radio
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR
Internet web site reporting arterial conditions	NR	
Telephone system for reporting arterial information to the public	NR	

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Summit County	
	1999	**2005**
Organizations your agency sends information for dissemination to the public	WKDD public WNIR public	
Arterial Incident Management Section		
Methods used to distribute incident location and severity information		
to the public		
Technologies your agency uses to disseminate:	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR
Internet web site reporting incident information	NR	
Telephone system for reporting incident information to the public	NR	
Organizations your agency sends information for dissemination to the public	NR	

Appendix I
Transit Management Components

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Campus Bus Service		Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes		Yes		Yes	
Number of vehicles used in revenue service								
Fixed Route Bus	16	16	769	765	30	NR	14	NR
Heavy or Rapid Rail	NR	NR	60	60	NR	NR	NR	NR
Light Rail	NR	NR	48	48	NR	NR	NR	NR
Demand Responsive	6	6	77	77	65	NR	14	NR
Commuter Rail	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat	NR	NR	NR	NR	NR	NR	NR	NR
Have of plan to have an Automated Vehicle Location System?	No		Yes		Yes		No	
Primary and Secondary Location Technologies Used								
Primary Technologies								
GPS	No	No	No	No	No	Yes	No	No
Sign/Odometer	No	No	No	No	No	No	No	No
Dead-Reckoning	No	No	No	No	No	No	No	No
LORAN C	No	No	No	No	No	No	No	No
Other	No	No	No	Yes	No	No	No	No
Backup Technologies								
GPS	No	No	No	No	No	No	No	No
Sign/Odometer	No	No	No	No	No	No	No	No
Dead-Reckoning	No	No	No	No	No	No	No	No
LORAN C	No	No	No	No	No	No	No	No
Other	No	No	No	No	No	No	No	No
Number of Vehicles Equipped with AVL								
Fixed Route Bus	NR	NR	0	765	NR	30	NR	NR
Heavy or Rapid Rail	NR	NR	NR	NR	NR	NR	NR	NR
Light Rail	NR	NR	NR	NR	NR	NR	NR	NR
Demand Responsive	NR	NR	0	77	NR	65	NR	NR
Commuter Rail	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat	NR	NR	NR	NR	NR	NR	NR	NR
Motor Buses Operated as Vehicle Probes								
Number of Motor Buses equipped as probes on freeways?	NR		NR		NR		NR	
Number of Motor Buses equipped as probes on arterials?	NR		NR		NR		NR	
Have Organized Regional Incident Management Program?	No		No		Yes		No	
Have Automated Traveler Information System?	Yes		Yes		No		No	
Services Automated Traveler Info. System Applies:								

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Campus Bus Service		Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Fixed Route	Yes		Yes		No		No	
Heavy Rail	No		Yes		No		No	
Light Rail	No		Yes		No		No	
Demand Responsive	Yes		No		No		No	
Commuter Rail	No		No		No		No	
Ferry	No		No		No		No	
Locations where traveler information is displayed to public								
Number of bus stops on fixed transit routes	NR	NR	8,500	8,200	NR	NR	NR	NR
Bus stops on fixed transit routes that display traveler info to the public	NR	NR	0	10	NR	NR	NR	NR
Number of rail stations	NR	NR	51	53	NR	NR	NR	NR
Number of rail stations that display traveler information	NR	NR	0	5	NR	NR	NR	NR
Number of other locations that display traveler information to public	NR	NR	0	5	NR	NR	NR	NR
Number of vehicles the traveler information system has available								
Fixed Route Bus	NR	NR	0	765	NR	NR	NR	NR
Heavy or Rapid Rail	NR	NR	0	60	NR	NR	NR	NR
Light Rail	NR	NR	0	48	NR	NR	NR	NR
Demand Responsive	NR	NR	0	0	NR	NR	NR	NR
Commuter Rail	NR	NR	0	0	NR	NR	NR	NR
Ferry Boat	NR	NR	0	0	NR	NR	NR	NR
Deployment of Communications Technology								
Attributes of Radio System:								
Digital?	No		No		No		No	
Analog?	Yes		Yes		Yes		Yes	
Trunked?	No		No		No		No	
Regular?	Yes		Yes		Yes		Yes	
Services that use a Digital or Trunked Radio System								
Digital Only								
Fixed Route Bus	No	No	No	No	No	Yes	No	No
Heavy or Rapid Rail	No	No	No	No	No	No	No	No
Light Rail	No	No	No	No	No	No	No	No
Demand Responsive	No	No	No	No	No	Yes	No	No
Commuter Rail	No	No	No	No	No	No	No	No
Ferry Boat	No	No	No	No	No	No	No	No
Trunked Only								
Fixed Route Bus	No	No	No	No	No	No	No	No
Heavy or Rapid Rail	No	No	No	No	No	No	No	No
Light Rail	No	No	No	No	No	No	No	No
Demand Responsive	No	No	No	No	No	No	No	No

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Campus Bus Service		Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Commuter Rail	No	No	No	No	No	No	No	No
Ferry Boat	No	No	No	No	No	No	No	No
Have of plan to have Automatic Passenger Counters (APCs)?	No		Yes		No		No	
Methods used to count passengers								
Treadle Mats	No		No		No		No	
Infrared Beams	No		No		No		No	
Primary and Secondary Location Technologies Used								
Primary Technologies								
GPS	No	No	No	No	No	Yes	No	No
Differential GPS	No	No	No	Yes	No	No	No	No
Signpost/Odometer	No	No	No	No	No	No	No	No
Dead_Reckoning	No	No	No	No	No	No	No	No
LORAN C	No	No	No	No	No	No	No	No
Other	No	No	No	No	No	No	No	No
Backup Technologies								
GPS	No	No	No	No	No	No	No	No
Differential GPS	No	No	No	No	No	No	No	No
Signpost/Odometer	No	No	No	No	No	No	No	No
Dead_Reckoning	No	No	No	No	No	No	No	No
LORAN C	No	No	No	No	No	No	No	No
Other	No	No	No	No	No	No	No	No
Number of Vehicles with APCs								
Fixed Route Bus	NR	NR	0	100	NR	NR	NR	NR
Heavy or Rapid Rail	NR	NR	0	0	NR	NR	NR	NR
Light Rail	NR	NR	0	0	NR	NR	NR	NR
Demand Responsive	NR	NR	0	0	NR	NR	NR	NR
Commuter Rail	NR	NR	0	0	NR	NR	NR	NR
Ferry Boat	NR	NR	0	0	NR	NR	NR	NR
Remote Real-Time Monitoring and Computer Assisted Dispatching								
Remote Real-Time Monitoring								
Fixed Route Bus	NR	NR	351	765	NR	NR	NR	NR
Heavy or Rapid Rail	NR	NR	0	0	NR	NR	NR	NR
Light Rail	NR	NR	0	0	NR	NR	NR	NR
Demand Responsive	NR	NR	0	77	NR	65	NR	NR
Commuter Rail	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat	NR	NR	NR	NR	NR	NR	NR	NR
Automated Dispatching or Control Software								
Fixed Route Bus	NR	NR	0	765	NR	30	NR	NR

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Campus Bus Service		Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Heavy or Rapid Rail	NR	NR	0	60	NR	NR	NR	NR
Light Rail	NR	NR	0	48	NR	NR	NR	NR
Demand Responsive	NR	NR	0	77	NR	65	NR	NR
Commuter Rail	NR	NR	0	0	NR	NR	NR	NR
Ferry Boat	NR	NR	0	0	NR	NR	NR	NR
Coordinate or plan to coordinate travel request and vehicle								
dispatching for multiple agencies?	No		No		No		No	
Is there or will there be a Transportation Management Center								
(TMC) in the region that controls transit and highway modes?	NR		Yes		NR		NR	
Modes that TMC currently controls:								
Highways	No	No	No	Yes	No	No	No	No
Fixed Route Bus	No	No	No	Yes	No	No	No	No
Heavy or Rapid Rail	No	No	No	Yes	No	No	No	No
Light Rail	No	No	No	Yes	No	No	No	No
Demand Responsive	No	No	No	Yes	No	No	No	No
Commuter Rail	No	No	No	Yes	No	No	No	No
Ferry Boat	No	No	No	No	No	No	No	No
Other	No	No	No	No	No	No	No	No
Priority at Traffic Signals and Ramp Meter Priority								
Priority at Traffic Signals								
Fixed Route Bus	NR	NR	0	100	NR	30	NR	NR
Light Rail	NR	NR	0	48	NR	NR	NR	NR
Demand Responsive	NR	NR	0	0	NR	NR	NR	NR
Ramp Meter Priority								
Fixed Route Bus	NR	NR	NR	NR	NR	NR	NR	NR
Demand Responsive	NR	NR	NR	NR	NR	NR	NR	NR
Number of Vehicles Equipped with Navigation Aids								
Fixed Route Bus	NR	NR	NR	NR	NR	NR	NR	NR
Heavy or Rapid Rail	NR	NR	NR	NR	NR	NR	NR	NR
Light Rail	NR	NR	NR	NR	NR	NR	NR	NR
Demand Responsive	NR	NR	0	77	10	65	NR	NR
Commuter Rail	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat	NR	NR	NR	NR	NR	NR	NR	NR
ITS Standards Used Related to Transit Management								
TCIP On Boad Objects (TCIP-OB)	No		No		No		No	
TCIP Traffic Management Objects (TCIP-TM)	No		No		No		No	

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Campus Bus Service		Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
TCIP Common Public Transportation Objects (TCIP-CPT)	No		No		No		No	
TCIP Passenger Information Objects (TCIP-PI)	No		No		No		No	
TCIP Incident Management Objects (TCIP-IM)	No		No		No		No	
TCIP Fare Collection Objects (TCIP-FC)	No		No		No		No	
TCIP Spatial Representation Objects (TCIP-SP)	No		No		No		No	
TCIP Control Center Objects (TCIP-CC)	No		No		No		No	
TCIP Scheduling/Runcutting Objects (TCIP-SCH)	No		No		No		No	
Send data communication between micro computer and heavy duty								
vehicle applications (SAE J1708)	No		No		No		No	
Would agency be willing to participate in testing of ITS Standards?	NR		NR		No		Yes	
Have agreements in place with other agencies to use similar hardware								
and software to aid maintenance and interoperability?	No		No		No		No	
Electronic Fare Payment								
Have full operational Electronic Fare Payment System?	No		Yes		No		No	
Methods of Fare Payment								
Stored value card with fare deducted for each trip								
Magnetic Stripe	No		No		No		No	
Smart Card	No		Yes		No		No	
Debit Card	No		No		No		No	
Billed by the month for trips taken								
Magnetic Stripe	No		No		No		No	
Smart Card	No		No		No		No	
Credit Card	No		No		No		No	
Monthly Pass								
Magnetic Stripe	No		No		No		No	
Smart Card	No		Yes		No		No	
Vehicles/Stations Equipped with Automated Payment Mechanism								
Magnetic Stripe Readers								
Fixed Route Bus Vehicles	NR	NR	764	765	NR	NR	NR	NR
Heavy or Rapid Rail Stations	NR	NR	18	18	NR	NR	NR	NR
Light Rail Stations	NR	NR	33	33	NR	NR	NR	NR
Demand Responsive Vehicles	NR	NR	77	75	NR	NR	NR	NR
Commuter Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat Landings	NR	NR	NR	NR	NR	NR	NR	NR
Smart Card Readers								
Fixed Route Bus Vehicles	NR	NR	0	765	NR	NR	NR	NR
Heavy or Rapid Rail Stations	NR	NR	0	18	NR	NR	NR	NR

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Campus Bus Service		Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**	**1999**	**2005**
Light Rail Stations	NR	NR	0	33	NR	NR	NR	NR
Demand Responsive Vehicles	NR	NR	0	75	NR	NR	NR	NR
Commuter Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat Landings	NR	NR	NR	NR	NR	NR	NR	NR
Credit Card								
Fixed Route Bus Vehicles	NR	NR	NR	NR	NR	NR	NR	NR
Heavy or Rapid Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Light Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Demand Responsive Vehicles	NR	NR	NR	NR	NR	NR	NR	NR
Commuter Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat Landings	NR	NR	NR	NR	NR	NR	NR	NR
Debit Card								
Fixed Route Bus Vehicles	NR	NR	NR	NR	NR	NR	NR	NR
Heavy or Rapid Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Light Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Demand Responsive Vehicles	NR	NR	NR	NR	NR	NR	NR	NR
Commuter Rail Stations	NR	NR	NR	NR	NR	NR	NR	NR
Ferry Boat Landings	NR	NR	NR	NR	NR	NR	NR	NR
_____								
NR: No Response								

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Metro Regional Transit Authority		Totals	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		5	
Number of vehicles used in revenue service				
Fixed Route Bus	149	152	978	933
Heavy or Rapid Rail	0	0	60	60
Light Rail	0	0	48	48
Demand Responsive	155	165	317	248
Commuter Rail	0	0	0	0
Ferry Boat	0	0	0	0
Have of plan to have an Automated Vehicle Location System?	Yes		3	
Primary and Secondary Location Technologies Used				
Primary Technologies				
GPS	Yes	No	1	1
Sign/Odometer	No	No	0	0
Dead-Reckoning	No	No	0	0
LORAN C	No	No	0	0
Other	No	No	0	1
Backup Technologies				
GPS	No	No	0	0
Sign/Odometer	No	No	0	0
Dead-Reckoning	No	No	0	0
LORAN C	No	No	0	0
Other	No	No	0	0
Number of Vehicles Equipped with AVL				
Fixed Route Bus	14	152	14	947
Heavy or Rapid Rail	0	0	0	0
Light Rail	0	0	0	0
Demand Responsive	68	78	68	220
Commuter Rail	NR	NR	0	0
Ferry Boat	NR	NR	0	0
Motor Buses Operated as Vehicle Probes				
Number of Motor Buses equipped as probes on freeways?	NR		0	
Number of Motor Buses equipped as probes on arterials?	NR		0	
Have Organized Regional Incident Management Program?	Yes		2	
Have Automated Traveler Information System?	Yes		3	
Services Automated Traveler Info. System Applies:				

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Metro Regional Transit Authority		Totals	
	1999	**2005**	**1999**	**2005**
Fixed Route	Yes		3	
Heavy Rail	No		1	
Light Rail	No		1	
Demand Responsive	No		1	
Commuter Rail	No		0	
Ferry	No		0	
Locations where traveler information is displayed to public				
Number of bus stops on fixed transit routes	NR	NR	8,500	8,200
Bus stops on fixed transit routes that display traveler info to the public	NR	NR	0	10
Number of rail stations	NR	NR	51	53
Number of rail stations that display traveler information	NR	NR	0	5
Number of other locations that display traveler information to public	NR	NR	0	5
Number of vehicles the traveler information system has available				
Fixed Route Bus	NR	NR	0	765
Heavy or Rapid Rail	NR	NR	0	60
Light Rail	NR	NR	0	48
Demand Responsive	NR	NR	0	0
Commuter Rail	NR	NR	0	0
Ferry Boat	NR	NR	0	0
Deployment of Communications Technology				
Attributes of Radio System:				
Digital?	No		0	
Analog?	Yes		5	
Trunked?	No		0	
Regular?	Yes		5	
Services that use a Digital or Trunked Radio System				
Digital Only				
Fixed Route Bus	No	No	0	1
Heavy or Rapid Rail	No	No	0	0
Light Rail	No	No	0	0
Demand Responsive	No	No	0	1
Commuter Rail	No	No	0	0
Ferry Boat	No	No	0	0
Trunked Only				
Fixed Route Bus	No	No	0	0
Heavy or Rapid Rail	No	No	0	0
Light Rail	No	No	0	0
Demand Responsive	No	No	0	0

	Metro Regional Transit Authority		Totals	
	1999	**2005**	**1999**	**2005**
Commuter Rail	No	No	0	0
Ferry Boat	No	No	0	0
Have of plan to have Automatic Passenger Counters (APCs)?	Yes		2	
Methods used to count passengers				
Treadle Mats	No		0	
Infrared Beams	No		0	
Primary and Secondary Location Technologies Used				
Primary Technologies				
GPS	Yes	No	1	1
Differential GPS	No	No	0	1
Signpost/Odometer	No	No	0	0
Dead_Reckoning	No	No	0	0
LORAN C	No	No	0	0
Other	No	No	0	0
Backup Technologies				
GPS	No	No	0	0
Differential GPS	No	No	0	0
Signpost/Odometer	No	No	0	0
Dead_Reckoning	No	No	0	0
LORAN C	No	No	0	0
Other	No	No	0	0
Number of Vehicles with APCs				
Fixed Route Bus	NR	NR	0	100
Heavy or Rapid Rail	NR	NR	0	0
Light Rail	NR	NR	0	0
Demand Responsive	NR	NR	0	0
Commuter Rail	NR	NR	0	0
Ferry Boat	NR	NR	0	0
Remote Real-Time Monitoring and Computer Assisted Dispatching				
Remote Real-Time Monitoring				
Fixed Route Bus	NR	NR	351	765
Heavy or Rapid Rail	NR	NR	0	0
Light Rail	NR	NR	0	0
Demand Responsive	68	78	68	220
Commuter Rail	NR	NR	0	0
Ferry Boat	NR	NR	0	0
Automated Dispatching or Control Software				
Fixed Route Bus	NR	152	0	947

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Metro Regional Transit Authority		Totals	
	1999	**2005**	**1999**	**2005**
Heavy or Rapid Rail	NR	NR	0	60
Light Rail	NR	NR	0	48
Demand Responsive	68	78	68	220
Commuter Rail	NR	NR	0	0
Ferry Boat	NR	NR	0	0
Coordinate or plan to coordinate travel request and vehicle				
dispatching for multiple agencies?	Yes		1	
Is there or will there be a Transportation Management Center				
(TMC) in the region that controls transit and highway modes?	NR		1	
Modes that TMC currently controls:				
Highways	No	No	0	1
Fixed Route Bus	No	No	0	1
Heavy or Rapid Rail	No	No	0	1
Light Rail	No	No	0	1
Demand Responsive	No	No	0	1
Commuter Rail	No	No	0	1
Ferry Boat	No	No	0	0
Other	No	No	0	0
Priority at Traffic Signals and Ramp Meter Priority				
Priority at Traffic Signals				
Fixed Route Bus	15	152	15	282
Light Rail	0	0	0	48
Demand Responsive	0	0	0	0
Ramp Meter Priority				
Fixed Route Bus	NR	NR	0	0
Demand Responsive	NR	NR	0	0
Number of Vehicles Equipped with Navigation Aids				
Fixed Route Bus	NR	NR	0	0
Heavy or Rapid Rail	NR	NR	0	0
Light Rail	NR	NR	0	0
Demand Responsive	NR	NR	10	142
Commuter Rail	NR	NR	0	0
Ferry Boat	NR	NR	0	0
ITS Standards Used Related to Transit Management				
TCIP On Boad Objects (TCIP-OB)	No		0	
TCIP Traffic Management Objects (TCIP-TM)	No		0	

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Metro Regional Transit Authority		Totals	
	1999	**2005**	**1999**	**2005**
TCIP Common Public Transportation Objects (TCIP-CPT)	No		0	
TCIP Passenger Information Objects (TCIP-PI)	No		0	
TCIP Incident Management Objects (TCIP-IM)	No		0	
TCIP Fare Collection Objects (TCIP-FC)	No		0	
TCIP Spatial Representation Objects (TCIP-SP)	No		0	
TCIP Control Center Objects (TCIP-CC)	No		0	
TCIP Scheduling/Runcutting Objects (TCIP-SCH)	No		0	
Send data communication between micro computer and heavy duty				
vehicle applications (SAE J1708)	No		0	
Would agency be willing to participate in testing of ITS Standards?	Yes		2	
Have agreements in place with other agencies to use similar hardware				
and software to aid maintenance and interoperability?	No		0	
Electronic Fare Payment				
Have full operational Electronic Fare Payment System?	Yes		2	
Methods of Fare Payment				
Stored value card with fare deducted for each trip				
Magnetic Stripe	Yes		1	
Smart Card	No		1	
Debit Card	No		0	
Billed by the month for trips taken				
Magnetic Stripe	No		0	
Smart Card	No		0	
Credit Card	No		0	
Monthly Pass				
Magnetic Stripe	No		0	
Smart Card	No		1	
Vehicles/Stations Equipped with Automated Payment Mechanism				
Magnetic Stripe Readers				
Fixed Route Bus Vehicles	NR	152	764	917
Heavy or Rapid Rail Stations	NR	NR	18	18
Light Rail Stations	NR	NR	33	33
Demand Responsive Vehicles	NR	78	77	153
Commuter Rail Stations	NR	NR	0	0
Ferry Boat Landings	NR	NR	0	0
Smart Card Readers				
Fixed Route Bus Vehicles	NR	NR	0	765
Heavy or Rapid Rail Stations	NR	NR	0	18

Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Metro Regional Transit Authority		Totals	
	1999	**2005**	**1999**	**2005**
Light Rail Stations	NR	NR	0	33
Demand Responsive Vehicles	NR	NR	0	75
Commuter Rail Stations	NR	NR	0	0
Ferry Boat Landings	NR	NR	0	0
Credit Card				
Fixed Route Bus Vehicles	NR	NR	0	0
Heavy or Rapid Rail Stations	NR	NR	0	0
Light Rail Stations	NR	NR	0	0
Demand Responsive Vehicles	NR	NR	0	0
Commuter Rail Stations	NR	NR	0	0
Ferry Boat Landings	NR	NR	0	0
Debit Card				
Fixed Route Bus Vehicles	NR	NR	0	0
Heavy or Rapid Rail Stations	NR	NR	0	0
Light Rail Stations	NR	NR	0	0
Demand Responsive Vehicles	NR	NR	0	0
Commuter Rail Stations	NR	NR	0	0
Ferry Boat Landings	NR	NR	0	0
_____				
NR: No Response				

Appendix J
Transit Management Integration

Transit Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Campus Bus Service		Greater Cleveland Regional Transit	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Transit operators in the region that use the same electronic payment system	None listed		None listed	
Toll operators from whom you accept electronic payment of transit				
fare through the use of ETC media	None listed		None listed	
Receiving real-time information via electronic means from others				
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions				
Receive Information	None listed	None listed	None listed	Ohio Department of Transportation District 12
Share Infrastructure	None listed	None listed	None listed	Ohio Department of Transportation District 12
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions				
Receive Information	None listed	None listed	None listed	Ohio Department of Transportation District 12, Cuyahoga County, Cleveland City
Share Infrastructure	None listed	None listed	None listed	Ohio Department of Transportation District 12, Cuyahoga County, Cleveland City
Incident Management agencies from which your agency receives				
incident severity, location, and type				
Receive Information	None listed	None listed	None listed	Ohio Department of Transportation District 12
Share Infrastructure	None listed	None listed	None listed	Ohio Department of Transportation District 12

Transit Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes	
Transit operators in the region that use the same electronic payment system	None listed		None listed	
Toll operators from whom you accept electronic payment of transit				
fare through the use of ETC media	None listed		None listed	
Receiving real-time information via electronic means from others				
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions				
Receive Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions				
Receive Information	Lake County, Cuyahoga County	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Incident Management agencies from which your agency receives				
incident severity, location, and type				
Receive Information	None listed	None listed	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed

Transit Management Integration
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Metro Regional Transit Authority	
	1999	**2005**
Agency Returned Survey?	Yes	
Transit operators in the region that use the same electronic payment system	None listed	
Toll operators from whom you accept electronic payment of transit		
fare through the use of ETC media	None listed	
Receiving real-time information via electronic means from others		
Freeway Management agencies from which your agency receives		
freeway travel times, speeds, and conditions		
Receive Information	None listed	None listed
Share Infrastructure	None listed	None listed
Arterial Management agencies from which your agency receives		
arterial travel times, speeds, and conditions		
Receive Information	None listed	None listed
Share Infrastructure	None listed	None listed
Incident Management agencies from which your agency receives		
incident severity, location, and type		
Receive Information	None listed	None listed
Share Infrastructure	None listed	None listed

Appendix K
Transit Management Information Collection and Dissemination

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Campus Bus Service	
	1999	**2005**
Agency Returned Survey?	Yes	
Methods used to disseminate transit information to the public		
Technologies your agency uses to disseminate:		
Transit routes, schedules and fares	Internet Web Sites, Facsimile, Variable Message Signs (in vehicle), Cell phone/voice, E-mail or other direct PC communication, Kiosks, Telephone System	NR
Real-time transit schedule adherence or arrival and departure times	NR	NR
Technologies employed by other organization receiving your data		
Transit routes, schedules and fares	NR	NR

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Campus Bus Service	
	1999	**2005**
Real-time transit schedule adherence or arrival and departure times	NR	NR
Internet web site reporting transit routes, schedules and fare, etc.	www.kent.edu/ksuts/	
Telephone system for reporting transit information to the public	330-672-7433	
Organizations your agency sends information for dissemination to the public	NR	
Data collected, archived, and/or transferred to another agency		
Collected by your agency	Incidents, Road conditions, Passenger information (e.g., surveys, O/D), Passenger count	NR
Archived by your agency	Incidents, Passenger information (e.g., surveys, O/D), Passenger count	NR
Transferred to another agency by your agency	Passenger information (e.g., surveys, O/D), Passenger count	NR
Importance of making information available to the public		
Ranked High	NR	
Ranked Medium	NR	

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Campus Bus Service	
	1999	**2005**
Ranked Low	NR	
Groups that make requests for the data	Consultants, MPOs	
What is the data used for?	Planning	

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**
Agency Returned Survey?	Yes		Yes		Yes	
Methods used to disseminate transit information to the public						
Technologies your agency uses to disseminate:						
Transit routes, schedules and fares	Internet Web Sites, Telephone System	Facsimile, Audible Enunciators, Monitors/VMS (not in vehicle), Variable Message Signs (in vehicle), In-vehicle navigation systems, E-mail or other direct PC communication, Kiosks, Interactive TV, Pagers or personal data assistants, Dedicated cable TV	NR	NR	NR	NR
Real-time transit schedule adherence or arrival and departure times	NR	Facsimile, Audible Enunciators, Monitors/VMS (not in vehicle), Variable Message Signs (in vehicle), In-vehicle navigation systems, E-mail or other direct PC communication, Kiosks, Interactive TV, Pagers or personal data assistants, Internet Web Sites, Telephone System, Dedicated cable TV	NR	NR	NR	NR
Technologies employed by other organization receiving your data						
Transit routes, schedules and fares	NR	NR	NR	NR	NR	NR

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**
Real-time transit schedule adherence or arrival and departure times	NR	Cell phone/data, Cell phone/voice	NR	NR	NR	NR
Internet web site reporting transit routes, schedules and fare, etc.	http://little.nhlink.net/~rta		NR		NR	
Telephone system for reporting transit information to the public	216.621.9500		NR		NR	
Organizations your agency sends information for dissemination to the public	Various		NR		NR	
Data collected, archived, and/or transferred to another agency						
Collected by your agency	Transit operations coordination information, Incidents, Vehicle monitoring status, Passenger information (e.g., surveys, O/D)	Transit operations coordination information, Transit vehicle signal priority, Trip itinerary planning records, Passenger count, Vehicle time and location	Vehicle monitoring status, Passenger information (e.g., surveys, O/D), Trip	Emergency vehicle signal preemption	operations coordination information, Incidents, Route designations (snow emergency,	NR
Archived by your agency	Transit operations coordination information, Incidents, Vehicle monitoring status, Passenger information (e.g., surveys, O/D)	Transit vehicle signal priority, Trip itinerary planning records, Passenger count, Vehicle time and location	NR	NR	NR	NR
Transferred to another agency by your agency	NR	NR	NR	NR	NR	NR
Importance of making information available to the public						
Ranked High	Vehicle time and location		Passenger information (e.g., surveys, O/D), Passenger count		Transit operations coordination information, Incidents, Route designations (snow emergency, etc), Vehicle monitoring status, Trip itinerary planning records, Passenger count, Vehicle time and location	
Ranked Medium	Transit operations coordination information, Passenger information (e.g., surveys, O/D), Trip itinerary planning records		NR		Passenger information (e.g., surveys, O/D)	

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Greater Cleveland Regional Transit		Laketran		Lorain County Transit	
	1999	**2005**	**1999**	**2005**	**1999**	**2005**
Ranked Low	Incidents, Transit vehicle signal priority, Vehicle monitoring status, Passenger count		Incidents, Emergency vehicle signal preemption, Vehicle monitoring status, Trip itinerary planning records, Vehicle time and location		NR	
Groups that make requests for the data	Transit agencies, Consultants, MPOs, Media (I.e., TV stations, radio stations), State DOT personnel		Consultants, MPOs, Federal DOT personnel, State DOT personnel		MPOs, Media (I.e., TV stations, radio stations), Federal DOT personnel, State DOT personnel	
What is the data used for?	Dissemination to the public, Planning		Dissemination to the public, Planning		Dissemination to the public, Planning, Traffic analysis	

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Metro Regional Transit Authority	
	1999	**2005**
Agency Returned Survey?	Yes	
Methods used to disseminate transit information to the public		
Technologies your agency uses to disseminate:		
Transit routes, schedules and fares	Internet Web Sites	Audible Enunciators, Monitors/VMS (not in vehicle), In-vehicle navigation systems, Kiosks
Real-time transit schedule adherence or arrival and departure times	NR	Audible Enunciators, Monitors/VMS (not in vehicle), Kiosks, Internet Web Sites
Technologies employed by other organization receiving your data		
Transit routes, schedules and fares	NR	NR

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Metro Regional Transit Authority	
	1999	**2005**
Real-time transit schedule adherence or arrival and departure times	NR	NR
Internet web site reporting transit routes, schedules and fare, etc.	www.akronmetro.org	
Telephone system for reporting transit information to the public	330.762.0341	
Organizations your agency sends information for dissemination to the public	NR	
Data collected, archived, and/or transferred to another agency		
Collected by your agency	Trip itinerary planning records, Passenger count, Vehicle time and location	Transit vehicle signal priority, Vehicle monitoring status, Trip itinerary planning records, Passenger count, Vehicle time and location
Archived by your agency	Trip itinerary planning records, Passenger count	Vehicle monitoring status, Trip itinerary planning records, Passenger count, Vehicle time and location
Transferred to another agency by your agency	Passenger count	Passenger count
Importance of making information available to the public		
Ranked High	Vehicle time and location	
Ranked Medium	Trip itinerary planning records	

Data Collection and Dissemination: Transit Management
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

Agency Name	Metro Regional Transit Authority	
	1999	**2005**
Ranked Low		Transit vehicle signal priority, Vehicle monitoring status, Passenger count
Groups that make requests for the data		MPOs, State DOT personnel
What is the data used for?		Planning

Appendix L
Emergency Management

Emergency Management Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Total Vehicles		Navigation Capabilities		AVL		CAD		CAD Equipped with Mobile Data Terminal		Vehicles Equipped with Preemption		Participate in Formal Incident Mgt Program	Send Incident Info to other agencies	List of agencies receiving data
Agency Name	1999	2005	1999	2005	1999	2005	1999	2005	1999	2005	1999	2005			
Akron City Fire Department	20	20	0	0	0	20	20	20	0	20	0	0	Yes	No	None listed
Akron City Fire Department (Emergency Medical)	13	13	0	NR	0	13	13	13	0	13	0	NR	Yes	No	None listed
Akron City Police Department	120	NR	0	NR	120	NR	120	NR	120	NR	0	NR	No	No	None listed
Cleveland City Emergency Medical Services	44	48	0	28	0	28	0	0	NR	28	0	0	No	Yes	None listed
Cleveland City Fire Department	71	NR	0	NR	0	NR	0	NR	0	NR	0	NR	Yes	No	None listed
Cleveland City Police Department	609	679	0	0	0	0	0	0	0	0	0	0	No	No	None listed
Cleveland Heights City Fire Department	5	5	0	0	0	0	5	5	0	0	0	0	Yes	No	None listed
Cleveland Heights City Fire Department (Emergency Medical)	3	3	0	0	0	0	3	3	0	0	3	3	Yes	No	None listed
Cleveland Heights City Police Department	80	80	0	0	0	0	80	80	60	80	0	0	Yes	No	None listed
Cuyahoga County Sheriff Department	50	50	0	NR	0	NR	50	NR	0	NR	0	NR	No	No	None listed
Elyria City Fire Department	18	18	0	0	0	0	0	0	0	0	4	4	No	No	None listed
Elyria City Police Department	68	68	0	0	0	0	68	68	0	50	0	0	Yes	Yes	Lorain Metropolitan Housing Authority
Euclid City Fire Department	5	5	0	0	0	0	0	5	0	5	0	0	No	No	None listed
Euclid City Fire Department (Emergency Medical)	3	3	0	0	0	0	0	3	0	3	0	0	No	No	None listed
Euclid City Police Department	25	25	0	NR	0	NR	0	25	0	25	0	NR	No	Yes	None listed
Lorain City Fire Department	23	NR	0	NR	0	NR	0	NR	0	NR	0	NR	Yes	No	None listed
Lorain City Police Department	102	110	0	0	0	NR	102	110	0	80	0	60	No	No	None listed
Parma City Fire Department	5	5	0	0	0	0	5	5	0	NR	0	5	No	Yes	State Fire Marshals Office
Parma City Fire Department (Emergency Medical)	4	4	0	0	0	0	4	4	0	0	0	4	No	No	None listed
Parma City Police Department	35	NR	0	NR	0	NR	0	NR	NR	NR	0	NR	No	Yes	None listed
Summit County Sheriff Department	58	58	0	0	0	0	0	0	20	20	0	0	Yes	No	None listed

Appendix M
Electronic Toll Collection

Electronic Toll Collection
Agencies for Metropolitan Area: Cleveland, Akron, Lorain

	Ohio Turnpike Commission	
	1999	**2005**
Agency Returned Survey?	Yes	
Number of toll Collection Plazas operated	6	0
Number of toll collection plazas with dedicated ETC	0	0
Number of toll collection plazas with both manual and ETC	0	0
Number of toll collection lanes operated	17	0
Number of toll collection lanes with dedicated ETC	0	0
Number of toll collection lanes with both manual and ETC	0	0
Number of toll collection tags issued	0	0
Antennae Location Technologies		
In-Pavement?	No	
Focused Beam?	No	
Distributed Overhead?	No	
In-Vehicle Equipment Technologies		
Tag-based?	No	
Integrated circuit card-based?	No	
Are toll tags used by other toll operations in metro area?	NR	
List of toll operators that use tags	None	
Are toll tags used by operators of public transit to pay transit fares		
in metro area?	NR	
List of transit operators that use tags	None	
_____		
NR: No Response		