

2002 Transit Management Survey

FLEET CHARACTERISTICS

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

1. Total number of vehicles used in revenue service:

	Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Fixed Route Bus:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail:	Provided to Surveyee	Provided to Surveyee		
Light Rail:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat:	Provided to Surveyee	Provided to Surveyee		

2. Total number of vehicles equipped with Automated Vehicle Location (AVL):

	Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Fixed Route Bus:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail:	Provided to Surveyee	Provided to Surveyee		
Light Rail:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat:	Provided to Surveyee	Provided to Surveyee		

3. Total number of vehicles with real-time monitoring of vehicle components:

	Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Fixed Route Bus:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail:	Provided to Surveyee	Provided to Surveyee		
Light Rail:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat:	Provided to Surveyee	Provided to Surveyee		

4. Total number of vehicles equipped with mobile data terminals:

	Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Fixed Route Bus:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail:	Provided to Surveyee	Provided to Surveyee		
Light Rail:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat:	Provided to Surveyee	Provided to Surveyee		

5. Total number of vehicles that have Automatic Passenger Counters (Do not include registering fareboxes):

	Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Fixed Route Bus:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail:	Provided to Surveyee	Provided to Surveyee		
Light Rail:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat:	Provided to Surveyee	Provided to Surveyee		

6. Total number of vehicles where automated dispatching or control software¹ is available:

	Total in 2000	2000 Estimated total by 2005	Total in 2002	2002 Estimated total by 2005
Fixed Route Bus:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail:	Provided to Surveyee	Provided to Surveyee		
Light Rail:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat:	Provided to Surveyee	Provided to Surveyee		

MOTOR VEHICLE OPERATED AS VEHICLE PROBES

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.

7. Motor buses used as probes to collect travel time, speed, and conditions on FREEWAYS:

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

¹ Software that displays AVL-equipped vehicle locations, vehicle data, and operator data on dispatcher monitors, automated control software for light or heavy rail systems, or automated scheduling software for demand responsive service.

8. Motor buses used as probes to collect travel time, speed, and conditions on ARTERIALS:

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

ORGANIZED REGIONAL INCIDENT MANAGEMENT PROGRAM

9. Does your agency's operators or dispatchers report traffic incidents (e.g., stalled vehicles, crashes)?

2000 Response	2002 Response	2005 Estimated
Provided to Surveyee	Yes No	Yes No

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

- Yes
- No
- Don't know

AUTOMATED TRAVELER INFORMATION SYSTEM (ATIS)

11. Does your agency have an Automated Traveler Information System (ATIS)?

2000 Response	2002 Response	2005 Estimate
Provided to Surveyee	Yes No	Yes No

12. Services the automated traveler information system applies or will apply to:

	2002 Response	2005 Estimate
Fixed Route Bus:		
Heavy or Rapid Rail:		
Light Rail:		
Demand Responsive:		
Commuter Rail:		
Ferry Boat:		

13. Is or will the ATIS be multi-carrier/multi-modal with other transit operators?

2000 Response	2002 Response	2005 Estimate
Provided to Surveyee	Yes No	Yes No

14. Is or will the ATIS be multi-carrier/multi-modal with highway information?

2000 Response	2002 Response	2005 Estimate
Provided to Surveyee	Yes No	Yes No

15. Please check all the methods your agency uses, or will use, to disseminate information to the public:

Method	Methods used to disseminate Transit Routes, Schedules, and Fare Information to the public:		Methods used to disseminate Real-time Transit schedule adherence or Arrival and Departure Times to the public:	
	2002 Response		2002 Response	
	In 2002	By 2005	In 2002	By 2005
Dedicated cable TV:				
Automated telephone system:				
Internet Web sites:				
Pagers or personal data assistants:				
Interactive TV:				
Kiosks:				
E-mail or other direct PC communication:				
In-vehicle navigation systems:				
Cell phone/automated voice:				
Variable Message Signs (in vehicle):				
Monitors/VMS (not in vehicles):				
Audible Enunciators:				
Facsimile:				
511 Telephone System:				
Other:				

16. Total number of bus stops:

Total locations in 2002	2002 Estimated total locations by 2005

17. Number of bus stops that electronically display or will display automated and dynamic traveler information to the public:

Total locations in 2002	2002 Estimated total locations by 2005

TRAFFIC SIGNAL PRIORITY

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.

18. Number of Fixed Route Buses that have or will have traffic signal priority capability:

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

19. Number of Light Rail vehicles that have or will have traffic signal priority capability:

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

20. Number of Demand Responsive vehicles that have or will have traffic signal priority capability:

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

RAMP METER SIGNAL PRIORITY

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.

21. Number of Fixed Route Buses with ramp meter signal priority:

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

22. Number of Demand Responsive vehicles with ramp meter signal priority:

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

ELECTRONIC FARE PAYMENT

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.

23. Vehicles/Stations equipped with Magnetic Stripe Readers

	Total in 2000	2005 Estimate in 2000	Total in 2002	2002 Estimated total by 2005
Fixed Route Buses:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail Stations:	Provided to Surveyee	Provided to Surveyee		
Light-Rail Stations:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive Vehicles:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail Stations:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat Landings:	Provided to Surveyee	Provided to Surveyee		

24. Vehicle/Stations equipped with Smart Card Readers (with embedded computer chip)

	Total in 2000	2005 Estimate in 2000	Total in 2002	2002 Estimated total by 2005
Fixed Route Buses:	Provided to Surveyee	Provided to Surveyee		
Heavy or Rapid Rail Stations:	Provided to Surveyee	Provided to Surveyee		
Light-Rail Stations:	Provided to Surveyee	Provided to Surveyee		
Demand Responsive Vehicles:	Provided to Surveyee	Provided to Surveyee		
Commuter Rail Stations:	Provided to Surveyee	Provided to Surveyee		
Ferry Boat Landings:	Provided to Surveyee	Provided to Surveyee		

25. Is the fare paid by electronic fare payment by monthly pass only?

2000 Response	2005 Estimate in 2000	2002 Response	2005 Estimate
Provided to Surveyee	Provided to Surveyee	Yes No	Yes No

26. Does your agency electronically store collected fare payment data for use in route and service planning?

2000 Response	2005 Estimate in 2000	2002 Response	2005 Estimate
Provided to Surveyee	Provided to Surveyee	Yes No	Yes No

27. Are there or will there be by 2005 any other Transit Agencies in your metropolitan area that use the same electronic fare payment system that can be used to pay for your transit fares?

2000 Response	2005 Estimate in 2000	2002 Response	2005 Estimate
Provided to Surveyee	Provided to Surveyee	Yes Please list them in the space provided: No, there are no other Transit Agencies No	Yes Please list them in the space provided: No, there are no other Transit Agencies No

28. Are there or will there be by 2005 any Toll Collection Operators in your metropolitan area that use electronic toll collection media (i.e. EZ PASS) that can be used to pay for your transit fares?

2000 Response	2005 Estimate in 2000	2002 Response	2005 Estimate
Provided to Surveyee	Provided to Surveyee	Yes Please list them in the space provided: No, there is no Toll Collection No	Yes Please list them in the space provided: No, there is no Toll Collection No

SECURITY

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

29. How many of your buses are equipped with any of the following security devices?

	Total in 2000	2005 Estimate in 2000	Total in 2002	Estimated total by 2005
Silent alarms:	Provided to Surveyee	Provided to Surveyee		
Cameras:	Provided to Surveyee	Provided to Surveyee		
Covert microphones:	Provided to Surveyee	Provided to Surveyee		
Remote disabling system:	Provided to Surveyee	Provided to Surveyee		
Other:	Provided to Surveyee	Provided to Surveyee		

COMMUNICATIONS TECHNOLOGY

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.

30. What type of radio system does your agency have?

	Total in 2000	2005 Estimate in 2000	Total in 2002	Estimated total by 2005
Radio system is Digital:	Provided to Surveyee	Provided to Surveyee		
Radio system is Analog:	Provided to Surveyee	Provided to Surveyee		
Radio system is Trunked:	Provided to Surveyee	Provided to Surveyee		
Radio system is Regular:	Provided to Surveyee	Provided to Surveyee		

INTEGRATION

31. Does your agency currently share or plan to share by 2005 information in real-time via electronic means and/or share infrastructure (e.g. building, computer system, communication lines) with other transportation agencies in your metropolitan area?

- Yes
- No, and do not plan to share by 2005
- No, but plan to share by 2005

32. Does your agency coordinate or will coordinate by 2005 travel requests and vehicle dispatching for multiple agencies (e.g. social service agencies, HHS, other transit agencies, etc.)?

- Yes
- No, and do not plan to do so
- No, but plan to do so by

33. Is there or will there be by 2005 a Transportation Management Center (TMC) that controls transit and highway modes (e.g. traffic signals, message signs, incident management, etc.) in your metropolitan area?

- Yes
- No, and do not plan to have a TMC by 2005
- No, but plan to have a TMC by 2005

WEATHER

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

- Yes
- No

COST AND BENEFITS

35. 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

36. 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

SECTION II

DATA COLLECTION AND ARCHIVING

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

Yes

No

38. 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)

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

Yes

What are the measures?

No

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

On-Line (Web)

CD

Paper reports

Other (please specify)

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.

41. Please check the information your agency collects/archives in real-time

	Collected in 2000	Archived in 2000	Collect in 2002	Archive in 2002
Vehicle time and location	Provided to Surveyee	Provided to Surveyee		
Passenger count	Provided to Surveyee	Provided to Surveyee		
Trip itinerary planning records	Provided to Surveyee	Provided to Surveyee		
Passenger information	Provided to Surveyee	Provided to Surveyee		
Vehicle monitoring status	Provided to Surveyee	Provided to Surveyee		
Road conditions (e.g. wet, icy, etc.)	Provided to Surveyee	Provided to Surveyee		
Emergency vehicle signal preemption events	Provided to Surveyee	Provided to Surveyee		
Transit vehicle signal priority events	Provided to Surveyee	Provided to Surveyee		
Weather conditions (e.g., snow, fog, rain, etc.)	Provided to Surveyee	Provided to Surveyee		
Incidents	Provided to Surveyee	Provided to Surveyee		

42. Please check the information that your agency collects/archives electronically

	Collected in 2000	Archived in 2000	Collect in 2002	Archive in 2002
Route designations (snow emergency, etc.)	Provided to Surveyee	Provided to Surveyee		
Current road work zones for transit	Provided to Surveyee	Provided to Surveyee		
Scheduled road work zones for transit	Provided to Surveyee	Provided to Surveyee		
Intermodal (air, rail, water) connections	Provided to Surveyee	Provided to Surveyee		
Emergency/evacuation routes and procedures	Provided to Surveyee	Provided to Surveyee		
Highway operations coordination information	Provided to Surveyee	Provided to Surveyee		
Transit operations coordination information	Provided to Surveyee	Provided to Surveyee		
Other (please specify):	Provided to Surveyee	Provided to Surveyee		
Do not collect/archive information	Provided to Surveyee	Provided to Surveyee		

43. What are the data used for?

	2000 Response	2002 Response
Do not know	Provided to Surveyee	
Operation planning/analysis	Provided to Surveyee	
Construction impact determination	Provided to Surveyee	
Capital planning/analysis	Provided to Surveyee	
Incident detection algorithm development	Provided to Surveyee	
Roadway impact analysis	Provided to Surveyee	
Accident prediction models	Provided to Surveyee	
Dissemination to the public	Provided to Surveyee	
Traffic Management	Provided to Surveyee	
Measurement of performance	Provided to Surveyee	
Safety analysis	Provided to Surveyee	
Other (please specify):	Provided to Surveyee	

NATIONAL ITS STANDARDS

44. Please check the ITS standards, or groups of standards, that are used in your operational transit management systems. These systems include traveler information, transit vehicle communication, and highway-rail intersection. 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 any 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 48.

List of standards to consider when deploying arterial management projects:

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 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

HIGHTWAY RAIL INTERSECTION (HRI)

- IEEE P1570 - Standard for Interface Between the Rail Subsystem and the Highway Subsystem at a Highway Rail Intersection

INCIDENT MANAGEMENT

- IEEE P1512.a - Standard for Emergency Management Data Dictionary
- IEEE P1512-2000 - Standard for Common Incident Management Message Sets (IMMS) for use by EMCs

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)

ITE TS 3.TM - TCIP - Traffic Management (TM) Business Area Standard

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

NTCIP 1301 - Message Set for Weather Reports

NTCIP 2104 - Subnet Profile for Ethernet

NTCIP 2202 - Internet (TCP/IP and UDP/IP) Transport Profile

NTCIP 2303 - Application Profile for File Transfer Protocol (FTP)

45. 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			

46. 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

47. 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

48. 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)			

49. 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			

Technical assistance. Again, please pick top three

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

50. 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

51. 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.