

Metropolitan Intelligent Transportation Systems (ITS)
Infrastructure 2004 Transit Management Survey

Table of Contents

SECTION I. Core deployment data

| | |
|---|----|
| FLEET CHARACTERISTICS..... | 4 |
| MOTOR VEHICLES OPERATED AS VEHICLE PROBES..... | 5 |
| ORGANIZED REGIONAL INCIDENT MANAGEMENT PROGRAM..... | 5 |
| ADVANCED TRAVELER INFORMATION SYSTEM (ATIS)..... | 5 |
| TRAFFIC SIGNAL PRIORITY..... | 6 |
| RAMP METER SIGNAL PRIORITY..... | 7 |
| ELECTRONIC FARE PAYMENT..... | 7 |
| SECURITY..... | 8 |
| COMMUNICATION TECHNOLOGY..... | 9 |
| INTEGRATION..... | 9 |
| WEATHER..... | 10 |
| EVALUATION..... | 10 |
| COST AND BENEFITS..... | 10 |

SECTION II. Additional deployment

| | |
|------------------------------------|----|
| DATA COLLECTION AND ARCHIVING..... | 12 |
| NATIONAL ITS STANDARDS..... | 14 |

Section I

FLEET CHARACTERISTICS

Please enter the current information for 2004 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2002 to assist you.

1. Total number of vehicles used in revenue service:

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|----------------------|----------------------|------------------------------|----------------------|------------------------------|
| Fixed Route Bus: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Heavy or Rapid Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Light Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Demand Responsive: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Commuter Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Ferry Boat: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

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

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|--|----------------------|------------------------------|----------------------|------------------------------|
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

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

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|----------------------|----------------------|------------------------------|----------------------|------------------------------|
| Fixed Route Bus: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Heavy or Rapid Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Light Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Demand Responsive: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Commuter Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Ferry Boat: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

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

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|--|----------------------|------------------------------|----------------------|------------------------------|
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

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

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|----------------------|----------------------|------------------------------|----------------------|------------------------------|
| Fixed Route Bus: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Heavy or Rapid Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Light Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Demand Responsive: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Commuter Rail: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Ferry Boat: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

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

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|--|----------------------|------------------------------|----------------------|------------------------------|
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

* 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.

MOTOR VEHICLE OPERATED AS VEHICLE PROBES:

Please enter the current information for 2004 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2002 to assist you.

| | Total in 2002 | 2005 estimate in 2002 | Total in 2004 | Estimated total by 2005 |
|---|----------------------|-----------------------|----------------------|-------------------------|
| 7. Motor buses used as probes to collect travel time, speed, and conditions on FREEWAYS: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 8. Motor buses used as probes to collect travel time, speed, and conditions on ARTERIALS: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

ORGANIZED REGIONAL INCIDENT MANAGEMENT PROGRAM:

| | 2002 Response | 2005 Estimate in 2002 | 2004 Response | 2005 Estimate |
|--|-------------------------------------|--------------------------|--------------------------|--------------------------|
| 9. Does your agency's operators or dispatchers report traffic incidents (e.g., stalled vehicles, crashes)? | Yes: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | No: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Does your agency participate in a statewide disaster planning program? | 2002 Response | | 2004 Response | |
| | Yes <input type="checkbox"/> | | <input type="checkbox"/> | |
| | No <input type="checkbox"/> | | <input type="checkbox"/> | |
| | Don't know <input type="checkbox"/> | | <input type="checkbox"/> | |

ADVANCED TRAVELER INFORMATION SYSTEM (ATIS):

| | 2002 Response | 2005 Estimate in 2002 | 2004 Response | 2005 Estimate |
|---|-------------------------------|--------------------------|--------------------------|--------------------------|
| 11. Does your agency have an Advanced Traveler Information System (ATIS)? | Yes: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | No: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Services the advanced traveler information system applies or will apply to: | 2002 Response | 2005 Estimate in 2002 | 2004 Response | 2005 Estimate |
| Fixed Route Bus: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Heavy of Rapid Rail: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Light Rail: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Demand Responsive: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Commuter Rail: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ferry Boat: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | 2002 Response | 2005 Estimate in 2002 | 2004 Response | 2005 Estimate |
|--|-------------------------------|--------------------------|--------------------------|--------------------------|
| 13. Is or will the ATIS be multi-carrier/multi-modal with other transit operators? | Yes: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | No: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Is or will the ATIS be multi-carrier/multi-modal with highway information? | Yes: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | No: <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

ADVANCED TRAVELER INFORMATION SYSTEM (ATIS) (Cont.):

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

| | 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 | | 2004 Response | | 2002 Response | | 2004 Response | |
| | In 2002 | by 2005 | In 2004 | by 2005 | In 2002 | by 2005 | In 2004 | by 2005 |
| Dedicated cable TV: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Automated telephone system: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Internet Web sites | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Pagers or personal data assistants: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interactive TV: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Kiosks: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| E-mail or other direct PC communication: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| In-vehicle navigation systems: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Variable Message Signs (in vehicle): | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Monitors/VMS (not in vehicles): | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audible Enunciators: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Facsimile: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 511 Telephone System: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Automated web-based trip planner: | | | <input type="checkbox"/> | <input type="checkbox"/> | N/A | N/A | <input type="checkbox"/> | <input type="checkbox"/> |
| Other: | | | <input type="checkbox"/> | <input type="checkbox"/> | N/A | N/A | N/A | N/A |

| | Total locations in 2002 | 2002 estimated total locations by 2005 | Total locations in 2004 | 2004 estimated total locations by 2005 |
|---|-------------------------|--|-------------------------|--|
| 16. Total number of bus stops: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 17. Number of bus stops that electronically display or will display automated and dynamic traveler information to the public: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 18. Total number of rail stations: | | | <input type="text"/> | <input type="text"/> |
| 19. Number of rail stations that electronically display or will display automated and dynamic traveler information to the public: | | | <input type="text"/> | <input type="text"/> |

TRAFFIC SIGNAL PRIORITY:

Please enter the current information for 2004 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2002 to assist you.

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|---|----------------------|------------------------------|----------------------|------------------------------|
| 20. Number of Fixed Route Buses that have or will have traffic signal priority capability: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 21. Number of Light Rail vehicles that have or will have traffic signal priority capability: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 22. Number of Demand Responsive vehicles that have or will have traffic signal priority capability: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

RAMP METER SIGNAL PRIORITY:

Please enter the current information for 2004 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2002 to assist you.

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|--|----------------------|---------------------------------------|----------------------|---------------------------------------|
| 23. Number of Fixed Route Buses with ramp meter signal priority capability: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 24. Number of Demand Responsive vehicles with ramp meter signal priority capability: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

ELECTRONIC FARE PAYMENT:

Please enter the current information for 2004 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2002 to assist you.

25. Vehicles/Stations equipped with Magnetic Stripe Readers

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

| | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 | Total in 2002 | 2002 estimated total by 2005 | Total in 2004 | 2004 estimated total by 2005 |
|-------------------------------|----------------------|---------------------------------------|----------------------|---------------------------------------|----------------------|---------------------------------------|----------------------|---------------------------------------|
| Fixed Route Buses: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Heavy or Rapid Rail Stations: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Light-Rail Stations: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Demand Responsive Vehicles: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Commuter Rail Stations: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Ferry Boat Landings: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

| | 2002 Response | 2005 estimate in 2002 | 2004 Response | 2005 Estimate |
|--|---|--|--|--|
| 27. Is the fare paid by electronic fare payment by monthly pass only? | Yes <input type="checkbox"/> No <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 28. Does your agency electronically store collected fare payment data for use in route and service planning? | Yes <input type="checkbox"/> No <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |

29. 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?

| | 2002 Response | 2005 estimate in 2002 | 2004 Response | 2005 Estimate |
|---|--------------------------|-----------------------------|--------------------------|--------------------------|
| Yes, please list them in the space provided | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| No, there are no other Transit Agencies | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| No | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

ELECTRONIC FARE PAYMENT (Cont.):

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

2005
estimate in
2002

2002
Response

2004
Response

2005
Estimate

Yes, please list them in the space provided

No, there is no Toll Collection

No

31. Does your agency coordinate billing with social service agencies?

- Yes
- No

SECURITY:

32. How many of your BUSES are equipped, or will be equipped, with the following security devices?

| | 2002 Respos | 2002 Estimate in 2002 | In 2004 | 2005 Estimate |
|---|----------------------|-----------------------------|----------------------|----------------------|
| Silent alarms: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Cameras: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Covert microphones: | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Remote disabling system: | N/A | N/A | <input type="text"/> | <input type="text"/> |
| Other: <input style="width: 200px;" type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

33. How many of your RAIL VEHICLES are equipped, or will be equipped, with the following security devices?

| | In 2004 | 2005 Estimate |
|---|----------------------|----------------------|
| Silent alarms: | <input type="text"/> | <input type="text"/> |
| Cameras: | <input type="text"/> | <input type="text"/> |
| Covert microphones: | <input type="text"/> | <input type="text"/> |
| Other: <input style="width: 200px;" type="text"/> | <input type="text"/> | <input type="text"/> |

34. How many of your RAIL STATIONS are equipped, or will be equipped, with the following security devices?

| | In 2004 | 2005 Estimate |
|---|----------------------|----------------------|
| Silent alarms: | <input type="text"/> | <input type="text"/> |
| Cameras: | <input type="text"/> | <input type="text"/> |
| Covert microphones: | <input type="text"/> | <input type="text"/> |
| Other: <input style="width: 200px;" type="text"/> | <input type="text"/> | <input type="text"/> |

35. Does your agency have electronic ID cards for employees?

- Yes
- No

COMMUNICATIONS TECHNOLOGY:

Please enter the current information for 2004 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2002 to assist you.

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

| | 2002 Response | 2005 Estimate in 2002 | 2004 Response | 2005 Estimate |
|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|
| Radio system is Digital: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radio system is Analog: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radio system is Regular: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radio system is Trunked: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

37. If you are planning or need to update your mobile communications system, what alternative are you thinking about?

- Updating your 150 or 450 MHz to a digital system
- Converting to a dedicated 800 MHz system?
- Joining an area wide 800 MHz system?
- No updates planned at this time

38. How do you now communicate with public safety agencies?

- Have a dedicated radio channel
- No direct means of communicating via the mobile communications system
- A partner in a joint interoperable system
- Do not communicate with public safety agencies

39. Are you considering adding the capability of interoperability with public safety agencies?

- By use of a communication switch (such as the ACU-1000 or other brand)
- By becoming part of an area wide interoperable system
- No

INTEGRATION:

40. 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.)?

| | 2002 Response | 2004 Response |
|-----------------------------------|--------------------------|--------------------------|
| Yes | <input type="checkbox"/> | <input type="checkbox"/> |
| No, and do not plan to do so 2005 | <input type="checkbox"/> | <input type="checkbox"/> |
| No, but plan to do so by 2005 | <input type="checkbox"/> | <input type="checkbox"/> |

41. Is there technology in place to coordinate rail, bus, and demand response services?

- No
- Connection protection software
- Technology to support using demand response assets to feed fixed route services
- Other:
- Don't know

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

- Yes, including rail operations
- Yes, but it is primarily oriented to traffic
- No, and do not plan to have a TMC by 2005
- No, but plan to have a TMC by 2005
- Don't know

43. Is there a regional ITS architecture for your region?

- Yes, complete
- In progress, to be completed in calendar year:
- Not aware of an existing or planned regional architecture

WEATHER:

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

- Yes
- No

EVALUATION:

45. The U.S. DOT is interested in networking with evaluators of Intelligent Transportation Systems (ITS) nationwide. Is there a point of contact in your state for ITS evaluations?

- Yes. Please provide the name, e-mail, and phone number

- No
- Don't know

46. The U.S. DOT ITS JPO actively collects data on the benefits and costs of ITS implementations and makes this information available at the following URL: <http://www.benefitcost.its.dot.gov/>. Are you aware of any locally produced and funded evaluations that could be added to this national database?

- Yes. Please provide a point of contact (name, phone number and e-mail) or reference (e.g., URL) for the evaluation report.

- No
- Don't know

COST AND BENEFITS:

47. Is your agency willing to share COST information on ITS-related equipment and projects (i.e., capital and O&M cost, project component breakdown, and brief description)? This information will be used to update the ITS JPO sponsored ITS costs database.

- 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.

- No

48. Is your agency willing to share BENEFITS information from ITS deployments? This information will be used to update the ITS JPO sponsored ITS benefits database.

- 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.

- No

Section II

DATA COLLECTION AND ARCHIVING:

49. Does your agency have an archived data management system?

- Yes, how long have you been archiving?
- No, but we plan to begin archiving data in the next year
- No, but we plan to begin archiving data within the next two years
- No, but we plan to begin archiving data in the future (five to ten years)
- No, we do not plan to begin archiving data

50. 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)
What is the size of the database?
- Other (please specify)
- Do not archive data

51. Are you aware of the Standard Guide for Archiving and Retrieving Intelligent Transportation System - Generated Data (ASTM E2259-03)?

- Yes, are you using it?
 - Yes
 - No
- No

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

- On-Line (Web)
- CD
- Paper reports
- Other (please specify)
- Do not make archive data available/do not archive data

DATA COLLECTION AND ARCHIVING (Cont.):

Please enter the current information for 2004 and the current estimate for 2005 in the boxes provided. We have entered the information your agency provided in 2002 to assist you.

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

| | Collected in 2002 | Archived in 2002 | Collected in 2004 | Archived in 2004 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Vehicle time and location | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Passenger count | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Trip itinerary planning records | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Passenger information | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Vehicle monitoring status | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Road conditions (e.g. wet, icy, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Emergency vehicle signal preemption events | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Transit vehicle signal priority events | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Weather conditions (e.g., snow, fog, rain, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Incidents | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

54. Please check the information your agency collects/archives electronically

| | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| Route designations (snow emergency, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Current road work zones for transit | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Scheduled road work zones for transit | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intermodal (air, rail, water) connections | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Emergency/evacuation routes and procedures | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Highway operations coordination information | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Transit operations coordination information | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other: <input style="width: 500px;" type="text"/> | | | <input type="checkbox"/> | <input type="checkbox"/> |
| Do not collect/archive information | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

55. What are the data used for?

| | 2002 Response | 2004 Response |
|---|--------------------------|--------------------------|
| Do not know | <input type="checkbox"/> | <input type="checkbox"/> |
| Operation planning/analysis | <input type="checkbox"/> | <input type="checkbox"/> |
| Construction impact determination | <input type="checkbox"/> | <input type="checkbox"/> |
| Capital planning/analysis | <input type="checkbox"/> | <input type="checkbox"/> |
| Incident detection algorithm development | <input type="checkbox"/> | <input type="checkbox"/> |
| Roadway impact analysis | <input type="checkbox"/> | <input type="checkbox"/> |
| Accident prediction models | <input type="checkbox"/> | <input type="checkbox"/> |
| Dissemination to the public | <input type="checkbox"/> | <input type="checkbox"/> |
| Traffic Management | <input type="checkbox"/> | <input type="checkbox"/> |
| Measurement of performance | <input type="checkbox"/> | <input type="checkbox"/> |
| Safety analysis | <input type="checkbox"/> | <input type="checkbox"/> |
| Other: <input style="width: 400px;" type="text"/> | | <input type="checkbox"/> |

NATIONAL ITS STANDARDS

56. Please check the ITS standards that you are using (deployed or in current RFP) or considering (assessing for use) in your operational transit 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 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 the question 59.

List of standards to consider when deploying transit management projects:

Traffic Management

Using Considering

- NTCIP 1202 - Object Definitions for Actuated Traffic Signal Controller Units
- NTCIP 1210 - Objects for Signal Systems Master
- NTCIP 1211 - Objects for Signal Control Priority

Freeway Management

Using Considering

- NTCIP 1203 - Object Definitions for Dynamic Message Signs
- NTCIP 1204 - Object Definitions for Environmental Sensor Stations
- NTCIP 1205 - Objects for CCTV Camera Control
- NTCIP 1206 - Object Definitions for Data Collection and Monitoring (DCM) Devices
- NTCIP 1207 - Object Definitions for Ramp Meter Control
- NTCIP 1208 - Object Definitions for Video Switches
- NTCIP 1209 - Object Definitions for Transportation Sensor System
- NTCIP 1213 - Electrical and Lighting Mgmt System Interoperability & Intercommunications Std
- NTCIP 1301 - Weather Report Message Set for ESS

Advanced Transportation Controller

Using Considering

- ITE 9603-1 - Application Programming Interface (API) Standard for the Advanced Transportation Controller (ATC)
- ITE 9603-2 - Advanced Transportation Controller (ATC) Cabinet
- ITE 9603-3 - Advanced Transportation Controller (ATC) Standard Specification for the Type 2070 Controller

Profiles and Base Standards

Using Considering

- NTCIP 1201 - Global Object Definitions
- NTCIP 1102 - Octet Encoding Rules (OER)
- NTCIP 1103 - Transportation Management Protocol
- NTCIP 1104 - CORBA Naming Convention Specification
- NTCIP 1105 - CORBA Security Service Specification
- NTCIP 1106 - CORBA Near-Real Time Data Service Specification
- NTCIP 2101 - Point to Multi-Point Protocol Using RS-232 Subnetwork Profile
- NTCIP 2102 - Subnetwork Profile for PMPP using FSK Modems
- NTCIP 2103 - Subnet Profile for Point-to-Point Protocol using RS 232
- NTCIP 2104 - Subnetwork Profile for Ethernet
- NTCIP 2201 - Transportation Transport Profile
- NTCIP 2202 - Transport Profile for Internet (TCP/IP and UDP)
- 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 2304 - Application Profile for Data Exchange ASN.1 (DATEX)
- NTCIP 2305 - Application Profile for Common Object Request Broker Architecture (CORBA)

Dedicated Short Range Communications

Using Considering

- IEEE 1609.1 - Standard for Dedicated Short Range Communications (DSRC) Resource Manager
- IEEE 1609-2 - Standard for Dedicated Short Range Communications (DSRC) Application Layer
- IEEE 1609.3 - Standard for IP Interface for Dedicated Short Range Communications (DSRC)
- IEEE 1609.4 - Standard for Dedicated Short Range Communications (DSRC) Medium Access Control (MAC) Layer
- E2213-02 Standard Specification for Telecommunications and Information Exchange Between Roadside and Vehicle Systems - 5 GHz Band Dedicated Short Range Communications (DSRC) Medium Access Control (MAC) and Physical Layer (PHY) Specifications
- SAE J2xxx - Standard for Data Dictionary and Message Sets for Dedicated Short Range Communications (DSRC)
- E2158-01 Standard Specification for Dedicated Short Range Communication (DSRC) Physical Layer using Microwave in the 902 to 928 MHz Band
- ASTM E17.54.00.1 - Standard Guidelines for Archiving ITS-Generated Data
- PS 105-99: Standard Provisional Specification for Dedicated Short Range Communication (DSRC) Data Link Layer

Archived Data User Service (ADUS)

Using Considering

- ASTM E2259-03 -Standard Guidelines for Archiving
- ASTM E-17.54.02.1 Standard Specifications for Metadata Content for ITS-Generated Data
- ASTM E-17.54.02.2 Standard Specifications for Archiving ITS-Related Traffic Monitoring Data

Location Referencing

Using Considering

- SAE J2266 - Location Referencing Message Specification

57. What factors helped your agency decide to use ITS standards? Please pick top three factors, check only one item in each column.

| 1 | 2 | 3 |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Options offered in the standards |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Products employ standards |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Regional architecture document requirements |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Additional funding provided |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Integration opportunities |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Consultant or integrator's recommendation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> My agency's participation on standard committees |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Training and Technical Assistance support provided by US DOT |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Responding to the rule to use ITS Standards |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Compliance testing is readily available |

58. 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

59. If no ITS standards are currently used, what factors will ensure that your agency uses ITS standards? Please pick top three factors, check only one item in each column (if your are using standards, please move to the next question).

| 1 | 2 | 3 |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> We are already committed to using standards when they are complete |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Vendors provide standard-compliant products |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Standards being accepted by the ITS community and being used in deployments |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Training and technical support being provided to my agency |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Standards are developed that apply to my system |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Additional funding being provided to use the standards |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Standards use enables interoperability of systems |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Other: <input style="width: 600px;" type="text"/> |

60. What tool, resource, or support mechanism was/would be most helpful for implementing the standards? Please pick top three, check only one item in each column.

| 1 | 2 | 3 |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Training courses |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Published standards provided for free |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Published standards are easily available |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Support documents (i.e. procurement and implementation guides) are available |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Workshops |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Standards Web site |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Standards forum |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Software tools to assist with correctly specifying and procuring the standard |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> E-mail bulletins |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Resource documents (i.e., user guides and reference notebooks) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Testing tools |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Case studies of other similar projects that used standards successfully |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Other: <input style="width: 600px;" type="text"/> |

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

Name:

Affiliation:

Phone:

E-mail:

62. May FHWA follow up with this agency contact for possible peer networking?

- Yes
- No