

Freeway Management Survey Summary

AGENCY CHARACTERISTICS

Total Agencies:

	Number of Miles	Number of Agencies
1. Total freeway centerline miles operated by your agency:	<input style="width: 80px;" type="text" value="72,529"/>	<input style="width: 80px;" type="text" value="106"/>
2. Indicate the number of staff performing freeway management, operations and maintenance in the following categories:		
Number of in-house management and operations staff:	<input style="width: 80px;" type="text" value="4,074"/>	<input style="width: 80px;" type="text" value="106"/>
Number of outsourced management and operations staff:	<input style="width: 80px;" type="text" value="700"/>	<input style="width: 80px;" type="text" value="49"/>
Number of in-house maintenance staff:	<input style="width: 80px;" type="text" value="3,415"/>	<input style="width: 80px;" type="text" value="83"/>
Number of outsourced maintenance staff:	<input style="width: 80px;" type="text" value="292"/>	<input style="width: 80px;" type="text" value="47"/>

3. What types of training do you provide and/or require for in-house freeway management staff? (Check all that apply)

Number of Agencies

Provide funding and encouragement for personnel to attend training	<input style="width: 80px;" type="text" value="53"/>
Provide training program	<input style="width: 80px;" type="text" value="82"/>
Require formal training leading to certification	<input style="width: 80px;" type="text" value="30"/>

4. What types of training do you provide and/or require for outsourced freeway management staff? (Check all that apply)

Provide funding and encouragement for personnel to attend training	<input style="width: 80px;" type="text" value="23"/>
Provide training program	<input style="width: 80px;" type="text" value="49"/>
Require formal training leading to certification	<input style="width: 80px;" type="text" value="30"/>

SURVEILLANCE

	Number of Miles	Number of Agencies
5. Total number of freeway centerline miles with real-time traffic data collection technologies (does not include Closed Circuit TV or CCTV):	<input style="width: 80px;" type="text" value="17,144"/>	<input style="width: 80px;" type="text" value="91"/>
5a. Number of these miles where real-time traffic data are collected using roadside infrastructure such as loops, radar detectors, or video imaging detector systems:	<input style="width: 80px;" type="text" value="12,137"/>	<input style="width: 80px;" type="text" value="82"/>
5b. Number of these miles where real-time traffic data are collected by vehicle probes, using technology such as toll tag readers, cell phones, etc.:	<input style="width: 80px;" type="text" value="7,296"/>	<input style="width: 80px;" type="text" value="39"/>

6. What type of vehicle probe readers are used to obtain traffic information? (Check all that apply)

Number of Agencies

Toll tag readers	<input style="width: 80px;" type="text" value="18"/>
Blue tooth readers	<input style="width: 80px;" type="text" value="21"/>
Cellular phone readers	<input style="width: 80px;" type="text" value="11"/>
GPS readers	<input style="width: 80px;" type="text" value="12"/>
License plate recognition	<input style="width: 80px;" type="text" value="5"/>
Do not collect vehicle probe data	<input style="width: 80px;" type="text" value="49"/>
Other readers (please specify):	<input style="width: 80px;" type="text" value="13"/>

	Number Deployed	Number of Agencies
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7. Total number of freeway traffic surveillance detector stations deployed by your agency:	<input style="width: 80px;" type="text" value="26,288"/>	<input style="width: 80px;" type="text" value="80"/>
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8. For each of the following technologies, please indicate the number deployed by your agency and the approximate percentage that are operational (reliably operating as intended):

	Number Deployed	Number of Agencies	Number of Agencies Percent Operational
Loop stations:	8,774	36	32
Radar stations:	11,662	68	59
Video imaging detector stations:	3,350	9	9
Toll tag readers:	1,638	18	15
Other stations (please specify):	936	8	8

RAMP CONTROL

	Number of Ramps	Number of Agencies
9. Total number of freeway entrance ramps operated by your agency:	11,919	65
10. Does your agency have freeway entrance ramp metering?		
Yes		26
No (go to question 18)		78
11. Total number of ramps with ramp metering:	3,500	24
12. Total number of metered ramps with priority access for transit vehicles:	216	5
13. Total number of metered ramps with bypass lanes for High Occupancy Vehicles (HOVs):	501	9
14. Total number of metered ramps with preemption access capability for emergency vehicles:	21	1
15. Does your agency deploy automated enforcement technologies to assist with the enforcement of ramp metering compliance?		

	Number of Agencies
Yes	2
No	42

16. Is ramp meter timing adjusted in coordination with nearby arterial traffic signal timing to manage queues that form on the ramp that spill back onto the adjacent arterial?

	Number of Agencies
Yes	14
No	30

17. Under what circumstances do you meter traffic on ramps as a traffic management strategy? (Check all that apply)

	Number of Agencies
Time of day (recurrent congestion)	26
Traffic incidents	17
Planned special events	16
Weather (e.g., fog, rain, snow)	4
Evacuation	3
Other (please specify):	11

18. Is nearby arterial traffic signal timing adjusted to manage queues that form on the ramp that spill back onto the freeway facility?

	Number of Agencies
Yes	32
No	71

19. Do you have any ramps with automated ramp closure capability?

	Number of Agencies
Yes	2
How many?	8
	2

What conditions or circumstances trigger an automated ramp closure? (Check all that apply)

	Number of Agencies
During evacuations	0
Planned special events	0
Emergencies	1
Weather events	2
Other (please specify):	1
No	102

TRANSPORTATION MANAGEMENT CENTER (TMC)

20. Does your agency operate an Freeway Management Transportation Management Center (TMC)?

	Number of Agencies
Yes	97
TMC Name:	100
TMC Coverage:	96
No	7

MANAGED LANES

	Number of Miles	Number of Agencies
21a. Total number of freeway centerline miles featuring managed lanes:	5,478	24
21b. Please provide the estimated number of freeway centerline miles for each type of managed lane strategy:		
Occupancy control (HOV):	1,219	18
Reversible flow:	163	10
Lane open/closed (traffic incidents, roadway maintenance, etc.):	1,248	5
Truck only:	1,608	2
Variable speed limit:	340	5
High Occupancy Toll (HOT):	226	10
Other congestion pricing strategies:	3	1
Other managed lane strategy (please specify):	46	4

21c. Does your agency have a written protocol or arrangement to suspend HOV/HOT enforcement under incident conditions?

	Number of Agencies
Yes	11
No	11
Not applicable	2

MODELING AND DECISION SUPPORT

22. Does your agency use any Analysis, Modeling and Simulation (AMS) tools to optimize/model the freeway system?

	Number of Agencies
Yes	35
Please specify:	28
No	71

23. Has your agency deployed a decision support system to assist in operations of the following? (Check all that apply)

	Number of Agencies
Road weather management	47
Incident management	55
Emergency management	48
Evacuation	34
Maintenance	49
No decision support system deployed	31
Other (please specify):	8

AUTOMATED ENFORCEMENT

24. Does your agency deploy automated speed enforcement technologies on freeway general use lanes?

	Number of Agencies
Yes	4
What types of technologies are used? (Check all that apply)	
License plate recognition	0
Camera	3
Toll tag readers	0
None	4
Other (please specify):	3
No	103

25. Does your agency deploy automated enforcement technologies to enforce High Occupancy Vehicle (HOV) restrictions on freeways?

Number of Agencies

Yes

What types of technologies are used? (Check all that apply)

License plate recognition

Camera

Toll tag readers

None

Other (please specify):

No

Not applicable (no HOV lanes)

SAFETY AND ROAD WEATHER MANAGEMENT

26. Has your agency deployed any of the following safety systems? (Check all that apply)

Number of Agencies

Over-height warning system

Automated and/or manual freeway ramp gates

Reference Location Signs

Dynamic Curve Warning System

None of the above

27. What are your agency's sources of weather and road weather information? (Check all that apply)

Number of Agencies

National Weather Service products

FAA (ASOS, AWOS, etc.)

USGS earthquake alerts

Agency field personnel

Agency field sensors (RWIS/ESS, probes, etc.)

National sensor data sources (Clarus/MADIS)

Private providers

Other (please specify):

28. Does your agency employ safety warning systems related to road weather events?

	Number of Agencies
Yes	48
What hazards are covered? (Check all that apply)	
High wind	39
Icy roads	44
Fog	37
Dust	7
Other	16
No	46

29. Has your agency deployed any Environmental Sensor Stations (ESS)?

	Total	Number of Agencies
Yes		66
How many?	667	54

What data are collected by ESS and in-pavement sensors? (Check all that apply)

Pavement temperature	57
Pavement surface condition	45
Pavement precipitation	47
Temperature	68
Humidity	61
Wind speed	61
Precipitation (rain)	56
Precipitation (snow)	44
Other (please specify):	16
No	38

30. Is your agency using or planning to use a Maintenance Decision Support System (MDSS) for winter maintenance? (MDSS includes software systems that provide strategic and tactical weather forecasts, support treatment decision making and provide summary.)

	Number of Agencies
Yes, agency uses an MDSS statewide	23
Yes, considering (pilot project, used partially, used in one district)	19
No, agency needs an MDSS, but does not have a system	38
No, agency does not need an MDSS	22

31. Does your agency implement restrictions on vehicles during inclement weather (e.g., road closures to high-profile vehicles during high winds, snow tire/chain requirements during winter weather)?

Yes	58
No	47

32. Does your agency change traffic incident management practices in response to inclement weather (e.g., prepositioning assets, quick clearance during weather, etc.)?

Yes	72
No	34

33. Does your agency deploy variable speed limit systems?

	Number of Agencies
Yes	32
What event triggers the deployment? (Check all that apply)	
Weather	19
Traffic volume	7
Incidents	9
Other (please specify):	14
No	74

INCIDENT MANAGEMENT/WORK ZONE MANAGEMENT

	Number of Miles	Number of Agencies
34. Total number of freeway centerline miles patrolled by service patrol:	20,345	85
35. Please provide the number of freeway centerline miles covered by the following incident detection/verification methods:		
Closed Circuit Television (CCTV):	15,049	96
Call boxes:	3,668	14
Computer algorithms to detect incidents:	6,883	26
Other (please specify):		4
36. Total number of Closed Circuit Television (CCTV) cameras deployed on freeways:	15,699	99
37. Does your agency deploy ITS technology at work zones?		
Yes		68
What ITS technologies does your agency deploy at work zones? (Check all that apply)		
Intrusion alarm		0
Dynamic lane merge system		6
Queue detection and alert system		23
Variable speed limit		11
Travel time system		40
Route guidance around work zones		17
Portable CCTV		49
Other (please specify):		23
No		32

TRAVELER INFORMATION

	Number of Miles	Number of Agencies
38. Number of freeway centerline miles covered by Highway Advisory Radio (HAR):	5,426	71
39. Total number of permanent Dynamic Message Signs (DMS) deployed on freeways:	5,255	98
40. Does your agency use the DMS in the absence of incidents or special events?		
Yes		95
Please describe:		92
No		12

41. Does your agency have an agreement with a private vendor to push mobile alerts regarding incidents, roadway conditions, etc. to mobile media?

	Number of Agencies
Yes	35
No	73

42. What methods are used to disseminate traveler information on freeways by your agency? (Check all that apply)

	Number of Agencies
511	81
Other (non-511) telephone systems	10
Email or alert	89
Twitter	82
Facebook	51
App for mobile device such as tablet or smart phone	54
Dynamic Message Signs	102
Website	94
Highway Advisory Radio	75
Other (please specify):	11

43. Please indicate whether your agency reports any of the following information to the public. (Check all that apply)

	Number of Agencies
Roadway or lane blocking incidents and events on arterials	89
Work zone location and duration on arterials	82
Roadway weather observations on arterials	58
Freeway blocked or with other travel restrictions	104
None of the above	1

44. Do you report freeway travel time data?

	Number of Agencies
Yes	78
What freeway travel time data are reported? (Check all that apply)	
Travel time by segment	54
Travel time over selected route	50
Other (please specify):	8
No	29

SYSTEM PERFORMANCE MANAGEMENT

45. Does your agency collect operations data to track freeway network system performance?

	Number of Agencies
Yes	74
No	30

46. Does your agency have clearly stated and documented operational objectives and performance measures for the freeway system?

	Number of Agencies
Yes	<input type="text" value="56"/>

Has your agency established targets for the performance measures?

Yes	<input type="text" value="48"/>
No	<input type="text" value="11"/>
No	<input type="text" value="47"/>

47. Does your agency use archived operations data to track freeway system performance?

Yes	Number of Agencies	<input type="text" value="60"/>
What are the archived operations data used for? (Check all that apply)		
Real-time Operations (e.g., used in real-time to adjust system operations)		<input type="text" value="32"/>
Capital planning/analysis		<input type="text" value="29"/>
Operations planning/analysis		<input type="text" value="54"/>
Dissemination to the public		<input type="text" value="37"/>
Planning/analysis of work zone design		<input type="text" value="37"/>
Other (please specify):		<input type="text" value="5"/>
No		<input type="text" value="39"/>

48. Which of the following measures are used to report on the performance of the freeway system? (Check all that apply)

	Number of Agencies
Travel time	<input type="text" value="55"/>
Travel time reliability	<input type="text" value="34"/>
Vehicles per lane per mile	<input type="text" value="25"/>
Vehicles per hour	<input type="text" value="41"/>
Person throughput per lane per hour	<input type="text" value="5"/>
Person throughput per hour	<input type="text" value="1"/>
Average auto occupancy	<input type="text" value="8"/>
Average queue length	<input type="text" value="11"/>
Performance measures are not used	<input type="text" value="14"/>
Other (please specify):	<input type="text" value="22"/>

MAINTENANCE OF FREEWAY MANAGEMENT ITS TECHNOLOGY

49. Does your agency utilize an asset management system to track infrastructure inventory and related maintenance and operations activity?

	Number of Agencies
Yes	<input type="text" value="83"/>
No	<input type="text" value="24"/>

50. Does your agency have a preventive maintenance program for ITS devices?

Number of Agencies

Yes

How often are your ITS devices inspected and re-calibrated?

a. Loop detectors

Less than once annually

Once annually

More than once annually

Not regularly inspected and recalibrated

Not Applicable

b. Other Types of Detectors (radar, microwave, toll tag readers)

Less than once annually

Once annually

More than once annually

Not regularly inspected and recalibrated

Not Applicable

c. CCTV Cameras

Less than once annually

Once annually

More than once annually

Not regularly inspected and recalibrated

Not Applicable

d. Other (please specify):

Less than once annually

Once annually

More than once annually

No

51. How are decisions for maintenance, repairs, and replacement of ITS devices made? (Check all that apply)

Number of Agencies

Reaction to failure in component or device

Planned program of routine and preventive maintenance

Results of inspection and monitoring of conditions

Cost/ benefit analysis

Estimated service life

Obsolescence (e.g. device becomes obsolete/out-of-date)

Other (please specify):

52. Does your agency collect data on the overall health and maintenance of ITS devices and equipment?

	Number of Agencies
Yes	76
What sources of data are used?	
Inspections	61
Complaint calls	39
Real-time monitoring	76
Other (please specify):	7

For which of the following purposes does your agency use the data on equipment health and maintenance?

	Number of Agencies
To make investment decisions	60
To monitor specified performance metrics	40
To monitor specified performance trends	38
To conduct benefit-cost analysis	28
To communicate to decision makers	53
To communicate to public	21
Other (please specify):	7
No	23

DEDICATED SHORT RANGE COMMUNICATIONS (DSRC) STANDARD

53. Is your agency familiar with Dedicated Short Range Communications (DSRC) technology?

	Number of Agencies
Yes	67
No (go to Next Section)	40

54. Does your agency currently use or have plans to use dedicated short range communications (DSRC) in operating any of its ITS infrastructure?

	Number of Agencies
Currently use DSRC	18
Plan to use DSRC	18
No plans to use DSRC (go to Next Section)	29

55. Is your agency using or does it plan to use any DSRC-enabled technologies to support the deployment of the following:

	Number of Agencies		
	Currently Using	Plan to Use	No Plans to Use
Safety applications (e.g. intersection collision avoidance)	9	14	22
Mobility applications	2	24	17
Tolling operations	4	10	24
Commercial Vehicle Operations and regulation	7	9	24

INTEGRATED CORRIDOR MANAGEMENT

56. Have you identified corridor(s) for the purpose of integrating operations across multiple transportation facilities (including freeways, major arterials, and public transit networks) in order to actively manage travel demand and capacity in the corridor as a whole?

	Number of Agencies
Yes	<input type="text" value="29"/>
How many corridors have been identified for integrated transportation operations?	
1 corridor identified	<input type="text" value="20"/>
1 corridor identified	<input type="text" value="3"/>
3 or more corridors identified	<input type="text" value="25"/>
No (go to Next Section)	<input type="text" value="66"/>

57. The next set of questions all pertain specifically to the corridor you identified above. If you identified more than one corridor, please tell us about the corridor where the greatest level of coordination is taking place. In your responses, please do NOT include coordination efforts that are occurring outside the specific corridor you have identified.

Please name the key facilities that comprise the corridor (please be as specific as possible):

	Number of Agencies
a. Freeway(s) (e.g., US-75):	<input type="text" value="40"/>
b. Key Arterial(s) (e.g., Greenville Avenue, US-75 Frontage Roads):	<input type="text" value="36"/>
c. Public Transit Services (e.g., DART Red/Orange Light Rail Line, MTS Express Bus):	<input type="text" value="24"/>
d. Other (e.g., freight, rail, bicycle, pedestrian):	<input type="text" value="14"/>

58. Approximately how long is the corridor?

	Number of Agencies
Less than 10 miles	<input type="text" value="11"/>
11-20 miles	<input type="text" value="12"/>
21-30 miles	<input type="text" value="6"/>
31-50 miles	<input type="text" value="5"/>
More than 50 miles	<input type="text" value="9"/>

59. For each agency type listed below, please indicate whether you are currently coordinating or plan to coordinate integrated transportation operations in the corridor specified above. If yes, please provide the name of the agencies in the corridor with which your agency is coordinating (referred to as the "coordinating agencies" in this survey). Please do NOT include coordination efforts that are occurring outside the corridor. For each agency type, a-d, select only one response.

	Number of Agencies				
	Currently Coordinate in Corridor	Plan to Coordinate in Corridor	No Plans to Coordinate in Corridor	Not Applicable	Agency Names
a. Freeway agencies:	24	12	1	4	29
b. Arterial agencies:	21	15	1	4	24
c. Transit agencies:	11	15	5	7	20
d. Other agencies (e.g., MPOs, Toll Authorities, Port Operators):	15	9	1	6	22

60. a. Has your agency signed any formal multi-jurisdictional or multi-agency Agreements, Memorandums of Understanding (MOUs), or other instruments with these coordinating agencies regarding the integrated operations of the corridor?

	Number of Agencies
Yes, already signed	17
One instrument signed	7
Multiple instruments signed	7
Agreements, MOUs, or instruments are being developed (plan to sign)	12
No, there is no plan to develop or sign Agreements, MOUs, or other instruments	8
Do not know	7

IF SIGNED OR PLAN TO SIGN:

Please describe what is covered by the Agreements, MOUs, or instruments:

61. How are data about conditions in the corridor shared among the coordinating agencies? (Check all that apply)

	Number of Agencies
Manual data sharing: Corridor stakeholders call, radio, fax or email relevant corridor data to one another	27
Automated sharing of real-time video data (video servers/switcher communicate directly to one another in real time to share video images through video protocols)	30
Automated sharing of real-time data (computers, database servers communicate directly to one another to transmit data automatically (in real time) via center-to-center protocols)	32
In general is this sharing of real-time data active or passive? (select one)	
Active (your agency receives alerts; data is pushed to your agency)	20
Passive (your agency must access the data; no alerts are received)	5
Information Clearing House/Information Exchange Network (IEN) between corridor networks/agencies (a software system that collects, aggregates, warehouses and distributes traffic flow/transit performance data and incident/construction data for the corridor. All corridor agencies can access the agency/network information)	12
In general is this sharing of data active or passive? (select one)	
Active (your agency receives alerts; data is pushed to your agency)	8
Passive (your agency must access the data; no alerts are received)	6
Other (please specify):	3

62. a. We want to understand if data is sent and/or received among the coordination agencies in the corridor. For each type of data below, please indicate if your agency receives this data from the other coordinating agencies in the corridor, collects and sends this data to the other coordinating agencies, collects but does not send this data to the other coordinating agencies, or does not collect this data. For each item, a-i, check all that apply.

	Number of Agencies				
	My agency Receives	My agency Collects and Sends	My agency Collects but does not send	My agency does not collect	Not Applicable
a. Freeway incident data	15	34	6	0	1
b. Freeway traffic volumes, speeds, or travel times	10	32	7	0	2
c. Arterial incident data	15	18	4	10	3
d. Arterial traffic volumes, speeds, or travel times	6	14	8	13	4
e. Transit incident data	5	2	0	18	13
f. Transit vehicle location data (AVL)	0	0	0	21	15
g. Transit schedule adherence data	0	0	0	21	14
h. Transit passenger count data	0	0	0	20	15
i. Other data (please describe):	0	1	0	1	9

b. For each type of data that is sent or received among coordinating agencies (as indicated in part a above), please indicate with what level of frequency the data is shared. For each item, a-i, select only one response.

	Number of Agencies			
	0-5 Minutes	6-15 Minutes	16-59 Minutes	60+ Minutes
a. Freeway incident data	30	4	1	3
b. Freeway traffic volumes, speeds, or travel times	26	4	0	5
c. Arterial incident data	14	5	2	2
d. Arterial traffic volumes, speeds, or travel times	15	4	0	2
e. Transit incident data	1	2	1	4
f. Transit vehicle location data (AVL)	0	0	0	2
g. Transit schedule adherence data	0	0	0	2
h. Transit passenger count data	0	0	0	2
i. Other data (described above):	1	0	0	1

63. For each of the following types of operations strategies please indicate whether your agency is currently coordinating or plans to coordinate operations with other corridor agencies across transportation facilities (i.e., freeway, arterial and transit) in order to achieve shared operations objectives. For each item, a-n, select only one response. For example, if traffic signal timing is coordinated across facilities, then signal timing on arterials is adjusted based on information about both freeway and arterial conditions.

	Number of Agencies			
	Currently Coordinate Across Facilities	Plan to Coordinate Across Facilities	No Plans to Coordinate	Not Applicable
a. Traffic incident management	26	14	0	1
b. Freeway ramp metering	7	11	6	18
c. Emergency management (e.g., evacuations)	20	16	2	1
d. Cross jurisdictional traffic signal coordination	15	19	2	3
e. Traffic responsive signal timing/coordination	12	26	2	3
f. Transit signal priority	4	18	5	11
g. Physical bus priority (e.g. bus-on-shoulder)	4	4	13	17
h. Demand-sensitive transit capacity increases (e.g., add cars/routes)	1	6	13	18
i. Real-time parking availability information (e.g., at transit stations)	2	10	9	16
j. Road weather management	14	11	6	6
k. Planned special events	28	10	2	1
l. Real-time traveler information delivered pre-trip	23	12	4	2
m. Real-time information delivered en-route (e.g., Dynamic Message Signs)	27	9	3	1
n. Electronic multimodal payment systems	1	3	8	24
o. Other (please specify):	0	0	0	8

64. How would you describe the institutional coordination among the corridor stakeholders? Please select one response from the following scale, which ranges from less formal institutional coordination (1) to more formal institutional coordination (5).

Number of Agencies	Description
8	1 (Less Formal) - Ad hoc coordination; no regular meetings; corridor stakeholders address near-term issues only
13	2 - Informal working groups; regular meetings among corridor stakeholders
17	3 - Formally established working groups; assigned responsibilities for Integrated Corridor Management
1	4 - Funded staff person(s) and well defined responsibilities for Integrated Corridor Management
1	5 (More Formal) - Legal entity with dedicated resources and a governing board

65. Have the coordinating agencies in the corridor developed any of the following Integrated Corridor Management (ICM) documents for the corridor? For each item, a-d, select only one response.

	Number of Agencies				
	Document Completed	Currently Developing	Plan to Develop Next 2-3 Years	No Immediate Plans to Develop	Do Not Know
a. ICM Concept of Operations (ConOps)	12	14	4	5	7
b. ICM System Requirements Specifications (SyRS)	7	6	8	13	7
c. ICM Analysis Modeling and Simulation (AMS) Plan	4	2	12	10	11
d. ICM Implementation Plan	5	7	6	10	10

66. Have the coordinating agencies in the corridor developed a documented set of response plans or strategies, in any level of detail, that are based on shared operational objectives and that are designed to optimize performance in the corridor as a whole (e.g., across transportation facilities/modes) during conditions of both recurring and non-recurring congestion? In your response, please do not include response plans developed for emergency situations, such as evacuations.

Number of Agencies

13	Response plans or strategies have been developed for day-to-day operations during conditions of both recurring and non-recurring congestion
8	Response plans or strategies are currently being developed
10	There are plans to develop response plans or strategies
2	There are no plans to develop response plans or strategies (skip to last question for additional comments)
8	Do not know

67. Has your agency deployed or does it plan to deploy a Decision Support System (DSS) to assist in the integrated operations of the Corridor?

NOTE: A DSS is a subsystem that utilizes measurements of real-time corridor conditions to recommend coordinated response plans to all corridor agencies. The DSS continues to update its recommendation based on corridor measurements showing changing corridor conditions.

Number of Agencies

Yes, deployed	1
Plan to deploy	13
No (no plans to deploy)	15
Do not know	13

68. Have the coordinating agencies identified corridor-level/multimodal performance measures (e.g., person throughput, average travel time, average travel speed, etc.) that will be used to measure the effectiveness of the strategies and response plans that are implemented in the corridor?

Number of Agencies

Yes, corridor-level/multimodal performance measures identified	8
Agency plans to identify corridor-level/multimodal performance measures	19
No plans to identify corridor-level/multimodal performance measures	5
Do not know	10
69. Additional comments about the integration and coordination of operations in the corridor:	7

ITS FUNDING

70a. Please indicate whether you track the budget separately for each of the following categories:

Number of Agencies

ITS Planning and Systems Engineering	25
Device Installation	28
ITS Operations	40
ITS Maintenance and Inspection	40
Repair of ITS Technologies	27
Do not track categories separately (go to next section)	15
Other (please specify):	14

70b. Please indicate the percentage of budget allocated to each category that is separately tracked:

	Number of Agencies
ITS Planning and Systems Engineering	20
Device Installation	19
ITS Operations	29
ITS Maintenance and Inspection	30
Repair of ITS Technologies	23
Other (specified above)	6

ITS PURCHASE DECISION-MAKING

71. Please rate the importance of each of the following factors to your agency's decision to purchase ITS technologies: (1 = Not at All Important; 2 = Not Very Important; 3 = Neutral; 4 = Somewhat Important; 5 = Very Important) Please check only one rating box per row.

	Number of Agencies				
	Not at All Important	Not Very Important	Neutral	Somewhat Important	Very Important
Cost of initial deployment	0	3	3	36	62
Cost to maintain and repair	0	2	6	30	67
Public/constituent involvement	9	14	40	29	14
Funding/grant availability	1	3	9	45	45
Mobility benefits (e.g., to address congestion)	0	1	6	33	63
Safety benefits	0	1	8	28	67
Environmental benefits	2	14	30	31	27
Integration with other agencies	1	4	34	44	21
Integration with your current technologies	0	1	8	23	70
Already used by other agencies	5	4	34	51	7
Other (please specify):	0	0	3	0	1

72a. Does your agency have any plans to invest in new ITS technology or to expand current ITS coverage in 2014 through 2016?

	Number of Agencies
Yes	97
Check all that apply:	
Invest in new ITS	75
Expand current ITS coverage	85
No	7

BENEFITS OF FREEWAY MANAGEMENT TECHNOLOGIES

73. Based on your agency experience, please rate the benefits of the following ITS technologies on freeways. Select a rating from 1 (No Benefit) to 5 (Significant Benefit) or No Experience in each row. Please check only one rating box per row.

	Number of Agencies					
	No Benefit (1)	(2)	Moderate Benefit (3)	(4)	Major Benefit (5)	No Experience
Traffic Sensors	0	2	11	14	72	7
Vehicle Probes	2	1	17	14	23	50
Toll Tags	2	0	5	5	23	70
Cameras	0	0	0	5	100	2
Ramp Control	1	3	2	8	27	65
Lane Management	0	0	6	7	17	74
Traveler Information	0	3	7	18	69	10
Automated Enforcement	0	1	1	7	4	92
Archived Data	0	5	22	32	38	11
Environmental Sensor Stations	1	8	11	25	29	30

PLANNING FOR OPERATIONS

Number of Agencies

74. Is there a long range ITS plan to guide project/program selection?

Yes

No

75. Does your agency routinely utilize systems engineering to identify agency needs and requirements when implementing/procuring ITS?

Yes

No

76. Does your agency rely on sample or model procurement documents provided by FHWA?

Yes

No

77. Is your agency part of the Regional ITS Architecture used to support regional transportation planning?

Number of Agencies

Yes

No

78. Is your agency included in a Regional Concept for Transportation Operations?

Number of Agencies

Yes

No

79. Does your agency receive, in real-time, incident information (e.g., clearance activities, type severity, etc.) from any public safety agency?

Number of Agencies

Incident Clearance	Yes	86	No	21
Incident Severity and Type	Yes	87	No	16

80. Does your agency provide, in real-time, incident information (e.g., type, severity, etc.) and/or freeway information (e.g., travel times, speed and condition) to the following types of agencies? (Check all that apply)

Number of Agencies

	Incident Information (e.g., type, severity, etc.)		Freeway Information (e.g., travel times, speed and condition)	
	Yes	No	Yes	No
Freeway Management agencies	80	19	67	32
Arterial Management agencies	67	32	53	45
Public Transit agencies	42	55	38	56
Law Enforcement public safety agencies	81	21	60	38
Fire Rescue public safety agencies	61	37	48	47
Other agencies	38	37	29	45

81. Select all that apply concerning your agency's participation in regional coordination activities:

Number of Agencies

No regular interagency meetings	27
Regular meetings with other agencies to coordinate planning	65
Regular meetings to coordinate operations	62
Formal agreement on coordination and data sharing with other agencies	34
Formal agreement to integrate operations with other agencies	28

ADDITIONAL COMMENTS

82. Please use the space below to provide any additional comments regarding your agency's deployment, operations or maintenance of ITS. (Please be as specific as possible when commenting on particular ITS technologies.)

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