

# Tracking the Deployment of the Integrated Metropolitan ITS Infrastructure in Tampa, St. Petersburg, Clearwater

## **FY99 Results**

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## Part 1 - Background and Purpose

In January 1996, Secretary Peña set a goal of deploying the integrated metropolitan Intelligent Transportation System (ITS) infrastructure in 75<sup>1</sup> 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."*<sup>2</sup>

-- 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

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<sup>1</sup> 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.

<sup>2</sup> 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.<sup>3</sup>

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 Tampa, St. Petersburg, Clearwater 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 Tampa, St. Petersburg, Clearwater region was 100% in 1997 and 91% 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:

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<sup>3</sup> 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 Tampa, St. Petersburg, Clearwater 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.

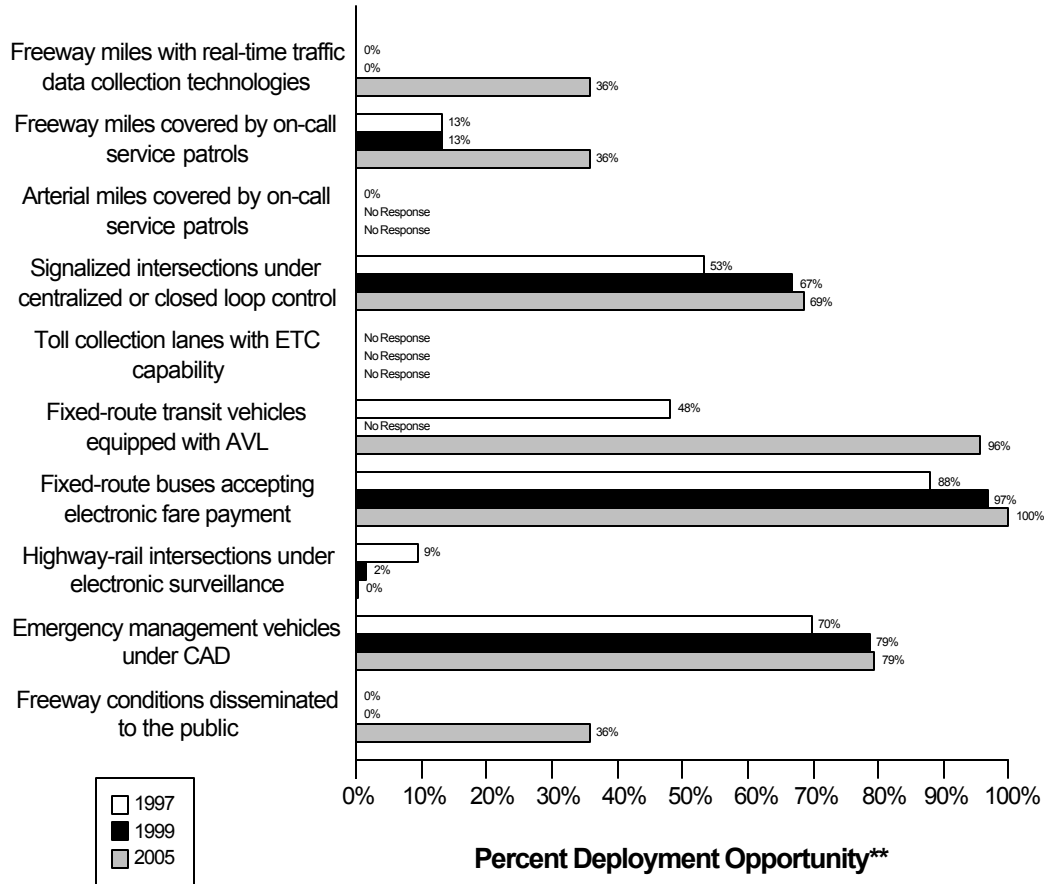
A critical aspect of ITS that provides much of its capability is the integration of individual components to form a unified regional traffic control system. Individual ITS components routinely collect information that is used for purposes internal to that component. For example, the Arterial Management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

## Tampa, St. Petersburg, Clearwater Summary Indicators\*

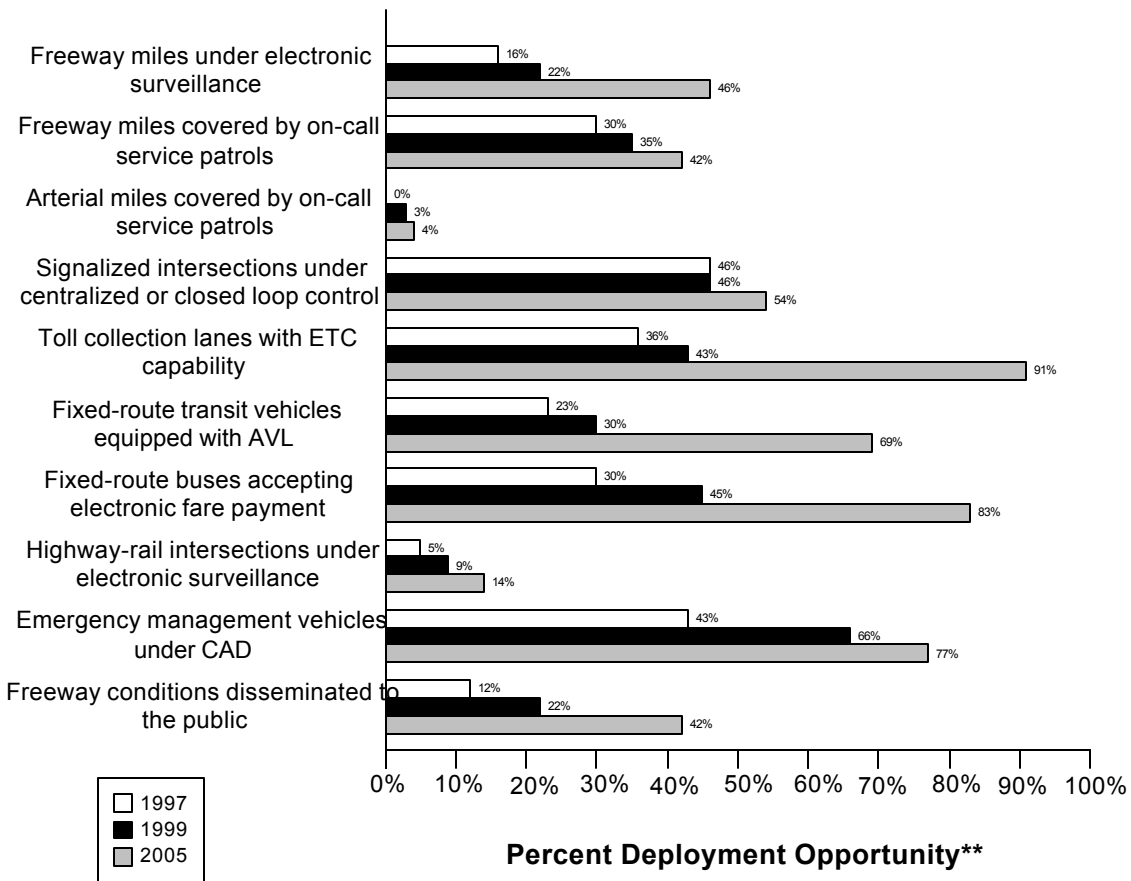


\* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.

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

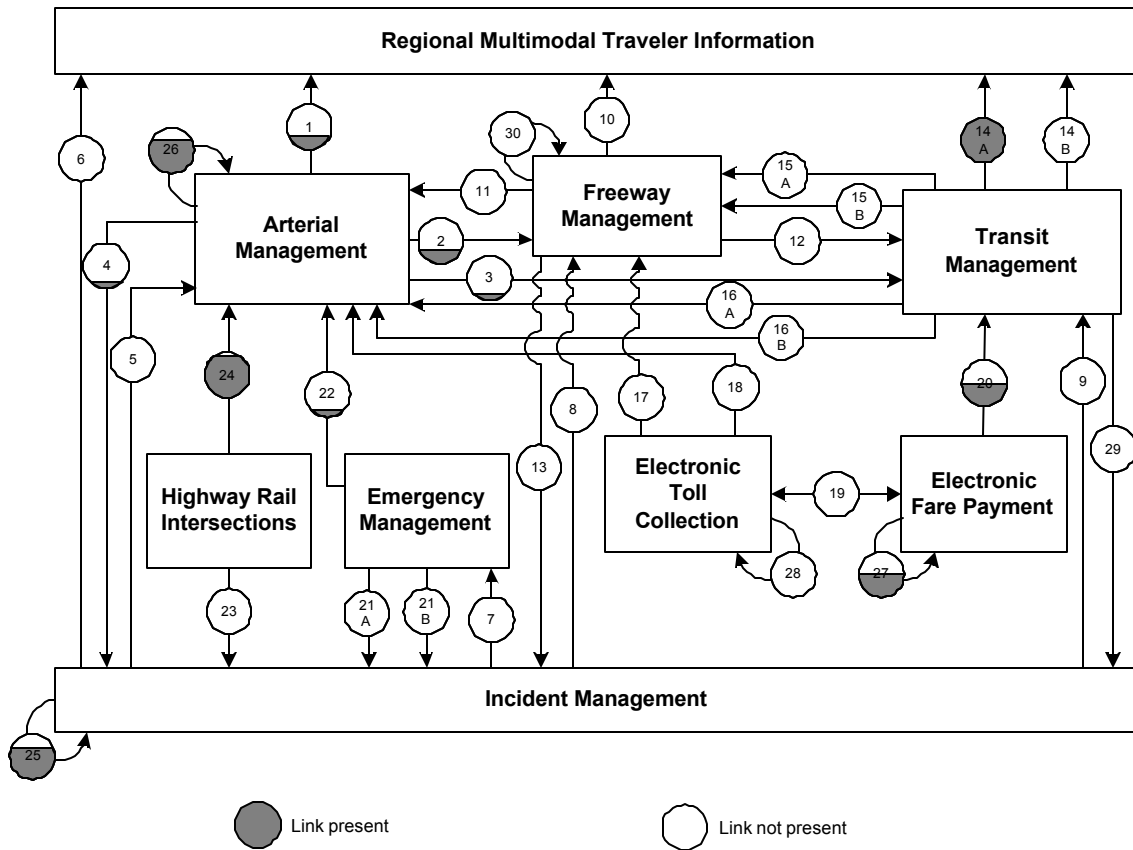
# National Summary Indicators\*

Data as of 5/1/00



\* 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

## Tampa, St. Petersburg, Clearwater 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



<b>Link</b>	<b>Description</b>	<b>Link</b>	<b>Description</b>
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 Tampa, St. Petersburg, Clearwater 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).

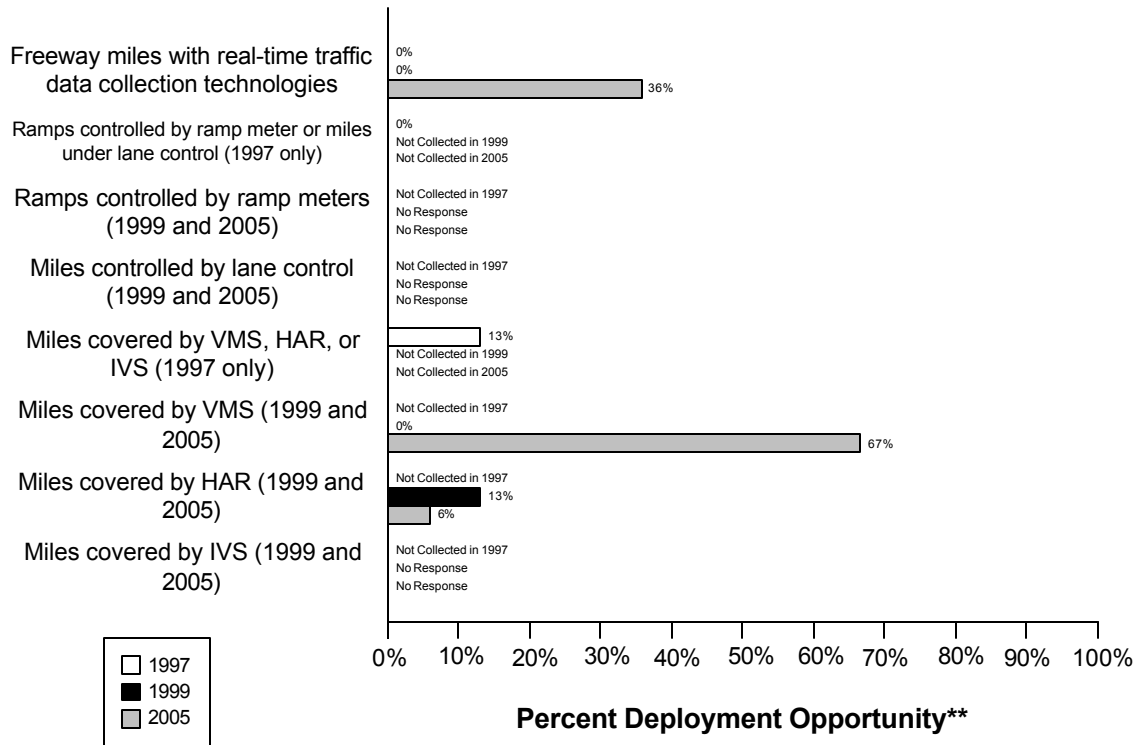
Example: Calculating Integration between Arterial Management and Regional Multimodal Traveler Information

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

## Tampa, St. Petersburg, Clearwater Freeway Management\*



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

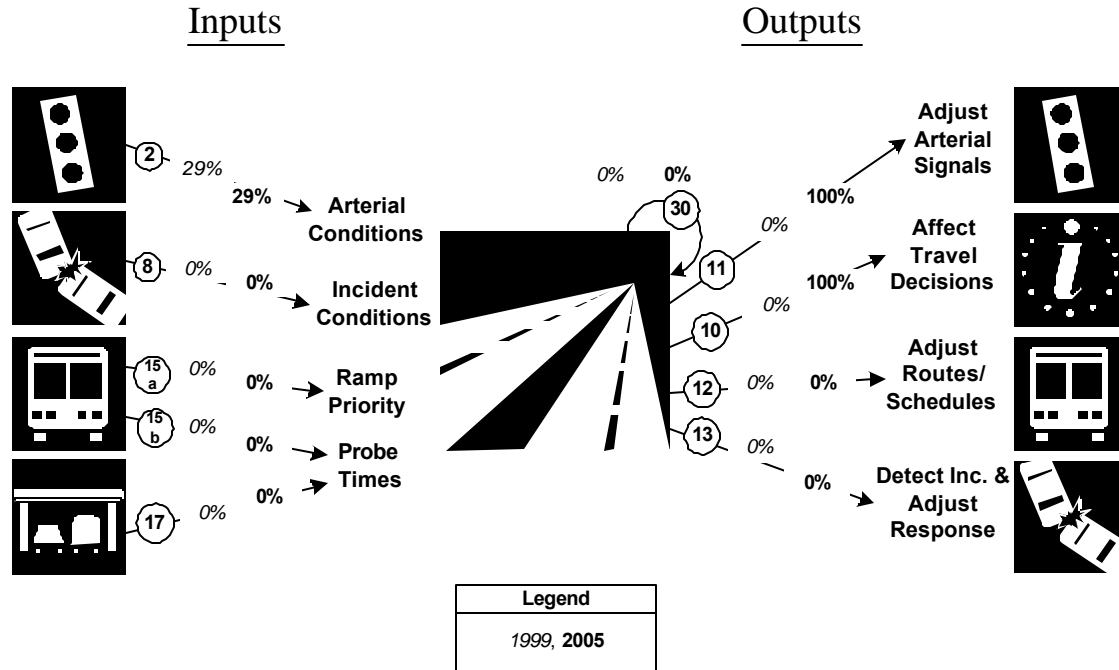
\*\* Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway centerline miles are under electronic surveillance for monitoring traffic flow	0	168	0%	0	168	0%	60	168	36%
Freeway entrance ramps are controlled by ramp meters or miles under lane control	0	168	0%						
Freeway entrance ramps are controlled by ramp meters					186			186	

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway centerline miles will be controlled by lane control					168			168	
Freeway miles are covered by VMS, HAR, or IVS	22	168	13%						
Freeway miles are covered by VMS				0	168	0%	112	168	67%
Freeway miles are covered by HAR				22	168	13%	10	168	6%
Freeway miles are covered by IVS					168			168	

# Freeway Management Integration Indicators

## Tampa, St. Petersburg, Clearwater Freeway Management Integration\*



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

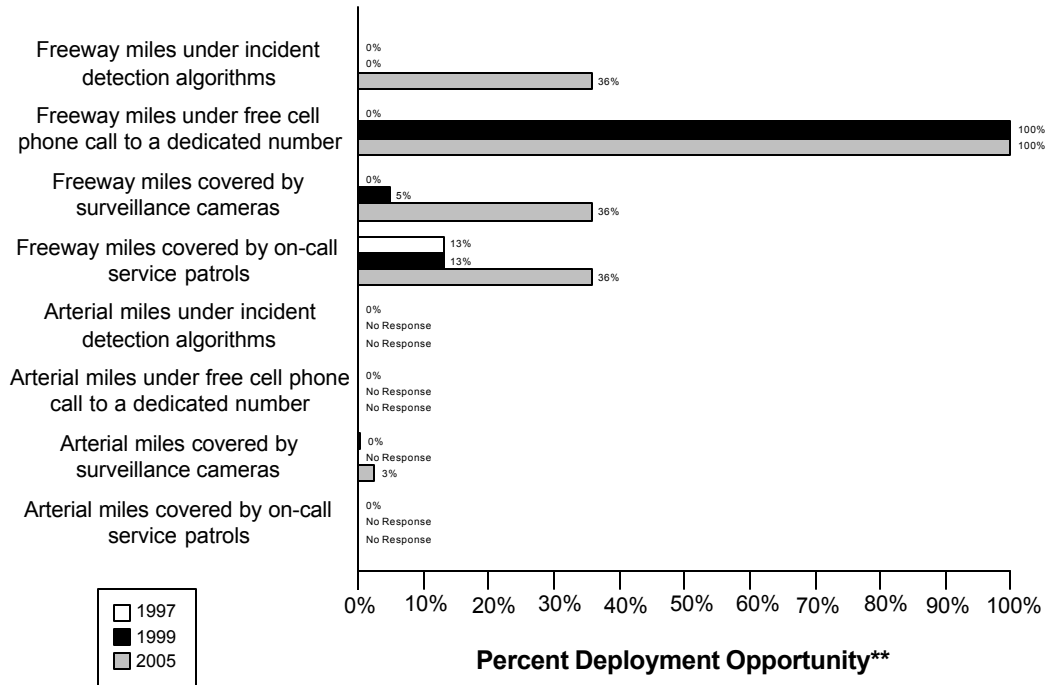
Link Description	1999	2005
2. Arterial Management agencies sending information to Freeway Management	( 2/ 7) 29%	( 2/ 7) 29%
8. Incident Management agencies sending information to Freeway Management	( 0/ 1) 0%	( 0/ 1) 0%
15a. Transit management agencies with vehicles equipped with ramp meter priority	( 0/ 2) 0%	( 0/ 2) 0%
15b. Transit Management agencies with vehicles equipped as probes	( 0/ 2) 0%	( 0/ 2) 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	( 0/ 1) 0%	( 0/ 1) 0%
11. Freeway Management agencies sending information to Arterial Management	( 0/ 1) 0%	( 1/ 1) 100%
10. Freeway Management agencies disseminating freeway conditions to the public	( 0/ 1) 0%	( 1/ 1) 100%

<b>Link Description</b>	<b>1999</b>	<b>2005</b>
12. Freeway Management agencies sending freeway conditions to Transit Management	( 0/ 1) 0%	( 0/ 1) 0%
13. Freeway Management agencies sending freeway conditions to Incident Management	( 0/ 1) 0%	( 0/ 1) 0%

# Incident Management Component Indicators

Data as of 5/1/00

## Tampa, St. Petersburg, Clearwater Freeway and Arterial Incident 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.

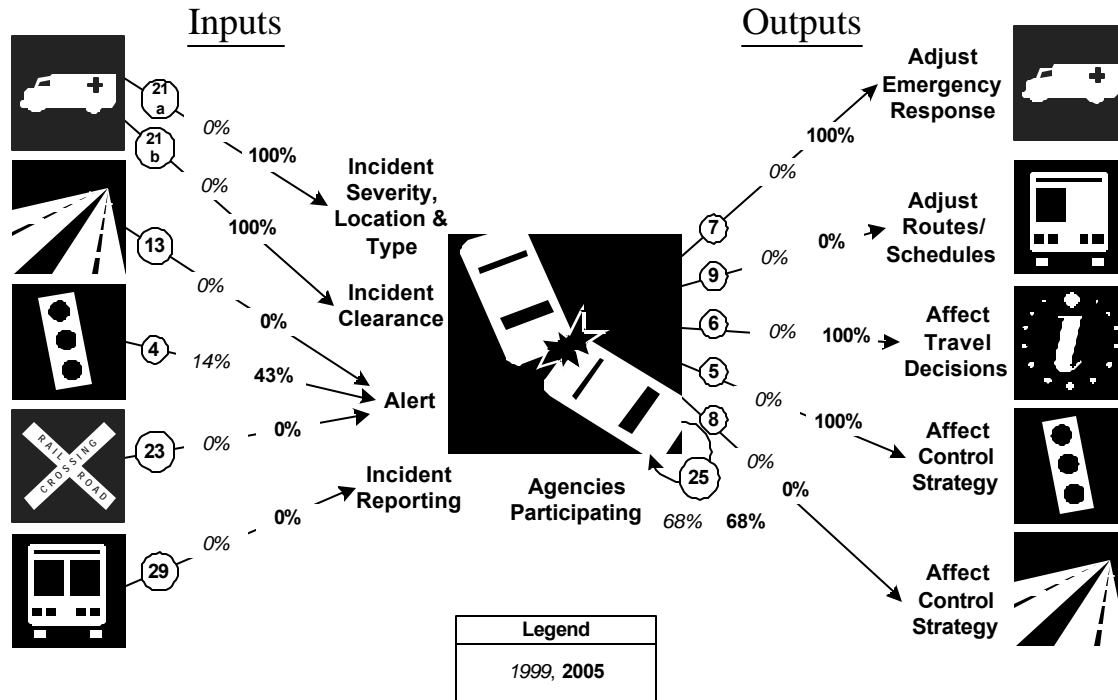
Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway miles are covered by incident detection algorithms	0	168	0%	0	168	0%	60	168	36%
Freeway miles are covered by free cellular phone calls to a dedicated number	0	168	0%	168	168	100%	168	168	100%
Freeway miles are covered by surveillance cameras.	0	168	0%	8	168	5%	60	168	36%

<b>Description</b>	<b>1997</b>			<b>1999</b>			<b>2005</b>		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway miles are covered by on-call publicly-sponsored service patrol or towing services.	22	168	13%	22	168	13%	60	168	36%
Arterial miles are covered by incident detection algorithms	0	863	0%		863			863	
Arterial miles are covered by free cellular phone calls to a dedicated number	0	863	0%		863			863	
Arterial miles are covered by surveillance cameras	3	863	0%		863		22	863	3%
Arterial miles are covered by on-call publicly-sponsored service patrol or towing services	0	863	0%		863			863	



# Incident Management Integration Indicators

## Tampa, St. Petersburg, Clearwater Incident Management Integration\*



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

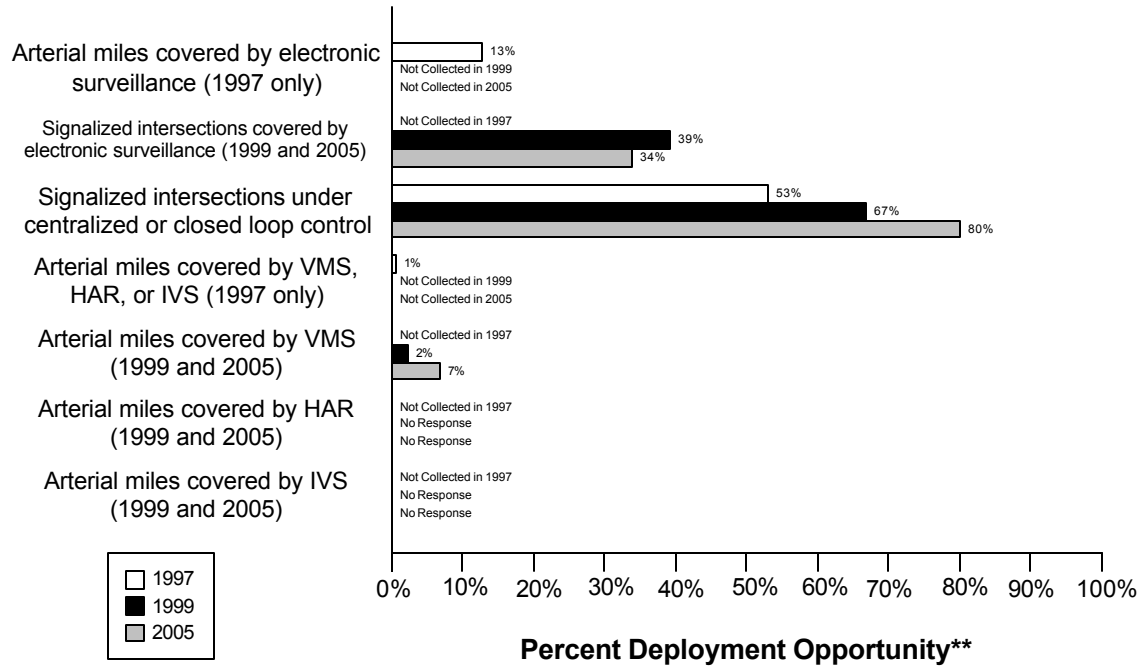
Link Description	1999	2005
21a. Incident management agencies receiving incident severity from Emergency Management	( 0 / 1 ) 0%	( 1 / 1 ) 100%
21b. Incident management agencies receiving incident clearance activities from Emergency Management	( 0 / 1 ) 0%	( 1 / 1 ) 100%
13. Freeway Management agencies sending freeway conditions to Incident Management	( 0 / 1 ) 0%	( 0 / 1 ) 0%
4. Arterial Management agencies sending arterial conditions to Incident Management	( 1 / 7 ) 14%	( 3 / 7 ) 43%
23. Arterial Management agencies receive information on highway-rail intersection crossing blockages for the purpose of managing incident response	( 0 / 7 ) 0%	( 0 / 7 ) 0%
29. Transit Management agencies report traffic incidents as part of an organized regional incident management program	( 0 / 2 ) 0%	( 0 / 2 ) 0%
7. Incident management agencies transfer information describing incident severity, location, and type to Emergency Management agencies	( 0 / 1 ) 0%	( 1 / 1 ) 100%

<b>Link Description</b>	<b>1999</b>	<b>2005</b>
9. Incident Management agencies transfer information describing incident severity, location, and type to Transit Management agencies	( 0/ 1) 0%	( 0/ 1) 0%
6. Incident Management agencies disseminate information describing incident severity, location, and type to the public	( 0/ 1) 0%	( 1/ 1) 100%
5. Incident Management agencies transfer information describing incident severity, location, and type to Arterial Management agencies	( 0/ 1) 0%	( 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	( 15/ 22) 68%	( 15/ 22) 68%

# Arterial Management Component Indicators

Data as of 5/1/00

## Tampa, St. Petersburg, Clearwater Arterial Management\*



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

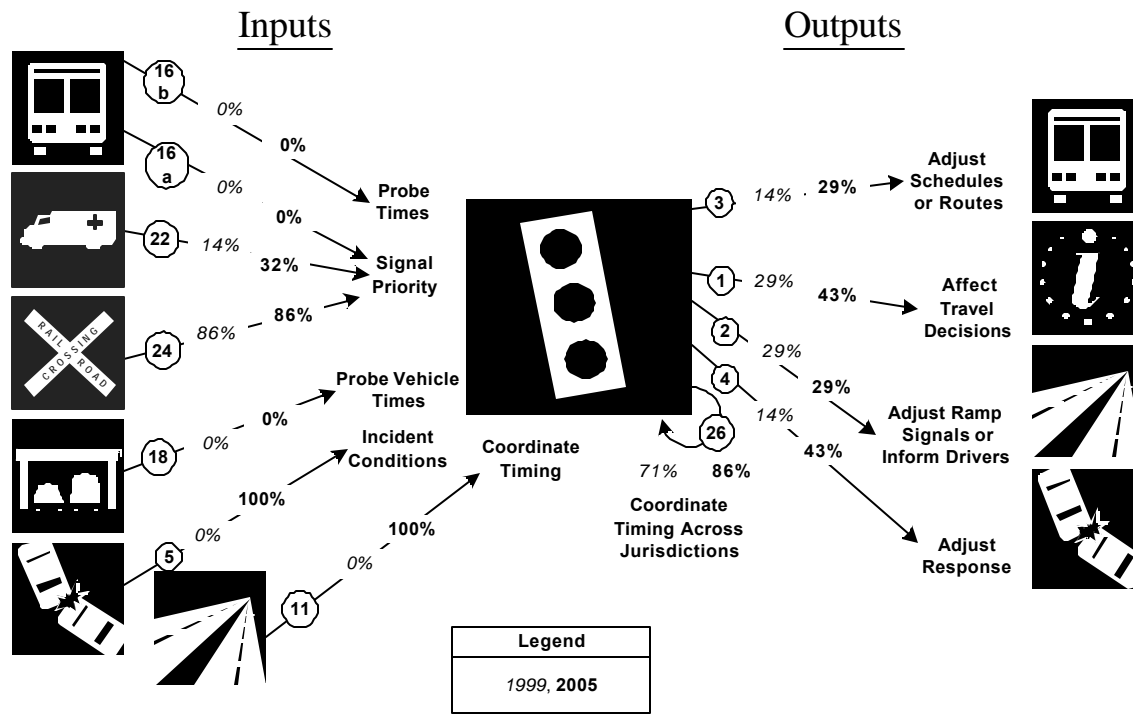
\*\* Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Arterial miles covered by electronic surveillance	111	863	13%						
Signalized intersections are covered by electronic surveillance for monitoring traffic flow				732	1867	39%	582	1712	34%
Signalized intersections are under centralized or closed loop control	1682	3166	53%	1249	1867	67%	1373	1712	80%
Arterial miles are covered by VMS, HAR, or IVS	6	863	1%						

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Arterial miles are covered by VMS				20	863	2%	58	863	7%
Arterial miles are covered by HAR					863			863	
Arterial miles are covered by IVS					863			863	

# Arterial Management Integration Indicators

## Tampa, St. Petersburg, Clearwater Arterial Management Integration\*



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

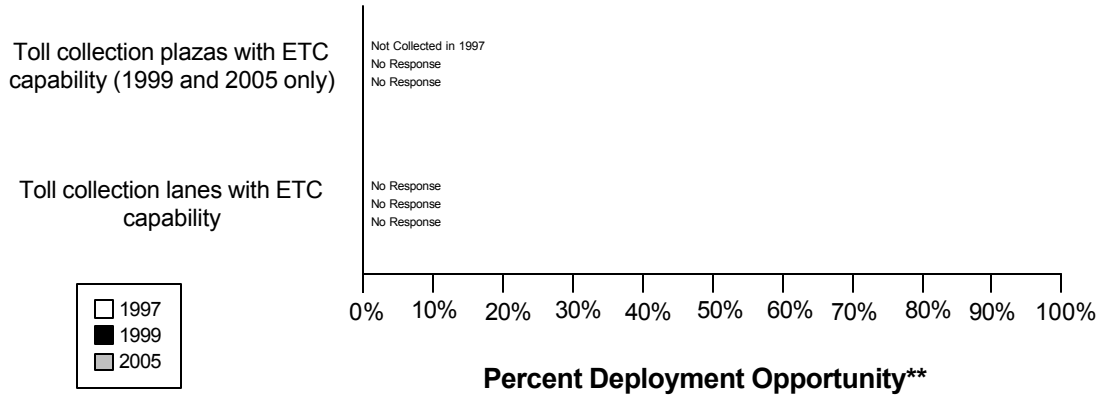
Link Description	1999	2005
16a. Transit management agencies with vehicles equipped with traffic signal priority	( 0/ 2) 0%	( 0/ 2) 0%
16b. Transit Management agencies have vehicles equipped as probes on arterials	( 0/ 2) 0%	( 0/ 2) 0%
22. Emergency Management agencies have vehicles equipped with traffic signal preemption capability	( 3/ 22) 14%	( 7/ 22) 32%
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	( 6/ 7) 86%	( 6/ 7) 86%
18. Number of Arterial Management agencies receiving information from vehicle probes	( 0/ 7) 0%	( 0/ 7) 0%
5. Incident Management agencies transfer information describing incident severity, location, and type to Arterial Management	( 0/ 1) 0%	( 1/ 1) 100%
11. Freeway Management agencies transfer freeway travel times, speeds, and conditions to Arterial Management agencies	( 0/ 1) 0%	( 1/ 1) 100%

<b>Link Description</b>	<b>1999</b>	<b>2005</b>
3. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Transit Management	( 1 / 7) 14%	( 2 / 7) 29%
1. Arterial Management agencies disseminate arterial travel times, speeds, and conditions to the public	( 2 / 7) 29%	( 3 / 7) 43%
2. Arterial Management agencies send traffic condition information to Freeway Management	( 2 / 7) 29%	( 2 / 7) 29%
4. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Incident Management	( 1 / 7) 14%	( 3 / 7) 43%
26. Arterial Management agencies under cooperative agreement to share traffic signal timing for coordinated response	( 5 / 7) 71%	( 6 / 7) 86%

# Electronic Toll Collection Component Indicators

Data as of 5/1/00

## Tampa, St. Petersburg, Clearwater Electronic Toll Collection\*



\* 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.

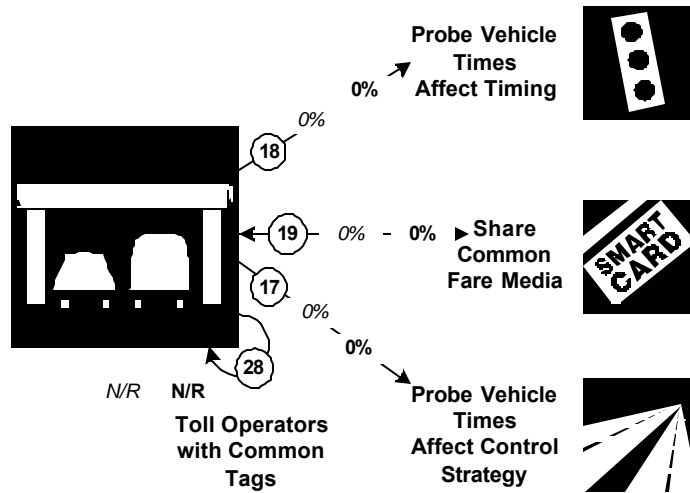
Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Toll collection plazas with ETC capability									
Toll collection lanes with ETC capability									

## Electronic Toll Collection Integration Indicators

# Tampa, St. Petersburg, Clearwater 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

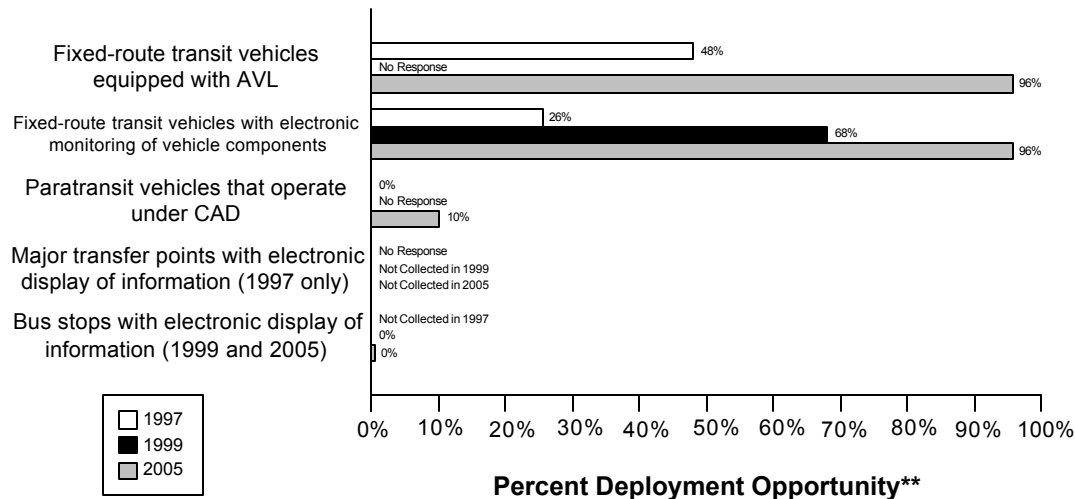
Link Description	1999	2005
18. Number of Arterial Management agencies receiving information from vehicle probes	( 0/ 7) 0%	( 0/ 7) 0%
19. Transit agencies that accept electronic payment through the use of electronic toll collection media	( 0/ 2) 0%	( 0/ 2) 0%
17. Freeway Management agencies receiving 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

## Tampa, St. Petersburg, Clearwater Transit Management\*



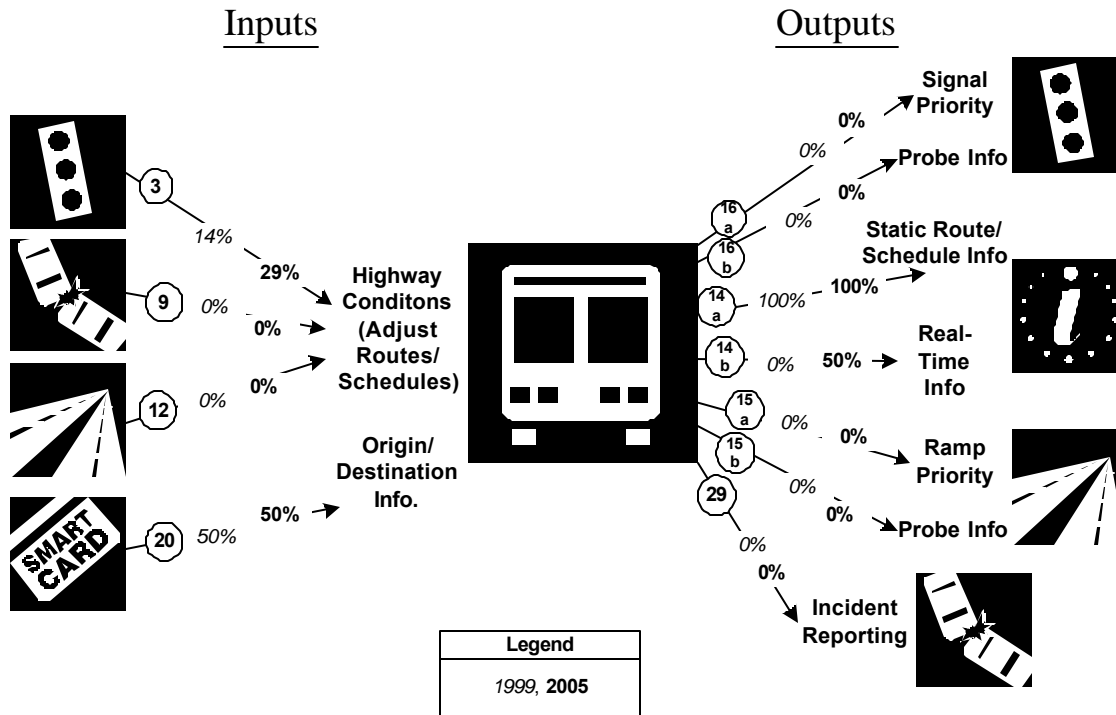
\* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity.

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

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Fixed-route transit vehicles are equipped with AVL	175	364	48%		153		175	183	96%
Fixed-route transit vehicles are equipped with electronic monitoring of vehicle component	93	364	26%	104	153	68%	175	183	96%
Paratransit vehicles operate under computer-aided dispatch	0	514	0%		195		25	245	10%
Percent fixed-route transfer locations with electronic display of information	0	0							
Bus stops display information to the public				0	40	0%	5	1010	0%

## Transit Management Integration Indicators

### Tampa, St. Petersburg, Clearwater Transit Management Integration\*



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

Link Description	1999	2005
3. Arterial Management agencies transfer arterial travel times, speeds, and conditions to Transit Management	( 1 / 7 ) 14%	( 2 / 7 ) 29%
9. Incident management agencies transfer information describing incident severity, location, and type to Transit Management	( 0 / 1 ) 0%	( 0 / 1 ) 0%
12. Freeway Management agencies transfer freeway travel times, speeds, and conditions to Transit Management	( 0 / 1 ) 0%	( 0 / 1 ) 0%
20. Transit Management agencies using Electronic Fare Payment data in transit service planning	( 1 / 2 ) 50%	( 1 / 2 ) 50%
16a. Transit Management agencies have vehicles equipped with traffic signal priority capability	( 0 / 2 ) 0%	( 0 / 2 ) 0%
16b. Transit Management agencies have vehicles equipped as probes on arterials	( 0 / 2 ) 0%	( 0 / 2 ) 0%
14a. Transit Management agencies disseminate information describing transit routes, schedules, and fares to travelers	( 2 / 2 ) 100%	( 2 / 2 ) 100%
14b. Transit Management agencies disseminate information describing schedule/route adherence to travelers	( 0 / 2 ) 0%	( 1 / 2 ) 50%

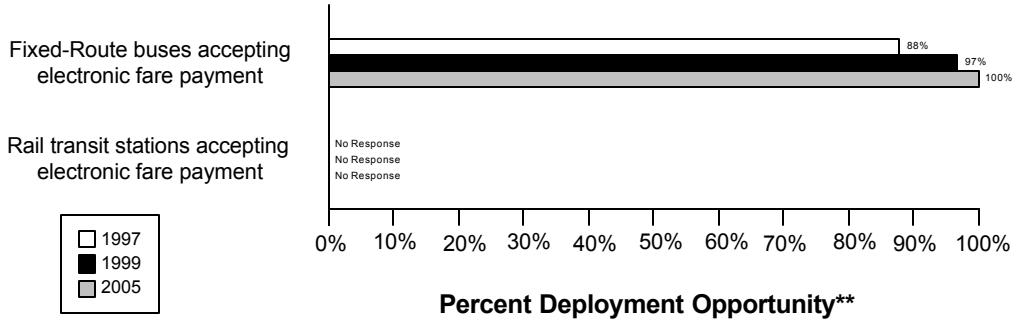
<b>Link Description</b>	<b>1999</b>	<b>2005</b>
15a. Transit Management agencies have vehicles equipped with ramp meter priority capability	( 0/ 2) 0%	( 0/ 2) 0%
15b. Transit Management agencies have vehicles equipped as probes on freeways	( 0/ 2) 0%	( 0/ 2) 0%
29. Transit Management agencies that report traffic incidents as part of an organized regional Incident Management program	( 0/ 2) 0%	( 0/ 2) 0%

## Electronic Fare Payment Component Indicators

Data as of 5/1/00

### Tampa, St. Petersburg, Clearwater

#### Electronic Fare Payment\*



\* 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.

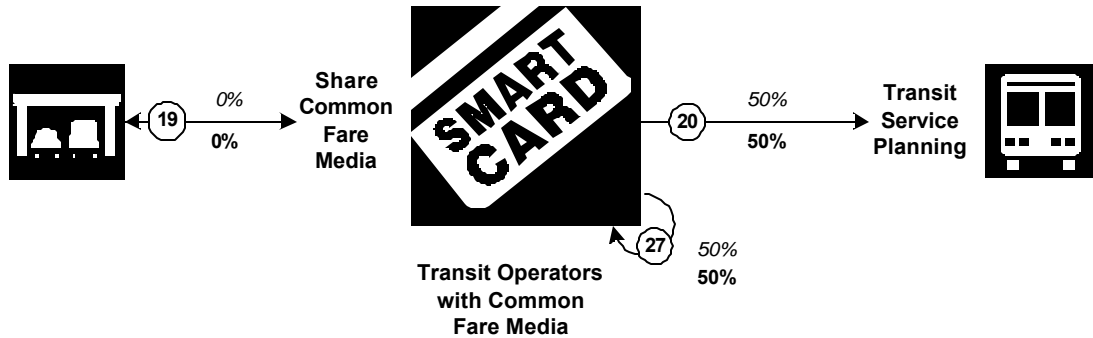
Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Fixed-route transit vehicles that accept electronic payment	320	364	88%	148	153	97%	193	183	105%
Rail transit stations that accept electronic payment	0	0			0			0	

## Electronic Fare Payment Integration Indicators

# Tampa, St. Petersburg, Clearwater 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

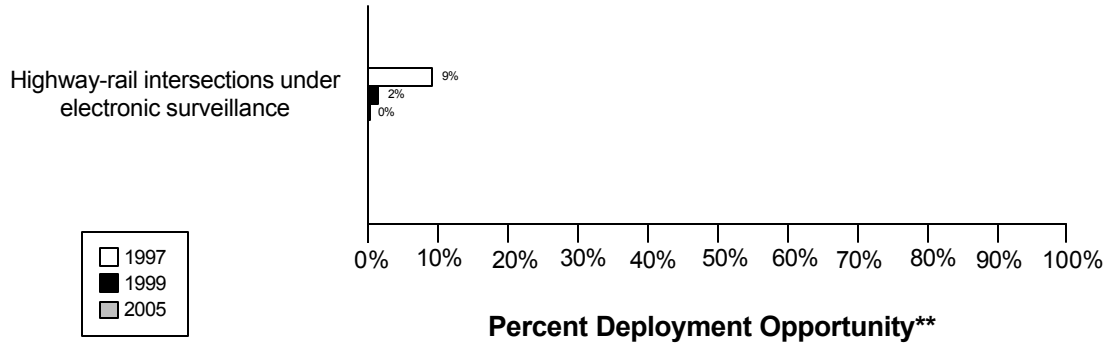
Link Description	1999	2005
19. Transit agencies that accept electronic payment through the use of electronic toll collection media	( 0 / 2 ) 0%	( 0 / 2 ) 0%
20. Transit Management agencies use Electronic Fare Payment data in transit service planning	( 1 / 2 ) 50%	( 1 / 2 ) 50%
27. Transit Management agencies that use the same electronic payment system	( 1 / 2 ) 50%	( 1 / 2 ) 50%

# Highway Rail Intersection Component Indicators

Data as of 5/1/00

## Tampa, St. Petersburg, Clearwater

### 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.

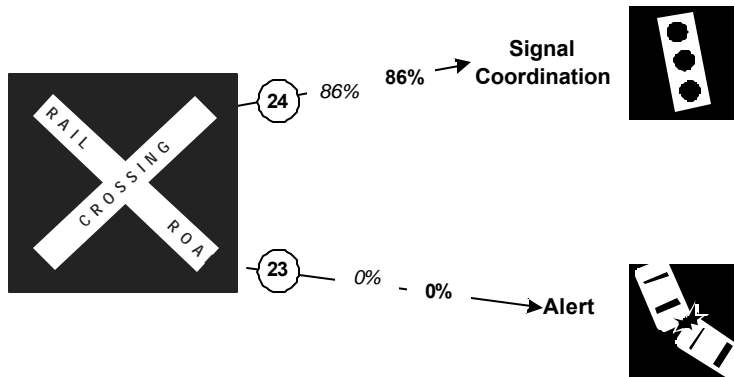
Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Highway-rail intersections are under electronic surveillance	3	32	9%	4	249	2%	1	249	0%

## Highway Rail Intersection Integration Indicators

# Tampa, St. Petersburg, Clearwater Highway Rail Intersections Integration\*

Inputs

Outputs



Legend
1999, 2005

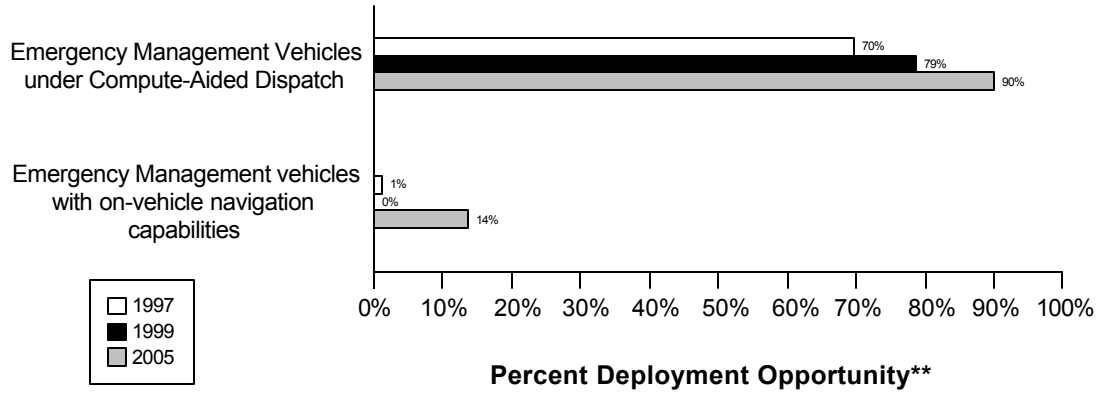
\* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

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	( 6 / 7 ) 86%	( 6 / 7 ) 86%
23. Arterial Management agencies receive information on highway-rail intersection crossing blockages for the purpose of managing incident response	( 0 / 7 ) 0%	( 0 / 7 ) 0%

# Emergency Management Component Indicators

Data as of 5/1/00

## Tampa, St. Petersburg, Clearwater 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	3514	5034	70%	2902	3689	79%	2246	2496	90%
Public sector emergency vehicles that have in-vehicle route guidance capability	56	5034	1%	3	3689	0%	340	2496	14%

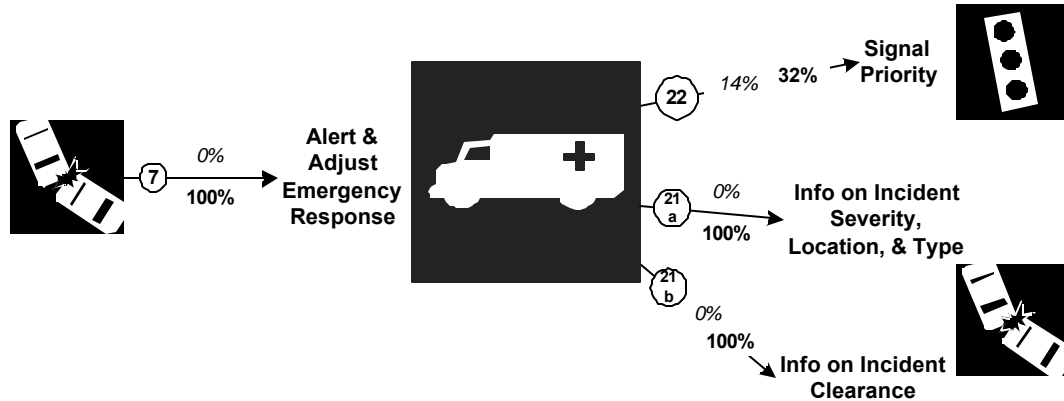


## Emergency Management Integration Indicators

# Tampa, St. Petersburg, Clearwater Emergency Management Integration\*

Inputs

Outputs



Legend
1999, 2005

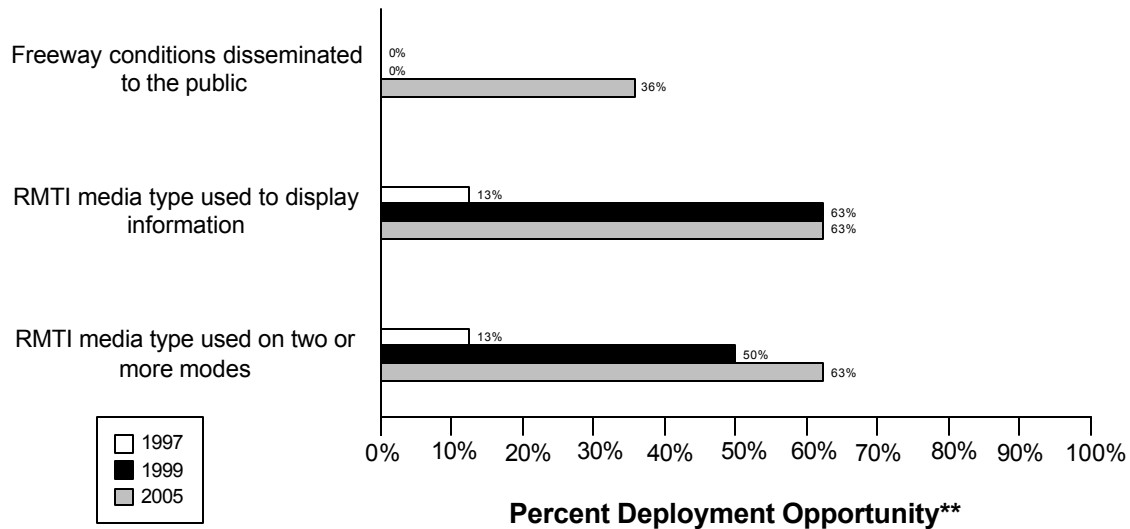
\* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

Link Description	1999	2005
7. Freeway Management agencies transfer information describing incident severity, location, and type to Emergency Management agencies	( 0/ 1) 0%	( 1/ 1) 100%
22. Emergency Management agencies have vehicles equipped with traffic signal preemption capability	( 3/ 22) 14%	( 7/ 22) 32%
21a. Freeway Management agencies receive incident severity, location, and type data from Emergency Management agencies	( 0/ 1) 0%	( 1/ 1) 100%
21b. Freeway Management agencies receive incident clearance activities information from Emergency Management agencies	( 0/ 1) 0%	( 1/ 1) 100%

## Regional Multimodal Traveler Information Component Indicators

Data as of 5/1/00

### Tampa, St. Petersburg, Clearwater Regional Multimodal Traveler Information\*



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

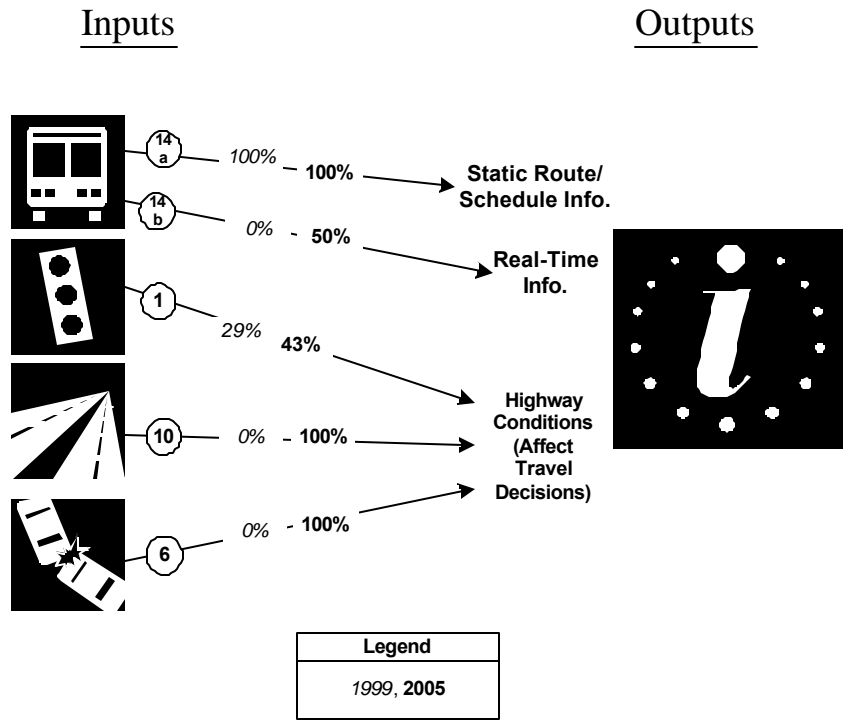
\*\* Deployment opportunity reflects potential totals that do not necessarily reflect actual need.

Description	1997			1999			2005		
	Num	Den	%	Num	Den	%	Num	Den	%
Freeway conditions disseminated to travelers	0	168	0%	0	168	0%	60	168	36%
Possible RMTI media types are used to display information to travelers	1	8	13%	5	8	63%	5	8	63%
Possible RMTI media are used to display information on <i>two or more modes</i> to travelers	1	8	13%	4	8	50%	5	8	63%

# Regional Multimodal Traveler Information Integration Indicators

## Tampa, St. Petersburg, Clearwater

### Regional Multimodal Traveler Information Integration\*

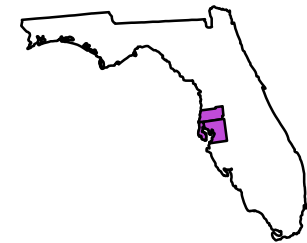
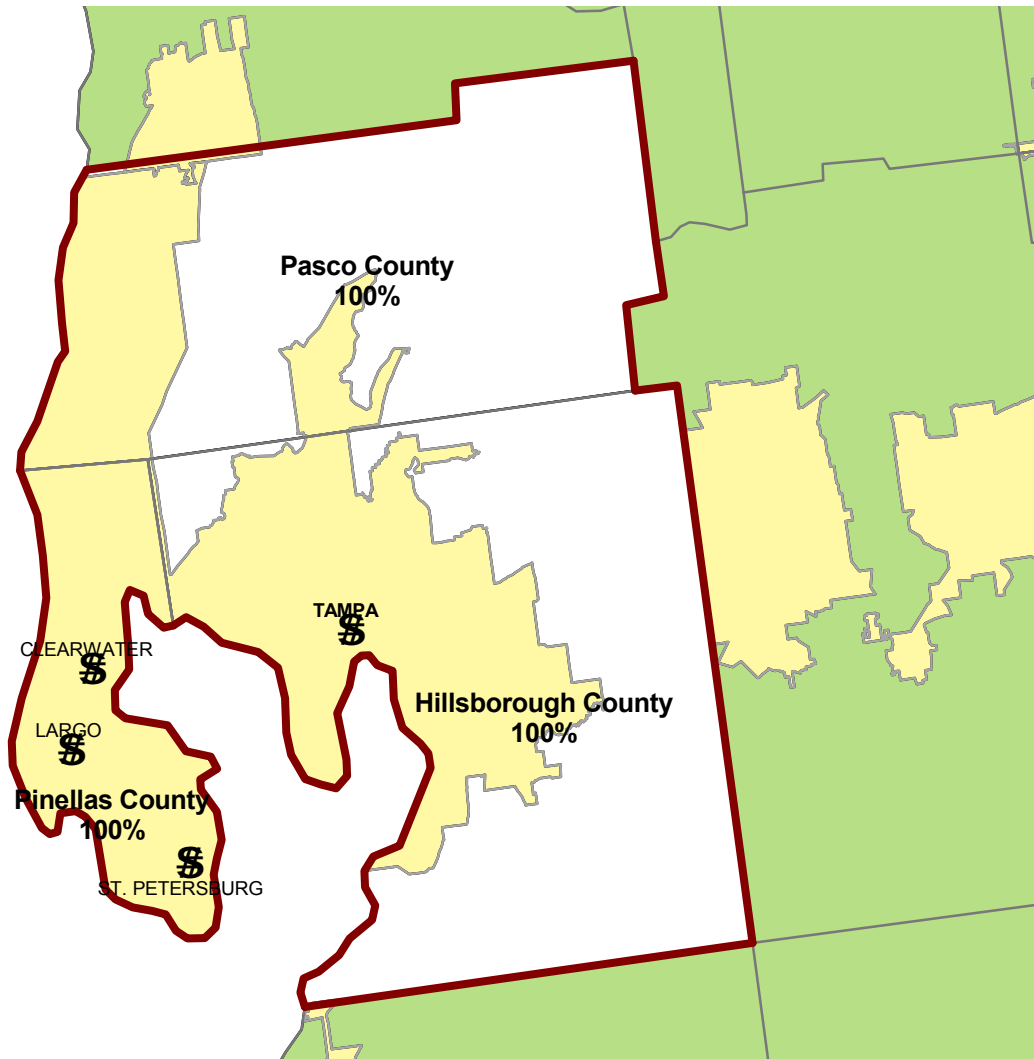


\* Indicators are single surrogates that do not necessarily reflect the full breadth of ITS deployment activity

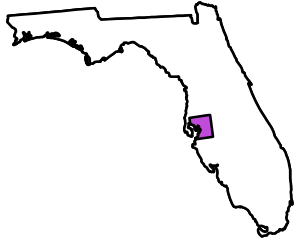
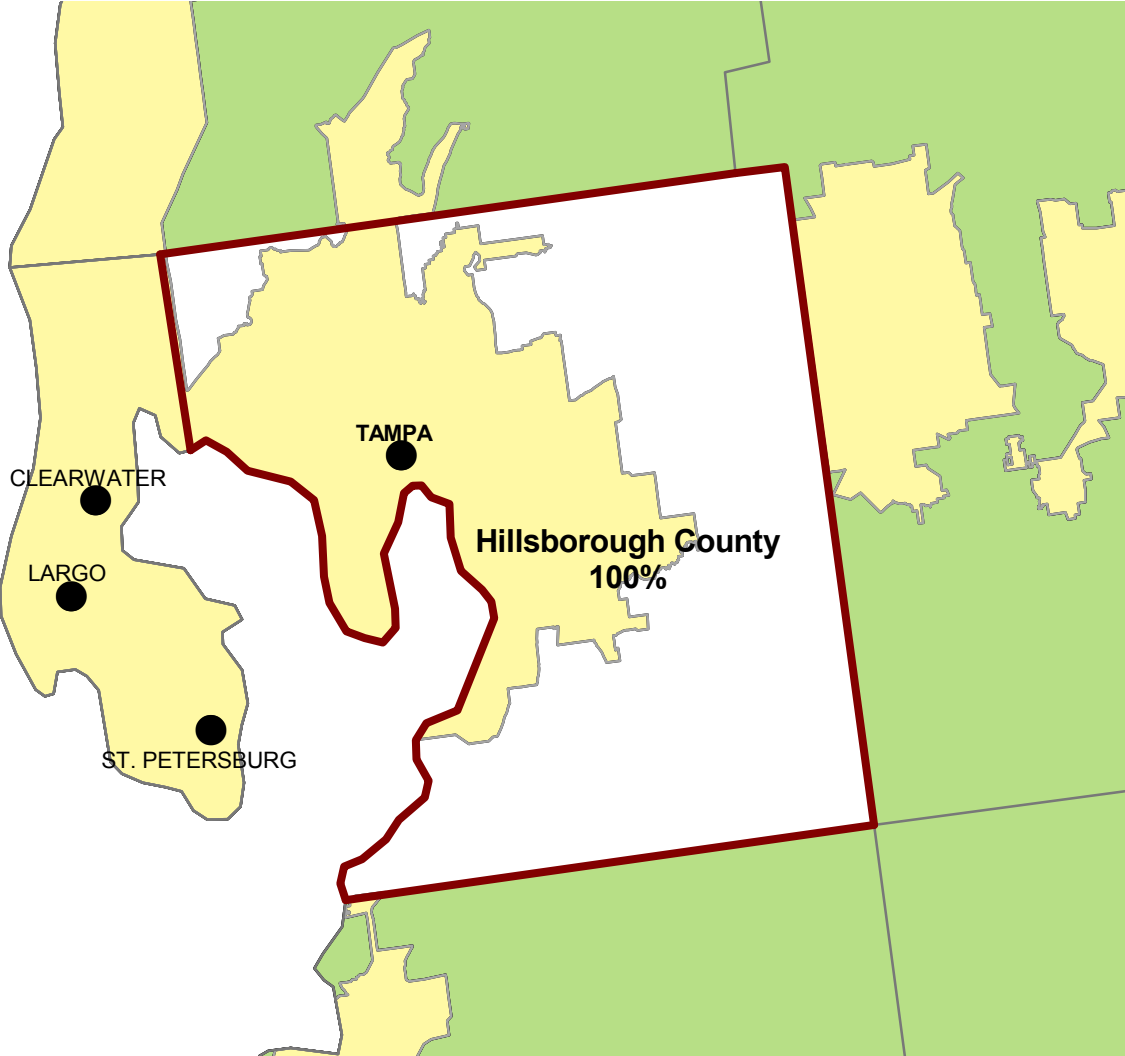
Link Description	1999	2005
14a. Transit Management agencies that disseminate information describing transit routes, schedules, and fares to travelers	( 2/ 2) 100%	( 2/ 2) 100%
14b. Transit Management agencies that disseminate information describing schedule/route adherence to travelers	( 0/ 2) 0%	( 1/ 2) 50%
1. Arterial Management agencies that disseminate arterial travel times, speeds, and conditions to the public	( 2/ 7) 29%	( 3/ 7) 43%
10. Freeway Management agencies that disseminate freeway travel times, speeds, and conditions to travelers	( 0/ 1) 0%	( 1/ 1) 100%
6. Incident Management agencies that disseminate information describing incident severity, location, and type to the public	( 0/ 1) 0%	( 1/ 1) 100%

**Appendix A**  
**Survey Coverage Area**

# HILLSBOROUGH COUNTY MPO, PASCO COUNTY MPO, AND PINELLAS COUNTY MPO, FL

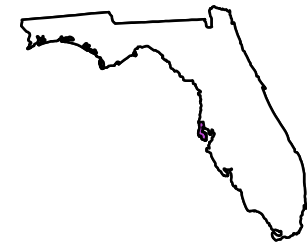
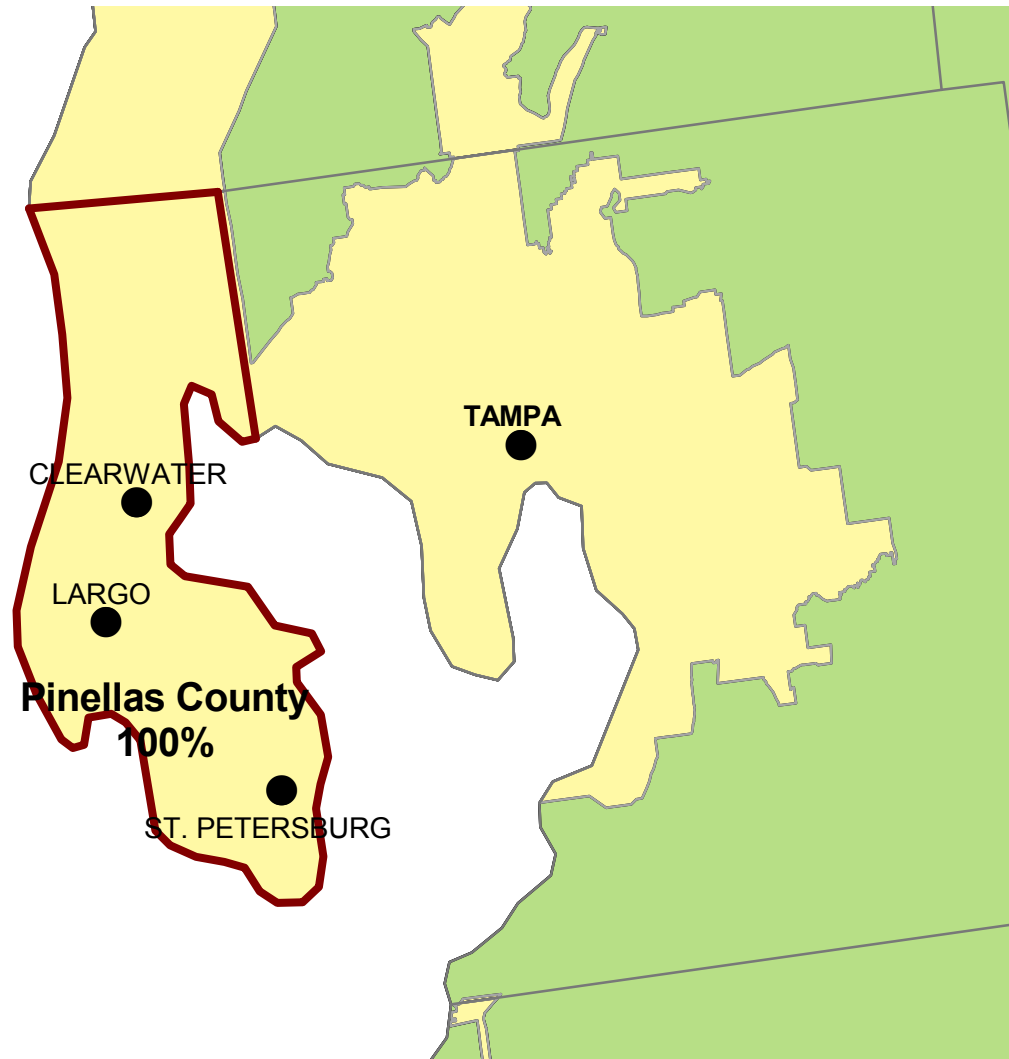


# HILLSBOROUGH COUNTY MPO, FL



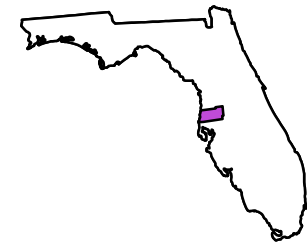
- City Included in Surveys
  - ▬ Metropolitan Planning Area Boundary
  - ▬ County Boundary
  - Urbanized Area
  - Outside Survey Area
- Percentage on the Map Represents Percentage of County Population Included within MPO Boundary

# PINELLAS COUNTY MPO, FL



- 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

# PASCO COUNTY MPO, FL



- 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
<b>TAMPA, ST. PETERSBURG, CLEARWATER</b>						
<b>Arterial Management</b>						
Pasco County	(727) 847-8139	(727) 847-8064	8/5/1999	9/20/1999	8/14/1997	8/19/1997
Clearwater City	(727) 562-4770	(727) 562-4755	8/5/1999	9/27/1999	8/14/1997	8/21/1997
St. Petersburg City	(727) 893-7426	(727) 893-7212	8/5/1999	9/20/1999	8/14/1997	8/28/1997
Tampa City	(813) 274-8303	(813) 274-8901	8/5/1999	10/15/1999	8/14/1997	10/14/1997
Hillsborough County	(813) 272-7021	(813) 276-2731	8/5/1999	8/23/1999	8/14/1997	9/4/1997
Pinellas County	(727) 464-8907	(727) 464-8803	8/5/1999	11/30/1999	8/14/1997	9/2/1997
Florida Department of Transportation	813-975-6612	813-975-6278	8/5/1999	8/16/1999		
<b>Emergency Management</b>						
Plant City Fire Department	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999		
Clearwater Fire & Rescue	727-562-4334	727-562-5327	6/17/1999	8/19/1999	8/14/1997	10/13/1997
American Medical Response - West	727-582-2168	727-582-2554	6/17/1999	6/22/1999		
Pasco County Sheriff Department	(813) 929-6095	813-929-6050	6/17/1999	8/19/1999	8/14/1997	7/6/1998
Plant City Police Department	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999		
Temple Terrace Police Department	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999		
Largo Police Department	(727) 587-6717	727-586-0416	6/17/1999		8/14/1997	8/26/1997
St. Petersburg City Fire & Rescue (Emergency	727-893-7664	727-892-5468	8/18/1999	9/3/1999	8/14/1997	8/29/1997
Temple Terrace Fire Department	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999		
St. Petersburg City Fire Department	(727) 893-7275	(727) 893-7935	8/11/1999	8/20/1999	8/14/1997	8/29/1997
Clearwater Fire & Rescue (Emergency Medical)	727-562-4334	727-562-5327	6/17/1999	8/19/1999	8/14/1997	10/13/1997
Hillsborough County Sheriffs Department	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999	8/14/1997	8/20/1997
Temple Terrace Fire Department - Emergency	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999		
Hillsborough County Fire Rescue - Fire	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999	8/14/1997	9/10/1997
Tampa City Fire Department	(813) 274-7011	(813) 274-7026	6/17/1999	8/11/1999	8/14/1997	8/28/1997
Tampa City Fire Rescue & Emergency Medical	(813) 274-7011	(813) 274-7026	6/17/1999	8/11/1999	8/14/1997	8/28/1997
Tampa City Police Department	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999	8/14/1997	9/3/1997
Clearwater Police Department	727-562-4343	727-562-4156	6/17/1999	6/23/1999	8/14/1997	8/26/1997
Largo Fire & EMS Department	(727) 587-6714	(727) 587-6798	6/17/1999	6/17/1999	8/14/1997	8/26/1997
Pinellas County Sheriff's Department	727-582-6401	727-582-6769	6/17/1999	7/22/1999	8/14/1997	8/19/1997
Tampa City Water Rescue	(813) 274-7011	(813) 274-7026	6/17/1999	8/11/1999	8/14/1997	8/28/1997
Hillsborough County Fire Rescue - HIT	(813) 272-6900	(813) 272-6878	6/17/1999	8/11/1999	8/14/1997	9/10/1997
St. Petersburg City Police Department	727-893-7533	727-892-5040	6/17/1999	9/14/1999	8/14/1997	8/27/1997

Agency Name	Phone	Fax	1999		1997	
			Out	In	Out	In
<b>Freeway Management</b>						
Florida Department of Transportation	813-975-6612	813-975-6278	8/5/1999	8/16/1999	8/14/1997	8/26/1997
<b>MPO</b>						
Pasco County Metro Planning Organization	(727) 847-8132	(727) 847-8084	7/15/1999	9/13/1999		
Hillsborough County Metropolitan Planning	(813) 272-5940	(813) 272-6258	7/15/1999	8/16/1999		
Pinellas County Metro Planning Organization	(727) 464-4751	(727) 464-4155	7/15/1999	8/19/1999		
<b>Transit Management</b>						
Hillsborough Area Regional Transit Authority	(813) 623-5835	(813) 621-1653	8/9/1999		8/14/1997	10/21/1997
Pinellas Suncoast Transit Authority	(727) 530-9921	(727) 535-5580	8/9/1999	8/23/1999	7/21/1997	7/22/1997
Pasco County Public Transportation (PCPT)	(727) 834-3200	(727) 834-3344	8/9/1999	10/4/1999	7/21/1997	7/28/1997

**Appendix C**  
**Freeway Management Components**

Freeway Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Florida Department of Transportation	
	1999	2005
Agency Returned Survey?	Yes	
<b>FREEWAY MANAGEMENT SECTION</b>		
Number of freeway centerline miles that agency owns or maintains	172	
Number of freeway centerline miles that is used for planning	75	
Number of freeway entrance ramps that agency owns, operates or maintains	186	
Number of freeway entrance ramps that is used for planning	100	
<b>Type of facilities used to conduct freeway/incident management activities</b>		
Activities housed in a free-standing dedicated building?	No	
Activities housed in a building shared with other activities?	Yes	
Activities conducted in a dedicated control room?	Yes	
Control room contains operator console(s)?	No	
Control room contains electronic wall map?	No	
Control room contains CCTV display(s)?	Yes	
Activities conducted in a room containing workstations or PCs that manage traffic?	No	
Facilities are electronically linked to other transportation mgt facilities?	No	
<b>Staffing and hours of operation of freeway/incident management activities</b>		
Number of full-time agency staff members	NR	
Number of full time contractor staff members	NR	
Number of part-time agency staff members	1	
Number of part-time contractor staff members	NR	
Staffed 24 hours day by agency staff or by others	agency	
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	Yes	
Agency staff dedicated to transportation management duty	No	
<b>Types of operations conducted for freeway/incident management</b>		
Incident detection and management?	No	
This metropolitan area?	No	
Other metropolitan area?	No	
Statewide?	No	
Monitoring and troubleshooting status of system components?	No	
Manual override of ramp metering rates at freeway on-ramps?	No	
Operating transportation management roadside devices?	Yes	
Radio communications with other agencies?	Yes	
Exchange of electronic data with other agencies such as computer aided dispatch?	No	
<b>Real-Time Traffic Data Collection Technologies</b>		
Total number of miles under surveillance with real-time data collection tech.	0	60

Freeway Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Florida Department of Transportation	
	1999	2005
<u>Number of Stations with data collection technologies</u>		
Loop detectors	0	45
Video imaging detectors	0	45
Probe readers (elec. toll tags, transit vehicles, other technology)	0	0
Microwave radar	0	0
Other (e.g., acoustic detectors)	0	0
<u>Number of Miles covered with data collection technologies</u>		
Loop detectors	0	30
Video imaging detectors	0	30
Probe readers (elec. toll tags, transit vehicles, other technology)	0	0
Microwave radar	0	0
Other (e.g., acoustic detectors)	0	0
<b>Variable Message Signs (VMS) on Freeways</b>		
Candidate locations for deployment of VMS where VMS has been deployed	0	45
Candidate locations for deployment of VMS	0	50
<b>Roadside Technologies used to Distribute Traveler Information</b>		
Total number of miles where information is distributed	22	10
<u>Number deployed</u>		
Highway advisory radio	3	3
In-vehicle signing	0	0
Portable variable message signs	6	6
Other	0	0
<u>Miles covered</u>		
Highway advisory radio	22	10
In-vehicle signing	0	0
Portable variable message signs	NR	NR
Other	0	0
<b>Ramp Meters on Freeways</b>		
Number of entrance ramp meters operated under isolated control	NR	NR
Number of entrance ramp meters operated under central control	NR	NR
Number of entrance ramp meters that provide preemption for emergency vehicles	NR	NR
Number of entrance ramp meters that provide priority for transit vehicles	NR	NR
Total number of metered ramps	NR	NR
<b>Freeway centerline miles under lane control</b>	NR	NR
<b>Communication Links</b>		
<u>Freeway centerline miles covered by the following type of communication</u>		
Twisted pair cable	0	0
Coaxial cable	0	0
Fiber-optic cable	8	68
Microwave radio	0	0
Other	0	0
<b>ITS Standards Used Related to Freeway Management</b>		
ATMS Data Dictionary Sections 1 and 2 (ITE TM 1.01)	No	

Freeway Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Florida Department of Transportation	
	1999	2005
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	
NTICP Object Definitions for Dynamic Message Signs (AASHTO TS 3.6)	Yes	
NTICP Object Definitions for Highway Advisory Radio (AASHTO TS 3.HAR)	No	
NTICP Object Definitions for Ramp Meter Control (AASHTO TS 3.RMC)	No	
NTICP Object Definitions for Transportation Sensor Systems (AASHTO TS 3.TSS)	No	
NTICP Object Definitions for Video Camera Control (AASHTO TS 3.VCC)	No	
Would agency be willing to participate in testing of ITS Standards?	Yes	
<b>Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?</b>	No	
<b>INCIDENT MANAGEMENT SECTION</b>		
<b>Use of Service Patrols to Assist in Detection and Response to Incidents</b>		
Publicly operated service patrol vehicles	No	
Privately operated service patrol vehicles operated under public contract	Yes	
Total number of freeway miles patrolled by these services	22	60
<b>Miles Covered by Methods to Detect and Verify Incidents</b>		
Free cellular phone call to a dedicated phone number other than 911	172	172
Police patrols	NR	NR
Computer algorithms linked to traffic surveillance equipment	0	60
CCTV	8	60
Private sector sources (e.g., Shadow Traffic, SmartRoutes)	NR	NR
Other (e.g., free cell phone call to an area radio system, etc.)	NR	NR
<b>Procedures in place for Freeway Incident Response?</b>		
Working agreement(s)/arrangement(s) with other agencies	No	
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	
<b>Central focal point for facilitating the two-way flow of information among agencies responding to an incident?</b>		
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	
<b>Methods of Communication Used On-Site at an Incident</b>		
<u>Police</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)	No	

Freeway Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Florida Department of Transportation	
	1999	2005
<u>Fire</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)	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)	No	
<u>Towing</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)	No	
<b>Which police agencies typically respond to incidents on freeways?</b>		
State Police	Yes	
County Police or Sheriff	Yes	
City Police	Yes	
<b>Who provides on-site emergency medical response?</b>		
Fire	Yes	
Emergency Management Service Agency	No	
Private hospital	No	
<b>Has a multi-agency contact list been developed in area containing the names, phone numbers, etc. for the appropriate response personnel?</b>		
	Yes	
<b>Is the Incident Command System used to manage incident scenes?</b>		
	No	
<b>Is there a legal specification by state law or formal agreement as to who is "in charge" at the incident scene?</b>		
Specified by state law?	No	
Formal agreement?	Yes	
Not specified or don't know?	No	
<b>On-scene command post used to manage activities of responding agencies?</b>		
Are there communication linkages to a communications traffic/freeway mgt center?	NR	
<b>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?</b>		
	No	
<b>Respondents protected through law or court opinion for liability claims for damages to vehicles or cargoes during clearance activities?</b>		
	Yes	
<b>Are overturned tank trucks, which are intact and not leaking, uprighted</b>		



Freeway Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Florida Department of Transportation	
	1999	2005
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?	Yes	
Have laws or policies regarding the removal of stalled/abandoned vehicles from freeway shoulders?	No	
Hours abandoned vehicles are allowed to remain on a freeway shoulder?	>36	
Have policies or procedures for quick removal of vehicles?	No	
Is Total Station equipment used to investigate major incidents?	No	
<b>Handling of Towing Responses to Incidents</b>		
Formal contract based on qualifications?	No	
Rotation with companies under contract?	No	
Separate lists kept for light and heavy response and for specialty recovery?	NR	
Rotation list with minimal qualifications?	Yes	
In towing qualifications, do you require towers to be certified under the Towing and Recovery Ass. of America's National Drivers Cert. Program?	No	
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: Tampa, St. Petersburg, Clearwater

Agency Name	Florida Department of Transportation	
	1999	2005
Agency Returned Survey?	Yes	
<b>Freeway Management Section</b>		
<b>Agencies your agency provides freeway travel times, speeds, and conditions information, share infrastructure or coordinates operation</b>		
<b><i>Freeway Management Agencies</i></b>		
Provide Information	None listed	Florida Highway Patrol
Share Infrastructure	None listed	Florida Highway Patrol
Coordinate Operation	None listed	Florida Highway Patrol
<b><i>Incident Management Agencies</i></b>		
Provide Information	None listed	Florida Highway Patrol
Share Infrastructure	None listed	Florida Highway Patrol
Coordinate Operation	None listed	Florida Highway Patrol
<b><i>Arterial Management Agencies</i></b>		
Provide Information	None listed	Hillsborough County, Pinellas County, St. Petersburg City, Tampa City
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b><i>Public Transit Operators</i></b>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b><u>Receiving real-time information via electronic means from others</u></b>		
<b><i>Incident Management agencies from which your agency receives incident severity, location, and type information</i></b>	None listed	Florida Highway Patrol
<b><i>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</i></b>	None listed	Hillsborough County, St. Petersburg City, Tampa City, Pinellas County
<b><i>Public Transit operators from which your agency receives freeway travel times derived from vehicle probes</i></b>	None listed	None listed
<b><i>Toll Collection agencies from which your agency receives freeway travel times derived from vehicles probes</i></b>	None listed	None listed
<b>Freeway Incident Management Section</b>		
<b>Agencies your agency provides incident severity, location, and type info. and/or shares infrastructure and/or coordinates operation</b>		
<b><i>Arterial Management Agencies</i></b>		
Provide Information	None listed	Hillsborough County, Pinellas County, St. Petersburg City, Tampa City
Share Infrastructure	None listed	Hillsborough County, Pinellas County, St. Petersburg City, Tampa City
Coordinate Operation	None listed	Hillsborough County, Pinellas County, St. Petersburg City, Tampa City
<b><i>Emergency Management Agencies</i></b>		

Freeway Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Florida Department of Transportation	
	1999	2005
Provide Information	None listed	Hillsborough County Fire Rescue - Fire Suppression, Hillsborough County Sheriffs Department, Pinellas County Sheriffs Department, St. Petersburg City Fire Department, St. Petersburg City Fire & Rescue (Emergency Medic, St. Petersburg City Police Department, Tampa City Fire Rescue & Emergency Medical Service, Tampa City Police Department
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Freeway Management Agencies</b>		
Provide Information	None listed	Florida Highway Patrol
Share Infrastructure	None listed	Florida Highway Patrol
Coordinate Operation	None listed	Florida Highway Patrol
<b>Public Transit Operators</b>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Receiving real-time information via electronic means from others</b>		
<b>Emergency Management agencies from which your agency receives incident clearance and/or incident severity and type</b>		
Receive Arterial Incident Clearance Information	None listed	Hillsborough County Fire Rescue - Fire Suppression, Hillsborough County Sheriffs Department, St. Petersburg City Fire & Rescue (Emergency Medic, St. Petersburg City Police Department, Tampa City Fire Department, Tampa City Police Department, Tampa City Fire Department
Receive Arterial Incident Severity Information	None listed	Hillsborough County Fire Rescue - Fire Suppression, Hillsborough County Sheriffs Department, St. Petersburg City Fire & Rescue (Emergency Medic, St. Petersburg City Police Department, Tampa City Fire Department, Tampa City Police Department, Tampa City Fire Department
<b>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</b>		
	None listed	Hillsborough County, Pinellas County, St. Petersburg City, Tampa City
<b>Freeway Management agencies from which your agency receives freeway travel times, speeds, and conditions</b>		
	None listed	Florida Highway Patrol

\*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: Tampa, St. Petersburg, Clearwater

Agency Name	Florida Department of Transportation	
	1999	2005
Agency Returned Survey?	Yes	
<b>Freeway Management Section</b>		
<b>Data collected, archived, and/or transferred to another agency</b>		
Collected by your agency	NR	Traffic volumes, Traffic speeds, Lane occupancy, Incidents, Current work zones, Scheduled work zones
Archived by your agency	NR	Traffic volumes, Traffic speeds, Lane occupancy, Incidents, Current work zones, Scheduled work zones
Transferred to another agency by your agency	NR	Traffic volumes, Traffic speeds, Lane occupancy, Incidents, Current work zones, Scheduled work zones
<b>Importance of making information available to the public</b>		
Ranked High	Incidents, Current work zones	
Ranked Medium	Traffic volumes, Traffic speeds, Scheduled work zones	
Ranked Low	Lane occupancy	
<b>Groups that make requests for the data</b>	NR	
<b>What is the data used for?</b>	NR	
<b>Methods used to disseminate freeway information to the public</b>		
Technologies your agency uses to disseminate:	NR	Internet Web sites
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR
<b>Internet web site reporting freeway conditions</b>	NR	
<b>Telephone system for reporting freeway information to the public</b>	NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR	
<b>Freeway Incident Management Section</b>		
<b>Methods used to distribute incident location and severity information to the public</b>		
Technologies your agency uses to disseminate:	NR	Internet Web sites
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR
<b>Internet web site reporting incident information</b>	NR	
<b>Telephone system for reporting incident information to the public</b>	NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR	

**Appendix F**  
**Arterial Management Components**

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Clearwater City		Florida Department of Transportation		Hillsborough County		Pasco County	
	1999	2005	1999	2005	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes		Yes		Yes	
<b>ARTERIAL MANAGEMENT SECTION</b>								
Number of arterial miles that agency owns or maintains	12		863		200		NR	
Number of arterial miles that is used for planning	54		400		700		NR	
Number of highway-rail intersections that agency maintains	20		32		197		NR	
Number of highway-rail intersections that is used for planning	25		0		400		NR	
<b>Type of facilities used to conduct arterial management activities</b>								
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		Yes		No	
Control room contains operator console(s)?	No		No		Yes		No	
Control room contains electronic wall map?	No		No		No		No	
Control room contains CCTV display(s)?	No		No		Yes		No	
Activities conducted in a room containing workstations or PCs that manage traffic?	No		Yes		No		No	
Facilities are electronically linked to other transportation mgt facilities?	No		No		No		No	
<b>Staffing and hours of operation of arterial management activities</b>								
Number of full-time agency staff members	3		NR		4		NR	
Number of full time contractor staff members	NR		NR		0		NR	
Number of part-time agency staff members	NR		1		0		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	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		Yes		Yes		No	
Agency staff dedicated to transportation management duty	Yes		No		No		No	
<b>Types of operations conducted for arterial management</b>								
Incident detection and management?	No		No		No		No	
This metropolitan area?	No		No		No		No	
Other metropolitan area?	No		No		No		No	
Monitoring and troubleshooting status of system components?	Yes		Yes		Yes		No	
Radio communications with other agencies?	No		No		No		No	
Exchange of electronic data with other agencies such as computer aided dispatch?	No		No		No		No	
Manual override of traffic signal timing plans	Yes		No		No		Yes	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	Yes		No		No		No	



Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Clearwater City		Florida Department of Transportation		Hillsborough County		Pasco County	
	1999	2005	1999	2005	1999	2005	1999	2005
<b>Describe agency's role in traffic signal control</b>	All roads in incorporated area		FDOT operates one closed loop signal system for Plant City. All other signals in MPO area are operated by the 3 county governments and 3 larger cities of Tampa, St. Petersburg, and Clearwater		All roads in county outside incorporated area		All roads in county	
<b>Traffic Signals Operated by Agency</b>								
Number of signalized intersections operated and owned by agency	140	150	NR	NR	187	215	61	75
Number of signalized intersections operated by agency but owned by another	NR	30	33	40	189	195	86	100
Total number of signalized intersections operated by agency	140	180	33	40	376	410	147	175
<u>Characteristics of signalized intersections that agency operates</u>								
Under closed loop or central system control	140	180	33	40	250	290	65	175
Under real-time traffic adaptive control using advanced software	0	NR	0	0	0	0	0	25
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	2	NR	0	0	2	6	4	100
Allow signal priority for transit vehicles	0	0	0	0	0	0	0	0
Within 200 feet of a highway-rail intersection	2	NR	5	6	11	12	3	3
Within 200 feet of a highway-rail intersection that adjust signal timing	2	NR	2	3	11	12	3	3
<b>Software used to control the signals agency operates</b>								
Date of last upgrade to traffic signal control system software?	8/1999		July 1999		1998		7/99	
How often do you update signal timing?	as needed		every 2 years or sooner if needed		Now- as needed; developing a policy for annually		when complaints are received.	
Software used and number of signalized intersections under control (1999, 2005)	MTCS, 140, NR		Peek LM System 6.4, 33, 40 Peek LM System 6.2, 0, 0		MIST, 30, 40		SCOOT/SCATS, NR, 25 MATS, 4, 150 SMARTWAYS, 61, 0	
<b>Controllers used to control signals</b>								
NEMA	140	NR	33	40	0	0	147	175
170/179	0	0	0	0	0	0	0	0
2070 controller	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
<b>Technologies Associated with Highway-Rail Intersections</b>								
Total number of highway-rail intersections under electronic surveillance	4	NR	NR	NR	0	1	NR	NR
<u>Highway-Rail intersection capabilities</u>								
Video surveillance	2	20	0	0	0	1	0	0

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Clearwater City		Florida Department of Transportation		Hillsborough County		Pasco County	
	1999	2005	1999	2005	1999	2005	1999	2005
Electronic surveillance other than video	2	NR	0	0	0	1	0	0
Ability to predict train arrival electronically	3	4	0	0	0	0	0	0
Equipped with electronic traffic violator devices	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
<b>Real-Time Electronic Traffic Data Collection Technologies</b>								
Total number of signalized intersections covered by electronic surveillance	202	NR	33	40	NR	NR	147	175
<u>Number of signalized intersections with data collection technologies</u>								
Loop detectors	200	NR	33	40	0	0	147	175
Video detection cameras	2	NR	0	0	0	0	0	2
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
<b>Roadside Technologies used to Distribute Traveler Information</b>								
<u>Number deployed</u>								
Highway Advisory Radio	NR	8	NR	NR	NR	NR	NR	NR
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	NR	NR
VMS controlling parking access	8	20	NR	NR	NR	NR	NR	NR
<u>Miles covered</u>								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	NR	NR
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	NR	NR
<b>Variable Message Signs (VMS) on Arterials</b>								
Candidate locations for deployment of VMS where VMS has been deployed	8	20	NR	NR	NR	NR	NR	NR
Candidate locations for deployment of VMS	NR	20	NR	NR	NR	NR	NR	NR
<b>Communication Technologies</b>								
<u>Signalized intersections communicated with by each type of communication</u>								
Twisted pair cable	132	NR	0	0	0	0	35	45
Coaxial cable	0	0	0	0	10	10	0	0
Fiber-optic cable	NR	140	33	40	10	10	0	0
Other (e.g., wireless, dial-up modems, leased lines, etc.)	8	0	0	0	6	6	37	130
<b>Does agency convey information on highway-rail intersection crossing status to travelers via roadside media such as VMS or HAR?</b>								
	No		No		No		No	
<b>ITS Standards Used Related to Traffic Signal Control</b>								
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)	Yes		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?	Yes		No		Yes		Yes	
<b>Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?</b>								
	Yes		No		Yes		No	

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Clearwater City		Florida Department of Transportation		Hillsborough County		Pasco County	
	1999	2005	1999	2005	1999	2005	1999	2005
<b>INCIDENT MANAGEMENT ON ARTERIAL STREETS</b>								
<b>Receive information on highway-rail intersection crossing blockages for the purpose of managing incident response?</b>								
	No		No		No		No	
<b>Use of Service Patrols to Assist in Detection and Response to Incidents</b>								
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
<b>Miles Covered by Methods to Detect and Verify Incidents</b>								
Free cellular phone call to a dedicated phone number other than 911	0	0	0	0	0	0	0	0
Free cellular phone call to an area radio station	0	0	0	0	0	0	0	0
Police patrols	0	0	0	0	0	0	0	0
Computer algorithms linked to traffic surveillance equipment	0	0	0	0	0	0	0	0
CCTV	0	0	0	0	0	0	NR	2
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
<b>Procedures in place for Arterial Incident Response?</b>								
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	
<b>Methods of Communication Used On-Site at an Incident</b>								
<u>Police</u>								
Two-way radio	No		No		No		No	
800 MHz trunked radio	No		No		No		Yes	
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		Yes	
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>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	

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Clearwater City		Florida Department of Transportation		Hillsborough County		Pasco County	
	1999	2005	1999	2005	1999	2005	1999	2005
Automated data systems (i.e., CAD)	No		No		No		No	
Other	No		No		No		No	
<u>Towing</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	
<b>Which police agencies typically respond to incidents on arterials?</b>								
State Police	No		No		No		Yes	
County Police or Sheriff	No		No		No		Yes	
City Police	No		No		No		Yes	
<b>Who provides on-site emergency medical response?</b>								
Fire	No		No		No		Yes	
Emergency Management Service Agency	No		No		No		Yes	
Private hospital	No		No		No		No	
<b>Has a multi-agency contact list been developed in area containing the names, phone numbers, etc. for the appropriate response personnel?</b>	NR		NR		NR		Yes	
<b>Is the Incident Command System used to manage incident scenes?</b>	NR		NR		NR		DK	
<b>Is there a legal specification by state law or formal agreement as to who is "in charge" at the incident scene?</b>								
Specified by state law?	No		No		No		No	
Formal agreement?	No		No		No		No	
Not specified or don't know?	No		No		No		Yes	
<b>On-scene command post used to manage activities of responding agencies?</b>	NR		NR		NR		DK	
Are there communication linkages to a communications traffic/freeway mgt center?	NR		NR		NR		NR	
<b>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?</b>	NR		NR		NR		DK	
<b>Respondents protected through law or court opinion for liability claims for damages to vehicles or cargoes during clearance activities?</b>	NR		NR		NR		DK	
<b>Are overturned tank trucks, which are intact and not leaking, uprighted without first off-loading?</b>	NR		NR		NR		NR	
<b>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?</b>	NR		NR		NR		Yes	
<b>Have laws or policies regarding the removal of stalled/abandoned vehicles from freeway shoulders?</b>	NR		NR		NR		NR	
<b>Hours abandoned vehicles are allowed to remain on a freeway shoulder?</b>	NR		NR		NR		DK	
<b>Have policies or procedures for quick removal of vehicles?</b>	NR		NR		NR		NR	
<b>Is Total Station equipment used to investigate major incidents?</b>	NR		NR		NR		DK	

Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Clearwater City		Florida Department of Transportation		Hillsborough County		Pasco County	
	1999	2005	1999	2005	1999	2005	1999	2005
<b>Handling of Towing Responses to Incidents</b>								
Formal contract based on qualifications?	No		No		No		No	
Rotation with companies under contract?	No		No		No		No	
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	
<b>In towing qualifications, do you require towers to be certified under the Towing and Recovery Ass. of America's National Drivers Cert. Program?</b>	NR		NR		NR		DK	
DK: Don't know								
NR: No Response								
Leg: Legislation or action being planned								

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pinellas County		St. Petersburg City		Tampa City		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes		Yes		7	
<b>ARTERIAL MANAGEMENT SECTION</b>								
Number of arterial miles that agency owns or maintains	NR		1,040		NR		2115	
Number of arterial miles that is used for planning	NR		1,040		NR		2194	
Number of highway-rail intersections that agency maintains	NR		NR		NR		249	
Number of highway-rail intersections that is used for planning	NR		NR		NR		425	
<b>Type of facilities used to conduct arterial management activities</b>								
Activities housed in a free-standing dedicated building?	No		No		No		0	
Activities housed in a building shared with other activities?	Yes		No		No		3	
Activities conducted in a dedicated control room?	Yes		Yes		No		4	
Control room contains operator console(s)?	Yes		Yes		No		3	
Control room contains electronic wall map?	Yes		Yes		No		2	
Control room contains CCTV display(s)?	No		No		No		1	
Activities conducted in a room containing workstations or PCs that manage traffic?	No		Yes		No		2	
Facilities are electronically linked to other transportation mgt facilities?	No		No		No		0	
<b>Staffing and hours of operation of arterial management activities</b>								
Number of full-time agency staff members	3		2		NR		12	
Number of full time contractor staff members	NR		NR		NR		0	
Number of part-time agency staff members	NR		NR		NR		1	
Number of part-time contractor staff members	NR		NR		NR		0	
Staffed 24 hours day by agency staff or by others	NR		NR		NR		0	
Staffed during peak hours only by agency staff or by others	NR		NR		NR		0	
Staffed by others during off-peak hours	No		No		No		0	
Agency staff perform transportation management as an ancillary duty	No		No		No		2	
Agency staff dedicated to transportation management duty	No		No		No		1	
<b>Types of operations conducted for arterial management</b>								
Incident detection and management?	No		No		No		0	
This metropolitan area?	No		No		No		0	
Other metropolitan area?	No		No		No		0	
Monitoring and troubleshooting status of system components?	No		No		No		3	
Radio communications with other agencies?	No		Yes		No		1	
Exchange of electronic data with other agencies such as computer aided dispatch?	No		No		No		0	
Manual override of traffic signal timing plans	No		Yes		No		3	
Operating transportation mgt roadside devices (e.g., VMS, CCTV, etc.)	No		No		No		1	

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pinellas County		St. Petersburg City		Tampa City		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
<b>Describe agency's role in traffic signal control</b>	All roads in county outside incorporated area		All roads in incorporated area		NR			
<b>Traffic Signals Operated by Agency</b>								
Number of signalized intersections operated and owned by agency	75	80	291	NR	NR	NR	754	520
Number of signalized intersections operated by agency but owned by another	275	287	0	NR	NR	NR	583	652
Total number of signalized intersections operated by agency	350	367	291	NR	530	540	1867	1712
<u>Characteristics of signalized intersections that agency operates</u>								
Under closed loop or central system control	243	160	0	NR	518	528	1249	1373
Under real-time traffic adaptive control using advanced software	0	100	NR	NR	0	NR	0	125
Using SCOOT	No		No		No		0	
Using SCATS	No		No		No		0	
Name of software	NR		NR		NR			
Allow signal preemption for emergency vehicles	20	150	NR	NR	5	9	33	265
Allow signal priority for transit vehicles	0	15	NR	NR	0	NR	0	15
Within 200 feet of a highway-rail intersection	10	12	NR	NR	25	NR	56	33
Within 200 feet of a highway-rail intersection that adjust signal timing	10	12	NR	NR	25	NR	53	30
<b>Software used to control the signals agency operates</b>								
Date of last upgrade to traffic signal control system software?	Current Y2K software contract		8/99		NR			
How often do you update signal timing?	Each section every 3-5 years		all the time		NR			
Software used and number of signalized intersections under control (1999, 2005)	COMPUTRAN "MTCS" enhanced UTCS System, 243, NR		COMPUTRAN, 291, NR		NR			
<b>Controllers used to control signals</b>								
NEMA	350	NR	291	NR	0	0	961	215
170/179	0	0	0	0	0	0	0	0
2070 controller	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
<b>Technologies Associated with Highway-Rail Intersections</b>								
Total number of highway-rail intersections under electronic surveillance	NR	NR	NR	NR	NR	NR	4	1
<u>Highway-Rail intersection capabilities</u>								
Video surveillance	0	0	0	0	0	0	2	21

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pinellas County		St. Petersburg City		Tampa City		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
Electronic surveillance other than video	0	0	0	0	0	0	2	1
Ability to predict train arrival electronically	0	0	0	0	0	0	3	4
Equipped with electronic traffic violator devices	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
<b>Real-Time Electronic Traffic Data Collection Technologies</b>								
Total number of signalized intersections covered by electronic surveillance	350	367	NR	NR	NR	NR	732	582
<u>Number of signalized intersections with data collection technologies</u>								
Loop detectors	348	267	0	0	0	0	728	482
Video detection cameras	2	100	0	0	0	0	4	102
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
<b>Roadside Technologies used to Distribute Traveler Information</b>								
<u>Number deployed</u>								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	0	8
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	0	0
VMS controlling parking access	NR	NR	NR	NR	NR	NR	8	20
<u>Miles covered</u>								
Highway Advisory Radio	NR	NR	NR	NR	NR	NR	0	0
In-Vehicle Signing (IVS)	NR	NR	NR	NR	NR	NR	0	0
<b>Variable Message Signs (VMS) on Arterials</b>								
Candidate locations for deployment of VMS where VMS has been deployed	0	NR	NR	3	NR	NR	8	23
Candidate locations for deployment of VMS	NR	20	NR	NR	NR	NR	0	40
<b>Communication Technologies</b>								
<u>Signalized intersections communicated with by each type of communication</u>								
Twisted pair cable	85	100	0	0	0	0	252	145
Coaxial cable	0	0	0	0	0	0	10	10
Fiber-optic cable	NR	100	0	0	0	0	43	290
Other (e.g., wireless, dial-up modems, leased lines, etc.)	243	100	291	0	0	0	585	236
<b>Does agency convey information on highway-rail intersection crossing status to travelers via roadside media such as VMS or HAR?</b>								
	No		No		No		0	
<b>ITS Standards Used Related to Traffic Signal Control</b>								
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		1	
NTCIP Object Definitions for Actuated Traffic Signal Controller Units (AASHTO TS 3.5)	No		No		No		0	
Would agency be willing to participate in testing of ITS Standards?	Yes		No		NR		4	
<b>Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?</b>								
	No		Yes		NR		3	



Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pinellas County		St. Petersburg City		Tampa City		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
<b>INCIDENT MANAGEMENT ON ARTERIAL STREETS</b>								
<b>Receive information on highway-rail intersection crossing blockages for the purpose of managing incident response?</b>								
	No		No		No		0	
<b>Use of Service Patrols to Assist in Detection and Response to Incidents</b>								
Publicly operated service patrol vehicles	No		No		No		0	
Privately operated service patrol vehicles operated under public contract	No		No		No		0	
Total number of arterial miles patrolled by these services	NR	NR	NR	NR	NR	NR	0	0
<b>Miles Covered by Methods to Detect and Verify Incidents</b>								
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	NR	20	0	0	0	0	0	22
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
<b>Procedures in place for Arterial Incident Response?</b>								
Working agreement(s)/arrangement(s) with other agencies	No		No		No		0	
Inter-agency incident management admin. team that meets regularly	No		No		No		0	
Major incident response team that responds to major incidents	No		No		No		0	
Set of goals/objectives for incident mgt that has been adopted by agencies in region	No		No		No		0	
<b>Methods of Communication Used On-Site at an Incident</b>								
<u>Police</u>								
Two-way radio	No		No		No		0	
800 MHz trunked radio	No		No		No		1	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		0	
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
<u>Fire</u>								
Two-way radio	No		No		No		0	
800 MHz trunked radio	No		No		No		1	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		0	
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
<u>DOT</u>								
Two-way radio	No		No		No		0	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		0	

Arterial Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pinellas County		St. Petersburg City		Tampa City		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
<u>Towing</u>								
Two-way radio	No		No		No		0	
800 MHz trunked radio	No		No		No		0	
Cellular telephone	No		No		No		0	
Hand-held (i.e., walkie-talkie)	No		No		No		0	
Automated data systems (i.e., CAD)	No		No		No		0	
Other	No		No		No		0	
<b>Which police agencies typically respond to incidents on arterials?</b>								
State Police	No		No		No		1	
County Police or Sheriff	No		No		No		1	
City Police	No		No		No		1	
<b>Who provides on-site emergency medical response?</b>								
Fire	No		No		No		1	
Emergency Management Service Agency	No		No		No		1	
Private hospital	No		No		No		0	
<b>Has a multi-agency contact list been developed in area containing the names, phone numbers, etc. for the appropriate response personnel?</b>	NR		NR		NR		1	
<b>Is the Incident Command System used to manage incident scenes?</b>	NR		NR		NR		0	
<b>Is there a legal specification by state law or formal agreement as to who is "in charge" at the incident scene?</b>								
Specified by state law?	No		No		No		0	
Formal agreement?	No		No		No		0	
Not specified or don't know?	No		No		No		1	
<b>On-scene command post used to manage activities of responding agencies?</b>	NR		NR		NR		0	
Are there communication linkages to a communications traffic/freeway mgt center?	NR		NR		NR		0	
<b>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?</b>	NR		NR		NR		0	
<b>Respondents protected through law or court opinion for liability claims for damages to vehicles or cargoes during clearance activities?</b>	NR		NR		NR		0	
<b>Are overturned tank trucks, which are intact and not leaking, uprighted without first off-loading?</b>	NR		NR		NR		0	
<b>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?</b>	NR		NR		NR		1	
<b>Have laws or policies regarding the removal of stalled/abandoned vehicles from freeway shoulders?</b>	NR		NR		NR		0	
<b>Hours abandoned vehicles are allowed to remain on a freeway shoulder?</b>	NR		NR		NR		0	
<b>Have policies or procedures for quick removal of vehicles?</b>	NR		NR		NR		0	
<b>Is Total Station equipment used to investigate major incidents?</b>	NR		NR		NR		0	

Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pinellas County		St. Petersburg City		Tampa City		Totals	
	1999	2005	1999	2005	1999	2005	1999	2005
<b>Handling of Towing Responses to Incidents</b>								
Formal contract based on qualifications?	No		No		No		0	
Rotation with companies under contract?	No		No		No		0	
Separate lists kept for light and heavy response and for specialty recovery?	NR		NR		NR		0	
Rotation list with minimal qualifications?	No		No		No		0	
<b>In towing qualifications, do you require towers to be certified under the Towing and Recovery Ass. of America's National Drivers Cert. Program?</b>	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: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Clearwater City	
	1999	2005
<b>Public Transit Operators</b>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Receiving real-time information via electronic means from others</b>		
<b>Emergency Management agencies from which your agency receives arterial incident clearance and/or arterial incident severity</b>		
Receive Arterial Incident Clearance Information	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed
<b>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</b>		
Receive Arterial Travel Times, Speeds, and Conditions Information	None listed	None listed
<b>Freeway Management agencies from which your agency receives freeway travel times, speeds, and conditions</b>		
Receive Freeway Travel Times, Speeds, and Conditions Information	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: Tampa, St. Petersburg, Clearwater

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



Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Florida Department of Transportation	
	1999	2005
<b>Public Transit Operators</b>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Receiving real-time information via electronic means from others</b>		
<b>Emergency Management agencies from which your agency receives arterial incident clearance and/or arterial incident severity</b>		
Receive Arterial Incident Clearance Information	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed
<b>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</b>		
Receive Arterial Travel Times, Speeds, and Conditions Information	None listed	None listed
<b>Freeway Management agencies from which your agency receives freeway travel times, speeds, and conditions</b>		
Receive Freeway Travel Times, Speeds, and Conditions Information	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: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Hillsborough County	
	1999	2005
<b>Public Transit Operators</b>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Receiving real-time information via electronic means from others</b>		
<b>Emergency Management agencies from which your agency receives arterial incident clearance and/or arterial incident severity</b>		
Receive Arterial Incident Clearance Information	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed
<b>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</b>		
Receive Arterial Travel Times, Speeds, and Conditions Information	None listed	None listed
<b>Freeway Management agencies from which your agency receives freeway travel times, speeds, and conditions</b>		
Receive Freeway Travel Times, Speeds, and Conditions Information	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: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pasco County	
	1999	2005
Provide Information	None listed	Pasco County Public Transportation (PCPT)
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Arterial Management Agencies</b>		
Provide Information	None listed	Florida Department of Transportation
Share Infrastructure	None listed	Florida Department of Transportation
Coordinate Operation	None listed	Florida Department of Transportation
<b>Receiving real-time information via electronic means from others</b>		
<b>Freeway Management agencies from which your agency receives</b>		
<i>freeway travel times, speeds, and conditions</i>	None listed	None listed
<b>Public Transit operators from which your agency receives</b>		
<i>arterial travel times derived from vehicle probes</i>	None listed	None listed
<b>Incident Management agencies from which your agency receives</b>		
<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
<b>Toll Collection agencies from which your agency receives arterial travel</b>		
<i>times derived from vehicles probes</i>	None listed	None listed
<b>Arterial Incident Management Section</b>		
<b>Agencies your agency provides incident severity, location, and type info.</b>		
<b>and/or shares infrastructure and/or coordinates operation</b>		
<b>Emergency Management Agencies</b>		
Provide Information	None listed	Pasco County Sheriff Department, Pasco County Fire Department
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Freeway Management Agencies</b>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pasco County	
	1999	2005
<b>Public Transit Operators</b>		
Provide Information	None listed	Pasco County Public Transportation (PCPT)
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Receiving real-time information via electronic means from others</b>		
<b>Emergency Management agencies from which your agency receives arterial incident clearance and/or arterial incident severity</b>		
Receive Arterial Incident Clearance Information	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed
<b>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</b>		
Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions	None listed	None listed
<b>Freeway Management agencies from which your agency receives freeway travel times, speeds, and conditions</b>		
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: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pinellas County	
	1999	2005
<b>Public Transit Operators</b>		
Provide Information	None listed	None listed
Share Infrastructure	None listed	None listed
Coordinate Operation	None listed	None listed
<b>Receiving real-time information via electronic means from others</b>		
<b>Emergency Management agencies from which your agency receives arterial incident clearance and/or arterial incident severity</b>		
Receive Arterial Incident Clearance Information	None listed	None listed
Receive Arterial Incident Severity Information	None listed	None listed
<b>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</b>		
Receive Arterial Travel Times, Speeds, and Conditions Information	None listed	None listed
<b>Freeway Management agencies from which your agency receives freeway travel times, speeds, and conditions</b>		
Receive Freeway Travel Times, Speeds, and Conditions Information	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: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

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

Arterial Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	St. Petersburg City		Tampa City	
	1999	2005	1999	2005
<b>Public Transit Operators</b>				
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
<b>Receiving real-time information via electronic means from others</b>				
<b>Emergency Management agencies from which your agency receives arterial incident clearance and/or arterial incident severity</b>				
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
<b>Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions</b>				
Arterial Management agencies from which your agency receives arterial travel times, speeds, and conditions	None listed	None listed	None listed	None listed
<b>Freeway Management agencies from which your agency receives freeway travel times, speeds, and conditions</b>				
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.

**Appendix H**  
**Arterial Management Information Collection and Dissemination**

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Clearwater City		Florida Department of Transportation	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
<b>Arterial Management Section</b>				
<b>Data collected, archived, and/or transferred to another agency</b>				
Collected by your agency	Traffic volumes, Traffic speeds, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Highway operations coordination information	Traffic volumes, Traffic speeds, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Highway operations coordination information	NR	Traffic volumes, Traffic speeds, Lane occupancy, Incidents, Current work zones, Scheduled work zones
Archived by your agency	Traffic volumes, Traffic speeds, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Highway operations coordination information	Traffic volumes, Traffic speeds, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Highway operations coordination information	NR	Traffic volumes, Traffic speeds, Lane occupancy, Incidents, Current work zones, Scheduled work zones



Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Clearwater City		Florida Department of Transportation	
	1999	2005	1999	2005
Transferred to another agency by your agency				
	Traffic volumes	Traffic volumes	NR	Traffic volumes, Traffic speeds, Lane occupancy, Incidents, Current work zones, Scheduled work zones
<b>Importance of making information available to the public</b>				
Ranked High	Traffic volumes, Traffic speeds, Lane occupancy, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Highway operations coordination information		Incidents, Current work zones	
Ranked Medium	NR		Traffic volumes, Traffic speeds	
Ranked Low	NR		Lane occupancy, Scheduled work zones	
<b>Groups that make requests for the data</b>	State DOT personnel, Federal DOT personnel, MPOs, Consultants		NR	
<b>What is the data used for?</b>	Traffic analysis, Construction impact determination, Planning, Dissemination to the public		NR	
<b>Methods used to disseminate arterial information to the public</b>				

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Clearwater City		Florida Department of Transportation	
	1999	2005	1999	2005
Technologies your agency uses to disseminate:	Dedicated cable TV, Internet Web sites, Kiosks, E-mail or other direct PC communication, Cell phone/voice	Dedicated cable TV, Internet Web sites, Kiosks, E-mail or other direct PC communication, Cell phone/voice	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
<b>Internet web site reporting arterial conditions</b>	NR		NR	
<b>Telephone system for reporting arterial information to the public</b>	NR		NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR		NR	
<b>Arterial Incident Management Section</b>				
<b>Methods used to distribute incident location and severity information to the public</b>				
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
<b>Internet web site reporting incident information</b>	NR		NR	
<b>Telephone system for reporting incident information to the public</b>	NR		NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR		NR	

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Hillsborough County		Pasco County	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
<b>Arterial Management Section</b>				
<b>Data collected, archived, and/or transferred to another agency</b>				
Collected by your agency	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Incidents, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Incidents, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption	NR
Archived by your agency	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Incidents, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption, Incidents, Current work zones, Scheduled work zones	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Phasing/cycle lengths, Emergency vehicle signal preemption	NR

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Hillsborough County		Pasco County	
	1999	2005	1999	2005
Transferred to another agency by your agency	Traffic volumes	Traffic volumes	Traffic volumes, Turning movements, Phasing/cycle lengths	NR
<b>Importance of making information available to the public</b>				
Ranked High	Current work zones, Scheduled work zones		Traffic volumes	
Ranked Medium	Incidents		Turning movements	
Ranked Low	Traffic volumes, Traffic speeds, Vehicle classification, Turning movements, Queues, Emergency vehicle signal preemption		Traffic speeds, Vehicle classification, Phasing/cycle lengths, Emergency vehicle signal preemption	
<b>Groups that make requests for the data</b>	Universities, State DOT personnel, Media (i.e., TV stations, radio stations), MPOs, Consultants, Citizens Activists Groups/Homeowners Associations		State DOT personnel, MPOs, Consultants	
<b>What is the data used for?</b>	Traffic analysis, Planning, Roadway impact analysis, Dissemination to the public, Support requests for construction		Traffic analysis	
<b>Methods used to disseminate arterial information to the public</b>				

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Hillsborough County		Pasco County	
	1999	2005	1999	2005
Technologies your agency uses to disseminate:	Dedicated cable TV, Telephone system, Internet Web sites, Facsimile	Dedicated cable TV, Telephone system, Internet Web sites, Facsimile	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	Dedicated cable TV, Telephone system, Internet Web sites, Facsimile	Dedicated cable TV, Telephone system, Internet Web sites, Facsimile	NR	NR
<b>Internet web site reporting arterial conditions</b>	www.hillsboroughcounty.org		NR	
<b>Telephone system for reporting arterial information to the public</b>	NR		NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR		NR	
<b>Arterial Incident Management Section</b>				
<b>Methods used to distribute incident location and severity information to the public</b>				
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
<b>Internet web site reporting incident information</b>	NR		NR	
<b>Telephone system for reporting incident information to the public</b>	NR		NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR		NR	

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pinellas County		St. Petersburg City	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
<b>Arterial Management Section</b>				
<b>Data collected, archived, and/or transferred to another agency</b>				
Collected by your agency	Traffic volumes, Phasing/cycle lengths, Incidents, Current work zones, Scheduled work zones, Emergency/evacuation routes and procedures	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Queues, Phasing/cycle lengths, Emergency vehicle signal preemption, Transit vehicle signal priority, Weather conditions, Incidents, Current work zones, Scheduled work zones, Emergency/evacuation routes and procedures, Highway operations coordination information	NR	NR
Archived by your agency	Traffic volumes, Phasing/cycle lengths, Incidents, Emergency/evacuation routes and procedures	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Queues, Phasing/cycle lengths, Emergency vehicle signal preemption, Transit vehicle signal priority, Weather conditions, Incidents, Current work zones, Scheduled work zones, Emergency/evacuation routes and procedures, Highway operations coordination information	NR	NR

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pinellas County		St. Petersburg City	
	1999	2005	1999	2005
Transferred to another agency by your agency	Incidents, Current work zones, Scheduled work zones, Emergency/evacuation routes and procedures	Traffic volumes, Traffic speeds, Lane occupancy, Vehicle classification, Queues, Emergency vehicle signal preemption, Transit vehicle signal priority, Weather conditions, Incidents, Current work zones, Scheduled work zones, Intermodal (air, rail, water) connections, Emergency/evacuation routes and procedures, Highway operations coordination information	NR	NR
<b>Importance of making information available to the public</b>				
Ranked High				
Ranked Medium		Traffic volumes, Queues, Phasing/cycle lengths, Emergency vehicle signal preemption, Transit vehicle signal priority, Incidents, Current work zones, Scheduled work zones, Emergency/evacuation routes and procedures, Highway operations coordination		
Ranked Low		Traffic speeds, Lane occupancy, Vehicle classification, Probe vehicles, Route designations (snow emergency, etc.), Weather conditions, Intermodal (air, rail, water) connections		
<b>Groups that make requests for the data</b>		State DOT personnel, Media (i.e., TV stations, radio stations), MPOs, Consultants		State DOT personnel, Federal DOT personnel, MPOs, Consultants, Lawyers/Insurance Company/Real Estate
<b>What is the data used for?</b>		Traffic analysis, Planning, Dissemination to the public		Traffic analysis, Construction impact determination, Planning
<b>Methods used to disseminate arterial information to the public</b>				

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pinellas County		St. Petersburg City	
	1999	2005	1999	2005
Technologies your agency uses to disseminate:	NR	Dedicated cable TV, Internet Web sites	NR	NR
Technologies your agency (through another agency or org.) uses to disseminate:	NR	NR	NR	NR
<b>Internet web site reporting arterial conditions</b>	not yet		NR	
<b>Telephone system for reporting arterial information to the public</b>	NR		NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR		NR	
<b>Arterial Incident Management Section</b>				
<b>Methods used to distribute incident location and severity information to the public</b>				
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
<b>Internet web site reporting incident information</b>	NR		NR	
<b>Telephone system for reporting incident information to the public</b>	NR		NR	
<b>Organizations your agency sends information for dissemination to the public</b>	NR		NR	



Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Tampa City	
	1999	2005
Agency Returned Survey?	Yes	
<b>Arterial Management Section</b>		
<b>Data collected, archived, and/or transferred to another agency</b>		
Collected by your agency	NR	NR
Archived by your agency	NR	NR

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Tampa City	
	1999	2005
Transferred to another agency by your agency	NR	NR
<b>Importance of making information available to the public</b>		
Ranked High	NR	
Ranked Medium	NR	
Ranked Low	NR	
<b>Groups that make requests for the data</b>	NR	
<b>What is the data used for?</b>	NR	
<b>Methods used to disseminate arterial information to the public</b>		

Data Collection and Dissemination: Arterial Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

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

**Appendix I**  
**Transit Management Components**

Transit Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority		Totals	
	1999	2005	1999	2005	1999	2005
<b>Agency Returned Survey?</b>	Yes		Yes		2	
<b>Number of vehicles used in revenue service</b>						
Fixed Route Bus	5	8	148	175	153	183
Heavy or Rapid Rail	NR	NR	0	0	0	0
Light Rail	NR	NR	0	0	0	0
Demand Responsive	45	45	150	200	195	245
Commuter Rail	NR	NR	NR	NR	0	0
Ferry Boat	NR	NR	NR	NR	0	0
<b>Have of plan to have an Automated Vehicle Location System?</b>	No		Yes		1	
<b>Primary and Secondary Location Technologies Used</b>						
<i>Primary Technologies</i>						
GPS	No	No	No	No	0	0
Sign/Odometer	No	No	No	No	0	0
Dead-Reckoning	No	No	No	No	0	0
LORAN C	No	No	No	No	0	0
Other	No	No	No	Yes	0	1
<i>Backup Technologies</i>						
GPS	No	No	No	No	0	0
Sign/Odometer	No	No	No	No	0	0
Dead-Reckoning	No	No	No	No	0	0
LORAN C	No	No	No	No	0	0
Other	No	No	No	No	0	0
<b>Number of Vehicles Equipped with AVL</b>						
Fixed Route Bus	NR	NR	NR	175	0	175
Heavy or Rapid Rail	NR	NR	NR	NR	0	0
Light Rail	NR	NR	NR	NR	0	0
Demand Responsive	NR	NR	NR	NR	0	0
Commuter Rail	NR	NR	NR	NR	0	0
Ferry Boat	NR	NR	NR	NR	0	0
<b>Motor Buses Operated as Vehicle Probes</b>						
Number of Motor Buses equipped as probes on freeways?	NR		NR		0	
Number of Motor Buses equipped as probes on arterials?	NR		NR		0	
<b>Have Organized Regional Incident Management Program?</b>	No		No		0	
<b>Have Automated Traveler Information System?</b>	No		Yes		1	

Transit Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority		Totals	
	1999	2005	1999	2005	1999	2005
<i>Services Automated Traveler Info. System Applies:</i>						
Fixed Route	No		Yes		1	
Heavy Rail	No		No		0	
Light Rail	No		No		0	
Demand Responsive	No		No		0	
Commuter Rail	No		No		0	
Ferry	No		No		0	
<b>Locations where traveler information is displayed to public</b>						
Number of bus stops on fixed transit routes	40	1,000	0	10	40	1010
Bus stops on fixed transit routes that display traveler info to the public	NR	NR	0	5	0	5
Number of rail stations	NR	NR	0	0	0	0
Number of rail stations that display traveler information	NR	NR	0	0	0	0
Number of other locations that display traveler information to public	NR	NR	0	0	0	0
<b>Number of vehicles the traveler information system has available</b>						
Fixed Route Bus	NR	NR	NR	NR	0	0
Heavy or Rapid Rail	NR	NR	NR	NR	0	0
Light Rail	NR	NR	NR	NR	0	0
Demand Responsive	NR	NR	NR	NR	0	0
Commuter Rail	NR	NR	NR	NR	0	0
Ferry Boat	NR	NR	NR	NR	0	0
<b>Deployment of Communications Technology</b>						
<i>Attributes of Radio System:</i>						
Digital?	Yes		No		1	
Analog?	No		Yes		1	
Trunked?	Yes		Yes		2	
Regular?	No		No		0	
<b>Services that use a Digital or Trunked Radio System</b>						
<i>Digital Only</i>						
Fixed Route Bus	No	No	No	No	0	0
Heavy or Rapid Rail	No	No	No	No	0	0
Light Rail	No	No	No	No	0	0
Demand Responsive	No	No	No	No	0	0
Commuter Rail	No	No	No	No	0	0
Ferry Boat	No	No	No	No	0	0
<i>Trunked Only</i>						
Fixed Route Bus	No	No	Yes	Yes	1	1
Heavy or Rapid Rail	No	No	No	No	0	0
Light Rail	No	No	No	No	0	0

Transit Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority		Totals	
	1999	2005	1999	2005	1999	2005
Demand Responsive	No	No	No	No	0	0
Commuter Rail	No	No	No	No	0	0
Ferry Boat	No	No	No	No	0	0
<b>Have of plan to have Automatic Passenger Counters (APCs)?</b>	No		Yes		1	
<b>Methods used to count passengers</b>						
Treadle Mats	No		No		0	
Infrared Beams	No		Yes		1	
<b>Primary and Secondary Location Technologies Used</b>						
<u>Primary Technologies</u>						
GPS	No	No	No	No	0	0
Differential GPS	No	No	No	Yes	0	1
Signpost/Odometer	No	No	No	No	0	0
Dead_Reckoning	No	No	No	No	0	0
LORAN C	No	No	No	No	0	0
Other	No	No	No	No	0	0
<u>Backup Technologies</u>						
GPS	No	No	No	No	0	0
Differential GPS	No	No	No	No	0	0
Signpost/Odometer	No	No	No	No	0	0
Dead_Reckoning	No	No	No	No	0	0
LORAN C	No	No	No	No	0	0
Other	No	No	No	No	0	0
<b>Number of Vehicles with APCs</b>						
Fixed Route Bus	NR	NR	0	175	0	175
Heavy or Rapid Rail	NR	NR	NR	NR	0	0
Light Rail	NR	NR	NR	NR	0	0
Demand Responsive	NR	NR	NR	NR	0	0
Commuter Rail	NR	NR	NR	NR	0	0
Ferry Boat	NR	NR	NR	NR	0	0
<b>Remote Real-Time Monitoring and Computer Assisted Dispatching</b>						
<u>Remote Real-Time Monitoring</u>						
Fixed Route Bus	NR	NR	104	175	104	175
Heavy or Rapid Rail	NR	NR	NR	NR	0	0
Light Rail	NR	NR	NR	NR	0	0
Demand Responsive	NR	NR	NR	NR	0	0
Commuter Rail	NR	NR	NR	NR	0	0
Ferry Boat	NR	NR	NR	NR	0	0
<u>Automated Dispatching or Control Software</u>						

Transit Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority		Totals	
	1999	2005	1999	2005	1999	2005
Fixed Route Bus	NR	NR	0	175	0	175
Heavy or Rapid Rail	NR	NR	NR	NR	0	0
Light Rail	NR	NR	NR	NR	0	0
Demand Responsive	NR	25	NR	NR	0	25
Commuter Rail	NR	NR	NR	NR	0	0
Ferry Boat	NR	NR	NR	NR	0	0
<b>Coordinate or plan to coordinate travel request and vehicle dispatching for multiple agencies?</b>	No		No		0	
<b>Is there or will there be a Transportation Management Center (TMC) in the region that controls transit and highway modes?</b>	No		No		0	
Modes that TMC currently controls:						
Highways	No	No	No	No	0	0
Fixed Route Bus	No	No	No	No	0	0
Heavy or Rapid Rail	No	No	No	No	0	0
Light Rail	No	No	No	No	0	0
Demand Responsive	No	No	No	No	0	0
Commuter Rail	No	No	No	No	0	0
Ferry Boat	No	No	No	No	0	0
Other	No	No	No	No	0	0
<b>Priority at Traffic Signals and Ramp Meter Priority</b>						
<i>Priority at Traffic Signals</i>						
Fixed Route Bus	NR	NR	NR	NR	0	0
Light Rail	NR	NR	NR	NR	0	0
Demand Responsive	NR	NR	NR	NR	0	0
<i>Ramp Meter Priority</i>						
Fixed Route Bus	NR	NR	NR	NR	0	0
Demand Responsive	NR	NR	NR	NR	0	0
<b>Number of Vehicles Equipped with Navigation Aids</b>						
Fixed Route Bus	NR	NR	NR	NR	0	0
Heavy or Rapid Rail	NR	NR	NR	NR	0	0
Light Rail	NR	NR	NR	NR	0	0
Demand Responsive	NR	NR	NR	NR	0	0
Commuter Rail	NR	NR	NR	NR	0	0
Ferry Boat	NR	NR	NR	NR	0	0
<b>ITS Standards Used Related to Transit Management</b>						
TCIP On Board Objects (TCIP-OB)	No		No		0	



Transit Management  
Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority		Totals	
	1999	2005	1999	2005	1999	2005
TCIP Traffic Management Objects (TCIP-TM)	No		No		0	
TCIP Common Public Transportation Objects (TCIP-CPT)	No		No		0	
TCIP Passenger Information Objects (TCIP-PI)	No		No		0	
TCIP Incident Management Objects (TCIP-IM)	No		No		0	
TCIP Fare Collection Objects (TCIP-FC)	No		No		0	
TCIP Spatial Representation Objects (TCIP-SP)	No		No		0	
TCIP Control Center Objects (TCIP-CC)	No		No		0	
TCIP Scheduling/Runcutting Objects (TCIP-SCH)	No		No		0	
Send data communication between micro computer and heavy duty vehicle applications (SAE J1708)	No		No		0	
Would agency be willing to participate in testing of ITS Standards?	No		No		0	
Have agreements in place with other agencies to use similar hardware and software to aid maintenance and interoperability?	No		No		0	
<b>Electronic Fare Payment</b>						
<b>Have full operational Electronic Fare Payment System?</b>	Yes		Yes		2	
<b>Methods of Fare Payment</b>						
<u>Stored value card with fare deducted for each trip</u>						
Magnetic Stripe	No		Yes		1	
Smart Card	No		No		0	
Debit Card	No		No		0	
<u>Billed by the month for trips taken</u>						
Magnetic Stripe	No		No		0	
Smart Card	No		No		0	
Credit Card	No		No		0	
<u>Monthly Pass</u>						
Magnetic Stripe	Yes		Yes		2	
Smart Card	No		No		0	
Vehicles/Stations Equipped with Automated Payment Mechanism						
<u>Magnetic Stripe Readers</u>						
Fixed Route Bus Vehicles	NR	18	148	175	148	193
Heavy or Rapid Rail Stations	NR	NR	NR	NR	0	0
Light Rail Stations	NR	NR	NR	NR	0	0
Demand Responsive Vehicles	NR	10	NR	NR	0	10
Commuter Rail Stations	NR	NR	NR	NR	0	0
Ferry Boat Landings	NR	NR	NR	NR	0	0
<u>Smart Card Readers</u>						
Fixed Route Bus Vehicles	NR	NR	NR	NR	0	0
Heavy or Rapid Rail Stations	NR	NR	NR	NR	0	0
Light Rail Stations	NR	NR	NR	NR	0	0

Transit Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority		Totals	
	1999	2005	1999	2005	1999	2005
Demand Responsive Vehicles	NR	NR	NR	NR	0	0
Commuter Rail Stations	NR	NR	NR	NR	0	0
Ferry Boat Landings	NR	NR	NR	NR	0	0
<u>Credit Card</u>						
Fixed Route Bus Vehicles	NR	NR	NR	NR	0	0
Heavy or Rapid Rail Stations	NR	NR	NR	NR	0	0
Light Rail Stations	NR	NR	NR	NR	0	0
Demand Responsive Vehicles	NR	NR	NR	NR	0	0
Commuter Rail Stations	NR	NR	NR	NR	0	0
Ferry Boat Landings	NR	NR	NR	NR	0	0
<u>Debit Card</u>						
Fixed Route Bus Vehicles	NR	NR	NR	NR	0	0
Heavy or Rapid Rail Stations	NR	NR	NR	NR	0	0
Light Rail Stations	NR	NR	NR	NR	0	0
Demand Responsive Vehicles	NR	NR	NR	NR	0	0
Commuter Rail Stations	NR	NR	NR	NR	0	0
Ferry Boat Landings	NR	NR	NR	NR	0	0
NR: No Response						

**Appendix J**  
**Transit Management Integration**

Transit Management Integration  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

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

**Appendix K**  
**Transit Management Information Collection and Dissemination**

Data Collection and Dissemination: Transit Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority	
	1999	2005	1999	2005
Agency Returned Survey?	Yes		Yes	
<b>Methods used to disseminate transit information to the public</b>				
<b>Technologies your agency uses to disseminate:</b>				
Transit routes, schedules and fares	Kiosks, Internet Web Sites, Dedicated cable TV	Kiosks, Internet Web Sites, Dedicated cable TV	Telephone System	Audible Enunciators, E-mail or other direct PC communication, Kiosks, Internet Web Sites, Telephone System
Real-time transit schedule adherence or arrival and departure times	NR	NR	NR	Kiosks, Internet Web Sites, Telephone System
<b>Technologies employed by other organization receiving your data</b>				
Transit routes, schedules and fares	NR	NR	Internet Web Sites	NR
Real-time transit schedule adherence or arrival and departure times	NR	NR	NR	NR
Internet web site reporting transit routes, schedules and fare, etc.	<a href="http://www.pascocounty.com/govt/">www.pascocounty.com/govt/</a>		<a href="http://www.co.pinellas.fl.us/mpo">www.co.pinellas.fl.us/mpo</a>	
Telephone system for reporting transit information to the public	NR		727-530-9911	
<b>Organizations your agency sends information for dissemination to the public</b>	NR		Pinellas County Metropolitan Planning Organization	
<b>Data collected, archived, and/or transferred to another agency</b>				
Collected by your agency	Transit operations coordination information, Emergency/evacuation routes and procedures, Incidents, Passenger information (e.g., surveys, O/D), Passenger count	Transit operations coordination information, Emergency/evacuation routes and procedures, Incidents, Passenger information (e.g., surveys, O/D), Passenger count	NR	Vehicle monitoring status, Passenger information (e.g., surveys, O/D), Trip itinerary planning records, Passenger count, Vehicle time and location
Archived by your agency	Transit operations coordination information, Emergency/evacuation routes and procedures, Incidents, Passenger information (e.g., surveys, O/D), Passenger count	Transit operations coordination information, Emergency/evacuation routes and procedures, Incidents, Passenger information (e.g., surveys, O/D), Passenger count	NR	Vehicle monitoring status, Passenger information (e.g., surveys, O/D), Passenger count, Vehicle time and location
Transferred to another agency by your agency	Transit operations coordination information, Emergency/evacuation routes and procedures, Incidents, Passenger information (e.g., surveys, O/D), Passenger count	Transit operations coordination information, Emergency/evacuation routes and procedures, Incidents, Passenger information (e.g., surveys, O/D), Passenger count	NR	NR

Data Collection and Dissemination: Transit Management  
 Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Pasco County Public Transportation (PCPT)		Pinellas Suncoast Transit Authority	
	1999	2005	1999	2005
<b>Importance of making information available to the public</b>				
Ranked High	Emergency/evacuation routes and procedures, Incidents, Passenger information (e.g., surveys, O/D), Passenger count		Vehicle time and location	
Ranked Medium	Transit operations coordination information		NR	
Ranked Low	NR		Vehicle monitoring status, Passenger information (e.g., surveys, O/D), Trip itinerary planning records, Passenger count	
<b>Groups that make requests for the data</b>	Consultants, MPOs, Media (i.e., TV stations, radio stations), Federal DOT personnel, State DOT personnel		Consultants, MPOs, State DOT personnel, Universities	
<b>What is the data used for?</b>	Dissemination to the public, Planning		Do not know	

**Appendix L**  
**Emergency Management**



Emergency Management Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Total Vehicles		Navigation Capabilities		AVL		CAD		CAD Equipped with Mobile Data Terminal		Vehicles Equipped with Preemption		Participate in Formal Incident Mgt Program	Send Incident Info to other agencies	List of agencies receiving data
	1999	2005	1999	2005	1999	2005	1999	2005	1999	2005	1999	2005			
American Medical Response - West Florida/Clearwater	60	60	0	55	53	55	60	60	53	55	0	55	Yes	Yes	Clearwater Fire & Rescue (Emergency Medical), Centralized Pinellas County 911 Dispatch
Clearwater Fire & Rescue	14	16	0	16	0	16	14	16	0	5	0	16	Yes	Yes	Pinellas County Emergency Medical Services
Clearwater Fire & Rescue (Emergency Medical)	7	8	0	8	0	8	7	8	0	8	0	8	Yes	Yes	Pinellas County Emergency Medical Services
Clearwater Police Department	226	226	0	226	0	NR	226	226	0	226	0	NR	No	No	None listed
Hillsborough County Fire Rescue - Fire Supression	110	NR	0	NR	0	NR	110	NR	0	NR	0	NR	Yes	No	None listed
Hillsborough County Fire Rescue - HIT	3	4	0	0	0	0	3	4	0	0	0	0	Yes	Yes	Emergency Management
Hillsborough County Sheriffs Department	1,100	1,100	0	0	0	0	850	850	NR	NR	0	0	Yes	Yes	Florida Highway Patrol, Tampa City Police Department, Temple Terrace Police Department, Plant City Police Department, Emergency Management
Largo Fire & EMS Department	13	13	0	0	0	0	13	13	0	0	0	0	Yes	Yes	None listed
Pasco County Sheriff Department	520	NR	0	NR	0	NR	0	NR	0	NR	0	NR	No	No	None listed
Pinellas County Sheriff's Department	600	NR	0	NR	150	NR	600	NR	550	NR	0	NR	Yes	Yes	Pinellas County Traffic Engineering, UCR, Florida State Division of Emergency Management, Pinellas County Emergency Management
Plant City Fire Department	7	NR	0	NR	0	NR	0	NR	0	NR	0	NR	Yes	Yes	Plant City Police Department, Facilities Maintenance
Plant City Police Department	74	NR	0	NR	0	NR	64	NR	0	NR	0	NR	NR	Yes	Local Media
St. Petersburg City Fire & Rescue (Emergency Medical)	17	21	0	21	0	0	17	21	0	19	0	14	No	No	None listed
St. Petersburg City Fire Department	58	62	0	0	0	0	58	62	0	0	0	0	Yes	No	None listed
St. Petersburg City Police Department	220	200	0	0	0	0	220	200	210	200	0	0	Yes	Yes	Pasco County Sheriff Department

Emergency Management Agencies for Metropolitan Area: Tampa, St. Petersburg, Clearwater

Agency Name	Total Vehicles		Navigation Capabilities		AVL		CAD		CAD Equipped with Mobile Data Terminal		Vehicles Equipped with Preemption		Participate in Formal Incident Mgt Program	Send Incident Info to other agencies	List of agencies receiving data
	1999	2005	1999	2005	1999	2005	1999	2005	1999	2005	1999	2005			
Tampa City Fire Department	32	32	0	0	0	0	32	32	0	0	3	3	NR	NR	None listed
Tampa City Fire Rescue & Emergency Medical Services	11	11	0	0	0	12	11	11	0	11	0	NR	Yes	Yes	US Coast Guard, Hillsborough County Trauma Agency, Hillsborough County Fire Rescue - Fire Suppression
Tampa City Police Department	586	724	0	0	0	0	586	724	586	724	0	0	Yes	Yes	Hillsborough County Sheriffs Department, Plant City Police Department, Temple Terrace Police Department
Tampa City Water Rescue	8	8	3	3	0	0	8	8	0	0	0	0	NR	NR	None listed
Temple Terrace Fire Department	6	8	0	8	0	0	6	8	6	8	6	8	Yes	Yes	State Fire Marshall
Temple Terrace Fire Department - Emergency Medical	2	3	0	3	0	0	2	3	2	3	2	3	Yes	Yes	Bureau of EMS, Trauma
Temple Terrace Police Department	15	NR	0	NR	0	NR	15	NR	15	NR	0	NR	No	No	None listed