

Tracking the Deployment of the Integrated Metropolitan ITS Infrastructure in Minneapolis, St. Paul

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 75¹ 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 Minneapolis, St. Paul 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 Minneapolis, St. Paul region was 81% in 1997 and 84% 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 Minneapolis, St. Paul 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.

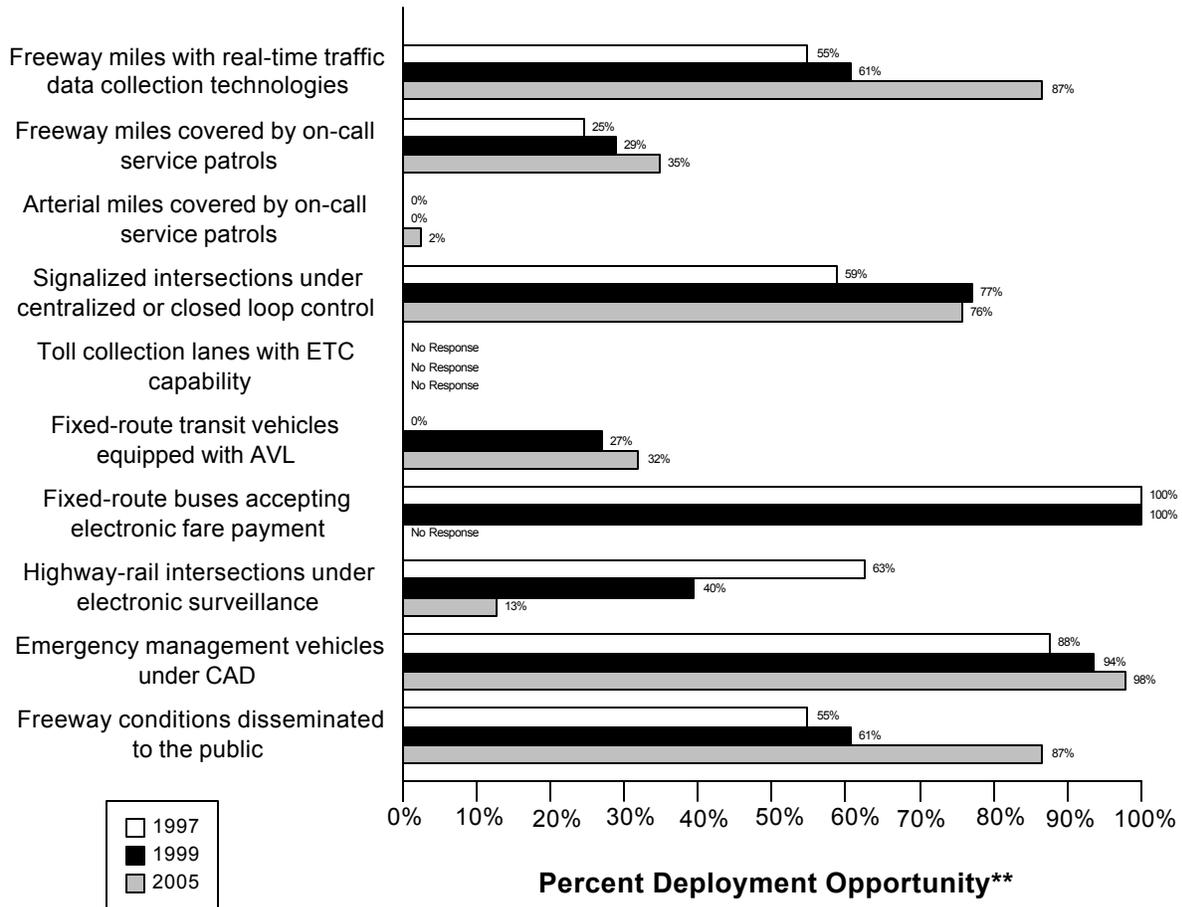
A critical aspect of ITS that provides much of its capability is the integration of individual components to form a unified regional traffic control system. Individual ITS components routinely collect information that is used for purposes internal to that component. For example, the Arterial Management 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.”

Data as of 5/1/00

Minneapolis, St. Paul Summary Indicators*

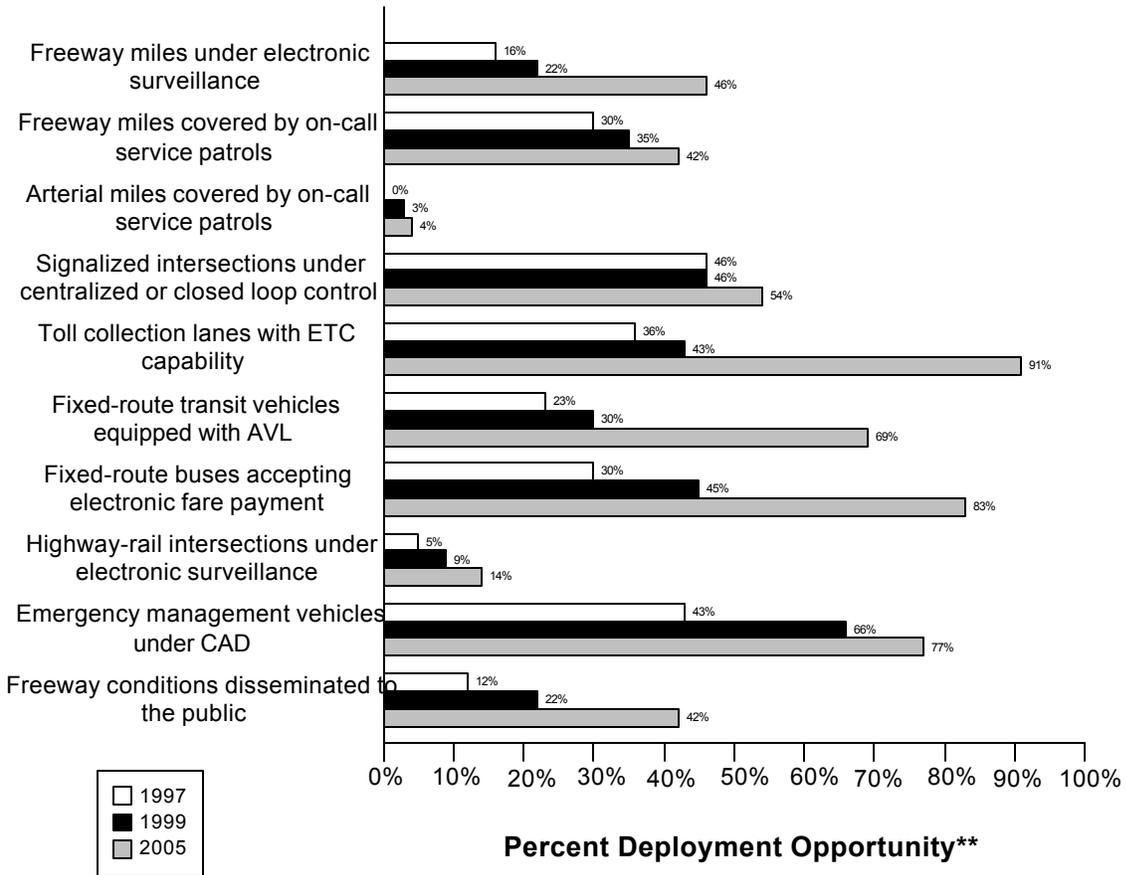


* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.

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

National Summary Indicators*

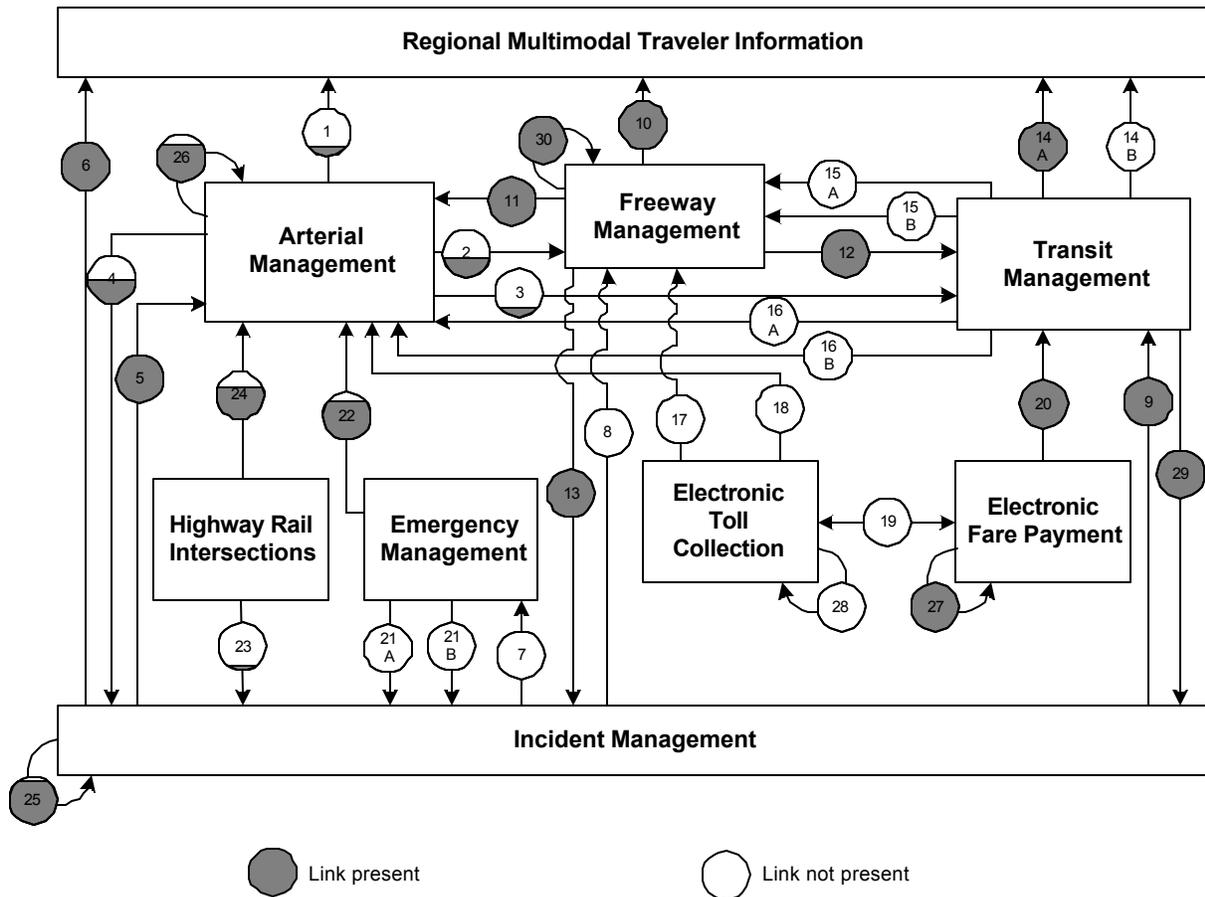
Data as of 5/1/00



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Minneapolis, St. Paul 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
11	Freeway Management to Arterial Management	12	Freeway Management to Transit Management

Link	Description	Link	Description
13	Freeway Management to Incident Management	14a	Transit Management to Regional Multimodal Traveler Information (static route information)
		14b	Transit Management to Regional Multimodal Traveler Information (schedule adherence information)
15a	Transit Management to Freeway Management	16a	Transit Management to Arterial Management
15b	Transit Management to Freeway Management (transit vehicle probes)	16b	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	Emergency Management to Incident Management (incident notification)	22	Emergency Management to Arterial Management
21b	Emergency Management to Incident Management (incident clearance)		
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 Minneapolis, St. Paul 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).

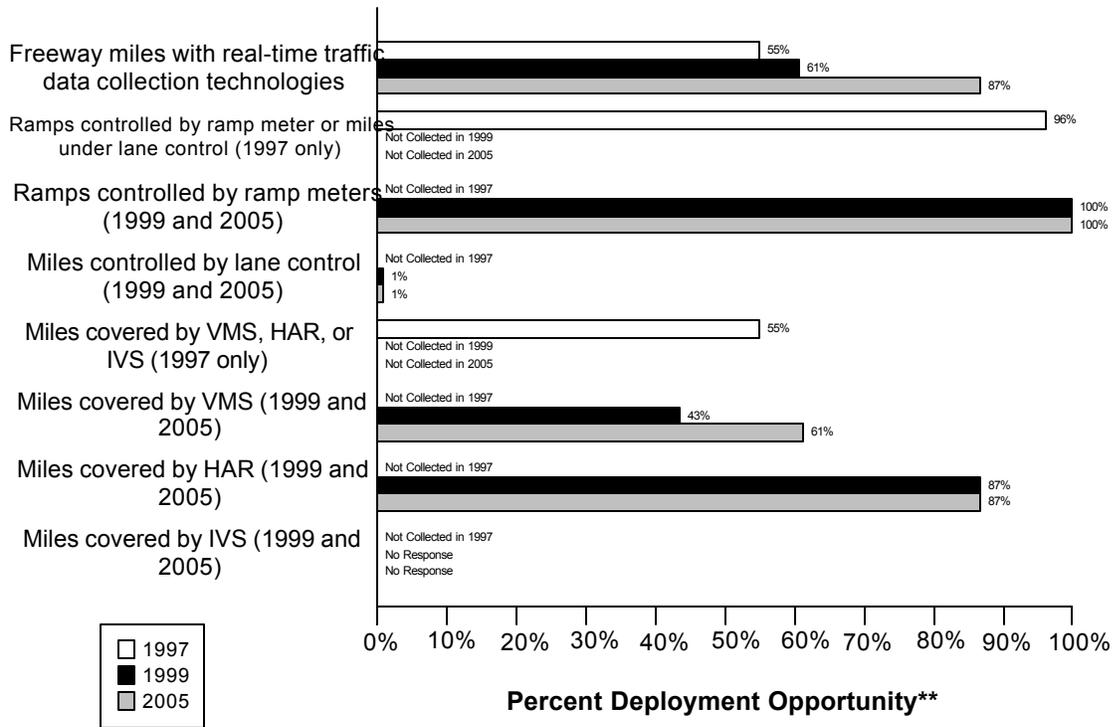
Example: Calculating Integration between Arterial Management and Regional Multimodal Traveler Information

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

Minneapolis, St. Paul Freeway Management*



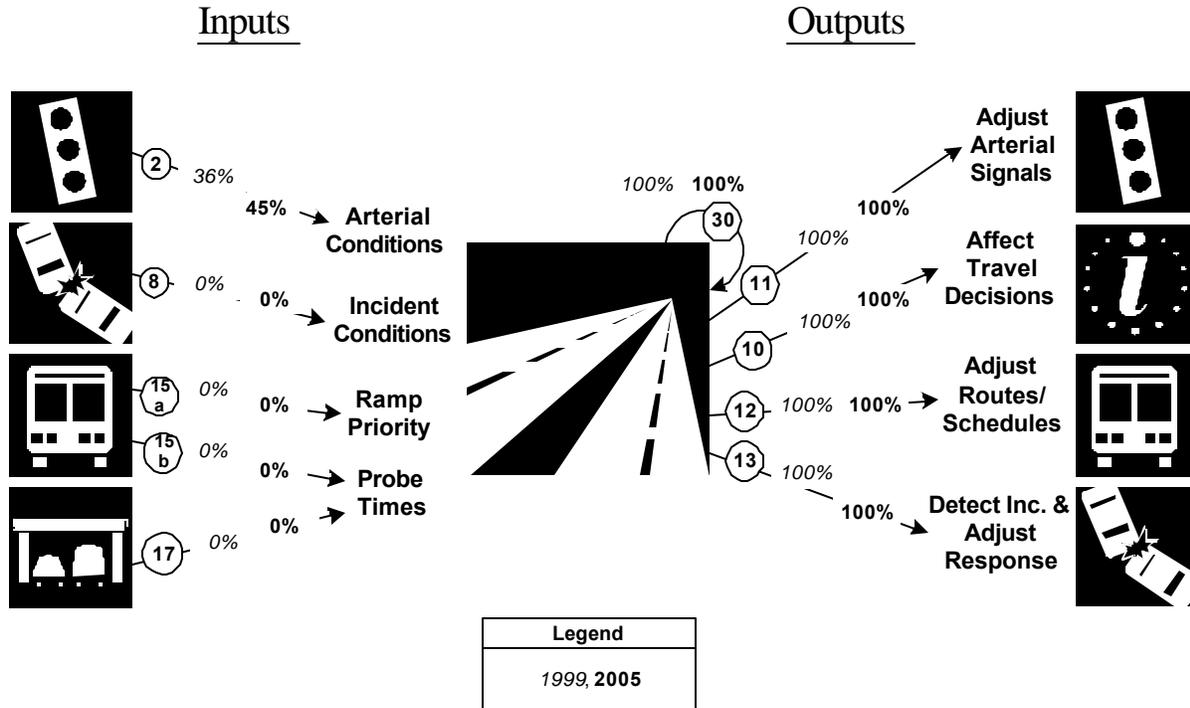
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.
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Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway centerline miles are under electronic surveillance for monitoring traffic flow	190	346	55%	210	346	61%	300	346	87%
Freeway entrance ramps are controlled by ramp meters or miles under lane control	400	416	96%						
Freeway entrance ramps are controlled by ramp meters				416	416	100%	416	416	100%

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway centerline miles will be controlled by lane control				3	346	1%	3	346	1%
Freeway miles are covered by VMS, HAR, or IVS	190	346	55%						
Freeway miles are covered by VMS				150	346	43%	212	346	61%
Freeway miles are covered by HAR				300	346	87%	300	346	87%
Freeway miles are covered by IVS					346			346	

Freeway Management Integration Indicators

Minneapolis, St. Paul Freeway Management Integration*



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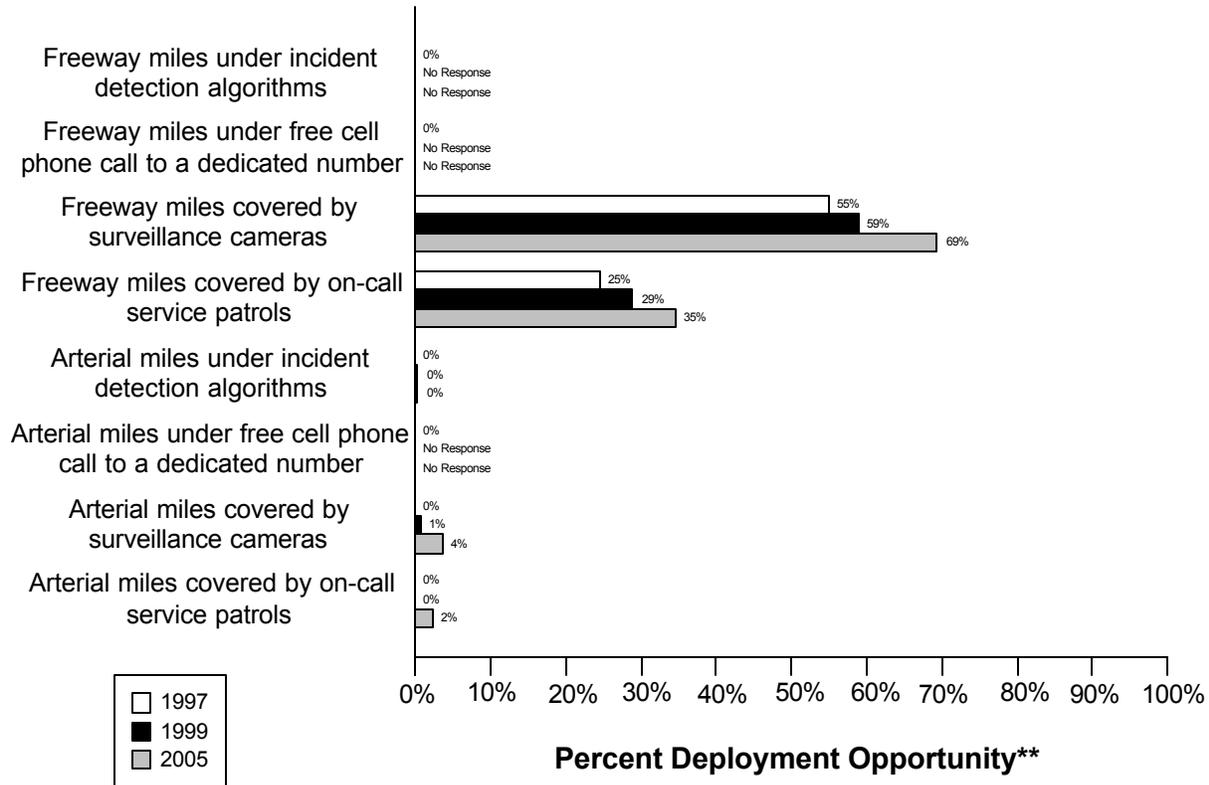
Link Description	1999	2005
2. Arterial Management agencies sending information to Freeway Management	(4/ 11) 36%	(5/ 11) 45%
8. Incident Management agencies sending information to Freeway Management	(0/ 1) 0%	(0/ 1) 0%
15a. Transit management agencies with vehicles equipped with ramp meter priority	(0/ 1) 0%	(0/ 1) 0%
15b. Transit Management agencies with vehicles equipped as probes	(0/ 1) 0%	(0/ 1) 0%
17. Freeway Management agencies receiving freeway conditions from vehicle probes	(0/ 1) 0%	(0/ 1) 0%
30. Freeway Management agencies sending information to another Freeway Management agency	(1/ 1) 100%	(1/ 1) 100%
11. Freeway Management agencies sending information to Arterial Management	(1/ 1) 100%	(1/ 1) 100%

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

Incident Management Component Indicators

Data as of 5/1/00

Minneapolis, St. Paul Freeway and Arterial Incident Management*



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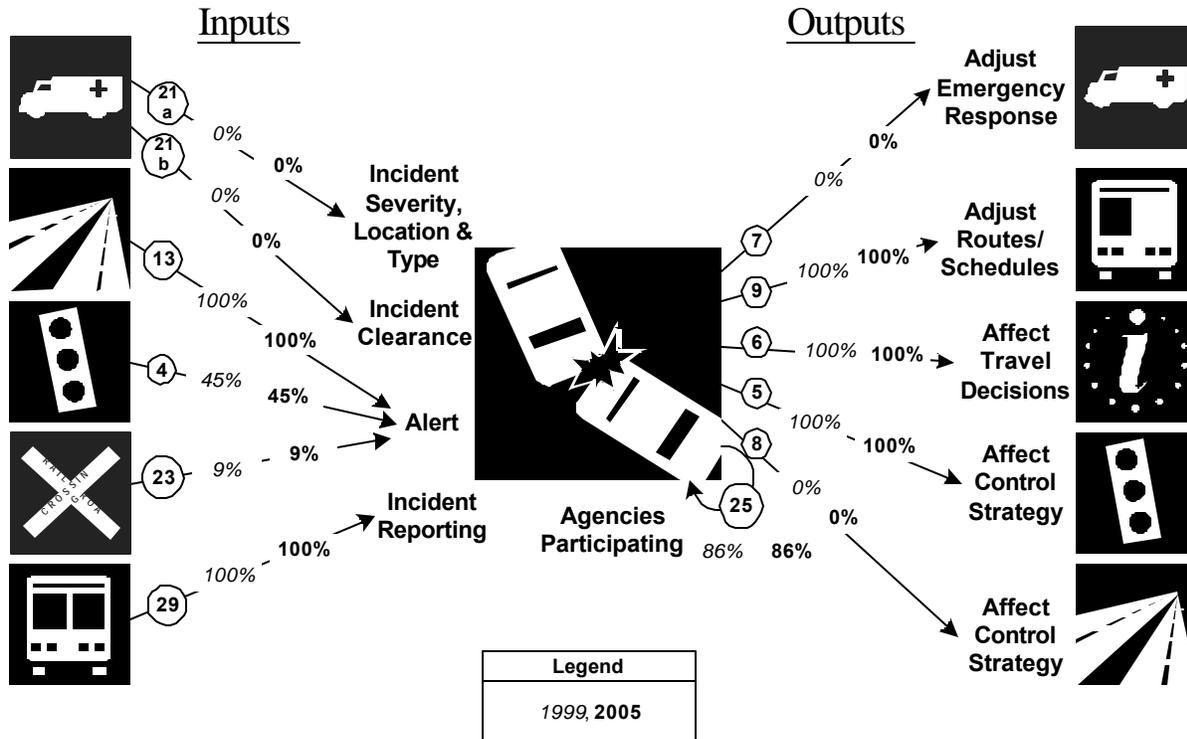
Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway miles are covered by incident detection algorithms	0	346	0%		346			346	
Freeway miles are covered by free cellular phone calls to a dedicated number	0	346	0%		346			346	
Freeway miles are covered by surveillance cameras.	190	346	55%	204	346	59%	240	346	69%

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway miles are covered by on-call publicly-sponsored service patrol or towing services.	85	346	25%	100	346	29%	120	346	35%
Arterial miles are covered by incident detection algorithms	0	2066	0%	8	2066	0%	8	2066	0%
Arterial miles are covered by free cellular phone calls to a dedicated number	0	2066	0%		2066			2066	
Arterial miles are covered by surveillance cameras	0	2066	0%	14	2066	1%	77	2066	4%
Arterial miles are covered by on-call publicly-sponsored service patrol or towing services	0	2066	0%	0	2066	0%	50	2066	2%

Incident Management Integration Indicators

Minneapolis, St. Paul

Incident Management Integration*



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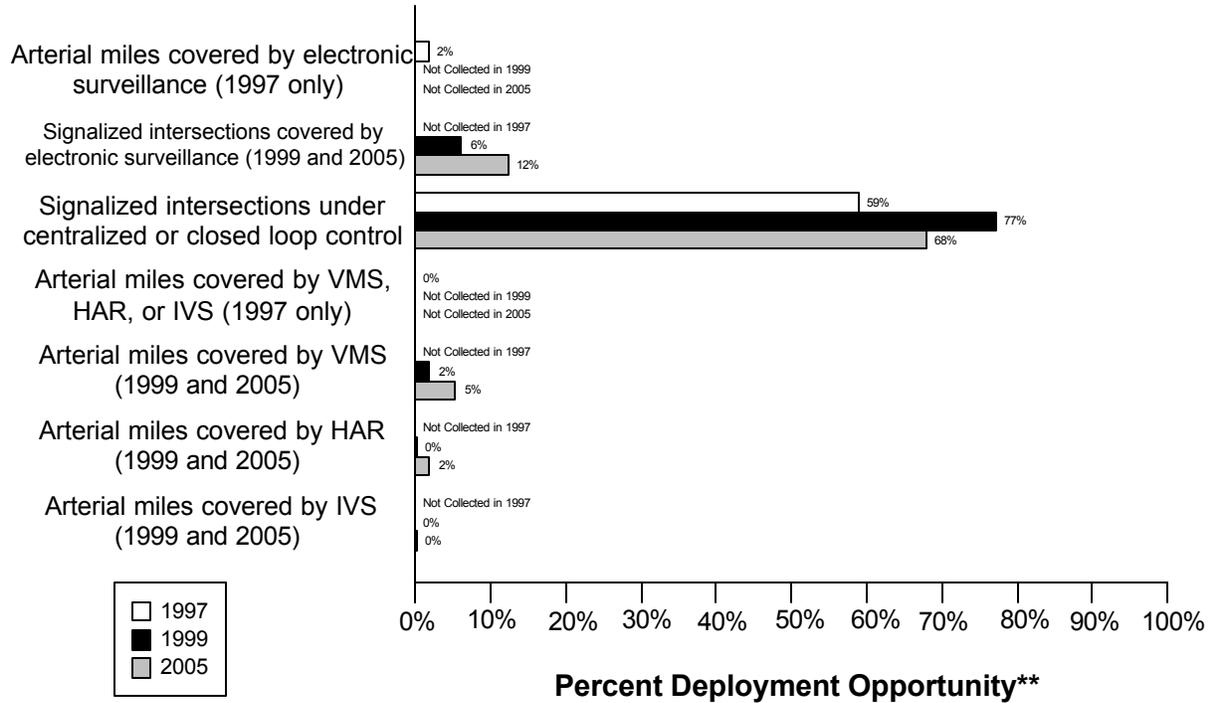
Link Description	1999	2005
21a. Incident management agencies receiving incident severity from Emergency Management	(0 / 1) 0%	(0 / 1) 0%
21b. Incident management agencies receiving incident clearance activities from Emergency Management	(0 / 1) 0%	(0 / 1) 0%
13. Freeway Management agencies sending freeway conditions to Incident Management	(1 / 1) 100%	(1 / 1) 100%
4. Arterial Management agencies sending arterial conditions to Incident Management	(5 / 11) 45%	(5 / 11) 45%
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	(1 / 1) 100%	(1 / 1) 100%

Link Description	1999	2005
7. Incident management agencies transfer information describing incident severity, location, and type to Emergency Management agencies	(0/ 1) 0%	(0/ 1) 0%
9. Incident Management agencies transfer information describing incident severity, location, and type to Transit Management agencies	(1/ 1) 100%	(1/ 1) 100%
6. Incident Management agencies disseminate information describing incident severity, location, and type to the public	(1/ 1) 100%	(1/ 1) 100%
5. Incident Management agencies transfer information describing incident severity, location, and type to Arterial Management agencies	(1/ 1) 100%	(1/ 1) 100%
8. Incident Management agencies transfer information describing incident severity, location, and type to Freeway Management agencies	(0/ 1) 0%	(0/ 1) 0%
25. Police, fire, and EMS agencies participating in a formal incident management plan/team	(12/ 14) 86%	(12/ 14) 86%

Arterial Management Component Indicators

Data as of 5/1/00

Minneapolis, St. Paul Arterial Management*



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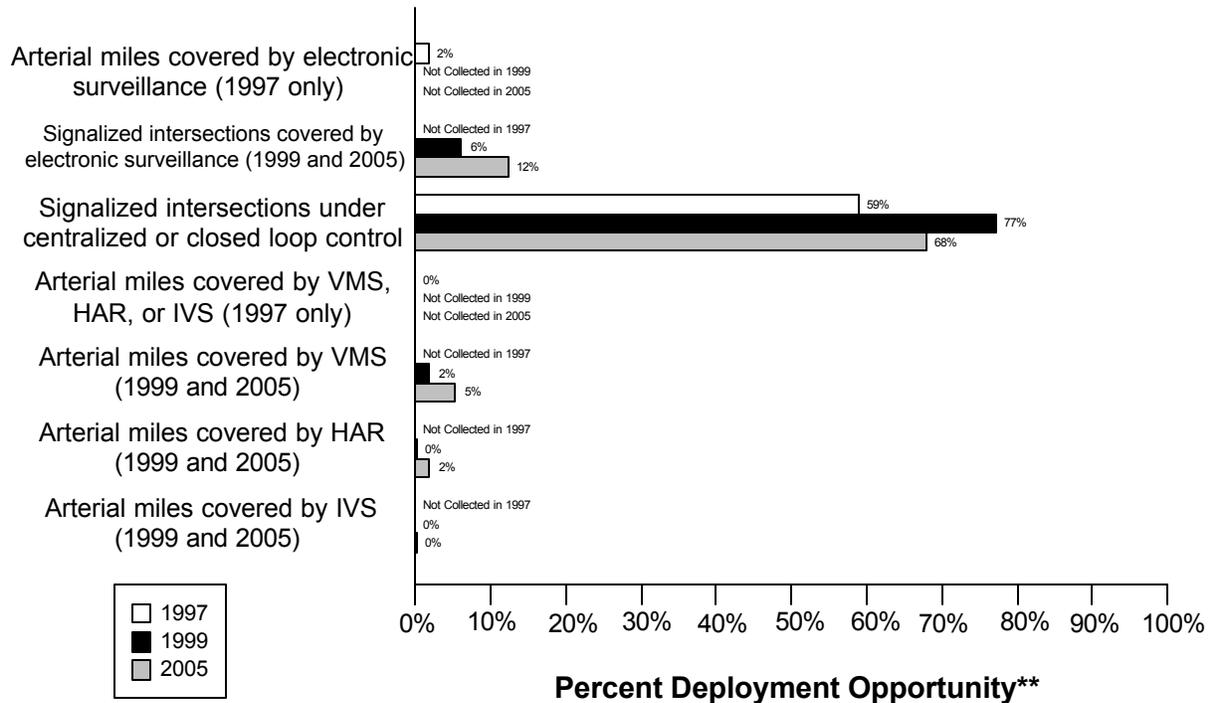
Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Arterial miles covered by electronic surveillance	36	2066	2%						
Signalized intersections are covered by electronic surveillance for monitoring traffic flow				171	2788	6%	290	2347	12%
Signalized intersections are under centralized or closed loop control	317	538	59%	2150	2788	77%	1595	2347	68%

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Arterial miles are covered by VMS, HAR, or IVS	0	2066	0%						
Arterial miles are covered by VMS				40	2066	2%	112	2066	5%
Arterial miles are covered by HAR				4	2066	0%	40	2066	2%
Arterial miles are covered by IVS				0	2066	0%	4	2066	0%

Arterial Management Integration Indicators

Data as of 5/1/00

Minneapolis, St. Paul Arterial Management*



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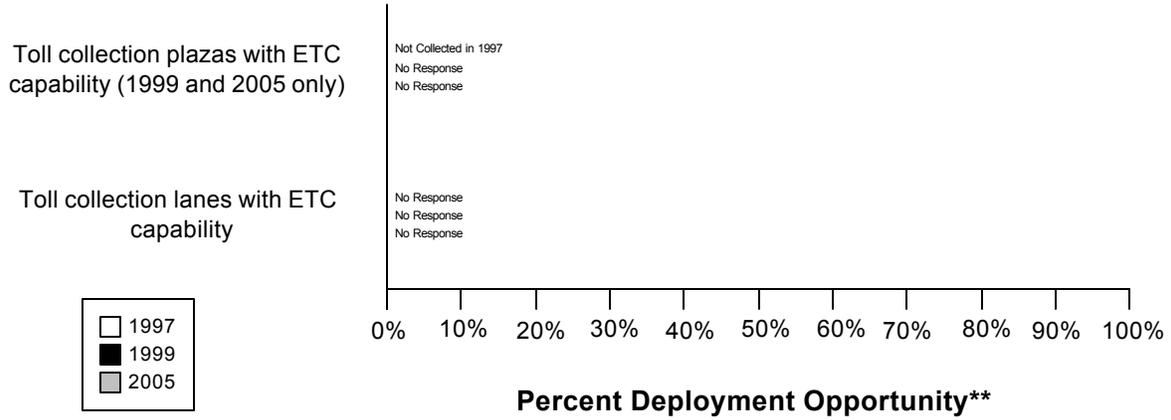
Link Description	1999	2005
16a. Transit management agencies with vehicles equipped with traffic signal priority	(0/ 1) 0%	(0/ 1) 0%
16b. Transit Management agencies have vehicles equipped as probes on arterials	(0/ 1) 0%	(0/ 1) 0%
22. Emergency Management agencies have vehicles equipped with traffic signal preemption capability	(11/ 14) 79%	(12/ 14) 86%
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	(7/ 11) 64%	(7/ 11) 64%
18. Number of Arterial Management agencies receiving information from vehicle probes	(0/ 11) 0%	(0/ 11) 0%

Link Description	1999	2005
5. Incident Management agencies transfer information describing incident severity, location, and type to Arterial Management	(1/ 1) 100%	(1/ 1) 100%
11. Freeway Management agencies transfer freeway travel times, speeds, and conditions to Arterial Management agencies	(1/ 1) 100%	(1/ 1) 100%
3. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Transit Management	(2/ 11) 18%	(2/ 11) 18%
1. Arterial Management agencies disseminate arterial travel times, speeds, and conditions to the public	(2/ 11) 18%	(4/ 11) 36%
2. Arterial Management agencies send traffic condition information to Freeway Management	(4/ 11) 36%	(5/ 11) 45%
4. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Incident Management	(5/ 11) 45%	(5/ 11) 45%
26. Arterial Management agencies under cooperative agreement to share traffic signal timing for coordinated response	(8/ 11) 73%	(8/ 11) 73%

Electronic Toll Collection Component Indicators

Data as of 5/1/00

**Minneapolis, St. Paul
Electronic Toll Collection***



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

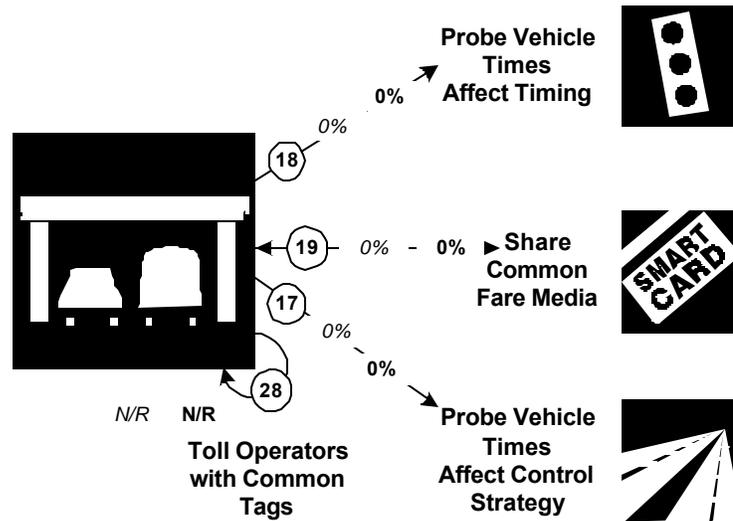
Electronic Toll Collection Integration Indicators

Minneapolis, St. Paul

Electronic Toll Collection Integration*

Inputs

Outputs



Legend
1999, 2005

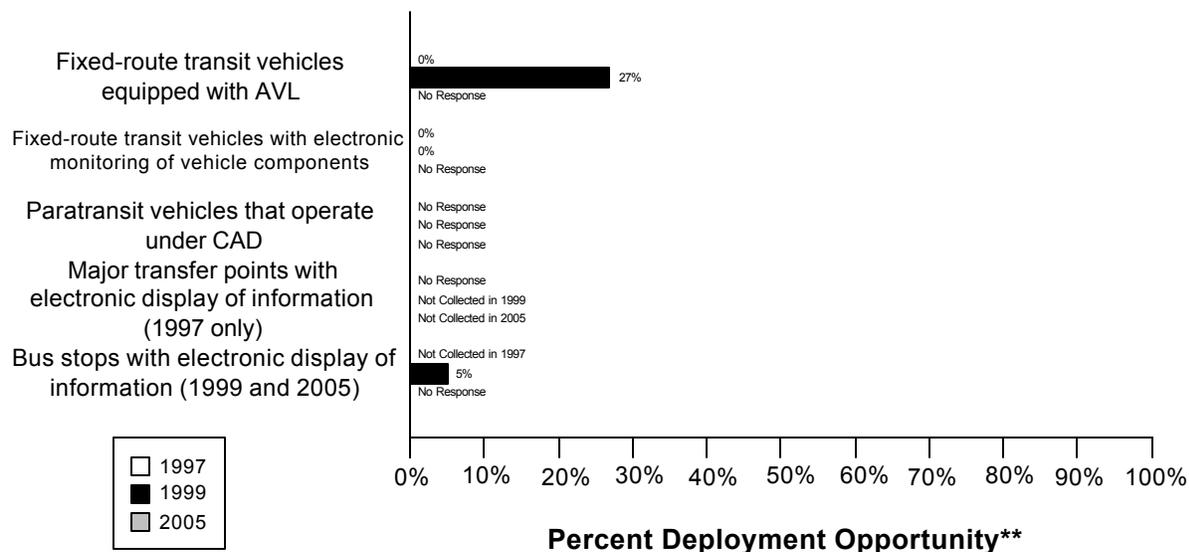
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
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/ 1) 0%	(0/ 1) 0%
17. Freeway Management agencies receiving information from vehicle probes	(0/ 1) 0%	(0/ 1) 0%
28. Toll operators using common toll tag technology	(0/)	(0/)

Transit Management Component Indicators

Data as of 5/1/00

Minneapolis, St. Paul Transit Management*



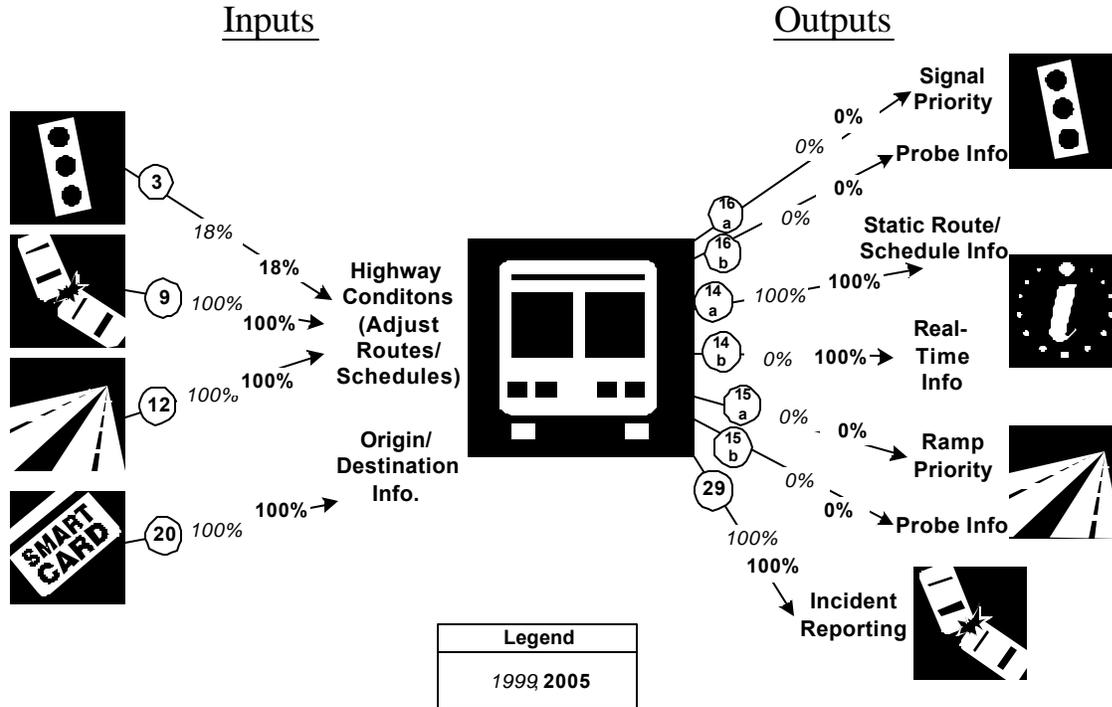
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Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Fixed-route transit vehicles are equipped with AVL	0	880	0%	253	938	27%	300		
Fixed-route transit vehicles are equipped with electronic monitoring of vehicle component	0	880	0%	0	938	0%	300		
Paratransit vehicles operate under computer-aided dispatch	0	0							
Percent fixed-route transfer locations with electronic display of information	0	0							
Bus stops display information to the public				1104	2152	5%			

Transit Management Integration Indicators

Minneapolis, St. Paul Transit Management Integration*



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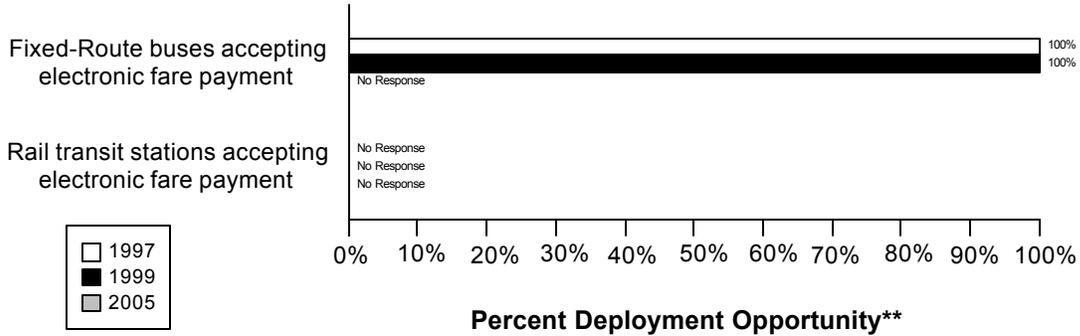
Link Description	1999	2005
3. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Transit Management	(2/ 11) 18%	(2/ 11) 18%
9. Incident management agencies transfer information describing incident severity, location, and type to Transit Management	(1/ 1) 100%	(1/ 1)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

Link Description	1999	2005
14b. Transit Management agencies disseminate information describing schedule/route adherence to travelers	(0/ 1) 0%	(1/ 1) 100%
15a. Transit Management agencies have vehicles equipped with ramp meter priority capability	(0/ 1) 0%	(0/ 1) 0%
15b. Transit Management agencies have vehicles equipped as probes on freeways	(0/ 1) 0%	(0/ 1) 0%
29. Transit Management agencies that report traffic incidents as part of an organized regional Incident Management program	(1/ 1) 100%	(1/ 1) 100%

Electronic Fare Payment Component Indicators

Data as of 5/1/00

Minneapolis, St. Paul Electronic Fare Payment*



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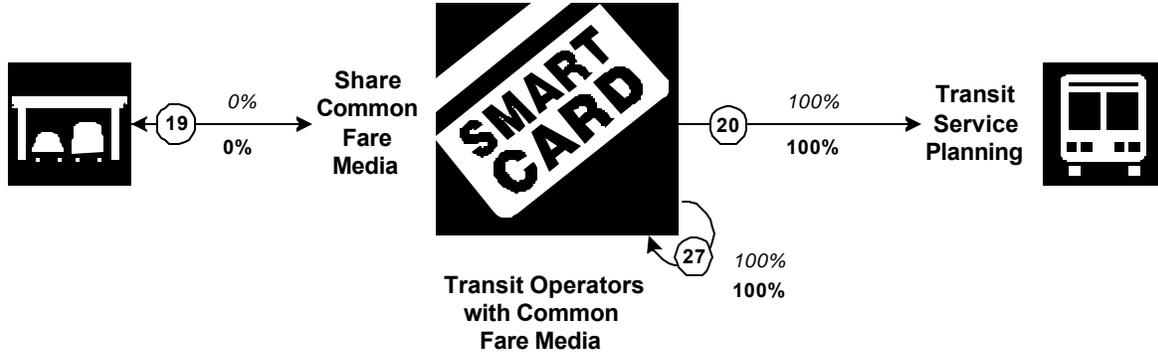
Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Fixed-route transit vehicles that accept electronic payment	880	880	100%	938	938	100%			
Rail transit stations that accept electronic payment	0	0			0				

Electronic Fare Payment Integration Indicators

**Minneapolis, St. Paul
Electronic Fare Payment Integration***

Inputs

Outputs



Legend
1999
2005

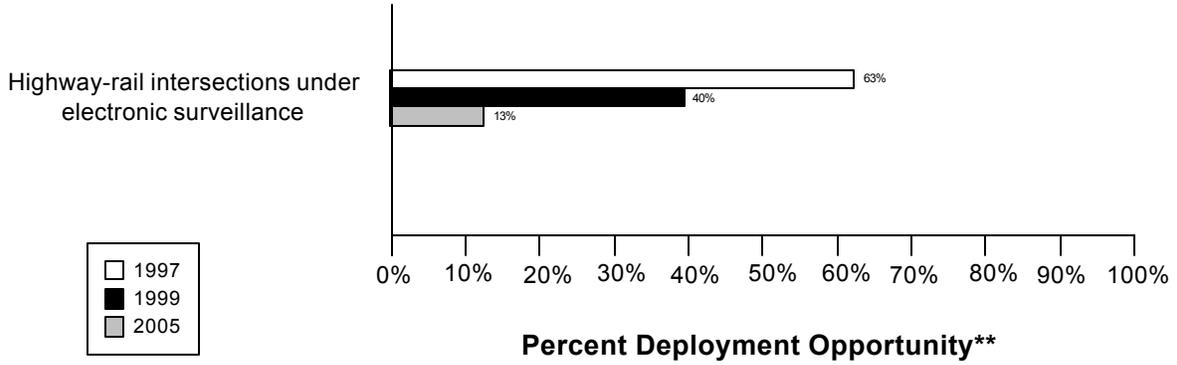
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
19. Transit agencies that accept electronic payment through the use of electronic toll collection media	(0/ 1) 0%	(0/ 1) 0%
20. Transit Management agencies use Electronic Fare Payment data in transit service planning	(1/ 1) 100%	(1/ 1) 100%
27. Transit Management agencies that use the same electronic payment system	(1/ 1) 100%	(1/ 1) 100%

Highway Rail Intersection Component Indicators

Data as of 5/1/00

Minneapolis, St. Paul Highway-Rail Intersections*



* 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	%
Highway-rail intersections are under electronic surveillance	75	120	63%	81	205	40%	26	205	13%

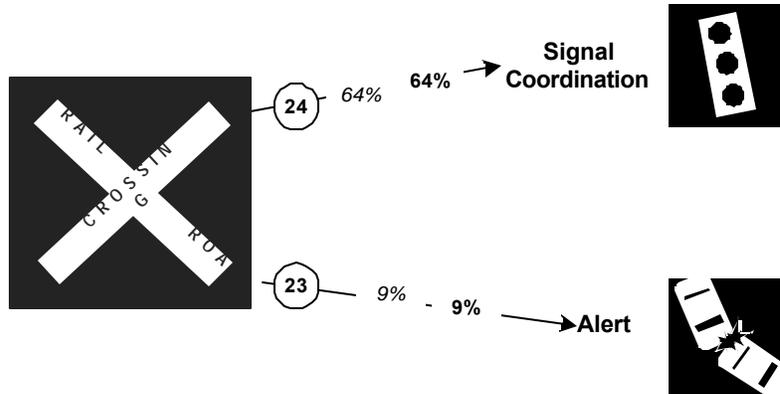
Highway Rail Intersection Integration Indicators

Minneapolis, St. Paul

Highway Rail Intersections Integration*

Inputs

Outputs



Legend
1999, 2005

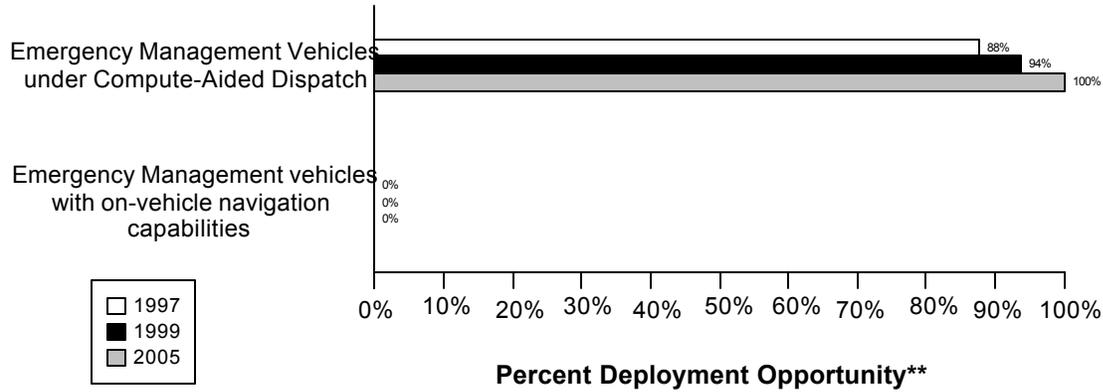
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
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	(7/ 11) 64%	(7/ 11) 64%
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

Minneapolis, St. Paul 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	727	830	88%	739	789	94%	687	687	100%
Public sector emergency vehicles that have in-vehicle route guidance capability	0	830	0%	0	789	0%	0	687	0%

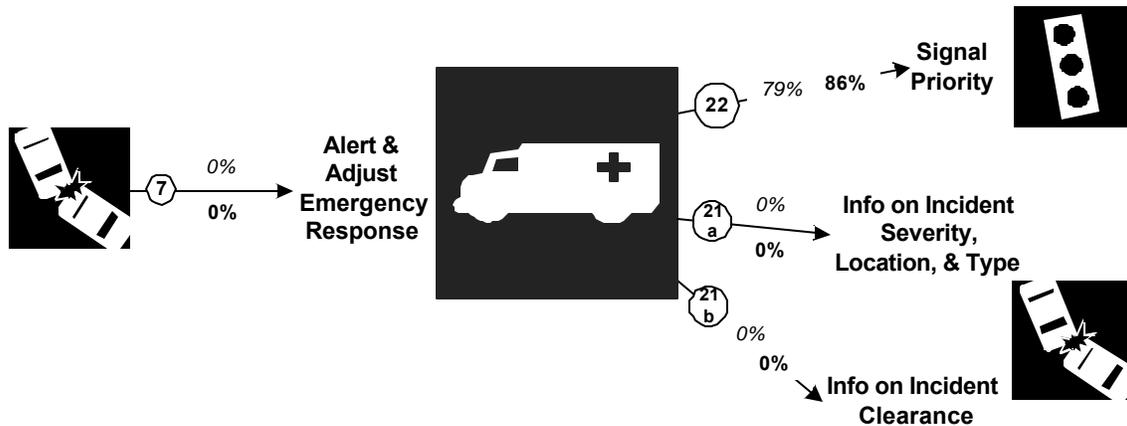
Emergency Management Integration Indicators

Minneapolis, St. Paul

Emergency Management Integration*

Inputs

Outputs



Legend
1999, 2005

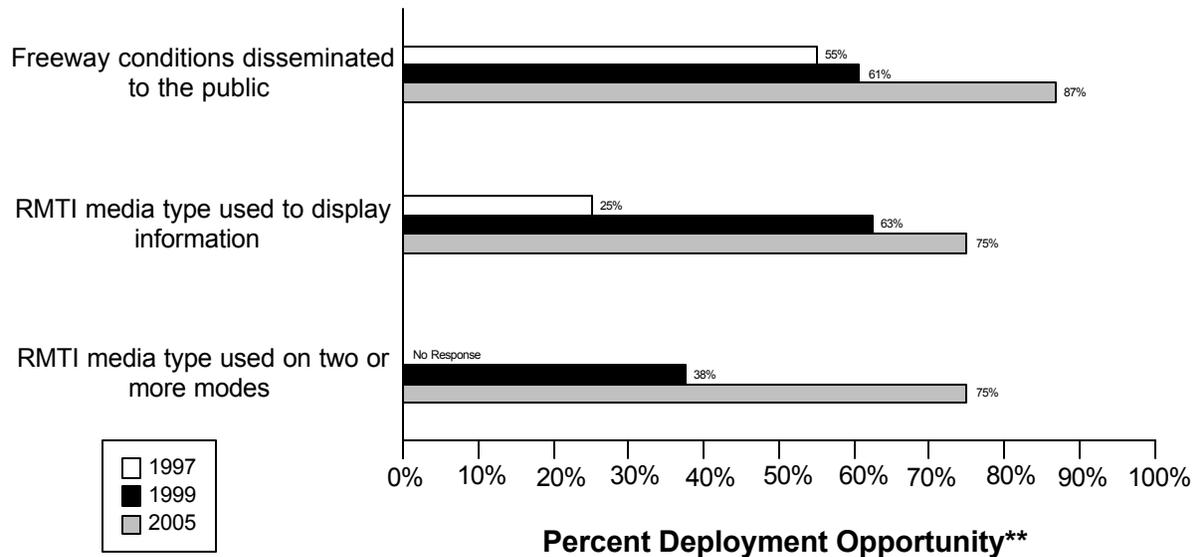
* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
7. Freeway Management agencies transfer information describing incident severity, location, and type to Emergency Management agencies	(0/ 1) 0%	(0/ 1) 0%
22. Emergency Management agencies have vehicles equipped with traffic signal preemption capability	(11/ 14) 79%	(12/ 14) 86%
21a. Freeway Management agencies receive incident severity, location, and type data from Emergency Management agencies	(0/ 1) 0%	(0/ 1) 0%
21b. Freeway Management agencies receive incident clearance activities information from Emergency Management agencies	(0/ 1) 0%	(0/ 1) 0%

Regional Multimodal Traveler Information Component Indicators

Data as of 5/1/00

Minneapolis, St. Paul Regional Multimodal Traveler Information*



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

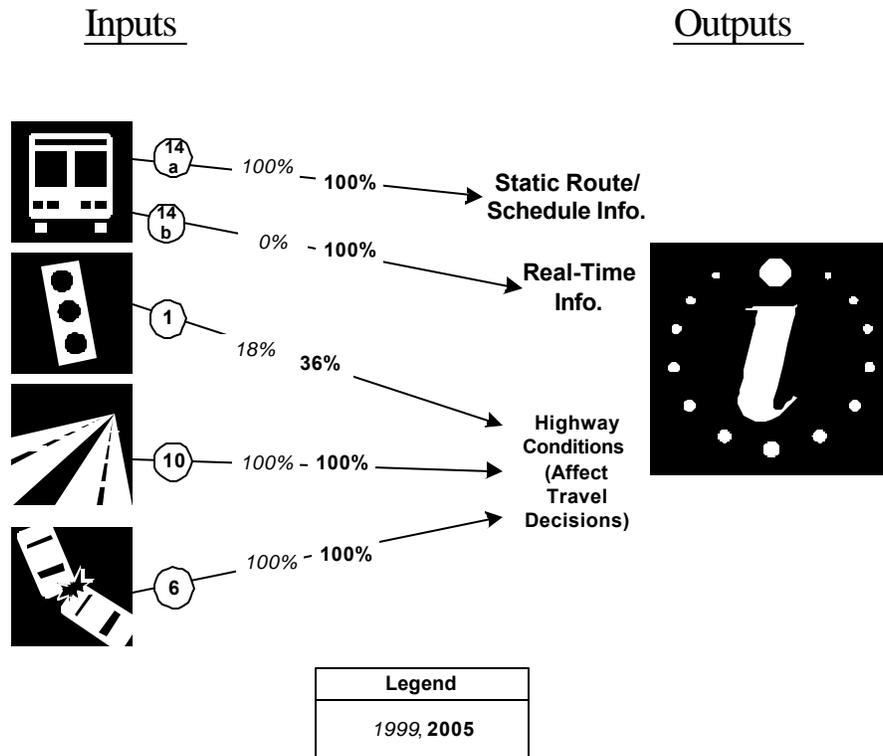
** Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway conditions disseminated to travelers	190	346	55%	210	346	61%	300	346	87%
Possible RMTI media types are used to display information to travelers	2	8	25%	5	8	63%	6	8	75%
Possible RMTI media are used to display information on <i>two or more modes</i> to travelers				3	8	38%	6	8	75%

Regional Multimodal Traveler Information Integration Indicators

Minneapolis, St. Paul

Regional Multimodal Traveler Information Integration*

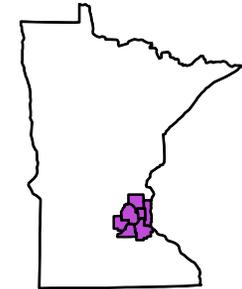
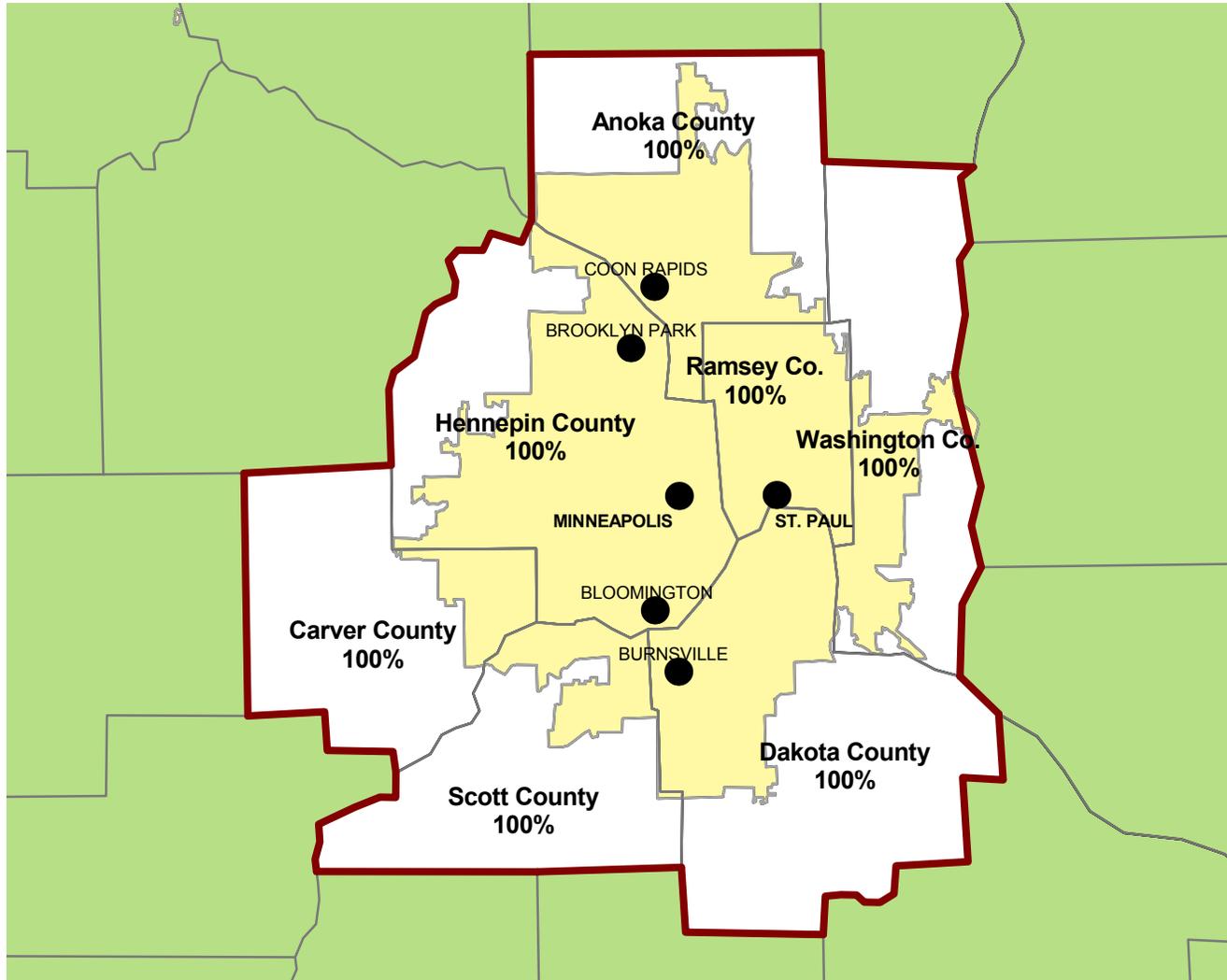


* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
14a. Transit Management agencies that disseminate information describing transit routes, schedules, and fares to travelers	(1 / 1) 100%	(1 / 1) 100%
14b. Transit Management agencies that disseminate information describing schedule/route adherence to travelers	(0 / 1) 0%	(1 / 1) 100%
1. Arterial Management agencies that disseminate arterial travel times, speeds, and conditions to the public	(2 / 11) 18%	(4 / 11) 36%
10. Freeway Management agencies that disseminate freeway travel times, speeds, and conditions to travelers	(1 / 1) 100%	(1 / 1) 100%
6. Incident Management agencies that disseminate information describing incident severity, location, and type to the public	(1 / 1) 100%	(1 / 1) 100%

Appendix A
Survey Coverage Area

TWIN CITIES AREA METROPOLITAN COUNCIL, MN



- City Included in Surveys
 - ⚡ Metropolitan Planning Area Boundary
 - ⚡ County Boundary
 - Urbanized 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
MINNEAPOLIS, ST. PAUL						
Arterial Management						
Scott County	(612) 496-8346	(612) 496-8365	8/5/1999	9/7/1999	7/21/1997	8/26/1997
Ramsey County	(651) 482-5209	(651) 482-5232	8/5/1999	10/21/1999	7/21/1997	
Minneapolis City	(612) 673-5758	(612) 370-3973	8/5/1999	10/15/1999	7/21/1997	
Bloomington City	(612) 948-3914	(612) 948-3868	8/5/1999	2/3/2000	7/21/1997	
Minnesota Department of Transportation	(612) 797-3134	(612) 797-3152	8/5/1999	10/4/1999	7/21/1997	
Brooklyn Park City	(612) 493-8102	(612) 493-8393	8/5/1999	9/20/1999	7/21/1997	8/25/1997
Burnsville City	(612) 895-4544	(612) 895-4404	8/5/1999		7/21/1997	10/10/1997
Dakota County	(612) 891-7103	(612) 891-7127	8/5/1999	8/16/1999	7/21/1997	8/25/1997
Anoka County	(612) 862-4231	(612) 862-4201	8/5/1999	10/13/1999	7/21/1997	
Washington County	(651) 430-4330	(651) 430-4350	8/5/1999	8/19/1999	7/21/1997	10/10/1997
St. Paul City	(651) 266-6200	(651) 292-7857	8/5/1999	9/7/1999	7/21/1997	
Hennepin County	(612) 745-7500	(612) 478-4000	8/5/1999	9/7/1999	7/21/1997	8/25/1997
Emergency Management						
Hennepin County Sheriff Department	(612) 391-5112	(612) 391-5108	6/25/1999	6/29/1999	7/18/1997	8/18/1997
Minneapolis City Fire Department	(612) 673-2059	(612) 673-2828	6/25/1999	6/29/1999	8/4/1997	8/25/1997
Anoka County Sheriff Department	(612) 323-5023	(612) 422-7503	6/25/1999	7/7/1999	7/21/1997	6/23/1998
Washington County Sheriff Department	(651) 430-7805	(651) 430-7673	6/25/1999	9/23/1999	7/21/1997	8/25/1997
Scott County Sheriff Department	(612) 496-8304	(612) 496-8305	6/25/1999		7/21/1997	6/11/1998
Brooklyn Park City Police Department	612-493-8222	612-493-8393	8/11/1999	10/5/1999	7/21/1997	10/10/1997
Ramsey County Sheriff Department	(651) 481-1314	(651) 490-4508	6/25/1999	6/29/1999	7/21/1997	6/11/1998
Coon Rapids City Fire Department	(612) 767-6471	(612) 767-6573	6/25/1999		7/21/1997	8/25/1997
St. Paul City Police Department	(651) 292-3590	(651) 292-3711	6/25/1999	7/6/1999	7/21/1997	8/25/1997
St. Paul City Fire Department	(651) 228-6214	(651) 228-6255	6/25/1999	8/16/1999	7/21/1997	6/11/1998
Minneapolis City Police Department	612-673-2655	612-370-3900	6/25/1999	9/30/1999	7/21/1997	8/26/1997
Coon Rapids City Police Department	(612) 767-6504	(612) 767-6435	6/25/1999	7/9/1999	7/21/1997	6/23/1998
Burnsville City Police Department	(612) 895-4605	(612) 895-4640	6/25/1999	7/7/1999	7/21/1997	6/11/1998
Burnsville City Fire & EMS Department	612-895-4572	612-895-4512	6/28/1999	7/7/1999	7/21/1997	6/11/1998
Brooklyn Park City Fire Department	(612) 493-8022	(612) 493-8391	6/25/1999	6/30/1999	7/21/1997	6/11/1998
Dakota County Sheriff Department	(651) 438-4703	(651) 438-4709	6/25/1999		7/21/1997	8/26/1997
Freeway Management						
Minnesota Department of Transportation	(612) 341-7500	(612) 341-7239	7/29/1999	8/16/1999	7/21/1997	8/25/1997

Agency Name	Phone	Fax	1999		1997	
			Out	In	Out	In
MPO						
Metropolitan Council of the Twin Cities Area	(651) 291-6359	(651) 602-1739	7/15/1999			
Transit Management						
Metro Transit	(612) 349-7571	(612) 349-7675	8/9/1999	8/30/1999	8/14/1997	11/7/1997

Appendix C
Freeway Management Components

Freeway Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Minnesota Department of Transportation	
	1999	2005
Agency Returned Survey?	Yes	
FREEWAY MANAGEMENT SECTION		
Number of freeway centerline miles that agency owns or maintains	345	
Number of freeway centerline miles that is used for planning	310	
Number of freeway entrance ramps that agency owns, operates or maintains	780	
Number of freeway entrance ramps that is used for planning	765	
Type of facilities used to conduct freeway/incident management activities		
Activities housed in a free-standing dedicated building?	Yes	
Activities housed in a building shared with other activities?	No	
Activities conducted in a dedicated control room?	Yes	
Control room contains operator console(s)?	Yes	
Control room contains electronic wall map?	Yes	
Control room contains CCTV display(s)?	Yes	
Activities conducted in a room containing workstations or PCs that manage traffic?	Yes	
Facilities are electronically linked to other transportation mgt facilities?	Yes	
Staffing and hours of operation of freeway/incident management activities		
Number of full-time agency staff members	14	
Number of full time contractor staff members	NR	
Number of part-time agency staff members	6	
Number of part-time contractor staff members	NR	
Staffed 24 hours day by agency staff or by others	NR	
Staffed during peak hours only by agency staff or by others	NR	
Staffed by others during off-peak hours	No	
Agency staff perform transportation management as an ancillary duty	No	
Agency staff dedicated to transportation management duty	Yes	
Types of operations conducted for freeway/incident management		
Incident detection and management?	Yes	
This metropolitan area?	Yes	
Other metropolitan area?	No	
Statewide?	No	
Monitoring and troubleshooting status of system components?	Yes	
Manual override of ramp metering rates at freeway on-ramps?	No	
Operating transportation management roadside devices?	Yes	
Radio communications with other agencies?	No	
Exchange of electronic data with other agencies such as computer aided dispatch?	Yes	
Real-Time Traffic Data Collection Technologies		

Freeway Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Minnesota Department of Transportation	
	1999	2005
Total number of miles under surveillance with real-time data collection tech.	210	300
<i>Number of Stations with data collection technologies</i>		
Loop detectors	3,500	5,000
Video imaging detectors	35	NR
Probe readers (elec. toll tags, transit vehicles, other technology)	0	0
Microwave radar	0	0
Other (e.g., acoustic detectors)	0	0
<i>Number of Miles covered with data collection technologies</i>		
Loop detectors	210	300
Video imaging detectors	3	NR
Probe readers (elec. toll tags, transit vehicles, other technology)	0	0
Microwave radar	0	0
Other (e.g., acoustic detectors)	0	0
Variable Message Signs (VMS) on Freeways		
Candidate locations for deployment of VMS where VMS has been deployed	60	85
Candidate locations for deployment of VMS	85	85
Roadside Technologies used to Distribute Traveler Information		
Total number of miles where information is distributed	300	300
<i>Number deployed</i>		
Highway advisory radio	1	1
In-vehicle signing	0	0
Portable variable message signs	3	7
Other	0	0
<i>Miles covered</i>		
Highway advisory radio	300	300
In-vehicle signing	0	0
Portable variable message signs	NR	NR
Other	0	0
Ramp Meters on Freeways		
Number of entrance ramp meters operated under isolated control	12	0
Number of entrance ramp meters operated under central control	410	500
Number of entrance ramp meters that provide preemption for emergency vehicles	422	500
Number of entrance ramp meters that provide priority for transit vehicles	75	120
Total number of metered ramps	422	500
Freeway centerline miles under lane control	3	3
Communication Links		
<i>Freeway centerline miles covered by the following type of communication</i>		
Twisted pair cable	20	0
Coaxial cable	20	0
Fiber-optic cable	210	300
Microwave radio	0	0
Other	0	0

Freeway Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Minnesota Department of Transportation	
	1999	2005
ITS Standards Used Related to Freeway Management		
ATMS Data Dictionary Sections 1 and 2 (ITE TM 1.01)	No	
ATMS Data Dictionary Sections 3 and 4 (ITE TM 1.02)	No	
Message Set for External TMC Communication (ITE-9604-1)	No	
NTCIP Class B Profile (AASHTO TS 3.3)	No	
NTCIP Data Collection and Monitoring Devices (AASHTO TS 3.DCM)	No	
NTCIP Object Definitions for Environmental Sensor Stations (AASHTO TS 3.7)	No	
NTCIP Object Definitions for Dynamic Message Signs (AASHTO TS 3.6)	Yes	
NTCIP Object Definitions for Highway Advisory Radio (AASHTO TS 3.HAR)	No	
NTCIP Object Definitions for Ramp Meter Control (AASHTO TS 3.RMC)	No	
NTCIP Object Definitions for Transportation Sensor Systems (AASHTO TS 3.TSS)	No	
NTCIP Object Definitions for Video Camera Control (AASHTO TS 3.VCC)	No	
Would agency be willing to participate in testing of ITS Standards?	Yes	
Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?		
	Yes	
INCIDENT MANAGEMENT SECTION		
Use of Service Patrols to Assist in Detection and Response to Incidents		
Publicly operated service patrol vehicles	Yes	
Privately operated service patrol vehicles operated under public contract	No	
Total number of freeway miles patrolled by these services	100	120
Miles Covered by Methods to Detect and Verify Incidents		
Free cellular phone call to a dedicated phone number other than 911	NR	NR
Police patrols	NR	NR
Computer algorithms linked to traffic surveillance equipment	NR	NR
CCTV	204	240
Private sector sources (e.g., Shadow Traffic, SmartRoutes)	NR	NR
Other (e.g., free cell phone call to an area radio system, etc.)	4	0
Procedures in place for Freeway Incident Response?		
Working agreement(s)/arrangement(s) with other agencies	Yes	
Inter-agency incident management admin. team that meets regularly	Yes	
Major incident response team that responds to major incidents	No	
Set of goals/objectives for incident mgt that has been adopted by agencies in region	No	
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	
The central focal point is a Police, Fire or joint dispatch center	No	
The central focal point is another center	No	
Methods of Communication Used On-Site at an Incident		
<u>Police</u>		
Two-way radio	Yes	
800 MHz trunked radio	No	

Freeway Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Minnesota Department of Transportation	
	1999	2005
Cellular telephone	Yes	
Hand-held (i.e., walkie-talkie)	No	
Automated data systems (i.e., CAD)	Yes	
<u>Fire</u>		
Two-way radio	Yes	
800 MHz trunked radio	No	
Cellular telephone	Yes	
Hand-held (i.e., walkie-talkie)	Yes	
Automated data systems (i.e., CAD)	No	
<u>DOT</u>		
Two-way radio	Yes	
800 MHz trunked radio	No	
Cellular telephone	Yes	
Hand-held (i.e., walkie-talkie)	No	
Automated data systems (i.e., CAD)	Yes	
<u>Towing</u>		
Two-way radio	No	
800 MHz trunked radio	Yes	
Cellular telephone	Yes	
Hand-held (i.e., walkie-talkie)	No	
Automated data systems (i.e., CAD)	No	
Which police agencies typically respond to incidents on freeways?		
State Police	Yes	
County Police or Sheriff	No	
City Police	No	
Who provides on-site emergency medical response?		
Fire	Yes	
Emergency Management Service Agency	No	
Private hospital	Yes	
Has a multi-agency contact list been developed in area containing the names, phone numbers, etc. for the appropriate response personnel?	DK	
Is the Incident Command System used to manage incident scenes?	Yes	
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?	Yes	
Formal agreement?	No	
Not specified or don't know?	No	
On-scene command post used to manage activities of responding agencies?	Yes	
Are there communication linkages to a communications traffic/freeway mgt center?	No	
Plan developed and adopted by responding agencies for staging and parking response vehicles and equip. at incident site that minimizes lane blockage		

Freeway Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

	Minnesota Department of Transportation	
	1999	2005
and facilitates the re-opening of lanes?	No	
Respondents protected through law or court opinion for liability claims for damages to vehicles or cargoes during clearance activities?	DK	
Are overturned tank trucks, which are intact and not leaking, uprighted without first off-loading?	No	
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	
Have laws or policies regarding the removal of stalled/abandoned vehicles from freeway shoulders?	Yes	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	0-24	
Have policies or procedures for quick removal of vehicles?	Yes	
Is Total Station equipment used to investigate major incidents?	Yes	
Handling of Towing Responses to Incidents		
Formal contract based on qualifications?	No	
Rotation with companies under contract?	No	
Separate lists kept for light and heavy response and for specialty recovery?	Yes	
Rotation list with minimal qualifications?	No	
In towing qualifications, do you require towers to be certified under the Towing and Recovery Ass. of America's National Drivers Cert. Program?	Considered	
DK: Don't know		
NR: No Response		
Leg: Legislation or action being planned		

Appendix D
Freeway Management Integration

Freeway Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	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		
<i>Freeway Management Agencies</i>		
Provide Information	Minnesota Department of Transportation, Minnesota State Police	None listed
Share Infrastructure	Minnesota Department of Transportation, Minnesota State Police	None listed
Coordinate Operation	Minnesota Department of Transportation, Minnesota State Police	None listed
<i>Incident Management Agencies</i>		
Provide Information	Minnesota Department of Transportation, Minnesota State Police	None listed
Share Infrastructure	Minnesota Department of Transportation, Minnesota State Police	None listed
Coordinate Operation	Minnesota Department of Transportation, Minnesota State Police	None listed
<i>Arterial Management Agencies</i>		

Freeway Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Provide Information	Bloomington City Public Works Department, Hennepin County, Minnesota Department of Transportation, Edina City, Richfield City	None listed
Share Infrastructure	Bloomington City Public Works Department, Hennepin County, Minnesota Department of Transportation, Edina City, Richfield City	None listed
Coordinate Operation	Bloomington City Public Works Department, Hennepin County, Minnesota Department of Transportation, Edina City, Richfield City	None listed
Public Transit Operators		
Provide Information	Metro Transit	None listed
Share Infrastructure	Metro Transit	None listed
Coordinate Operation	Metro Transit	None listed
<u>Receiving real-time information via electronic means from others</u>		
<i>Incident Management agencies from which your agency receives incident severity, location, and type information</i>		
	Minnesota Department of Transportation, Minnesota State Police	None listed
<i>Arterial Management agencies from which your agency receives</i>		

Freeway Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
<i>arterial travel times, speeds, and conditions</i>	None listed	Hennepin County, Minneapolis City, St. Paul City Engineering Division
<i>Public Transit operators from which your agency receives freeway travel times derived from vehicle probes</i>	None listed	None listed
<i>Toll Collection agencies from which your agency receives freeway travel times derived from vehicles probes</i>	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	Bloomington City Public Works Department, Hennepin County, Minneapolis City, ICTM-Richfield, Edina	None listed
Share Infrastructure	Bloomington City Public Works Department, Hennepin County, Minneapolis City, ICTM-Richfield, Edina	None listed
Coordinate Operation	Bloomington City Public Works Department, Hennepin County	None listed
Emergency Management Agencies		
Provide Information	Minnesota State Police	None listed
Share Infrastructure	Minnesota State Police	None listed
Coordinate Operation	Minnesota State Police	None listed
Freeway Management Agencies		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed

Freeway Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Public Transit Operators		
Provide Information	Metro Transit	None listed
Share Infrastructure	Metro Transit	None listed
Coordinate Operation	Metro 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	Minnesota State Police	None listed
Receive Arterial Incident Severity Information	Minnesota State Police	None listed
Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions		
	None listed	Hennepin County-via Orion, Minneapolis City-via Orion, Minnesota Department of Transportation-via Orion, St. Paul City-via Orion
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 E
Freeway Management Information Collection and Dissemination

Data Collection and Dissemination: Freeway Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Agency Returned Survey?	Yes	
Freeway Management Section		
Data collected, archived, and/or transferred to another agency		
Collected by your agency	Traffic volumes, Traffic speeds, Lane occupancy, Ramp queues, Metering rate, Incidents, Current work zones, Scheduled work zones, Highway operations coordination information, TV Video	NR
Archived by your agency	Traffic volumes, Lane occupancy, Metering rate, Incidents, Highway operations coordination information	NR
Transferred to another agency by your agency	Traffic volumes, Traffic speeds, Lane occupancy, Incidents, Current work zones, Scheduled work zones, Highway operations coordination information, TV Video	NR
Importance of making information available to the public		
Ranked High	Traffic speeds, Incidents, Current work zones, Scheduled work zones, Highway operations coordination information, TV Video	
Ranked Medium	Ramp queues	
Ranked Low	Traffic volumes, Lane occupancy, Metering rate	

Data Collection and Dissemination: Freeway Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Groups that make requests for the data	State DOT personnel, Universities, Federal DOT personnel, Media (I.e., TV stations, radio stations), MPOs, Consultants, Advanced Traveler Information Systems (ATIS) provi, Cities, Counties	
What is the data used for?	Traffic analysis, Construction impact determination, Planning, Dissemination to the public, Traffic Management-Operating CMS	
Methods used to disseminate freeway information to the public		
Technologies your agency uses to disseminate:	Dedicated cable TV, Internet Web sites, KBEM Radio-88.5 FM, KVBM TV	NR
Technologies your agency (through another agency or org.) uses to disseminate:	Dedicated cable TV, Telephone system, Internet Web sites, Pagers or personal data assistants, E-mail or other direct PC communication, Cell phone/voice, Facsimile, KBEM Radio-88.5 FM, KVBM TV	NR
Internet web site reporting freeway conditions	www.twincities.sidewalk.com (traffic view) www.startribune.com (latest traffic) www.smartraveler.com (twin cities) www.twincitiesexpress.com	
Telephone system for reporting freeway information to the public	651-633-8383 #211 on wireless phones	
Organizations your agency sends information for dissemination to the public	Local Broadcast TV stations MicroSoft Smartraveler KVBM-Traffic TV Metro Traffic Shadow Broadcasting KBEM Radio 88.5FM Star Tribune Pioneer Press Steamline Data Solutions	
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: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Technologies your agency uses to disseminate:	Dedicated cable TV, Internet Web sites, Kiosks, Facsimile, KBEM- Radio 88.5FM, KVBM TV	NR
Technologies your agency (through another agency or org.) uses to disseminate:	Telephone system, Internet Web sites, Pagers or personal data assistants, E-mail or other direct PC communication, Cell phone/data	NR
Internet web site reporting incident information	www.twincities.sidewalk.com (traffic view) www.startribune.com (latest traffic) www.smartraveler.com (twin cities) www.twincitiesexpress.com	
Telephone system for reporting incident information to the public	651-633-8383 #211 on wireless phones	
Organizations your agency sends information for dissemination to the public	Local Broadcast TV stations MicroSoft Smartraveler KVBM-Traffic TV Metro Traffic Shadow Broadcasting KBEM Radio 88.5FM Star Tribune Pioneer Press Steamline Data Solutions	

Appendix F
Arterial Management Components

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Anoka County		Bloomington City		Brooklyn Park City		Dakota County	
	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		NR		10		450	
Number of arterial miles that is used for planning	NR		NR		0		50	
Number of highway-rail intersections that agency maintains	24		20		0		15	
Number of highway-rail intersections that is used for planning	NR		NR		0		0	
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		Yes	
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		Yes	
Facilities are electronically linked to other transportation mgt facilities?	No		No		No		Yes	
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		Yes	
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		Yes	
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	No		No		No		Yes	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	No		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Anoka County		Bloomington City		Brooklyn Park City		Dakota County	
	1999	2005	1999	2005	1999	2005	1999	2005
Describe agency's role in traffic signal control	NR		NR		All roads in incorporated area except state and county routes		County routes only	
Traffic Signals Operated by Agency								
Number of signalized intersections operated and owned by agency	NR	NR	NR	NR	8	10	120	150
Number of signalized intersections operated by agency but owned by another	NR	NR	NR	NR	0	0	18	20
Total number of signalized intersections operated by agency	113	161	48	60	8	10	138	170
<i>Characteristics of signalized intersections that agency operates</i>								
Under closed loop or central system control	39	65	33	NR	NR	NR	71	85
Under real-time traffic adaptive control using advanced software	0	0	30	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	60	161	47	NR	8	10	138	170
Allow signal priority for transit vehicles	0	0	13	NR	NR	NR	0	NR
Within 200 feet of a highway-rail intersection	0	0	2	NR	NR	NR	0	0
Within 200 feet of a highway-rail intersection that adjust signal timing	0	0	2	NR	5	5	0	0
Software used to control the signals agency operates								
Date of last upgrade to traffic signal control system software?	NR		NR		N/A		1997	
How often do you update signal timing?	NR		NR		5 years		3 years	
Software used and number of signalized intersections under control (1999, 2005)	NR		NR		NR		Eagle Marc, 7, 13 ECONOLITE ZONE MONITOR 4, 64, 70	
Controllers used to control signals								
NEMA	0	0	0	0	0	0	138	170
170/179	0	0	0	0	8	10	0	0
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	11	13	NR	NR	NR	NR
<i>Highway-Rail intersection capabilities</i>								
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

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Anoka County		Bloomington City		Brooklyn Park City		Dakota County	
	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
<i>Number of signalized intersections with data collection technologies</i>								
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								
<i>Number deployed</i>								
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
<i>Miles covered</i>								
Highway Advisory Radio	NR	NR	4	0	NR	NR	NR	NR
In-Vehicle Signing (IVS)	NR	NR	0	4	NR	NR	NR	NR
Variable Message Signs (VMS) on Arterials								
Candidate locations for deployment of VMS where VMS has been deployed	NR	NR	10	15	NR	NR	NR	NR
Candidate locations for deployment of VMS	NR	NR	40	20	NR	NR	NR	NR
Communication Technologies								
<i>Signalized intersections communicated with by each type of communication</i>								
Twisted pair cable	0	0	0	0	0	0	71	83
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.)	0	0	0	0	0	0	8	10
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		No		No	
Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?	NR		NR		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: Minneapolis, St. Paul

	Anoka County		Bloomington City		Brooklyn Park City		Dakota County	
	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	8	8	0	0	0	0
CCTV	0	0	8	12	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								
<u>Police</u>								
Two-way radio	No		No		Yes		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	
<u>Fire</u>								
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		Yes		No	
Automated data systems (i.e., CAD)	No		No		Yes		No	
Other	No		No		No		No	
<u>DOT</u>								
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	
<u>Towing</u>								

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Anoka County		Bloomington City		Brooklyn Park City		Dakota County	
	1999	2005	1999	2005	1999	2005	1999	2005
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		Yes		No	
Cellular telephone	No		No		Yes		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		No		Yes		No	
Who provides on-site emergency medical response?								
Fire	No		No		No		No	
Emergency Management Service Agency	No		No		Yes		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		NR		No		NR	
Is the Incident Command System used to manage incident scenes?	NR		NR		No		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		No		Yes		No	
On-scene command post used to manage activities of responding agencies?	NR		NR		No		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		NR		DK		NR	
Respondents protected through law or court opinion for liability claims for damages to vehicles or cargoes during clearance activities?	NR		NR		DK		NR	
Are overturned tank trucks, which are intact and not leaking, uprighted without first off-loading?	NR		NR		No		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		NR		Yes		NR	
Have laws or policies regarding the removal of stalled/abandoned vehicles from freeway shoulders?	NR		NR		Yes		NR	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	NR		NR		0-24		NR	
Have policies or procedures for quick removal of vehicles?	NR		NR		Yes		NR	
Is Total Station equipment used to investigate major incidents?	NR		NR		Yes		NR	
Handling of Towing Responses to Incidents								
Formal contract based on qualifications?	No		No		Yes		No	
Rotation with companies under contract?	No		No		Yes		No	

Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

	Anoka County		Bloomington City		Brooklyn Park City		Dakota County	
	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		NR		DK		NR	
DK: Don't know								
NR: No Response								
Leg: Legislation or action being planned								

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Hennepin County		Minneapolis City		Minnesota Department of Transportation		Ramsey County	
	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	467		NR		1,150		210	
Number of arterial miles that is used for planning	467		NR		1,150		210	
Number of highway-rail intersections that agency maintains	64		10		30		31	
Number of highway-rail intersections that is used for planning	64		NR		1		31	
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?	Yes		No		No		Yes	
Activities conducted in a dedicated control room?	Yes		No		No		No	
Control room contains operator console(s)?	Yes		No		No		No	
Control room contains electronic wall map?	No		No		No		No	
Control room contains CCTV display(s)?	Yes		No		No		No	
Activities conducted in a room containing workstations or PCs that manage traffic?	Yes		No		Yes		Yes	
Facilities are electronically linked to other transportation mgt facilities?	Yes		No		No		Yes	
Staffing and hours of operation of arterial management activities								
Number of full-time agency staff members	1		NR		5		3	
Number of full time contractor staff members	NR		NR		0		NR	
Number of part-time agency staff members	NR		NR		1		NR	
Number of part-time contractor staff members	NR		NR		0		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	agency		NR		NR		NR	
Staffed by others during off-peak hours	Yes		No		No		No	
Agency staff perform transportation management as an ancillary duty	No		No		Yes		No	
Agency staff dedicated to transportation management duty	Yes		No		No		No	
Types of operations conducted for arterial management								
Incident detection and management?	Yes		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		No		Yes		Yes	
Radio communications with other agencies?	No		No		No		No	
Exchange of electronic data with other agencies such as computer aided dispatch?	Yes		No		No		No	
Manual override of traffic signal timing plans	Yes		No		No		No	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	Yes		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Hennepin County		Minneapolis City		Minnesota Department of Transportation		Ramsey County	
	1999	2005	1999	2005	1999	2005	1999	2005
Describe agency's role in traffic signal control	County routes only		NR		State routes only		Operate all traffic signals on county routes plus a select number of state and city systems.	
Traffic Signals Operated by Agency								
Number of signalized intersections operated and owned by agency	355	450	NR	NR	632	700	112	127
Number of signalized intersections operated by agency but owned by another	15	50	NR	NR	30	20	118	118
Total number of signalized intersections operated by agency	370	500	792	NR	662	720	230	245
<i>Characteristics of signalized intersections that agency operates</i>								
Under closed loop or central system control	252	352	747	NR	650	700	0	0
Under real-time traffic adaptive control using advanced software	26	45	65	75	12	0	0	0
Using SCOOT	No		Yes		No		No	
Using SCATS	Yes		No		Yes		No	
Name of software	SCATS		NR		NR		NR	
Allow signal preemption for emergency vehicles	212	300	80	200	600	720	89	114
Allow signal priority for transit vehicles	0	50	65	200	0	10	0	NR
Within 200 feet of a highway-rail intersection	15	NR	10	NR	30	25	7	7
Within 200 feet of a highway-rail intersection that adjust signal timing	13	NR	6	NR	30	25	7	7
Software used to control the signals agency operates								
Date of last upgrade to traffic signal control system software?	8/25/99		NR		Econolite Aries/Tranconex		not sure	
How often do you update signal timing?	as requested and as workloads allow		NR		Ideally-Annually- Actually - every 2-3 years		2 years	
Software used and number of signalized intersections under control (1999, 2005)	EAGLE MARC System, 5, NR AWA SCATS, 26, 45 ECONOLITE AIRES, 252, 350		NR		SCATS, 12, 0 Traconex, 200, 100 ECONOLITE AIRES, 462, 600		ECONOLITE ZONE MONITOR IV, 75, 127	
Controllers used to control signals								
NEMA	370	500	0	0	662	720	230	245
170/179	0	0	0	0	0	0	0	0
2070 controller	0	0	0	0	0	0	0	0
Other	26	45	0	0	12	0	0	0
Technologies Associated with Highway-Rail Intersections								
Total number of highway-rail intersections under electronic surveillance	57	NR	NR	NR	NR	NR	NR	NR
<i>Highway-Rail intersection capabilities</i>								
Video surveillance	0	10	0	0	0	0	0	0
Electronic surveillance other than video	0	10	0	0	0	0	0	0
Ability to predict train arrival electronically	57	NR	0	0	0	0	0	0
Equipped with electronic traffic violator devices	0	0	0	0	0	0	0	0

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Hennepin County		Minneapolis City		Minnesota Department of Transportation		Ramsey County	
	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	7	15	NR	NR	NR	NR	75	137
<i>Number of signalized intersections with data collection technologies</i>								
Loop detectors	7	15	0	0	0	0	75	127
Video detection cameras	0	0	0	0	0	0	0	10
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								
<i>Number deployed</i>								
Highway Advisory Radio	NR	NR	NR	NR	0	5	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
<i>Miles covered</i>								
Highway Advisory Radio	NR	NR	NR	NR	NR	40	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	6	15	0	15
Candidate locations for deployment of VMS	NR	NR	NR	NR	NR	20	0	15
Communication Technologies								
<i>Signalized intersections communicated with by each type of communication</i>								
Twisted pair cable	252	350	0	0	632	680	65	25
Coaxial cable	0	0	0	0	0	0	0	0
Fiber-optic cable	0	0	0	0	4	20	10	100
Other (e.g., wireless, dial-up modems, leased lines, etc.)	504	700	0	0	129	0	12	15
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)	Yes		No		No		No	
Would agency be willing to participate in testing of ITS Standards?	No		NR		Yes		No	
Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?	Yes		NR		Yes		Yes	
INCIDENT MANAGEMENT ON ARTERIAL STREETS								
Receive information on highway-rail intersection crossing blockages for the purpose of managing incident response?	Yes		No		No		No	

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Hennepin County		Minneapolis City		Minnesota Department of Transportation		Ramsey County	
	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		Yes		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	0	50	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	5	15	1	NR	0	50	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	Yes		No		Yes		No	
Inter-agency incident management admin. team that meets regularly	Yes		No		No		No	
Major incident response team that responds to major incidents	Yes		No		No		No	
Set of goals/objectives for incident mgt that has been adopted by agencies in region	Yes		No		No		No	
Methods of Communication Used On-Site at an Incident								
<u>Police</u>								
Two-way radio	Yes		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	Yes		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	
<u>Fire</u>								
Two-way radio	Yes		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	Yes		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	
<u>DOT</u>								
Two-way radio	Yes		No		Yes		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	Yes		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	
<u>Towing</u>								

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Hennepin County		Minneapolis City		Minnesota Department of Transportation		Ramsey County	
	1999	2005	1999	2005	1999	2005	1999	2005
Two-way radio	Yes		No		No		No	
800 MHz trunked radio	No		No		No		No	
Cellular telephone	Yes		No		Yes		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		Yes		No	
County Police or Sheriff	Yes		No		Yes		No	
City Police	Yes		No		Yes		No	
Who provides on-site emergency medical response?								
Fire	Yes		No		Yes		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?	DK		NR		DK		NR	
Is the Incident Command System used to manage incident scenes?	DK		NR		No		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		Yes		No	
On-scene command post used to manage activities of responding agencies?	DK		NR		No		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?	DK		NR		No		NR	
Respondents protected through law or court opinion for liability claims for damages to vehicles or cargoes during clearance activities?	DK		NR		DK		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		NR		No		NR	
Have laws or policies regarding the removal of stalled/abandoned vehicles from freeway shoulders?	NR		NR		No		NR	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	DK		NR		DK		NR	
Have policies or procedures for quick removal of vehicles?	NR		NR		No		NR	
Is Total Station equipment used to investigate major incidents?	DK		NR		Yes		NR	
Handling of Towing Responses to Incidents								
Formal contract based on qualifications?	No		No		No		No	
Rotation with companies under contract?	No		No		Yes		No	

Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

	Hennepin County		Minneapolis City		Minnesota Department of Transportation		Ramsey County	
	1999	2005	1999	2005	1999	2005	1999	2005
Separate lists kept for light and heavy response and for specialty recovery?	NR		NR		Yes		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		DK		NR	
DK: Don't know								
NR: No Response								
Leg: Legislation or action being planned								

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Scott County		St. Paul City		Washington 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	350		125		NR		2,762	
Number of arterial miles that is used for planning	20		125		NR		2,022	
Number of highway-rail intersections that agency maintains	7		4		NR		205	
Number of highway-rail intersections that is used for planning	0		4		NR		100	
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		Yes		No		4	
Activities conducted in a dedicated control room?	No		Yes		No		2	
Control room contains operator console(s)?	No		Yes		No		2	
Control room contains electronic wall map?	No		No		No		0	
Control room contains CCTV display(s)?	No		Yes		No		2	
Activities conducted in a room containing workstations or PCs that manage traffic?	No		Yes		Yes		6	
Facilities are electronically linked to other transportation mgt facilities?	No		Yes		No		4	
Staffing and hours of operation of arterial management activities								
Number of full-time agency staff members	NR		3		NR		0	
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		1	
Agency staff perform transportation management as an ancillary duty	Yes		No		Yes		4	
Agency staff dedicated to transportation management duty	No		No		No		1	
Types of operations conducted for arterial management								
Incident detection and management?	No		Yes		No		2	
This metropolitan area?	No		Yes		No		1	
Other metropolitan area?	No		No		No		0	
Monitoring and troubleshooting status of system components?	Yes		Yes		No		6	
Radio communications with other agencies?	No		No		No		0	
Exchange of electronic data with other agencies such as computer aided dispatch?	No		No		No		1	
Manual override of traffic signal timing plans	No		Yes		No		3	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	No		Yes		No		2	

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Scott County		St. Paul City		Washington County		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
Describe agency's role in traffic signal control	County routes only		All roads in incorporated area		All roads in county except state routes			
Traffic Signals Operated by Agency								
Number of signalized intersections operated and owned by agency	28	33	370	400	28	43	1,653	1,913
Number of signalized intersections operated by agency but owned by another	0	0	NR	NR	1	5	182	213
Total number of signalized intersections operated by agency	28	33	370	400	29	48	2,788	2,347
<i>Characteristics of signalized intersections that agency operates</i>								
Under closed loop or central system control	28	33	330	360	0	0	2,150	1,595
Under real-time traffic adaptive control using advanced software	0	0	NR	NR	0	0	133	120
Using SCOOT	No		No		No		1	
Using SCATS	No		No		No		2	
Name of software	NR		NR		NR			
Allow signal preemption for emergency vehicles	12	33	370	400	29	48	1,645	2,156
Allow signal priority for transit vehicles	0	0	NR	NR	29	48	107	308
Within 200 feet of a highway-rail intersection	1	1	NR	NR	0	0	65	33
Within 200 feet of a highway-rail intersection that adjust signal timing	1	1	NR	NR	0	0	64	38
Software used to control the signals agency operates								
Date of last upgrade to traffic signal control system software?	none		8/9/99		Will be upgrading this fall			
How often do you update signal timing?	NR		NR		Never Have Yet			
Software used and number of signalized intersections under control (1999, 2005)	NR		Traffic Control System II, 112, 240		ARIES, 29, NR ZONE MONITOR III, 24, NR			
Controllers used to control signals								
NEMA	0	0	0	0	29	48	1,429	1,683
170/179	0	0	370	400	0	0	378	410
2070 controller	0	0	0	0	0	0	0	0
Other	28	33	0	0	0	0	66	78
Technologies Associated with Highway-Rail Intersections								
Total number of highway-rail intersections under electronic surveillance	NR	NR	NR	NR	13	13	81	26
<i>Highway-Rail intersection capabilities</i>								
Video surveillance	0	0	0	0	0	0	0	10
Electronic surveillance other than video	0	0	0	0	0	0	0	10
Ability to predict train arrival electronically	0	0	0	0	13	13	70	13
Equipped with electronic traffic violator devices	0	0	0	0	0	0	0	0

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Scott County		St. Paul City		Washington 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	60	90	29	48	171	290
<i>Number of signalized intersections with data collection technologies</i>								
Loop detectors	0	0	50	60	29	48	161	250
Video detection cameras	0	0	10	30	0	5	10	45
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								
<i>Number deployed</i>								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	0	5
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	0	0
VMS controlling parking access	NR	NR	10	20	NR	NR	10	20
<i>Miles covered</i>								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	4	40
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	0	4
Variable Message Signs (VMS) on Arterials								
Candidate locations for deployment of VMS where VMS has been deployed	NR	NR	NR	NR	NR	NR	16	45
Candidate locations for deployment of VMS	NR	NR	NR	NR	NR	NR	40	55
Communication Technologies								
<i>Signalized intersections communicated with by each type of communication</i>								
Twisted pair cable	0	0	260	260	20	33	1,300	1,431
Coaxial cable	0	0	0	0	0	0	0	0
Fiber-optic cable	0	0	65	100	0	5	79	225
Other (e.g., wireless, dial-up modems, leased lines, etc.)	0	0	5	0	9	10	667	735
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		1	
Would agency be willing to participate in testing of ITS Standards?	Yes		Yes		Yes		4	
Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?	No		Yes		Yes		5	
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: Minneapolis, St. Paul

	Scott County		St. Paul City		Washington 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		1	
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	50
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	8	8
CCTV	0	0	0	0	0	0	14	77
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		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		1	
Methods of Communication Used On-Site at an Incident								
<u>Police</u>								
Two-way radio	No		No		No		2	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		1	
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	
<u>Fire</u>								
Two-way radio	No		No		No		1	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		1	
Hand-held (i.e., walkie-talkie)	No		No		No		1	
Automated data systems (i.e., CAD)	No		No		No		1	
Other	No		No		No		0	
<u>DOT</u>								
Two-way radio	No		No		No		2	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		1	
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	
<u>Towing</u>								

Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Scott County		St. Paul City		Washington County		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
Two-way radio	No		No		No		1	
800 MHz trunked radio	No		No		No		1	
Cellular telephone	No		No		No		3	
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		2	
City Police	No		No		No		3	
Who provides on-site emergency medical response?								
Fire	No		No		No		2	
Emergency Management Service Agency	No		No		No		1	
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		0	
Is the Incident Command System used to manage incident scenes?	NR		NR		NR		0	
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		3	
On-scene command post used to manage activities of responding agencies?	NR		NR		NR		0	
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		0	
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		1	
Is Total Station equipment used to investigate major incidents?	NR		NR		NR		2	
Handling of Towing Responses to Incidents								
Formal contract based on qualifications?	No		No		No		1	
Rotation with companies under contract?	No		No		No		2	

Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

	Scott County		St. Paul City		Washington 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		1	
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

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Anoka County		Bloomington City	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
<u>Arterial Mgt. agencies in metropolitan area with which you share info.</u>				
Share Timing Plans Information	short survey	None listed	short survey	None listed
Coordinate Changes to Timing Plans	short survey	None listed	short survey	None listed
Turn over Control of Signals	None listed	None listed	short survey	None listed
<u>Agencies your agency provides arterial travel times, speeds, and conditions information, share infrastructure or coordinates operation</u>				
<i>Freeway Management Agencies</i>				
Provide Information	None listed	None listed	short survey	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
<i>Incident Management Agencies</i>				
Provide Information	short survey	None listed	short survey	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
<i>Public Transit Operators Agencies</i>				
Provide Information	None listed	None listed	short survey	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
<i>Arterial Management Agencies</i>				

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Anoka County		Bloomington 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
<u>Receiving real-time information via electronic means from others</u>				
<i>Freeway Management agencies from which your agency receives</i>				
<i>freeway travel times, speeds, and conditions</i>	None listed	None listed	short survey	None listed
<i>Public Transit operators from which your agency receives</i>				
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed	None listed	None listed
<i>Incident Management agencies from which your agency receives</i>				
<i>incident clearance and/or incident severity, location, and type information</i>				
Receive information on Incident Clearance	None listed	None listed	short survey	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed	short survey	None listed
<i>Toll Collection agencies from which your agency receives arterial travel</i>				
<i>times derived from vehicles probes</i>	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
<u>and/or shares infrastructure and/or coordinates operation</u>				
<i>Emergency Management Agencies</i>				
Provide Information				
	short survey	None listed	short survey	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Anoka County		Bloomington 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	short survey	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	short survey	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	short survey	None listed
Receive Arterial Incident Severity Information	short survey	None listed	short survey	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	None listed	None listed	short survey	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.

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Brooklyn Park City		Dakota County	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
<u>Arterial Mgt. agencies in metropolitan area with which you share info.</u>				
Share Timing Plans Information	Hennepin County, Minnesota Department of Transportation	Minnesota Department of Transportation	Burnsville City, Minnesota Department of Transportation, Apple Valley	Apple Valley
Coordinate Changes to Timing Plans	Hennepin County, Minnesota Department of Transportation	Hennepin County, Minnesota Department of Transportation	Burnsville City, Minnesota Department of Transportation, Apple Valley	Burnsville City, Minnesota Department of Transportation, Apple Valley
Turn over Control of Signals	Hennepin County, Minnesota Department of Transportation	Hennepin County, Minnesota Department of Transportation	Minnesota Department of Transportation	Minnesota Department of Transportation
<u>Agencies your agency provides arterial travel times, speeds, and conditions information, share infrastructure or coordinates operation</u>				
<i>Freeway Management Agencies</i>				
Provide Information	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
Share Infrastructure	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
Coordinate Operation	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
<i>Incident Management Agencies</i>				
Provide Information	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
<i>Public Transit Operators Agencies</i>				
Provide Information	Metro Transit	Metro Transit	None listed	None listed
Share Infrastructure	None listed	None listed	None listed	None listed
Coordinate Operation	None listed	None listed	None listed	None listed
<i>Arterial Management Agencies</i>				

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Brooklyn Park City		Dakota County	
	1999	2005	1999	2005
Provide Information	Hennepin County, Minnesota Department of Transportation	Hennepin County, Minnesota Department of Transportation	None listed	None listed
Share Infrastructure	Hennepin County, Minnesota Department of Transportation	Hennepin County, Minnesota Department of Transportation	None listed	None listed
Coordinate Operation	Hennepin County, Minnesota Department of Transportation	Hennepin County, Minnesota Department of Transportation	None listed	None listed
<u>Receiving real-time information via electronic means from others</u>				
<i>Freeway Management agencies from which your agency receives</i>				
<i>freeway travel times, speeds, and conditions</i>	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
<i>Public Transit operators from which your agency receives</i>				
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed	None listed	None listed
<i>Incident Management agencies from which your agency receives</i>				
<i>incident clearance and/or incident severity, location, and type information</i>				
Receive information on Incident Clearance	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed	None listed	None listed
<i>Toll Collection agencies from which your agency receives arterial travel</i>				
<i>times derived from vehicles probes</i>	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
<u>and/or shares infrastructure and/or coordinates operation</u>				
<i>Emergency Management Agencies</i>				
Provide Information	Hennepin County Sheriff Department	Hennepin County Sheriff Department	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Brooklyn Park City		Dakota County	
	1999	2005	1999	2005
Share Infrastructure	Hennepin County Sheriff Department	Hennepin County Sheriff Department	None listed	None listed
Coordinate Operation	Hennepin County Sheriff Department	Hennepin County Sheriff Department	None listed	None listed
Freeway Management Agencies				
Provide Information	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
Share Infrastructure	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
Coordinate Operation	Minnesota Department of Transportation	Minnesota Department of Transportation	None listed	None listed
Public Transit Operators				
Provide Information	Metro Transit	Metro Transit	None listed	None listed
Share Infrastructure	Metro Transit	Metro Transit	None listed	None listed
Coordinate Operation	Metro Transit	Metro Transit	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	Hennepin County Sheriff Department	Hennepin County Sheriff Department	None listed	None listed
Receive Arterial Incident Severity Information	Hennepin County Sheriff Department	Hennepin County Sheriff Department	None listed	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	Hennepin County, Minnesota Department of Transportation	Hennepin County, Minnesota Department of Transportation	None listed	None listed
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions	Minnesota Department of Transportation	Minnesota Department of Transportation	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.

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Hennepin County		Minneapolis City	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
<u>Arterial Mgt. agencies in metropolitan area with which you share info.</u>				
Share Timing Plans Information	Bloomington City, Brooklyn Park City, Minneapolis City, Minnesota Department of Transportation	None listed	None listed	None listed
Coordinate Changes to Timing Plans	Bloomington City, Brooklyn Park City, Minneapolis City, Minnesota Department of Transportation	None listed	short survey	None listed
Turn over Control of Signals	Minneapolis City, Minnesota Department of Transportation	Minneapolis City, Minnesota Department of Transportation	None listed	None listed
<u>Agencies your agency provides arterial travel times, speeds, and conditions information, share infrastructure or coordinates operation</u>				
<i>Freeway Management Agencies</i>				
Provide Information	Minnesota Department of Transportation	None listed	None listed	None listed
Share Infrastructure	None listed	Minnesota Department of Transportation	None listed	None listed
Coordinate Operation	None listed	Minnesota Department of Transportation	None listed	None listed
<i>Incident Management Agencies</i>				
Provide Information	Minnesota Department of Transportation	None listed	None listed	None listed
Share Infrastructure	None listed	Minnesota Department of Transportation	None listed	None listed
Coordinate Operation	None listed	Minnesota Department of Transportation	None listed	None listed
<i>Public Transit Operators Agencies</i>				
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
<i>Arterial Management Agencies</i>				

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Hennepin County		Minneapolis City	
	1999	2005	1999	2005
Provide Information	Bloomington City, Brooklyn Park City, Minneapolis City, Minnesota Department of Transportation	None listed	None listed	None listed
Share Infrastructure	Bloomington City, Brooklyn Park City, Minneapolis City, Minnesota Department of Transportation	None listed	None listed	None listed
Coordinate Operation	Bloomington City, Brooklyn Park City, Minneapolis City, Minnesota Department of Transportation	None listed	None listed	None listed
Receiving real-time information via electronic means from others				
<i>Freeway Management agencies from which your agency receives</i>				
<i>freeway travel times, speeds, and conditions</i>	Minnesota Department of Transportation	None listed	None listed	None listed
<i>Public Transit operators from which your agency receives</i>				
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed	None listed	None listed
<i>Incident Management agencies from which your agency receives</i>				
<i>incident clearance and/or incident severity, location, and type information</i>				
Receive information on Incident Clearance	Minnesota Department of Transportation	None listed	None listed	None listed
Receive information on Incident Severity, Location, and Type	Minnesota Department of Transportation	None listed	None listed	None listed
<i>Toll Collection agencies from which your agency receives arterial travel</i>				
<i>times derived from vehicles probes</i>	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
<u>and/or shares infrastructure and/or coordinates operation</u>				
Emergency Management Agencies				
Provide Information	None listed	Minnesota State	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Hennepin County		Minneapolis City	
	1999	2005	1999	2005
Share Infrastructure	None listed	Minnesota State	None listed	None listed
Coordinate Operation	None listed	Minnesota State	None listed	None listed
Freeway Management Agencies				
Provide Information	None listed	Minnesota Department of Transportation	None listed	None listed
Share Infrastructure	None listed	Minnesota Department of Transportation	None listed	None listed
Coordinate Operation	None listed	Minnesota Department of Transportation	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	Minnesota State	None listed	None listed
Receive Arterial Incident Severity Information	None listed	Minnesota State	None listed	None listed
Arterial Management agencies from which your agency receives				
arterial travel times, speeds, and conditions	Minnesota Department of Transportation	Bloomington City, Brooklyn Park City, Minneapolis City	None listed	None listed
Freeway Management agencies from which your agency receives				
freeway travel times, speeds, and conditions	Minnesota Department of Transportation	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.

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Agency Returned Survey?	Yes	
Arterial Management Section		
<u>Arterial Mgt. agencies in metropolitan area with which you share info.</u>		
Share Timing Plans Information	Bloomington City, Hennepin County, Minnesota Department of Transportation	None listed
Coordinate Changes to Timing Plans	Bloomington City, Hennepin County, Minnesota Department of Transportation	None listed
Turn over Control of Signals	Anoka County, Bloomington City, Dakota County, Hennepin County, Minneapolis City, Minnesota Department of Transportation, Ramsey County, St. Paul City	Anoka County, Bloomington City, Dakota County, Hennepin County, Minneapolis City, Minnesota Department of Transportation, Ramsey County, St. Paul City
<u>Agencies your agency provides arterial travel times, speeds, and conditions information, share infrastructure or coordinates operation</u>		
<i>Freeway Management Agencies</i>		
Provide Information	Minnesota Department of Transportation	None listed
Share Infrastructure	Minnesota Department of Transportation	None listed
Coordinate Operation	None listed	None listed
<i>Incident Management Agencies</i>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<i>Public Transit Operators Agencies</i>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<i>Arterial Management Agencies</i>		

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Provide Information	None listed	None listed
Share Infrastructure	Dakota County, Hennepin County, Ramsey County	None listed
Coordinate Operation	Anoka County, Bloomington City, Brooklyn Park City, Burnsville City, Dakota County, Hennepin County, Minneapolis City, Minnesota Department of Transportation, Ramsey County, Scott County, St. Paul City, Washington County	None listed
<u>Receiving real-time information via electronic means from others</u>		
<i>Freeway Management agencies from which your agency receives</i>		
<i>freeway travel times, speeds, and conditions</i>	Minnesota Department of Transportation	Minnesota Department of Transportation
<i>Public Transit operators from which your agency receives</i>		
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed
<i>Incident Management agencies from which your agency receives</i>		
<i>incident clearance and/or incident severity, location, and type information</i>		
Receive information on Incident Clearance	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed
<i>Toll Collection agencies from which your agency receives arterial travel</i>		
<i>times derived from vehicles probes</i>	None listed	None listed
Arterial Incident Management Section		
Agencies your agency provides incident severity, location, and type info.		
<u>and/or shares infrastructure and/or coordinates operation</u>		
<i>Emergency Management Agencies</i>		
Provide Information	Hennepin County Sheriff Department, State Patrol	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation	
	1999	2005
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
Freeway Management Agencies		
Provide Information	Minnesota Department of Transportation	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	Minnesota Department of Transportation	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.

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Ramsey County		Scott County	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
Arterial Management Section				
<u>Arterial Mgt. agencies in metropolitan area with which you share info.</u>				
Share Timing Plans Information	None listed	None listed	Minnesota Department of Transportation	Minnesota Department of Transportation
Coordinate Changes to Timing Plans	None listed	None listed	Minnesota Department of Transportation	Dakota County, Minnesota Department of Transportation
Turn over Control of Signals	Minnesota Department of Transportation, St. Paul City	Minnesota Department of Transportation, St. Paul City	Minnesota Department of Transportation	Minnesota Department of Transportation
<u>Agencies your agency provides arterial travel times, speeds, and conditions information, share infrastructure or coordinates operation</u>				
<i>Freeway Management Agencies</i>				
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
<i>Incident Management Agencies</i>				
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
<i>Public Transit Operators Agencies</i>				
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
<i>Arterial Management Agencies</i>				

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Ramsey County		Scott County	
	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
<u>Receiving real-time information via electronic means from others</u>				
<i>Freeway Management agencies from which your agency receives</i>				
<i>freeway travel times, speeds, and conditions</i>	None listed	None listed	None listed	None listed
<i>Public Transit operators from which your agency receives</i>				
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed	None listed	None listed
<i>Incident Management agencies from which your agency receives</i>				
<i>incident clearance and/or incident severity, location, and type information</i>				
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
<i>Toll Collection agencies from which your agency receives arterial travel</i>				
<i>times derived from vehicles probes</i>	None listed	None listed	None listed	None listed
Arterial Incident Management Section				
Agencies your agency provides incident severity, location, and type info.				
<u>and/or shares infrastructure and/or coordinates operation</u>				
<i>Emergency Management Agencies</i>				
Provide Information				
	None listed	None listed	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Ramsey County		Scott County	
	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.

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	St. Paul City	
	1999	2005
Agency Returned Survey?	Yes	
Arterial Management Section		
<u>Arterial Mgt. agencies in metropolitan area with which you share info.</u>		
Share Timing Plans Information	None listed	Oakdale, Woodbury, Cottage Grove
Coordinate Changes to Timing Plans	Ramsey County	Oakdale, Woodbury, Cottage Grove
Turn over Control of Signals	None listed	None listed
<u>Agencies your agency provides arterial travel times, speeds, and conditions information, share infrastructure or coordinates operation</u>		
<i>Freeway Management Agencies</i>		
Provide Information	None listed	Minnesota Department of Transportation
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	Minnesota Department of Transportation
<i>Incident Management Agencies</i>		
Provide Information	Minnesota Department of Transportation	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	Minnesota Department of Transportation	None listed
<i>Public Transit Operators Agencies</i>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	Metro Transit
<i>Arterial Management Agencies</i>		

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	St. Paul City	
	1999	2005
Provide Information	None listed	Anoka County, Bloomington City, Dakota County, Hennepin County, Minneapolis City, Minnesota Department of Transportation, Ramsey County, Scott County, Washington County
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	Dakota County, Hennepin County, Minneapolis City, Minnesota Department of Transportation, Ramsey County, Washington County
<u>Receiving real-time information via electronic means from others</u>		
<i>Freeway Management agencies from which your agency receives</i>		
<i>freeway travel times, speeds, and conditions</i>	Minnesota Department of Transportation	None listed
<i>Public Transit operators from which your agency receives</i>		
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed
<i>Incident Management agencies from which your agency receives</i>		
<i>incident clearance and/or incident severity, location, and type information</i>		
Receive information on Incident Clearance	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed
<i>Toll Collection agencies from which your agency receives arterial travel</i>		
<i>times derived from vehicles probes</i>	None listed	None listed
Arterial Incident Management Section		
Agencies your agency provides incident severity, location, and type info.		
<u>and/or shares infrastructure and/or coordinates operation</u>		
<i>Emergency Management Agencies</i>		
Provide Information	None listed	None listed

Arterial Management Integration
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	St. Paul City	
	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.

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Washington County	
	1999	2005
Agency Returned Survey?	Yes	
Arterial Management Section		
<u>Arterial Mgt. agencies in metropolitan area with which you share info.</u>		
Share Timing Plans Information	Anoka County, Hennepin County, Minnesota Department of Transportation, Ramsey County, St. Paul City	St. Paul City
Coordinate Changes to Timing Plans	Minnesota Department of Transportation, Ramsey County	Minnesota Department of Transportation, Ramsey County
Turn over Control of Signals	None listed	None listed
<u>Agencies your agency provides arterial travel times, speeds, and conditions information, share infrastructure or coordinates operation</u>		
<i>Freeway Management Agencies</i>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	Minnesota Department of Transportation	Minnesota Department of Transportation
<i>Incident Management Agencies</i>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<i>Public Transit Operators Agencies</i>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	Metro Transit	Metro Transit
<i>Arterial Management Agencies</i>		

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Washington County	
	1999	2005
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	Minnesota Department of Transportation	Minnesota Department of Transportation
<u>Receiving real-time information via electronic means from others</u>		
<i>Freeway Management agencies from which your agency receives</i>		
<i>freeway travel times, speeds, and conditions</i>	Minnesota Department of Transportation	Minnesota Department of Transportation
<i>Public Transit operators from which your agency receives</i>		
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed
<i>Incident Management agencies from which your agency receives</i>		
<i>incident clearance and/or incident severity, location, and type information</i>		
Receive information on Incident Clearance	None listed	None listed
Receive information on Incident Severity, Location, and Type	None listed	None listed
<i>Toll Collection agencies from which your agency receives arterial travel</i>		
<i>times derived from vehicles probes</i>	None listed	None listed
Arterial Incident Management Section		
Agencies your agency provides incident severity, location, and type info.		
<u>and/or shares infrastructure and/or coordinates operation</u>		
<i>Emergency Management Agencies</i>		
Provide Information	None listed	None listed

Arterial Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Washington 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: Minneapolis, St. Paul

Agency Name	Anoka County		Bloomington 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	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: Minneapolis, St. Paul

Agency Name	Anoka County		Bloomington City	
	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:				
	Internet Web sites	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	
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:				
	Internet Web sites	NR	NR	NR

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Anoka County		Bloomington City	
	1999	2005	1999	2005
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: Minneapolis, St. Paul

Agency Name	Brooklyn Park City		Dakota County	
	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, Incidents	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Incidents	Traffic volumes, Vehicle classification, Turning movements, Phasing/cycle lengths	Traffic volumes, Turning movements, Phasing/cycle lengths
Archived by your agency	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Incidents	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Incidents	Traffic volumes, Turning movements	Traffic volumes, Turning movements
Transferred to another agency by your agency	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Incidents	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Incidents	Traffic volumes, Turning movements	Traffic volumes, Turning movements
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Brooklyn Park City		Dakota County	
	1999	2005	1999	2005
Ranked High	Traffic volumes, Incidents		NR	
Ranked Medium	Traffic speeds, Vehicle classification, Turning movements		Traffic volumes	
Ranked Low	NR		Vehicle classification, Turning movements, Phasing/cycle lengths	
Groups that make requests for the data	State DOT personnel, Media (i.e., TV stations, radio stations), Consultants		State DOT personnel, Consultants, Property Owners and Developers	
What is the data used for?	Traffic analysis, Planning, Dissemination to the public		Traffic analysis, Construction impact determination, Planning, Roadway impact analysis	
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	
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

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Brooklyn Park City		Dakota County	
	1999	2005	1999	2005
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
Internet web site reporting incident information	City, NO State VMS & CMS		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: Minneapolis, St. Paul

Agency Name	Hennepin County		Minneapolis 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, Queues, Phasing/cycle lengths, Current work zones, Scheduled work zones	Traffic speeds, Vehicle classification, Emergency vehicle signal preemption, Incidents	NR	NR
Archived by your agency	NR	NR	NR	NR
Transferred to another agency by your agency	Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Queues, Phasing/cycle lengths, Emergency vehicle signal preemption, Incidents	NR	NR
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Hennepin County		Minneapolis City	
	1999	2005	1999	2005
Ranked High	Turning movements		NR	
Ranked Medium	Traffic volumes, Traffic speeds, Queues, Phasing/cycle lengths, Incidents, Current work zones, Scheduled work zones		NR	
Ranked Low	Vehicle classification, Emergency vehicle signal preemption		NR	
Groups that make requests for the data	Universities, State DOT personnel, Federal DOT personnel, Media (I.e., TV stations, radio stations), Consultants		NR	
What is the data used for?	Traffic analysis, Construction impact determination, Planning, Dissemination to the public		NR	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	Dedicated cable TV, Internet Web sites, Pagers or personal data assistants, Kiosks
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	
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:	Facsimile	Telephone system, Internet Web sites, E-mail or other direct PC communication	NR	Dedicated cable TV, Internet Web sites, Pagers or personal data assistants, Kiosks

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Hennepin County		Minneapolis City	
	1999	2005	1999	2005
Technologies your agency (through another agency or org.) uses to disseminate:	Facsimile	Telephone system, Internet Web sites, E-mail or other direct PC communication	NR	NR
Internet web site reporting incident information	State of Minnesota		NR	
Telephone system for reporting incident information to the public	NR		NR	
Organizations your agency sends information for dissemination to the public	Will be sending to State of Minnesota (ORION Program) in the near future.		NR	

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation		Ramsey County	
	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, Lane occupancy, Vehicle classification, Turning movements, Queues, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption, Transit vehicle signal priority	Probe vehicles	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Turning movements, Emergency vehicle signal preemption	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Turning movements, Emergency vehicle signal preemption
Archived by your agency	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Turning movements, Queues, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption, Transit vehicle signal priority	Probe vehicles	Traffic volumes, Vehicle classification, Turning movements	Traffic volumes, Vehicle classification, Turning movements
Transferred to another agency by your agency	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Turning movements, Queues, Road conditions, Transit vehicle signal priority	Probe vehicles	Traffic volumes	Traffic volumes
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation		Ramsey County	
	1999	2005	1999	2005
Ranked High	Traffic volumes, Traffic speeds, Turning movements, Queues, Road conditions, Emergency vehicle signal preemption		Traffic volumes, Turning movements, Emergency vehicle signal preemption	
Ranked Medium	Lane occupancy		Traffic speeds, Lane occupancy, Vehicle classification	
Ranked Low	Vehicle classification, Probe vehicles, Phasing/cycle lengths, Transit vehicle signal priority		NR	
Groups that make requests for the data	Universities, State DOT personnel, Media (i.e., TV stations, radio stations), Consultants, Lawyers		State DOT personnel, Consultants	
What is the data used for?	Do not know, Traffic analysis, Dissemination to the public, Fight Traffic Violations		Traffic analysis, Planning, Roadway impact analysis, D	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	Dedicated cable TV	VMS	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	
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:	Dedicated cable TV, Internet Web sites, Kiosks, FM Radio	NR	NR	NR

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Minnesota Department of Transportation		Ramsey County	
	1999	2005	1999	2005
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: Minneapolis, St. Paul

Agency Name	Scott County		St. Paul City	
	1999	2005	1999	
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, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption	Traffic volumes, Traffic speeds, Turning movements, Queues, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption	NR	Traffic volumes, Traffic speeds, Lane occupancy, Highway operations coordination information
Archived by your agency	Traffic volumes, Traffic speeds, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption	Traffic volumes, Traffic speeds, Turning movements, Queues, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption	NR	Traffic volumes, Traffic speeds, Lane occupancy
Transferred to another agency by your agency	Traffic volumes	Traffic volumes	NR	Traffic volumes, Traffic speeds, Lane occupancy
Importance of making information available to the public				

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Scott County		St. Paul City	
	1999	2005	1999	
Ranked High	Traffic volumes, Traffic speeds		Traffic volumes, Traffic speeds, Lane occupancy, Highway operations coordination information	
Ranked Medium	Queues, Road conditions, Emergency vehicle signal preemption		NR	
Ranked Low	Turning movements, Phasing/cycle lengths		NR	
Groups that make requests for the data	State DOT personnel, Federal DOT personnel, Media (I.e., TV stations, radio stations), MPOs, Consultants		Universities, State DOT personnel, Media (I.e., TV stations, radio stations), Consultants, Advanced Traveler Information Systems (ATIS) provi	
What is the data used for?	Do not know, Traffic analysis, Planning, Dissemination to the public		Traffic analysis, Construction impact determination, Planning, Dissemination to the public	
Methods used to disseminate arterial information to the public				
Technologies your agency uses to disseminate:	NR	NR	NR	Internet Web sites
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	Internet Web sites
Internet web site reporting arterial conditions	NR		NR	
Telephone system for reporting arterial information to the public	NR		NR	
Organizations your agency sends information for dissemination to the public	NR		SmartRoute Systems - Minnesota, MN 55345; 612-935-2929	
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

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Scott County		St. Paul City	
	1999	2005	1999	
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: Minneapolis, St. Paul

Agency Name	Washington County	
	1999	
Agency Returned Survey?	Yes	
Arterial Management Section		
Data collected, archived, and/or transferred to another agency		
Collected by your agency	Traffic volumes, Lane occupancy, Vehicle classification, Turning movements, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption, Transit vehicle signal priority, Current work zones, Scheduled work zones	Traffic volumes, Lane occupancy, Vehicle classification, Turning movements, Phasing/cycle lengths, Road conditions, Emergency vehicle signal preemption, Transit vehicle signal priority, Current work zones, Scheduled work zones
Archived by your agency	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Transit vehicle signal priority, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Transit vehicle signal priority, Current work zones, Scheduled work zones
Transferred to another agency by your agency	Traffic volumes, Turning movements, Phasing/cycle lengths, Current work zones, Scheduled work zones	Traffic volumes, Turning movements, 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: Minneapolis, St. Paul

Agency Name	Washington County	
	1999	
Ranked High	Traffic volumes, Traffic speeds, Turning movements, Emergency vehicle signal preemption, Current work zones, Scheduled work zones	
Ranked Medium	Phasing/cycle lengths, Road conditions, Transit vehicle	
Ranked Low	Lane occupancy, Vehicle classification	
Groups that make requests for the data	State DOT personnel, Consultants, Cities within the County	
What is the data used for?	Traffic analysis, Planning, Roadway impact analysis	
Methods used to disseminate arterial information to the public		
Technologies your agency uses to disseminate:	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	Internet Web sites
Internet web site reporting arterial conditions	NR	
Telephone system for reporting arterial information to the public	NR	
Organizations your agency sends information for dissemination to the public	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

Data Collection and Dissemination: Arterial Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Washington County	
	1999	
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: Minneapolis, St. Paul

	Metro Transit	
	1999	2005
Agency Returned Survey?	Yes	
Number of vehicles used in revenue service		
Fixed Route Bus	938	NR
Heavy or Rapid Rail	NR	NR
Light Rail	NR	25
Demand Responsive	NR	NR
Commuter Rail	NR	NR
Ferry Boat	NR	NR
Have of plan to have an Automated Vehicle Location System?	Yes	
Primary and Secondary Location Technologies Used		
<u>Primary Technologies</u>		
GPS	Yes	Yes
Sign/Odometer	No	No
Dead-Reckoning	No	Yes
LORAN C	No	No
Other	Yes	Yes
<u>Backup Technologies</u>		
GPS	No	Yes
Sign/Odometer	No	No
Dead-Reckoning	No	Yes
LORAN C	No	No
Other	No	Yes
Number of Vehicles Equipped with AVL		
Fixed Route Bus	253	300
Heavy or Rapid Rail	NR	NR
Light Rail	NR	25
Demand Responsive	NR	NR
Commuter Rail	NR	NR
Ferry Boat	NR	NR
Motor Buses Operated as Vehicle Probes		
Number of Motor Buses equipped as probes on freeways?	NR	
Number of Motor Buses equipped as probes on arterials?	NR	
Have Organized Regional Incident Management Program?	Yes	
Have Automated Traveler Information System?	Yes	
<u>Services Automated Traveler Info. System Applies:</u>		

Transit Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Metro Transit	
	1999	2005
Fixed Route	Yes	
Heavy Rail	No	
Light Rail	No	
Demand Responsive	No	
Commuter Rail	No	
Ferry	No	
Locations where traveler information is displayed to public		
Number of bus stops on fixed transit routes	21,525	NR
Bus stops on fixed transit routes that display traveler info to the public	1,104	NR
Number of rail stations	0	NR
Number of rail stations that display traveler information	0	NR
Number of other locations that display traveler information to public	26	NR
Number of vehicles the traveler information system has available		
Fixed Route Bus	NR	NR
Heavy or Rapid Rail	NR	NR
Light Rail	NR	NR
Demand Responsive	NR	NR
Commuter Rail	NR	NR
Ferry Boat	NR	NR
Deployment of Communications Technology		
<i>Attributes of Radio System:</i>		
Digital?	No	
Analog?	Yes	
Trunked?	Yes	
Regular?	No	
Services that use a Digital or Trunked Radio System		
<i>Digital Only</i>		
Fixed Route Bus	No	Yes
Heavy or Rapid Rail	No	No
Light Rail	No	Yes
Demand Responsive	No	Yes
Commuter Rail	No	No
Ferry Boat	No	No
<i>Trunked Only</i>		
Fixed Route Bus	Yes	Yes
Heavy or Rapid Rail	No	No
Light Rail	No	Yes
Demand Responsive	No	Yes
Commuter Rail	No	No

Transit Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Metro Transit	
	1999	2005
Ferry Boat	No	No
Have of plan to have Automatic Passenger Counters (APCs)?	Yes	
Methods used to count passengers		
Treadle Mats	No	
Infrared Beams	No	
Primary and Secondary Location Technologies Used		
<i>Primary Technologies</i>		
GPS	Yes	No
Differential GPS	No	Yes
Signpost/Odometer	No	No
Dead_Reckoning	No	Yes
LORAN C	No	No
Other	No	No
<i>Backup Technologies</i>		
GPS	No	No
Differential GPS	No	Yes
Signpost/Odometer	No	No
Dead_Reckoning	No	Yes
LORAN C	No	No
Other	No	No
Number of Vehicles with APCs		
Fixed Route Bus	30	100
Heavy or Rapid Rail	0	0
Light Rail	0	25
Demand Responsive	0	0
Commuter Rail	0	0
Ferry Boat	0	0
Remote Real-Time Monitoring and Computer Assisted Dispatching		
<i>Remote Real-Time Monitoring</i>		
Fixed Route Bus	0	300
Heavy or Rapid Rail	NR	NR
Light Rail	NR	NR
Demand Responsive	NR	NR
Commuter Rail	NR	NR
Ferry Boat	NR	NR
<i>Automated Dispatching or Control Software</i>		
Fixed Route Bus	253	300
Heavy or Rapid Rail	NR	NR

Transit Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Metro Transit	
	1999	2005
Light Rail	NR	25
Demand Responsive	NR	NR
Commuter Rail	NR	NR
Ferry Boat	NR	NR
Coordinate or plan to coordinate travel request and vehicle dispatching for multiple agencies?	Yes	
Is there or will there be a Transportation Management Center (TMC) in the region that controls transit and highway modes?	Yes	
Modes that TMC currently controls:		
Highways	Yes	Yes
Fixed Route Bus	No	No
Heavy or Rapid Rail	No	No
Light Rail	No	No
Demand Responsive	No	No
Commuter Rail	No	No
Ferry Boat	No	No
Other	No	No
Priority at Traffic Signals and Ramp Meter Priority		
<u>Priority at Traffic Signals</u>		
Fixed Route Bus	NR	NR
Light Rail	NR	NR
Demand Responsive	NR	NR
<u>Ramp Meter Priority</u>		
Fixed Route Bus	NR	NR
Demand Responsive	NR	NR
Number of Vehicles Equipped with Navigation Aids		
Fixed Route Bus	NR	NR
Heavy or Rapid Rail	NR	NR
Light Rail	NR	NR
Demand Responsive	NR	NR
Commuter Rail	NR	NR
Ferry Boat	NR	NR
ITS Standards Used Related to Transit Management		
TCIP On Board Objects (TCIP-OB)	No	
TCIP Traffic Management Objects (TCIP-TM)	No	
TCIP Common Public Transportation Objects (TCIP-CPT)	No	
TCIP Passenger Information Objects (TCIP-PI)	No	

Transit Management
Agencies for Metropolitan Area: Minneapolis, St. Paul

	Metro Transit	
	1999	2005
TCIP Incident Management Objects (TCIP-IM)	No	
TCIP Fare Collection Objects (TCIP-FC)	No	
TCIP Spatial Representation Objects (TCIP-SP)	No	
TCIP Control Center Objects (TCIP-CC)	No	
TCIP Scheduling/Runcutting Objects (TCIP-SCH)	No	
Send data communication between micro computer and heavy duty vehicle applications (SAE J1708)	No	
Would agency be willing to participate in testing of ITS Standards?	Yes	
Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?	Yes	
Electronic Fare Payment		
Have full operational Electronic Fare Payment System?	Yes	
Methods of Fare Payment		
<i>Stored value card with fare deducted for each trip</i>		
Magnetic Stripe	Yes	
Smart Card	No	
Debit Card	No	
<i>Billed by the month for trips taken</i>		
Magnetic Stripe	No	
Smart Card	No	
Credit Card	No	
<i>Monthly Pass</i>		
Magnetic Stripe	Yes	
Smart Card	No	
Vehicles/Stations Equipped with Automated Payment Mechanism		
<i>Magnetic Stripe Readers</i>		
Fixed Route Bus Vehicles	938	NR
Heavy or Rapid Rail Stations	NR	NR
Light Rail Stations	NR	NR
Demand Responsive Vehicles	NR	NR
Commuter Rail Stations	NR	NR
Ferry Boat Landings	NR	NR
<i>Smart Card Readers</i>		
Fixed Route Bus Vehicles	NR	NR
Heavy or Rapid Rail Stations	NR	NR
Light Rail Stations	NR	NR
Demand Responsive Vehicles	NR	NR
Commuter Rail Stations	NR	NR
Ferry Boat Landings	NR	NR
<i>Credit Card</i>		

Transit Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

	Metro Transit	
	1999	2005
Fixed Route Bus Vehicles	NR	NR
Heavy or Rapid Rail Stations	NR	NR
Light Rail Stations	NR	NR
Demand Responsive Vehicles	NR	NR
Commuter Rail Stations	NR	NR
Ferry Boat Landings	NR	NR
<u>Debit Card</u>		
Fixed Route Bus Vehicles	NR	NR
Heavy or Rapid Rail Stations	NR	NR
Light Rail Stations	NR	NR
Demand Responsive Vehicles	NR	NR
Commuter Rail Stations	NR	NR
Ferry Boat Landings	NR	NR
NR: No Response		

Appendix J
Transit Management Integration

Transit Management Integration
 Agencies for Metropolitan Area: Minneapolis, St. Paul

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

Appendix K
Transit Management Information Collection and Dissemination

Data Collection and Dissemination: Transit Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Metro Transit	
	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	Facsimile, E-mail or other direct PC communication, Internet Web Sites, Telephone System	Monitors/VMS (not in vehicle), Facsimile, E-mail or other direct PC communication, Kiosks, Internet Web Sites, Telephone System
Real-time transit schedule adherence or arrival and departure times	NR	Monitors/VMS (not in vehicle), Kiosks
Technologies employed by other organization receiving your data		
Transit routes, schedules and fares	Internet Web Sites, Telephone System	Kiosks, Internet Web Sites, Telephone System
Real-time transit schedule adherence or arrival and departure times	NR	Monitors/VMS (not in vehicle)
Internet web site reporting transit routes, schedules and fare, etc.	www.metrocouncil.org <input type="checkbox"/> www.metrotransit.org	
Telephone system for reporting transit information to the public	TIC or Busline 373.3333 <input type="checkbox"/>	
Organizations your agency sends information for dissemination to the public	To many locations-bus schedules-hard copy <input type="checkbox"/> Other agencies send information to metro transit information center for dissemination	
Data collected, archived, and/or transferred to another agency		
Collected by your agency	Weather conditions, Passenger count, Trip itinerary planning records, Passenger information (e.g., surveys, O/D), Vehicle time and location, Route designations (snow emergency, etc), Incidents, Current roadway work zones for transit, Scheduled roadway work zones for transit, Emergency/evacuation routes and procedures	Weather conditions, Passenger count, Vehicle monitoring status, Vehicle time and location, Route designations (snow emergency, etc), Incidents, Current roadway work zones for transit, Scheduled roadway work zones for transit, Intermodal (air, rail, water) conditions, Emergency/evacuation routes and procedures
Archived by your agency	Vehicle time and location, Route designations (snow emergency, etc), Incidents, Current roadway work zones for transit, Scheduled roadway work zones for transit	Weather conditions, Vehicle monitoring status, Vehicle time and location, Route designations (snow emergency, etc), Incidents, Current roadway work zones for transit, Scheduled roadway work zones for transit, Intermodal (air, rail, water) conditions

Data Collection and Dissemination: Transit Management
 Agencies for Metropolitan Area: Minneapolis, St. Paul

Agency Name	Metro Transit	
	1999	2005
Transferred to another agency by your agency	Current roadway work zones for transit, Scheduled roadway work zones for transit	Vehicle monitoring status, Vehicle time and location, Incidents, Current roadway work zones for transit, Scheduled roadway work zones for transit, Intermodal (air, rail, water) conditions
Importance of making information available to the public		
Ranked High	Vehicle time and location, Route designations (snow emergency, etc), Current roadway work zones for transit, Scheduled roadway work zones for transit, Intermodal (air, rail, water) conditions, Emergency/evacuation routes and procedures	
Ranked Medium	Trip itinerary planning records, Passenger information (e.g., surveys, O/D), Incidents	
Ranked Low	Weather conditions, Passenger count, Vehicle monitoring status, Road conditions, Emergency vehicle signal preemption, Transit operations coordination information, Highway operations coordination information, Transit vehicle signal priority	
Groups that make requests for the data	Federal DOT personnel, State DOT personnel, Universities, Advanced Traveler Information Systems (ATIS) providers, Consultants, MPOs, Media (i.e., TV stations, radio stations)	
What is the data used for?	Dissemination to the public, Planning	

Appendix L
Emergency Management