

2002 Freeway Management Survey

FREEWAY SURVEILLANCE

NOTE: The "2002 Estimated by 2005" figures and selection information are not included in the companion Excel Spreadsheets.

- Total number of freeway centerline miles with real-time traffic data collection technologies (does not include CCTV):**

Traffic data collection technologies deployed	Miles Covered			
	Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Loop detectors:	Provided to Surveyee	Provided to Surveyee		
Video imaging detectors:	Provided to Surveyee	Provided to Surveyee		
Probe readers using ETC tags:	Provided to Surveyee	Provided to Surveyee		
Probe readers using other technology:	Provided to Surveyee	Provided to Surveyee		
Probe readers for transit vehicles:	Provided to Surveyee	Provided to Surveyee		
Acoustic detectors:	Provided to Surveyee	Provided to Surveyee		
Microwave radar:	Provided to Surveyee	Provided to Surveyee		
Aircraft Spotters:	Provided to Surveyee	Provided to Surveyee		
RTMS:				

RAMP CONTROL

Please enter the current information for 2002 and the current estimate for 2005 and 2008 in the boxes provided. We have entered the information your agency provided in 2000 to assist you.

NOTE: The "2002 Estimated Total by 2005" figures and selection information are not included in the companion Excel Spreadsheets.

- Total number of ramp meters**

	Total in 2000	2000 Estimated Total by 2005	Total in 2002	2002 Estimated Total by 2005	Estimated Total by 2008
Isolated (or stand-alone) ramp meters:	Provided to Surveyee	Provided to Surveyee			
Centrally controlled ramp meters:	Provided to Surveyee	Provided to Surveyee			
Freeway to freeway ramp meters:	Provided to Surveyee	Provided to Surveyee			
Pretimed ramp meters:	Provided to Surveyee	Provided to Surveyee			
Traffic responsive ramp meters:	Provided to Surveyee	Provided to Surveyee			
HOV bypass lanes at ramp meters:	Provided to Surveyee	Provided to Surveyee			
Ramp meters preemption for emergency vehicles:	Provided to Surveyee	Provided to Surveyee			
Ramp meters that provide priority for transit vehicles:	Provided to Surveyee	Provided to Surveyee			

2b. Temporary ramp closures:

	Total in 2000	2000 Estimated Total by 2005	Total in 2002	2002 Estimated Total by 2005	Estimated Total by 2008
Number of off-ramps:	Provided to Surveyee	Provided to Surveyee			
Number of on-ramps:	Provided to Surveyee	Provided to Surveyee			

2c. Please indicate under what situations are the ramp meters operational and how many.

	Total in 2000	2000 Estimated Total by 2005	Total in 2002	2002 Estimated Total by 2005	Estimated Total by 2008
Time of day	Provided to Surveyee	Provided to Surveyee			
Incidents	Provided to Surveyee	Provided to Surveyee			
Special events	Provided to Surveyee	Provided to Surveyee			
Other	Provided to Surveyee	Provided to Surveyee			

3. If your agency has not deployed ramp metering and has no plans to do so by 2008, has a feasibility study been conducted on the use of Ramp Metering?

Yes

Please indicate the reason(s) for not deploying Ramp Metering

Not feasible

Lack of perceived need

Lack of institutional support

Lack of funding

Other (please specify):

No

If a study is planned, when will it be conducted?

LANE MANAGEMENT

Please enter the current information for 2002 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2000 to assist you.

NOTE: The "2002 Estimated by 2005" figures and selection information are not included in the companion Excel Spreadsheets.

4. Total number of freeway centerline miles under lane control

Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Provided to Surveyee	Provided to Surveyee		

5. Please provide the number of centerline miles and the time of operation for each type of lane control:

	Freeway centerline miles	24 hours	Peak period only
Occupancy control (HOV):			
Express lanes (reversible flow):			
Lane open/closed			
Movable barrier:			
Pricing or tolls:			
Other (please specify):			

6. Do you have any variable speed limit signs?

Yes

How many?

No

DISTRIBUTION OF EN-ROUTE TRAVEL CONDITION INFORMATION

NOTE: The "2002 Estimated by 2005" figures and selection information are not included in the companion Excel Spreadsheets.

7. Number of centerline miles covered by Highway Advisory Radio (HAR)

Total miles in 2000	2000 Estimated total miles by 2005	Total miles in 2002	2002 Estimated total miles by 2005
Provided to Surveyee	Provided to Surveyee		

8. Number of miles covered by other roadside technologies (please specify)

Total miles in 2000	2000 Estimated total miles by 2005	Total miles in 2002	2002 Estimated total miles by 2005
Provided to Surveyee	Provided to Surveyee		

Specify other roadside technology:

Changeable Message Signs (CMS)

9. Total number of Permanent CMS deployed on freeways

Total miles in 2000	2000 Estimated total miles by 2005	Total miles in 2002	2002 Estimated total miles by 2005
Provided to Surveyee	Provided to Surveyee		

10. Total number of Portable CMS deployed on freeways

Total miles in 2002	2002 Estimated total miles by 2005	Total miles in 2004	2004 Estimated total miles by 2005
Provided to Surveyee	Provided to Surveyee		

11. Do you have established formal policies or procedures

that govern the operation of the CMS?

Yes

No

that govern the display of messages on the CMS?

Yes

No

that govern how messages are developed prior to being displayed on the CMS?

Yes

No

12. Do you have established formal policies or procedures for operators

that govern the operation of the CMS?

Yes

No

that govern the display of messages on the CMS?

Yes

No

DISSEMINATION OF INFORMATION TO THE PUBLIC

NOTE: The "2002 Estimated by 2005" figures and selection information are not included in the companion Excel Spreadsheets.

13a. Please check all the methods that your agency uses, or will use, to distribute information to the public.

	2000 Response		2002 Response	
	In 2000	By 2005	In 2002	By 2005
Dedicated cable TV:	Provided to Surveyee	Provided to Surveyee		
Automated telephone system:	Provided to Surveyee	Provided to Surveyee		
Internet Web sites	Provided to Surveyee	Provided to Surveyee		
Pagers or personal data assistants:	Provided to Surveyee	Provided to Surveyee		
Interactive TV:	Provided to Surveyee	Provided to Surveyee		
Kiosks:	Provided to Surveyee	Provided to Surveyee		
E-mail or other direct PC communication:	Provided to Surveyee	Provided to Surveyee		
In-vehicle navigation systems:	Provided to Surveyee	Provided to Surveyee		
Cell phone/automated voice:	Provided to Surveyee	Provided to Surveyee		
Facsimile:	Provided to Surveyee	Provided to Surveyee		
Do not distribute information:	Provided to Surveyee	Provided to Surveyee		
511 Telephone System				
Other (please specify):	Provided to Surveyee	Provided to Surveyee		

13b. Please check all the types of information that your agency distributes, or will distribute, to the public.

	In 2002	By 2005
Freeway travel times:		
Freeway travel speeds:		
Incident information:		
Special events:		
Work zones		
Parking information:		
Weather:		
Road conditions:		
Other (please specify):		

REAL-TIME INFORMATION TRANSFER AND RECEIPT

14. Does your agency receive, in real-time, freeway travel times derived from vehicle probes from any toll collection agency?

- Yes
- No
- No toll collection

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

- Incident clearance:
 - Yes
 - No
- Incident severity and type:
 - Yes
 - No

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

	Incident information (e.g. type, severity, etc.)	Freeway information (e.g. travel times, speed, and conditions)
Freeway Management Agencies:		
Arterial Management Agencies:		
Public Transit Agencies:		
Public Safety Agencies:		

SERVICE PATROLS

NOTE: The "2002 Estimated Total by 2005" figures and selection information are not included in the companion Excel Spreadsheets.

17. Total number of freeway miles patrolled by service patrols

Total in 2002	2002 Estimated total by 2005

18. Number of vehicles

Total in 2002	2002 Estimated total by 2005

19. Service Hours

	2002 Response
Peak hours only	
24/7	
Other (please specify)	

INCIDENT DETECTION AND VERIFICATION METHODS

NOTE: The "2002 Estimated Total Miles by 2005" and "2002 Estimated Total Miles by 2008" figures and selection information are not included in the companion Excel Spreadsheets.

Please provide the miles covered by the following incident detection/verification methods.

20. Free cellular phone call to a dedicated phone number other than 911

Total miles in 2002	2002 Estimated total miles by 2005	2002 Estimated total miles by 2008

21. Computer algorithms

Total miles in 2002	2002 Estimated total miles by 2005	2002 Estimated total miles by 2008

22. CCTV

Total miles in 2002	2002 Estimated total miles by 2005	2002 Estimated total miles by 2008

23. Call boxes

Total miles in 2002	2002 Estimated total miles by 2005	2002 Estimated total miles by 2008

SECTION II

DATA COLLECTION AND ARCHIVING

24. Do you have an Archived Data Management System as described in the National ITS Architecture?

- Yes
- No

25. How are data archived? (Check all that apply)

- Computer database - Store raw data. (e.g., sensor feed)
- Computer database - Store processed data (e.g., traffic conditions)
- Other (please specify)

26. Is an assessment of data quality included with the archived data?

- Yes,
What are the measures?
- No

27. Please check all the methods your agency uses to make the archived data available.

- On-Line (Web)
- CD
- Paper reports
- Other (please specify)

28. Please check the information your agency collects/archives from sensors.

	Collected in 2002	Archived in 2002
Traffic volumes:		
Traffic speeds:		
Lane occupancy:		
Vehicle classification:		
Travel time:		
Road conditions (e.g., wet, icy, etc.):		
Weather conditions (e.g., snow, fog, rain, etc.):		
Video surveillance:		
Other (please specify):		

29. Please check the information your agency collects/archives from other sources

	Collected in 2002	Archived in 2002
Route designations (snow emergency, etc.):		
Current work zones:		
Scheduled work zones:		
Intermodal (air, rail, water) connections:		
Emergency/evacuation routes and procedures:		
Vehicle occupancy:		
Violation rates for HOV lanes:		
Incident information (e.g., location, response time, etc.):		
Other (please specify)		
Do not collect/archive information		

30. What are the data used for?

- Do not know:
- Traffic analysis:
- Impact on work zones:
- Capital planning/analysis:
- Operation planning/analysis
- Incident detection algorithm development:
- Roadway impact analysis:
- Accident prediction models:
- Dissemination to the public:
- Monitor system performance:
- Safety analysis:
- Traffic simulation modeling:
- Traffic control:
- Travel time prediction:
- Other (please specify)

SYSTEM PERFORMANCE MONITORING, EVALUATION, AND REPORTING

31. Which of the following performance measures are used to report on the performance for the specified portions of the freeway system?

	Travel time	Travel time reliability	Vehicles per lane per mile	Vehicles per hour	Person throughput per lane per hour	Person throughput per hour	Average auto occupancy
Spot location							
Corridor							
System wide							

32. How often does your agency reports on the performance of the freeway system?

- Monthly
- Annually
- Other (please specify)

33. Who receives this performance report? (Check all that apply)

- Agency traffic operations
- Management
- Executive management
- Elected officials
- MPOs
- Other (please specify)

34. What format are used to present these measures? (Check all that apply)

- Tables
- Graphics/Charts
- Maps
- Text
- Other (please specify)

WEATHER

35. Has your agency deployed any Road Weather Information Systems (RWIS)?

Yes

How many have you deployed?

What information is collected? (Check all that apply)

- Temperature
- Humidity
- Wind speed
- Wind direction
- Precipitation (Rain)
- Precipitation (Snow)
- Other (please specify)

No

36. Does your agency have any in-pavement sensors to detect the condition of the roadway?

Yes

What conditions are measured? (Check all that apply)

- Temperature
- Presence of water
- Presence of ice
- Anti-icing chemical concentration
- Other (please specify)

No

37. Does your agency receive weather products tailored to your particular requirements?

- Yes
- No

OPERATIONAL PLANS AND PROCEDURES

Special Events

38. Does your agency participate in a formal multi-agency initiative to proactively plan for and coordinate activities regionally related to special events?

Yes

What are the associated components of this effort? (Check all that apply)

Plan to document and coordinate activities, resources, and policies for all special events

Interagency agreement

Multi-agency team

Other (please specify)

No

Will your agency participate by 2008?

Yes

No

39. For each of these events, provide the following information:

Event	Number of Events					
	Per year	Agencies plan and coordinate	With documented special events plan	With specific traffic control plans	With established operational procedures and protocol	With day-of-event multiagency traffic management team
Occasional major sporting						
Frequent major sporting events						
Fairs & Festivals						
Parades						
Other						

Alternate Route Plans

40. Does your agency have pre-planned alternate route plans to implement for certain sections of your freeway system?

Yes

Please answer the following corresponding to the type of event that requires the implementation of the plan:

	Total number of freeway centerline miles corresponding to plans			
	Urban Area	Rural Area	Alternate Route on Freeway	Alternate Route on Surface Street Arterial
Roadway construction				
Roadway maintenance				
Roadway closure – weather				
Major traffic incident				
Other:				

No

41. What criteria must be met to implement the alternate route plan? (Check all that apply)

- Type of incident
- Incident duration
- Incident location
- Number of freeway lanes blocked
- Time of day
- Other (please specify)

NATIONAL ITS STANDARDS

42. Please check the ITS standards, or groups of standards, that are used in your operational freeway management systems. The U.S. DOT ITS Standards Program recognizes that there may be other ITS standards surveys being conducted by other entities. If this is the case, please pardon the overlap; however, your input to these surveys will help the U.S. DOT ITS Standards Program better serve your needs and requirements. If no standards are used, skip to question 46.

List of standards to consider when deploying freeway management projects:

ADVANCED TRANSPORTATION CONTROLLER (ATC)

- ITE 9603-1 - ATC Application Program Interface (API)
- ITE 9603-2 - ATC Cabinet
- ITE 9603-3 - Advanced Transportation Controller (ATC)

ADVANCED TRAVELER INFORMATION SYSTEM (ATIS)

- SAE J2353 - Data Dictionary for Advanced Traveler Information System (ATIS)
- SAE J2354 - Message Set for Advanced Traveler Information System (ATIS)
- SAE J2369 - Standard for ATIS Message Sets Delivered Over Bandwidth Restricted Media

SAE J2529 - Rules for Standardizing Street Names and Route Ids
SAE J2540 - Messages for Handling Strings and Look-Up Tables in ATIS Standards

CENTER-TO-CENTER COMMUNICATIONS

ITE TM 2.01 - Message Sets for External TMC Communication (MS/ETMCC)
NTCIP 1104 - CORBA Naming Convention
NTCIP 1105 - CORBA Security Service
NTCIP 1106 - CORBA Near-Real Time Data Service
NTCIP 2304 - Application Profile for Data Exchange ASN.1 (DATEX)
NTCIP 2305 - Application Profile for Common Object Request Broker Architecture (CORBA)
NTCIP 2501 - Information Profile for DATEX
NTCIP 2502 - Information Profile for CORBA

COMMERCIAL VEHICLE OPERATIONS

ANSI TS285 - Commercial Vehicle Safety and Credentials Information Exchange
ANSI TS286 - Commercial Vehicle Credentials

INCIDENT MANAGEMENT

IEEE P1556 - Security/Privacy of Vehicle/RS Communications including Smart Card Comm.
IEEE P1512-2000 - Standard for Common Incident Management Message Sets (IMMS) for use by EMCs

DEDICATED SHORT RANGE COMMUNICATIONS

ASTM N/A - Standard Specification for 5.9 GHz Data Link Layer
ASTM N/A - Standard Specification for 5.9 GHz Physical Layer
ASTM PS 105-99 - Specification for DSRC Data Link Layer: Medium Access and Logical Link Ctrl.
ASTM PS 111-98 - Specification for DSRC Physical Layer using Microwave in the 902-928 MHz

LOCATION REFERENCING

SAE J1746 - ISP-Vehicle Location Referencing Standard
SAE J2374 - National Location Referencing Information Report

TRANSIT

NTCIP 1400 - TCIP - Framework Document
NTCIP 1401 - TCIP - Common Public Transportation (CPT) Business Area Standard
NTCIP 1403 - TCIP - Passenger Information (PI) Business Area Standard
NTCIP 1404 - TCIP - Scheduling/Runcutting (SCH) Business Area Standard
NTCIP 1405 - TCIP - Spatial Representation (SP) Business Area Standard
NTCIP 1406 - TCIP - Onboard (OB) Business Area Standard
NTCIP 1407 - TCIP - Control Center (CC) Business Area Standard
NTCIP 1408 - TCIP - Fare Collection (FC) Business Area Standard

ASTM AG - ADMS Standard Guidelines

ASTM DD - ADMS Data Dictionary Specifications

CEA/EIA-794 - Data Radio Channel (DARC) System

CEA/EIA-795 - Subcarrier Traffic Information Channel (STIC) System

IEEE Std 1488-2000 - Trial-Use Standard for Message Set Template for Intelligent Transportation Systems

IEEE Std 1489-1999 - Standard for Data Dictionaries for Intelligent Transportation Systems

ITE TM 1.03 - Standard for Functional Level Traffic Management Data Dictionary (TMDD)

NTCIP 1101 - Simple Transportation Management Framework (STMF)

NTCIP 1102 - Base Standard: Octet Encoding Rules (OER)

- NTCIP 1103 - Simple Transportation Management Protocol (STMP)**
- NTCIP 1201 - Global Object Definitions**
- NTCIP 1203 - Object Definitions for Dynamic Message Signs**
- NTCIP 1204 - Object Definitions for Environmental Sensor Stations & Roadside Weather Information System**
- NTCIP 1205 - Data Dictionary for Closed Circuit Television (CCTV)**
- NTCIP 1206 - Data Collection & Monitoring Devices**
- NTCIP 1207 - Ramp Meter Controller Objects**
- NTCIP 1208 - Object Definitions for Video Switches**
- NTCIP 1209 - Transportation System Sensor Objects**
- NTCIP 1301 - Message Set for Weather Reports**
- NTCIP 2001 - Class B Profile**
- NTCIP 2101 - Point to Multi-Point Protocol Using RS-232 Subnetwork Profile**
- NTCIP 2102 - Subnet Profile for PMPP Over FSK modems**
- NTCIP 2103 - Subnet Profile for Point-to-Point Protocol using RS 232**
- NTCIP 2104 - Subnet Profile for Ethernet**
- NTCIP 2201 - Transportation Transport Profile**
- NTCIP 2202 - Internet (TCP/IP and UDP/IP) Transport Profile**
- NTCIP 2301 - Application Profile for Simple Transportation Management Framework (STMF)**
- NTCIP 2302 - Application Profile for Trivial File Transfer Protocol**
- NTCIP 2303 - Application Profile for File Transfer Protocol (FTP)**
- NTCIP 8003 - Profiles - Framework and Classification of Profiles**

43. What factors helped your agency decide to use ITS standards? Please pick top three factors

	1	2	3
Options offered in the standards			
Products employ standards			
Regional architecture document requirements			
Additional funding provided			
Integration opportunities			
Consultant or integrator's recommendation			

44. For ITS standards that are used in operational systems, what level of detail was specified in the procurement specification document(s)?

Brief statement such as "Devices must be NTCIP compliant" was used. Please list the project name(s) that included this statement

A detailed write up of the specification and options from the standard was developed by: Please list project name(s) next to each option:

- Agency (in-house)
- Consultant

- Systems integrator

45. If you are using ITS standards, do you feel that using the standards helped with the integration needs for your agency? Please list project name(s) next to each option

- Absolutely:

- Somewhat:

- Not exactly

46. If no ITS standards are currently used, what factors will ensure that your agency uses ITS standards? Please pick top three factors (if standards are used check no. 1 on the first option and move on to next question).

	1	2	3
We are already committed to using standards			
Vendors providing products that use ITS standards			
Standards being accepted by the ITS community and being used in deployments			
Training and technical support being provided to my agency			
My agency being involved with standards development			
Additional funding being provided to use the standards			
Standards use enables interoperability of systems			
Other (please specify)			

47. What tool, resource, or support mechanism _____ was or _____ would be most helpful for implementing the standards? Please pick top three.

	1	2	3
Training courses			
Standards documents			
Workshops Standards			
Web site			
Standards forum			
Reference implementation			
E-mail bulletins			
Resource documents (i.e., user guides and reference notebooks)			
Testing tools			
Case studies of other similar projects that used standards successfully			
Other (please specify)			

Technical assistance. Again, please pick top three

	1	2	3
Colleagues (who have deployed standards)			
ITS Specialist			
Consultants			
Other (please specify)			

48. If plans for using ITS standards are underway in projects, at what stage will these deployment projects be in the spring of 2002? Please list project name(s) next to each option.

Transportation Improvement Plan

Procurement specification

Design

Systems integration

System testing and acceptance

49. Who can we contact in your agency regarding ITS standards?

Name:

Affiliation:

Phone:

E-mail:

NOTE: This information is not included in the companion Excel Spreadsheets.

COST AND BENEFITS

50. Is your agency willing to share COST information on ITS-related equipment (i.e., capital and O&M cost, and brief equipment description)? This information will be used to update the ITS JPO sponsored ITS unit cost database. This database provides ITS cost data for ITS implementation and is accessible at the following URL: <http://www.benefitcost.its.dot.gov/>.

Yes

Please provide name, phone number, and e-mail of the cost information contact if different from respondent. This person will be contacted for the cost information at a later date.

NOTE: This information is not included in the companion Excel Spreadsheets.

No

51. Is your agency willing to share BENEFITS information from ITS deployment?

Yes

Please provide name and phone number of the benefits information contact if different from respondent. This person will be contacted for the benefits information at a later date.

NOTE: This information is not included in the companion Excel Spreadsheets.

No

TRAFFIC INCIDENT MANAGEMENT

52. Does your agency participate in a formal multi-agency regional or statewide program to coordinate management of traffic incidents that contains all of the following elements?

Strategic Planning - A mutually agreed to statement of multi-agency program goals and measurable objectives.

Program Plan - A multi-year, multi-agency program plan that maps out the process toward meeting program goals and identifying initiatives, tasks and funding sources.

Annual Work Plan - A plan of tasks, projects, or initiatives for participating agencies to be done during the current year with funding secured.

- Yes
- No
- Don't know

53. Does your agency participate in a team that meets on a regular basis to evaluate and improve coordinated incident response and to address traffic problems as well?

- Yes
- No
- Don't know

54. Does your agency have formal established call-out procedures for responding to traffic incidents?

Yes

When are these procedures in effect and whom in your agency do they affect?

Procedures are in place: (Check all that apply)

- 24 hours a day, 7 days a week, 365 days a year
- Peak periods only
- Normal business hours only
- Weekends
- Holidays
- Other (please specify):

Whom do they affect: (Check all that apply)

- Traffic control
- Roadway maintenance
- Bridges/Tunnels (structures)
- Other : (please specify)

- No
- Don't know

55. Are on-call supervisors permitted to take public vehicles or equipment home in order to facilitate their response to traffic incidents?

- Yes
- No
- Don't know
- Don't know

56. With what types of agencies does your agency electronically share real-time and/or after-the-fact reporting information on traffic incidents?

	Real-Time Data	After-The-Fact Data
Other transportation agencies		
Law enforcement (local)		
Law enforcement (state)		
Fire and rescue agencies		
Other (please specify):		
Do not electronically exchange information		
Do not know		

57. Has a multi-agency contact list been developed in your area containing the names, phone numbers, pager numbers, and other pertinent information for the appropriate response personnel?

- Yes
- No
- Don't know

58. Is an Incident Management (Incident Command) System used on-scene to manage traffic incidents?

- Yes, specified by state law
- Yes, through agreement
- No
- Don't know

59. Is there a legal specification by state law or formal agreement as to who is in charge at the scene of a traffic incident (Incident Commander)?

- Yes
- No
- Don't know

60. Has a plan been developed and adopted by responding agencies for staging and parking response vehicles and equipment at a traffic incident site in a manner that minimizes lane blockage and facilitates the re-opening of lanes?

- Yes
- No
- Don't know

61. Are respondents protected through law or court opinion for liability claims for damages to vehicles or cargoes during clearance activities so long as the removal was not done in a careless or grossly negligent manner?

- Yes
- No
- Legislation or action being planned
- Don't know

62. Does your state or local jurisdiction have a law that requires drivers involved in a property-damage only accident (where vehicles can be driven) to move the vehicles from travel lanes to a safe location to exchange information or wait for police?

- Yes
- No
- Legislation planned or in progress
- Don't know

63. Are there any laws or policies regarding the removal of stalled or abandoned vehicles from freeway shoulders in your metropolitan area?

Yes
Please describe briefly

- No
- Don't know

64. How long are abandoned vehicles allowed to remain on a freeway shoulder (assuming they are not an imminent hazard)?

- 0 to 4 hours
- 4 to 24 hours
- More than 24 hours (Please specify):
- Don't know

65. Are there any policies and procedures to facilitate quick removal of heavily damaged vehicles and non-hazardous cargoes in your metropolitan area?

Yes
Please briefly describe the policy or procedures

- No
- Don't know

66. What agency usually directs traffic on scene at major traffic incidents in your area? (select only one)

- Law enforcement
- Fire and rescue
- Transportation
- Auxiliary or reserves (fire or police)

67. Are on-scene responders to traffic incidents from your agency familiar with standards for traffic control specified in the Manual on Uniform Traffic Control Devices (MUTCD)?

- Yes
- No
- Don't know

68. Does your agency participate in a statewide disaster planning program?

- Yes
- No
- Don't know

69. Does your agency have a multi-year strategic plan that focuses on highway traffic operations and freeway management?

Yes

What are the components of this plan? (Check all that apply)

Goals and objectives

Program performance measures and thresholds

Operation strategies, procedures, and plans

Operational concept and requirements

Maintenance concept and plan

Staffing and support plan

Multi-year implementation plan (e.g., ITS, TMS, system support, etc.)

No

SECTION III

FREEWAY TRAFFIC OPERATIONS

70. Does your agency have a highway traffic operations or freeway management program?

Yes

What are the components of this program? (Check all that apply)

Goals and objectives

Program performance measures and thresholds

Operation strategies, procedures, and plans

Operational concept and requirements

Maintenance concept and plan

Staffing and support plan

Multi-year implementation plan (e.g., ITS, TMS, system support, etc.)

No

71. Does your agency have established operational policies and procedures?

Yes

Are they documented in the form of an Operations Manual?

Yes

Please identify the items contained within this manual.

No

No

TRAFFIC MANAGEMENT CENTER

72. Does your agency operate a Traffic Management Center (TMC)?

Yes

Please answer questions 73 through 95

No

If your agency does not operate a TMC and has no plans to do so by 2008, has a feasibility study been conducted on the operation of a TMC?

Yes

Please indicate the reason(s) for not operating a TMC

Not feasible

Lack of perceived need

Lack of institutional support

Lack of funding

Other (Please specify):

No

if a study is planned, when will it be conducted?

73. What is the name of the center?

74. Please check all of the following items which best describe the functional capabilities of your TMC

Network or roadway surveillance and data collection

Incident management (e.g., detection, verification and monitoring of incident status)

Information dissemination (public, private, and interagency)

En-route driver information (e.g., CMS, HAR)

Environmental monitoring (e.g., air quality, noise and weather)

Special event traffic management

Disaster management and traffic coordination

Emergency services traffic control coordination

Ramp management and control

Lane management and control (e.g., HOV, reversible or freeway lanes)

Corridor management/traffic signal coordination or control

Network performance monitoring, evaluation and reporting

Other (please specify)

75. Which of the following best describes the type of TMC facilities used to manage travel, control traffic, and coordinate with others?

Building/Facility: (Check one)

Free-standing building dedicated to TMC activities

Building shared with other activities (e.g., transit, arterial management, public safety)

Control room: (Check all that apply)

Contains operator console(s)

Contains electronic wall map

Contains CCTV display(s)

Joint facility shared with other interest: (Check all that apply)

Transit

Traffic signal control

Public safety

Other (please specify)

76. Hours of operation:

24 hours a day

Peak hours only

Other (please specify):

77. Dedicated Staff to Control Room: (Number of Employees):

	Professional engineer	Other professional	Technical	Administrative	Other
Full time agency staff					
Part time agency staff					
Full time contractor					
Part time contractor					

78. Dedicated Staff to Other TMC Activities: (Number of Employees)

	Professional engineer	Other professional	Technical	Administrative	Other
Full time agency staff					
Part time agency staff					
Full time contractor					
Part time contractor					

79. Does your agency have a multi-year strategic plan that focuses on TMC?

Yes

Please indicate the following components: (Check all that apply)

- System goals and objectives
- TMC architecture and standards
- Operational strategies, procedures, and plans
- System operational requirements and concepts
- System maintenance concept and plan
- Staffing and system support plan
- Performance monitoring, evaluation, and reporting process
- Performance measures and thresholds
- Staff development and training
- Multi-year implementation plan to expand or upgrade system components
 - System management
 - System support
 - Communication network
 - TMC (e.g., control room)
 - Traffic control devices
 - Surveillance devices

No

80. Does your agency have any agreements in place to establish and/or systematically maintain the ability to share information with other systems or agencies?

Yes

Please indicate the following components of this agreement: (Check all that apply)

Hardware standards and/or specifications (e.g., CMS, traffic controllers, CCTV, etc.)

Software and/or specifications

Database and data elements

Communications protocol

Configuration management

Maintenance policies

Acceptance testing specifications and procedures

Accuracy of data

Type of data

No

81. Does your TMC have established operational policies and procedures?

Yes

Are they documented in the form of an Operations Manual?

Yes

Please identify the items contained within this manual.

No

No

Coordinated Freeway and Surface Street Operation

82. Have control plans been developed to coordinate traffic between ramp meters and adjoining traffic signal?

Yes

Number of locations:

No

83. Have operational procedures and protocol been established for agency staff to modify control plans based on actual roadway conditions?

Yes

No

84. Have interfaces been developed to share information between ramp meters and adjoining traffic signals to coordinate operation in real-time?

Yes

Number of locations:

No

85. Do you have special control algorithms to coordinate operation of traffic signals and ramp meters?

Yes

No

86. Does capability exist for TMC to remotely change both ramp meter and adjoining traffic signal operation?

Yes

Number of locations:

No

Maintenance Program, Concept, Plans, and Procedures

87. Do you have a formal maintenance program?

Yes

What are the components? (Check all that apply)

System maintenance concept and requirements

Policies

Established procedures

Multi-year program plan

Tracking system and software

Training

Other (please specify)

No

88. Please check all technologies for which you have requirements, procedures, protocol for preventive maintenance, routine maintenance, or emergency repair.

CMS

CCTV

Ramp Meter Controllers

Traffic Signal Controllers

Comm network

Detectors

Other (please specify)

Configuration Management

89. Do you have a formal Configuration Management program?

Yes

What are the components? (Check all that apply)

Configuration control board

System or Configuration Management Program Plan

Program or system specific policies and procedures

Multi-year program plan

Training

Other (please specify)

No

90. What Configuration Management tools do you use, and have they been developed or purchased?

	Developed	Purchased
Software		
Inventory software		
Documentation		
Other (please specify)		

91. Please check all technologies for which you have manufacturer specifications, formal procedures, check lists, etc.

- CMS
- CCTV
- Ramp Meter Controllers
- Traffic Signal Controllers
- Comm network
- Detectors
- Other (please specify)

92. Does your region have a formal Configuration Management initiative or policies to implement Configuration Management concepts and techniques?

- Yes
- No

Acceptance Testing

93. Do you have an acceptance testing plan for your TMC?

- Yes
 - What are the components? (Check all that apply)
 - Policies
 - Procedures
 - Specifications
 - Testing material and resources
 - Training
 - Other (please specify)

No

94. Please check all technologies for which do you have manufacturer testing specifications, formal testing procedures, test performance requirements, etc.

- CMS
- CCTV
- Ramp Meter Controllers
- Traffic Signal Controllers
- Comm network
- Detectors
- Other (please specify)

95. Please provide us with a contact person for this TMC (name, e-mail, telephone, etc.).

NOTE: This information is not included in the companion Excel Spreadsheets.