

PB8 1-24987 2

MASS TRANSIT MANAGEMENT:

A HANDBOOK FOR SMALL CITIES
SECOND EDITION, REVISED

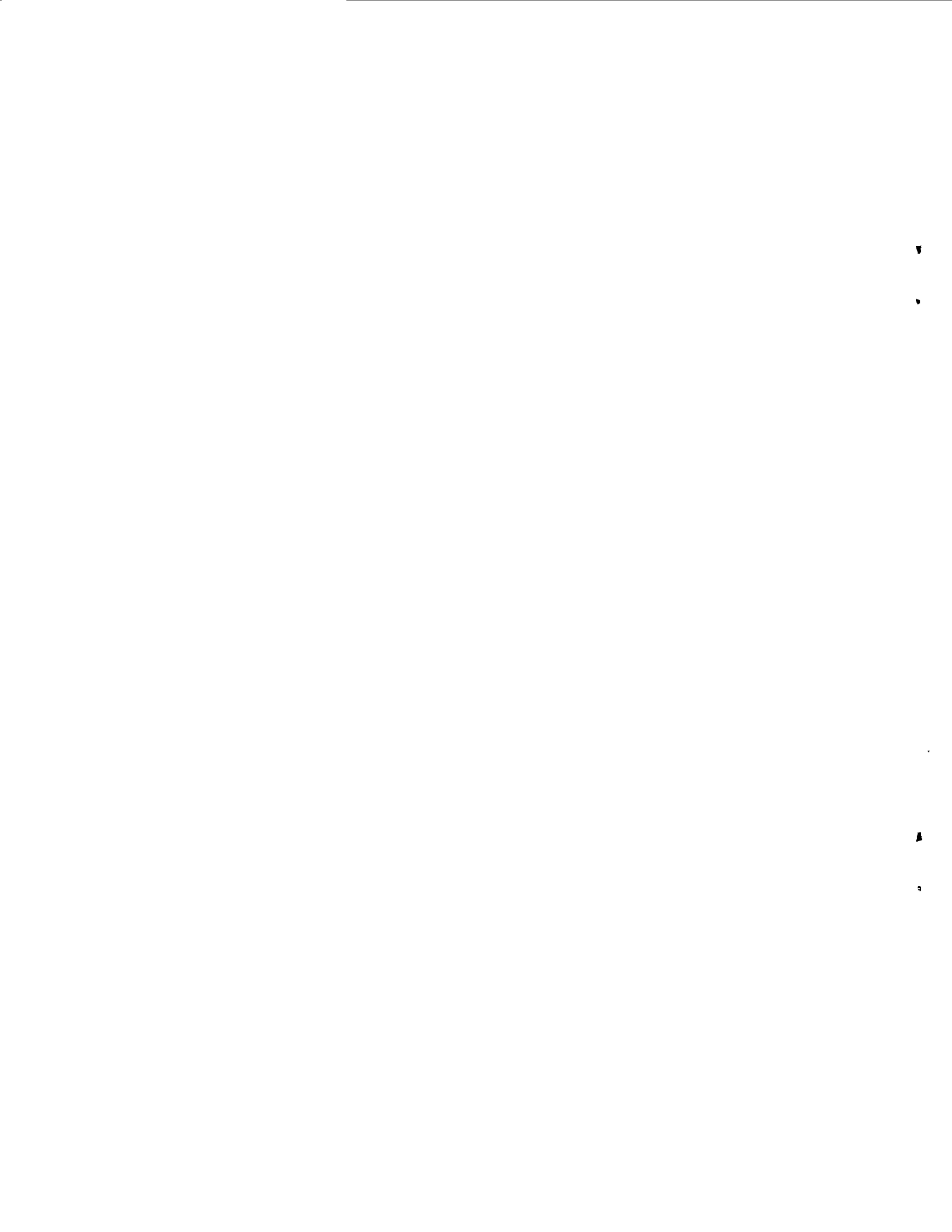
SEPTEMBER 1980

U.S. DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION
OFFICE OF THE SECRETARY

PART I



1. Report No. IN 09 8002/8003/8004		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle * Mass Transit Management: A Handbook for Small Cities Second Edition, Revised 1980				5. Report Date 1980	
				6. Performing Organization Code	
7. Author(s) Smerk, George M. and Rosemary B. Gerty, Editor				8. Performing Organization Report No.	
9. Performing Organization Name and Address Institute for Urban Transportation 809 E. Ninth Street Bloomington, Indiana 47405				10. Work Unit No. (TRAI5)	
				11. Contract or Grant No. IN 09 8002/8003/8004	
12. Sponsoring Agency Name and Address U.S. Department of Transportation Urban Mass Transportation Administration 400 7th Street, S.W. Washington, D.C. 20590				13. Type of Report and Period Covered	
				14. Sponsoring Agency Code	
15. Supplementary Notes Part I: Goals, Support and Finance Part III: Operations Part II: Management and Control Part IV: Marketing					
16. Abstract The aim of <u>Mass Transit Management: A Handbook for Small Cities</u> is to provide information for the management of mass transit, particularly for small-scale operations in smaller cities. A modern, systematic approach to transit management has been worked into the material, while recognizing the financial constraints and limited degree of specialization possible in a small transit system. The consumer-oriented approach to marketing is stressed throughout the handbook. For convenience, the handbook is split into four parts: Part I Goals, Support, and Finance; Part II Management and Control; Part III Operations; and Part IV Marketing.					
17. Key Words Transit-Management Marketing Small Cities Financing Mass Transportation			18. Distribution Statement Available to the Public Through the National Technical Information Service Springfield, Virginia 22161		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages	22. Price



MASS TRANSIT MANAGEMENT:

A HANDBOOK FOR SMALL CITIES

Volume 1: Goals, Support, and Finance



REVISED EDITION

Prepared by

Institute for Urban Transportation
Indiana University
809 East Ninth Street
Bloomington, Indiana 47401

Prepared for

U.S. DEPARTMENT OF TRANSPORTATION
Urban Mass Transportation Administration
Office of Planning, Management, and Demonstrations

Distributed by

Office of the Secretary
Technology Sharing Program

September 1980

02878a

HE
S.O.B.
4.15.80
V.L.

ACKNOWLEDGMENTS

We want to thank Nancy Grandcolas and Rita Polley for typing this handbook. We also want to thank A. W. Hite, Tony McCaulay, Nicole Pare, and Elizabeth Renno for their help in the preparation of this report. Cover designed by Keith Kline.

TABLE OF CONTENTS

INTRODUCTION TO THE SECOND EDITION, REVISED	xix
PART I: GOALS, SUPPORT, AND FINANCE	
CHAPTER 1 OBJECTIVES AND STRATEGY	3
Introduction	3
Establishing Goals and Objectives	3
Goals	4
Objectives	5
Using Goals and Objectives	5
Evaluating Goals and Objectives	9
Policies	9
Consumer Behavior	10
A Simple Model of Behavior	11
Using the Behavioral Model	13
Journey Analysis	14
The Need to Institutionalize Transit	16
Organization or Institution	16
Process of Institutionalization	17
Strategies for Institutionalization	18
Managerial Strategy for Mass Transit	20
CHAPTER 2 THE FIRST STEP: GAINING PUBLIC INTEREST AND SUPPORT FOR TRANSIT	25
Introduction	25
A Community's Need for Transit Service	25
The Problem of the Small City Environment	25
The Need for Transit	27

Some Sources of Information	28
The Catalyst	30
The People to Have in Transit's Corner	32
Opposition to Transit Improvement	33
The Heart of the Argument for Transit	34
Presenting the Argument for Transit	36
Transit Feasibility Studies	36
Should a Feasibility Study Be Conducted?	36
Where Should Expert Advice Be Sought?	37
The Result	38
CHAPTER 3	
ESTABLISHING AND FINANCING MASS TRANSIT AGENCIES	45
Introduction	45
Privately Financed Transit	45
Equity Capital	46
Long-term Debt	47
Long-term Leases	48
Short-term Debt	48
Equipment Trust Obligations	48
Reducing Financial Risk	49
Conditions Mitigating Risk	50
Publicly Financed Transit	51
City Departments	51
The Transit Authority	52
Establishing a Transit Authority	53
Organization	53
Characteristics of the Board of Directors	54
The "Ideal" Institutional Establishment	57
Sources of Funds	58
Local Tax Sources	58
Bonds	60
Fares	62
Federal, State, and Local Revenue	63
State Aid for Mass Transportation	63
Federal Funds for Mass Transportation	65

Some Preliminary Actions	67
Federal Aid to Urbanized Areas	68
Federal Aid to Nonurbanized Areas	69
Critical Points	69
Cooperation	69
Consultant Selection	70
Grant Application	70
Public Hearing	71
Labor Clause Sign-off	71
Maintenance of Effort	71
APPENDIX 3A UMTA REGIONAL OFFICES	75
PART II: MANAGEMENT AND CONTROL	77
CHAPTER 4 THE TRANSIT MANAGEMENT PROGRAM: FUNCTIONS, MANAGEMENT BY OBJECTIVES, AND ORGANIZATION AND PLANNING	79
Introduction	79
The Environment of Transit	79
National Environment	79
State and Local Environments	81
Internal Environment	82
The Art of Management	83
Management Roles	83
Managerial Styles	84
Management by Objectives	84
Goals	85
Objectives	86
Plan	87
Control	96
Feedback	96
Managerial Planning	99
Basic Stages	99
Information Sources	100

The Organizational Structure	101
Types of Organization	101
Typical Organizational Form for the Small Transit Firm	105
Recommended Organizational Form for the Small Transit Firm	106
Sample Organizational Charts	108
Other Major Management Tasks and Problems	110
Supervision of Employees	110
Coordination of Effort	112
Constraints on Management	113
Some Guidelines for Management	114
Responsibilities of Management	115
The Role of the Board of Directors	116
The Management Process	117
Management Personnel	119
Sources of Managerial Talent	122
APPENDIX 4A PLANNING	129
Long-range Planning	129
Short-range Planning	131
Organizational Evaluation	131
Standing Plans	132
Project Plans	133
CHAPTER 5 ACCOUNTING	137
Introduction	137
Information Needs and Requirements	138
Control of Operations	138
Information for Outside Groups	139
Accounting and Cost Control Systems	140
Ledgerless Bookkeeping	140
Use of Accounts and Records	149

Federal Reporting Requirements: Project FARE	153
Mode Classification	153
Reporting Categories	156
General Requirements	156
Cost of Implementation	157
Managerial Controls	157
Acquiring Inventory	157
Receiving Stock Parts	158
Maintenance and Repair Information	160
Electronic Data Collection Aids	163
Routes and Schedules	170
Personnel	174
Special Operations	175
Cash Management	177
Management Reports	178
Budget Reports	178
Daily Operating Report	178
Weekly Operating Report	179
Monthly Route Report	179
Income Statement	179
Summary of Reports	179
PART III: OPERATIONS	185
CHAPTER 6 PERSONNEL AND LABOR RELATIONS	187
Introduction	187
Personnel Planning	189
Assessing Personnel Needs	189
Assessing Personnel Resources	189
Filling Personnel Needs	190
Recruitment	190
Selection	191
Orientation	199
Training	200
Career Development	204
Individual and Organizational Goal Attainment	206

Reduced Turnover and Costs	206
Hoarding High-caliber Personnel	206
Basis of Career Development	206
Personnel Evaluation	208
The Evaluatees	208
The Evaluators	209
The Criteria	209
The Techniques	209
Employee Compensation	210
Direct Compensation	210
Indirect Compensation	211
Compensation as a Motivator	212
Administering Employment Opportunity and Affirmative Action Programs	213
Administering Health and Safety Programs	213
APPENDIX 6A PERSONNEL PLANNING: AN EXAMPLE	217
Preparing Job Descriptions	218
Forecasting Personnel Needs	218
APPENDIX 6B ORIENTATION AND TRAINING: AN EXAMPLE	223
Orientation Program	223
Training Program	223
Training Instructor	224
Oral Instruction	224
Behind-the-wheel Instruction	225
CHAPTER 7 THE MAINTENANCE PROGRAM	229
Introduction	229
A Preventive Maintenance Program	230
Costs	231
Programs	231
Goals and Objectives	232

Implementation	234
Other Maintenance Programs	238
Outside Maintenance Contract	238
Selective Outside Maintenance Contract	239
Performing Maintenance on Other Vehicles	239
Maintenance Facilities	240
Fueling Service Area	242
Washing Area	243
Grease Pit or Hoist Area	245
Body Shop and Paint Shop	245
Machine Shop	246
Stockroom and Storeroom	246
Maintenance Superintendent's Office	246
Indoor or Outdoor Storage	246
Fuel and Lube Oil Storage Tanks	247
APPENDIX 7A EXAMPLES OF MAINTENANCE FORMS	251
APPENDIX 7B CONTRACTUAL PURCHASE OF SUPPLIES	287
CHAPTER 8 EQUIPMENT SELECTION	289
Introduction	289
The Creative Role of Equipment in the Marketing Mix	289
Creating an Image	289
Meeting the Service Requirement	290
Using Equipment as Promotion	291
Important Specifications for Equipment Selection	292
Guidelines for Selection	294
Demand Characteristics	296
Operating Conditions	296
Comfort and Quality Needs	297
Drivers' Needs	299
Maintenance Needs	299
Other Considerations	300
The Need for Other Equipment	302
Other Vehicles	302
Passenger Facilities	303

CHAPTER 9	ROUTING AND SCHEDULING	309
	Introduction	309
	Forecasting Demand for Transit Service	310
	Market Segmentation	311
	Socioeconomic Data	311
	Census Data	312
	Routing	312
	Radial Routing	312
	Grid Routing	312
	Other Routing Patterns	314
	Access to Transit Service	316
	Transit Speed	318
	Marketing Effects of Routing	319
	Guidelines for Routing	319
	Evaluating Existing Routes	324
	Scheduling	325
	Demand-based Scheduling	325
	Policy-based Scheduling	331
	Schedule Time Periods	332
	Service Standards	338
	Scheduling Questions	338
	Marketing Effects of Scheduling	339
	Guidelines for Scheduling	340
	Resource Allocation	340
APPENDIX 9A	ROUTING/SCHEDULING EXAMPLE	347
CHAPTER 10	COMMUNICATIONS AND CONTROL: SUPERVISION OF OPERATIONS	353
	Introduction	353
	Supervision	353
	The Main Tasks	353
	Location of Supervisory Personnel	354
	Communication Systems	355

Methods of Communication	356
System Selection	358
Central Control Concept	358
APPENDIX 10A COMMUNICATION SYSTEMS	363
System Acquisition	363
Suitability and Price	363
FCC Compliance	364
Radio Equipment	364
Other Systems	366
PART IV: MARKETING	367
CHAPTER 11 THE MARKETING PROGRAM	369
Introduction	369
The Marketing Approach: Meeting Consumer Needs	370
Considerations in Choosing Marketing Objectives	370
Cost	371
Information	372
Flexibility	372
Marketing Mix	373
Product	373
Price (Fare)	373
Promotion	377
Use of the Marketing Mix	377
The Nature of Transit	377
Influence of External Factors	378
Underused Capacity	378
Maximizing Service and Self-support	378
Marketing Strategies	379
Three Approaches to the Market	379
Selecting a Strategy	380
Guidelines for Developing a Strategy	381

Segmenting the Market	382
Market Segmentation Model One	383
Market Segmentation Model Two	386
Putting Market Segmentation into Action	387
Market Research	391
Complaints	394
Information Requests	394
Questionnaires	394
APPENDIX 11A THE MARKETING PROGRAM: FARE COLLECTION	405
Introduction	405
Cash Fares	405
Tickets and Tokens	406
Passes	406
Credit Card and Other Electronic Systems	408
APPENDIX 11B QUESTIONNAIRES FOR MARKET RESEARCH	411
CHAPTER 12 THE ADVERTISING PROGRAM	427
Introduction	427
The Purpose of Advertising	427
Developing an Advertising Program	428
Defining Advertising Goals and Objectives	428
Determining Advertising Strategies	428
Developing Advertising Budgets	429
Developing Advertising Themes	430
Selecting a Medium	433
Timing Advertising Expenditures	434
Evaluating and Controlling Advertising	435
Company Image	436
CHAPTER 13 THE PUBLIC INFORMATION PROGRAM	441
Introduction	441
The Role of Public Information	441

Conveying Information	442
Identification Schemes	442
Major Means of Conveying Information	443
CHAPTER 14 THE COMMUNITY RELATIONS PROGRAM	453
Introduction	453
Effective Community Relations	454
Transit Employee Relations	455
Customer Relations	456
General Public Relations	457
Government Relations	458
Stockholder Relations	459
Media Relations	460
A Comprehensive Program	461
GENERAL SOURCES OF INFORMATION	465



LIST OF TABLES AND ILLUSTRATIONS

Figure	1.1	Survival	6
Figure	1.2	Reviewing Goals and Objectives	10
Figure	1.3	Simple Behavioral Model	11
Figure	1.4	Journey Analysis: Time and Energy Costs	15
Figure	1.5	Strategy for Management	22
Figure	4.1	The Environment of Transit Management	80
Figure	4.2	Inventory Example--Transit Operations	88
Figure	4.3	Inventory Example--Maintenance	90
Figure	4.4	Inventory Example--Marketing	92
Figure	4.5	Model Action Plan	94
Figure	4.6	Management by Objectives Form	97
Figure	4.7	Operating Action Plan	98
Figure	4.8	A Simplified Line Organization	102
Figure	4.9	A Simplified Line-and-Staff Organization	104
Figure	4.10	Typical Small-scale Mass Transit Organization	105
Figure	4.11	Suggested Organizational Chart for Small-scale Firms	107
Figure	4.12	Organizational Chart--Small-sized Firms (10 or Fewer Buses)	109
Figure	4.13	Organizational Chart--Medium-sized Firms (11 to 30 Buses)	109

Figure	4.14	Organizational Chart--Large-sized Firms (31 to 100 Buses)	111
Figure	4.15	Management Process	118
Figure	4A.1	Outline of Long-range Planning	130
Figure	4A.2	Planning Hierarchy	132
Figure	5.1	Ledgerless Bookkeeping--Purchases and Cash Disbursements	141
Figure	5.2	Voucher Check	143
Figure	5.3	Ledgerless Bookkeeping--Sales, Accounts Receivable, and Cash Receipts	145
Figure	5.4	Daily Cash Receipts and Operating Report	146
Figure	5.5	Journal Voucher	147
Figure	5.6	Combined Check and Cash Disbursement Journal	151
Figure	5.7	Pegboard	152
Figure	5.8	Comparative Income Statement Using Unit Analyzer System	154
Figure	5.9	Requisitioning and Ordering: Inventory Control Process	159
Figure	5.10	Inventory Received: Recording Process	161
Figure	5.11	Daily Vehicle Report	162
Figure	5.12	Consumption Per Mile Report	164
Figure	5.13	Preventive Maintenance Card	165
Figure	5.14	Preventive Maintenance Recording Procedure	166
Figure	5.15	Sample Repair Order	167
Figure	5.16	Maintenance Repair Recording Procedure	168
Figure	5.17	Sample Daily Mileage/Platform Hour Report	172

Figure	5.18	Sample Passenger Log Sheet	173
Figure	5.19	Weekly Operating Report	180
Figure	5.20	Monthly Route Report	181
Figure	5.21	Summary of Reporting Relationships	182
Figure	6.1	Transit Job Application Form	193
Figure	6.2	Personnel Information: Telephone Questionnaire	197
Figure	6.3	Road Test Checklist	205
Figure	6A.1	Hometown Transit Company: Job Description	219
Table	6A.1	Hometown Transit Company--Driver Personnel Planning	220
Figure	7.1	Cost of Preventive Maintenance Program	233
Figure	7A.1	Bus Defect Report	254
Figure	7A.2	Daily Inspection Form--A	255
Figure	7A.3	Daily Inspection Form--B	256
Figure	7A.4	Mileage Inspection Form--A1	257
Figure	7A.5	Mileage Inspection Form--A2	258
Figure	7A.6	Mileage Inspection Form--A3	259
Figure	7A.7	Mileage Inspection Form--A4	261
Figure	7A.8	Mileage Inspection Form--B1	262
Figure	7A.9	Mileage Inspection Form--B2	264
Figure	7A.10	Mileage Inspection Form--B3	266
Figure	7A.11	Mileage Inspection Form--B4	267
Figure	7A.12	Mileage Inspection Form--B5	268
Figure	7A.13	Mileage Inspection Form--C1	269
Figure	7A.14	Mileage Inspection Form--C2	271
Figure	7A.15	Mileage Inspection Form--C3	273

Figure	7A.16	Air-Conditioning Inspection Form--A	274
Figure	7A.17	Air-Conditioning Inspection Form--B	275
Figure	7A.18	Foreman's Inspection Form	276
Figure	7A.19	Battery Report Form	277
Figure	7A.20	Tire Form--A	278
Figure	7A.21	Tire Form--B	279
Figure	7A.22	Vehicle History Form	280
Figure	7A.23	Inventory Control Form--A	282
Figure	7A.24	Inventory Control Form--B	283
Figure	7A.25	Inventory Control Form--C	284
Figure	7A.26	Inventory Control Form--D	285
Figure	7A.27	Repair Order	286
Figure	9.1	Radial Routing	313
Figure	9.2	Grid Routing	313
Figure	9.3	Through Routing	315
Figure	9.4	Cycle Routing	315
Figure	9.5	Reverse Routing	317
Figure	9.6	Balloon Routing	317
Figure	9.7	Routes Between Traffic Generators	321
Figure	9.8	Inclusion of Major Traffic Generators in Route Design	322
Figure	9.9	The Subcenter in Route Design	322
Figure	9.10	Loading Within Major Traffic Generators	323
Figure	9.11	Parking to Permit Transfers Between Buses	323
Figure	9.12	On/off Riding Check Form	327

Figure	9.13	Single Point Maximum Load Check Form	328
Figure	9.14	Summary of Total Maximum Loads by Time Period	330
Figure	9.15	Headway Table	335
Figure	9.16	Unit Operating Schedule	336
Figure	9.17	Summary of Runs	337
Figure	9A.1	Proposed Layout: Lake Central Flyer	348
Figure	9A.2	Sample Inbound Schedule	350
Figure	11.1	Market Segmentation Model One	385
Figure	11.2	Market Segmentation Model Two	388
Table	11.1	Consumer Profiles of Existing and Potential User Groups	389
Table	11.2	Alternative Marketing Strategies-- A Conceptual Format	392
Figure	11B.1	Questionnaire 1: Example of Close-ended Questionnaire	413
Figure	11B.2	Questionnaire 2: Example of Open-ended Questionnaire	417
Figure	11B.3	Questionnaire 3: Example of On-board Questionnaire	419
Figure	11B.4	Questionnaire 4: Example of On-board, Self-administered Questionnaire	421
Figure	11B.5	Questionnaire 5: Example of Tele- phone Interview Questionnaire of Head of Household	422
Figure	13.1	Example of Strip Map	445
Figure	13.2	Bus Stop Sign Format	446
Figure	14.1	The Role of Community Relations	454

INTRODUCTION TO THE SECOND EDITION, REVISED

In most fields of transportation, management--rather than equipment, location, or operating rights--is the key to success. Urban mass transportation is no exception. Despite its importance, transit management has received surprisingly little attention, especially in terms of modern business practices. The aim of this handbook is to provide information for the management of mass transit, particularly for small-scale operations in smaller cities in the United States. For the purposes of this handbook, a small city is defined as one that operates 101 buses or fewer. This cutoff point for small transit systems is one used by the federal government. Because of the scale of transit enterprises involved, the handbook assumes that management faces two major constraints: (1) the amount of money available and (2) the degree of specialization possible with the limited manpower of a small enterprise.

Staff members at the Institute for Urban Transportation (IUT) in Ellettsville, Indiana, investigated the practices of smaller transit systems in many parts of the United States to discover firsthand some of the methods and problems of such properties. The best methods used by these properties have been included in this handbook. In addition, a modern, systematic approach to the management of transit firms has been worked into the material as an improvement on the conventional practices of the transit industry. Extensive experience in providing local and statewide technical assistance in Indiana and conducting management performance audits of transit properties has provided IUT's staff with substantial insight into transit management.

The modern consumer-oriented approach to business is strongly emphasized in this handbook. The consumer-oriented approach is the major concept of business that has been pursued through the technique of marketing management by American business firms since the end of World War II. By adopting this powerful, strategic concept, this handbook is very much a marketing-oriented document. The justifications for this approach seem compelling because in general the transit industry admittedly suffers from a lack of marketing expertise and effort. Today, the transit industry still is primarily operations-oriented. However, in many parts of the United States transit properties of all sizes are becoming more marketing-oriented.

The handbook is divided into four sections. Part I: Goals, Support, and Finance (chapters 1-3) includes the important matters of establishing goals and objectives, understanding the consumer, gaining public support and public action for transit, institutionalizing transit as an integral part of the community, and financing transit. Part II: Management and Control (chapters 4 and 5) focuses on management itself and the control and information devices needed for effective management. Part III: Operations (chapters 6-10) covers important areas of day-to-day operation, coordinated as the product element in the marketing mix. Part IV: Marketing (chapters 11-14) deals with the marketing program and promotional activities.

Because this handbook is intended to serve as a reference work, not a textbook, care has been taken to produce chapters that are complete in and of themselves, which can be used independently. Some repetition is inevitable when using this technique, but every effort has been made to eliminate duplication as much as possible by cross-referencing and through providing a detailed table of contents. Appendixes are included with some chapters to give more detail on certain subjects without interrupting the flow of the text. A short but relevant bibliography is provided at the end of each chapter. A general bibliography is included at the end of the handbook.

Early in this handbook, the need to establish goals and objectives is stressed. Indeed, the concept of management by objectives (MBO) is treated in some detail. MBO recommendations are given for policy-making bodies as well as management. A detailed explanation of how to use MBO for transit management is provided.

The critical concept of consumer orientation through marketing is reflected throughout the handbook, but perhaps most strongly in Chapter 1 and Chapter 11. Chapter 1 is a discussion of the goals and objectives of a transit enterprise. It covers consumer behavior as it may be applied to mass transportation and a recommendation for the development of a general marketing-management strategy for transit management. In Chapter 11, the marketing program suggested for the small transit property is developed fully. The relationship of all parts of the transit enterprise is built around a marketing-oriented firm. The marketing mix--product, price, and promotion--is the concept that shapes managerial action in meeting consumer needs. MBO is the means by which results can be attained reasonably.

Throughout this handbook, careful attention has been paid to the consumer and to gearing management thought and the service provided by the transit firm to meet the desires and needs of consumers. Service quality is a key factor--not a minimum of service at the lowest possible

cost, concocted mainly to meet the needs of the transit firm, but service that meets consumer needs and desires at a cost carefully calculated and controlled. This seems a wise course for transit managers; publicly owned transit firms--of which the number is increasing rapidly--generally focus on service as their main reason for operation. Even privately owned transit firms cannot hope to generate long-run profits without providing good service to their clientele.

In addition to covering broad strategic concepts of management and matters of systematic, day-to-day operation, this handbook deals with critical factors including public support, finance, and various forms of public ownership. A fair proportion of the contents, therefore, is directed not only toward transit managers, but also toward public-spirited citizens and public officials who wish to inaugurate or improve transit services through public action.

This handbook should be considered a draft, as was the first edition. It combines the tried-and-true methods--where these appeared to be the best possible practices--with innovation, in the application of modern business techniques to transit. Thus, this handbook ventures onto untested ground. In a world of managerial as well as technical innovation, it would be surprising indeed if no major changes in modern business thinking and in transit occur in the course of 3 to 5 years. What is contained here may be subject to fairly rapid obsolescence.

We sincerely hope that by using this handbook managers of existing smaller transit properties will find many good ideas and suggestions that they may adopt easily. For the transit operation starting from scratch, this handbook provides as complete and usable a program as currently is available in published form. To be completely realistic, existing transit properties will be able to adopt the complete strategy and the major concepts suggested here only with some difficulty, because of vested interests, agreements, and other factors difficult or impossible to modify in a short time.

PART I

GOALS, SUPPORT, AND FINANCE

In the beginning, urban mass transportation in the United States was almost exclusively provided by private firms in pursuit of profit. The public's interest in transit was recognized through economic regulation of mass transportation, usually by a state public utility commission that controlled entry into the transit business, the rates the public might be charged, and the quality and quantity of service offered. In recent years, because of financial losses to private transit firms in the face of continued need for mass transit service, transit has become mostly a public service. Today, the majority of transit service is supported both by fares paid by users and by public funds from local, state, and federal sources.

Before any kind of transit enterprise can begin operating, it must come to grips with such matters as setting goals and obtaining public support and finance. Part I includes matters that are not only important managerial concerns, but that also are major public policy considerations and necessary foundation steps at the beginning of operations.

The keynote of the entire handbook is struck in Chapter 1, with its emphasis on setting goals and objectives for the transit enterprise. As obvious as it seems, this critical factor often is overlooked in many businesses. The consumer-oriented concept of business also is introduced in Chapter 1. Included is a description of consumer behavior and a discussion of those factors that transit management must work with to serve the public well and to do its job properly. Understanding consumer behavior also leads to the formulation of an overall managerial strategy for the transit agency wishing to perform in the public interest. This strategy includes being sensitive to public needs and desires, and using the most modern and effective business practices.

Chapter 2 is aimed especially at public officials or public-spirited citizens who see a need for new or improved transit operations in their cities. It provides guidelines

and suggestions for building the public support needed to take action favorable toward transit. It also gives suggestions on how to institutionalize mass transportation so that it becomes an integral part of community life.

Chapter 3 includes information related to transit finance. Special attention is given to the forms of public ownership and to the important steps that must be taken in applying for money through various federal aid programs.

CHAPTER 1

OBJECTIVES AND STRATEGY

Introduction

This chapter has been written for new transit enterprises and for those wishing to make changes in existing transit systems to better serve the public. The principal points made in this chapter are:

1. Transit management--or public officials contemplating transit operations--must be specific about what their enterprise is supposed to do, by establishing goals and objectives.
2. Transit management must understand consumer behavior.
3. Transit management must develop a rational strategy to guide it through all aspects of its tasks.

Establishing Goals and Objectives

Goals and objectives are critical for any enterprise because they help:

1. To guide effort.
2. To provide effectiveness as well as efficiency in management.
3. To act as a yardstick for performance.
4. To upgrade performance in public service organizations that lack the profit-and-loss discipline of private enterprise.

Goals and objectives act as a target for effort. Various policies then can be set and activities undertaken to reach the desired results. For a transit firm the goal(s)

selected will do much to shape its approach to the day-to-day operations of the enterprise.

Setting goals and objectives is not easy. For example, general goals may seem obvious: Transit service should be better. But what does "better" mean, and how does a manager know when such a goal has been achieved?

The goals and objectives of an enterprise are affected by the values of the society in which the entity exists and the importance given to various factors by that society. The social environment will have a definite and inescapable impact on those persons who guide the fortunes of a transit enterprise either as policymakers or managers. The values of society not only affect the nature of the goals and objectives but also the priorities assigned to them. For example, in the United States the automobile has been valued above transit for many years. With improved personal transportation as a value, it is no small wonder that much time, effort, and money were expended to improve the highway system. Again, the high value placed on private enterprise in our society often makes it difficult to gain vigorous support for improvements to publicly owned and operated mass transit.

Goals

Knowing the difference between goals and objectives is important. Goals are broader and more general than objectives. Goals are desirable conditions of broad scope. The following are examples of goals for mass transit that are supported by many persons in the nation today:

1. Provide mobility for all.
2. Improve the environment.
3. Conserve energy.
4. Sustain and enhance economic growth and vitality.

The realization of a goal generally will not be attained by the satisfactory completion of any one objective. Each of the above goals focuses on an area of needed accomplishment, and although mass transportation has an obvious role to play in helping to achieve each of them, it is clear that mass transit alone, even under the most favorable conditions, cannot ensure the attainment of the desirable end. The statement of goals provides a sense of direction, set by priorities.

Priorities are the order in which goals and objectives will be pursued. Priorities are affected by the values of the society, as noted earlier, and also by the degree of understanding that exists for a situation. A matter that is not completely understood probably will not be given a high priority because its values are not fully appreciated. One of the reasons why transit often has faced difficulties in gaining necessary public support is that its values to society are not always understood well. As long as this situation exists in the competition for scarce resources, transit will tend to receive less than its proponents believe is needed.

Objectives

Objectives are precise statements of what is to be done to reach a goal. In practice, once a goal has been selected and the priorities between several goals established, objectives will be set forth to help attain each of the goals. A good statement of an objective must have precision; it must be:

1. Clear, concise, and unambiguous.
2. Measurable and attainable in a reasonable period of time and with reasonable effort.
3. Consistent with goals and priorities.
4. Assigned a target date for accomplishment.
5. Assigned to an individual or group who will be responsible for its accomplishment.

For example, a goal might be established calling for the overall improvement in the quality of transit service. One objective might be to make the operations manager responsible for seeing that 96% of the service is operated no more than 2 minutes late, by a certain date 18 months in the future. Such an objective would help attain the goal. Other objectives and action plans would have to be established to attain the objective noted above. Matters concerning maintenance, supervision, fare collection, and new equipment would have to be considered and steps taken in each area to see that the service reliability goal is met.

Using Goals and Objectives

Of course, a firm or institution may be trying to achieve a number of major and minor goals simultaneously. As long as these goals are not in conflict with one another, multiple goals should pose no great problem. For example,

in transit, goals for growth, in terms of number of passengers carried per annum, and for the provision of high-quality service, with precise statements defining dimensions of quality, are not in conflict. However, a goal of minimizing maintenance costs would be likely to conflict with the goal of keeping every bus in service for 30 years. Objectives, too, must be consistent with each other.

General goals. The general goals that all enterprises strive for include the basic need to survive. Once survival is assured, the next general goal is growth. Once at least some degree of growth is attained, the higher level goals of prestige or recognition are sought. (The process is outlined in Figure 1.1.)

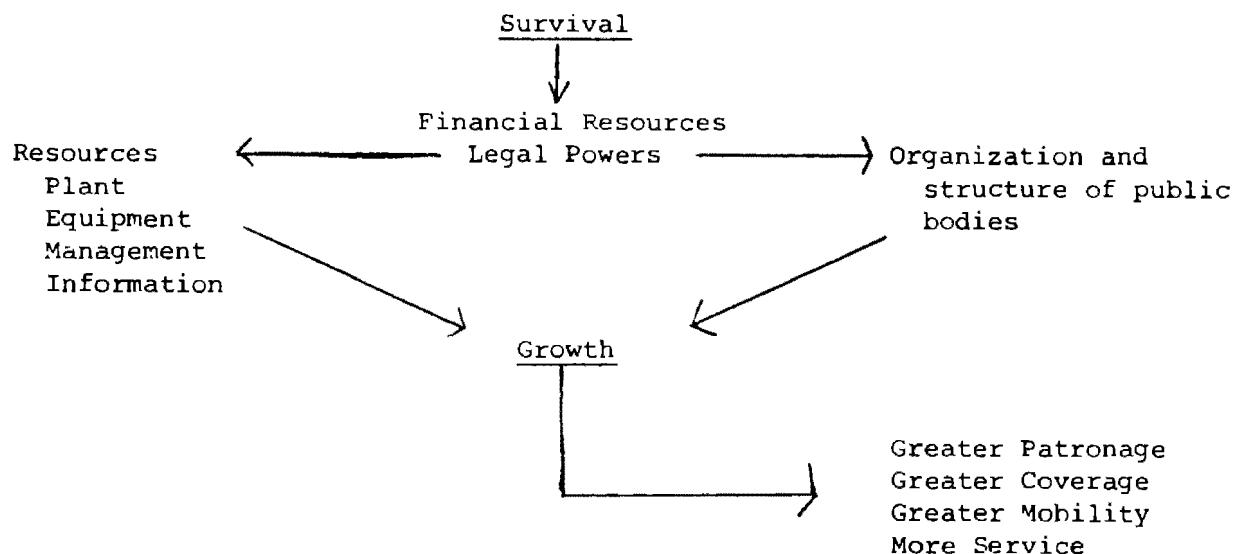


FIGURE 1.1 Survival.

For many transit properties, survival is not only the first goal but the only goal. Many transit operations are run on the proverbial shoestring, whether publicly or privately owned. Survival depends upon acquiring the legal powers to operate and securing sufficient financial resources available to carry on operations. Survival is assured if the financial resources are adequate to continue operations over time. In the future, funds will be expected not only to meet operating losses and capital needs, but also to expand service to meet community needs. Legal powers are also needed to survive. For a private transit firm, this means possession of an operating franchise. For the public transit enterprise, legal powers grant official status and the right to issue bonds or levy taxes. Perhaps most important is the authority to operate over the entire relevant area of an urban place.

Growth goals. Once the hurdle of survival is surmounted and continuation of the transit enterprise is assured or expected, the next move is to the goal of growth. Growth depends upon the organization and structure of the local public transit body and resources available to make transit improvements. Improvements may be made to the physical facilities of the plant (garage, maintenance facilities, terminals, shelters), the equipment (rolling stock, maintenance equipment, office equipment), manpower, and information. Manpower includes both the employees needed to carry out the various tasks and the skilled management necessary to oversee the use of the various resources. Information also is included because good information is essential to the growth of successful transit operations.

The growth of the transit enterprise should lead to greater patronage, which means that more people will be enjoying greater mobility. Growth also means that the coverage offered by the transit agency will increase in both extent and depth. That is, a wider area will be covered by service, and more frequent service will be offered throughout the entire transit system. More services will probably be offered, such as special service, service for the elderly and handicapped, subscription bus services for commuters, express service, and so forth.

With survival assured and growth taking place, the transit system is then ready to aim toward the goal of prestige or recognition. Few transit properties have achieved this enviable position.

Other goals. The goals of private firms are likely to differ from those of publicly owned enterprises. The private firm, obviously, must have profit as its major goal if it is to continue in business. In the transit business, profit will be earned only if the firm offers a public service of some quality. The publicly owned firm probably will consider public service to be its major goal. However, a publicly owned operation may have profit (or surplus) as one of its objectives just as a private enterprise would. Even so, most public enterprises aim at serving the public while either breaking even or minimizing losses.

Some reasonable community-oriented goals for a publicly owned, service-oriented transit operation might be:

1. Provide transportation services to those without an automobile.
2. Help relieve traffic congestion.
3. Minimize use of land for parking.

4. Increase interaction between all parts of the community.
5. Aid in shaping community development toward ends established through comprehensive planning.
6. Help reduce the costs of transportation to the community and its residents.
7. Enhance the image of the community.
8. Extend the labor market and increase job opportunities available to workers.
9. Help maintain downtown property values through improved access.
10. Attract new business to the area.

For private transit operators, a suitable goal is making the rate of return from a transit operation equal to or greater than a similar rate of return earned through a secure investment such as a savings account or government security. In other words, if \$100,000 invested in transit earns \$3,000 a year compared with possible earnings of \$6,000 from a bank savings certificate, investment in the certificate is preferable. However, a 1-year comparison is perhaps unfair; no reasonable manager should expect an immediate profit or adequate rate of return in transit in a short period of time.

A reasonable return on investment should be high enough to ensure that expansion and replacement of the enterprise's assets can be achieved by internal financing. Many transit operators work in states where the public utility commission or city ordinance sets the maximum rate of return that may be earned. Almost without exception today, most transit enterprises have difficulty in reaching this maximum. With only a few exceptions, most of the larger transit operations and many of the smaller ones are now publicly owned.

Regardless of the ownership of a transit firm, both private and public enterprise would hold some goals in common. Both probably would wish to serve the public as well as they could and wish to increase ridership, if doing so would boost profits, reduce the need for public funds, or help attain the goal of public service. Both would like to maximize profits or cut costs as much as possible, two goals that are completely compatible with a goal of public service, especially over the long term.

Evaluating Goals and Objectives

As time passes, goals and the means selected to achieve them are subject to evaluation and change. This fact is necessary for any undertaking that expects to maintain any degree of dynamism. The truly flexible enterprise must be able to adjust goals as well as implement objectives to achieve them. This latter course is more difficult.

The establishment of goals and their respective objectives is a continuous process. Goals and objectives must be evaluated regularly. The following questions must be asked:

1. Are the goals and objectives still correct for the particular situation in the local environment?
2. Has the local environment changed?
3. Is the implementation process working? (This point is especially important for the objectives.)

Scrutiny of the goals, objectives, and implementation as an ongoing process is shown in Figure 1.2. The goals and objectives are implemented through organization, planning, and the establishment of guidelines and controls. Errors are detected through the collection and analysis of information from operations and other sources. Revision of goals, objectives, or the process of implementation is then carried out, based on comparison of desired performance, actual measured performance, and the evaluation of various options. This evaluative process should be continued. At the very least, a formal review should take place each year.

Policies

Policies are guidelines to ensure that a transit agency's objectives are being met. For example, to improve the process of recruiting, and thereby to ensure a ready supply of qualified maintenance personnel, a policy may be adopted of working with local vocational high schools to encourage young people to study diesel engines. This may include having high school students work in the maintenance department as part-time apprentices to ensure familiarity with real-world problems. The students are easily recruited for full-time jobs when they finish school. Another objective may be for better public information, resulting in a policy that calls for all transit vehicles to be equipped with destination signs on the front, rear, and both sides so that the destination of the vehicle is visible to patrons approaching from any direction.

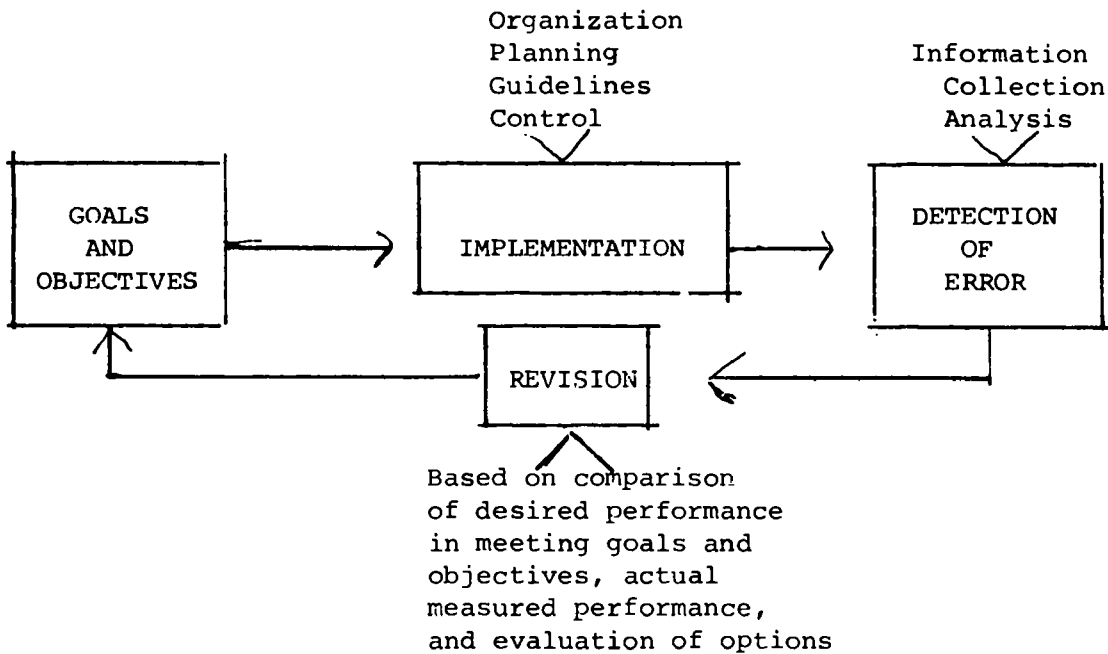


FIGURE 1.2 Reviewing goals and objectives.

As with goals and objectives, policies should be subjected to regular scrutiny as part of the overall evaluation process. Transit firms must be especially sensitive to government rules and regulations in the establishment and evaluation of all policies. A long-standing policy of only hiring male bus drivers between the ages of 28 and 35 will obviously run afoul of current federal regulations mandating that there be no discrimination in hiring on the basis of sex or age.

Consumer Behavior

A large part of what any transit enterprise must do to reach its goals is directly related to public attitudes and actions toward the service and public use of the service. It is important to find out what makes people act the way they do. This investigation should provide valuable clues to transit management in marketing its service, particularly in terms of understanding and meeting transportation needs of the public. Because the aim of a service enterprise such as transit is to serve the public, careful consideration of the consumer is essential.

Management should know precisely what consumers of transportation service desire. This need goes beyond mere demographic information to investigation of what given groups (market segments) desire in their public

transportation. Transit management then may determine what the firm must do to satisfy the desires of some or all of the population segments. Transit demand can be forecast on this basis, along with the cost of serving the demand. Estimates of revenues or costs can be made, and adjustments in plan or practice can be undertaken to arrive at the best short-term alternative for transit, in view of its goals and objectives.

In considering consumer behavior, the first step will be to examine a simple behavioral model. This model will then be applied as a transportation decision-making model. Although it often seems that consumers do not act rationally, all behavior has as its motivation the solution to problems. Some of the problems require travel as a solution, and there may be a role for transit in such cases.

A Simple Model of Behavior

A diagram illustrating the simple model of consumer behavior is shown in Figure 1.3.

Problem. Starting at the left of Figure 1.3, we see that all of us are constantly beset with big and small problems. They may range from severe physical pain or situations of physical danger to the more ordinary problems

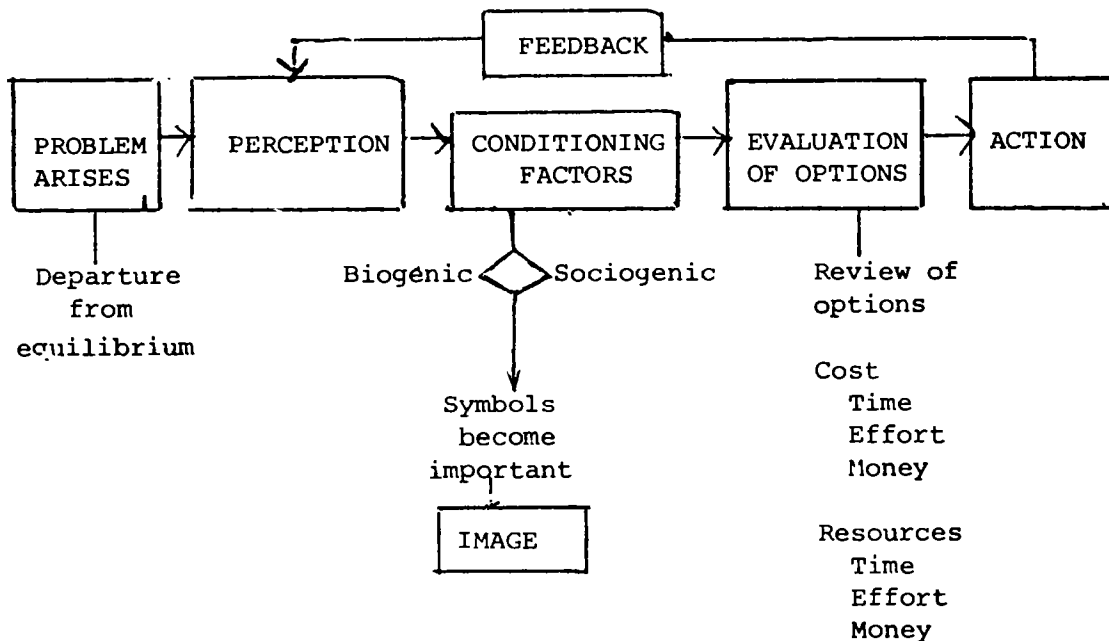


FIGURE 1.3 Simple behavioral model.

of life. In the latter category would be such things as hunger, being too hot or too cold, wanting a cigarette, being thirsty, or other mundane matters. These problems are pulling and tugging at us constantly, and pulling us as consumers away from the desired state of equilibrium. Some of these problems may be solved through the purchase of a good or service. At times one of these problems becomes significant enough so that the individual perceives that some action is needed to solve the problem. Once the problem is perceived, several steps remain in the problem solving process. These factors are critical for management to understand.

Perception and conditioning factors. Before a consumer can act on his perceptions of a problem, there are certain conditioning factors that influence his attitude. These factors act as a kind of pre-programming or filter that will affect action by helping the consumer determine what is acceptable. Some of the conditioning factors are biogenic; they are related to physical factors determined by size, strength, age, and so forth. Biogenic factors will naturally rule out certain actions to solve problems.

The most important conditioning factors are the sociogenic ones, that is, those elements affecting behavior that are determined by the society in which a consumer lives. All people get hungry, but what they eat, and when, and how they eat it, is a product of the society in which a person lives. Persons in the United States are conditioned by Western civilization and the Judeo-Christian ethic. They also are affected by national and regional conditioning factors. For example, for breakfast in Philadelphia and eastern Pennsylvania one might have scrapple; in the South one might have grits. Specific areas also have conditioning factors and clues as to what is acceptable. Using public transit is quite acceptable to persons in all walks of life in New York City; the same might not be true in Phoenix or Des Moines. On a more personal level, there is the peer group to which a person belongs and the pressures of the peer group to conform to its patterns and interests. Finally, there is the reference group, those with whom a person wishes to identify.

As a filter for what is acceptable, the conditioning factors are extremely important. In the behavioral process, as the model shows, this is the place where activities or products may be eliminated because of social forces at work pressing consumers to accept or reject certain actions. Moreover, symbols become very important in relation to the conditioning factors. For example, if one's peers drive certain types of cars, there are pressures to drive a similar type of car. Image also becomes an important factor. There is a general tendency among younger Americans to be interested in the new and the different. The image of

modernity is, therefore, essential in the process of selling certain types of goods or services to younger people. For example, sellers of all kinds of goods and services constantly advertise their products as "new and improved."

Evaluation of options. The next step in the behavioral process for the consumer is the evaluation of options. The conditioning factors filter out the unacceptable. Of the options remaining, the consumer must review the cost of each in terms of the time needed to carry out the various acceptable actions, the amount of effort that will be required for each option, and the expenditure of money that is necessary. This mental calculus continues with a review of the resources of time, physical effort, and money that the consumer possesses. The options that are acceptable and which bear costs within the range of the consumer's resources are those options that are subject to selection by the consumer. For both the conditioning factors and the evaluation of options, the options must be known to the consumer. Unknown options, no matter how good, cannot be considered.

Action and feedback. After evaluating various options, one will be selected by the consumer. Action will then be taken to solve the perceived problem. The results of the action will provide feedback on whether the problem originally perceived has been solved. If the consumer has had his problem solved, he can return to a state of equilibrium; if not, he must to go through the process again to find another action that will provide a suitable solution. Action or actions that provide reasonably good solutions to problems and which are modest in the resources required, are likely to become habitual. Once such a satisfactory solution has been found it may be difficult to encourage consumers to try different actions to solve their problems.

Using the Behavioral Model

Transit managers and policymakers must understand and be sensitive toward several areas in the behavioral model. The conditioning factors are extremely critical. Transit does not have a generally good image in the United States today. Transit is apt to be filtered out of acceptable behavior, especially by the middle class who perceives transit as a service for the poor or the unfortunate. A blue collar worker may think he needs to drive an automobile as a status symbol. Peer group pressure also may make it difficult for many consumers, who would otherwise seriously consider using transit service, to use it. The same is true of the reference group. Except for commuter rail service from affluent suburbs, it is unlikely that most consumers will have referents who are mass transportation users. Or, put in terms of popular culture, how many television or

movie heroes use the bus to go to work? Indeed, popular culture may place transit in a bad light if it is touched upon at all. Clearly, much work has to be done to improve transit's image. This is not an effort that will be accomplished easily on the local level, particularly where resources are slim. Work on overcoming the image problem of transit is a national problem.

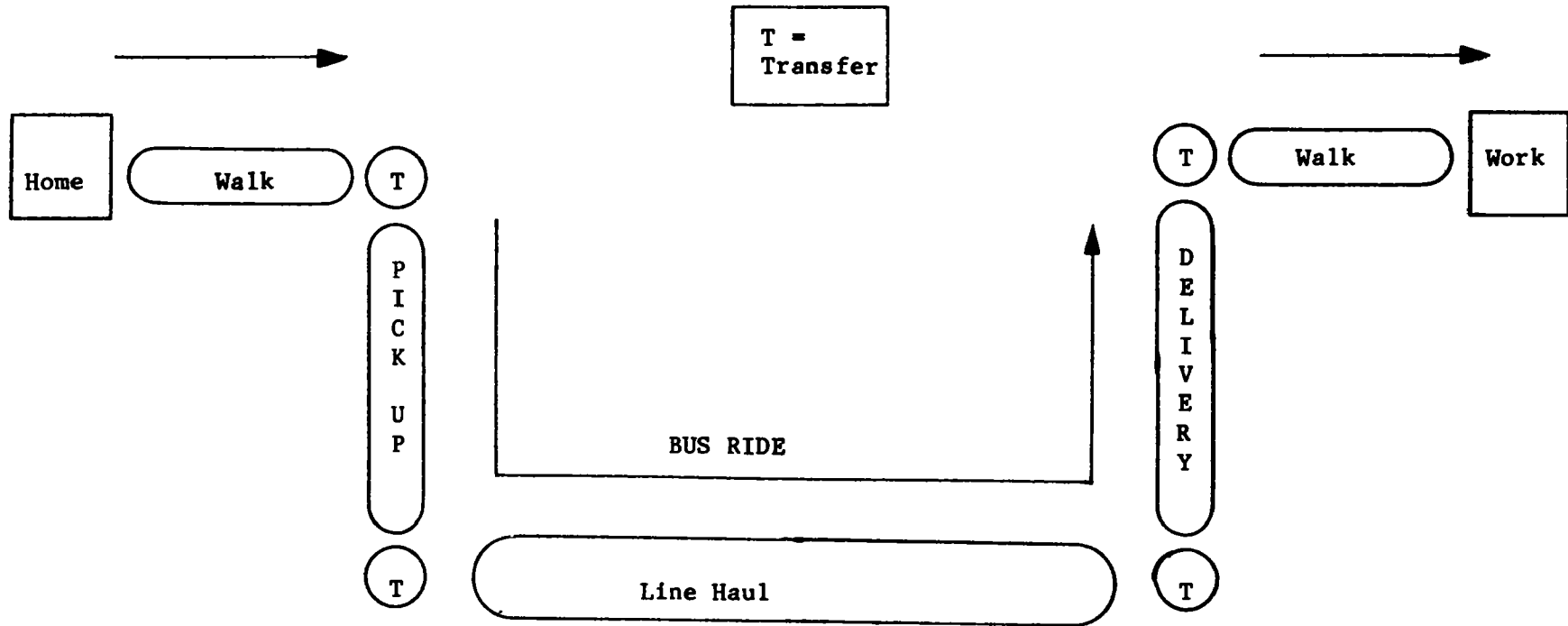
Consumer evaluation of options is another area that requires understanding and work by transit management. It is essential that they be provided with as much information as possible so that in their calculation of time, effort, and money costs they may consider transit as a viable mode choice. Providing information on transit as an alternative is probably less difficult than working on the problem of image, but it is still a challenge. Both the conditioning factors and the consideration of transit as an alternative require a management strategy that is directly related to consumer behavior. The service must be shaped to meet not only consumer needs, but also the ways in which consumers make consumption decisions.

Transit management should make vigorous efforts toward affecting attitudes so that mass transportation is accepted by various elements of society. In setting goals and establishing policy, therefore, practices that will improve transit's image and acceptability should be carefully considered. Through advertising, community relations efforts, and exemplary performance, the attitude factor relating to mass transportation may be affected positively. Such activity has to be recognized as part of the goal and objective structure of the transit agency.

Promoting mass transportation as a reasonable travel alternative offers particularly fertile ground for goal setting and policy effort. By careful manipulation of the various tools at the manager's command (such as routing and scheduling, equipment selection, personnel, and so forth), it is possible to change the time, money, and energy costs of public transportation and to provide a better and more useful service that will appeal to a larger slice of the traveling public.

Journey Analysis

Before leaving this point, it would be useful to look at the component parts of a trip to see where and how action may be taken to improve the position of transit as an alternative. One way to do this is to view a journey as a series of pieces that fit together as one trip. Figure 1.4 illustrates this approach. Please note that time, energy, and, to some extent, money costs are associated with each of the pieces. Transit management can affect all parts of a journey. By reviewing and analyzing each of the parts of



Time Cost	Walk From Home	Transfer To Pick Up	Pick Up	Transfer To Line Haul	Line Haul	Transfer To Delivery	Delivery	Transfer To Walk	Walk To Work
Energy Cost	Walk From Home	Transfer To Pick Up	Pick Up	Transfer To Line Haul	Line Haul	Transfer To Delivery	Delivery	Transfer To Walk	Walk To Work
Money Cost	Walk From Home	Transfer To Pick Up	Pick Up	Transfer To Line Haul	Line Haul	Transfer To Delivery	Delivery	Transfer To Walk	Walk To Work

FIGURE 1.4 Journey analysis: time and energy costs.

the journey in terms of the established goals, a manager may spot areas in which use of the factors under his control might enable him to make service more attractive by reducing the time, money, and energy costs. An example would be running a bus in local service in residential areas, operating as an express on a freeway, and then operating local service in the central business district; such service would provide service close to residences and work places and cut the need to transfer between local and express services. This subject will be discussed again in later chapters. It is mentioned here as an example of the areas a transit manager may consider that can affect consumer demand.

The Need To Institutionalize Transit

It is not enough to gain early support for transit initiation or improvement. To ensure continued support from the community, especially financial support, it is essential that transit be made an integral part of community life. In brief, transit must be institutionalized.

Organization or Institution

The words "organization" and "institution" often are thought to be synonymous; however, there is a significant difference between an organization and an institution. An organization is a mechanism for accomplishing some purpose. It involves given practices, an administrative unit, and interdependent action of people and things to attain some implied or expressed goals and objectives. A bank, a grocery store, a transit agency is an organization, but it is not necessarily an institution.

An institution, on the other hand, is more nearly a natural product of social needs and pressure. It is an adaptive organism that is responsive to needs. Moreover, the people associated with an institution--both employees and those who use it--gain personal satisfaction because of the values represented by the institution, not just from the tasks it performs. A mere organization with a technical function to perform becomes an institution as it takes on values above and beyond its technical function and comes to symbolize the community's aspirations and sense of identity. When an organization takes on symbolic meaning in a community, it has some claim on that community to protect and enrich it, on grounds not purely technical or economic. In addition, if some organization or entity is seen as good for a community because it is a vital part of that community, the community will be disposed to support it. Therefore, because transit requires public financial support, it is essential that it be viewed by the community with favor, as an institution, for support to continue.

Process of Institutionalization


The process of institutionalization requires:

1. Leadership--a skillful and highly committed management of both internal and external relationships.
2. Doctrine--a set of themes, images, and expectations on the goals of the institution and the styles of action.
3. Program--the translation of doctrine into concrete action.
4. Resources--the human and material means to achieve the established goals.
5. Internal structure--the organizational structure and processes necessary to take action.

Transit management and policymakers will recognize that the community lacks positive attitudes toward transit and wish to take steps to correct the situation through the process of institutionalization. Their efforts may be thwarted by the personal characteristics of the top transit manager, who may lack the skills needed to work with other agencies and institutions in institutionalizing the transit agency. Time also is likely to be a problem: there is not enough of it to go around for managers to do much more than fight fires and handle day-to-day problems. The need for the manager to become involved in the community, so necessary in the process of institutionalization, may be forfeited because of lack of time. Managers obviously will concentrate efforts on operations and service improvement, but, unless institutionalization is identified as a goal, the process may stop here. Managers must spend time outside the transit firm in the community, as well as time inside its operations.

In addition to lack of goals and lack of time, management's efforts at institutionalization will be hampered by lack of funds to carry out institutionalizing actions, politics that preclude certain actions, bureaucratic red tape, and an overall lack of leadership and direction from policymakers and political leaders. The institution-building process is not easy nor quick. It can happen by chance, but it is not likely to occur unless the intent is to build an institution.

Building the support needed for institutionalization means doing many things and doing some of them very well. Involvement is one aspect of the process of institution building. Every person in the community should be made to



feel some sense of involvement with the transit system. The effort to involve as many people as possible from as many different segments of society as possible requires the use of mass media as well as personal, grass roots relationships with as large a public as possible.

Responsiveness to public needs is another essential part of institution building. This means caring about the individual and his problems through operational responsiveness, meeting needs that are important to the community and the individuals that comprise it. Responsiveness means doing a lot of little extra things, such as answering every complaint as personally as possible, providing community groups with information and speakers about transit, and otherwise showing the value of transit in the life of the community.

United and vigorous team action on the part of transit management is a necessity. External groups and persons who can help transit must be aggressively located and pursued; the initiative lies with transit personnel, particularly top management. Seeking ways to become involved also means that transit must act rather than react to situations. Taking risks is involved, and the transit organization must be pervaded with the notion that innovation is a desirable quality in meeting the public needs and in making transit an important element of the lives of individuals and an asset to the community.

Carrying the ball in building support should involve both management and policymakers. Members of the policy-making body--whether it be the board of directors of a public transit agency or members of a city council--are generally well known in the community; their attitudes and interests may have strong influence. Unfortunately, the members of a policy-making body may have limited time to spend on the process of institutionalization. Transit management spends its working time with transit, but it can work on building support only if there is sufficient personnel and time to do things other than care for day-to-day operations.

Strategies for Institutionalization

There are four strategies that may be adopted in the process of institutionalization: (1) improving operations, (2) improving service, (3) educating the public, and (4) integrating transit with community goals.

Improving operations. This strategy is based on the philosophy that only by the public using the service can real support and belief in the value of transit be built. Part of the basis of this philosophy is the knowledge that there is a close relationship between the amount of service

provided and use of that service. The quality and quantity of the service provided must be of such a level that the public will see that transit is a practical alternative to the automobile. The fact that the transit agency is doing the best job possible to build a convenient and useful service of real quality must be conveyed not only to the public but to the employees of the transit entity, so that the employees recognize the value of their work. Inherent in all actions must be the knowledge that the system management wants to do the best job possible.

Improving service. A second strategy is one that depends largely on external events. The philosophy is that improving service is all that can be done so that the transit system is ready when some desirable, external, uncontrollable event occurs and thrusts the transit agency into a position of such value in the community that institutionalization takes place. Such an event may be a shortage of gasoline for automobiles or lower personal disposable income. In either case, the public must turn to transit. This strategy depends primarily on a reaction to outside events rather than action by the transit agency.

Educating the public. A third strategy involves improvement of operations and an effort to educate the public about transit. The most important aspect of this strategy is its direct attack on the problem of lack of public understanding of mass transportation, especially on the part of nonriders. Upgrading operations is an integral part of this approach. It is joined by a top-notch communications plan and system. Ideally, this strategy calls for a fast, intensive program that effectively reaches all the people in the community and provides good indoctrination on the values of transit. More possible and likely is a comprehensive educational and marketing program designed to increase awareness of transit over an extended period of time. The outreach program would include such elements as:

1. Educating children through the schools.
2. Using advertising that educates the public on the value of transit as well as attracting and inducing additional ridership.
3. Inspiring every pro-transit person to do some personal crusading.
4. Training employees to develop a set of pro-transit values and pass those values on to the community.
5. Providing direct information on a variety of transit-related topics to the transit employees.

6. Helping to develop a positive image in the community for the employees.

Integrating transit with community goals. The fourth strategy involves improving operations, increasing understanding, and promoting social change. In this approach the strongest emphasis is on the integration of transit with overall community growth and development goals. In essence, transit is involved in upgrading the quality of life in the community by helping to limit urban sprawl and cut the levels of pollution or congestion, or by playing some other part in community life where transit can fulfill an existing need. This strategy embraces all the aspects of strategy three and combines transit with community goals.

Of the four strategies, the last two are the best and also the most difficult. The first, which is based on improving the quality and quantity of transit is the obvious base of all the others, but it lacks any overt outreach and does not attempt to pursue means of educating the public or push the values of transit to the community. The second strategy is useful only if the external, uncontrollable event takes place; otherwise it is mere wishful thinking. The last two strategies require much effort and time on the part of management because the results may not be seen for a long period. Indeed, it may take years of effort to achieve the desired end.

Assuming policymakers support transit, the most important element in the process of following a strategy to produce institutionalization is the capability and personality of the general manager, the person who is the obvious center for moving the system forward. The ideal general manager is a person with a high level of interest and foresight, one who can act as a catalyst in getting other people and groups active in supplementing and extending his ideas. Coupled with these attributes is that mark of the successful executive: the ability to make positive use of a negative event. On top of everything else, good luck is necessary.

Managerial Strategy for Mass Transit

The purpose of this first chapter has been to discuss matters of critical importance to transit for consideration by policymakers as well as managers. The stress on establishing goals and objectives for transit at the beginning is to point out the importance of direction and a sense of real purpose to transit operators. The discussion on consumer behavior was introduced to stress the basic need to recognize that transit is a consumer service; concern for the consumer is absolutely essential if transit is to succeed in serving the public. The aim of transit is not

running buses up and down the street; the broad objective of transit is helping to provide mobility to people.

To do an effective job, transit management needs a strategy to use as a set of basic principles by which to direct its efforts. Figure 1.5 illustrates this strategy. The figure shows the major elements of concern that affect the overall strategy. It then shows how the strategy is interpreted into action.

An effective transit strategy must be consumer-oriented. This means that policymakers and managers must, to the best of their abilities, gear transit service to the consumer. To meet consumer needs most effectively, transit management must understand the underlying factors of consumer behavior. In addition to the factors of time, effort, and money cost that affect the choices a consumer makes, careful thought must be given to quality elements of transit that are critical to the consumer. These elements include dependability of service, flexibility, and access. Dependable service is essential to attract and hold customers to transit; it means, very simply, running on time. Flexibility means being able to shape service quickly to meet consumer needs. Access means that the transit service should be within easy reach. This may be achieved either by routing schemes, the provision of good interchange between modes, or offering door-to-door services.

To do its job properly, the transit organization must be structured in a market-oriented way. Organizational structures in transit are typically organized around the operation of the service, rather than marketing concerns. market orientation implies that the organization's activities of transit are geared to meeting the needs of consumers rather than meeting the needs of the transit operating agency. Joined with marketing orientation is the need for tight managerial controls based on good information and data collection, and for close adherence to guidelines, objectives, and other yardsticks of performance.

Not to be forgotten is the need to make institutionalization an explicit goal. Without that goal, institutionalization can happen only by accident and not by design. Because the necessary public support depends on the community seeing transit as one of its vital and integral parts, not making institutionalization a specific goal is a blunder of the first order.

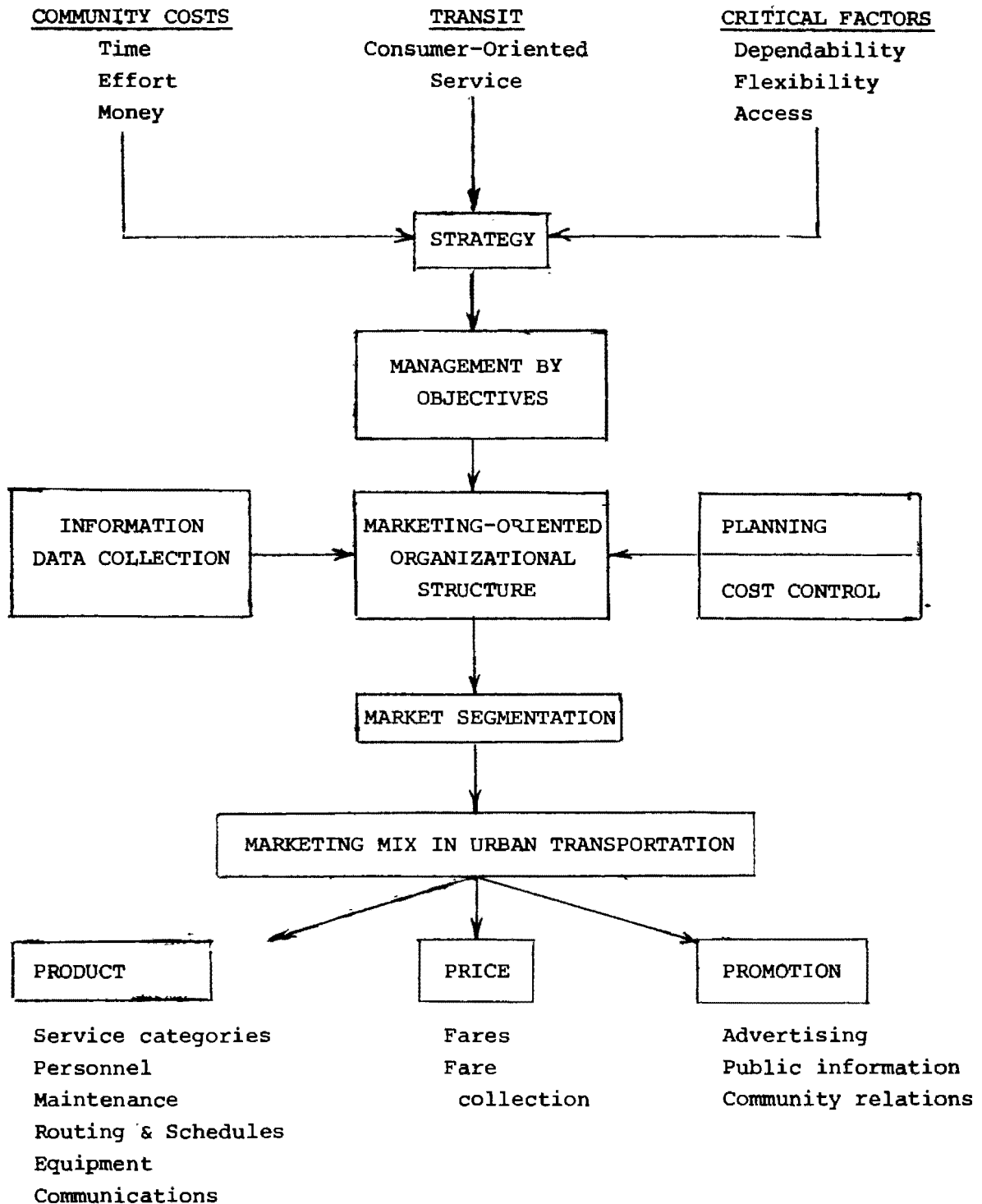


FIGURE 1.5 Strategy for management.

Bibliography for Chapter 1

- [1] Cravens, D.W., and Harper, J.F., Determining Public Transportation Goals for an Urban Community, Knoxville, TN: University of Tennessee, The Transportation Center, January 1975.
- [2] Managing Nonprofit Organizations, edited by Borst and Montana, New York, NY: AMACOM, 1977.
- [3] Peat, Marwick, Mitchell and Company, with D.H. James, Transportation Consultant, Analyzing Transit Options for Small Urban Communities, Vol. One: Transit Service Objectives and Options, Washington, D.C.: Peat, Marwick, Mitchell and Company, January 1978. (NTIS PB 291 451)
- [4] Peat, Marwick, Mitchell and Company, with D.H. James, Transportation Consultant, Analyzing Transit Options for Small Urban Communities, Vol. Two: Analysis Methods, Washington, D.C.: Peat, Marwick, Mitchell and Company, January 1978. (NTIS PB 291 451)
- [5] Peat, Marwick, Mitchell and Company, with D.H. James, Transportation Consultant, Analyzing Transit Options for Small Urban Communities, Vol. Three: Summary of Management and Operations Experience, Washington, D.C.: Peat, Marwick, Mitchell and Company, January 1978. (NTIS PB 291 452)

The numbers in parentheses are NTIS order numbers.

CHAPTER 2

THE FIRST STEP: GAINING PUBLIC INTEREST AND SUPPORT FOR TRANSIT

Introduction

It is extremely difficult to operate mass transportation as a profit-making, private enterprise in the United States today. Continuation (not to mention improvement) almost always requires public funds. In cities without transit, it is rare for an entrepreneur to come forward to offer service.

This chapter, therefore, is not addressed to managers or to the process of management. Rather, it is aimed primarily at public officials or groups interested in starting or revitalizing a transit system through public action. This chapter suggests ways of identifying need and mustering support for mass transportation so that public officials may take the needed action.

Even though the principal thrust of this chapter is toward public action, it does not rule out a private entrepreneur's use of some of the suggestions and guidelines. It is, of course, assumed that an entrepreneur would see the opportunity for a reasonable return on investment in a given situation and take the appropriate business action. Nonetheless, the entrepreneur will need some public support for his enterprise, and public action is usually necessary for the franchise to operate on the public streets.

A Community's Need for Transit Service

The Problem of the Small City Environment

The need for mass transportation often is difficult to appraise objectively in the small city environment. On the other hand, the need for mass transportation generally is quite obvious in a large city. One rule of thumb is that if the members of a community want transit, and are willing to pay for it, that community--regardless of its size--needs transit.

Mass transportation generally is (improperly) assumed to be a service almost exclusively for those who have no alternative transportation available.¹ However, even though transit should be geared to meet the needs of all of a city's residents, it is practical to begin building a case for transit on the basis of the most obvious and easily detected need.

This task is relatively simple in a large city because there is a large number of people who lack alternatives to public transportation. Those without easy access to an automobile are the old, the young, the handicapped, and the poor. To this group should be added the substantial number of single-car families in which one member of the family, generally the housewife, has no car available for a large portion of the week. While in total number this may be a minority of the population in a large city, it is generally visible, often vocal, and may be a potent force at the ballot box. In their quest for reelection, big city politicians usually consider it wise to court and win the support of these groups. Moreover, large cities have the concentration of population and economic activity that makes a high level of transit service feasible as well as necessary. Because the need for transit is readily identifiable, large cities are likely to take the necessary steps needed to preserve and improve the service.

It is more difficult to tell when transit is needed in a small city and, therefore, harder to gain public support for it. Even a small city will have its share of the aged, the young, the poor, and other groups who do not regularly enjoy the mobility afforded by the automobile. Chances are, however, that these groups will be less visible, less vocal, and less organized than their peers in the big city. Without strong pressure from the general public as well as groups to whom transit is absolutely essential, local government is not likely to meet the mobility needs of the nonautomotive population.

However, local pride in growth and size and the desire for a progressive image may be powerful enough to foster serious considerations of transit service or its improvement, as a symbol of growth and progress as well as a necessary public service. The task of those promoting transit in smaller cities is to determine if the need for new or improved transit service exists and can be documented.² The next job is to build a strong case to convince the community and the local government that transit can play a vital role in the small city.

Predicting transit need or demand appears to be as much an art as it is a science. Even relatively sophisticated means of predicting demand appear uncertain. Furthermore, it may be difficult to get the public to consider transit

seriously in a community without transit; it is an option that is unknown. Adding to the difficulty, the cost of in-depth research, review, and analysis of some of the more accurate predictors of demand simply may be too steep to be considered in the early stages of transit promotion and development in small cities. Federal funds are available to conduct transit planning studies, but only public bodies can apply for such funds. It is necessary to get the cooperation of local government to apply for the funds and to pay the local matching share of project cost required by federal law.

Those who wish to promote transit prior to gaining local government interest must fall back on the second-best alternative open to them: they must develop a case based on relatively inexpensive and readily available information. For example, basing an argument for transit service strictly on the potential need of those without access to automobiles is narrow and short-sighted; it neglects a potential clientele among auto owners. It is a conventional approach to a conventional problem, which, if followed to its conventional conclusion, will lead to the conventional service and eventual failure. Yet, under conditions of limited funds--certainly not unrealistic in the small city situation--focusing on the portion of the public without access to automobiles may be the only realistic alternative. The critical point is not to become trapped in the bounds of the conventional approach after the first hurdle is cleared.

In any case, the group interested in promoting transit must recognize that the public's needs and wishes may be relatively obscure. Easy-to-obtain information, coupled with some particular local condition, both pointing to a clear need for transit service, is needed to stimulate public interest and support. After initial support is gained from local government, application can be made for federal funds to carry out a more formal and complete study.

The Need for Transit

The first task is to put the need for transit in some quantifiable form so that it has meaning for the members of the community at large. Data are required that give an indication of the number and location of the people within the metropolitan area who are most likely to have a vital need for a public transportation system. Such information is not likely to be readily available even in the smaller city. Transit promoters must use the best available information that supports their case in a reasonable manner.

Groups in need of transit must be identified and documented. Documentation should include information on those younger than 16 years of age, those older than 65 years of age, the number of persons or families without

automobiles, the number of single-car families, and the number of families living at or below the poverty level established by the federal government. Data on the proportion of income expended on transportation by low-income groups also are important. It is of great value to have information on how many persons in the community cannot go to jobs, medical services, shopping, or recreation facilities because of a lack of transportation.

Some Sources of Information

Some excellent information may be gathered from at least eight sources.

The Census of the United States. The decennial census provides a gold mine of information. The statistics on income, age, and car ownership are useful in making rough predictions of need. The main weakness is the time span between the taking of the census and the period at which action is sought. Furthermore, in smaller cities the data breakdown--into relatively small census blocks--may not be done, increasing the difficulty in pinpointing the location of need.

City planning department. If the city has a vigorous planning department, or even a single city planner, that resource probably has information on the various segments of populations for whom transit may be needed. Growth patterns and probable future mobility problems also may be available here, as well as the location of persons needing transit. If the population of the city is large enough (more than 50,000), a federally supported comprehensive land use and transportation plan will have been undertaken for purposes of receiving federal funds. This plan should prove of enormous value and may contain all of the information needed.

City engineer. If the city has no planning body, the city engineer's office may have valuable information, particularly on the location and type of housing and other construction. This office also may have data on traffic flows within the city.

State highway department. The state highway department often routinely collects certain basic information on personal travel flows through their regular origin/destination planning studies. The value of the material will depend upon the demographic detail gathered in conjunction with the origin/destination study, as well as how recently it was performed.

State welfare agencies. These agencies often collect information on income and related matters that would be of value in determining transit need, especially for

identifying the location of residents without automobile transport.

State departments of labor or economic development. These agencies often collect data on various important aspects of the urban situation that may be helpful to transit including income, employment, and growth rates. Often, they will have prepared economic base studies that can be very useful.

University research bureaus. Most major state universities have a bureau of business and economic research, which may have much demographic and economic information available for the asking. They also may have prepared economic base studies of many of the cities within the state, or have studied various trends on a regional basis. Some universities have urban affairs centers, or similar bodies, which concentrate their efforts on urban matters. Furthermore, theses and dissertations by graduate students, although unpublished, are available at university libraries and may provide valuable information.

Transit company data. If a transit company already is in operation, it should have information available on ridership or other potentially useful data on transit need or demand. The information is apt to be sketchy for the smaller transit properties.

Other sources. The information that can be gleaned from some of these sources often will be inadequate in one way or another, usually because the information is not broken down finely enough. For example, some states and state agencies may not collect information by city, but by county. It may be very difficult to put together a good case for a given city when only aggregate county wide figures are provided. Usually, the larger the community in question, the better the information that will be available. A place in which some degree of planning has been carried out by professional planners should have the basic information available for those hoping to build a case for transit.

A number of groups may help gather supplementary information. Surveys may be conducted by volunteers from service clubs in the community. For example, the League of Women Voters, the Jaycees, fraternal organizations, and service clubs often have done yeoman service in collecting information of vital importance to a community. Indeed, some of these local civic associations may have useful information already available that they may be willing to share. City departments also may be enlisted--depending upon the interest of the city in the promotion of transit--to collect or otherwise make information available. (Useful information may come from the most unlikely sources;

it often is difficult to know where to begin, hence, the need for early cooperation from at least one public official.)

The financial support of concerned interest groups would be very useful at this stage. New or improved transit service is one means of improving access to the downtown area, and a downtown merchants' association or chamber of commerce, worried over the threat of suburban shopping centers to investment in central city property and businesses, might provide support. If one of these organizations could be induced to finance some professional assistance, even on a modest scale, it could be used to pull together the available facts and prepare a more sophisticated case for transit improvement. Voluntary contributions by interested citizens are another means of finding money. Other potentially interested groups may include senior citizens, environmental protection organizations, and human service agencies, or combinations of all of these.

The Catalyst

Even with the problems of inadequate information, a fairly good case may be put together in terms of the current or potential need for new or improved transit service. But mere information may not be enough to convince or enable local government to act. Bold and imaginative action by public officials on the local level in the United States is rare, because such officials usually choose not to act ahead of their constituents. The American public appears to want things that way; it is not a reflection on public officials whose jobs depend on meeting the wishes of the public. As a result of this prevailing attitude, some event often is needed to help legitimize any sort of out-of-the-ordinary action supporting public transit.

What must be done, therefore, is to find some event or group of events that may be related to the transit issue. The event can be used as a catalyst to stir action that will not only gain public support for transit, but also help the city fathers and public officials to act. The event need not be something totally unexpected or undesired by public officials. Indeed, many of them will seek ways to generate an event dramatizing a need so that they can legitimately take the needed action. Some possibilities are listed below.

Minimal business activity. Failure of a business to expand within a town may be blamed on lack of room for both plant expansion and parking areas needed for increased numbers of workers, many of whom will travel by automobile to work. The loss of potential jobs can cause a very obvious and serious inherent economic loss to a community.

Decreased economic consumption. Falling retail sales in the central business district (CBD) can be clearly linked to the difficulty persons have in access to center city stores. (Care must be exercised in using this factor, because mass transportation service is only part of the package of action needed to boost a sagging CBD.) The movement of a well-established downtown business to a suburban location is another event that may dramatize the need for transit.

Urban renewal. Urban renewal may spark the consciousness of public officials, influential persons, and the entire population to a general renewal of all aspects of the city's life, including transportation. Examples of successful renewal efforts involving transit in other cities, particularly ones close by, can have a pronounced positive effect.

Community spirit. Desire to improve the city and its image may stimulate a community to rebuild not only physically, but psychologically. Economic growth may be the desirable end result, but along the way the community builds pride, vigor, and support from having the finest possible parks, recreation programs, schools, and mass transit.

Employee discontent. An employees' strike at a privately owned transit firm, may force the firm out of business or cause such a loss in patronage and revenue that failure is inevitable. The need for public action can be seen quite clearly.

Immobility and job market. The jobless or underemployed may need greater mobility to find jobs or to find the best job they are capable of holding. Studies and reports from various groups--on a national, statewide, or local basis--may be available. Again, transit is merely part of a package for helping the jobless find prospective employers. The argument always can be made that it is better for people to be taxpayers rather than tax users, and that money spent on providing needed support services is a wise investment.

Reduced economic growth. Loss of a potential new enterprise to some other community may occur because of the lack of public transportation or because of a general lack of urban services that a firm may desire. In the competition to attract new enterprise, cities must provide a complete package of urban services. This loss can be dramatized by an example of what the new enterprise would have meant to the community.

External funding. The promise of outside financial aid may please local politicians who like to have outside funds come into their city. The promise of federal grant funds or

perhaps state funds for transit improvement always is a welcome event and one likely to help swing the whole transit program.

This list is not meant to be exhaustive. What the catalyst might be depends on the given community. In any case, some event is needed that dramatizes the need for action related to transit. It must be carefully handled to gain the maximum mileage as a key part of the case for transit.

The People To Have in Transit's Corner

Many problems and much of the opposition to transit or transit improvements result from lack of information and understanding. In proposing any plan for the initiation of transit service or for a major improvement to transit, it pays to have the following people briefed and on the side of the change: (1) city officials, (2) other officials, (3) state and national political leaders, (4) local power brokers, (5) organizations, (6) news media, and (7) other influential people.

City officials. The mayor, city manager, key councilmen, and the heads of city departments must be kept informed.

Other officials. The need for transit does not stop at city limits. The support and cooperation of county and other officials of adjacent government jurisdictions may be necessary to formulate any sort of reasonable transit program.

State and national political leaders. Support by members of the state legislature, the office of the governor, and members of Congress is especially vital if there is hope for state or federal action in gaining needed funds or legislation.

Local power brokers. Lawyers, businessmen, and others, who are rarely in public office but who strongly influence the decisions made by local government, may comprise a very small group or a fairly large one, depending upon the community. Anyone involved in the community for any length of time certainly would know who these people were. Their support is critical. As a corollary, the professional opponents to any change must be quietly placated, or defused as an opposition force by the intercession of the power brokers.

Organizations. The local chamber of commerce and other organizations that are generally interested in promoting the community and its welfare should be included.

News media. The news media should be contacted early and should be kept well informed of all that goes on. The media, particularly newspapers, can be a vital force in focusing community interest and action on transit.

Other influential people. This group might include members of old families whose opinions are respected, labor leaders who may speak for a fairly large percentage of the community, leaders of minority groups, prominent businessmen, and other respected persons speaking as individuals and as members of key groups.

Opposition to Transit Improvement

Opposition to pro-transit plans may develop. The general nature of the most likely opposition and the counterarguments are listed below.

Resistance to public expenditures. Some individuals may be opposed to public expenditures for what traditionally has been a service of private enterprise.

This is perhaps the most common point of opposition. Many persons who remember transit as a business for profit assume the current or expected deficits of a transit operation are a local anomaly. It is generally conceded throughout the United States that transit cannot continue as a private enterprise. All businesses confer benefits to the public that do not find their way into the revenue accounts, but, as long as revenues exceed costs, there is little need to worry about these external benefits. Urban transit is rich in externalities--greater mobility for all citizens, better access to downtown areas, and so forth--and always has been. Today, however, transit is caught in a cost squeeze. Raising fares to increase revenues and cutting back service to cut costs only drives riders away, further reducing revenues and lowering productivity. Rather than to forego general mobility and other benefits of transit, it is best to support transit publicly. The public benefits will outweigh the cost.

Opposition from taxpayers. Certain groups may complain that they are being taxed to help support the service and claim they will not use it.

These groups must be made to feel that they are an integral part of the community. Because mass transportation is for everyone, all members of the community stand to benefit, and those who benefit should pay. Even families with more than one car will find it useful as a standby and may be relieved from having to ferry children or aged relatives about. Most important, however, are the general benefits to the community of improved mobility in terms of economic development, greater access to employment, shopping

and recreation centers. Also, it should be noted that the automobile is subsidized. The costs of snow removal, auto-related police service, and traffic signal and control systems usually are paid for by the property owner, not the motorist. The subsidy for these services may be larger by far than any subsidy for transit.

Costliness of Program. Some people may claim that transit improvement will cost too much.

This argument is resolved when people realize that not having mass transportation service may be even more costly than providing the service. The particular catalytic event that helped dramatize the need for mass transportation service may fit into the counterargument. Particularly effective would be the loss of a new enterprise because of deficient community services, including transit. The income loss to the community, in terms of both wages and taxes, is a strong counterargument.

Those favoring transit improvement must, of course, stress their strongest possible arguments. If a community's influential individuals are firmly on the side of transit, opposition usually can be minimized, especially if the opposition is mere politicking. At all times, the emphasis should be on the benefits of improved mobility to all members of the community. The sting from arguments about the cost of transit improvement can be removed somewhat by the likelihood of aid from the federal and state government. Other positive arguments in behalf of transit may center on pollution and energy. The strength of the pollution argument depends upon the local importance of the issue; if air pollution is not a real issue locally it will be a relatively weak argument in favor of transit. The energy argument is not one that will catch fire, unless the availability of fuel decreases or its price becomes much higher than current levels. Energy arguments may carry more weight if the city in question was seriously affected by a fuel shortage resulting from the oil embargo of 1973-74, suffered shortages in the summer of 1979, or if there is a significant number of influential citizens seriously concerned about energy.

The Heart of the Argument for Transit

Once the active promoters of transit, concerned citizens, and key public officials deem the establishment or improvement of transit service necessary, support must be developed from a broad cross-section of the community. To gain this support, the arguments in behalf of improved transit must be developed carefully. The facts and figures mustered in support of improved transit should be brought together at this point and combined with the catalyst discussed earlier.

The economic and social problems of the community and individuals resulting from the lack of good transit service should be publicized well. For example, the problem may be the relocation of a large downtown retail business to a suburban shopping center. The reason for the change is a lower sales volume attributed to difficulties of downtown access and parking. Relocations of businesses can be shown to have a deleterious effect on the economic vitality of the downtown area and the city's tax base.³

Other transit-related problems should be publicized, such as the fact that citizens without automobiles are severely limited in terms of employment opportunities. Unemployment may cost a community more in welfare and other costs than would provision of transit service. Perhaps one-third of the population is literally taken out of circulation because of a lack of mobility. However, great care must be taken not to advocate transit merely as another form of welfare. Rather, the benefits to the entire community should be emphasized.

Transit proponents must not claim more than transit can reasonably be expected to deliver. In particular, they should make it quite clear at the outset that many of the benefits of an improved transit system will not translate directly into dollars and cents. For example, improving access to the downtown shopping area for a larger proportion of the population may have a strong influence on downtown vitality, financial success of businesses, and the taxable value of the land. However, unless a good deal of careful research and analysis is carried out (which may be most expensive), it is unlikely that the downtown merchants or anyone else will realize the importance of improved access to downtown areas until after that access has become a reality. In short, the benefits may not be realized immediately and in highly visible forms.

Similarly, improved access to recreational facilities may help reduce the rate of juvenile delinquency, or considerably broaden the social contacts available to senior citizens. However, the direct value of the service can be determined only with extreme difficulty. Even though these values cannot be quantified, they must be clearly and convincingly brought to the attention of the public.

Another issue that must be faced squarely is the quality of service. With the long-range view in mind, when the job of transit improvement is done properly, the undertaking will not be cheap. It must be emphasized that to reap any substantial community benefit whatsoever, transit improvements should be entered into wholeheartedly and with the willingness to make relatively large expenditures. To do less than the best possible job with mass transit within various ranges of cost is an invitation

to disaster. Furthermore, to delay the implementation of a program favoring mass transportation practically ensures that the overall undertaking will be more costly than first expected. The arguments should be expressed in terms of need, potential benefits, and the necessity for prompt action.

In all cases, positive arguments must be emphasized. Cost, the major negative argument, should not be glossed over, but it must be made clear that the benefits outweigh the costs.

Presenting the Argument for Transit

The platform for the presentation of the ideas and arguments in favor of public action toward transit is important. There are various sources within the community which may prove to be supportive and instrumental toward transit.

City council. Discussion of transit by the city council, or presentations before that body, usually attract wide attention.

Newspapers. A series of articles, as well as interviews with key promoters of transit, are valuable ways to publicize transit.

Radio and television. When possible, informed proponents of transit should present their ideas and plans through radio and television. On television, films of attractive and successful transit services should be used.

Meetings of civic and social groups. Rotary, Kiwanis, Jaycees and other group meetings are excellent forums for discussing local issues such as transit. The presentation should be prepared carefully, and the use of slides and transparencies will improve effectiveness and impact.

Transit Feasibility Studies

Should a Feasibility Study Be Conducted?

Public officials may attach a great deal of weight to an official feasibility study for mass transportation to strengthen the arguments supporting transit improvement. Studies of this sort can be quite time-consuming. If the situation is at all critical, it may be more frustrating to the public to wait for the completion of a study than to go ahead with less information. The time-honored practice of studying an issue to death to circumvent the need for a meaningful decision should be avoided at all costs. Once the process of building public enthusiasm has started, it should not be interrupted.

Even so, to receive a capital facilities improvement grant from the Urban Mass Transportation Administration, (UMTA), a municipality must have planning completed. (The requirements and procedures for application for the various types of federal grants for transit are covered in detail in the chapter on financing transit.)

If a transit feasibility study is considered necessary, a federal technical studies grant can be obtained to cover 80% of the cost. However, it should be recognized that the process of applying for and receiving a decision on a federal grant also is time-consuming. Frustrations can mount, and the local community may lose its zest for transit improvement.

The main point is not to let feasibility and other studies be used as a means of delay. Such work should only be performed if it is useful and valid in advancing the cause of transit. The wisest course, if any magnitude of study is to be carried out, is to conduct a federally funded planning project that will gain federal approval for a capital grant and other federal aid, where planning is a key qualifying activity.

Where Should Expert Advice Be Sought?

In achieving support for transit from the community and public officials, no official study or plan is necessary. Formal planning is needed for a federal capital grant or operating aid. In either case, however, expert advice is of value and is obviously needed in any sort of formal planning effort. This handbook is designed to provide such help to interested communities. A volume such as this has to be written in general terms because of the many differences between individual communities and their needs; additional help should be sought.

In helping to build local support, one source of "live" aid may be provided by higher level management personnel from a transit firm in the general area. Transit management people can give advice and information on the possibilities of transit and on experience in other places. Great care should be exercised in selecting these people, because their expertise often lies within a very narrow sector of the transit field. Moreover, there is no point in asking for yesterday's competence to meet today's needs. Transit proponents should not be afraid of looking far afield for the best calibre of aid from this source.

A nearby college or university may have business, economic, or government faculty who could quickly and at relatively low cost, provide at least a shirt-tail analysis, furnish certain types of information on what has happened elsewhere and, perhaps, help formulate the details of an

action program. Information on federal and state programs and how to apply for aid also may be provided. Interest in and knowledge of the transit business still is rather rare in institutions of higher learning, but the trend is moving in the right direction. This source of help is worth investigating. A large state university is most likely to be of help.

Some departments of state government also may be able to lend a hand. The state planning office--if there is one--may have expert personnel who are willing to work with a community in providing information, advice, and, perhaps, help in formal planning for various urban-oriented programs on the federal and state level. An increasing number of states are forming departments of transportation, which may provide local technical assistance. The scope of activity of these agencies varies widely, but it may include planning as well as some financial aid.

Consulting firms also may be used to provide both advice and formal planning. The problem with using a consulting firm, particularly a large, well-known one, is that these are usually fairly expensive and may be a bit slow in making a final report. The bigger and more prestigious firms are geared to handle projects of a very large scale, and, frankly, may possess capabilities that are not needed by smaller cities. In the early stages of the development of transit strategy, it would be best to check out a number of firms to decide which can do the job quickly and in a way that suits the particular needs of the situation. Newer, smaller consulting firms may do an excellent job quickly and at low cost, provided they are knowledgeable about the field of transit. Some of the professional transit management firms will provide local technical assistance and planning services. Such firms certainly will have a deep knowledge of transit and should be on top of the latest federal and state programs. In all cases, care should be used in selecting a consultant. Any worthwhile consultant will be happy to furnish references from past clients.

Consulting firms that work in the transit field may be most easily located through the advertisements in Passenger Transport, a weekly newspaper published by the American Public Transit Association (APTA). Other transit publications such as Mass Transit, Metro, and Bus Ride provide such information. Information on consultants also may be gained from officials of large transit agencies nearby or from planners.

The Result

The result of the effort mounted by the promoters of improved transit will be action by a public body. One

action should be a formal resolution to move ahead with a mass transit program. At the least, it should be a move to seek expert advice. Most desirable would be the action of a city council establishing a transit district, transit authority, city transit department, public corporation, or other similar device. This body would have the responsibility of carrying through further needed effort in planning, grant application, and other tasks necessary to either start transit service or improve it. In subsequent chapters, this handbook offers information on various transit bodies and advice on which types may best suit the needs of a given community.

The ordinance or other legislation establishing the transit body should grant liberal powers to the undertaking so the transit agency will not be hampered in its efforts. The legislation should be prepared by proper legal counsel, in accordance with state laws. It may be wise to discuss some of the provisions of proposed transit legislation in the public meetings and other parts of the campaign for transit. To facilitate matters, and to make sure transit gets the treatment it deserves, transit advocates should try to have a draft ordinance prepared for consideration and debate by the city council. This practice is usual for interest groups in all legislative efforts, and is quite common in the formulation of Acts of Congress.

Variations in state laws make it difficult to generalize on the contents of transit ordinances. At the very least, however, the ordinance should follow these guidelines:

1. The transit operation should be empowered to cover the entire urban area. It should have considerable freedom to extend operations as the community grows; operations should be possible beyond the boundaries of the city. Charter service should not only be permitted, but encouraged, within the context of federal rules and regulations regarding charters.
2. The public transport undertaking should have taxing and bonding authority.
3. There should be no mandate that transit operations be financed solely from the farebox.
4. The management and board of directors of the transit undertaking should have complete freedom to establish and change routes, schedules, and fares.
5. The transportation of schoolchildren at reduced fares should be fully reimbursed by the school board.

6. The transit agency should have a large degree of control over parking along the streets it uses and in terminal areas, and should be able to acquire or obtain easements for the use of private property, when the quality or safety of transit service can be improved by so doing.
7. Powers should be granted to enable the local transit agency to contract with other levels of government, either to provide transit service or to receive grants from federal or state agencies.

Following the guidelines in this chapter and achieving the desired and necessary public action, is just the first step. The real work of initiating, preserving or improving mass transportation service can now get underway.

Most of the remainder of this handbook will be devoted to spelling out in detail how to carry out the strategy developed here.

Notes for Chapter 2

¹In very large cities, such as New York or Chicago, many persons who do have alternate transportation available are regular users of mass transportation service. Driving or parking is either so difficult, time-consuming, or unpleasant that many persons are discouraged from using their automobiles. Regardless of city size, it is unwise to assume that captive riders--those with no travel alternative except transit--will be the only ones to use transit service. The real success of transit service depends upon serving a broad spectrum of riders, and it is a major purpose of this handbook to aid transit management in providing a service that will be generally attractive to all. Service attractive and useful to as many persons as possible is in the long run essential, where taxes from the entire public are used to support transit. The emphasis in this chapter on the "nonautomobile" part of the urban population is because it is easier to identify this segment and easier to predict its need for transit service.

²"Those promoting transit" may include almost anyone within a community. In the early stages it is likely to be a group that chooses itself. It also is likely to be a group that chooses members of minority groups or community leaders. No definitive prescription is available for the group's composition; it may include persons of all political stripes, motivated often by complex reasons. Members must be willing, however, to work diligently to gain a broad base of support, and the task is made much easier if the support of some leading citizens and public officials is included early in the game.

³The declining downtown area is used merely as an example because it is common in smaller cities, not because it is the most critical problem. Note, however, that the steps taken in the argument for transit may be applied to many situations.

Bibliography for Chapter 2

- [1] A Guide for Citizen Participation in Transportation, U.S. Dept. of Transportation, Office of University Research, Washington, D.C.: U.S. Dept. of Transportation, Urban Mass Transportation Administration, 1976. (NTIS PB 265 051)
- [2] Coates, Vary, and Weiss, Revitalization of Small Communities: Transportation Options, Vol. One, Washington, D.C.: The George Washington University, Technology Assessment Group, December 1975.
- [3] Council of Fresno County Governments, How to Set Up a Local Public Transportation Service in Your Community, Fresno, CA: Council of Fresno County Governments, September 1975. (NTIS PB 247 283)
- [4] Effective Citizen Participation in Transportation Planning, Vol. One Community Involvement Process and Vol. Two: A Catalogue of Techniques, FHWA, Washington, D.C.: U.S. Dept. of Transportation, 1976. (NTIS PB 259 981)
- [5] French, B.I. and Casebeer, D.M., Integration of Para-Transit with Conventional Transit Systems, Washington, D.C.: Public Technology, Inc., U.S. Dept. of Transportation, 1976. (NTIS PB 262 254)
- [6] Pikarsky, Milton, and Christensen, Urban Transportation Policy and Management, Lexington, MA: D.C. Heath and Company, 1976.
- [7] Ross, H.S., and Curtis, H.F., Essentials for Success in Transit, Bloomington, IN: Indiana University, Division of Research, School of Business, 1979.
- [8] Sheldon, N.S., and Brandwein, R., The Economic and Social Impact of Investments in Public Transit, Lexington, MA: Lexington Books, D.C. Heath and Company, 1973.

The numbers in parentheses are NTIS order numbers.

CHAPTER 3

ESTABLISHING AND FINANCING

MASS TRANSIT AGENCIES

Introduction

One of the most formidable tasks facing mass transportation today is financing the service. In the years since World War II, well-established, privately owned firms have faced increasing difficulties in covering operating costs, as well as meeting capital needs out of the fare box. Publicly owned transit firms have had similar difficulties. Many transit properties recover less than half of their operating costs from operating revenues received through passenger fares. In recent years, financial losses, coupled with the continued need for transit service, have caused the industry to shift from what was mainly a private enterprise to one which is mostly publicly owned.

The purpose of this chapter is to provide information on the different forms of financing available for mass transportation and to suggest funding options for small cities and small transit operators. This chapter also includes a section on the various grant programs provided by the federal government under the Urban Mass Transportation Act of 1964, as amended.

Privately Financed Transit

It is assumed that any entrepreneur wanting to enter the urban mass transportation field has studied the situation sufficiently to be aware of the profit potential of transit operations in a given city and fully understands the high risk of this business to private capital. It is further assumed that, over the long term, the rate of return on investment will be reasonable. In other words, the earnings from the investment will at least equal the current rate of interest on time deposits in a bank or the current rate of interest on securities in which the entrepreneur might have invested.

Unless the entrepreneur is a person with substantial personal monetary resources, he will have to depend upon various outside sources of financing for his undertaking. Some of those sources are described below.

Equity Capital

The corporate device has many attractions. One of the most important is the limitation of liability to the amount of money a shareholder has invested. An individual proprietorship holds the proprietor liable to the full extent of all his property; in a partnership the partners are all fully liable for each other's actions in the course of the business. As transit is generally assumed to be a very risky business in today's world, incorporation makes good sense, even if the entrepreneur has sufficient funds to cover his business needs and sees no need to seek financial aid from other investors. To ensure that only the amount of the investment will be lost in the event of business failure, it is wise to incorporate the transit firm and have very few persons or one family hold all the shares of stock.

The incorporation of a privately owned transit firm is generally not a difficult matter. However, the particular rules, regulations, and circumstances associated with incorporation depend largely on the laws of the state involved and the rules and regulations of the state regulatory body that oversees transit operations. Usually, firms wishing to operate as a common carrier of passengers are required to secure a certificate of public convenience and necessity from a state regulatory agency. A franchise for operation may be required by a city. A lawyer's assistance in filing incorporation papers and gaining operating authority is necessary.

If securities are to be sold to the public through the mail or other similar means, registration with the federal Securities and Exchange Commission (SEC) is required. Exceptions to this rule include issues that are privately placed and those totaling less than \$300,000. The latter exception is valid only when a notification form is filed with the regional office of the SEC.

Stock that represents shares of ownership in a firm may be sold privately to a single purchaser or to an institution such as an insurance company, or it may be sold publicly to anyone wishing the opportunity to purchase. However, raising initial capital through the sale of stock usually is a feasible alternative only for growth companies, because only firms with a reasonable potential of profit are likely to obtain needed funds in this manner. Of course, with sufficient publicity, a public sale may be successful in the local community. As a result, local citizens may retain

more than a casual interest and voice in their local mass transit operation.

The chance for success in public sales of stock is quite limited. An established transit firm with a good reputation and good earnings probably would have little difficulty in selling new securities; a new transit operator attempting to get started probably would be unsuccessful.

A private sale to a local bank, foundation, or other group that might have an interest in transit is possible. Even so, today it is more likely to be considered a charitable act rather than a good business proposition. There is, of course, no guarantee of any return from the purchase of stock. Even though the purchaser's liability is limited to the amount invested in the shares, considering the separate earnings of transit firms in the cost and barring a philanthropic gesture, private sale of shares is as unlikely to be successful as public sale.

In addition to the use of conventional common stock, other forms might be used. Preferred stock, usually carrying a stipulated rate of dividend that must be paid before dividends on common stock, is usually cumulative and it may have voting rights. It obviously offers less risk than common stock, which is a residual claimant on the profits of a firm or the proceeds of its liquidation. (Common stock follows after the claims of those who possess debt obligations of the firm and preferred shares.)

It is doubtful whether an entrepreneur can raise the needed capital through either the public or private sale of stock. The best use of the corporate device is as a means of limiting the liability of the owner of the transit firm who will be the sole owner of equity capital.

Long-term Debt

Long-term debt usually is that running in excess of 5 years.¹ Bonds are a popular type of debt capital. They are evidence of an obligation to pay, rather than of ownership as in the case of stocks. Bonds may be offered to the general public or on a private basis to a few institutional investors. There are several forms of long-term debt.

Loans. Loans, and the conditions under which they may be granted, vary widely according to the situation involved. In general, loans may take the form of promissory notes or of a line of credit. Loans usually are worked out with commercial banks, but other institutions may offer loans--perhaps at a lower rate of interest. However, a commercial bank usually is easier to work with and can typically supply funds on rather short notice.

Bonds. Various types of bonds may be used for financing small firms. The debenture, which is secured on the general worth of the firm, is one of the most popular types of debt capital for business in general.

Other types. Mortgage bonds use the property of the borrower as security; income bonds require payment only when the firm makes a profit. (Mortgage bonds are more likely to be used.)

Long-term Leases

Generally, leases do not run for long periods of time, especially in the case of equipment. However, long-term leases are not unusual where land and buildings are involved. For example, a municipality that wishes to attract a private transit operator might construct necessary facilities, issue bonds to cover cost, and then lease the facilities to the private operator at a charge sufficient to pay off the bonds and the interest. Leasing is an attractive way of greatly reducing the amount of capital needed to enter the transit business. Another advantage is that municipalities typically may borrow--through bonds in this case--at a lower rate of interest than may private individuals or firms.

Short-term Debt

Short-term debt often is necessary because of seasonal or emergency fluctuations in income or disbursements. For financing in the form of short-term loans, a commercial bank is the most commonly used source. In general, dealings are unsecured, but most banks require that balances be kept in the borrower's account in the bank. Such loans run for less than 5 years, as a rule, and may be for a time period as short as from 60 to 90 days.

Equipment Trust Obligations

Transportation firms often have resorted to equipment trust as a means of financing a part of their capital needs. Under this technique, a financial institution is the nominal owner; the operating company pays essentially a rental fee. When the total fees equal the equipment costs plus the interest charges, the operating company becomes owner. These are considered to be high-grade securities because they are secured by specific assets that usually are portable and easily resalable. In this way a small transit firm can provide itself with modern equipment even without a great deal of capital, provided that earnings are sufficient to meet the payments on the equipment trust.

Reducing Financial Risk

To obtain any sort of financing, the private firm must attempt to meet certain goals or standards that appear to reduce the risk of individuals or institutions that purchase stock or provide funds through one of the several forms of debt capital. The commonly accepted standards are listed below.

1. Reputable management. The management of the firm must possess good character. A well-known individual in a relatively small community may fulfill this requirement easily if he has a good reputation.
2. Management expertise. The management must have demonstrated its ability to operate a business successfully. It should be noted that management's reputation need not have been acquired in the transit business.
3. Sufficient initial capital. The transit company must be properly capitalized. In other words, capital already in the business must be sufficient so that any additional funds provided will further strengthen its ability to operate on a sound financial basis. An entrepreneur attempting to start a transit operation probably would need a substantial personal investment in the business before this qualification could be met.
4. Solvency. The property's record of past earnings and its prospects for future earnings must ensure that the funds will be repayable out of the income of the business. This point is closely related to the other three, except that it is future-oriented. Potential difficulty might be encountered here because of the generally poor financial performance of transit firms in recent years throughout the United States.

Financing a privately owned transit firm is likely to be quite difficult. Even if a firm has abundant capital and is managed by a successful entrepreneur enjoying a good business reputation, the outlook for transit as a private entrepreneur is not cheerful. There are several primary reasons.

1. Reputation. Transit has a poor financial reputation nationally. Since 1945, the transit industry has suffered financial difficulties. The industry's problems are not secret, and it may be difficult to interest investors and money lenders.

2. Investment. A fairly large investment is needed. The capital need for a transit undertaking is likely to be quite formidable. In the range of transit properties covered by this handbook, anywhere from 1 or 2 to 100 vehicles may be needed, along with adequate facilities. With new, standard, transit-type buses ranging in cost from \$90,000 to \$125,000 each, it is not difficult to have several millions of dollars invested in rolling stock alone.
3. Insufficient private funds. The market for stocks or bonds sufficient to meet the needs of the firm may be limited or nonexistent because of the uncertainty involved. Private financing may be extraordinarily difficult.

Conditions Mitigating Risk

It is probably the overall national reputation of the mass transit industry that will most seriously hinder the entrepreneur in financing his transit business. However, certain points are in favor of transit operation--and these hold true whether the transit enterprise is publicly or privately owned--and may be used as arguments to prove that the opportunities for profitable private operation are quite good. Some of the most powerful arguments include residential density, dense economic activity, and relatively balanced demand.

Residential density. Many areas have a relatively large population of low-income families, with a low incidence of automobile ownership. These people depend on transit for personal mobility.

Dense economic activity. Transit works most easily and efficiently when it can shuttle between areas of fairly high residential density and relatively dense economic activity. Concentration of the residences, work places, and shopping areas of a dependent group makes it possible to provide high-quality service without the need to run extensive bus miles or to operate through sparsely populated areas. This factor is favorable in serving even those portions of the population that do not fall into the low-income category.

Relatively balanced demand. The peaking of demand at the morning and afternoon rush hours is one of the principal causes of financial difficulty in the transit business. Assets and personnel are required to handle relatively large demands placed on the system for only brief time periods. To succeed, a transit firm must be able to spread its costs over more than just the trip to and from work. Some of the ways demand may be spread more evenly throughout the day are by off-peak movement of school children carried under

contract to the school district, charters, and special services. Whatever the reasons, they are likely to spell the difference between a profitable private transit system and one that requires public aid.

Publicly Financed Transit

The question of public ownership or public support of transit in the United States always has been controversial. Public ownership, control, or subsidies to private firms appear most desirable under one or more of the following conditions:

1. When there are many external benefits and costs that do not find their way into the fare box as revenue or onto the income statement as an outlay.
2. When the service is inherently a monopoly.
3. When public costs of operation are not much different from those of private firms.
4. When there are no private funds available.

Public ownership of mass transportation service may be carried out in a number of ways. Before discussing the means of financing publicly owned transit, it would be wise to examine the major forms of public ownership.

City Departments

Placing a publicly owned transit system within a city department is very common in small- or medium-sized cities. The city transit department usually is a separate entity, created solely to provide mass transportation and operating on an equal footing with the other departments of the city. In some cities the transit undertaking may be part of another department, most often the department of public works.

City transit departments often are controlled by the city council, which acts as a board of directors would act in a corporation. Unless state law dictates otherwise, the city council controls rates, fares, and services. It would also make decisions on matters of overall policy.

In some cities, the transit department may be placed under a transit board. In most cases, the board is appointed by the mayor with the approval of the city council, often with the requirement that it be bipartisan. The situation varies from city to city, but generally the transit board is free to run the transit system without

recourse to the mayor or city council. However, in some cases, a transit board may be responsible to the mayor or the city.²

As with a private transit firm, the governing body appoints a general manager to handle the day-to-day operations. The city department should operate much like a private firm or other form of publicly owned transit firm. At times, however, the city transit department can rely on other city departments to provide many of its needs. Legal services can be handled by the city attorney, and financing may be arranged by the city controller. Purchases and payroll also may be handled by other parts of the city organization. This sharing is a decided cost advantage. Unfortunately, unless the transit board or management is alert, sharing services also may obscure the real costs of transit operation. Worse yet, the transit system may be a haven for political hacks or used as a reward for political service to persons without any knowledge of transit.

One of the major constraints of transit under a city department is the limitation on the geographical area it serves. Because the department is very much an arm of the city, usually financed directly out of city funds, it is awkward to operate in jurisdictions outside the city limits.

Another deficiency, particularly evident in the area of finance, is that, in states granting only limited bonding authority to a city, the transit operations are bound by the overall limitations on the city. With constant pressures on the city for many urban services, the transit operation may suffer from fiscal malnutrition.³

The Transit Authority

A transit authority--like other public authorities--is a specially incorporated government body designated to carry out a specific, revenue-producing enterprise. As a rule, the authority only has those powers granted to it by the governmental body that created it. However, once it has been established, the authority typically has considerable freedom to operate within its particular area without intervention by other agencies of government, including the one that created it.

The public authority has some general advantages that have made its use attractive in many states.

Funding. On the local level it may be easier to finance transit by means of a transit authority than with other forms. Many states impose a constitutional debt limitation on lower governmental jurisdictions, and authorities often are created to circumvent these limitations. Many authorities are given the power to issue

revenue bonds, which normally do not fall under the debt limitations imposed upon the municipality in which the authority functions. Also, transit authorities often have independent taxing powers, which make them relatively free to pursue activities and provide service deemed best by the board of directors with little political interference.

Independent administration. The authority provides an independent means of administering what essentially is a commercial--but not necessarily profit-making--enterprise. The service provided by the authority generates revenues that can be used to offset expenses, and the relative independence of an authority enables it to function in a more businesslike manner than the city transit department, which typically is more politically oriented.

Multiple-jurisdiction. Transit authorities often are able to overcome the problems caused by the many complex political units that comprise most metropolitan areas, even those of modest size. This virtue is particularly true of the transit authority as opposed to the city department, because transit needs and services cannot be hampered by the artificial political boundaries of the city, but should serve the whole of the urbanized area. Multiple-jurisdictional authorities often are desirable and are made relatively easy to accomplish through the authority device, as opposed to the city department.

Establishing a Transit Authority

Organization

Board of directors. At the top of an organization of a transit authority is the board of directors. The directors usually are appointed either by the mayor and/or the city council. If all members are appointed by the mayor, approval of the city council often is required.

General manager. Like any board of directors, the transit board establishes long-range goals and sets policies necessary to meet those goals. The day-to-day transit operations are handled by the general manager, who is appointed by the board of directors. The general manager and his assistants should have as free a hand as possible in handling operational matters. It is essential that board members not interfere in routine matters of management; the board's function is overall guidance, not supervision of operations and matters of detail (see Chapter 4).

If the transit authority is intended to cover a number of governmental jurisdictions, the board should have members from several of the constituencies, selected according to a formula included in the legislation creating the district. Most such formulas are based on the population of the area

or on a combination of population along with at least one representative from each separate jurisdiction. If many jurisdictions are involved, the board may have so many members that it becomes unwieldy. Whenever possible, representation should be adjusted so that the total number of board members does not exceed nine.

Contract management firm. The transit authority may choose to hire a management firm to operate the system. Under such an arrangement, the authority contracts with a firm for a given time period--3 years seems to be a common time period--to provide a given service and to manage day-to-day operations. The assets used in providing service generally are owned by the transit authority. The management firm usually is paid a flat fee for its services.

There are a number of advantages in hiring a management firm. The most important is the assurance of having truly professional and experienced management. Good management is always a scarce resource. A management firm guarantees the availability of skilled, professional transit managers, backed by a central staff that provides specialized staff support in such areas as marketing, labor negotiations, maintenance, and the construction of facilities.

A management firm relieves the transit board of the responsibility of dealing with many mundane matters, but it also may take away some degree of control during the life of the contract. Also, management by contract may be costly, in that the managing firm is in business for profit. The taxpayers supporting a transit authority may take a dim view of guaranteeing a profit to a private firm for operating what probably is a money-losing enterprise. At the same time, the overall package of management provided by a professional management firm, including central staff support, may be far better than that afforded by use of purely local resources. It is difficult for smaller communities to attract the best managers or to afford all of the staff functions that need to be performed.

Characteristics of the Board of Directors

The appointing officials should consider carefully the skills and abilities required of transit board members. It is as important to select persons who can help channel public opinion to the board, as it is to enlist those with some specialized skill or knowledge.

Size. The transit board should not be too large; 9 members is about the largest size that is manageable. Boards of more than 9 members are unwieldy; however, boards with fewer than 5 members may not be able to cover all the bases where a wide variety of skills and representative community views are necessary.

Influence. Different skills on the board are needed at different points in the life cycle of a public transit agency. For example, the first-generation board may need far different skills than subsequent boards. At the time of the transit authority's initiation, it would be wise to have board members who are particularly skilled in financial matters as well as in communicating the objectives of the authority effectively to the public. They also should have sufficient grasp of the community's needs and its long-range goals, so that the goals for transit fit within the framework of what the city wants.

The first board selected may be the easiest to fill with the movers and shakers--the influential and progressive leaders of the community at large. The issue of transit is apt to loom large at the starting point, and the best talent of the community may be willing to give its time in public service for transit. When the transit authority or agency is well-established, major community leaders may wish to move on to other challenging activities. Subsequent boards may be lower in talent or in community influence. If an existing transit authority needs stimulation, the appointing officials may wish to place community leaders of the first order on the board to provide the needed prestige and influence.

Awareness. Whether on the initial board or subsequent boards, transit board members must do their best to understand the intricacies of transit. They must understand that their job does not involve participating in day-to-day management decisions. Board members also should be skilled in listening to the public's opinions and needs and communicating them to transit management. In formulating policy, the board may "fine-tune" itself to meet public needs at given points in time without losing sight of long-range objectives. To do this, the board must be aware of what tasks and opportunities lie before it, and how it must educate itself, shape itself, or otherwise rise to the occasion. It also means that board members must convince those who have the power of appointment of the need for certain types of persons as board members at different points in the life of a transit agency.

Representation. On the matter of representation, it is not always feasible to try to represent each possible constituency on a board of reasonable size. Where broad communication and representation of public opinion are found necessary, a large, representative advisory board can be appointed to provide community input to the board of directors.

The following, in no particular priority order, are suggestions for persons to include on the board:

1. A representative of the local news media.
2. A representative of local retailers.
3. A representative with a legal background.
4. A representative experienced in accounting and cost-control functions.
5. Representatives of ethnic and racial minority groups.
6. Representatives from various areas of the metropolitan area, including those outside the city limits who are served by the transit operations.
7. A representative of a planning agency.
8. A representative of the women's point of view.
9. A representative of business with the knowledge, the power, and the connections to bring about successful acceptance and operation of a public enterprise. (If possible, a local power broker should be included.)
10. A representative of senior citizens.
11. A representative of youth.
12. A representative of the handicapped.
13. A representative of downtown interests.

Obviously, many boards will not and should not contain enough members to provide all these viewpoints, but every attempt should be made to have relevant groups represented when necessary. For example, in an urban area with many retired senior citizens, it would make sense to include a representative of that group. In a city with a large ethnic population, it would be wise to have major ethnic groups represented on the board. At least one elected official should be included (in category 6) to represent, in a sense, a cross-section of citizens.

The problem of representation of all interested parties can be solved through the appointment of a relatively large-sized advisory committee, which would meet regularly with the board to offer advice and convey information to the legally constituted board. The advisory committee members could act as a sounding board and also could convey information to their particular constituencies. The two-way transmission of information also would increase public knowledge and input, and help raise the credibility of the transit agency.

The representation of pertinent constituencies and areas of knowledge can also be achieved by requiring that certain persons be ex officio board members. In this group might be included the mayor, the president of the city council, the city planner or the city engineer, the city attorney and/or the city controller, and, of course, the general manager of the transit operation. Whether they are voting or nonvoting members, these persons can bring knowledge and expertise to the deliberations of the board.

Chairman. It is debatable whether a transit board should select its own chairman. When the chairman is selected by an elected official, some of the prestige of the elected official is inescapably transferred to the appointee. A board that elects its own chairman is apt to have a better idea of the qualities of leadership that are necessary at certain stages in a board's lifespan. Whatever the means of choice, selection of a chairman is not a task to be taken lightly. In addition to being a good spokesman, the chairman should have leadership qualities, a broad knowledge of the community and its hopes and needs, an acquaintance with the important officials and power brokers in a community, and sufficient time and interest to devote to what may be a difficult task.

Term of office. The issue of the term of office for board members is an important one. It is best to have members serve for a relatively long period of time, surely no less than 4 years, and probably longer. For example, a board of 9 members might have a 9-year term of office with a new board member appointed each year. This would tend to assure experience on the part of the board; turnover could be assured by mandating that a board member could only serve one term. Such a practice could guard against quick turnover of a board for strictly political purposes. On the other hand, care must be taken in selecting board members, because those who turn out to be unproductive are in place for a long time.

The "Ideal" Institutional Establishment

It is difficult to suggest an "ideal" institutional establishment for a publicly owned transit system, because of the variety of state laws affecting agencies. In some states, it may be impossible to approach the ideal under existing statutes. In general, however, the following guidelines should be followed:

1. The transit agency's jurisdiction should cover the entire metropolitan area, with freedom to expand service as needed.

2. The transit agency should have both taxing and bonding authority.
3. There should be no mandate to cover all costs from fare box revenues.
4. Directors and managers should have complete freedom to establish and change routes, schedules, and fares.
5. School and welfare transportation should be paid for by the appropriate agency; it should not be a cost borne by the transit agency.
6. The transit agency should have as much control over its operating environment as possible (roads and streets, bus stop zones, traffic signals, and so forth).
7. The transit agency should have power to contract with other levels of government, and to receive financial support from them.

Sources of Funds

The following discussion is tempered by the assumptions that transit is a service that benefits the entire public, and that all who benefit should pay in one way or another. This assumption is consistent with one of the major thoughts behind this handbook, namely that transit service is not to be provided only for a relatively small, immobilized minority within an otherwise mobile public, but for all citizens of a community. Because broad public benefits are assumed to flow from the provision of transit service, public financial backing is likewise assumed.

Local Tax Sources

Property taxes. Property taxes have been the usual means of financing local public undertakings for many years. If property taxes have no other merit, at least they are understandable and have the blessing of being familiar to taxpayers. Collection procedures usually are well-established, and the concept is not complicated. Property taxes are, therefore, the probable foundation of public support of transit in most cities.

On the minus side, property taxes often do not reflect changes in cost or revenue needs very quickly or effectively. Also, because they usually are paid in one or two installments they seem to impose a very visible burden upon the taxpayer. Despite the fact that they are generally levied throughout the community, they are typically unpopular, even though they may be generally fair in application. Adding to their unpopularity is the regressive

nature of property taxes and the burden placed on those with fixed incomes, such as the retired elderly.

It is difficult to generalize on the means of levying taxes on an areawide basis through the transit authority; this matter depends very largely upon the powers granted to such institutions by state laws. If an authority cannot levy taxes upon communities outside the boundary of the governmental body that created it, it may be able to achieve the same end by entering into contracts with other municipalities to provide transit service. The agreement then would permit those areas to levy taxes to meet contract obligations within the limits of the law.

Income taxes. While not yet commonly used in the funding of municipal undertakings, the income tax is another means of providing funds for transit and other public purposes. The freedom of a local government or authority to use such taxes usually depends upon state or municipal laws. One of the strongest points in favor of income taxes is that usually they are levied in biweekly or monthly installments as deductions from paychecks, resulting in a steady flow of revenue into the tax coffers. The installment plan type of collection also removes some of the sting from imposition of the tax--something that is certainly not true in the case of most property taxes.

The income tax also is fair because it tends to fall most heavily upon those who are most able to pay. This may be particularly important in a transit undertaking that is obliged to pay a large proportion of its costs out of the fare box. If the majority of riders are from low-income groups, they are not as heavily burdened by what is, in essence, dual taxation--the fare box and the income tax.

Special levies. Because of the increasing demands placed on cities for services and the large proportion of these services financed from the property tax, many cities have sought new forms of revenue. Whether cities are able to use such special levies is, of course, again dependent upon state law.

The levy could be of almost any form applied to almost any service, sale, transaction, or activity. For example, in Massachusetts a special statewide sales tax is levied against cigarettes especially to support the Massachusetts Bay Transportation Authority (MBTA). It could just as well be a 10-cent tax levied on each mortgage or a dollar on the sale of each new automobile.

Some places have a portion of the sales tax devoted to transit. In states that allow local option taxes, a so-called "wheel tax" often is levied on each automobile belonging to residents. This tax may be a nominal sum of a

dollar or two, or may range as high as \$35 or \$50. These funds often are earmarked for special purposes, such as highway improvements. Household taxes for transit are levied in some places, with a fixed fee per household collected on the utility bill each month. A tax on hotel and motel rooms is another type of levy.

The difficulty with the use of these special levies is that they may become unpopular. Great care has to be used in promoting the application and use of such taxes to avoid alienating the public. An overt tax for transit purposes that is considered to be a nuisance may give transit a bad name in a community.

The arguments in favor of special levies are more acceptable if some relatively close tie-in can be demonstrated between what or who is to be taxed and the benefits to be gained. That is, a wheel tax levied against automobiles for the purpose of improving streets, while unpleasant, is at least dedicated to providing better streets for those who have automobiles. The connection between the taxpayer and the individual who benefits is quite close, and taxpayers are less likely to chafe at the expenditures they must make.

If special levies are used, probably the wisest course is to call the special levy, however imposed, a "mobility tax," with the proceeds used for the general improvement of mobility. Most of the proceeds would go to offset any losses of the transit operation or to provide capital for transit operations. Other portions of the fund could be used for purposes generally related to mobility--to provide stop signs or traffic signals, to install turn lanes at intersections, to provide off-street parking, or to help support special services for the elderly and handicapped. Offering broad benefits to both transit users and nonusers should make the special levy much more palatable to the public.

Bonds

Bonds issued by public bodies for transit purposes are of two general types: revenue and general obligation.

Revenue bonds. Revenue bonds are used when the transit operation is revenue-producing and may be expected to pay off its debt through the fare box. The advantages of revenue bonds are:

1. The users help pay for the facilities rather than imposing a burden upon the entire community and the general taxpayer.

2. Bodies that overlap political boundaries can use these bonds more easily than forms of debt obligation relying upon the property tax.
3. Usually, bonds can be issued without voter approval.

The issuance of revenue bonds requires that money be placed in a sinking fund for repayment of the bonds. Revenues, therefore, must be sufficient to cover operating costs as well as the sinking fund allotments. In a time of greatly increasing cost, it may be difficult to hold fares within reasonable levels. Because the payment of revenue bonds is based on the revenues earned by the undertaking, they are slightly more risky than general obligation bonds. Therefore, the rate of interest required for revenue bonds usually is higher than that required for general obligation bonds. Because few transit operations provide sufficient revenue to cover even operating costs out of the fare box, revenue bonds generally are impractical.

General obligation bonds. On the other hand, general obligation bonds are backed with the full faith and credit of the taxing power of the issuer. Without the dependence upon transit revenues to pay off the bonds, pressure is less likely to be placed upon the fare box.

The problem with general obligation bonds is that, in many instances, they must receive voter approval through a referendum. If the sum involved is large, gaining approval may be difficult. Approval also is difficult if a community is experiencing one of the periodic taxpayer revolts in which any referendum item that is bound to increase taxes is bound just as certainly to fail at the polls. If the referendum route is to be used, it must be carefully timed, and a strong campaign must be developed to sell the bond issue to the voters. Some of the techniques reviewed in Chapter 2 should be used.

Special assessment bonds. Sometimes special assessment bonds may be issued. In this situation, the debt is paid off by a special assessment on property owners who stand to benefit in a more than ordinary manner by the service provided through the funds raised from the bonds. In the case of the small-scale transit operation, assessment of special bonds might be used to finance the construction of a downtown terminal building, if downtown merchants and businessmen were expected to gain special benefits from the presence of such a terminal. Downtown properties would then be assessed at a higher rate than other property.

Municipal assistance bonds. A governmental body might float a bond issue for transit because the city may be able to procure a lower interest rate than a public transit operation that is only empowered to issue revenue bonds. The public transit enterprise would then reimburse the city, which, in turn, pays off the bonds. Even if a transit agency can issue general obligation bonds, the municipal bonding route should be followed if a municipality is able to issue bonds at a lower rate of interest.

Fares

There is no denying the extreme difficulty of covering all costs--including capital costs--from the fare box, in the typical mass transit operation. It probably is unrealistic to rely heavily upon the fare box to cover a great deal of the costs because the short-run viewpoint will inevitably push toward fare increases. In general, fare increases are self-defeating. Given the usual low quality of mass transit service, the higher fare simply tends to alienate more customers and, over time, produces less revenue.

To be realistic, at best fares should be expected to pay only a portion of the operating costs. Capital costs should be covered from federal capital grants, with tax levies or subsidies from local government used to pay the local matching share. The wisest course is to set fares in relation to the goals and objectives established by transit policymakers. If attracting the largest possible number of riders is a principal goal, fares should be held relatively low with a large operating subsidy. If more modest patronage is desired and a larger share of the cost is to be paid by users, then fares would be set higher. What is done will depend on local support apart from the fare box and on the goals and objectives of the transit agency.

The issue of free transit has been raised on a number of occasions. It is believed by some that this would be an excellent way to attract many additional riders to the transit system. The total costs would be paid, of course, out of tax revenues. The operations would not really be free, but, like police and fire protection, there would be no direct charge for it when it is used.

Free transit would greatly benefit the lower income groups and might be worthwhile on that basis. It would be up to the individual city to determine whether such a step were desirable. What must be avoided, for the sake of equity, is placing the burden of paying for service or service improvement upon those with the least ability to pay. However, the evidence indicates that the widest means for increasing ridership is to provide high-quality service.

Federal, State, and Local Revenue

An increasingly important form of aid to transit by municipalities is subsidies, from local and/or state sources, used in conjunction with federal funds. The use of municipal revenues either for publicly or privately owned transit firms has become common in recent years. Sometimes, the city will merely agree to pick up the deficit of the transit operation, whatever that might be. At other times, the subsidy is for a specified amount each year. Typically, the amount involved is negotiated, based on the needs of the transit agency (or subsidized private firm) and the funds available from local taxes and other sources. General revenue-sharing money from the federal government often is used by smaller municipalities to help cover transit costs.

Federal, state, and local revenue for private firms, at least in the United States, generally have been used as an interim means of providing funds for transit while a long-run solution is being sought. Indeed, unless the transit operation is very small or the sum needed a very modest one, smaller cities usually cannot afford to subsidize a transit operation out of general tax revenues. The use of a subsidy to keep a financially troubled private transit system in operation is a wise move in the short run to prevent service from seriously deteriorating. The best long-run solution, however, is some form of public institution that can support itself out of a combination of fare box revenues and taxes.

There is no best answer to the question of whether to subsidize a private operation. Local circumstances will dictate what is to be done. An important point to remember is that subsidies are not handouts, and should not be thought of as negative. The government is paying to provide service that will benefit local citizens.

State Aid for Mass Transportation

A number of the states provide aid for mass transportation, either in the form of financial contributions or by creating the enabling legislation for local action. In some cases, state aid is substantial in dollar amounts and may offer significant leverage when combined with local funds and used in conjunction with federal grant programs.

Financial aid. Most state transit programs are tied to federal aid programs. State funds typically are used to match a proportion of the required local share of a federal grant. A state may, for example, agree to pay up to one-half of the local share for federal capital improvement grants or other types of federal aid. The administration of a state aid program may be quite simple, with aid being

given for projects that meet federal approval. The same application prepared by a transit agency for federal funds may be submitted to the state, greatly reducing local paperwork requirements. On the other hand, the state may set its own standards, rules, and regulations for financial aid and require separate paperwork. Whatever practice is used will depend upon the goals and objectives established by the state for its program to help mass transportation. Some states may have a portion of their aid program independent of federal aid programs. Among these independent state programs are purchase-of-service agreements by which the state may use its funds to provide operating or capital subsidies for transit. States also may provide a program of aid for human services programs involving either standard mass transit or special service.

Enabling legislation. Many states may not give direct financial aid for mass transportation, but will provide significant help through the passage of enabling legislation. Such legislation may provide for public ownership of transit, the establishment of transit authorities, and the creation of transit districts with taxing powers. Enabling legislation also can be used to provide a variety of local option taxes to support transit.

Based on the experience of states that provide aid for transit through enabling legislation, the best advice appears to be to provide a wide spectrum of local option taxes that may be used to support transit and related activities. In some states, transit districts may be given authority and power to tax only property. The property tax is not popular, as discussed earlier in this chapter, and it probably is much easier to gain taxpayer support for transit if the particular source of support may be chosen from a wide variety of levies. Some form of local income tax may be the least regressive form of taxation, although a local sales tax may be somewhat easier to put through a referendum procedure.

The sources of revenue used by states for state aid programs in transit has been quite varied. A piggyback on the license fees for automobiles or on the gasoline tax would have the advantage of using collection methods already in use. Some states are in the process of revising the state gasoline tax, typically collected on a gallonage basis, because the revenues have not kept pace with the inflation of the cost of highway construction and maintenance. The gallonage tax is poor in that it does not reflect inflation or the higher price of crude oil (as would a sales tax on gasoline), and the impact of federally mandated improvements in the average gasoline mileage of new automobiles. Many states face relatively static gas tax revenues. When states are considering either raising the gallonage tax or replacing it with a more realistic sales

tax on gas, the time would be ripe for including support for transit in the gas tax.

Other special levies may be attractive for financing transit activities or special portions of transit programs. For example, in Pennsylvania the state lottery is used to reimburse local transit agencies for the cost of moving senior citizens free of charge. Liquor taxes also are possible sources of funds.

It behooves local transit agencies to work as closely as possible with members of the state legislature and the state government to assure transit its rightful place in the state's transportation program. A unified front on the part of the transit agencies throughout the state is an absolute necessity in such a process. To achieve unity, a strong, well-organized state transit association is a necessity.

Federal Funds for Mass Transportation

Since 1961, the federal government has provided grants of various types to aid cities in their mass transportation programs. The major federal programs by type of aid are described below.

Section 3 (capital improvements). The federal government will pay 80% of the net project cost for capital improvements. Only legally authorized public bodies (states, municipalities, political subdivisions, public commissions, and so forth) in urbanized areas (places of more than 50,000 population) are eligible to receive capital grants or loans. Private transportation companies may participate in federally aided capital projects, but they must do so through a public agency. Capital needs for transit agencies in nonurbanized (fewer than 50,000 population) are met through section 18 of the federal program (see below).

The kinds of projects eligible for capital grants and loans include: acquisition, construction, and reconstruction or improvement of facilities and equipment for use in mass transportation services. This includes purchase of buses or other transit vehicles, construction of garages and other maintenance and storage facilities, offices, shelters for passengers, parking lots, terminal structures, and equipment for the facilities mentioned previously. Capital grant funds also may be used for the acquisition of the assets of a private operator. The proceeds of the capital grant may be used for the purchase of land or to rent or lease facilities or personal property needed for an efficient and coordinated transportation system.

Low interest rate loans can be obtained under the capital program, but they have been used relatively

infrequently because a loan is obviously less attractive than an outright grant. Besides, the requirements are the same for a loan as for a grant, so there is no real incentive to apply for a loan.

Section 5 (operating and capital aid). Operating aid is made available on a 50% federal, 50% local basis to urban areas only. The money for operating aid is provided through a formula grant process. The formula money may be used at local option to cover either operating deficits or to pay for capital improvements. If used for capital improvements, the federal share is 80% and the local share 20%. Nationally, transit agencies have chosen to use formula funds primarily for operating aid.

Section 6 (research, development, and demonstration). The proportion of this aid varies and may be as high as 100% federally funded. For local areas section 6 provides an opportunity to try out ideas through practical, real-life demonstrations, by means of the Service and Methods Demonstration Program. Most of the funding for the overall program, however, is based on initiatives developed by the federal government and contracted out to consultants. Much of the research and development work is theoretical or future-oriented in nature.

Section 8 (planning aid). Under this program, which is called technical assistance, the federal government will pick up 80% of the cost of transit planning; local and state agencies must pay the remaining 20%. While this is a discretionary program, a sizable proportion of the funds are allocated to urbanized areas and to states by a nonstatutory formula. States are allocated funds to do the planning for the cities in nonurbanized areas (those places with less than 50,000 population). There is enough flexibility in this program to meet special needs for cities of all sizes and conduct special kinds of studies, depending upon need. Cities that have not attained the standards set by the Clean Air Act may be eligible for additional planning money; this matter should be checked with the Regional UMTA office.

Section 10 (management-improvement). Fellowships of up to three-quarters of an individual's salary are made available each year by the federal government. The purpose of this program is to help current management personnel further develop their skills to become more valuable to the transit enterprise for which they work. The majority of these grants have been used for short courses, institutes, workshops, and other specialized types of programs. The grants also may be used for regular college or university degree programs.

Section 11 (university research and training). These are grants to institutions of higher learning primarily for

research purposes, but also for aid in training young people for careers in mass transportation planning, management, or some other related field. The federal government provides 100% of funds.

Section 16(b)2 (nonprofit organizations). Capital is available for equipment used in human services transportation provided by the federal government to nonprofit, private corporations. The federal government pays nonprofit, private corporations 80% of the cost of acquiring equipment for services to the elderly, handicapped, or those who otherwise need some sort of human service transportation. Such agencies as the Red Cross, the Heart Fund, Easter Seals, and local community groups that provide various kinds of aid are eligible to receive such funds.

Section 18 (capital and operating aid). This program uses a formula based on the proportion of the nonurbanized residents in a given state to nonurbanized residents in the United States as a whole. The sum of money derived by this formula is made available as a block grant to the state and may be used only in nonurbanized areas. The program is administered by the Federal Highway Administration (FHWA) and a state agency designated by the governor. If used for capital improvement purposes the federal share is 80% and the local share is 20%; operating aid is available on a 50% federal, 50% local basis. Initial contact for information about section 18 aid should be made with the FHWA office in each state, or with the designated state agency.

Section 147 (rural transit demonstration). Money is made available each year through FHWA for demonstrations of public transportation in rural areas. This is a discretionary program; participants are those who have won on the basis of a competition with other applicants.

Highway trust fund. Highway trust fund money from the Federal Aid for Urban Systems (FAUS) category may be used for transit capital improvement purposes. It also is possible to use money set aside for the interstate system for mass transportation capital purposes. The use of interstate system money in this fashion has been commonly undertaken only where it is difficult or impossible to build a road because of opposition to the highway construction. Rather than forego the funds, a public transportation improvement is made. This use of interstate switchover funds has been made most notably in larger cities, such as Boston and Philadelphia.

Some Preliminary Actions

Before applying for federal aid to mass transportation, management would be wise to become acquainted with UMTA and its procedures.

The first step is to establish contact with an UMTA regional office. (The addresses and telephone numbers of the regional offices are listed in Appendix 3A). At each UMTA regional office, there are UMTA staff specialists for the various UMTA program activities. The initial contact with the regional office by telephone or letter should be followed up as soon as possible by a personal visit. A copy of the UMTA external operating manual should be obtained. The manual contains complete instructions on procedures involved in making applications for UMTA funds. It is a large and complex volume and the newcomer to it will need help. Those needing aid under section 18 should contact the state FHWA office.

Early in the game, the transit goals and objectives of a city or a transit agency should be brought to the attention of UMTA in writing. As a product of the personal visit, telephone follow-ups, and correspondence, the outline of the particular program for which aid is sought should be clearly sketched out. The applicant should be in a position to obtain advice and counsel from UMTA officials on the proposed project. UMTA's rules and regulations are complicated and the procedures often are time-consuming. The applicant can ensure the least trouble and quickest processing of paperwork by making sure that everything that is required is done properly and completely. A good working relationship with UMTA officials and frequent contact will be of great aid in getting applications done correctly the first time. The material that follows is designed to help in the application process. It is necessarily short and it should in no way be considered a substitute for contact with UMTA or the use of the latest external operating manual.

Federal Aid to Urbanized areas

For cities with more than 50,000 population, aid is provided by UMTA through a relatively complicated procedure, and the advice and counsel of UMTA staff is of critical importance. Planning is an important element in all UMTA programs and, in the case of mass transportation in urbanized areas, the transit planning process must be carried out in conjunction with highway planning. The first and most important step is the development and writing of a Transportation Improvement Program (TIP), which includes highway and transit elements. Each urbanized area has a metropolitan planning organization (MPO), designated by the governor of the state. It is responsible for seeing that the planning process is carried out.

In each TIP developed by an MPO, there will be an annual element for transit improvement projects that will include operating aid as well as capital improvement projects. It is vital that local transit officials build and maintain a good working arrangement with the MPO.

The planning process carried out by the MPO must be a "3-C" planning process (comprehensive, coordinated, continuing). If planning is not carried out in the proper fashion and certified by UMTA, the urbanized area will not be eligible for federal aid for mass transportation or highways.

As a part of the annual element of the TIP there must be a Transportation System Management (TSM) element. The TSM element calls for low capital cost improvements aimed at making better use of existing facilities and encouraging high-occupancy vehicles. TSM may include such things as reserved lanes for buses during rush hours; "no parking" programs on arterial streets at busy times; installation of "no parking, bus stop" signs; traffic signal coordination; one-way street programs; traffic-free zones; a program of no freight deliveries during the day; or any act that would permit more intensive use of existing facilities at a low capital cost. After the initial planning of these proposed improvements, they must be programmed into the various improvement projects for highways and transit that will be carried out in the years ahead.

Federal Aid to Nonurbanized Areas

The process of grant application planning is simpler for cities of fewer than 50,000 population. The planning for many, if not most, cities of fewer than 50,000 population is conducted under statewide transit planning grants. By means of a formula, UMTA provides money to each of the states so that it has only to deal with the state government, rather than with many small cities. The state then provides the planning aid by various means to the smaller cities. The state may choose to do the work itself or it may hire consultants. Persons involved in transit in nonurbanized areas should contact either the state department of transportation or the office of the governor to discover which agency handles transit planning for smaller cities.

For a city of fewer than 50,000 population, only a transit development plan (TDP) is necessary. This concerns only transit improvements and does not involve the highway planning element necessary for an urbanized area. In both urbanized and nonurbanized areas, the plan must be updated regularly and must be certified by UMTA for funding for capital and other purposes.

Critical Points

Cooperation

For urbanized areas, cooperation with the MPO is critical. The MPO is supposed to represent both elected and

appointed public officials, planning professionals, and the transit agency. Transit and MPO people have much they can do to help one another, and they should work with each other as much as possible. Transit management should supply the MPO with all necessary information as soon as it becomes available. The MPO should give transit management the information it requires for effective management and marketing of the transit service.

Consultant Selection

Great care should be taken in selecting who will do the planning, if it is to be entrusted to a consulting firm. There are many fine consulting firms that will do a good job of planning. Those making the selection must be careful and should not be impressed merely by a firm of large reputation; contact should be made with other cities of the same size, to learn what experience they have had with the various consulting firms. Very large consulting contracts for large cities often are handled well; small contracts for small cities may not receive the same sort of attention and may even fail in gaining UMTA's approval.

In selecting who will do the planning, management must stipulate carefully what is to be done, particularly when dealing with firms or planning agencies that have little experience in transit planning. The result must be a usable 5-year transit plan that addresses all of the elements required by UMTA. That plan must be updated annually to maintain certification for funding by UMTA.

Grant Application

The section 3 capital grant process is long and involved. After the planning is completed, there is a need to establish a program of improvements based on the planning. Once this program has been developed and priorities established, the application for funds must be written, including a host of required assurances, labor protection clauses, and assurance of the provision of the local matching funds necessary under the rules and regulations established by UMTA. After the capital proposal has been accepted by UMTA, the local agency must seek bids from equipment suppliers and contractors on the capital improvements. Then the bids must be approved by UMTA before they can be accepted. Finally, there is the delivery of equipment, completion of construction, or installation of the capital improvement. Section 18 capital grant procedures probably will be equally complex. It is not unrealistic to allow at least 2 years for the process to move from planning to completion of the capital improvement.

It is extremely important to prepare the justification for any capital improvement very carefully. This is

especially true if the capital improvement is something other than a mere replacement of existing equipment on a one for one basis. Furthermore, great care must be taken to see that all requirements of the application are met before submission of the application.

Public Hearing

One of the most frequently troublesome federal requirements is that there be a public hearing and that it be advertised in newspapers of general circulation 30 days before the hearing, with an advertisement once again prior to the hearing. Many places fail to advertise early enough or forget the second advertisement. The hearing transcript must be an exact transcription of the proceedings; UMTA will not accept a paraphrased version. It is best to hire a court reporter for this task.

Labor Clause Sign-off

Another time-consuming and troublesome factor is the sign-off of the section 13c labor protection clause. This is handled by the U.S. Department of Labor (DOL). After a section 3 or section 5 grant is submitted to UMTA, that agency will send the proposal to DOL, which will then send it back to the local union for its sign-off. Local transit officials should have agreements reached with the union local while the grant is being put together prior to submission to UMTA. Otherwise, there will be delay while the union reviews the grant application and an agreement is reached with the transit agency.

Maintenance of Effort

For grants under the formula provisions of the law, an important factor is the maintenance of effort (MOE). MOE must be equal to contributions from local sources (excluding fares) for the past 2 years. There also must be an adequate local share to match the grant applied for. Federal revenue-sharing monies may be used for this. In any case, this is an absolutely essential part of the application. Careful preparation of all documentation also is essential.

In any grant application, the best advice is early contact with UMTA, developing a good working relationship through follow-up and contact on all areas that seem troublesome before submitting the formal grant application.

Notes for Chapter 3

¹As a general rule, a short-term debt is considered to be that with less than 5 years to run. Some experts in finance label any debt with a term of 1 year or less as short-term, from 1 to 5 years medium-term, and more than 5 years as long-term.

²For recommended qualifications of board members, see the section on Characteristics of the Board of Directors, in this chapter.

³More complete coverage on fares may be found in Chapter 11.

Bibliography for Chapter 3

- [1] Bair, B.O., and McKelvey, D.J., Current State Practices in Transit Funding, Iowa City, Iowa: University of Iowa, Institute of Urban and Regional Research, July 1975.
- [2] Small City Transit: Summary of State Aid Programs, edited by R. Casey, Cambridge, MA: Transportation Systems Center, March 1976. (NTIS PB 251 515)
- [3] Community Service Administration, Improving Rural Transportation: The Section 18 Program of the Surface Transportation Assistance Act of 1978, Washington, D.C.: U.S. Dept. of Transportation, 1979. (NTIS PB 162 225)
- [4] Hilton, G.W., Federal Transit Subsidies: The Urban Mass Transportation Assistance Program, Washington, D.C.: American Institute for Public Policy Research, 1974.
- [5] Institute of Public Administration, Financing Transit: Alternatives for Local Government, Washington, D.C.: U.S. Dept. of Transportation, Urban Mass Transportation Administration, Office of the Secretary, July 1979. (NTIS PB80 129 331)
- [6] Smerk, G.M., Development of Federal Urban Mass Transportation Policy, Bloomington, IN: Indiana University, Center for Urban and Regional Analysis, School of Public and Environmental Affairs, 1973.
- [7] Smerk, G.M., Urban Mass Transportation: A Dozen Years of Federal Policy, Bloomington, IN: Indiana University Press, 1974. ISBN 0-253036170-2

The numbers in parentheses are NTIS order numbers

APPENDIX 3A

UMTA REGIONAL OFFICES

Region I

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	Regional Director Transportation Systems Center Kendall Square, 55 Broadway Cambridge, Mass. 02142 617/494-2055
--	---

Region II

New Jersey, New York, Puerto Rico, Virgin Islands	Regional Director 26 Federal Plaza, Suite 507 New York, N.Y. 10007 212/264-8162
---	--

Region III

Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia	Regional Director 434 Walnut St., Suite 1010 Philadelphia, Penna. 19106 215/597-8098
--	---

Region IV

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee	Regional Chief 1720 Peachtree Road, NW Suite 501 Atlanta, Ga. 30309 404/526-3948
---	--

Region V

Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin	Regional Chief 300 S. Wacker Drive, Suite 700 Chicago, Ill. 60606 312/353-6005
---	---

Region VI

Arkansas, Louisiana, New Mexico, Oklahoma, Texas	Regional Chief 819 Taylor St., Suite 9A32 Fort Worth, Texas 76102 817/334-3896
--	---

Region VII

Iowa, Kansas, Missouri, Nebraska	Regional Chief 6301 Rock Hill Road, Room 303 Kansas City, Mo. 64131 816/926-5053
-------------------------------------	---

Region VIII

Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	Regional Director Prudential Plaza 1050 17th St., Suite 1822 Denver, Colo. 80202 303/827-3242
--	---

Region IX

Arizona, California, Hawaii, Nevada, Guam	Regional Chief Two Embarcadero Center Suite 620 San Francisco, Calif. 94111 415/556-2884
--	--

Region X

Alaska, Idaho, Oregon, Washington	Regional Director 915 Second Ave., Federal Bldg. Suite 3106 Seattle, Wash. 98184 206/442-4210
--------------------------------------	---

MASS TRANSIT MANAGEMENT:
A HANDBOOK FOR SMALL CITIES

SECOND EDITION, REVISED

1980

Institute for Urban Transportation
Indiana University School of Business
Bloomington, Indiana

George M. Smerk

Staff Assigned:

Rosemary B. Gerty, Coordinator and Editor
Jean H. Babbitt, Graduate Research Assistant
Jennifer A. Clifford, Research Assistant
James J. Humpf, Graduate Research Assistant

This report does not constitute a standard, specification, or regulation.

The opinions, findings, and conclusions expressed in this publication are those of the Institute for Urban Transportation and not necessarily those of the U. S. Department of Transportation, Urban Mass Transportation Administration.

The preparation of this report has been financed through a grant from the United States Department of Transportation under the provisions of section 9 of the Urban Mass Transportation Act of 1964, as amended. (UMTA Project Numbers IN-09-8002, IN-09-8003, and IN-09-8004)

