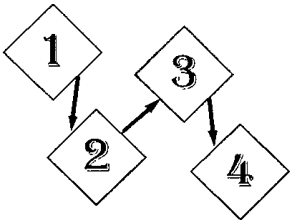
CHAPTER 3:

BASIC STEPS

INTRODUCTION

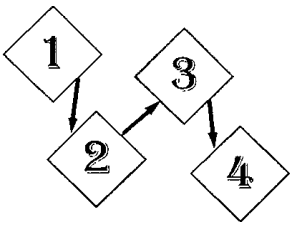
This chapter describes the basic steps for each approach to attract paratransit patrons and people with disabilities to fixed-route services. These steps are as follows:



1. Identify the need;
2. Define funding needs and resources;
3. Conduct public involvement; and
4. Conduct market research.

These steps must be accomplished at the outset of any approach.

These four steps may occur in different orders for various implementations or they may occur nearly simultaneously. In some cases, the steps may occur more than once. For example, it may be useful to conduct additional public involvement after market research is completed. These four steps are very important to start the process and the order discussed here is recommended for most purposes. Specific implementation steps for different approaches are described in the following chapters.



STEP 1: IDENTIFY THE NEED

For any selected method to attract paratransit patrons to fixed-route, different specific approaches may be taken. For example, to decrease the distance a passenger travels to a transit stop, the transit system may choose from several options — some more feasible and more effective than others. It may increase the number of stops along existing routes if the need exists along core parts of the service area. It may introduce a shuttle service to bring people from outlying areas to stops along the main route, if the need exists in more remote areas. It may erect stops in mall parking lots or at multiple hospital entrances, or at multiple college campus locations if the need relates to specific locations. The need for the improvements must be clearly defined so that the most effective approach can be implemented.

To select the appropriate approach, review the available information and collect additional information as necessary to identify the need for a particular approach. Although each approach may attract people to fixed-route, every transit service area is different and local information is needed to apply the most needed improvements.

Identification of the need may not be an independent step; however, there must be mechanisms to translate input on services to a definition of the appropriate solution.

INFORMATION SOURCES

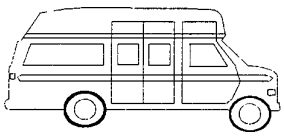
The transit system needs to be able to learn from available information what is needed to change the service to attract paratransit patrons and people with disabilities. Three sources of information are as follows:

- Ridership and other statistics;
- Paratransit use trends; and
- Public and other input.

Ridership and Service Area Information

The need for specific fixed-route features may be identified from information showing the following:

- Increased traffic congestion in specific locations;
- Changing paratransit eligibility;
- Increased accessibility of the fixed-route fleet; or
- Planned or evolutionary changes in the community leading to a natural service area for specialized services.



Paratransit Use

Collect information on increasing paratransit use to specific locations by doing the following:

- Plotting paratransit origins and destinations on maps;

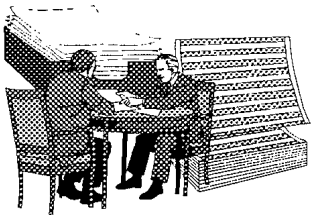
- Grouping origins and destinations by small geographic areas of the service area;
- Observing common origins and destinations (e.g., hospitals, senior centers, rehabilitation clinics, and shopping destinations) for increasing paratransit traffic; and/or
- Observing vehicle capacity in specific areas and ability to schedule multiple rides to or from specific locations.

From this information, determine the trends of increasing paratransit traffic.

Public and Other Input

It is necessary to be aware of and open to input and suggestions that would define the need for improved fixed-route service. Input may come from such sources as the following:

- Service complaints regarding lack of service or infrequent service;
- Survey results;
- A pattern of complaints regarding specific areas;
- Service complaints related to vehicle accessibility;
- Service complaints related to driver empathy;
- Driver input on passenger needs;
- Discussions with local businesses on related issues, such as parking, future development, customer location, changing demographics, and market opportunities;
- Input from community leaders on key locations that could be better served by accessible fixed-route transit;
- Requests for additional assistance to use transit, such as additional vehicle lifts or securement positions, stop announcements, or travel training; or
- Input from advocacy groups which represent individuals with disabilities.

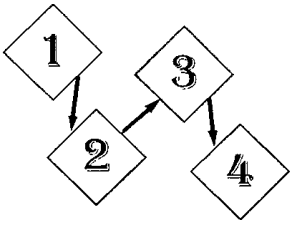


To review the information from these sources, transit planners must do as follows:

- Review complaints to discern patterns in topics of complaints (driver, service frequency, accessibility, equipment reliability, etc.), location of service, and other patterns;
- Meet with community leaders to discuss the role of transit in their enterprises, particularly with those along proposed routes and along accessible routes;
- Meet with transit system employees, including drivers, paratransit call-takers and schedulers, dispatchers, and supervisor and managerial personnel;
- Meet with advisory committees and consumer representatives; and
- Meet with advocacy groups which represent individuals with disabilities.

Meetings should be designed to receive input on the proposed service features that the transit system is interested in implementing. Before meetings, review with participants the feature types and ask them to be prepared to discuss their preferred ways of implementing the features.

Once the need has been identified, it must be clearly defined so that the necessary resources can also be determined.



STEP 2: DEFINE FUNDING NEEDS AND RESOURCES

For most systems, the availability of funding will be an important factor in the decision to implement a new service improvement. The accurate identification of funding needs will help in making decisions on priorities and future needs. By carefully calculating the funds needed for approaches, define those which can be most cost-effective in attracting people to the system. Identify those which can be immediately implemented and those which must wait for significant funding allocations. Set up priorities for projects on the basis of costs and anticipated results.

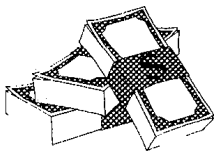
It is important, when embarking on innovative programs to attract riders from paratransit, to explore innovative funding options. Not all approaches will generate revenue to cover investments, but the enhancements to the well-being of the community may prompt unanticipated sources to assist with costs.

The identification of funding needs and resources includes the following three major factors:

1. Identification of the necessary funding levels;
2. Identification of current budget availability and grant, demonstration, or other available future funding; and
3. Identification of other non-traditional revenue sources.

IDENTIFICATION OF NECESSARY FUNDING LEVELS

Make a quick cost estimate.



Before being able to define the sources of the necessary funding, identify the level of funding required to start the project. Different amounts of funding are available from different sources, sometimes with restrictions on use. An initial estimate should be made before final decisions on actual service configurations are made.

Consider the types of resources which will be necessary for the project. For example, a new specialized route may require the following:

- New vehicles;
- Additional drivers;
- Marketing and advertising materials;
- Additional driver training;
- Driver uniforms or other special equipment; and
- Fuel, maintenance, and insurance.

Some of these items can come out of existing budgets. Driver training often is part of an existing ongoing training program. Figure 3-1 shows how the costs can be calculated. Figure 3-2 shows the formulas for the spreadsheet developed to calculate the costs. Use local costs and expected mileage to make the estimates realistic.

	A	B	C	D
1	**Vehicles**			
2	Type	Cost	Number Required	Total
3	Modified Van	$35,000	0	$0
4	Low-Floor Small Bus	$65,000	3	$195,000
5	Full-Size Bus	$200,000	0	$0
6	**Drivers**			
7	Number	Hourly Rate*	Annual Hours	Total
8	6	$20	2080	$249,600
9	**Advertising**			
10	Type of Advertising	Development Cost	Distribution/ Reproduction Cost	Total
11	Advertising Agency			$3,000
12	Mailings (200 pieces)	$500	$2	$900
13	Posters (50 posters)	$500	$5	$750
14	Media (5 radio ads)	$1,000	$100	$1,500
15	**Driver Training**			
16	Number of Drivers	Hourly Rate	Training Hours	Total
17	6	$20	24	$2,880
18	**Uniforms or Equipment**			
19	Item	Number	Unit Cost	Total
20	Uniforms	12	$100	$1,200
21	Badges	6	$10	$60
22	Awards	6	$10	$60
23	**Operations**			
24	Item		Unit Cost	Total
25	Fuel	TBD	TBD	TBD
26	Maintenance	TBD	TBD	TBD
27	Insurance	TBD	TBD	TBD
28	**Estimated Total**			$463,050

* Including fringe benefits
TBD = To be determined locally

Figure 3-1. Cost Calculations

	A	B	C	D
1	**Vehicles**			
2	Type	Cost	Number Required	Total
3	Modified Van	35000	0	=B3*C3
4	Low-Floor Small Bus	65000	3	=B4*C4
5	Full-Size Bus	200000	0	=B5*C5
6	**Drivers**			
7	Number	Hourly Rate	Annual Hours	Total
8	6	20	2080	=A8*B8*C8
9	**Advertising**			
10	Type of Advertising	Development Cost	Distribution/ Reproduction Cost	Total
11	Advertising Agency			3000
12	Mailings (200 pieces)	500	2	=B12+(C12*200)
13	Posters (50 posters)	500	5	=B13+(C13*50)
14	Media (5 radio ads)	1000	100	=B14+(C14*100)
15	**Driver Training**			
16	Number of Drivers	Hourly Rate	Training Hours	Total
17	6	20	24	=A17*B17*C17
18	**Uniforms or Equipment**			
19	Item	Number	Unit Cost	Total
20	Uniforms	12	100	=B20*C20
21	Badges	6	10	=B21*C21
22	Awards	6	10	=B22*C22
23	**Operations**			
24	Item	Units	Unit Cost	Total
25	Fuel	TBD	TBD	=B25*C25
26	Maintenance	TBD	TBD	=B26*C26
27	Insurance	TBD	TBD	=B27*C27
28	**Estimated Total**			=SUM(D3:D27)

* Including fringe benefits
TBD = To be determined locally

Figure 3-2. Cost Calculation Formulas

Identify some possible sources.

IDENTIFICATION OF CURRENT BUDGET AVAILABILITY AND FUTURE FUNDING

Although transit systems do not, typically, have extra current and future funding available for new services or programs, it is necessary to review available funding and determine what parts of an innovative program can be funded from existing sources. For example, new vehicles can be procured through a previously approved grant. Additional driver training may fit into the current training budget. Funds for a particular marketing campaign may be diverted to advertise the new service.

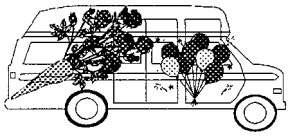
Sources of grants and funding at the local, state, and federal level can also be pursued for the new program. Occasionally, special funding is available for new programs, for demonstration programs, or for specific types of programs. A new service feature may fit into one of the categories for which funding is available. It is important to keep in contact with representatives at the state and federal level to remain aware of the status of funding. Contact with government leaders at the local level may also reveal funding availability.

Try some innovative approaches.

IDENTIFICATION OF NON-TRADITIONAL REVENUE SOURCES

In addition to revenue generated through fares and grants, take advantage of non-traditional revenue sources and try to create innovative methods of financing new types of services. Advertisers and private firms may be particularly interested in being associated with and contributing to services which benefit people with disabilities. Some non-traditional revenue-raising techniques are as follows:

- Advertising on vehicles, at stops, on bus shelters, on schedules and brochures, and in newsletters;
- Private-public partnerships with businesses which benefit from the service; and/or
- Private "sponsors" of vehicles or routes.



Advertising

Consider the revenue-generating capabilities of advertising on vehicles. Buses have always carried advertisements, but some types of advertisements are more attractive to businesses than others. Advertisements at bus shelters and on vehicle exteriors are more attractive than advertisements on vehicle interiors. Advertising on bus shelters is attractive to businesses because the large advertisements can be seen by a large number of people, not all of whom are current transit riders. Work with potential advertisers on the cost of bus shelter advertisements. Sometimes the advertisers will pay for the construction of the shelter itself or for part of the cost.

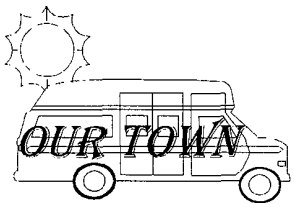
Businesses are particularly interested in the wrap-around advertising technique in which the vehicle, windows and all, can be transformed into a moving object advertising the business. Many creative advertisements are moving along city streets, including a giant basketball shoe in Philadelphia, Pennsylvania, and a bus apparently filled with swimming polar bears in Louisville, Kentucky. Advertising can generate significant revenue, and creative ideas can generate additional interest in the transit services provided.

It is important to work with advertisers and advertising agencies to ensure that the advertisements on the vehicles do not clash with the purpose and theme of the routes. This can be particularly important for services directed to historic or tourist attractions. For those services, the attraction of the route may come in part from its compatibility with the environment.

Wrap-around advertising has advantages and disadvantages.

There are advantages and disadvantages to the use of wrap-around advertising. Some advantages are as follows:

- Revenue generation;
- Some reduction in the cost of maintenance (painting);
- Creative advertisements that generate interest in the service; and
- Local advertisements that bring a distinct local and community theme to the service.



Some potential disadvantages are as follows:

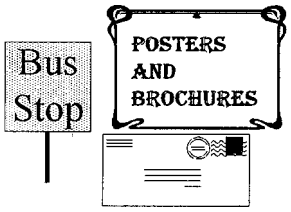
- The wrap-around advertisements may mask the identification of the vehicles as part of the circulator service and make them more difficult for passengers to identify.
- Market research has shown that people like to see into the vehicles and be seen from the outside when on the vehicles, largely for security reasons. Advertisements on the windows prevent this. Wrap-around advertisements can also make the vehicle interior darker.
- During hours of outside darkness, the reflection of inside lighting on the inside of the windows prevents riders from being able to see where the bus is at any time.
- Over time, the outside of the vehicle can get dirty and the grime on the wrap-around design can make it more difficult to see through and allow even less light into the vehicle.
- If control cannot be exerted over advertising contents and image, potential problems can arise if the advertisement is inconsistent with local community values. A recent example is the allegedly suggestive theme in a bus advertisement for jeans.
- Unless the advertising contract specifies that the advertiser will pay for the restoration of the bus surface to its original condition at the end of the advertising period, the transit authority will have to absorb the cost of restoration.

Smaller systems for which whole-bus advertising is not feasible can generate revenue through other types of advertisements. Selling placement of posters and cards on buses and at stops are common methods to generate revenue. Other locations for advertisement space are on schedules and brochures distributed by the system. Many transit systems generate newsletters for transit and paratransit riders on which advertisement space can also be sold.

Get ready to sell advertisements all around the system.

To determine where and for how much advertising space can be sold, transit systems need to do the following:

1. **Identify all possible locations (e.g., vehicles, stops, shelters, benches, brochures, schedules, newsletters, and others).** Transit systems need to develop creative



Find locations, calculate amounts and costs, identify targets, and sell advertising space.

ways to generate advertising revenue. More information on marketing and advertising can be found in Chapter 8.

2. **Determine how much space can be sold in each location (e.g., how many stops and vehicles with how much space, and how much publication space can be sold).** Once all the outlets are determined, define how much of what type of space is available. Determine for newsletters and other publications how much advertising is appropriate and what kinds should be accepted. Newsletters and brochures need to be clearly identifiable with the transit system; however, a balanced distribution of advertisements should cover the publication and distribution costs and also generate additional revenues for service provision.

3. **Determine the cost of advertisements and how much revenue can be and needs to be generated.** Determine costs through comparison with other advertising outlets and calculations of expected circulation.

4. **Define targets for advertisements.** In smaller systems, contact local advertisers as the most likely targets, as well as local franchises and branches of national outlets. In larger systems, national businesses may be interested.

5. **Sell advertisements using dedicated staff, part-time workers, or an outside agency.** An agency can be hired to book advertisement space for a fee. Current staff can also serve in this role, or additional staff may be needed to sell the advertisements on a full- or part-time basis. When new advertising outlets are offered, a skilled sales force can ensure that potential advertisers are contacted.

Private-Public Partnerships

Look for ways to form partnerships with businesses and other private and quasi-public enterprises which benefit from the services fixed-route transit can provide. Partnerships can be developed with the following:

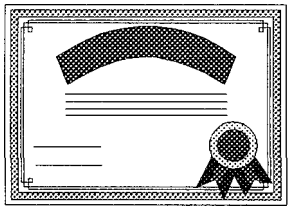
Look for existing connections, and offer something in return.

- Local businesses;
- The chamber of commerce and local branches of national service organizations;
- Educational and training institutions;
- Charitable organizations;
- Employment centers;
- Real estate developments;
- Corporate complexes; and
- Other entities which might exist in the service area.

To develop a partnership with a local private enterprise, it is necessary to offer something in return for the effort. For some businesses and organizations, advertising and the publicity which will accompany the partnership is the reward. Others may be looking for more specialized service considerations for their enterprise. For example, consider offering increased service to a corporate complex, additional stops on a campus, or stops directly in front of downtown stores. The additional costs of such services can be compared to the possible revenue, goodwill, and funding opportunities offered with the partnership.

To effectively involve other organizations, do the following:

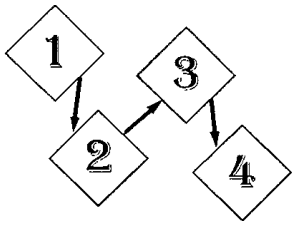
- Identify local contacts, such as leaders who live in the service area;
- Identify existing connections, such as corporate or other sponsorship of events; and/or
- Discuss with the organization what they need and determine if the transit system can provide it (e.g., publicity or sales [coupons in newsletters], and/or rides for employees [special routes or stops or reduced fare passes]).



Private Sponsors

Private and quasi-public organizations in the service area may be interested in sponsoring vehicles or routes by providing the funding to operate them. They may also be interested in providing materials, such as printing, for recognition.

Organizations may also be interested in sponsoring programs with a high level of goodwill associated with them. For example, travel training or transit familiarization training, which is conducted for a great many potential customers, may be a way for a company to generate interest in its services or products. Discuss with private sponsors whether they would be interested in contributing to the costs of printing materials and brochures in order to receive sponsorship recognition. Coupons for the company's services could be offered as part of the training package, along with coupons for transit use.



STEP 3: CONDUCT PUBLIC INVOLVEMENT

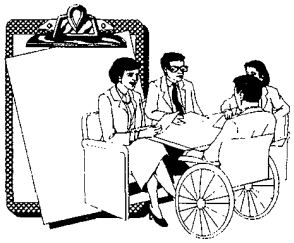
It is important to involve the public early in any new service development, particularly something which may be different from other services already offered. There are numerous methods of public involvement — some of which are already integrated into the decision-making process. For example, most systems have at least one advisory committee to consult on a variety of issues.

To conduct a public involvement program, include at least the following:

- ***A task force;***
- ***An open workshop; and***
- ***An advisory committee.***

In the development of new service features, conduct at least the following public involvement activities:

- The creation of a task force made up of business and community leaders, riders, and transit staff, which meets until the need and the potential approaches are clearly defined, including funding needs and potential sources;
- At least one open workshop or meeting at which the public is educated on the possible services recommended by the task force and is able to offer input and suggestions; and
- Meetings of all the relevant advisory committees for their input and approval to move forward to implement the service.



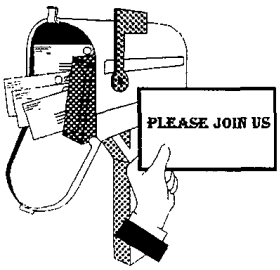
TASK FORCE

A task force is a group of people — representing the interests which would be affected by the program — who meet over time to discuss approaches and make recommendations. To create a task forced do the following:

Look to riders, business leaders, community leaders, and representatives of possible destinations.

- Select the interested groups to be invited, who then select their representative;
- Select unaffiliated representatives, as appropriate;
- Set the agenda, the topics for discussion, and the goals of the process;
- Set the overall time frame and schedule and set a completion date for the process, as appropriate;
- Provide technical information and staff to participate in a neutral role at meetings; and
- Provide a neutral facilitator who ensures that all members participate, that the group stays focused on the issues, and that conflicts are addressed and resolved.

The task force should meet serially at its own schedule to discuss the agenda issues and come to a consensus. It may be necessary to provide a meeting room for the group. Provide technical materials and information and a staff person as a technical resource, as well as a meeting facilitator (roles may be shared). At the initial meeting offer a presentation by the transit system staff on the goals and objectives of the program for the task force, including all necessary information for effective decision-making. It is important to be committed to acting on task force recommendations inasmuch as they are feasible and coincide with market and other research findings. The facilitator and transit staff can assist in keeping task force recommendations within budget and other resource limits.



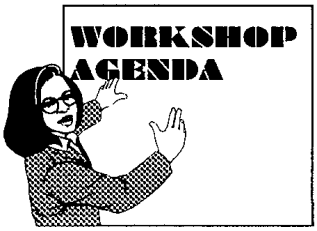
Groups to invite to participate on the task force may include the following:

- Groups representing people with various disabilities, including organizations representing people with vision impairments, people who use wheelchairs, people with hearing impairments, people with developmental and mental disabilities, and other groups;
- Agencies which provide service to older citizens;
- The chamber of commerce and other local business organizations;
- The local tourist bureau or organizations with interests related to particular attractions in the area (historic landmarks; convention center; zoos, parks and recreation areas; etc.);

- Representatives of educational institutions such as trade schools, community colleges, and universities;
- United Way or other charitable organizations; and
- Transportation professionals.

Include a diverse group with a broad range of interests.

It is important to include diverse groups so that the recommendations represent a broad spectrum of interests. It is also important to ensure that the recommendations are not overly influenced by one or two groups. The inclusion of a variety of interests and the work of an effective facilitator can ensure the representation of diverse interests. Learn to provide what the members of the community want. Support for the project from the community can be enhanced by including many local interests early in the decision-making process.



PUBLIC MEETING OR WORKSHOP

Following, or in conjunction with, the work of the task force, schedule at least one open, public meeting or workshop. The purpose of the workshop is to present information on the program and current thinking on its implementation and to receive input from participants. The workshop could be a structured, seminar type of meeting, or it could be a less formal, open house type of gathering.

Advertising the Workshop

Task force members can advertise the workshop.

Be certain that the workshop is well attended by people with diverse interests and stakes in the program. Chapter 8 includes information on effective advertising and marketing techniques for these and other types of activities.

Those who participate on the task force can also suggest ways of reaching the membership of the organizations they represent. Task force members can also take an active role in advertising, distributing information, and encouraging others to attend. Transportation to the meeting may need to be arranged.

Generate community interest in the workshop.

It is important to draw a wide variety of interested parties to the workshop. Some consideration should be given to making the event as attractive as possible. It may need to be held in the

evening to accommodate people's work schedules. It should be advertised as an opportunity to offer opinions on a program that is important to the community, emphasizing that the transit system is interested in people's opinions. Consider creative advertising and other ways to attract different types of participants.

Workshop Format

Provide information, encourage participation, and make staff available to answer questions.

Although the workshop can be structured or informal, include the following basic components:

- Information on the program, the significant issues, and the possible approaches should be distributed to participants. Summary handouts can be supplemented by staff presentations. Graphics, charts, photographs, and other visual aids can be displayed at the workshop.
- All participants should be encouraged to offer their opinions, which should be thoughtfully received. An effective workshop leader or facilitator can ensure that the discussion remains on the topic.
- Transit system and other staff should be available for questions and additional clarification of issues.

Types of Workshops

Ranging from more structured to less, the three basic types of workshops are as follows:

- Seminar;
- Open meeting; and
- Open house.

Seminar Approach

A seminar approach would be structured around staff presentations designed to educate the participants on the program and issues. Informational handouts and visual aids can be very important to clarify complex issues. Questions would be encouraged. Following each educational presentation, a facilitator would lead a discussion of the issues and participants would offer opinions. The purpose of such an approach can be as much to educate participants as to collect input. A seminar approach may last all day, so a structured agenda, with scheduled topics, is important. This type of

workshop may be most appropriate when the issues are complex and there are a great many areas which need discussion. The role of the facilitator is very important in order to address all the complex issues, ensure participation in the discussion, and initiate discussion of a new topic when the current topic is exhausted.

Open Meeting

An open meeting would start with a staff presentation. The discussion is less formal and participants are encouraged to offer opinions and input on the information presented to them and distributed in handouts. Consensus may not necessarily be reached, but a diversity of opinions will be offered. The open meeting is more appropriate when the issues are more straightforward and less education of participants is required from a facilitator or staff member.

Open House

An open house can be designed with various stations (tables staffed with knowledgeable professionals and a variety of print material) on specific, related topics at which staff members distribute information, answer questions, and discuss participants' views. For example, there may be a station with information on the types of vehicle features being considered, with photographs of the vehicles and handouts with vehicle specifications. Another station may show the various routes under consideration for improvement, with blow-up maps on display and handouts with statistics and expected ridership. Another station may include cost and revenue projections and comparisons with other cities. The open house may last a day, with participants arriving throughout the day and remaining until they have collected the information they want. This approach is less effective in formally soliciting opinions, but serves to educate the public on the issues and the service, and their support or opposition can be perceived. It is also a method that appeals to people who are averse to speaking in front of large groups.

ADVISORY COMMITTEE

Most transit systems have one or more advisory committees. The committees are created for specific purposes, such as dealing with accessibility, paratransit, or eligibility issues. They can also be formed to represent specific groups, such as consumers or combinations of consumers, agencies, and

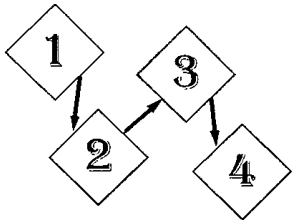
providers.

An advisory committee has the following characteristics:

- Is formed from interest groups within the service area;
- Meets regularly;
- Keeps a record of comments and points of view;
- Seeks consensus on issues, but does not require it; and
- Plays an important role in decision making.

Bring the results of the task force and the workshop to the advisory committee or committees for their recommendations and concurrence. At various important decision points, it is necessary to share the results with the advisory committees at their regular meetings, or at special sessions. It is necessary to keep the advisory committees informed and to gain their support at the necessary junctures. Unrealistic expectations among advisory committee members can be avoided by clearly defining the role of the advisory committee at the outset.

Additional information on involving the public in all aspects of transit can be found in the *ADA Public Participation Handbook.*[1]



STEP 4: CONDUCT MARKET RESEARCH

Different research techniques for different purposes:
- ***Telephone survey;***
- ***Mail-in survey;***
- ***Focus groups.***

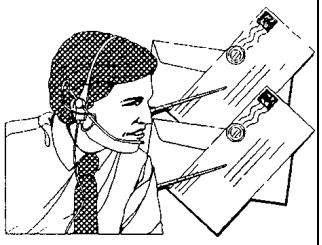
Market research is a way to accurately define the market for the particular improvements to the fixed-route system. Market research helps to define the size of the group that will be attracted to the fixed-route and what specific activities will be most effective in attracting them. By defining the size of the group, the transit system can predict what kind of revenue increases may be generated as part of the resource calculation. The market research may also help the transit system identify, on the local level, what particular aspects of a program are going to be most effective. For example, people with disabilities do not like to have to transfer vehicles, but the market research may show that they do not mind transferring at the central transit center because it is well lit and always busy

[1] J.N. Balog, A.N. Schwarz, R. Rimmer, M. Hood. *ADA Public Participation Handbook*, KETRON Division of The Bionetics Corporation; Project Action, Easter Seal Society, Washington, DC; September, 1993.

and they can use almost any route on it. This may lead to more convenient service configurations that frequently use the transit center.

There are a variety of ways to conduct market research. For a large project involving significant investment, it would be necessary to hire a professional firm to conduct the research. For smaller projects, focus groups can be conducted at a relatively low cost. A professional firm may be hired to design a survey and analyze the results, and the surveys themselves could be conducted by in-house staff to conserve costs. However, market research practices do require experienced personnel, if indicative results are desired. The three applicable types of market research are as follows:

- Telephone survey;
- Mail-in survey; and
- Focus groups.



TELEPHONE AND MAIL-IN SURVEYS

For both telephone and mail-in surveys, the purpose is to ask a randomly selected group of respondents to compare service alternatives and indicate which ones they would prefer and which ones they would actually use.

Telephone and mail-in surveys are designed to be asked of a sample of people who represent the varied interests of the community. Two main factors affect the accuracy of the survey results: sample reliability and questionnaire information.

SURVEY SAMPLE

The sample of the population needs to reflect the actual population.

Survey sample reliability depends on working with respondents who accurately represent the target market. If the service is designed to attract people with disabilities, then the survey must be asked of people with disabilities. If the service is designed to attract people who do not normally ride transit, then the survey must be asked of people who do not use transit. In addition, if, for example, 50% of the community does not use transit, then 50% of the respondents should also not be transit riders.

This is not easy to do. It is difficult to know precisely who the target market is and how the market is distributed. Some of the important market segments to consider for new service features may be as follows:

- People with disabilities who work and shop in the target service area;
- Paratransit patrons;
- Older citizens who work and shop in the target service area;
- People who live in outlying areas who work in the target area;
- Tourists and business travelers;
- People who work at restaurants, tourist attractions, and business attractions;
- People who normally drive for various purposes; and
- People who take transit to and from a central location or the target service area.

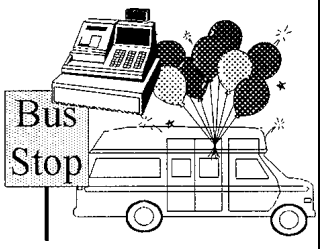
Random sampling means all people have the same chance of being asked.

There are different ways to select a sample. A random group can be selected from a prepared list, such as those who are registered for paratransit service. If the target market is a broader segment of the community, the sample can be selected using random numbers associated with the telephone directory in order to randomly select a sample of all members of the community. The purpose of random selection is so that each member of the community has an equal chance of being selected. No particular type or group of individuals is more likely to be selected than others and the opinions of the group will not be more heavily represented than others.

Some informational questions on where the respondents live and work and what activities they pursue can be used to ensure that the sample of people asked is appropriately stratified by the size of the important target groups.

Mail-in surveys can be mailed or manually distributed to target population groups.

A mail-in survey can be mailed to a randomly selected mailing list or distributed at key locations. The survey is then completed and mailed back to the transit system. The distribution sites of the survey can target the particular markets. Locations at which to distribute surveys can include the following:



- The proposed service area at rush hours and during lunch hours;
- Vehicles traveling to and from target service areas;
- Common paratransit origins and destinations;
- Paratransit vehicles;
- Parking garages and lots;
- Transit stops serviced by routes coming into and out of downtown locations;
- Local businesses and restaurants expecting to benefit from the new service;
- Other attractions likely to be served by the new service; and
- Fairs and other gatherings.

Other creative locations can be identified on the basis of local community characteristics.

A mail-in survey can generally produce a return rate of approximately 20 to 25%.

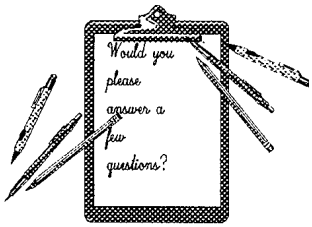
Another method to consider, rather than a mail-in format, is having interviewers at appropriate locations who ask individuals the questions and write down the responses. This can ensure a higher return rate on the surveys, but can require a great deal of staff and cost.

The difficulty with the mail-in, as well as the in-person, survey technique, is that the sample of people who complete the surveys may not be representative of the market population. In mail-in surveys, the rate of return of the completed surveys can be very low and the sample returned may not be randomly distributed. In-person surveys have a higher return rate, but it might not be possible to greatly control the representativeness of who will respond to the questionnaire. Determine the available resources and decide what is the best approach.

Categorical questions identify the sample group and measure sample reliability.

In any survey, some categorical questions need to be included. These are generally placed at the end of the questionnaire and need to be as respectful of privacy as possible. If too intrusive, respondents may not answer them and the information is lost. It is important to put them at the end so that the rest of the survey, the opinion questions which are the purpose of the survey, are completed first.

Figure 3-3 shows some sample categorical questions. They are related to the market segments identified above, but it may also be desirable to collect other information.



SURVEY QUESTIONNAIRE

The difficulty of a survey is that it is all too easy to find out that everyone wants the most extensive and most frequent service at the lowest fare. The questionnaire must also be designed to collect opinions on just what level of service will attract enough people to use it and which added service features are not going to attract additional riders, but only increase the costs.

Below are some tips for developing an effective telephone or mail-in questionnaire.

Make it brief.

- The survey questionnaire should be no longer than absolutely necessary. Most people will not want to spend a lot of time responding to the survey. A long survey instrument will reduce the response rate, and the usefulness of the collected data.

Make it simple.

- Survey questions should be simple, straightforward, and clear without explanation. For mail-in surveys, the respondents will not be interacting with an interviewer. For in-person and telephone questionnaires, the interviewers' explanations could bias the respondents' answers. A pretest can highlight the difficulties respondents may have. If the pre-test suggests respondents will have difficulty with a question and the wording cannot be changed, specific clarification sentences should be prepared and either included in the question or read by the interviewer.

1 Do you ever use public transit?	___Yes ___ No
2 Do you use public transit to travel to and from downtown?	___ Yes ___ No
3 About how many times in the past year did you use transit to travel to and from downtown?	_____
4. Where do you live, downtown, this outlying community, that outlying community, or the community far away? *[Transit system would substitute appropriate community names]*	___ downtown ___ this ___ that ___ far away
5 Where do you work, downtown, this outlying community, that outlying community, or the community far away? *[Transit system would substitute appropriate community names]*	___ downtown ___ this ___ that ___ far away
6 How do you normally travel to work? *[More than one mode may be selected]*	___ transit ___ paratransit ___ ride with friend or relative ___ drive ___ walk ___ bike ___ other
7 How would you describe your occupation, manager, executive, professional, hourly, blue collar worker, office worker, retired, or parent at home?	___ manager ___ executive ___ professional ___ hourly ___ blue collar ___ office ___ retired ___ parent
8 Do you have a disability or impairment which makes it difficult for you to use transit?	___ Yes ___ No
9 Would you like to tell me what that is? *[If respondent answers yes to number 8]* _____ _____	
10 Are you over 64 years of age?	___ Yes ___ No
11 Do you work at any retailer or restaurant downtown or at the convention center? *[Transit system would add relevant employment locations]*	___ Yes ___ No

Figure 3-3 Sample Categorical Survey Questions

Test it.

- Pretest and refine the sequence of the questions carefully. If one question asks if a person uses the service, then only those answering yes need to answer the follow-up questions about the quality of service they received. Otherwise, questions should be skipped to relevant locations in the survey instrument.

Avoid ambiguity.

- Questions should seek a single response and not be ambiguous. Be sure the wording does not include multiple questions, double negatives, or non-specific terms. For example, "What is your opinion of the paratransit service provided by the transit authority?" could generate anything from a vague, "Fine," to an elaborate description of a particular trip, neither of which is the information needed.

Be objective.

- Be sure the questions are worded objectively and non-emotionally. Questions such as, "You enjoy riding this service, don't you?" will not generate honest answers from respondents.

Describe the purpose.

- Be sure to include adequate introductory and conclusive information. People like to know the reason for the survey and how the information will be used. They like to know that their responses will be confidential. They should also be thanked for their time. Providing an incentive such as a free pass for one round trip will demonstrate commitment to the respondent.

Use different types of questions.

- Make a distinction among the types of questions asked. There are essentially four types of questions: fact; opinion and attitude; information; and self-perception. Each type of question will collect different kinds of information. Fact questions ask for factual information, such as whether the respondent owns a car. Opinion questions ask their feelings about the service or other issues. Information questions ask about things that the respondent will know, such as their destination. Self-perception questions ask respondents to describe their behavior, such as how often they ride the service.

Think ahead to data needs.

- Consider the data the questions will generate. A question stating, "What do you think of the service?" will generate a great diversity of responses, which would be difficult to categorize and analyze. A question offering alternatives,

such as, "Do you consider the service to be excellent, good, fair, or poor?" will generate more uniform responses. Rating things from 1 to 10 generates uniform responses while offering more options.

Limit open-ended questions.

- Determine how many and what type of "open-ended" questions there will be, such as "Tell me what you think of this service feature." Open-ended questions are difficult to code and analyze and it can be difficult for an interviewer to record the entire response; therefore the number should be limited. They can be useful in moderation — if they are worded to keep the response relatively specific and relevant.

Think ahead to analysis needs.

- Try to develop the questions in relation to the types of answers they will generate and how that information can be counted and analyzed. If the question requires too complex a response, it will be difficult to analyze. If the question generates the exact same response from nearly every one (for example, "What city do you live in?"), then the question should be changed or eliminated.

Be careful of using transit terms and jargon.

- Be sure that the words used will be understandable by the respondents. It is not necessary to use complicated words and it is not a good idea to use transit jargon or other terms that the general public might not understand. For example, riders do not usually know the definitions of fixed-route, headway, ADA eligibility, etc. To be sure the survey is free of jargon, pretest it on several people who are not transit professionals.

Be careful when asking potentially intrusive questions.

- Be careful when asking intrusive questions. Many surveys ask about items like income, age, and education level, but the respondents must be very sure about the confidentiality of the survey to respond to such questions. For example, collecting travel log information from riders and asking if their travel times and days are consistent could lead them to be concerned about their safety. When interviewing people with disabilities, some disabilities may be observable and the interviewer would not have to ask about the disabilities. Questions about disabilities need to be carefully worded, with due respect for proper etiquette.

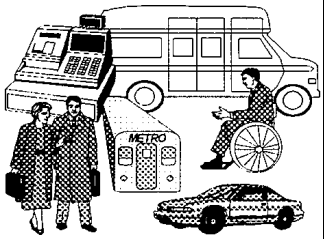
Develop consistent wording.

➪ Develop the exact wording for each question, each introductory and transitional remark, and all the exact explanations that interviewers may need to give. Using the same words with each respondent ensures consistency. Interviewers need to be trained so that they are consistent in the way they ask the questions and that all respondents receive the same information.

FOCUS GROUPS

Focus groups involve a small group of people who meet together once to discuss their opinions of particular service features, changes to services, training program components, vehicle preferences, or other aspects of a service. A number of groups can meet to express their opinions. The groups can be a mixture of types of members of the community, or stratified by significant types. Each focus group should be led by a professional facilitator who is skilled in encouraging people to speak honestly and to share their views.

Usually, a focus group is formed from a larger group of people who are already familiar with the service. Consider using a professional market research firm to locate particular types of participants, or identify people through in-house means. As with the telephone or mail-in surveys, groups of participants should include the following:



- People with disabilities who work and shop in the target service area;
- Paratransit patrons;
- Older citizens who work and shop in the target service area;
- People who live in outlying areas who work in the target area;
- Tourists and business travelers;
- People who work at restaurants, tourist attractions, and business attractions;
- People who normally drive for various purposes; and
- People who take transit to and from a central location in the target service area.

Target groups may be separated or combined.

More than one focus group meeting may be held.

The transit system may choose to mix groups or, for example, have one focus group exclusively consisting of paratransit patrons and another focus group consisting of only people who work in the target area — regardless of how they travel. If a particular group is being targeted, the transit system may form focus groups that are even more specialized, such as a group of people with disabilities who work in the target area, a group of people with disabilities who attend a local university, and a group of people with disabilities who are not employed. People who work in the target area may be divided into executive, middle management, and blue collar workers. Again, a professional market research firm can assist.

Limit the issues to ensure detailed discussion.

The focus group sessions typically last 2 hours and address a single issue or a set of issues, so that thorough, detailed discussion can take place. The session usually starts with information from the facilitator about the particular issue, presenting the options to be discussed, or the particular service features that are important to the discussion. The facilitator then asks questions about the group's opinions and guides the discussion.

Focus group facilities provided by professional firms are very useful since the activity is always recorded on audio tape and can be video-taped as well. It is important for all the recording equipment to be hidden or unobtrusive so that people will feel free to express themselves. The proceedings are often observed by transit officials via a one-way see-through mirror. The focus group participants should be told that they are being recorded and observed, but if they do not see the camera they tend to be able to relax.

CONCLUSIONS

Once these four important steps have been accomplished, the specific steps for the approach can be implemented. For different types of approaches, there may be variations on these basic steps. For different transit systems and different communities there may also be variations on the basic steps. It is important to carefully identify the need, define resource needs and sources, conduct public involvement, and do some market research first, before making significant investments and dedicating scarce resources. The secret to successful implementation is to do what will address the need. The secret to efficiently using resources is to only implement services which will benefit people and will be used by them.

CHAPTER 4: LOCATING TRANSIT STOPS CLOSE TO PASSENGERS

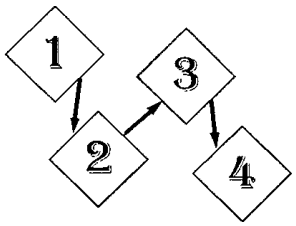
INTRODUCTION

This chapter describes the steps to move transit stops closer to passengers through the design of a new operating scheme. Approaches include a route deviation service using low-floor accessible vehicles to bring passengers to where they can transfer to other accessible routes and a circulator service using low-floor accessible vehicles with short headways to quickly travel among frequently used locations.

Both approaches use accessible vehicles to travel to convenient locations so that passengers receive service close to their origins and destinations. The provision of accessible vehicles allows people with disabilities to ride and to benefit from the special training the drivers receive. These approaches are not system-wide, but the availability of the additional services contributes to increased ridership on other, more traditionally designed accessible transit routes.

The steps for locating transit stops close to passengers are as follows:

1. Identify the need;
2. Define funding needs and resources;
3. Conduct public involvement;
4. Conduct market research;
5. Identify approach to address need;
6. Determine personnel and other resource needs;
7. Develop implementation plan;
8. Test the routes;
9. Implement service; and
10. Evaluate the results.



STEP 1: IDENTIFY THE NEED

To locate transit stops close to passengers, learn to identify where the passengers are and where they want to go. Particular areas may be more in need of specialized services for passengers who travel to and from them. Identify those areas with the greatest need.

For a circulator service, identify areas of the service area which have the following characteristics:

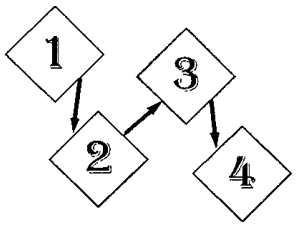
- Are relatively compact;
- Contain various attractions, including businesses, entertainment, and tourist sites;
- Attract enough people to make the service popular, whether people currently use transit or not; and
- Include areas which are accessible to people with disabilities, such as places of business and entertainment.

The following locations lend themselves to a circulator service:

- Downtown areas which are served by other routes from outlying areas;
- Historic or tourist areas with multiple attractions which may or may not be within walking distance of each other;
- Shopping and entertainment areas with limited parking or with widespread components; and
- Well-defined communities or subdivisions without regular traditional service whose members may want to travel to local businesses or to stops on main routes.

For a shuttle service, identify areas with the following characteristics:

- Are near the regular routes, but not close enough to be easily accessible to the routes; and
- Include areas where there are people with disabilities and older people who would be interested in using transit.



Consider service alternatives and calculate costs.

STEP 2: DEFINE FUNDING NEEDS AND RESOURCES

The funding required for a service that moves stops closer to passengers includes new vehicles and new drivers. The new service may need to be distinguished from other transit in the area, particularly if a goal is to attract people who do not normally use transit. New vehicles (with such features as low floors, lower capacities, and wheelchair securement systems) with distinctive logos and paint schemes can provide identity.

An important feature in attracting people who normally do not use transit can be the operators. Special training for the drivers (including empathy training, assistance training, and training related to the nature of the service) can help attract patrons to a new service. Uniforms which set the drivers apart can be useful, too.

Special marketing can make the service more successful. Marketing and advertising need to target the service area and the customers for the new service.

SERVICE ALTERNATIVES

A circulator service, service routes (that is, routes which make frequent stops throughout a neighborhood and transport people to local destinations and activities), a shuttle service, or other special services can be implemented with different service features. Although each combination provides a certain level of service, each has certain costs. Table 4-1 shows some of the potential features of a special service.

The combinations of service features in Table 4-1 provide different levels of service. The first row may be considered the highest level of service because it is free, runs frequently, and runs all week for extended hours. It covers a wide service area and represents a significant investment and operating costs. The bottom row, a more limited service, has lower operating costs; it may or may not represent less of a capital investment.

Table 4-1. Potential Alternative Service Features

Service Area	Routes	Vehicle Size	Vehicle Type	Service Frequency	Days & Hours	Fares
Wide Area	8	Small Bus/Van	Low-Floor Bus	5 Minutes	7 Days, All Hours	Free
Specific Areas	6	Small Bus/Van	Accessible Van	10 Minutes	5 Days All Hours, Short Weekend Hours	$0.50
Down-town Only	4	30' Bus	Accessible Bus	15 Minutes	5 Days All Hours	$1.00
One Area	2	40' Bus	Accessible Bus	20 Minutes	5 Days Peaks Only	$2.00

COST CALCULATIONS

Routes and Vehicles

To calculate the funding needs, identify the service components and estimate the costs. Tables 4-2 through 4-5 show the results of a method for calculating the annual service costs using a spreadsheet. The cost values are for illustrative purposes only and may not represent actual industry-wide or local costs. Establish the values within local, actual parameters and substitute them into the method tables. Table 4-2 is for a single part of the service area served by two routes. Table 4-3 is for a downtown service area served by four routes. Table 4-4 is for a broader area served by six routes and Table 4-5 is for a wide area served by eight routes. Table 4-6 shows the spreadsheet formulas for arriving at the cost calculations. The number of vehicles per route assumes that the route or loop can be completed in approximately 20 minutes. For a 20-min headway, only one vehicle would be required. To reduce the headways to 5 min, four vehicles would be required for each route. These estimates can be adjusted according to the actual proposed routes and the time required to complete them.

Vehicle Costs

Estimates for each type of vehicle are included. The cost assumes, as shown in Table 4-6, full financing of the vehicle at a 10% rate over 5 years. Costs for three types of vehicles are shown, with formulas for estimated costs. The initial cost for an accessible body-on-chassis small bus is estimated at $60,000. The initial cost for a low-floor bus is estimated at $120,000. The initial cost for a 30-ft bus is estimated at $180,000. These initial costs can vary for individual systems, depending on the included features, the number purchased, and the manufacturer. Research the local environment to estimate the costs to use in the calculations. The annual costs reflect the annual payments to pay the principal and interest on the purchase loan. These costs would be very different if the vehicles were acquired through federal grants and only 20% of the costs would need to be provided.

Driver Costs

The number of drivers per route is based on the estimated number of shifts. This could vary somewhat for different systems, depending on their policies for driver shifts. The driver costs assume a $20.00 rate, including fringe benefits. This is a representative rate, based on the Top Hourly Wage Rate Summary, published by the American Public Transit Association. Services may experience peak ridership at, for example, the morning, lunch, and evening rush hours. Split shifts and differential vehicle allocation may be required. This can increase the number of drivers and the driver costs. Evaluate the local conditions in order to allocate the appropriate number of drivers and driver shifts.

Operations Costs

The annual operations cost includes the driver and vehicle costs. The annual operations cost would include all costs for fuel and fluid, maintenance, insurance, administration, and other needs. This $5.69 per mile reflects the 1993 Section 15 data provided by transit operators. The estimate may vary greatly for different systems. An estimate can be made by calculating total annual costs for the existing system and dividing by the annual service miles. Table 4-6 assumes an average speed of 10 miles an hour, multiplied by the number of service hours a year. This can be calculated for actual average speed by calculating total vehicle miles and dividing by the total service hours.

Table 4-2. Cost Calculations for Service with Two Routes

	A	B	C	D	E	F	G	H	I
1	Number of Routes	Service Frequency (minutes)	Number of Vehicles/ Route	Vehicle Type	Annual Vehicle Cost	Service Hours/ Week	Number of Drivers	Annual Driver Cost	Annual Operations Cost ($5 69/mi)
2	2	5	4	Small Bus	$126,624	126	25	$1,040,000	$2,982,470
3	2	5	4	Low Floor	$253,248	126	25	$1,040,000	$2,982,470
4	2	5	4	30'	$379,872	126	25	$1,040,000	$2,982,470
5	2	10	3	Small Bus	$94,968	106	16	$665,600	$1,881,797
6	2	10	3	Low Floor	$189,936	106	16	$665,600	$1,881,797
7	2	10	3	30'	$284,904	106	16	$665,600	$1,881,797
8	2	15	2	Small Bus	$63,312	90	9	$374,400	$1,065,168
9	2	15	2	Low Floor	$126,624	90	9	$374,400	$1,065,168
10	2	15	2	30'	$189,936	90	9	$374,400	$1,065,168
11	2	20	1	Small Bus	$31,656	70	4	$166,400	$414,232
12	2	20	1	Low Floor	$63,312	70	4	$166,400	$414,232
13	2	20	1	30'	$94,968	70	4	$166,400	$414,232

Table 4-3. Cost Calculations for Service with Four Routes

	A	B	C	D	E	F	G	H	I
1	Number of Routes	Service Frequency (minutes)	Number of Vehicles/ Route	Vehicle Type	Annual Vehicle Cost	Service Hours/ Week	Number of Drivers	Annual Driver Cost	Annual Operations Cost ($5.69/mi)
2	4	5	4	Small Bus	$253,248	126	50	$2,080,000	$5,964,941
3	4	5	4	Low Floor	$506,496	126	50	$2,080,000	$5,964,941
4	4	5	4	30'	$759,744	126	50	$2,080,000	$5,964,941
5	4	10	3	Small Bus	$189,936	106	32	$1,331,200	$3,763,594
6	4	10	3	Low Floor	$379,872	106	32	$1,331,200	$3,763,594
7	4	10	3	30'	$569,808	106	32	$1,331,200	$3,763,594
8	4	15	2	Small Bus	$126,624	90	18	$748,800	$2,130,336
9	4	15	2	Low Floor	$253,248	90	18	$748,800	$2,130,336
10	4	15	2	30'	$379,872	90	18	$748,800	$2,130,336
11	4	20	1	Small Bus	$63,312	70	7	$291,200	$828,464
12	4	20	1	Low Floor	$126,624	70	7	$291,200	$828,464
13	4	20	1	30'	$189,936	70	7	$291,200	$828,464

Table 4-4. Cost Calculations for Service with Six Routes

	A	B	C	D	E	F	G	H	I
1	Number of Routes	Service Frequency (minutes)	Number of Vehicles/ Route	Vehicle Type	Annual Vehicle Cost	Service Hours/ Week	Number of Drivers	Annual Driver Cost	Annual Operations Cost ($5 69/mi)
2	6	5	4	Small Bus	$379,872	126	76	$3,161,600	$8,947,411
3	6	5	4	Low Floor	$759,744	126	76	$3,161,600	$8,947,411
4	6	5	4	30'	$1,139,616	126	76	$3,161,600	$8,947,411
5	6	10	3	Small Bus	$284,904	106	48	$1,996,800	$5,645,390
6	6	10	3	Low Floor	$569,808	106	48	$1,996,800	$5,645,390
7	6	10	3	30'	$854,712	106	48	$1,996,800	$5,645,390
8	6	15	2	Small Bus	$189,936	90	27	$1,123,200	$3,195,504
9	6	15	2	Low Floor	$379,872	90	27	$1,123,200	$3,195,504
10	6	15	2	30'	$569,808	90	27	$1,123,200	$3,195,504
11	6	20	1	Small Bus	$94,968	70	11	$457,600	$1,242,696
12	6	20	1	Low Floor	$189,936	70	11	$457,600	$1,242,696
13	6	20	1	30'	$284,904	70	11	$457,600	$1,242,696

Table 4-5. Cost Calculations for Service with Eight Routes

	A	B	C	D	E	F	G	H	I
1	Number of Routes	Service Frequency (minutes)	Number of Vehicles/ Route	Vehicle Type	Annual Vehicle Cost	Service Hours/ Week	Number of Drivers	Annual Driver Cost	Annual Operations Cost ($5.69/mi)
2	8	5	4	Small Bus	$506,496	126	101	$4,201,600	$11,929,882
3	8	5	4	Low Floor	$1,012,992	126	101	$4,201,600	$11,929,882
4	8	5	4	30'	$1,519,488	126	101	$4,201,600	$11,929,882
5	8	10	3	Small Bus	$379,872	106	64	$2,662,400	$7,527,187
6	8	10	3	Low Floor	$759,744	106	64	$2,662,400	$7,527,187
7	8	10	3	30'	$1,139,616	106	64	$2,662,400	$7,527,187
8	8	15	2	Small Bus	$253,248	90	36	$1,497,600	$4,260,672
9	8	15	2	Low Floor	$506,496	90	36	$1,497,600	$4,260,672
10	8	15	2	30'	$759,744	90	36	$1,497,600	$4,260,672
11	8	20	1	Small Bus	$126,624	70	14	$582,400	$1,656,928
12	8	20	1	Low Floor	$253,248	70	14	$582,400	$1,656,928
13	8	20	1	30'	$379,872	70	14	$582,400	$1,656,928

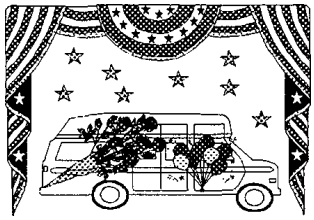
Table 4-6. Cost Calculation Formulas

	A	B	C	D	E
1	Number of Routes	Service Frequency (minutes)	Number of Vehicles/ Route	Vehicle Type	Annual Vehicle Cost
2	2	5	4	Small Bus	=A2*C2$15828[1]
3	2	5	4	Low Floor	=A3*C3$31656
4	2	5	4	30'	=A4*C4$47484
5	2	10	3	Small Bus	=A5*C5$15828
6	2	10	3	Low Floor	=A6*C6$31656
7	2	10	3	30'	=A7*C7$47484
8	2	15	2	Small Bus	=A8*C8$15828
9	2	15	2	Low Floor	=A9*C9$31656
10	2	15	2	30'	=A10*C10$47484
11	2	20	1	Small Bus	=A11*C11$15828
12	2	20	1	Low Floor	=A12*C12$31656
13	2	20	1	30'	=A13*C13$47484

Table 4-6. Cost Calculation Formulas (Concluded)

	F	G	H	I
1	Service Hours/ Week	Number of Drivers	Annual Driver Cost	Annual Operations Cost ($0.50/mi)
2	126	=ROUND(A2*C2*(F2/40),0)	=A2*G2*2080*20	=A2*C2*126*10*52*5 69
3	126	=ROUND(A3*C3*(F3/40),0)	=A3*G3*2080*20	=A3*C3*126*10*52*5 69
4	126	=ROUND(A4*C4*(F4/40),0)	=A4*G4*2080*20	=A4*C4*126*10*52*5.69
5	106	=ROUND(A5*C5*(F5/40),0)	=A5*G5*2080*20	=A5*C5*106*10*52*5.69
6	106	=ROUND(A6*C6*(F6/40),0)	=A6*G6*2080*20	=A6*C6*106*10*52*5 69
7	106	=ROUND(A7*C7*(F7/40),0)	=A7*G7*2080*20	=A7*C7*106*10*52*5.69
8	90	=ROUND(A8*C8*(F8/40),0)	=A8*G8*2080*20	=A8*C8*90*10*52*5.69
9	90	=ROUND(A9*C9*(F9/40),0)	=A9*G9*2080*20	=A9*C9*90*10*52*5.69
10	90	=ROUND(A10*C10*(F10/40),0)	=A10*G10*2080*20	=A10*C10*90*10*52*5.69
11	70	=ROUND(A11*C11*(F11/40),0)	=A11*G11*2080*20	=A11*C11*70*10*52*5.69
12	70	=ROUND(A12*C12*(F12/40),0)	=A12*G12*2080*20	=A12*C12*70*10*52*5.69
13	70	=ROUND(A13*C13*(F13/40),0)	=A13*G13*2080*20	=A13*C13*70*10*52*5.69

[1] These annual payments are calculated based on a 5-year loan at a 10% annual interest rate. These payment amounts can be found in any standard mathematics or finance text or in selected computer programs. For example, the annual cost of a $60K vehicle is $15,828.



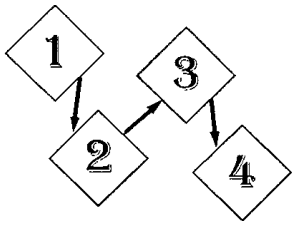
Additional costs — one-time or ongoing — may be incurred. Start-up costs may include the following:

- Initial driver training,
- Initial program advertising,
- Start-up promotions,
- Special vehicle painting or decorations, and/or
- Distinctive signs or bus stop markers.

Ongoing costs may include the following:

- Ongoing driver training;
- Driver uniforms;
- Promotional literature, schedules, and brochures;
- Advertising sales; and/or
- Marketing campaigns.

STEP 3: CONDUCT PUBLIC INVOLVEMENT



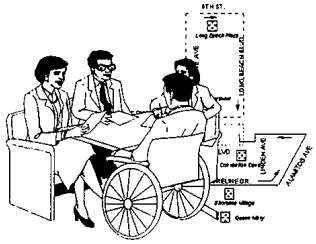
In addition to task forces, public meetings, and advisory committees, meet with target groups — consumers and community businesses.

In addition to using task forces, public meetings, and advisory committees, consider other public involvement approaches which may attract interest in the service and ideas on cost containment and revenue generation strategies. For services which bring stops closer to passengers, the most important groups to involve during early planning stages are as follows:

- People with disabilities and older residents in specific locations to be targeted by the service, as well as groups which represent them, and
- Businesses and retail establishments in the target areas.

Consider holding separate meetings with each group to obtain preliminary opinions. Then, hold a joint meeting with specific issues on the agenda. The issues should include the following:

- Any areas where there are substantial differences of opinion and
- Funding and revenue issues.



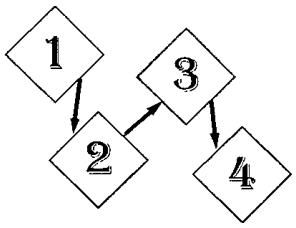
Provide the following kinds of backup information to meeting participants:

- Proposed service routes and configurations;
- Service interests of the two groups and how they can and cannot be met;
- Cost estimates, funding estimates, and potential deficit estimates; and
- Proposals for increased service with increased revenues.

Learn to identify target groups and individuals in the community.

In all public involvement, it is important for participants to be involved in solving problems as well as identifying them. Consumers who want more convenient services need to understand the costs involved and participate in the identification of funding sources. Businesses interested in customers being transported to their locations should participate in revenue generation through sponsorship and partnership programs.

It may be necessary to identify regional organizations to assist. State or regional offices of groups may be able to participate more fully than representatives at the local level. A regional or general headquarters may be more involved than a single branch of a business. Become familiar with the service users in the community.



STEP 4: CONDUCT MARKET RESEARCH

A new service can have a variety of characteristics. Each characteristic must be considered and evaluated through market research and public evaluation. Focus groups, surveys, and conjoint analysis are useful market research methods. Refer to Chapter 3 for additional information on market research.

Use focus groups, surveys, and conjoint analysis to conduct market research.

The vehicles for the new service may be very different from others in the system. There may be special fares. The particular areas served by the service must be carefully chosen. The routes and destinations of the service must also be carefully selected. The scope, duration, and cost of the system must be considered in terms of the available budget.

FOCUS GROUPS

Use of focus groups as a market research tool was discussed in Chapter 3. Detailed discussion of how Long Beach Transit used focus groups is provided in the following paragraphs.

LONG BEACH TRANSIT

When Long Beach Transit began to develop its downtown circulator, they held focus groups to determine the most attractive type of service to offer to people who work in the downtown area. It was believed that people would be more likely to eat lunch in a restaurant or run errands in the downtown area if they could get around quickly and return to work within their lunch hour. The transit system also believed that people who typically take their cars to work would choose transit if they could get around during the work day.

Three focus groups were held on the same day in Long Beach. The first group consisted of executives from businesses in the downtown Long Beach area who worked with employee benefits or services for their companies. The second and third groups were employees of downtown businesses.

The members of each group were asked about their current transit use and their opinions on the following:

- The concept of a circulator;
- Their potential usage patterns;
- Design elements of the vehicles;
- Fares;
- Potential routes;
- A time schedule for the routes; and
- Names for the service.

The focus group participants seemed to endorse the concept of a circulator service. They thought that the design of the vehicle should be attractive and not resemble the regular buses, which were perceived to be dirty and unpleasant. They preferred a vehicle with a light, airy feeling.

The participants wanted routes to areas where parking is difficult, for example, to restaurants, businesses, and travel centers.

Most of the people in the second and third groups indicated they would use such a service. The executives largely perceived it to be for other people.

Other opinions included the following:

Vehicles Other Than Buses

- People were not comfortable riding a bus. Buses were associated with other types of people ("indigents, criminals"), so the vehicle could not be like a bus. Rail did not have an image problem, and certain types of upscale vehicles were acceptable.

Low-floor Vehicles

- Participants particularly liked the low-floor vehicles. To the groups they appeared fast and efficient, not old and chunky.

Able to See Through Windows

- People did not like darkened windows. They were concerned about security and wanted to be sure people could see into the vehicle in case there was a problem inside. They also wanted to be able to see inside the vehicle before they got on board.

Two Doors

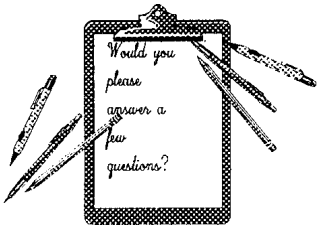
- They preferred two doors. In case of a problem on the vehicle, they wanted to be able to get off from more than one exit.

Closed Vehicle

- They did not want an open vehicle. The target riders were people who commute into downtown and go out at lunch time. Workers did not want to have their hair blown or become otherwise disarrayed on their way to and from lunch.

Frequent Service

- Frequent service was important. A 10-min wait was too long, but 5-min was acceptable.



SURVEYS

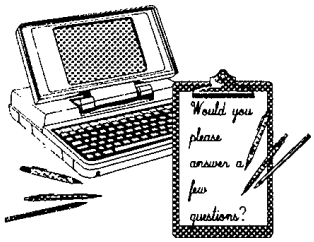
Some service features are more attractive than others, but not all are affordable. The difficulty of a survey is that it is all too easy to find out that everyone wants the most extensive and most frequent service at the lowest cost. The survey must be designed to collect opinions on just what level of service will attract enough people to use it and which added service features will increase costs without attracting additional riders.

The survey should ask respondents to compare and contrast service features in likely combinations. The survey should also ask respondents to project how likely they are to actually use the service. Respondents may indicate that a certain service configuration would be very attractive and a good idea, but they would never use it because they use personal vehicles throughout the day.

Figure 4-1 illustrates some questions for a survey based on the service configurations shown in Table 4-1.

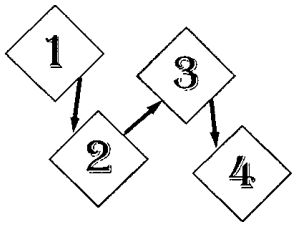
Please rate the likelihood of your using the described service on a scale of 1 to 10, in which a 1 means you would not use it at all and a 10 means you would use it every day.	
1. On a scale of 1 to 10, how likely are you to use a bus service in the *[name of one part of the service area]* only that runs Monday through Friday 6 am to midnight and weekends 8 am to 4 pm with buses every 10 minutes?	*[Interviewer Circle Response]* 1 2 3 4 5 6 7 8 9 10
How likely are you to ride it if the fare is	
Free?	1 2 3 4 5 6 7 8 9 10
50 cents?	1 2 3 4 5 6 7 8 9 10
$1.00?	1 2 3 4 5 6 7 8 9 10
$2.00?	1 2 3 4 5 6 7 8 9 10
2. On a scale of 1 to 10, how likely are you to use a bus service in the *[name of one part of the service area]* only that runs Monday through Friday 6 am to 8 pm with buses every 20 minutes?	1 2 3 4 5 6 7 8 9 10
How likely are you to ride it if the fare is	
Free?	1 2 3 4 5 6 7 8 9 10
50 cents?	1 2 3 4 5 6 7 8 9 10
$1.00?	1 2 3 4 5 6 7 8 9 10
$2.00?	1 2 3 4 5 6 7 8 9 10
3. On a scale of 1 to 10, how likely are you to use a bus service in the *[name of one part of the service area]* only that runs Monday through Friday 6 am to midnight with buses every 15 minutes?	1 2 3 4 5 6 7 8 9 10
How likely are you to ride it if the fare is	
Free?	1 2 3 4 5 6 7 8 9 10
50 cents?	1 2 3 4 5 6 7 8 9 10
$1 00?	1 2 3 4 5 6 7 8 9 10
$2.00?	1 2 3 4 5 6 7 8 9 10

Figure 4-1. Survey Questions On Service Configurations



CONJOINT ANALYSIS

To obtain a more sophisticated evaluation of potential rider service preferences, transit systems can employ professional firms that use computer programs to conduct conjoint analysis of survey responses. The technique asks respondents to rank service features and rate the importance of the features to them. Then the surveys offer respondents pairs of various service configurations, of which the respondents choose one. On the basis of pair-comparisons, a utility value is assigned to the service feature level (5-minute headways, 10-minute headways, $1.00 fare, etc.) for each respondent. The utility value represents the value of that feature to the respondent. The computer program then adds the various utility values for all respondents to determine the particular combinations which will be used by the most people. The analysis emulates reallife decisions, in that, for all product choices, people select a group of services according to what is available, what they can afford, and what most appeals to them. (For example, patrons may prefer on-demand, door-to-door service and all new vehicles, but not be willing to pay the $15.00 a ride that it would cost; however, they may be willing to forgo some convenience for a reasonable cost.)



Determine service area routes, vehicles, fares, and service features.

STEP 5: IDENTIFY APPROACH TO ADDRESS NEED

The next step is to select the approach that will be taken, including routes, destinations, vehicles, and other characteristics of the system. Determine the important factors for the new system and decide how to address each factor given the available resources. At a minimum, the following are relevant:

- Service area;
- Specific routes and destinations;
- Vehicle size and type;
- Service features, such as frequency of service, hours and days of service, and peak and off-peak service;
- Fares;
- Any special features, such as additional driver training, special policies or procedures, or a theme or distinctive

identity for the service; and
- The scope and duration of the program.

These interrelated factors can be combined in different ways depending on available funding and potential revenues. A larger service area but with relatively infrequent service could be implemented for a particular cost, or a smaller service area could be served with more frequent service for a similar cost. If the fare is low, the service may be limited to a few routes and destinations. If the fare is a little higher, more stops may be included.

Look at the possibilities and select the feasible service approaches. Table 4-1 showed some potential alternatives. The best service, a combination of the features at the top of the table, is probably the most expensive service to provide. The features at the bottom of the table offer the least amount of service. Although such a service may be less expensive to provide, it may not attract many patrons.

SERVICE CONFIGURATION COMPARISONS

Tables 4-7 through 4-11 show comparisons of different service configurations. These comparisons can be used in determining whether to implement a circulator service. Each table shows system configurations with similar annual costs, based on the calculations made in Table 4-6.

Table 4-7. Service Configurations with Approximately $400,000 in Annual Costs

Service Area	Routes	Vehicle Size	Vehicle Type	Service Frequency	Days & Hours
One Area	2	Small Bus	Accessible Bus	20 Minutes	5 Days, Peaks Only
One Area	2	Small Bus	Low-Floor Bus	20 Minutes	5 Days, Peaks Only
One Area	2	30' Bus	Accessible Bus	20 Minutes	5 Days, Peaks Only

Table 4-8. Service Configurations with Approximately $800,000 in Annual Costs

Service Area	Routes	Vehicle Size	Vehicle Type	Service Frequency	Days & Hours
One Area	2	Small Bus	Accessible Bus	20 Minutes	5 Days, Peak Only
One Area	2	Low-Floor Bus	Accessible Bus	20 Minutes	5 Days, Peak Only
One Area	2	30' Bus	Accessible Bus	20 Minutes	5 Days, Peak Only

Table 4-9. Service Configurations with Approximately $1,100,000 in Annual Costs

Service Area	Routes	Vehicle Size	Vehicle Type	Service Frequency	Days & Hours
Specific Areas	6	Small Bus	Accessible Bus	20 Minutes	5 Days, Peak Only
One Area	2	Small Bus	Accessible Bus	15 Minutes	5 Days, All Hours

Table 4-10. Service Configurations with Approximately $2,100,000 in Annual Costs

Service Area	Routes	Vehicle Size	Vehicle Type	Service Frequency	Days & Hours
One Area	2	30' Bus	Accessible Bus	5 Minutes	7 Days, All Hours
Down-town Only	4	30' Bus	Accessible Bus	15 Minutes	5 Days, All Hours

Table 4-11. Service Configurations with Approximately $7,500,000 in Annual Costs

Service Area	Routes	Vehicle Size	Vehicle Type	Service Frequency	Days & Hours
Wide Area	8	Small Bus	Accessible Bus	10 Minutes	5 Days, All Hours; Short Weekend Hours
Wide Area	8	Low-Floor Bus	Accessible Bus	10 Minutes	5 Days, All Hours; Short Weekend Hours
Wide Area	8	30' Bus	Accessible Bus	10 Minutes	5 Days, All Hours; Short Weekend Hours

LONG BEACH TRANSIT

Figure 4-2 depicts the route for the downtown circulator in Long Beach, California. This route was selected as a result of the market research program using focus groups described previously. The route runs through the major business corridors, Ocean Boulevard (East-West) and Pine Avenue (North-South), and travels to the major business, transit, and tourist locations downtown. Shoreline Village, the Queen Mary, and Catalina Island are major tourist destinations. The World Trade Center and Convention Center are important business locations, for local business as well as business travelers. Pine Avenue and Ocean Boulevard are the major corridors for local businesses, restaurants, and services. At the Transit Mall patrons can transfer to other transit, including the Los Angeles Metro Blue Line to downtown Los Angeles. The inclusion of all the major downtown destinations makes the circulator a popular mode for a variety of passengers. Three distinct "loops" serve the downtown area.

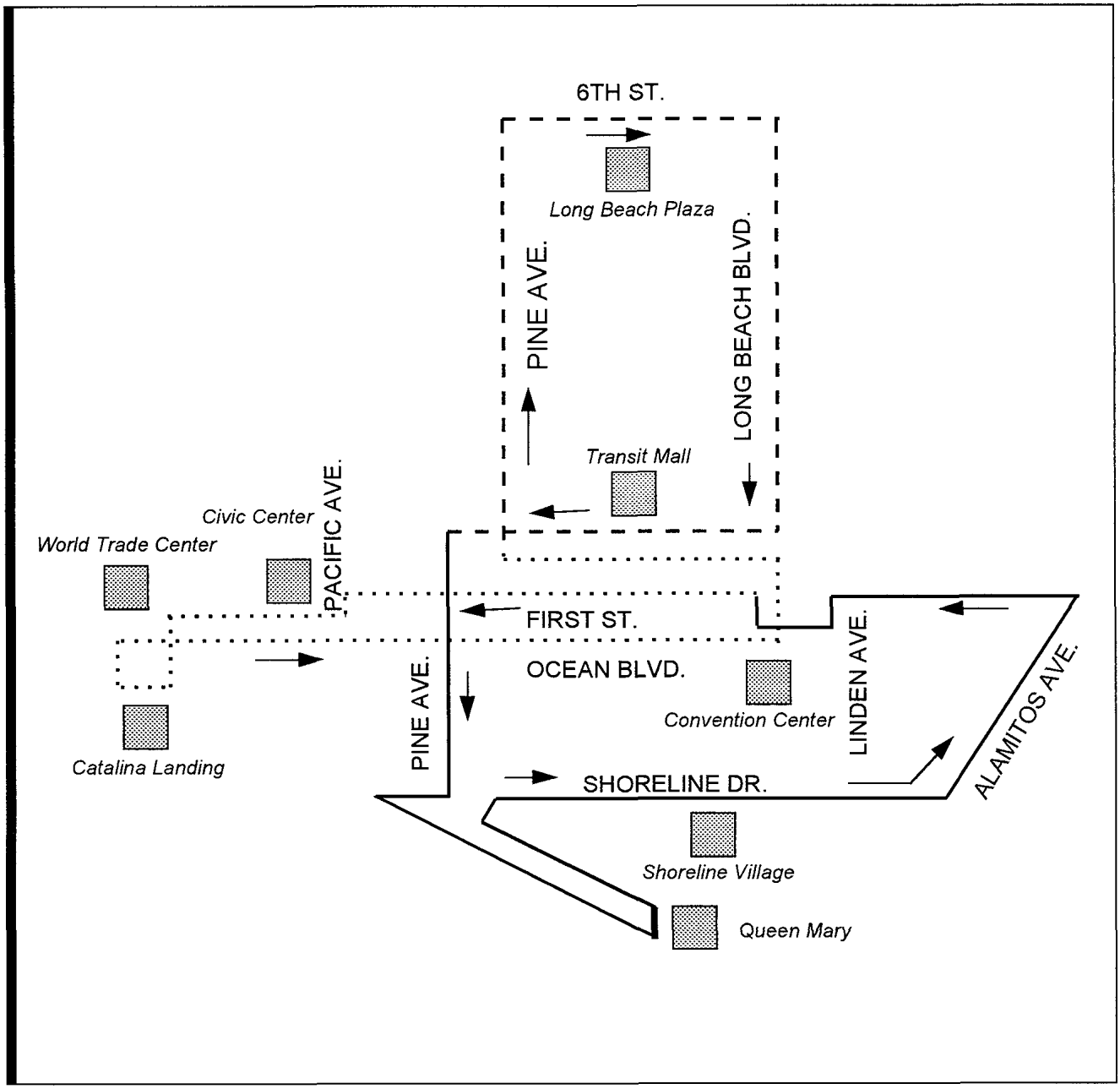


Figure 4-2. Long Beach Downtown Circulator Route

LEHIGH AND NORTHHAMPTON TRANSPORTATION AUTHORITY

Figure 4-3 shows the route deviation configuration for the Lehigh and Northampton Transit Authority's (LANTA, Allentown, Pennsylvania) Evening Starlight service.

The LANTA daytime shuttles were conceived as an efficient method for providing suburb-to-suburb trips and for providing core-city-to-suburb and suburb-to-core-city trips. The daytime shuttles primarily link residential and employment centers. The evening shuttles cover much the same service areas as the daytime shuttles; however, the runs are optimized for shopping services and other evening recreational uses.

As shown in Figure 4-3, there are five evening shuttle routes. Routes 1, 2, and 5 are designed as loops — vehicles use different roads going out and coming back. The vehicle on Route 3 uses the same roads going out and coming back, so the route is not a loop. Route 4 uses the same roads going out to Easton (South Side) and returning, but makes a loop within South Side. The routes interconnect at three Metro Transit Centers (MTCs). The MTCs are major bus stops which allow for timed transfers between several Metro bus routes.

With the advent of the ADA-complementary paratransit rule, LANTA recognized the evening routes were an opportunity to provide an efficient demand-responsive alternative to conventional fixed-route services. Also, designing the evening shuttle routes as demand-responsive routes meant that a paratransit complement would not be required.

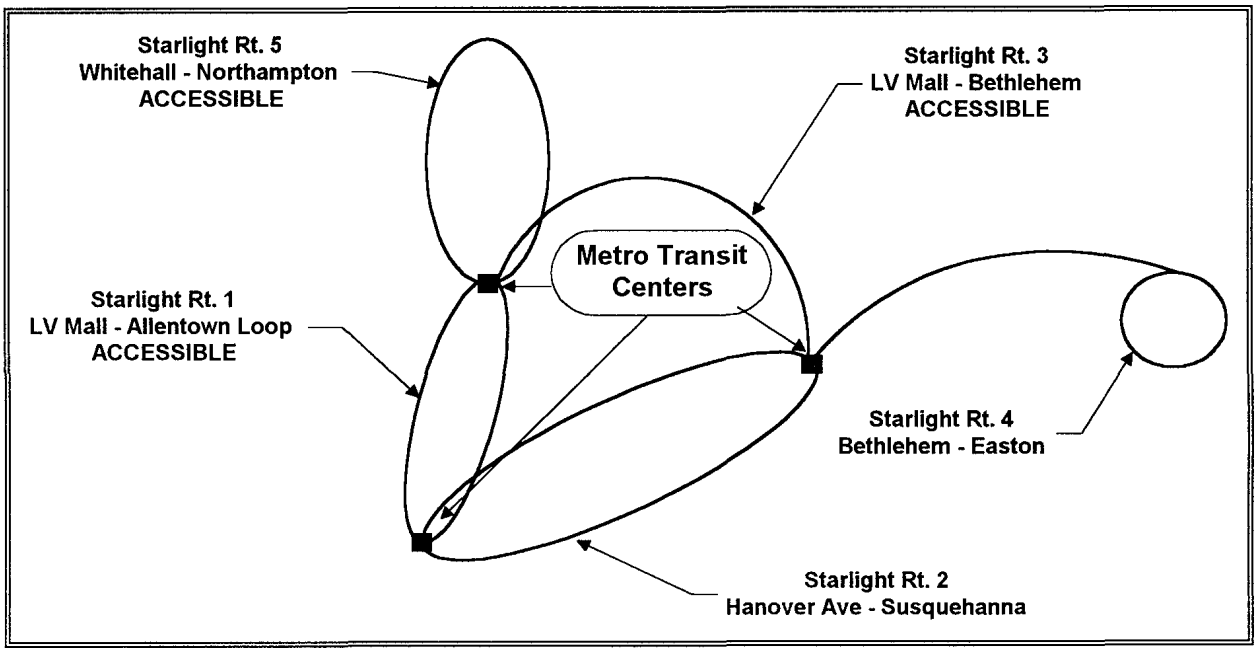
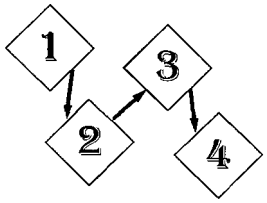


Figure 4-3. LANTA Evening Starlight Routes

Final review by interested groups, staff, and board members.

It may be useful for the transit system to collect opinions on the recommended service configurations from staff members other than those closely involved with the service planning. Internal meetings can be held to discuss the feasible approaches and some of the implementation issues. It might also be useful to present the final list of approaches to the advisory committee, subcommittee, or task force, and solicit their input. They may have additional ideas or suggestions, and it is important to ensure that the process and decisions are still in line with their earlier input.



STEP 6: DETERMINE PERSONNEL AND MAINTENANCE NEEDS

PERSONNEL

After a service approach has been selected, determine the level of staffing necessary for the program. Addition of drivers, creation of separate dispatch functions, hiring of driver supervisors, determining whether separate management is required, and other office and maintenance staffing should be evaluated.

Questions to be answered are as follows:

- **How many new drivers are needed and should they come from the current roster or be hired separately?**

Drivers

The number of drivers needed depends on the number of routes and the number of shifts. Hiring of the drivers depends on specific characteristics of the transit system. For many systems, union rules will describe the applicable hiring practices. In other systems, the definition of the service itself will define what type of hiring may be done. Systems without unions will have to examine the number of extra board drivers available, the level of staffing on other routes, and overall driver staff levels, and existing driver skill levels to determine the sources of drivers.

- **Will the service be large enough or different enough to require separate dispatch functions?**

Dispatch

Most new services can probably use existing dispatchers; others may require a separate dispatcher. If the system concentrates on services for older riders and people with disabilities, then separate dispatching may be necessary to ensure that problems, such as inoperable lifts, insufficient vacant wheelchair securement positions, or medical emergencies, can be handled efficiently by properly trained dispatchers.

Supervisors

- **Will enough drivers and staff be involved to require separate supervisory or management staff?**

This largely depends on the size of the system, the size of the new service, and the level of new staffing in comparison to current personnel.

- **Will additional office staff or maintenance personnel be required?**

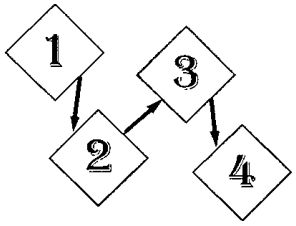
Office

For many systems, office functions and vehicle maintenance for the new service can be handled within existing resources. Office functions should be minimal. However, if new types of vehicles are procured for the service, additional maintenance considerations may include hiring mechanics trained in maintaining the new vehicles or additional training for mechanics.

OTHER RESOURCE NEEDS

Maintenance

Different types of vehicles may require different parts, types of tools, equipment (for example, lifts), and maintenance personnel skills. Different requirements for skills may lead to different mechanic grades and training and salary requirements. For systems which contract out maintenance work, these issues need to be explored with the contractor. The vehicle manufacturer may be able to provide preventive maintenance schedules and training requirements.



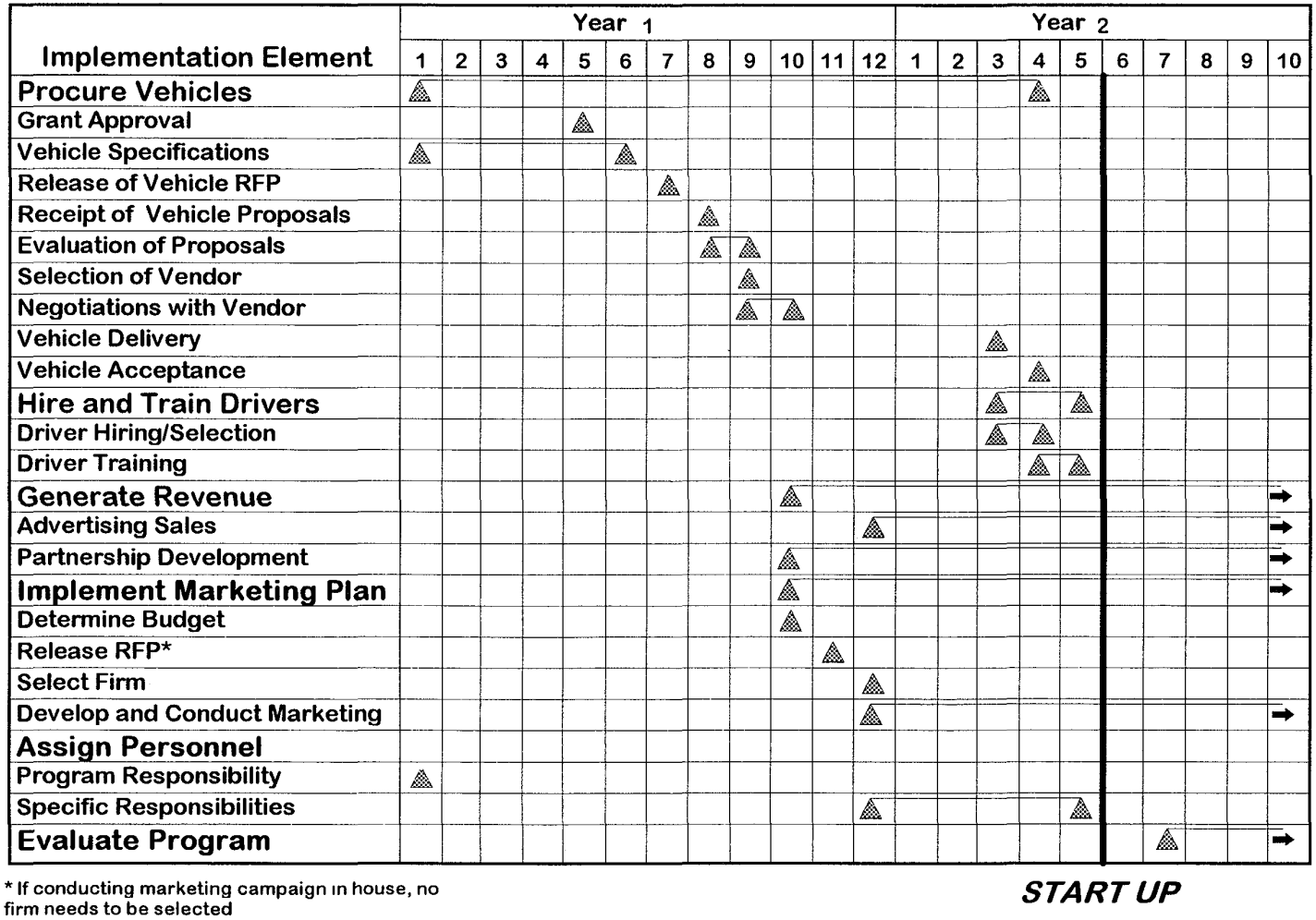
STEP 7: DEVELOP IMPLEMENTATION PLAN

In order to smoothly implement the service, develop a fully detailed implementation plan. Figure 4-4 shows the possible components of an implementation plan. Not all components will apply to all services, and some services may have additional components. Transit systems should identify all components of implementation to ensure that implementation occurs in the appropriate sequence and that potential problems are identified and solved as soon as possible.

Figure 4-5 shows a possible Gantt chart for the implementation plan. Some components are start-up activities and some are ongoing, but require early decisions. None of the activities can be accomplished instantaneously. Allow adequate time, especially for time-consuming activities such as vehicle procurement.

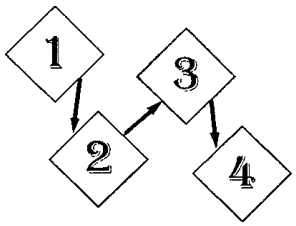
1. **Vehicle procurement**
   - A. Grant application
   - B. Grant approval
   - C. Vehicle specifications determination
   - D. Release of RFP
   - E. Receipt of proposals
   - F. Evaluation of proposals
   - G. Selection of vendor
   - H. Negotiations with vendor
   - I. Vehicle delivery
   - J. Vehicle acceptance
2. **Drivers**
   - A. Driver hiring and/or selection
   - B. Driver training
3. **Revenue generation plan**
   - A. Advertising sales plan
   - B. Private partners plan
   - C. Other plans
4. **Marketing plan**
   - A. Marketing budget decisions
   - B. Selection of advertising firm or development of advertising in house
   - C. If selecting a firm, release of an RFP
   - D. If selecting a firm, receipt and evaluation of proposals and selection of a firm
   - E. If using an outside firm, working with the firm to develop a marketing campaign
5. **Personnel assignments**
   - A. Overall program responsibility
   - B. Oversight and management positions
   - C. Reporting hierarchy
   - D. Troubleshooting responsibilities
   - E. Emergency responsibilities
   - F. Driver/supervisor responsibilities
   - G. Vehicle dispatch responsibilities
   - H. Vehicle maintenance responsibilities
   - I. Service complaint resolution responsibilities
   - J. Program evaluation responsibilities
6. **Program evaluation**

Figure 4-4. Possible Components of an Implementation Plan



* If conducting marketing campaign in house, no firm needs to be selected

Figure 4-5. Implementation Gantt Chart

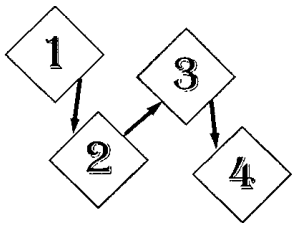


STEP 8: TEST THE ROUTES

Before the new service start-up, test the routes by operating the vehicles along all parts at various times of the day. This testing achieves such goals as the following:

- Enables personnel to determine the estimated time between stops under different traffic conditions,
- Ensures that the vehicles are maneuverable on all the streets and all the corners,
- Assesses the abilities of drivers to maneuver the vehicles,
- Allows the drivers to practice the routes and familiarize themselves with all their features, and
- Ensures that there are no unforeseen obstacles along the routes (such as low-hanging branches or structures) or obstacles close to curbs or stops that the vehicles would hit.

Operate the vehicles over the routes repeatedly, carefully timing the runs and the stop times. Include dwell time at each stop with additional dwell time at some stops to emulate the boarding and securement of wheelchairs on the vehicles.

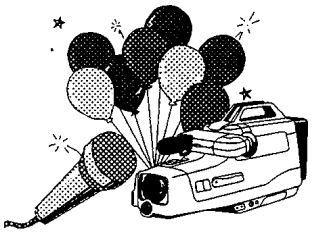


Start up the service with celebrations and publicity.

STEP 9: IMPLEMENT SERVICE

Start-up of the new service should be well advertised and include festivities. Effective methods of publicizing the start-up include the following:

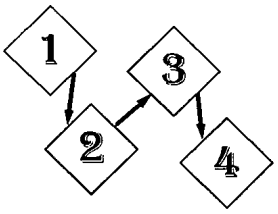
- An opening ceremony with local celebrities and government officials;
- Media coverage before and during the opening service day, including newspaper articles, local television and radio news coverage, and other media involvement;
  Significant, market-focused advertisement leading to the opening day;



- Special events, such as a transportation fair, to exhibit the new vehicles, meet the drivers, distribute flyers and schedules, and so forth;
- Free fares for the first week of service; and
- Special giveaways or drawings, in conjunction with the new service, to increase public awareness and interest.

With significant publicity and advertisement regarding the opening day, it is especially important that the opening go off smoothly and on time. If problems are anticipated, it is probably better to schedule the start-up for later than to have to delay it once has been publicized.

STEP 10: EVALUATE THE RESULTS



Evaluate service by measuring ridership, customer satisfaction, and revenues.

The transit system should collect baseline data before service changes; then, a month or two after the service is running smoothly, the system should evaluate the success of the service. Important measures of success include the following:

- High and growing levels of ridership,
- High customer satisfaction,
- High levels of ridership by people with disabilities,
- Increased ridership on other services which come into the target service areas,
- Frequent requests for information on the service and distribution of schedules and brochures,
- Increasing fare revenues, and
- Advertiser satisfaction with the visibility and effectiveness of advertisements.

Be prepared to evaluate success by having data collection and analysis procedures in place shortly after implementation of the service. Some methods of data collection are as follows:

- Ridership data can be collected on board the vehicles, either through fare revenues or through manual counting methods. Rather than count all riders all the time, operators can count riders for sample days or weeks, which can be used to calculate estimated ridership. Peak and off-peak ridership can be counted as well. Manual

Evaluate success by gathering data on ridership levels, customer satisfaction, and requests for information.

counts of riders with disabilities can also be made for sample time periods or on an ongoing basis.

- Customer satisfaction can be measured through on-board surveys conducted periodically by transit system staff. The number and nature of service complaints can also be used to judge the level of satisfaction with the service. Surveys and complaint reviews can indicate where adjustments are necessary to improve service delivery.

- Advertiser satisfaction can be gauged through formal or informal surveys. Increasing advertising revenue and a growing list of clients are also measures of advertiser satisfaction.

- Keeping track of information requests and the number of brochures or schedules requested on an ongoing basis can indicate success and the level of demand.

One of the best ways to evaluate the success of the system is to have transit system staff ride the service, observe the drivers, and talk with the riders.

CHAPTER 5:

TRAINING DRIVERS

INTRODUCTION

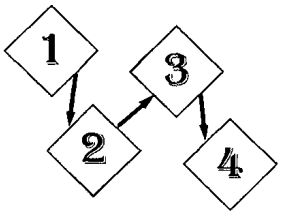
This chapter describes implementation of a driver empathy training program and development of an in-house training video.

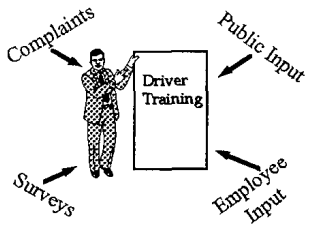
Fixed-route operators receive a great deal of training before they provide transit service. For many fixed-route systems, assisting people with disabilities is a new component of the service. Training on how to provide appropriate service to people with disabilities helps operators to improve their skills and enhances their awareness of the needs of people with disabilities. Such training (variously known as sensitivity training, rider or passenger assistance training, or empathy training) is designed to enable operators to assist passengers with disabilities, communicate with them, and offer services necessary for people to use public transit.

This chapter describes how to implement an effective driver empathy training program and emphasizes the development of an in-house video for use in training. A video using current drivers and actual passengers will be significantly more effective than one which is less applicable to the system. The video is only one component of a broader driver empathy training program, but can be an important feature. As with all operator training, it must persuade operators to follow training policies — even when unsupervised. A relevant, effective program is more likely to convince operators to follow the training policies and to always offer courteous and helpful service to people with disabilities.

This chapter discusses the nine steps necessary for the training of drivers:

1. Identify the need;
2. Define funding needs and resources;
3. Conduct a public involvement program;
4. Conduct market research;
5. Determine training contents;
6. Establish a development team;
7. Develop and produce materials;
8. Distribute the video; and
9. Evaluate the results.





STEP 1: IDENTIFY THE NEED

The need for driver empathy training is often revealed through public participation and through information received from passengers and employees. Indications of the need for driver empathy training may include the following:

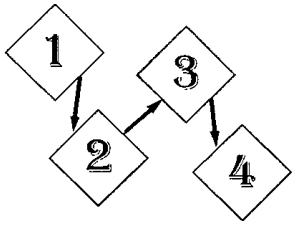
- Increasing complaints related to driver performance;
- Increasing complaints from passengers with disabilities;
- Complaints related to the operation of accessibility equipment on the vehicles;
- Input from advisory committees, task forces, or public meetings on driver training issues;
- Comments on surveys related to driver empathy and communication with people with disabilities;
- Input from the drivers themselves;
- Increasing accessibility of the vehicle fleet; or
- Reevaluation of the current training curriculum.

Training may be necessary for specific topics.

There may be a need for training on very specific topics. For example, the New York Metropolitan Transit Authority Long Island Bus Division developed a video to train drivers to announce stops. The Cambria County Transit Authority in Johnstown, Pennsylvania, developed a video (with a Project ACTION grant) about disabilities that are "hidden" and which may be difficult for drivers to recognize (for example, epilepsy, deafness, and dementia). Training may be required in other specific areas, such as the following:

- Operation of the lift, including assisting standees;
- Operation of the wheelchair securement system;
- Securement of various types of mobility devices, such as three-wheeled scooters or unconventional wheelchairs;
- New fare issues or policies;
- Other new policies and procedures, such as identifying service animals, allowing personal care attendants onto the system for special fares, or meeting the needs of riders with travel trainers;
- Policies and procedures regarding bus stop announcements;
- Communication issues; and/or
- General courtesy and etiquette for working with people with disabilities.

Meet with drivers, advisory committees, consumer representatives, and employees who serve the public, to discuss the need for driver empathy training or an improved course.



STEP 2: DEFINE FUNDING NEEDS AND RESOURCES

For the most part, empathy training can be added to existing driver training; additional costs, however, related to the development of new materials and the acquisition of materials developed by other systems and organizations, may be necessary.

Funding needs are tied to available in-house expertise and time.

Professional firms may be hired to train trainers in particular topics. Training programs and videos are available from public and private sources.

If there is no full-time trainer on the staff, staff time will need to be devoted to developing a curriculum and acquiring materials.

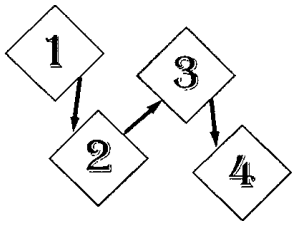
Look for community resources and in-kind contributions.

For the development of a video, determine the availability of in-house resources for working on the video, including staff members with experience, local editing facilities, and contacts in the community for adding titles and graphics.

When the San Mateo County Transit District in California developed a video for driver training, they hired a production firm through a competitive bidding process for a cost of $35,000. That is a recent price, but may not be indicative of possible costs — other training films by professional production firms have cost as much as $100,000.

When the Metropolitan Transit Authority Long Island Bus Division in New York developed its video, the work was completed in house. The script was written by the Department of Customer Services and the Safety and Training Department. The editing was accomplished by a local university through an employee contact. The only direct charge was for duplicating the video.

Look for in-kind contributions from organizations and firms in the community, use actual drivers and passengers, and borrow available video and other equipment in order to minimize costs.



Create a task force that reflects diverse opinions. Include drivers, people with disabilities, and other passengers.

STEP 3: CONDUCT PUBLIC INVOLVEMENT

A task force will be a major component of the development of a driver empathy training program or a video. Include a variety of participants, as well as transit system staff members. Members could include the following:

- Transit passengers with disabilities,
- Interested advisory committee members,
- Driver trainers,
- Driver supervisors,
- Drivers,
- Customer service staff members or supervisors,
- Individuals who have contacted the transit system regarding driver training issues, and
- Representatives of agencies that provide services to older passengers and passengers with disabilities.

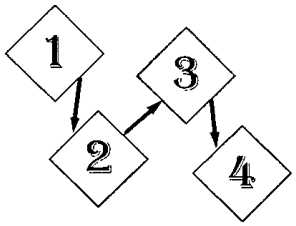
Involve drivers in planning and developing the training and video because it will be directed at them. Their participation can ensure that the final product is relevant and that the drivers can enthusiastically use the training in their jobs. Driver trainers and supervisors should assist in integrating the training with other driver training elements and job components.

The San Mateo County Transit District works with a group of people with disabilities in its driver training program. The group conducts training and participates in all training sessions. This group helped identify the need for a new driver training video and worked with the firm hired to produce the video on all aspects of production.

Invite potential task force members to participate in development of training materials. Specify their role and the goals of the process. Activities in which the task force members may participate are as follows:

- Initial conceptualization of the program;
- Identification of available resources;
- Input on training contents, scripts, and other materials;
- Direct participation in development;
- Review of draft materials;

- Final review of developed videos and materials; and
- Direct participation in training activities.



Use a survey to target the appropriate level of training in assistance and understanding of passengers with disabilities.

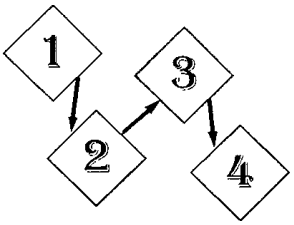
STEP 4: CONDUCT MARKET RESEARCH

To accurately target training needs, it is necessary to understand what passengers are seeking from drivers when they need assistance. Drivers cannot provide all the assistance that some passengers may want, but additional help from drivers can encourage people to use the fixed-route system. To target people who ride paratransit and to determine the appropriate level of understanding and assistance, survey people who use paratransit and ask them, specifically, what assistance and understanding operators could provide to make it easier to use the fixed-route system. Figure 5-1 shows some questions that could be included in a survey. The survey may be taken over the telephone to a sample of those who are registered for paratransit. It may also be undertaken on board paratransit and transit vehicles. Chapter 3 provides additional information regarding surveys.

Ask respondents about policies, procedures, and possible new skills that should be included in training. Open-ended questions may lead to responses which are too general for analysis or to the expectations of policies that the transit system cannot implement. However, one open-ended question at the end of the survey (such as, "Do you have any other comments?") may produce valuable information. Determine possible topics by working with the task force, attendees at public meetings, and advisory committees. If there is some controversy over the contents of the survey, consider using focus groups to arrive at possible training components. Focus groups are discussed in Chapter 3.

1. Have you ever ridden *[name of fixed-route service]*?	____Yes ____No
2 When was the last time you rode *[name of fixed-route service]*?	_____
3. Why don't you ride it now? _____ _____	
4. Do you need to board a van or bus using the wheelchair lift?	____ Yes ____ No
5. (If Yes to Question 4) If the driver helped you board on the wheelchair lift, would you be able to use *[name of fixed-route service]*?	____Yes ____ No
6 (If Yes to Question 5) On a scale of 1 to 10, where 1 is not at all likely and 10 is very likely, how likely do you think you would be to ride *[name of fixed-route service]*?	1 2 3 4 5 6 7 8 9 10
If the drivers announced all the major stops on the route, would you be able to use *[name of fixed-route service]*?	____ Yes ____ No
On a scale of 1 to 10, where 1 is not at all likely and 10 is very likely, how likely do you think you would be to ride *[name of fixed-route service]* if the drivers announced all the major stops on the route?	1 2 3 4 5 6 7 8 9 10
If drivers were able to communicate with you on the bus, would you be able to use *[name of fixed-route service]*?	____Yes ____ No
On a scale of 1 to 10, where 1 is not at all likely and 10 is very likely, how likely do you think you would be to ride *[name of fixed-route service]* if drivers were able to communicate with you on the bus?	1 2 3 4 5 6 7 8 9 10
Do you have any comments or anything you would like to tell us about our service? _____ _____ _____	
Thank you!	

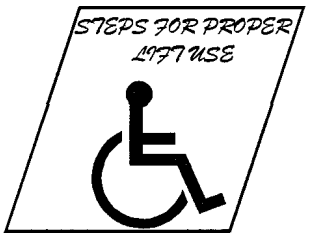
Figure 5-1. Sample Survey Questions on Driver Assistance



Use a variety of media to convey key training elements.

STEP 5: DETERMINE TRAINING CONTENTS

Training conducted by only using videos will not be as effective as training which incorporates other approaches and techniques. The most effective training uses different media to convey the same information, such as lecture, discussion, videos, handout materials, graphic and visual displays, hands-on activities, and written activities. Training programs, including training videos, need to include certain key elements. These elements should reflect the transit system's specific problem areas and issues. Below are descriptions of key elements to include in videos and training programs on specific topics: training on lift operation, training on wheelchair securement, training on stop announcements, and training on specific disabilities. Consider these outlines and decide how a training video can be integrated with other training techniques to most effectively train drivers.



TRAINING ON LIFT OPERATION

A training program on lift operation should include the following elements:

- Description of the components of the lift;
- Description of policies for lift use, including when wheelchair securement positions are full, and for standees;
- Description of policies in the event the lift is inoperable;
- Instructions for proper use of the lift;
- Instructions for proper placement of the mobility device on the lift; and
- Instructions for assisting passengers onto and off the lift, according to policies.

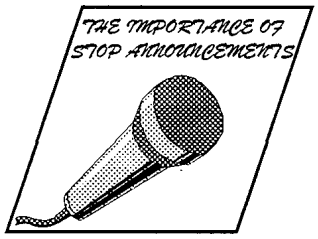
Use slides and lecture to describe lift usage and designate policies. A video program can also show the components of the lift. Use a video program to demonstrate the operation of the lift. Conduct a hands-on practice to allow drivers to practice the techniques and become familiar with the equipment. At a minimum, provide handouts listing reference materials related to the lift and a troubleshooting guide for use on the road.

TRAINING ON WHEELCHAIR SECUREMENT

A training program on wheelchair securement should include the following elements:

- An overview of the types of securement systems in use in the service;
- Information on the advantages and disadvantages of each type of system;
- Information on policies related to securement assistance;
- Step-by-step instructions on using each type of system;
- Instructions for securing unconventional mobility devices;
- Instructions on safely storing the system components on the vehicles;
- Techniques to increase efficiency; and
- Techniques to assist passengers who resist using or are reluctant to use the system.

Consider a lecture format to describe the securement systems, their advantages and disadvantages, and the policies related to securement. The lecture should be accompanied by a slide presentation or handouts. Use a video to show the systems with step-by-step instructions on their use, storage instructions, and efficiency techniques. Create hands-on practice activities with the system and role-play with mock passengers to increase learning.



TRAINING ON STOP ANNOUNCEMENTS

A training program on announcing bus stops should include the following:

- An overview of the reasons for the requirement to announce stops,
- A good demonstration of how to make the announcements,
- Information about the equipment on the vehicles and how to use it (for example, microphones, enunciators, and "talking bus" technology),
- What to do if equipment is not working, and
- Information about the importance of the stop announcements to passengers who need them.

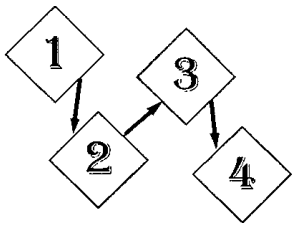
A video can convey this information, if accompanied by a lecture and group discussion activities. In the video, include proper techniques demonstrated by an actual driver. The Long Island Bus Division also included in its video a segment where there is no narration, only the sounds of the bus. The viewers are asked, "Do you know where you are?" Facilitate an interactive discussion of drivers' experiences on the bus when passengers do not know where they are on the route.

TRAINING ON SPECIFIC DISABILITIES

A training program on specific disabilities should include the following:

- Information on how to recognize a disability, especially those that are hidden;
- Information on how to communicate with and assist the passenger; and
- Information on characteristics of the disability which can have an impact on the bus trip, such as safety or health concerns.

Convey this information using a video tape, in conjunction with lectures and group discussion of the topic. Work with local medical, rehabilitation, and independent living facilities to develop accurate contents.



Select the development team from in house or hire a firm through a competitive process.

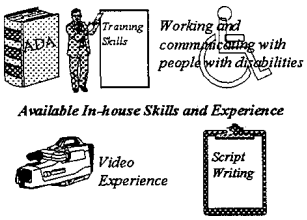
STEP 6: ESTABLISH A DEVELOPMENT TEAM

There are two basic approaches to developing the training components: in-house development or hiring of an outside firm with the appropriate expertise.

IN-HOUSE DEVELOPMENT

To develop a video in house, select a group of people who have the necessary skills and understanding to create the appropriate materials. Participants in the development process must understand the following:

- The needs and abilities of passengers with disabilities;
- The local and federal requirements related to accessibility for people with disabilities, including the Americans with



Disabilities Act;

- The accessibility features of the vehicle fleet;
- Skills necessary for training drivers;
- Skills necessary to develop the training components; and
- Methods to communicate and work with people with disabilities.

In addition, those working on the video will need some understanding of the production skills necessary to complete the project, including the following:

- Writing an appropriate, believable script;
- Interviewing drivers and passengers to record information and audio portions of the video;
- Operating video equipment;
- Staging of video sequences, including use of appropriate backgrounds and elimination of distracting elements;
- Video editing;
- Use of cleared (public domain) music;
- Securement of a signed release for persons appearing in the video; and
- Audio and title dubbing.

Some of these skills may be available locally, through university film departments or other facilities, and friends and relatives of employees may also have such skills, but avoid amateur production. Consider mixing employee capabilities and available outside resources to achieve the desired results within the available budget. For example, someone who has worked in marketing services may be good at writing the script; someone who has a good background in amateur video may do the filming; and the local university may agree to do the editing and dubbing, or, the editing capabilities may be purchased once the video is filmed in house.

OUTSIDE FIRM

An outside firm is selected through an RFP process.

If an outside firm will be selected to produce a video, a Request for Proposals (RFP) process is the most effective method to acquire the services. A competitive bidding process is necessary, but the quality of the services rendered is more significant than acquiring the services at the lowest cost. With an RFP, consideration of the qualifications of the competing firms is possible, so the firm with the most experience and best ideas is selected.

Request for Proposals

The San Mateo County Transit District released an RFP which included the following elements:

- A general description of the video to be developed;
- A list of the services to be provided by the successful proposer;
- A schedule for completion of the video;
- A list of specific elements to include in the proposal, including a demonstration video; and
- The cost of the project.

The RFP also included the various legal, procurement, and insurance requirements.

RFP components, related specifically to the procurement of services to provide a training video, are described in the following paragraphs.

Description of the Video

The RFP included a description of the video to be produced. Figure 5-2 shows a sample description.

List of Services

Carefully describe the services that the successful proposer must provide. This will lessen the likelihood of disputes over the expectations of the contract. For a video production, considerable preparations are necessary before actual shooting begins. The quality of the video depends on the quality of the preparations. The quality of the production relies on the accomplishment of various editing and review steps. Figure 5-3 shows a sample list of services for a video production company.

The scope of the services shall consist of the creation of a video program that will help bus operators understand and accommodate people with disabilities and people who are elderly on transit system vehicles. The objectives of the video are as follows:

1. To teach bus operators about the transportation needs of people with disabilities and people who are elderly;

2. To help bus operators empathize with people with disabilities and people who are elderly by demonstrating their needs;

3. To educate operators about transportation requirements of the Americans with Disabilities Act; and

4. To train operators in the specific methods of serving these customers.

The video will primarily be shown during bus operator training. The transit system may also show the video to community groups of people with disabilities and people who are elderly or to groups that serve this population.

The video should be about 20 to 25 minutes long and should be realistic, informative, and interesting. Although the material lends itself to documentary format, the transit system is open to other approaches. The transit system would also encourage the use of music when appropriate, images and graphics, and other special effects.

The Proposer will work in conjunction with transit system staff and at least one representative of people with disabilities, selected by the transit district, in the production of the video.

Figure 5-2. Sample Video Description

The specific services to be provided shall be as follows:

1. Meet with transit system staff and representative(s) of people with disabilities to develop the concept and to understand the important elements of the video.

2. On the basis of input from transit system staff and representatives of people with disabilities, write a script.

3. Deliver the script in accessible formats as required. For this project, all scripts must also be delivered in print form of letters at least 30 points in size:

This is 30 point type.

4. With input from transit system staff, decide on locations and scheduling of staff and equipment.

5. With input from transit system staff, select talent.

6. If necessary, develop storyboards of specific scenes.

7. Incorporate appropriate images, graphics, and special effects in the video.

8. Incorporate appropriate cleared music in the video.

9. Produce a fine-cut edited master on betacam SP, 1 inch, or D2 videotape, incorporating the elements described above.

10. Deliver one (1) Protection Master (betacam SP) and four (4) VHS copies of the video made from the edited master.

11. Deliver one (1) master copy of the video in open-captioned format.

Figure 5-3. Sample List of Services

Schedule for Completion

Include a schedule in the proposal, even though it may be adjusted to accommodate the actual production of the video. It is important to outline the expectations at the outset, so that proposers are aware of the time constraints and can plan to produce the video within the anticipated time frame. With so many preliminary preparations and requirements for input from the transit district and members of the community with disabilities, delays are possible. However, the proposer can

promise to maintain the schedule in the proposal and the subsequent contract, which can minimize delays. Figure 5-4 shows a sample schedule from an RFP.

Proposal Elements

As with all RFPs, it is a good idea to outline the required elements of the proposal. In this way, the proposals all include the necessary elements and are relatively uniform in content. This makes them easier to compare and easier to review. Figure 5-5 shows a sample list of proposal elements.

Project Cost

Including the cost allows evaluation for quality and ensures all proposals are within available budget.

For a project of this type, include the overall budget of the project in the RFP. If the available budget is fixed and is already known, including it in the RFP has two distinct advantages.

First, it allows proposers to offer exactly what they can accomplish within the budget. They will not offer something too elaborate and too expensive for the budget. This avoids the situation where all the proposals offer something beyond the available budget and none can be selected.

The second advantage is that, since all the proposals will have similar costs, the evaluation of the proposals can rely on the quality of the proposal and the likely quality of the resulting product. For projects where the quality of the result is very important, something can be lost if the lowest bid must be accepted, even if the quality is not as good. When evaluating proposals, select the firm that appears to offer the most for the expected cost.

The project shall be completed in the following stages.

1. Within 21 calendar days after receipt of the Notice to Proceed, Proposer shall submit the first draft of the script for transit system approval.

2. Within 10 calendar days of receipt of the transit system's comments regarding the first draft of the script, Proposer shall submit a second draft of the script for transit system approval.

3. Within 6 calendar days of receipt of the transit system's comments regarding the second draft of the script, Proposer shall submit a final draft of the script for transit system approval.

4. Within 10 calendar days of receipt of the transit system's approval of the final draft of the script, Proposer will meet with staff and representative(s) of people with disabilities and decide on locations and scheduling of staff and equipment.

5. Within 5 calendar days of decisions regarding locations and scheduling of staff and equipment, Proposer shall submit talent selection for transit system approval.

6. Within 10 calendar days of the transit system's approval of talent selection, Proposer shall submit any storyboards of specific scenes for transit system approval.

7. Within 30 calendar days of receipt of the transit system's comments regarding any storyboards, Proposer shall submit the off-line edit for transit system approval.

8. Within 15 calendar days of receipt of the transit system's approval of the off-line edit, Proposer shall submit the final on-line edit for transit system approval.

9. Within 5 calendar days of receipt of the transit system's approval of the fine-cut edited master, Proposer shall submit four (4) VHS copies and one (1) Protection Master (betacam SP) of the video to the transit system.

10. Within 30 days of receipt of the transit system's approval of the fine-cut edited master, Proposer shall submit one (1) Master of the video in open-captioned format.

The transit system shall issue its approval for each stage of the Project described above within a reasonable period of time from submission of the designated product. If the period for the transit system's review, comment, and approval of any one stage exceeds ten (10) calendar days, such time in excess of ten (10) calendar days shall be added to the time of completion.

Figure 5-4. Completion Schedule from RFP

Proposals shall include the following sections.

A. Demonstration Tape

Proposer must submit a recent VHS video that it produced.

B. General Experience and Qualifications

Proposer should include as an appendix to the proposal a brief description of its qualifications for this project. Proposer should demonstrate proven capability and experience in creating a video on similar or related projects.

C. Specific Experience and Qualifications

Proposer should include, as an appendix to the proposal, previous experience on similar or related projects. Project descriptions should include a summary of work performed and the name, address, and telephone number of three (3) present or former clients for which Proposer has performed comparable services. These clients will be contacted as references.

D. Project Understanding

Proposer shall demonstrate its understanding of the proposed project and the various subtasks.

E. Technical Approach/Treatment of Project

Proposer shall describe its technical work plan for performing the Scope of Services. This should include a brief narrative describing the creative approach, a work program outlining proposed tasks, and the number of personnel required. Proposer shall also address its approach to coordination between transit system staff, representative(s) of people with disabilities, and Proposer's staff.

F. Management Plan

Proposer shall describe how it will staff and manage this Project. Project team members are to be identified by name, field of expertise, and specific responsibilities on the Project. The organizational structure for the project team must be detailed in the proposal. Individual resumes must be included for all Project team members.

G. Organization and Background

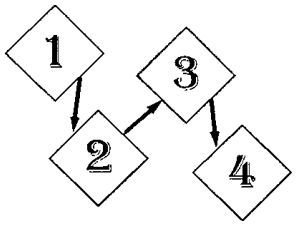
The Proposal shall include a brief summary of the overall organization and background of the Proposer's firm, including areas of practice and its internal quality control program. The Proposer's background resources and capabilities in relevant areas must be described.

H. Project Cost

The Proposal shall include a total fixed-price quotation for completion of the Project described herein. The sum shall include all labor, materials, taxes, insurance, subcontractor costs, and all other expenses necessary to complete the Project in full accordance with the specified requirement.

The transit system has a budget of $35,000 for production of the empathy training video and four (4) copies.

Figure 5-5 Sample List of Proposal Elements



Follow a schedule that includes script approvals, enough time for filming, and reviews and approval of the video.

STEP 7: DEVELOP AND PRODUCE MATERIALS

Although the RFP may include a schedule, this schedule should serve only as a guideline, depending on the most efficient process for completing the project. The production company may have procedures which work best for them, so, in order to complete the project in the most efficient way, work with the production company to develop a schedule that meets the need to review the materials and suits the requirements for the production. Figure 5-6 shows a video production schedule submitted by a production company during the course of the project. Include a penalty for late delivery of final product to avoid extensive delays.

6/24	Second Draft Script Delivered
6/27 - 7/8	Transit System Review/Approval of Second Draft Script
7/11 - 7/14	Script Changes Incorporated
7/25, 26 & 28	Remote Production
8/1 - 8/4	Transcriptions
8/5 - 8/8	Selection of Interview Clips and Insertion into Script, Revision of Narration as Necessary
8/8	Final Draft Script Delivered
8/9 - 8/23	Transit System Approval of Final Draft
8/25	Voice-over Recording
8/26 - 8/29	Off-line Edit
8/30 - 9/13	Transit System Review/Approval of Off-line Edit
9/14 - 9/15	On-line Edit
9/16	Evaluation Dub Delivered

Figure 5-6. Empathy Training Video Production Schedule Submitted by Production Company

Interviews

Review and Approval of Draft Scripts

The development and production process should be as follows:

- Conduct interviews with transit staff, drivers, and passengers;
- Submit first draft of the script for transit system approval;
- Submit second draft of the script for transit system approval;
- Transit system reviews/approves second draft script;
- Script changes incorporated;
- Meet with staff and representative(s) of people with disabilities and decide on locations and scheduling of staff and equipment;

- Submit talent selection for transit system approval;
- Submit any storyboards of specific scenes for transit system approval;

Location, Talent, and Equipment Selection

- Remote production;
- Transcriptions;
- Select interview clips and insert into script, revise narration as necessary;
- Final draft script delivered;
- Transit system approves final draft;

Remote Production

- Voice-over recording;
- Off-line edit;
- Transit system reviews/approves off-line edit;

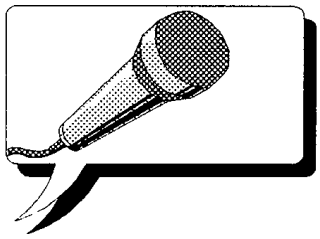
Final Script From Interview Clips

- On-line edit;
- Evaluation dub delivered;
- Submit four (4) VHS copies and one (1) Protection Master (betacam SP) of the video to the District; and

Final Editing and Approval

- Submit one (1) Master copy of the video in open-captioned format.

Submission of Open-Captioned Version

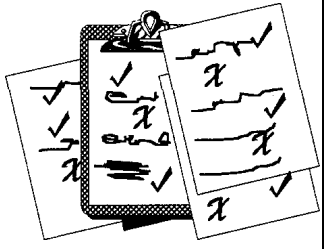


INTERVIEWS

Interviews provide background information for the contents of the video. Drivers, other transit staff, and passengers should be interviewed. Interviews with drivers can provide information about situations they face and the training they feel they need and tips and techniques to include in the video. Interviews with staff provide information on the policies which need to be included in the video. The interviews can also help personnel to structure the goals and objectives of the training.

Interviews with passengers provide information on riding the transit system and using the accessibility equipment. Understanding the perspective of passengers is crucial to providing appropriate service and to being empathetic to passengers. Passengers can describe the specific parts of their transit trips which are difficult as well as the assistance they have received and the attitudes they have experienced which have made their travel more enjoyable.

Interviews may be conducted in house or by a production company. Tape-record the interviews. The voices of those interviewed can be added to the video narration to enhance the immediacy of their comments. Get releases from anyone whose image or voice may be considered for inclusion in the video. Everyone should be asked to sign a release at the outset. In exchange for the release, each should be paid $1.00.



SCRIPT REVIEW AND APPROVAL

If a task force has been developed, involve the members in all script reviews and approvals. If there are members of the task force who have vision impairments, it may be necessary for the script to be delivered on audio tape or in large print or to make those versions after it has been delivered. It is easier to require the contractor to deliver the scripts in the required formats. Work with the members of the task force and those reviewing any scripts to determine what format is required and include it in the RFP and the contract.

Have a diverse group of people review the scripts from various points of view. For example, drivers need to review it to make sure that the policies and procedures conform to their normal practices and do not conflict with other policies that they routinely follow. Maintenance personnel should review the scripts to ensure that they reflect what the equipment can actually do in the circumstances.

Have people with disabilities review the script to ensure that the information is accurate and appropriate. It is useful if there is someone who is very active among people with disabilities who can also review the script for the proper, non-discriminatory attitudes and language.

Management staff and supervisory personnel should review the scripts to be sure that the policies and procedures described conform to system policies and with the local, state, and federal regulations.

Select a member of the staff to compile reviewer comments and direct the production company in making the appropriate changes. If there are conflicting review comments, the staff person can work out a compromise with the reviewers.

TALENT, LOCATION, AND EQUIPMENT SELECTION

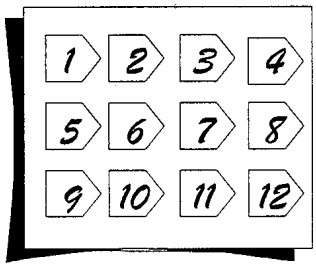
Often, the most effective video will use actual transit system drivers, vehicles, and passengers; however, professional actors can be used. The selection of talent needs to be made jointly by the production company, the transit system, and the members of the task force. Remember, when selecting transit staff to perform in a video, some will consider it a form of recognition and those not selected may be upset. Using transit system staff offers the following advantages:

- The message is more immediate and relevant to the trainees,
- Costs are limited because people are already on the payroll,
- Employees can participate in developing and learning about the video,
- Interest about the final product and an enthusiasm among employees to effectively implement it are generated, and
- The applicability of the subject to the intended audience is increased.

Transit system employees can be used as "extras" (for example, as other passengers on the vehicles, people waiting at stops, and other people in the scenes). This involves more of the employees and makes the production even more localized. In this way, all sorts of employees become aware of the message of the training and feel a part of the message.

The location selection and the use of the vehicles are very important as well. Choose scenic locations. Select sites, such as bus stops, that are well maintained and satisfy the requirements for accessibility. Use vehicles and other equipment that are in good repair. Check for such items as operating headlights, accurate destination signs, and operating lifts, doors, and windows. Check items on the day of filming, to prevent or reduce shooting delays. Look into corners and all areas of the shoot for things that do not fit or are not correct. Even if the script and the actors are impeccable, visual incongruities will distract the viewers and detract from the message of the video.

STORYBOARDS



Storyboards are visual and text presentations of the flow of a particular scene. These can be very important if it is not clear from the script what points are being conveyed in the scene. Storyboards can also be useful if there is some controversy regarding the policies or procedures and how they are presented. Use the storyboards to clarify the message of the video for those participating in reviews of the materials. Not all scenes need to be depicted in storyboards prior to shooting.

REMOTE PRODUCTION

Remote production, the actual filming of the video sequences at locations in the service area, is the most expensive and complicated step of the production. Compress the time of the production schedule as much as possible to reduce the disruption to normal working and the number of people involved, both from the transit authority and from the production company. In order to minimize the time and financial impacts of the remote production, plan carefully and tightly coordinate all resources. Planning and coordination tips follow.

REMOTE PRODUCTION TIPS

Select locations in advance.

- Select all locations in advance and prepare a schedule with the production company of when shooting will take place at each location. Determine who will be in the scenes at each location and arrange for them to be transported at the appropriate times.

Assign one person to coordinate.

- Consider assigning one person to provide information, and coordination. This can alleviate confusion from conflicting information from different sources. On the filming days, crews will be in various locations of the service area and may need information and assistance.

Check equipment to anticipate production delays.

- Try to anticipate problems which could delay the remote production schedule. Make sure that all equipment that will be used is in good working order. Check the lifts and other operating equipment before shooting to make sure they will work when the time comes. Make sure that all necessary equipment is on board, such as all the

components of the securement system. Shooting delays cost time and money.

Be clear with the production company about costs of schedule changes.

- Be clear with the production company about who is responsible for the costs incurred if shooting cannot be done on the day scheduled by the production staff. For example, if it rains the day that shooting is scheduled, the production people will need to be paid and the schedule change will affect other shooting schedules of the company. Be clear about who pays the additional cost. If possible, a mix of indoor and outdoor shooting locations can help minimize the impact of unpredictable weather.

Use vehicles in the scene to transport talent.

- It is probably most efficient to have the vehicles which will be used in the filming transport passengers and extras to each scene location.

Maintain communication.

- Maintain communication between the remote production sites and the garage or property in order to update the schedule and have the talent on site at the appropriate times.

Arrange for employee volunteers.

- Arrange for transit employees to volunteer to appear in the video. Be prepared to rearrange schedules so that volunteers can be available for the shooting. Many people may be involved in the shooting for 2 or 3 days or longer.

Consider weekend shooting.

- Determine whether weekend shooting is feasible and desirable. This depends on the availability of employees over the weekend and whether the route schedules are lighter than the weekdays, making vehicles and personnel more available.

Anticipate the impact on regular service.

- Anticipate how shooting will affect regular service through blocked bus stops, the creation of traffic delays, or other problems. Be prepared to block traffic and communicate with vehicles on the routes to alert them of any impacts from the filming.

View daily video footage.

- Consider having staff members view the daily raw footage to be certain that what is filmed is usable in terms of the

visual accuracy and the consistency of what is shown. For example, if something was filmed but not noticed during the day, it might be possible to reshoot the material the following day as an addition to the regular schedule. It is usually too expensive to go back to remote shooting, days or weeks after it is completed. For example, those present might not have noticed a shot of a vehicle with a non-working headlight or with "Out of Service" on the destination sign or a performer having a change in clothes (such as removing a jacket) which can be a problem when the scenes are edited.

Shoot still photographs.

⇨ Shoot still photographs of key scenes and people for later use in brochures and other print media in support of the video.

INTERVIEW CLIPS AND FINAL SCRIPT

An effective method for conveying information is to use the actual voices of passengers and drivers as part of the video. These can be recorded during interviews. From the original draft script, select important points and ask people about them in the interviews. These interviews can be conducted by the production company.

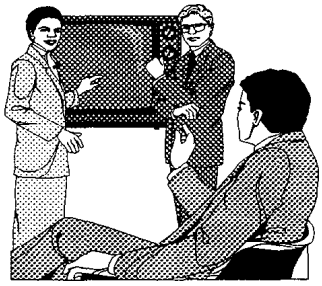
When the filming is done and the tape edited, add the most appropriate clips from interviews to the tape to provide part of the narration. When selecting narrative clips from interviews, whether done by the production company or in house, some important considerations include the following:

- The clarity of the voice and the quality of the sound, so that the words can be clearly understood;
- The appropriateness of the language used, so that discriminatory language is not inadvertently included in the training video;
- The applicability of the content of the clip, so that the words match the accompanying video images; and
- The conformance of the clip with the overall tone of the video, which should be helpful, supportive, hopeful and positive in all aspects.

The final script prepared by the production company should include the actual wording of the selected clips, along with other narration and voice-over.

OPEN-CAPTIONED VERSION

Be sure to make a version that is captioned for people with hearing impairments. This is important for review and for use of the video by people with disabilities. Choose whether to make two versions, one captioned and one without captions, or to just make the captioned version.



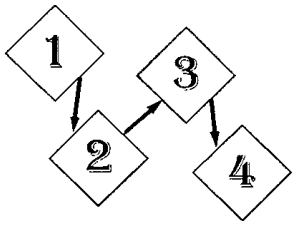
REVIEWS OF EDITED VIDEO

When the video is nearly complete, review it carefully. Any inaccuracies, inconsistencies, or quality problems need to be identified. Work with the production company to determine what can be done about them and the impact on the costs. Some things may not be correctable within the budget and may have to be tolerated or eliminated. It is important to identify those changes which are necessary and those which can be easily accomplished. Other changes may need to be negotiated.

Those reviewing the video should be the same as those who reviewed the earlier draft scripts. Be sure to allow adequate time for proper review and a meeting among the reviewers if necessary.

Review the video again after changes are made to ensure that it is satisfactory.

Production companies resist changes to their products unless adequate funding has been allocated from the beginning. It is very expensive to change things once the production is final. Sequential approval of scripts and other materials are considered by production companies to be carved in stone. The transit system will have to make all decisions with due diligence.



STEP 8: DISTRIBUTE THE VIDEO

There are two aspects of the distribution of the video. The most important is in training to improve the skills of the drivers. The second is advertising its completion in the community and making the community aware of improved driver capabilities.

Distribute the video through driver training, but also let the community know about it. Recognize those who participated.

DRIVER TRAINING CURRICULUM

Typically, after being hired, drivers are trained in a broad range of topics; annually, on a selection of important topics; after incidents; and as part of discipline on specific topics. Empathy training is a significant component of all training schedules. Initial empathy training can be included in a training program in passenger relations and passenger assistance methods. Although an empathy training video is not sufficient in itself for initial or annual empathy training, the video can be an important component of the curriculum, and a locally developed video can emphasize the importance of the topic and encourage drivers to provide exemplary service.

At least a full day of empathy training for initial training and annual training for all drivers, in small groups of 10 to 15 students per instructor, is necessary. The video can be accompanied by lecture, informal discussions, and hands-on activities. Driver empathy training tips follow.

Involve people with disabilities in training.

- Involve people with disabilities in developing empathy training materials and in conducting training. Some members of the community may be experienced in training and can conduct sessions. Others may be more interested in being present to answer questions and present their views on the role of the driver in transporting people with disabilities.

Use training to encourage drivers to use the information they have.

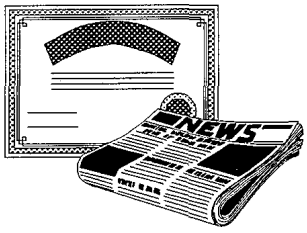
- Use lectures and examples to encourage drivers to provide the necessary service and to make the required efforts to communicate and assist passengers. Many drivers, particularly those receiving annual training, have the information and skills, but do not understand the importance of all the service components — from announcing stops to operating the lift to communicating with people with sensory impairments.

Emphasize the importance of assisting passengers.

➪ Emphasize, within company policy, the importance of assisting people with disabilities by describing discipline procedures for violations. Review the complaint process, the street supervisor role, and whether "undercover" passengers ride the service to observe drivers. Passenger assistance and empathy need to be just as important as other activities for which drivers can be disciplined.

Use hands-on activities.

➪ Use hands-on activities to allow drivers to understand for themselves some of the limitations of people's impairments and the importance of the assistance and courtesy a driver can provide. The San Mateo County Transit District devotes most of an afternoon to an exercise in which each driver selects a disability and uses equipment to emulate it. Drivers sit in wheelchairs, wear earplugs, wear blindfolds, etc., to emulate a particular impairment. They then ride on a transit district bus to a local shopping mall, where they go inside to the food court and order and eat. They finish the trip by riding the bus back to the transit property. Similar activities can be undertaken on a smaller scale at the system by having drivers use the equipment, then complete tasks related to riding the bus and locating destinations. This temporary impairment does not begin to simulate for drivers how people with disabilities live, but it allows them to come to their own conclusions regarding how much they can help people when they have the right attitude and provide the appropriate service and assistance.



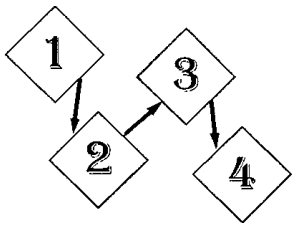
ADVERTISING IN THE COMMUNITY

After completion of the video, make the community and the transit employees aware of its availability and its inclusion in the driver training curriculum. Public efforts to recognize the achievements of the drivers and other employees makes the video a component of the transit property culture and engenders enthusiasm for the principles it espouses.

Advertising possibilities are as follows:

- If a newsletter is published for transit and/or paratransit riders, describe the video and the training curriculum in the video.

- Work with the local media to cover the new training, including information about the people who appear in the video and how it will be used in training.
- Submit information about the video to the transit trade publications.
- At public meetings and at public board meetings, include the new video and training on the agenda.
- Provide recognition for participants, through awards and certificates. Present the awards at a public meeting or board meeting. Alert the local media so they can cover it. Participation of people with disabilities and with local groups in the video can lead to coverage by television stations as well as newspapers.
- Try to incorporate still photographs taken during the video shoot in brochures, schedules, advertisements, mailings and other print materials. Clips from the video may also be used for television advertising or public service announcements. Be sure to obtain releases from those who participate to allow the use of their images and voices in all applications.



STEP 9: EVALUATE THE RESULTS

There are two main measures of the success of a driver empathy training program: changes in the drivers' attitudes and changes in the passengers' attitudes. Changes in drivers' attitudes can be measured through surveys of the drivers or can be observed in service. Changes in the passengers' attitudes can be measured through surveys or can be inferred from increased ridership by people with disabilities on the fixed-route services.

DRIVER ATTITUDES

Driver Surveys

Driver attitudes to passengers with disabilities can be measured through surveys taken anonymously. If the information is collected anonymously, drivers may be more honest regarding their attitudes. This can be important in determining if the empathy training is causing unforeseen problems for the drivers. For example, requirements for assistance can be causing drivers undue concern regarding schedule adherence. There may also be difficulties with particular passengers that the drivers can identify. These new issues can be incorporated into additional training.

Meetings With Drivers

Meetings with drivers, either individually or in groups, can also provide a forum for measuring attitudes and service provision. If drivers can identify particular problem areas, these can be addressed in policy adjustments or in additions to the training program. If meetings are held, be sure that drivers understand that they will not be disciplined for what they reveal or discuss. This technique can be used effectively in many applications related to driver activities.

PASSENGER ATTITUDES

Passenger Surveys

Measure passenger attitudes using a survey. Surveys can be distributed in newsletters so that passengers can mail them back. Staff members can ride on vehicles and conduct on-board surveys, or surveys can be taken over the phone, with a randomly selected sample of members of the community. These techniques are discussed in detail in Chapter 3.

Track Survey Responses Over Time

Track the survey responses over time to see if there are changes. Also include questions on the survey form so that respondents can indicate what routes they use. Particular problems can be identified, whether they are related to traffic congestion, overcrowded vehicles, vehicle or stop accessibility, or driver attitudes.

Measure the Ridership of People With Disabilities

Another way to measure passenger attitudes is to count the number of times that people with disabilities board the fixed-route system. As more people become aware of increased driver skills, they will be more likely to use fixed-route. If people are satisfied with the fixed-route service they receive, they are more likely to use it more frequently. Increasing use of the fixed-route by people with disabilities over time is indicative of a successful program.

CHAPTER 6: PROGRAMMING ACCESSIBLE BUS STOP IMPROVEMENTS

INTRODUCTION

Design and construct new transit facilities to be fully accessible to people with disabilities.

This chapter describes how transit systems can plan and conduct programs to improve bus stop accessibility. The chapter also presents important elements to consider when designing accessible transit facilities.

Design and construct new transit facilities to be readily accessible to and usable by people with disabilities, including people who use wheelchairs. Public transit design standards are found in the *ADA Accessibility Guidelines* (ADAAG), Appendix A to 49 CFR Part 37. These accessibility guidelines cover new construction and renovation. An illustrated handbook to the ADAAG guidelines, which addressed the applications to transit facilities, was developed by the Volpe National Transportation Systems Center and the Federal Transit Administration. The document contains special information on how to best make transit facilities accessible.[1]

Provide accessibility enhancements when facilities are upgraded or when new facilities are constructed.

In addition to new construction of accessible facilities, transit systems may desire to upgrade their bus stops to enhance accessibility. Accessible facilities and bus stops are important features for making a transit system accessible to and usable by people with disabilities.

As with bus stop enhancements, transit facility access may be an integral part of a new construction project, or it may be associated with a program to renovate an existing facility.

Accessibility design in new construction requires innovative thought and design assistance from individuals with disabilities and the organizations with which they are associated. The requirement to design for accessibility must be a goal from the beginning.

[1] J.N. Balog, D. Chia, A.N. Schwarz, and R. B. Gribbon, *Accessibility Handbook for Transit Facilities,* KETRON Division of the Bionetics Corporation; Volpe National Transportation Systems Center; Federal Transit Administration, DOT-VNTSC-FTA-92-4 (1992).

In contrast, accessibility design as part of a rehabilitation project may require an innovative architectural approach in addition to a willingness to overcome institutional barriers. Many rehabilitation initiatives are designed to replace a shabby edifice with a more acceptable one. Often there is a desire to take only minimal corrective action. However, one must recognize that the budget for appropriate accessibility features often equals or exceeds the budget for basic remedial measures.

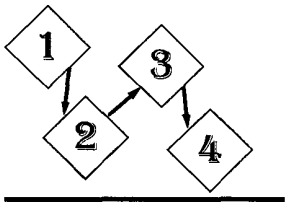
Accessibility enhancements can benefit everyone.

Instituting steps to maximize accessibility benefits all riders. Everyone benefits from large, easy-to-read signs. Everyone benefits from direct, clearly marked walkways in parking lots. Everyone benefits from clear, audible public address systems. Everyone benefits from ticket counters, telephones, and vending devices that are easy to find and reach.[2]

This chapter describes seven steps for programming accessible bus stop improvements. These steps are as follows:

1. Identify the need;
2. Define funding needs and resources;
3. Conduct public involvement;
4. Conduct market research;
5. Select target stops;
6. Determine improvements; and
7. Evaluate enhancements.

STEP 1: IDENTIFY THE NEED



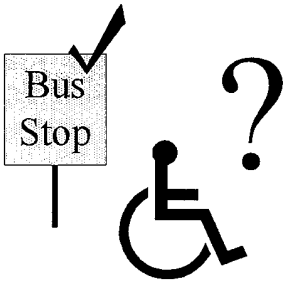
Catalog stops and rate accessibility.

Bus stop and transit facility improvements which promote accessibility, safety, and usability will assist in attracting individuals with disabilities to the fixed-route system.

Well-established, quantitative methods for documenting the need for new transit facilities, including central terminals, transfer centers, and park-n-ride lots, are regularly used by transit systems. In contrast, there are no established quantitative methods for documenting the need to enhance

[2] *Ibid,* p. 2-1

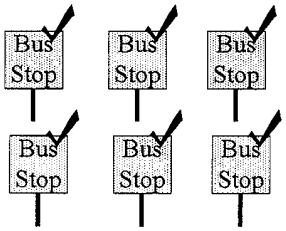
overall bus stop accessibility. This chapter provides a systematic approach to improving the accessibility of bus stops within a transit system. As used in this chapter, "Identifying the need" goes beyond recognizing a generalized need to do something — it encompasses a transit system's performing the following activities:



- Developing a catalog of all (or some) of the bus stops,
- Rating the current accessibility of each stop in the catalog, and
- Estimating the degree of difficulty in making each stop in the catalog accessible.

Every transit system acknowledges the need to increase the number of accessible bus stops. This chapter discusses ways to quantify the need and plan a systematic, proactive response.

DEVELOP A CATALOG OF BUS STOPS



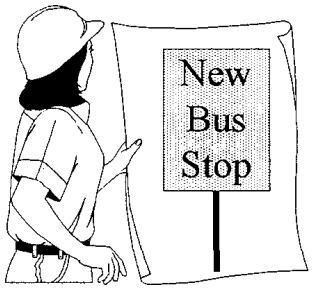
To develop a catalog of bus stops requiring accessibility improvements, collect information from riders, drivers, and others about bus stops, through public outreach and market research. Then, review planned capital projects for required accessibility improvements.

<u>Passenger and Operator Reports</u>

Transit systems often rely on anecdotal reports from passengers and operators to identify bus stops requiring enhancements to improve accessibility. Passengers may call to request that specific bus stops be made accessible. An advisory committee, if asked to prioritize routes for the introduction of accessible buses, will often identify important bus stops for accessibility enhancements. Operators may radio dispatchers that there are passengers who want or need to use the lift who are waiting at stops where it would be dangerous or difficult to deploy the lift.

Such reports are important and indicative. Unfortunately, some transit systems often rely exclusively on these anecdotal reports to identify transit stops for improvement. Tallying sporadic reports from users will not provide a systematic approach to bus stop enhancements. Such reports identify problems, but do not indicate the overall level of need.

Better techniques to systematically identify and upgrade bus stops are needed. Following a plan for bus stop upgrades and accessible facility design will maximize the attractive impact of the accessibility improvements for persons with disabilities and general users.

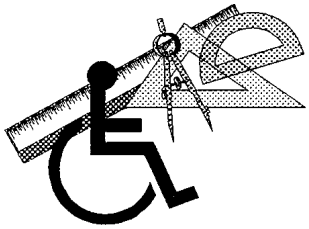


Planned Capital Projects

The need to upgrade bus stops may arise because of a capital improvement project planned by a transit system, community, or regional planning agency. Typical capital improvements might involve rehabilitation of an existing transit facility, the systematic upgrading of neighborhood sidewalks and roadways, or the replacement of dilapidated signage. ADA accessibility issues are intertwined with all capital improvement projects. If a capital project is in the planning stage, the object is not to determine whether something needs to be done, but what to do and how to best do it.

In summary, the need to improve transit stop or transit facility accessibility may be identified through carefully solicited customer input or as part of a capital improvement project. In either case, there are systematic methods for assessing the need; involving consumers in the planning process; developing, reviewing, and evaluating the improvement plan; and using this feedback to adjust the ongoing schedule for improvements.

RATE THE CURRENT ACCESSIBILITY OF STOPS



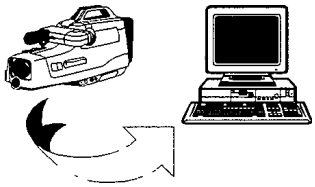
Develop a bus stop database which includes an estimate of current and potential accessibility. If there are many stops in a transit system, developing a bus stop database may seem daunting; however, there are several efficient methods to prepare a database. Some of these methods are described in the following subsections. Select the method best suited to the local environment. Use volunteers or students to reduce personnel costs.

Video Tape Bus Stops

Use video tape to record and evaluate bus stop accessibility.

The City of Tucson Transit Department pioneered an effective video tape method to catalog bus stops from inside a moving bus running its regular route. The process they used can be described as follows:

- Assign a technician (or hire a college student during the summer) to collect the information;
- Have the driver alert the technician as each stop is approached;
- Through the bus window, the technician video tapes the bus stop and approximately 15 feet on either side of the stop, including the curb cut, sidewalk, and/or hard-packed surface if present.
- The technician speaks into the video camera's microphone to identify the bus stop and rate the bus stop's current and potential accessibility.
- Add other brief comments as needed.
- At the office, view the video tape and input the data into a bus stop database. Some elements to include in the database are as follows:



  - Location of the stop;
  - Routes served by the stop;
  - Amenities at the stop, such as a shelter, roof, or benches;

- Location of the nearest curb cut;
- Availability of an accessible path to the stop (for example, sidewalks or curb cuts leading to the stop or the entrance to the shelter);
- Availability of clear space for a lift pad (96 inches long by 60 inches wide);
- Availability of a location for posting schedules;
- Slope and surface considerations; and
- Other relevant considerations.

- Design this database to accept graphic data. Use a computer with plenty of free disk space and the ability to capture video frames so that a photograph of each bus stop can be retained in the database.
- Retain the videotape as a permanent record.

For estimation purposes, an individual can generally ride two bus routes and enter the bus stop data into the computer each day.

Use Paper and Pencil

Collaborate with the city engineering department.

The Indianapolis Public Transportation Corporation used a more labor-intensive pencil and paper method to catalog bus stops. The process they used can be described as follows:

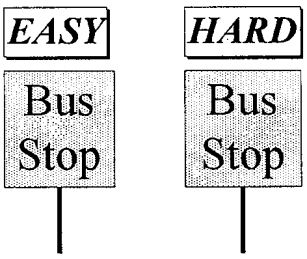
- Have service planning personnel work jointly with staff from the city engineering department;
- Visit and assess each stop separately; and
- Develop a work plan for each stop.

INTERFACE WITH GLOBAL POSITIONING SYSTEM

Use volunteers deployed in the field to complete a different but related project.

The Regional Transit District of Denver, Colorado, cataloged its bus stops and evaluated their accessibility in conjunction with a program to calibrate its new Global Positioning System (GPS). Within 3 months, 12 graduate students visited each bus stop with a GPS receiver and a form for evaluating bus stop accessibility. The process they used can be described as follows:

- Transmit the latitude and longitude of each stop back to base.
- While waiting for confirmation from the GPS receiving unit, complete the form to evaluate the stop's current accessibility. At the same time, prepare a description of improvements and enhancements needed to achieve full ADA-compliance.
- Once GPS and accessibility data are collected, add accessibility data to the geocoded database.
- From the geocoded database, prepare bus stop accessibility reports as needed.



DEVELOP AN ESTIMATE OF THE DIFFICULTY OF ACHIEVING ACCESSIBILITY

Appendix A of the ADA regulations includes the requirements of accessible facilities.[3] Part 10 of that appendix has specific requirements for transit facilities. *The Accessibility Handbook for Transit Facilities* fully explains all the guidelines related to transit facilities.[4] The *Handbook* also contains a complete set of ADA-design checklists in its appendixes. Figure 6-1, drawn from one of the appendixes, can be used in determining the accessibility of current bus stops.

[3] U.S. Department of Transportation, 49 CFR Part 37, Transportation for Individuals With Disabilities; Final Rule, September 6, 1991.
[4] Balog, et al., *op. cit.,* Appendix

YES	NO	BUS STOPS AND SHELTERS	Regulation 49 CFR 37 Appendix A, Section
☐	☐	Are all new bus stops and bus shelters designed to accommodate people using wheelchairs and to permit full deployment of lifts?	10.1
☐	☐	Do accessible bus stop pads provide a minimum clear length of 96 inches, measured from the curb or the roadway edge?	10.2.1
☐	☐	Do accessible bus stop pads provide a minimum clear width of 60 inches, measured parallel to the roadway?	10.2.1
☐	☐	Do all bus stop pads have a firm, stable surface with a slope the same as the roadway itself, measured parallel to the road?	10.2.2
☐	☐	Do all bus stop pads have a maximum slope of 1:50 (for water drainage) measured perpendicular to the roadway?	10.2.2
☐	☐	Do all accessible bus shelters allow individuals using wheelchairs to enter from the public way and reach a location within the shelter?	10.2.1
☐	☐	Do all accessible bus stop shelters provide a minimum clear floor space of 30 x 48 inches, completely included within the shelter?	10.2.1
☐	☐	Are all accessible bus stop shelters connected by an accessible path to the bus boarding area?	10.2.1
☐	☐	Are all accessible bus stop shelters connected by an accessible curb cut with the roadway?	4.7 & 4.29
☐	☐	Are all bus route identification signs accessible in terms of character size, finish and contrast?	4.30.3 & 4.30.5

Figure 6-1. Bus Stop Accessibility Checklist

The regulations require a bus pad with a clear footprint of at least 96 inches deep by 60 inches wide, to accommodate the deployment of the wheelchair lift. This pad must be connected to any shelters by an accessible path. The surface of the pad needs to be stable and should be of the same slope as the roadway, to ease boarding and alighting.

A shelter must have a clear floor space of at least 30 inches by 48 inches, completely located within it. These dimensions allow a person in a typical wheelchair to be inside the shelter. Any other items in the shelter, such as benches, shelves or poles, must be positioned to allow for this clear space.

As used at Tucson, a working definition of an accessible bus stop is one at which an individual using a wheelchair can do the following:

- Travel up the curb cut,
- Continue along a hard-packed surface to the stop, and
- Wait on a hard-packed surface where ghe bus' lift can operate freely.

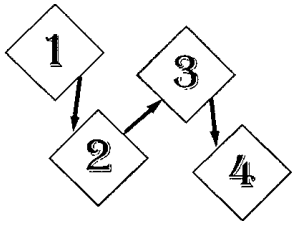
Even using this broad definition, the Tucson Transit Department determined that only 18% of its bus stops satisfied all three criteria; 52% met at least one criterion; and 30% met none of the criteria[5].

The Indianapolis Public Transportation Corporation (IPTC) involved the city construction division in the resolution of the bus stop accessibility problem, starting with the earliest stages of assessment. IPTC realized that its fixed-route service planners and the city construction engineers would bring different perspectives to the catalog and work write-up. Transit service planners would be more interested in defining the enhancements that would make the stop more usable by bus drivers and patrons. City engineers would be more interested in determining the feasibility and cost of making those improvements.

Involve city engineers early.

The on-site collaboration between transit and city personnel resulted in an individual work write-up and accessibility plan developed in the field for each bus stop. Initially, this was a more laborious process than Tucson's; however, this collaboration resulted in an agreed-upon work plan for each bus stop. IPTC feels that the early involvement of city engineers was critical in gaining support from the city and for ensuring that the bus stop upgrade program was implemented.

[5] G.S. Synder, *Tuscon Transit Stop Inventory and Capital Improvement Plan: Final Report* (June, 1994).



STEP 2: DEFINE FUNDING NEEDS AND RESOURCES

If the need for accessibility is defined through anecdotal reports of passengers and operators, address each problem as it is raised. In this case, there is no compelling need to develop a cost estimate for remedying the complete problem in a systematic manner. By knowing the budget for miscellaneous improvements, it can be consumed on an item-by-item basis.

Another approach is to address the overall problem as thoroughly as the budget and staffing allow. Make a preliminary estimate of costs and staffing required, and survey the available sources of funding and personnel. Develop a concept for the scope of work and the resources that will be required.

In preparation, determine the origin and scope of the problem, as well as the type of response necessary. Determine how much and what level of consumer involvement is needed for problem identification and resolution. Make a preliminary determination of whether the solution necessitates a formal bidding and contracting process, or whether less formal, more flexible remedies are feasible.

Figure 6-2 illustrates the types of issues to be resolved with the consumer advisory body at this stage of the planning. These issues determine the preliminary scope of work and initial budget. (The scope of work and budget can be reassessed later in light of new or changed information; however, the initial approach to the problem should be defined at this point.)

Determine what research and development are needed to arrive at the optimal solution — localized problems may be addressed with limited research; systemic problems may require implementation of a formal research and development effort.

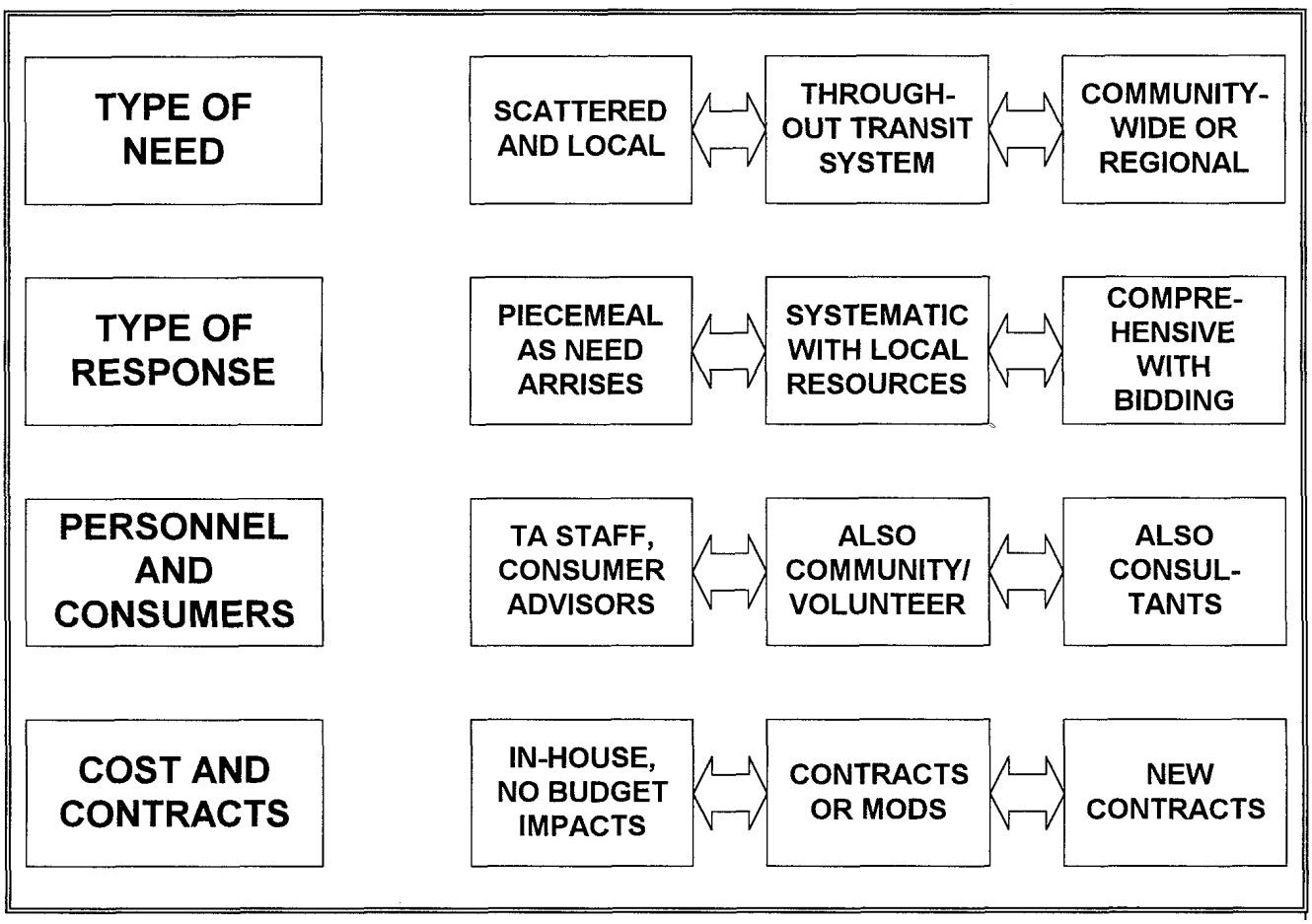


Figure 6-2. Planning and Budget Issues

Deciding to systematically improve the accessibility of bus stops requires development of a cost estimate for that work. Developing quick cost estimates of accessibility enhancements is the second step after creation of the bus stop database.

Three estimate methods:

- ***Unique cost***
- ***Typical costs, and***
- ***Bids.***

The three methods for developing these estimates are as follows:

- Estimate the unique cost for each bus stop on the basis of individual work plans for each stop;
- Assign typical costs to accessibility factors in the bus stop database and aggregate those costs to achieve a statistical estimate of the total cost of improvements; or
- Put the project (or parts of the project) out for bid and use the responses to estimate the cost of all portions of the work.

ESTIMATE UNIQUE COSTS

Indianapolis approached the cost estimation problem pragmatically. Each stop had been evaluated by the transit system service planner and by the city engineer. A stop-by-stop work plan had been developed. The team was readily able to develop a list of stops where it was feasible to achieve accessibility.

ASSIGN TYPICAL COSTS

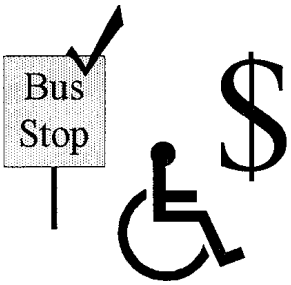
Tucson approached the cost estimation problem systematically. It developed an extensive multi-dimensional database of its bus stops. The current accessibility of the site was evaluated using a multi-dimensional model. Typical costs were estimated for each of a variety of possible accessibility improvements and site enhancements. The range of costs and treatments were recorded in the database. An estimate of the total cost of improvements was developed for the whole bid, a roster of 100 bus stops.

Biggest problems: Bus stop pad size and Slope.

Each stop had a unique situation. Some solutions required much planning. Some stops could not be made accessible — usually because there was not enough right of way to provide an adequate landing pad with the lift down or enough room to provide a safe egress for individuals with disabilities. The regulations require that the pad be at least 60 inches wide by 96 inches deep. The regulations also require that the pad slope be no more than 1:50. Unless the solution or improvement was fairly simple (e.g., installation of a sign or shelter or placing a known quantity of concrete), there were no cookbook cost estimates.

Indianapolis' intention was to do as much as it could quickly within a limited budget. Dollars could be maximized and time minimized by having the work done through change orders to existing street contracts. Therefore, IPTC personnel actually correlated three factors in determining which stops to improve: 1) feasibility of the improvements; 2) potential for attracting paratransit patrons; and 3) whether there were city street repair contracts ongoing in the area.

When these factors came together, IPTC generally negotiated with the city project engineer who asked the contractor for an estimate. The work was approved and completed through a minor change order. Even though they were feeling their way through the project, IPTC staff felt this approach resulted in piecemeal small projects being accomplished cost-effectively and efficiently.



USE BID RESPONSE TO ESTIMATE COSTS

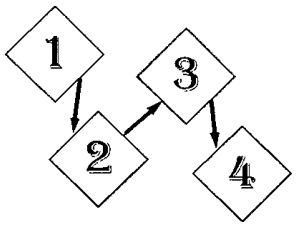
The determining factor is the approach selected to conduct the program of improvements. To bid a defined set of improvements for a roster of bus stops, develop a master cost estimate for the project — the master estimate may not be exactly correct for any given bus stop, but it will be reasonably correct overall for the project. If working within available funds, obtain a firm and exact unit price for each bus stop. Carefully describe the work to be done at each stop and seek quotes for the improvements on an individual or a few-at-a-time basis.

In the first instance, the project will not proceed until an acceptable bid is received; however, the project will have a firm total price, an established level of work quality, and a projected completion date. In the second instance, the piecemeal nature of the project allows work to start as soon as funds are available, but there is no assurance that work can be completed within the available budget. Moreover, it is probably more difficult under the piecemeal approach to ensure a uniform quality of workmanship than under a bid approach.

The comprehensive approach means more time in planning and less in implementation.

The piecemeal approach means less time in planning and more in implementation.

In the bid situation, more transit authority staff time initially will be required while the specifications and cost estimate are being prepared and the project brought through the bid process. However, there are relatively fewer staff time requirements after the contract has been awared. In contrast, there is probably less of an initial personnel time requirement if the entity receives quotes and conducts the project piecemeal; but, there is a greater responsibility for the direct supervision of the project and for quality assurance.



STEP 3: CONDUCT A PUBLIC INVOLVEMENT PROGRAM

PUBLIC INVOLVEMENT INTEGRATED IN PLANNING

Figure 6-3 shows how the public can be integrated into the planning of bus stop accessibility improvements. Public involvement in the planning process helps to ensure that the plans will be implemented. Plans developed with public involvement and approval are more visible, have more support, and are much more difficult to shelve than plans developed in private.

In Figure 6-3, the left side of the diagram presents the five steps for developing a prioritized work plan for bus stop upgrades. The right side of the diagram presents the complementary input of the consumer advisory body. Important aspects are as follows:

- **Develop a bus stop accessibility database.** During the earliest planning stage, prepare a catalog of the existing accessibility of the bus stops. Ask the advisory body to recommend which bus routes should be evaluated first, and make a list of stops known to have accessibility problems.
- **Develop a cost estimation methodology.** Develop a method for estimating the complexity and cost of upgrading the bus stops. Ask consumers to contribute insights about the relationship of accessibility features and attractiveness, to assist by reviewing the costing methodology, and/or to develop a methodology for determining the difficulty of upgrading stops.
- **Integrate data on bus stop utilization.** Add information about the current frequency of utilization of bus stops. Ask consumer advisors to provide information on which stops people with disabilities use most heavily or might use most heavily in the future.

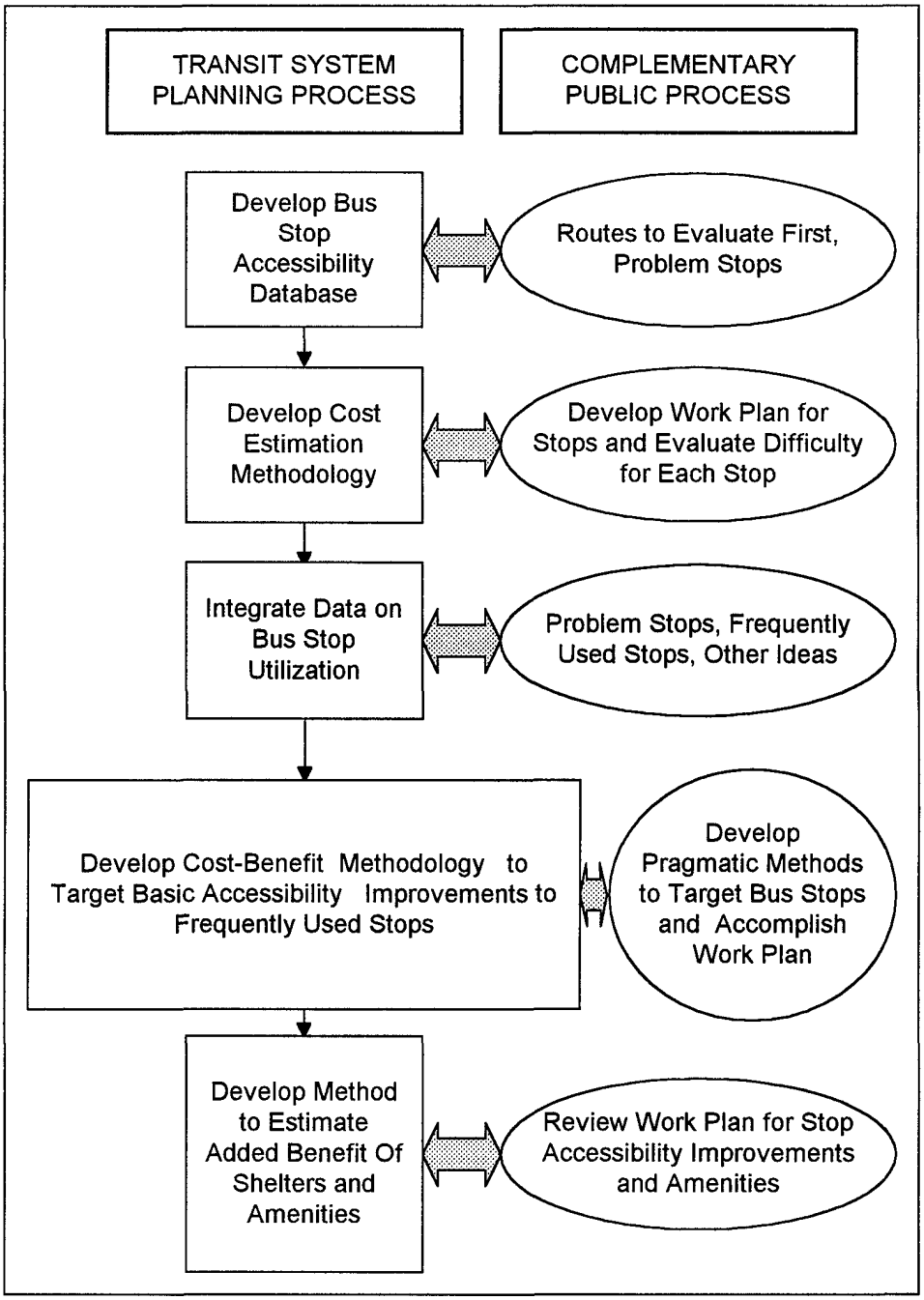
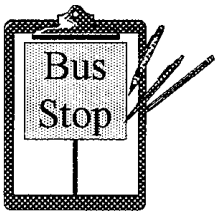


Figure 6-3. Integrated Consumer Involvement in Accessibility Improvements Planning

- **Develop a cost-benefit methodology to target basic accessibility improvements to frequently used stops.** Work with consumers to establish a method for prioritizing the list of bus stops to be improved.

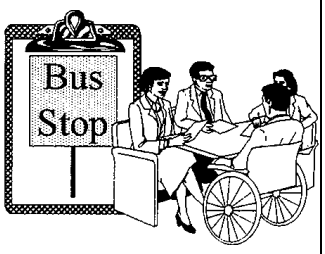
- **Develop a method to estimate the added benefit of shelters and amenities.** Work with consumers to develop a method for deciding which stops should receive enhanced amenities because they will be key stops in the accessible transit system.



ROLE OF CONSUMER ADVISORS

Ask consumer advisory committees to survey individuals with disabilities who use paratransit in order to make a list of frequently used bus boarding locations. Ask consumers to identify locations at which they would enter and exit the bus system if it were accessible. Ask consumer advisory committees to provide input on the most important bus routes from the point of view of users with disabilities. Work with city planners and consumers to attempt to identify sites where new housing, medical or work complexes are likely to become frequent trip generators.

Figure 6-4 shows a possible questionnaire for advisory committee members for them to answer and share with coworkers who have disabilities.



CONSUMER ADVISORY COMMITTEE

Do not rely exclusively on the numerical values that result from the prioritization process. Consumer advisors should participate extensively in the review of the priority scores. Authorize them to deliberate the outcome of the process, to visit prospective bus stop locations or view them on tape, and to suggest alternative sites for a higher priority level.

We are working to decide what transit stops to make accessible to people with disabilities. Some of the improvements for stops might include larger shelters, room for a wheelchair lift on the ground, and curb cuts and other access. Please answer the questions below to help us decide which stops to improve.

1. Where is the bus stop closest to your house?

_____

2. Have you ever taken the bus from that stop?

❑ Yes ❑ No

3. Do you know what routes stop there?

❑ Yes. Which ones? _____
❑ No

4. Would you use the stop if it were accessible to people with disabilities?

❑ Yes ❑ No

5. Please think about the place you travel to the most each week. Do you know the bus stop nearest to it?

❑ Yes. Please write in the location.

_____

❑ No. Please write in the intersecting streets nearest to where you travel to the most each week.

_____

6. Have you ever taken the bus to that location?

❑ Yes ❑ No

7. Would you use a stop at this location if it were accessible to people with disabilities?

❑ Yes ❑ No

Thank you very much for your help. Your answers will help us provide better service for all our riders.

Figure 6-4. Questionnaire for Use by Advisory Committee Members

Consumer advisor input can be helpful because it reflects experience; can prevent costly, inefficient decisions; and gives the public a greater stake in the success of the program.

Conduct early, significant, and ongoing planning meetings with a consumer advisory committee to target bus stop improvements. Otherwise, locations where improvements are most needed may be overlooked.

In one system, the bus stop committee met (and continues to meet) monthly or bimonthly. The committee includes one individual who uses a wheelchair as a representative of individuals with disabilities. The mandate of the committee is to improve bus stops for all riders, including those with disabilities. Transit system planners, transit system service personnel, and city engineers assist the committee.

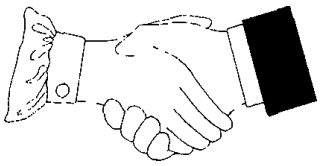
Before the transit system and city engineering teams go into the field, have the bus stop subcommittee discuss and decide which routes should be analyzed first. Record such decisions to prevent revisiting the same subject. Begin each meeting with a review of the preceding meeting and a discussion of progress made by the city and the transit system in the intervening period. Over the course of several meetings, have the committee discuss and decide upon the criteria to be used for determining bus stop accessibility[6]. Also ask the committee to identify known problem stops and known high-volume transit stops. An open, interactive public participation process is important throughout the bus stop improvement program.

PUBLIC INVOLVEMENT TO IDENTIFY STOPS FOR IMPROVEMENT

Use the public involvement program, in conjunction with market research, to identify the stops to make accessible and to determine priorities for which stops to make accessible first. From

[6] In determining accessibility. IPTC's staff and committee largely relied upon *Bus Stop Accessibility: A Guide for Virginia Transit Systems for Complying with the Americans With Disabilities Act of 1990:* Virginia Department of Rail and Public Transportation (July, 1992).

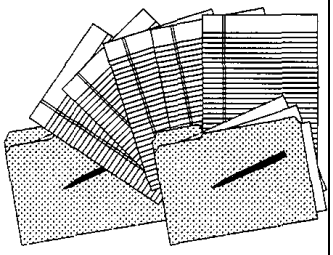
the public involvement perspective, emphasize outreach to agencies that serve people with disabilities and at public meetings to discuss priorities and finalize decisions.



Outreach to Agencies

Following the development of an inventory of bus stops and needed accessibility improvements, work with the entities in the service area which provide services to people with disabilities, such as human service agencies, hospitals, clinics, nutrition sites, senior centers, and others, to determine which bus stops are nearest to them and provide access to their location.

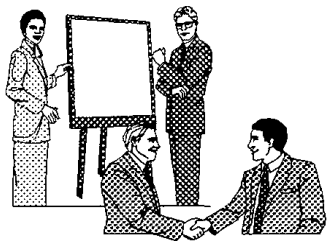
The outreach can be in the form of a letter to each agency asking for information about bus stops near their locations. One-on-one meetings may also be held. Consider holding meetings with one or more agencies which have locations in the same general part of the service area, to discuss which stops, if made accessible, would serve clients of more than one agency.



Considerations to discuss include the following:

- The comparative level of effort and expense required to make different stops accessible;
- The definition of accessibility and what is required to make stops ADA-accessible;
- Which stops may not be useful to clients even if they are accessible, because of barriers between the stops and the agency location (for example, steps, hills, and major roads);
- The likelihood that clients of the agency would or could use fixed-route, even with accessible stops;
- The conjunction of accessible stops with travel training and other education programs aimed at agency clients and clients' caregivers;
- The availability and deployment of accessible vehicles;
- Which improvements are most applicable for their clients; and/or
- Services provided on the vehicles, such as stop announcements and assistance with lifts and securement.

Work with agencies to determine the appropriateness of making stops near their locations accessible and prioritize the placement of individual stops. Work with them to establish a feasible schedule for improvements and to schedule other educational activities. Also work with the agencies to promote attendance at public meetings to discuss bus stop accessibility.



Public Meetings

Before deciding which stops to make accessible, hold public meetings. Publicize the meetings through newsletters, mailings, and newspaper advertisements. They may also be targeted to the clients of agencies, with publicity handled through the agencies and the meetings taking place at their sites.

At the public meetings, discuss the list of bus stop improvements and priorities, as defined through the outreach activities and market research. Describe the justifications for the improvements and the priorities. Establish priorities according to such factors as the following:

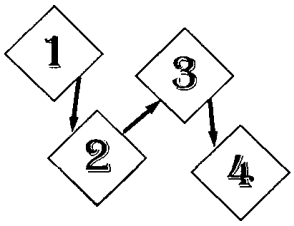
Stops which can be made accessible the soonest and for the least cost, such as those which are nearly accessible, or have sufficient room for expansion;

- Stops which will serve the largest number of people with disabilities, based on overall ridership at the stops or potential ridership by people with disabilities;
- Stops served by routes with accessible vehicles; or
- Interests of agency representatives.

Listen to participants at the meetings and make adjustments to the priorities. Be clear regarding the costs of improvements and the available resources for such improvements.

Public involvement and market research regarding identification of stops to improve for accessibility will often occur simultaneously. Public meetings are best scheduled after other

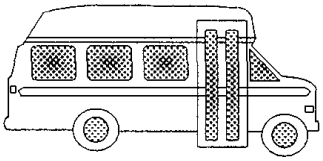
forms of public involvement and research are completed, because then justification for the decisions will be clear and can be readily explained to public participants. Figure 6-5 shows the interaction of the public involvement and market research processes.



STEP 4: CONDUCT MARKET RESEARCH

Develop an estimate of the probable use of newly accessible bus stops by people with disabilities. This estimate is critical in establishing the sequence of the work. Use the measure of current and expected ridership to prioritize the sequence of bus stop improvements.

In deciding which bus stops to improve earliest, work with consumer advisors to estimate probable increased future utilization.



INFORMATION FROM THE PARATRANSIT SYSTEM

Ask the local complementary paratransit service to identify locations where people with disabilities travel. A list of frequently used paratransit origins and destinations can identify potential accessible bus stop locations on the fixed-routes. If the paratransit system has an automated trip booking and scheduling database, it should be able to develop a list of frequent paratransit pickup and drop-off sites. Compare this list against the bus stop accessibility inventory to identify bus stops close to frequent paratransit patron origins and destinations.

Deciding how to attract persons to use the fixed-route system by upgrading bus stops that are likely to be used by current paratransit patrons is a major step in prioritizing the sequence in which the stops will be improved.

Along with correlating current paratransit use and bus stop accessibility, the transit system and consumers should use direct market research to prioritize the improvements.

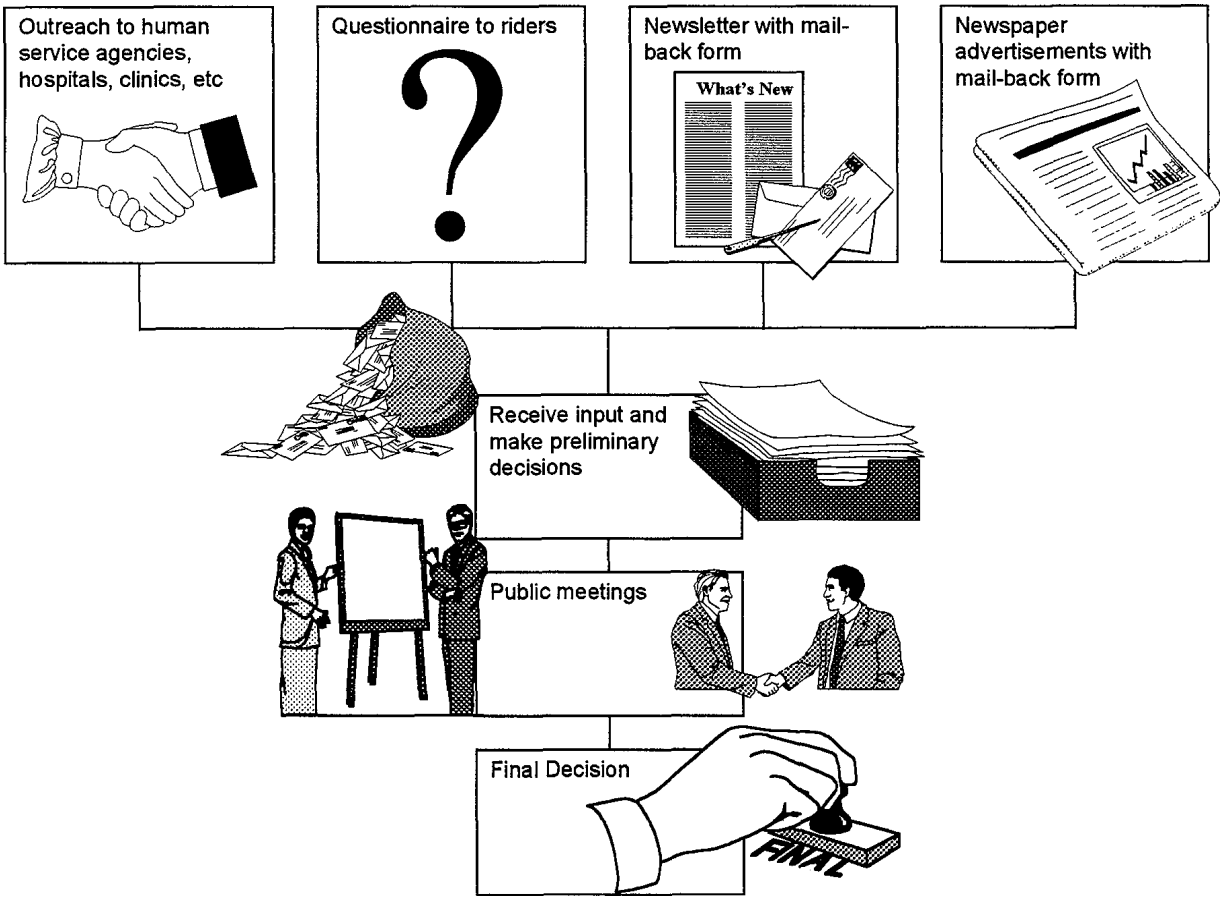


Figure 6-5. Public Involvement and Market Research to Identify Stops

DIRECT MARKET RESEARCH

Conduct direct market research of riders and other members of the community through questionnaires distributed to transit and paratransit riders, newsletters with mail-back forms, and newspaper advertisements with clip-out coupons to indicate preferences.

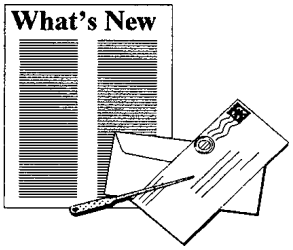
Questionnaires Distributed to Riders

To learn about preferences for bus stop accessibility, distribute questionnaires to paratransit and fixed-route riders. Distribute questionnaires to paratransit riders on the paratransit vehicles, at common origins and destinations, and through mail inserts when other information or eligibility applications are mailed. On the paratransit vehicles and at common sites, provide a box where respondents can drop completed forms. Paratransit drivers can return the box to the transit system. Include a return address so respondents can mail the forms back.

Distribute questionnaires to fixed-route riders on the fixed-route vehicles, at transit centers, at ticket vending locations, and through general mailings, such as inserts in utility bills. Provide a mail-back address on the questionnaire. On vehicles and at transit locations, provide a box to return the questionnaires.

Figure 6-6 shows a sample questionnaire to send to riders.

Newsletters with Mail-Back Form



Many transit systems mail or otherwise distribute newsletters to paratransit and fixed-route riders. The newsletters can include a brief questionnaire to be dropped in a box or mailed back to the transit system. Highlight the questionnaire with a box which can be clipped and sent back to the transit system.

We are deciding what transit stops to make accessible to people with disabilities. Some of the improvements for stops might include larger shelters, room for a wheelchair lift on the ground, and curb cuts and other access. Please answer the questions below to help us decide which stops to improve.

1. Where is the bus stop you use the most?

   _____

2. Do you think that stop could be used by people with disabilities? ❑ Yes ❑ No

3. Do you think people with disabilities would use the stop if it were improved to make it more accessible? ❑ Yes ❑ No

4. Please indicate, on a scale of 1 to 10, how high a priority should that stop have for improvements (where a 1 means it should have very low priority and 10 means it should be improved right away)?

   ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 ❑ 9 ❑ 10

5. On a scale of 1 to 10 (where 1 means it would not change your riding habits at all and a 10 means you would definitely ride more often), how likely are you to use the transit system more often if the stop were improved?

   ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 ❑ 9 ❑ 10

6. Is there another stop which you think should be made accessible?

   ❑ Yes. Where is it? ❑ No

7. On a scale of 1 to 10, how high a priority should that stop have for improvements (where a 1 means it should have very low priority and 10 means it should be improved right away)?

   ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 ❑ 9 ❑ 10

8. On a scale of 1 to 10 (where 1 means it would not change your riding habits at all and a 10 means you would definitely ride more often), how likely are you to use the transit system more often if the stop were improved?

   ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 ❑ 9 ❑ 10

9. Is there another stop which you think should be made accessible?

   ❑ Yes. Which one_____ ❑ No

10. On a scale of 1 to 10, how high a priority should that stop have for improvements (where a 1 means it should have very low priority and 10 means it should be improved right away)?

    ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 ❑ 9 ❑ 10

11. On a scale of 1 to 10 (where 1 means it would not change your riding habits at all and a 10 means you would definitely ride more often), how likely are you to use the transit system more often if the stop were improved?

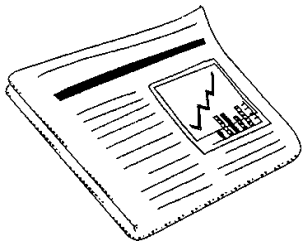
    ❑ 1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 ❑ 9 ❑ 10

Thank you very much for your help. Your answers will help us provide better service for all our riders.

Please drop this questionnaire in the box or return it to:

Mr. Accessibility Planner
Your Transit Authority
123 Main Street
Thistown, MA 02134

Figure 6-6. Sample Questionnaire to Send to Riders



Newspaper Advertisements

When placing advertisements regarding accessibility or other topics, include a clip-out coupon with questions about what stops to make accessible. Coupons could offer cents off a transit ride. When the drivers collect the coupons and return them to the transit system, the information can be collected. Figure 6-7 shows an example of an advertisement with a clip-out coupon with questions.

UTILIZATION BY GENERAL PASSENGERS

Target improvements to bus stops that are frequently used by general passengers or might be frequently used if a stop were present. Use Section 15 passenger counts to provide bus-stop-by-bus-stop boarding and alighting data. Also utilize information on plans for new commercial or residential developments.

The current degree of utilization of each bus stop by people with disabilities would generally be expected to correlate with utilization by general passengers; however, some locations may generate or receive many trips by people with disabilities, but rather few trips by general passengers. These locations should receive special consideration for accessibility improvements and amenities targeted at general passengers.

Your Transit System

We Have New Buses!

Come see our new buses — fully accessible, clean, and quiet. The new buses are on routes:

A (Baker Street)
D (South Main)
14 (North City)
24 (River Drive)
23 (South Side)

Picture of a bus here.

COME RIDE WITH US

Clip here

We are also going to improve bus stops to make them more accessible (larger shelters, room for a wheelchair lift on the ground, and/or curb cuts and other access). Which stops should we improve first?

Return this coupon with your choices the next time you ride and

take 25¢ off the cost of your trip.

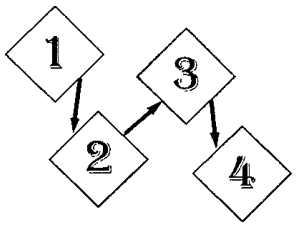
Write the location (such as, corner of 1st Ave. and Main Street, etc.) of the three bus stops you think should be changed first.

1. _____

2. _____

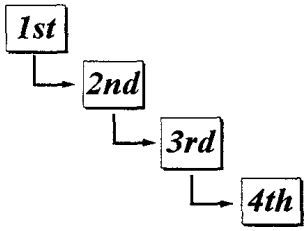
3. _____

Figure 6-7. Sample Advertisement with a Clip-out Coupon with Questions



Three elements:

- ***Bus stop catalog,***
- ***Cost estimate, and***
- ***Frequency of use.***



STEP 5: SELECT TARGET STOPS

Develop a methodology for selecting target stops by using consumer input gained throughout the project or rely on analyzing information in the database. The optimal method combines qualitative inputs from consumer advisors with quantitative inputs from the accessibility database; however, as will be seen in Steps 6 and 7, available funding and the method that will be used to administer the work will substantially influence the final selection of stops to be enhanced and the sequence of the work.

SETTING PRIORITIES

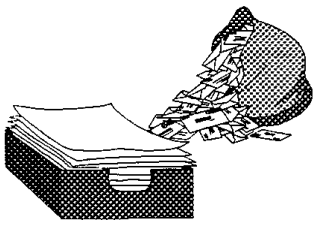
At this point in the planning, the transit system should have a catalog of bus stops, a cost estimate and work plan for achieving ADA accessibility for each stop, and an index of the frequency of use of each stop. These products of the planning process should have been developed in cooperation with consumer advisors.

Prioritize the stop list by using a numerical formula and by involving consumers in developing the formula and in review of the resulting prioritized list.

Tucson developed a plan for prioritizing accessibility improvements by evaluating the bus stop list against the following goals:

- All new capital improvements should adhere to ADA requirements and increase the accessibility of the transit system.
- Sites selected for enhancement should be as close as possible to boarding or disembarking locations which are more heavily used by the current paratransit riders. Operationally, this means selecting bus stops nearest to the top 25% of frequently used paratransit trip generators or destinations.
- Selected sites should contribute to a network of accessible sites no more than 1/4 mile distant from one another.
- Selected sites should be those most heavily used by the general transit ridership. Stops selected for enhancement

should meet the market needs of the general public, current paratransit riders, and other individuals who are most likely to require accessible access to the fixed-route system.



INPUT FROM PUBLIC INVOLVEMENT PROGRAM AND MARKET RESEARCH

From the questionnaires completed by those contacted by the members of the consumer advisory committee and the questionnaires completed by paratransit and fixed-route riders, generate a list of the stops most frequently mentioned. If questions are asked regarding whether the improvements would increase ridership, include this information in the list. Develop a database of stops mentioned and use the information to set priorities. On the basis of the questions in Figures 6-4 and 6-6, some of the database items would be as follows:

- Bus stop location, along with transit system designation for the stop;
- Number of times it was mentioned by paratransit riders;
- Number of times it was mentioned by fixed-route riders;
- Number of times it was mentioned as being near a home or most frequently used stop;
- Average score for priority; and
- Average score for likelihood of use if improved.

From this information, determine which stops have the highest priority.

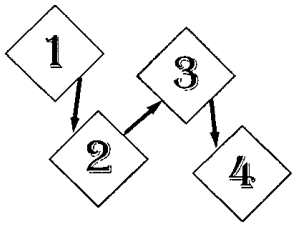
PRAGMATIC CONSIDERATIONS

There may be compelling reasons to select target stops from a more operational perspective. For instance, expedite the program of bus stop improvements by piggy-backing them on existing contracts for city street work. This process tends to favor bus stop improvements made near street improvements.

Bolster the deliberations of a citizens' committee with hard data. Prioritize the bus stop list by conducting a computerized benefitcost analysis on information contained in the bus stop database. Prioritize stops for improvement by using the computerized selection process and taking into account the following:

- Current and probable future general population ridership;
- The potential and likelihood for utilization by persons with disabilities; and
- The complexity and cost of the desired improvements.

The outcome of the deliberations on site selections should be a systematic, sequenced, proactive, cost-estimated plan for bus stop enhancements. It is likely to be a multi-year plan or a phased plan, with the highest priority stops rehabilitated in the early phases. Revisit and revise such a plan in the out years to incorporate new information about frequently utilized stops or desired bus stop accessibility features.



STEP 6: DETERMINE IMPROVEMENTS
SELECTING STOP AMENITIES

Most of the improvements to achieve accessibility will be basic, consisting of installing curb cuts and 60 inch-by-96 inch pads. If there are sidewalks, they should be integrated with the bus stop. In addition to basic improvements, include bus stop amenities whenever feasible. As used here, bus stop amenities range from benches to shelters, with shade plantings and/or extra security considerations.

Lighted, large, covered shelters are important to transit users with disabilities.

The research, upon which this guidebook is based, determined that persons with disabilities considered amenities to be very important. For example, people with disabilities who use fixed-route transit assigned the attribute, "Lighted Shelters," the highest utility value of any attribute ranked. They also rated "Large, Covered Shelters" as their sixth most important attribute. The research also revealed that people who use wheelchairs and the fixed-route system like having benches at bus stops.

Therefore, having determined the sequence for bus stop improvements and having cost-estimated the plan to include accessibility, consider, with consumer groups, all possible approaches to including bus stop amenities such as shelters and lighting.

Locating a bus stop under a street light is a smart use of resources.

Work with consumer groups to determine which high-frequency stops have enough land for a bus pad, a bench, a shelter, and lighting. Any bench, shelter, bus stop sign, or lighting fixture should be placed so as not to impede the deployment of the bus lift or the use of the accessible path by people with disabilities.

Whenever possible, locate new bus stops near illumination by a street lamp. Conversely, encourage the installation of street lighting at existing bus stop locations, whether accessible or not.

TRANSIT CENTER DESIGN ELEMENTS

Tucson, Arizona's Tohono Tadai transit facility was the first transit facility in the country to be designed and constructed in full accordance with the ADA guidelines. The facility includes items which can attract people with disabilities to use the fixed-route, such as announcement of stops and routes; large, covered shelters; lighted shelters; accessible seating; and wheelchair locations.

Through a design review process, Tucson incorporated and built on the travel experiences of many people with disabilities in achieving the final architectural design of Tohono Tadai. The finished facility is a model of accessible, usable architecture. Some accessibility features are as follows:

- Signage in Grade #2 Braille;
- Speakers at each bus bay to announce arrivals, routes, and departures;
- Flashing red lights to attract attention to the digital sign boards;
- A two-way amplified speaker system at the information booth;
- Accessible public phones, vending machines, and counter heights;

- Motion-sensor toilets and lavatories;
- Rounded edges on benches, counters, and all protruding surfaces; and
- An accessible tot lot.[7]

Open Space Clearance

Locating the columns in relation to the benches and setback between the columns and the edge of the curb so as to open up the clearances was particularly important to persons with mobility disabilities.

Rounded Corners

Rounding corners on all structural elements and amenities, benches, and columns, to eliminate protrusions which could cause injuries was particularly important for persons with visual impairments.

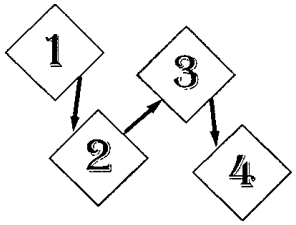
Visibility and Design of Signs

Several items were important to people with vision and hearing impairments. Among the items were highly visible signage set at the correct height and incorporating Grade #2 Braille, flashing lights and buzzers; a color and lighting scheme that would make the signs easy to read; signs with a modern appearance; and signs that were bright and easy to see. Solutions included a flashing light and other annunciators at each bus bay to alert individuals with hearing impairments to the bus arrival. Another light flashes if there is a schedule change.

Location of Air Ducts

The Tucson transit centers are not enclosed or air-conditioned. Small shelters and trees provide shade, but the only enclosed area is the customer service booth. Cool air is provided at the benches through an evaporative cooling system. This system pipes cool air from ducts from just behind the benches. In meetings, the advisory committee members requested that special care be taken so that the air would also blow out over the wheelchair spaces adjoining the benches and that the duct work would not obstruct the clearance.

[7] Project ACTION, "Tucson's Tohono Tadai Transit Center," *Project ACTION Update*, Summer, 1995, p. 11.



STEP 7: EVALUATE ENHANCEMENTS

Evaluate the outcomes of a bus stop enhancement program using one of the following methods.

- Solicit opinions from the consumer advisory group on the value of the outcome, as well as from the bus operators having routes with enhanced accessibility. Review comments from the general public.
- Directly count bus boardings by people with disabilities and lift deployments.
- Monitor, over time, the decrease in paratransit use by people who live near newly accessible fixed-route stops and who previously were frequent paratransit riders.

Whatever method is chosen, keep the advisory committee involved in continued planning and aware of ongoing successes.