U.S. Department
of Transportation
**Urban Mass
Transportation
Administration**

UMTA-CT-06-0008-83-2
DOT-TSC-UMTA-84-4

Transportation Brokerage Demonstration - Bridgeport, Connecticut

Interim Report
April 1984

UMTA Technical Assistance Program
Office of Service and Management Demonstration
UMTA/TSC Project Evaluation Series

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
UMTA-CT-06-0008-83-2		

4. Title and Subtitle	5. Report Date
TRANSPORTATION BROKERAGE DEMONSTRATION- BRIDGEPORT, CONNECTICUT	April 1984
	6. Performing Organization Code DTS-64
7. Author(s) J. Richard Kuzmyak	8. Performing Organization Report No. DOT-TSC-UMTA-84-4
9. Performing Organization Name and Address COMSIS Corporation* 11501 Georgia Avenue, Suite #312 Wheaton MD 20902	10. Work Unit No. (TRAIS) UM464/R4620
	11. Contract or Grant No. DOT-TSC-1753
12. Sponsoring Agency Name and Address U.S. Department of Transportation Urban Mass Transportation Administration Office of Technical Assistance Washington DC 20590	13. Type of Report and Period Covered Interim Report August 1978 - December 1981
	14. Sponsoring Agency Code URT-30

15. Supplementary Notes

*Under contract to: U.S. Department of Transportation
Research and Special Programs Administration
Transportation Systems Center
Cambridge MA 02142

16. Abstract

Since August 1978, the Greater Bridgeport Transit District (GBTD) has been engaged in a test of multimodal transportation brokerage. It is an ambitious effort aimed at revolutionizing the role of a public transit operator in planning and operating a regional transportation system.

GBTD's mission is to implement a diversified transportation network using a Transportation System Management (TSM) process, with services designed to meet the needs of specific markets. The components of this plan range from conventional fixed-route bus to both public and privately operated paratransit, including shared-ride taxi and employment-centered/subscription bus. Other major components include: strategic pricing and fare integration methods; development and application of advanced management and planning tools, linked to development of a large-scale management information system (MIS) capability; and a community and economic development role assumed by the Transit District.

Accomplishments of the brokerage through the period of this interim report include: development of a core fixed-route bus system and a performance monitoring system to control its operation; a community-based minibus system, with alternating peak feeder and off-peak circulation service schedules, a consolidated social service agency transportation network; a market-based fare prepayment program; and a program for eliciting funding support from the private sector. Planning for shared-ride taxi, user-side subsidies, employment-centered bus, and the broad-based management information system were still in progress at the time of this report.

17. Key Words	18. Distribution Statement
Brokerage; Transportation Systems Management; Paratransit; Multi-Modal; Fare Integration	DOCUMENT IS AVAILABLE TO THE PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
UNCLASSIFIED	UNCLASSIFIED	152	

PREFACE

This Interim Report was prepared by COMSIS Corporation under contract to the Transportation Systems Center (TSC) of the U.S. Department of Transportation. The project, which is still in progress, has been funded by the Urban Mass Transportation Administration (UMTA) under the Service and Methods Demonstration Program.The author of the report is J. Richard Kuzmyak of COMSIS.

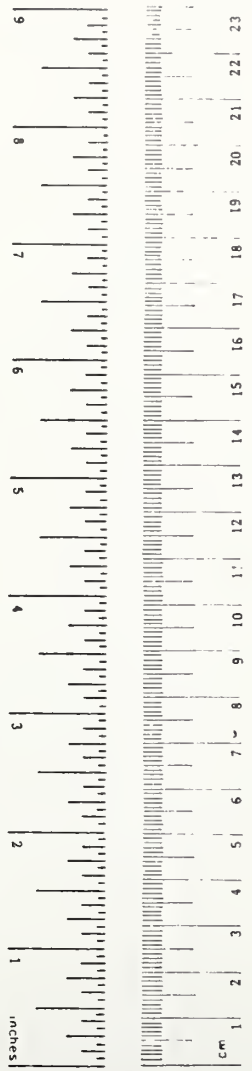
COMSIS acknowledges the assistance of several individuals in the preparation of this report. Dr. Bruce Spear served as Project Evaluation Manager for TSC, and provided considerable and very welcome assistance in framing difficult issues and in the overall organizational and editorial content. Mary Martha Churchman has served as the Project Manager for UMTA, and also contributed valuable, clarifying review comments. And finally, thanks are extended to the staff of the Greater Bridgeport Transit District for their help in supplying the basic information for the report, and for their patience in helping to resolve issues and factually represent project events. These individuals include Lance Grenzeback, the Demonstration Project Manager, Thomas Brigham, Executive Director of Greater Bridgeport Transit District, both of whom assisted in review of this report, and numerous others, including Mark Boaz, Ross Burkhardt, Richard Oram, Randy Richardson, and Eve Wyatt.

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

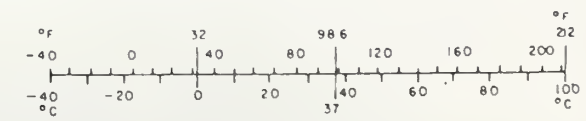
Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	he
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures. Price $2.25, SD Catalog No. C13.10:286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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EXECUTIVE SUMMARY

PROJECT OVERVIEW

This Interim Report details the first phase of development of a multipurpose, multimodal transportation brokerage demonstration in Bridgeport, Connecticut. The project began in early 1978 and is scheduled to run through June 1984. This report follows the progress of the demonstration through December 1981.

The grant recipient and administering agency for the project is the Greater Bridgeport Transit District (GBTD), a public transit agency whose authority encompasses a 91-square mile region, comprising the City of Bridgeport and adjacent towns of Fairfield, Stratford and Trumbull. The region accommodates a population of approximately 280,000.

The demonstration in Bridgeport is testing an innovative approach to the planning and operation of a public transportation agency. With the aid of over $2 million in UMTA Section 6 (demonstration) and Section 8 (planning) grants, GBTD has been attempting to engineer a systematic and innovative reconstruction of public transportation in the Bridgeport region, where previous transit service had bottomed out for both economic and institutional reasons. The clean slate and supportive atmosphere of Bridgeport were seen as providing an excellent environment for piloting planning, management and operating innovations. Pursuit of innovation within existing, established transit operations typically has been frustrated by the inertia of the prevailing infrastructure.

Numerous specific accomplishments have come out of the Bridgeport project, in the form of innovative service concepts, planning tools and management techniques. Each is documented within this report, and several of the more significant have been or will be made the subject of separate case studies. However, the overriding interest in the evaluation of the Bridgeport project is the study at an institutional level of the brokerage process itself: how the process formulates and grows, translates objectives into actions, interfaces with the community and

traditional institutions, and causes actions to be implemented. In sum, the issue is whether a general model for brokerage, either in whole or significant parts thereof, emerges from the demonstration in Bridgeport.

The Bridgeport project is guided by several objectives. The overall objective has been to establish a genuine Transportation Systems Management (TSM) process, or, literally, managing a maximum of service out of modest resources through enlightened application of conventional technology. Supporting objectives to this central theme include:

- development of an integrated, multimodal regional transportation network, where services are keyed to the needs of individual markets;
- integration of public and private sector transportation resources;
- planning and provision of transportation services using service-effective and cost-effective criteria to maximize the value and impact of transportation investments;
- implementation of a variety of service types, offering different levels of service at different prices;
- establishment of a formal market research and community involvement program;
- institution of pricing strategies that maximize the financial performance of transportation services, assist in user choice, and integrate regional services;
- use of transportation investments to stimulate and reinforce community and economic development.

Beyond the prerequisites of funding, defined objectives, and suitable location, two aspects of a brokerage demonstration are particularly important--timing and staff. In Bridgeport, these two factors have had significant influence on project events and, as a consequence, on the way in which this report is structured.

The idealized integrated regional transit system is a mosaic of physical service concepts, and operating and management systems. Realistically, the full mosaic does not come into being in one cosmic instant, but is "brokered" into place gradually over time--the result of meticulous and often simultaneous management of service development plans and supporting subsystems. These components are affected by the timing and amount of funding resources, availability of staff expertise, actual physical time to get a concept operational, and community readiness or expectation to see action. While there can be no clear-cut optimum for building up a system given the many planning variables, scheduling of actions nevertheless appears to be very important. If diversification calls for reversing service precedents in order to test a new concept where risk is involved, strong institutional resistance may be encountered, and diversification plans may not be realized. In appreciation of the importance of timing in what has happened and has yet to happen in Bridgeport, the major section of this report (Chapter 3) is structured as a chronological summary of events. Synthesis of the overall impact of the chain of events is then attempted in the report's conclusions and summary chapter (Chapter 5).

Another important ingredient in brokerage is staffing. The experience and working style of individuals have great leverage in a project where innovations are being packaged and sold to an interested but conservative community. The planning group for the brokerage demonstration was recruited almost entirely from the outside. Most were acquired for specific skills to meet the needs of specific initiatives. The staff includes specialists in fixed-route service planning and operations, paratransit, pricing, economic development, and management systems. At its peak the planning staff consisted of 12 individuals, in an agency of about 170 to 180 employees. Profiles of key staff members and issues related to their interaction are also a subject of a major section (Chapter 4).

As yet, a model brokerage operation has not materialized in Bridgeport, and it has become increasingly doubtful that anything like such an ideal will be realized. Rather, events are suggesting that institutional forces which have curbed transit innovation in the past are also significantly at work in Bridgeport. It appears that even the remarkable leverage afforded the brokerage project in Bridgeport, in terms of financial and intellectual resources and absence of an established infrastructure, has not been enough to overcome traditional obstacles to change. Since a "model" diversified, integrated network has not materialized, attention has been shifted to smaller planning breakthroughs and on identification of factors that have impeded innovation.

GBTD's efforts to develop a diversified, multimodal regional transportation network keyed to individual markets has been only partially successful. Between January and September 1980, GBTD put into operation a 55-vehicle, 15-route, fixed-route bus network, constituting the first improvements to basic transit service in Bridgeport in over a decade. This was followed in early 1981 by the implementation of a community-based minibus service, known as the MiniMover, in Fairfield. The MiniMover represented the beginning of market-based planning and service diversification for GBTD. The 6-vehicle system was designed to furnish morning and evening feeder service for commuters, and then shift route and fare structure to provide mid-day, evening, and weekend service for intracommunity travellers. The MiniMover was the second step in a three-part diversification plan for GBTD that included conventional fixed-route bus service for high density corridors, minibus service for the medium density markets, and shared-ride taxi for the low density markets.

The third component in this diversification plan, shared-ride taxi, has been difficult to realize. For various reasons, the existing Bridgeport taxi industry has not offered an attractive basis for inaugurating a shared-ride taxi (SRT) program. The industry is in poor financial health, is undercapitalized, and suffers from poor public image. These characteristics have

made the Transit District's Executive Board reluctant to proceed with a program that would use these resources to represent the Transit District in providing service. Options consisting of vehicle subsidies or contracting with an outside operator have been considered, but with limited prospects for implementation. So as yet, the shared-ride taxi service element remains untapped, which has obviously restricted GBTD's ability to innovate in the general travel market. While GBTD has extensively planned to incorporate privately-operated services into its regional development plan, until that integration is realized the brokerage will fall short of its goal to demonstrate cost-effective, market-based service development and diversification.

The area in which GBTD has been most successful with innovative market-based service development has been with elderly and handicapped transportation. GBTD played a leading role in the assembly of a consolidated regional transportation system for the elderly and handicapped. The system, known as the Human Service Transportation Consortium (HSTC), consists of a private, non-profit corporation from which local social service agencies (public and private) purchase transportation services for their clients. It presently transports over 10,000 riders a month. The HSTC replaced an existing coordinated system, which was ineffectual for the same reasons that have limited most coordination efforts--fragmented management, inexperience in running transportation programs, and agency self-interest. The GBTD consolidation effort was successful because of several contributing factors: sharp declines in agency funding; delapidation of agency vehicle stock; and significant enthusiasm and leadership from several private non-profit agencies to accept the responsibility of consolidation. However, these factors were brought together only through significant planning and liaison work by GBTD. GBTD staff developed the organizational structure, solicited the necessary cooperation, and used the uniqueness of the situation to attract badly needed capital replacement money. Perhaps the biggest accomplishment for GBTD was in removing itself from a direct operating or funding role, despite local pressure to assume the role of operator.

While GBTD's efforts to achieve full scale diversification have been limited by the number of available service options, it has continued efforts to develop and refine a framework for comprehensive market-based planning. The current procedure is patterned after conventional market research techniques. The system is hierarchical, and is designed to become more focused as planning evolves, and more detailed as the particular activity demands. In general, this has meant extensive initial discussions with community leaders and review of available data on travel patterns, activity centers and growth plans, followed by focus group sessions with citizen groups to establish community response to various service concepts and development proposals. In some of GBTD's early development efforts this general information profile has been followed by an origin-destination survey to quantify travel patterns and estimate potential service impacts. Actual service plans, however, are still based largely on judgment. The planning process has not evolved to the point where service options are developed and selected based on demand and cost-effectiveness considerations. Perhaps the major reason for this is that, without access to all modes in the diversification plan, the Transit District views most of its service developments as holding actions until comprehensive planning can be engaged. And when developing these initial services, GBTD is obliged to provide the widest possible coverage from available resources, which limits the amount of service that can be deployed in any one place. Hence, level-of-service vs. demand tradeoffs as a basis for cost-effectiveness analysis has been, in GBTD's judgment, an irrelevant consideration. Until it has the full ability to diversify, GBTD feels it is obliged to simply supply the best service it can from its available resources.

GBTD's chief control over service design lies less in planning and more in its monitoring program. Ridership, cost and service are monitored on all systems on a monthly basis. Periodically, individual routes are evaluated relative to their cost recovery, and are either expanded or eliminated based on this data. Bridgeport has been a pilot implementation for UMTA's

transit performance monitoring system.* Extensive baseline information was obtained in 1980 on the fixed-route bus system, and was used to calibrate system performance models. To date, the models and data base have not been applied in the day to day operation of the bus system or to reach planning decisions. However, there are plans to use these models more aggressively for service management and modification once the database is updated and the District's principal management information system (MIS) is in place.

GBTD has realized numerous delays in implementing its plans for a multipurpose, mainframe MIS. As a substitute, they have developed a functional management system on a microcomputer. This system is regularly used for routine bus system monitoring, project scheduling and monitoring, and budget management. It is being increasingly used for marketing analysis. Data on clients and system usage is being stored in the computer as the basis for future marketing initiatives. Staff freely interact with the computer to satisfy planning needs as increasingly innovative applications arise.

The pricing component of the demonstration has produced several interesting products. Pricing structures have been devised for existing transit services based on cost analysis. Cost allocation procedures were developed to investigate the appropriateness of peak/off-peak fare differentials on the fixed-route system, and as a basis for a highly differentiated fare structure for the Fairfield MiniMover system. Program innovations also include a market-segmented transit fare prepayment program, consisting of separate passes for commuters and daytime users, and tokens for less frequent users, each with a studied and unique break-even level.

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*Bus Transit Monitoring Manual," Urban Mass Transportation Administration, U.S. Department of Transportation, August 1981.

The pricing program has also used pricing strategies for promotion and to encourage private sector funding support. Commuter passes and tokens have been successfully marketed to employers, who then subsidize the cost of the pass to employees as a fringe benefit. Another major development is the "Value Fare" merchant discount program. Discount coupons redeemable at area commercial enterprises are given to pass purchasers as a sales inducement. Support of the program by area merchants has been enthusiastic.

Finally, the Transit District has been testing the role of a joint development broker within a conventional transit agency. As an old industrial city, Bridgeport has suffered typical urban decay. With the City apparently on the verge of an economic metamorphosis, the issue has been to see if transit investments can be used as a force to shape or lead revitalization activities. GBTD initiated three such community development projects: revitalization of the Bridgeport CBD through redesign of the downtown bus loop and various streetside improvements; a study of the economic development potentials of Fairfield's town center; and a transit mall development on East Main Street on the East Side, the City's most ethnic and deteriorating innercity neighborhood. After considerable progress was gained through active community liason and careful shaping of development alternatives, program efforts were dealt a severe blow by the loss of UMTA Urban Initiatives and Economic Development Administration funding in 1981. This caused a change in approach for GBTD, to a position of coaching and encouraging development efforts and a greatly diminished role in funding. Based on this continuing role, however, the most promising elements of these development plans are progressing.

SUMMARY AND CONCLUSIONS

What is being attempted in Bridgeport is a radical approach to the planning and operation of a public transportation system. It is an ambitious experiment whose ultimate success has been predicated on a clean institutional slate and, hence, minimal

resistance to change. In point of fact, it does not take long for these institutional forces to materialize, led by conventional notions of what public transit should be and the reinforcement of these notions by existing funding programs.

This report is an interim statement on the progress of the Greater Bridgeport Transit District in developing a public transportation planning and management model. The likelihood that a transferable general model will result from the project seems less promising at this interim stage than at the project outset. True multimodal service development has not yet materialized because of some key missing options, most particularly the involvement of private operators through shared-ride taxi or similar arrangements. Without such options, a diversified, multimodal capability does not exist, and Bridgeport at this interim stage is not far different from other conventional transit agencies in its operation and performance.

Several useful innovations have resulted from the brokerage process, however, including methods for private sector financial participation, project monitoring and management systems, and a consolidation formula for social agency transportation. These innovations should prove useful as options to other operators for improving the performance of their systems. However, it may prove that a transferable procedure for accomplishing major innovation in public transportation does not materialize from the Bridgeport demonstration, due to the interplay of institutional factors and the timing and sequence of events.

1. INTRODUCTION

1.1 BACKGROUND AND PURPOSE

This interim report details the background and first phase of development of a multi-purpose, multi-modal transportation brokerage experiment ongoing in Bridgeport, Connecticut. The demonstration elements of this project have been funded under the Service and Management Demonstrations Program (SMD) of the Urban Mass Transportation Administration (UMTA), U.S. Department of Transportation.

The grant recipient and administering agency for this project is the Greater Bridgeport Transit District (GBTD), a public transit agency which presides over a 91-square mile region, comprised of the City of Bridgeport and the adjacent towns of Fairfield, Stratford and Trumbull. About 280,000 people reside in this service region, which has substantial travel both within the region, as well as into and out of the region as a result of Bridgeport's location in the busy I-95 corridor.

The concept of brokerage as a transportation management strategy is not new, although the demonstration of brokerage in Bridgeport is distinct in a number of ways. The major distinction is the scale and comprehensiveness of the Bridgeport experiment. While most prior brokerage efforts have been restricted to a small number of special markets or modes, GBTD has taken on the task of systematically rebuilding an entire regional public transportation system, which was badly deteriorating at the outset of the project. This revised system will continue to have a fixed-route bus network as its core, but will be complemented by a family of public and private paratransit services. Each element in the system is intended to meet the requirements of specific travel markets, while functioning as an integrated component within a regional network.

The primary objective of the Bridgeport experiment is to establish a true Transportation Systems Management (TSM) process (the more official title for brokerage), where all transportation

modes are eligible for use in the transportation system, depending on their effectiveness in serving particular markets, and not on whether the operator is public or private. This is not TSM as currently interpreted by transit operators. While public transit operators are increasingly adopting a systems approach in the planning and management of transportation services, little progress has been made in reaching outside traditional public modes and operating practices. By starting from scratch with a broadly-defined charter, the Greater Bridgeport Transit District set out to identify and institute the appropriate type of transportation service for particular travel markets, and not simply maximize the deployment of fixed-route bus services. This ambition requires development of special planning tools and expertise to match transportation demands with the performance characteristics of different modal alternatives, and to balance these demands and service offerings into an efficient and integrated regional transportation network.

In addition to the more technical planning aspects of market definition, alternatives analysis and service development, the brokerage function must also incorporate elements of management and entrepreneurship. Management implies that active efforts are made to monitor service strategies after they have been implemented, and to modify those services periodically to maximize service productivity and overall system performance. Entrepreneurship is also an important brokerage function. Regardless of their technical merit, programs must be effectively packaged, promoted and sold at all levels in order to be successful. GBTD's entrepreneurial efforts include extensive marketing and promotional programs, public information systems, and direct interaction with institutions and citizen groups in the community.

In further support of the comprehensive TSM objective, the Transit District is conducting specialized studies of the application of competitive pricing methods, and of the use of transportation improvements to promote community and economic development. Effective pricing of transit service carries with it the need for accurate information on costs, and timely management

information to determine whether the pricing policy is producing the desired modal balance in relation to efficiency objectives and operational policy. GBTD is attempting to integrate these considerations into the overall brokerage process. The brokerage is also making a concerted effort to target transit improvements to areas in need of commercial and residential revitalization. Cooperative action programs involving the transit provider, community interest groups and the financial community can often produce small improvements which have important leverage in transforming neighborhood spirit and self-image, and leading the way to larger-scale revitalization.

The brokerage demonstration in Bridgeport has been officially underway since receipt of a modest initial Section 6 grant in August of 1978. However, this early work was largely preparatory to the main demonstration, which was initiated under a major Section 6 grant received in September 1979. Since that time, many of the planned service improvements and management strategies have been implemented, while others are substantially along in planning and development. Because the demonstration is virtually unprecedented, however, a learning process is in effect. Brokerage is a dynamic process, and the Bridgeport experiment is continuing to define itself, growing in steps and ways that perhaps could not have been predicted at the outset. One thing which is clear is that the learning process will continue, characterized by outcomes that are both expected and unexpected, both desirable and undesirable. However, what is happening in Bridgeport may well define what the future holds for urban transportation system planning and operations. As public resources grow ever more scarce, the pressure will build to control costs through innovation and through improved management. In both its successes and failures, Bridgeport may have much to share with transit operators of the future.

1.2 PROJECT STATUS

This report describes the interim status of the brokerage demonstration. The focus of the report falls decidedly on brokerage as a transportation management strategy. Individual projects which spill out of the brokerage are discussed as they describe the progress and success of the brokerage. It is important to see that projects are not always designed or implemented in what might be considered optimal form or rational sequence. The dynamics of the brokerage environment significantly challenge the systematic service planning ideal.

Figure 1-1 is provided to convey a better initial sense of how the Bridgeport project is organized and the types of activities that are taking place. The brokerage itself is perhaps best visualized as a management function, comprised of several elements. At its core is a Transportation Systems Management (TSM) function which acts as a control center to formulate and administer overall goals and objectives. The work of the TSM function is played out through three supporting and sequential functions: Comprehensive Planning, Service Development, and Service Evaluation. These three processes, shown as boxes in Figure 1-1, are the mechanisms through which the brokerage defines the initial need for a service development, establishes its priority and manages its development relative to other projects, goals, and funding and institutional constraints, and then monitors and fine tunes the project to long-term success.

Specific accomplishments in this area are difficult to list out, since the management system is something of a nucleus which precipitates and monitors projects, but often shows no tangible product itself. Aside from the various service initiatives, planning and management tools are the traceable products of the management process. Among these tools, many of which are still in the development stage, are:

- An evolving model for comprehensive community-based planning and service development. This model envisions stepwise estimates of needs, development of alternatives, financial analysis and service development

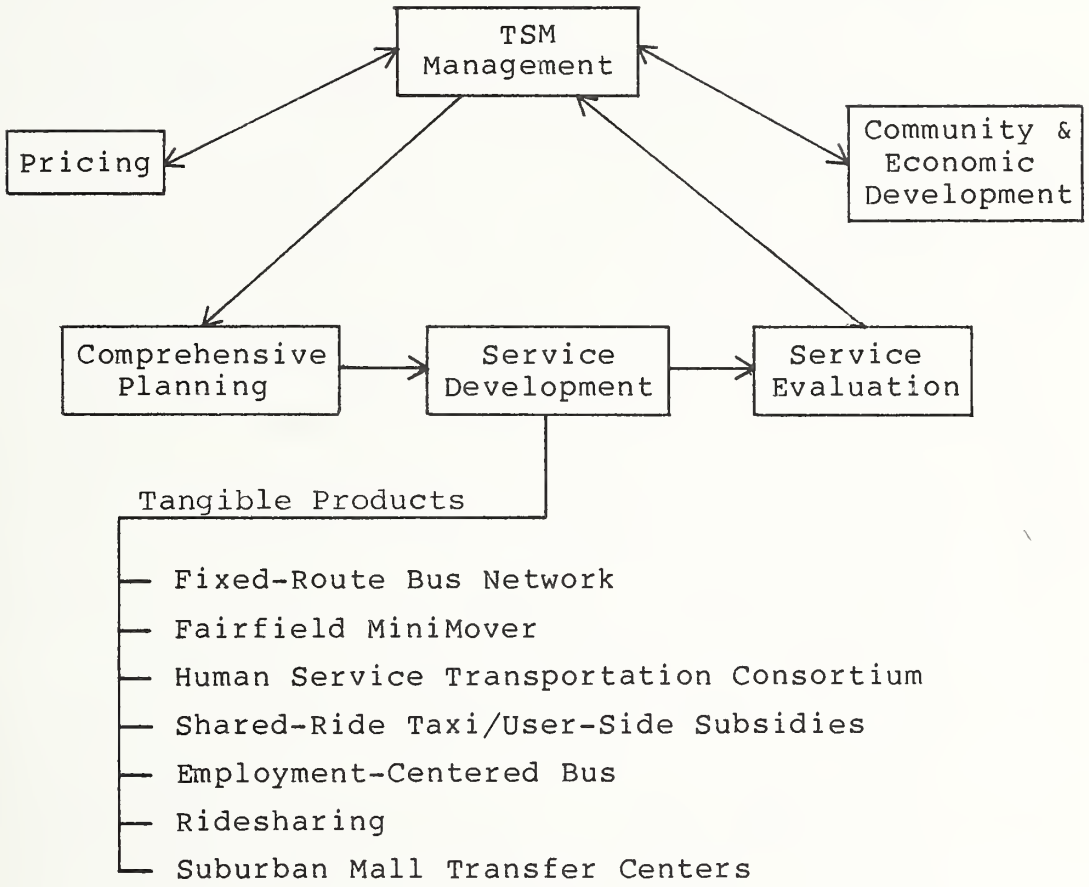

FIGURE 1-1. BRIDGEPORT BROKERAGE ORGANIZATION

schedules. Development of such a model is now being attempted in conjunction with planning and service development in Stratford, after similar efforts were cut short by the rush of events in the planning for Bridgeport and Fairfield.

- A large community evaluation and service development project underway on the East Side, known as the Inner-City Demonstration, which will try to study the relationships between economic hardship and mobility.

- An evolving market research program to supply data for planning and evaluation of services. Market surveys were performed in Fairfield and Stratford during service development planning in those areas, and are either planned or underway for the Inner-City Demonstration and the Shared-Ride Taxi program.

- A service monitoring and performance evaluation system which, when complete, will provide monthly operating information on all active services. The system incorporates UMTA's bus performance monitoring system.* The system has been debugged in the course of some original software development, and will eventually be used to chart strategic performance variables relative to service standards.

- A full-fledged management information system (MIS), which will operate on a mainframe computer to assist planning, evaluation, and general management functions. This system is in advanced design. In the interim, a miniature MIS has been set up on a desktop microcomputer, which has been used for project management and program budgeting since August of 1981.

Once projects reach the service development stage, they are farmed out to individual staff members or teams for design and implementation. This does not terminate management's role, but

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*"Bus Transit Monitoring Manual," Urban Mass Transportation Administration, U.S. Department of Transportation, August 1981.

only transforms it to that of monitor, advisor, and budgetary enforcer. Similarly, brokerage does not stop at the service development stage.

Specific service development accomplishments are listed in Figure 1-1. One of the first accomplishments of the Transit District was the acquisition of four private bus companies which had previously supplied transit service to the region. This former system provided an alternately fragmented and redundant network of services. Takeover of the private companies began in late 1978 and was concluded in early 1980. The previous service network was then reviewed and the route system rationalized to provide better service within communities and to eliminate unproductive links and redundancies. A consolidated service network consisting of 15 routes and 55 vehicles was put into operation in September 1980. This system carries about 315,000 passengers monthly, or 28.2 per bus service hour*, resulting in a cost recovery ratio (portion of operating costs met through fare revenues) of 52 percent.

Another major accomplishment was the design and implementation of a community-based minibus service in the member town of Fairfield. This system, termed the MiniMover, provides separate service to a morning and evening commuter market, and a daytime and weekend service oriented toward travel within the community. The two services assume entirely different routings and fare structures. The commuter service is oriented to the New York City commuter population which utilizes the local CONRAIL station. Its schedules are designed to ensure connections with daily trains. Users are charged according to a distance-based, zonal fare system. The daytime/weekend service connects major shopping, educational, social service, and recreational offerings within the community, with inter-route connections made possible through a centrally located, timed-transfer site, or "pulse point." Users may also transfer to GBTD's fixed-route bus system for travel to locations elsewhere in the region. The MiniMover system features flat fares equal to the fixed-route bus service,

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*Period 11/15/81 to 12/12/81

with special reduced fares for students and elderly. The six-vehicle MiniMover system went into operation in February 1981, and carries approximately 8,500 monthly passengers, or 4.7 per bus service hour.*

Along with the development of the MiniMover service, GBTD has tested some ambitious marketing and promotional fare strategies. The service was not only advertised through most of the conventional media, but a special marketing packet was assembled and distributed to each household and each commuter at the train station. The packet was strategically designed to contain all the information necessary for the individual to become familiar with the service, as well as encouraging them to use the service. Promotional strategies included two free tickets and special order forms for purchasing half-price tickets and passes. Follow-up investigations have shown that these marketing aids facilitated public understanding and encouraged use of the service.

A significant accomplishment has been the catalytic participation of GBTD in the development of a consolidated transportation network for the elderly and handicapped, termed the Human Service Transportation Consortium (HSTC). The Consortium combines the resources of Bridgeport's elderly and handicapped service agencies into a non-profit transportation corporation which sells transportation services to member agencies. HSTC operations are currently limited to the City of Bridgeport, but are expected to eventually expand to serve the entire GBTD Region. The HSTC system pools the vehicle fleets of the member agencies and centralizes the dispatching, maintenance, and administrative functions to improve overall level of service and productivity, and reduce costs. GBTD worked as liaison and technical advisor with the member agencies to help develop the organizational structure and assist in planning the system, including the development of an independent charter and a multi-purpose management information system. Based on the strength of the cooperation of the member agencies, GBTD was able to secure Federal and

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*Period 11/15/81 to 12/12/81

state funding for 15 new paratransit vehicles for HSTC use. The system was implemented in September 1980, and has been operating independently, except for regular technical assistance from GBTD, since the summer of 1981. The system carries an average of 11,000 riders per month.* Costs per individual tripmaker currently average $1.25 for regularly scheduled trips to workshops, $5 to $6 for prescheduled travel, and $8 for demand-responsive service.

Numerous projects have reached the advanced planning stage. Both a regional shared-ride taxi program and a user-side subsidy program are under design and expected to be implemented in the near future. In another area, the District is playing a catalytic role in identifying the market for private, employment-centered subscription bus service to major employers. Some of the first tests of this concept, involving several major employers in the Stratford area, are planned for 1983. This program is being marketed in conjunction with the regional ridesharing program. Also at hand are plans for improved suburban transportation services, particularly in the town of Trumbull, through a network which utilizes regional malls as strategic transfer centers.

The Pricing and Community and Economic Development programs have also been very active. Figure 1-1 shows these two programs in a strategic position relative to the brokerage. While they are under the control of the primary management function, they also contribute importantly to the management in terms of overall goals and objectives and supporting programs of action. With the concurrence of the brokerage's central management, they have also been separate centers of project development, outside of the comprehensive planning/service development/evaluation process of the brokerage.

GBTD's pricing program has been active in developing and testing innovative pricing concepts to complement and integrate the various physical services. For example, system fares, to the extent possible, have been related to incidence of cost, which in

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*July 1982

most cases also reflects relative levels of service. Studies of cost incidence by time of day were made on the fixed-route service to show no basis for instituting peak/off-peak fare differentials. The principal fare policy objective of GBTD is one of "revenue maximization," or in other words, differentiating fare levels among markets in relationship to both service costs and willingness to pay, with the aim of maximizing overall cost recovery. This policy resulted in a dual fare system for the Fairfield MiniMover service, which exacts distance-based premium fares from commuters, but requires only flat fares (differentiated by type of user) from the more price-sensitive discretionary daytime traveler. A supporting objective of the revenue maximization goal is to avoid fare policies which constitute service "give-aways," particularly in terms of discounts to entice users. GBTD implemented a multi-element transit prepaid fare system in the fall of 1981 which incorporates these revenue maximization principles. GBTD endeavored to find the correct price for a pass instrument such that the public would be encouraged to buy it, but very few passengers would be able to exceed its break-even level. The District hoped that any discounts in the pass rates would be realized instead through support from the private market, in the form of employers subsidizing employees, and merchants subsidizing customers. GBTD's employer subsidy program has had modest but growing success, with one local bank now subsidizing transit use by its employees, and other employers expressing similar interest. Simultaneously, the merchant discount program, designated the Value Fare Program, has enjoyed substantial early success. By December 1981, 40 to 45 Bridgeport area merchants had already become participants in this program which functions by giving the pass user product discounts at the respective establishment, thereby reducing the effective cost of the pass to the purchaser. Discounts are effected by redeeming coupons which are obtained at the time of pass purchase. GBTD has derived different prepayment instruments for three distinct user markets: a commuter pass, purchased for $23 and valid for use before 9 A.M. and between 2 P.M. and 6 P.M. on weekdays; a Fare-Cutter card, designed principally for off-peak

users but valid at all times, purchased for $15 and requiring payment of $.25 with each ride (regular fare of $.60); and bus tokens, available in 10-pack quantities for $6, designed for the individual whose schedule or income does not encourage a monthly pass investment.

Another important accomplishment of the brokerage demonstration is the development of an active community and economic development program. Based on the premise that transit-related investments and service improvements can stimulate community revitalization, the brokerage team has sought development opportunities through active community research and liaison. This activity has resulted in cooperative courses of action in several key areas of the region. In downtown Bridgeport, the Transit District is engaged in a program of improvements to bus streetside facilities (signs, shelters, sidewalks, greenery, etc.), as well a complete revamp of the downtown loop system for moving buses efficiently into and out of the CBD, in a manner which also enhances commercial activity. In Fairfield the District is attempting to tie a system of service improvements to commercial growth and revitalization in the town center. Finally, in its largest effort, the District has been attempting to spearhead a major renewal program in the city's heavily ethnic and deteriorating East Side, Bridgeport's oldest commercial district. GBTD's initial plans were directed at a transit mall development on East Main Street, the neighborhood's principal corridor. However, untimely elimination of Federal funding programs which supported economic revitalization and joint development activity has resulted in a much reduced role here for GBTD. Nevertheless, GBTD has been effective in sustaining revitalization interests within the community, primarily through entrepreneurial actions which are based on targeting transit service development to these areas.

1.3 EVALUATION SUMMARY

1.3.1 Overview

Many potentially valuable findings have been anticipated from the Bridgeport brokerage demonstration. Experienced and specialized staff members functioning with ample resources in an environment which is politically favorable to revitalization have earmarked Bridgeport as a prime source for answers to many important policy questions. This is, however, a tall expectation to place on any one experiment, no matter how well it is staffed or funded. Implementations always take time, innovations have doubters, funding streams are unreliable, and politicians can be fickle and capricious in deciding between the general public welfare and the wishes of their constituency. Furthermore, these variables make it difficult to evaluate an undertaking on the scale of Bridgeport with any static or universal model.

There are many concepts being tested in Bridgeport, of both a service and management nature. While the typical evaluation of a Service and Management Demonstration project would attempt an impact assessment of each major project innovation, for several reasons that strategy has not been extended to this demonstration. First, with Bridgeport's mission to reshape the entire transportation system, a number of the individual actions represent rather basic building blocks, the planning and implementation of which has not extended the state-of-the-art. Hence, detailed coverage would be of limited interest.

Other project concepts may be sufficiently novel in conventional practice to be regarded as innovations. Yet, even as legitimate innovations in appearance, many of these do not qualify for standard evaluation treatment because they have not been staged in an acceptable evaluation framework, or because peculiarities in their implementation have rendered their impacts either minimal or so heavily dependent upon the Bridgeport environment as to be only weakly transferable experiences. As a result of these considerations, only a select number of

individual project components have been isolated for in-depth study and reporting, and these have been made the subject of independent case studies.

The overriding evaluation interest in Bridgeport, more important than the use or success of particular service concepts, is the brokerage "process" itself. The "process" is the mechanism by which the need for specific service actions is identified, as well as the force which develops, markets, implements, and operates these services. Evaluation of this process is difficult to do objectively and with precision because it is so multi-faceted, and because it is decidedly dynamic. Individual actions, like pieces on a chessboard, are deployed at such time and in such form as is necessary to advance the "process" toward the ultimate goals of the Transit District. These goals are to achieve an integrated regional transportation system which supplies all member jurisdictions with the transportation service that meets their respective requirements, and is justifiable, not only in terms of economic and operating efficiency, but in the constituency's willingness and ability to pay for and support the service.

A multitude of factors affect how this "game" is played, in terms of what actions are instituted, at what time, in what area, and in what form. A partial list of these include:

- Jurisdiction with most apparent immediate service needs
- Availability of Federal, state, or local funding assistance
- Strength of support or opposition within the Executive Board, from local political officials, and from the community
- Availability of appropriate staff expertise to plan, market, or administer concepts
- Degree of experience, strength of personality, and level of financial backing of individual staff members
- Regulatory and institutional obstacles.

Because of the interplay of these factors, it is difficult to evaluate the progress or success of the brokerage in any static sense. Actions are linked to resources, skill, and prevailing climate. The management of these factors into a comprehensive, goals-oriented process is in effect a strategy, and this strategy often requires that actions be taken which may not in themselves be defensible as effective long-term solutions. Often an action must be used a a "place holder," to achieve a temporary balance in the system until a more appropriate action can be taken. This approach is expedient in maximizing current objectives while allowing the "process" to move on toward its ultimate goals.

Therefore this evaluation has the objectives of both studying the development and effects of specific transportation improvements as well as attempting to track the much larger overall process. This split has resulted in a decision to provide reporting at two entirely different levels. The standard evaluation report (of which this is the interim version) will focus on documentation of the process. Project accomplishments, large and small, will be described at a level of detail that is appropriate for characterizing their role in and importance to evolution of the process. Meanwhile, individual actions, which have been effectively implemented and that represent innovation in transportation service delivery or management will be monitored and analyzed in conventional evaluation detail. The results of these analyses will be documented in individual "case studies." These studies will primarily deal with the traditional impacts of demand, level of service and economics, but will also relate the importance of the process in the definition and development of the service element, since this often significantly affects the form in which the concept materializes.

Those service elements which will be reported upon in case studies are still being considered, as the project evolves and more insight is gained. Individual projects which to date have been selected as case study topics are the Human Service Transportation Consortium, the Inner-City transportation development

project, and potentially, the Value Fare merchant discount program. The first case study, which deals with the Transportation Consortium, is currently available.*

1.3.2 Issues

For structural simplicity, evaluation issues have been organized into four program areas. The first of these deals with the comprehensive Transportation Systems Management process itself. The remaining three are program specific, dealing with physical service development, pricing strategies and fare integration, and community and economic development. The issues which have guided the evaluation are listed below by program area.

1. **Development of Comprehensive TSM Process**

   What overall goals guide the Transit District?

   How are goals and objectives transformed into specific actions by the Transit District?

   How are travel markets defined and their needs determined?

   How are candidate projects identified, developed, and prioritized for implementation?

   What role do the following have in definition, development and prioritization of projects?

   - o experience and rank of staff
   - o type and availability of funding assistance
   - o political and institutional pressures

   To what degree are alternative actions defined and evaluated?

   How do regulatory barriers affect the planning and service development process?

   What management tools are necessary to guide and assist the process?

   How are projects evaluated?

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*COMSIS Corporation, **The Human Service Transportation Consortium**, for the Transportation Systems Center, U.S. Department of Transportation, Final Draft, December 1982.

How does service evaluation affect subsequent planning and operation?

How are integration and balance achieved?

What are the administrative costs to operate the brokerage?

What would have been the major differences in transportation development in Bridgeport in the absence of the multimodal broker? In what measure is the Bridgeport experience transferable?

2. **Transit Service Planning and Development**

Planning

How was the project identified? What market was the project targeted for?

What alternatives were considered?

Against what criteria was the chosen alternative selected?

What were the steps in the planning process?

What types of staff expertise were required in developing the concept? What skills were missing?

How long did the planning process take and what were the causes of any major delays?

Implementation

What marketing was employed?

What was usual or unusual about the implementation?

What special liaison was necessary to gain successful implementation?

Has the project reached steady-state operation, and how long did it take?

In what measure is the Bridgeport experience transferable?

*Demand Impacts

Describe the population served.

What is market penetration of the service?

*Major treatment occurring in case studies for select projects.

How does the user group compare to the population served in terms of:

- o sociodemographics,
- o alternatives available,
- o travel patterns,
- o perceptions and attitudes regarding public transportation ?

How many trips are carried?

What are tripmaking characteristics:

- o frequency,
- o purpose,
- o time of day,
- o day of week,
- o trip length,
- o number of new trips by purpose,
- o number of substitute trips by purpose and previous mode?

*Level of Service Impacts

Describe the service:

- o reservation requirements
- o wait time
- o hours of operation
- o fare
- o travel time
- o reliability
- o service quality.

*Productivity and Economic Impacts

What are service productivities?

What portion of costs are covered by direct revenues?

How does service compare to other GBTD services, and to similar services located elsewhere?

*Major treatment occurring in case studies for select projects.

3. **Pricing and Fare Integration**

What specific pricing strategies are developed?

What goals or objectives was the action developed to satisfy?

What caused the particular strategy to arise as a project when it did and in the form it did?

What planning was involved in the project?

What alternatives were considered and why was the chosen approach selected?

What information was used in the course of detailing the concept?

How long did the planning for the project take, and what was the cause of any major delays?

How was the project implemented? How long did it take, what special problems were encountered, and what special liaison was necessary?

What are the primary effects of the project, and how do these conform to design goals and objectives?

What is the evaluation procedure, and what is done with the results of the evaluation?

In what measure is the Bridgeport experience transferable?

4. **Community and Economic Development**

What projects have been undertaken, and why were these particular projects selected?

How influential is the community and economic development broker in defining the course of actions and in coordinating the channels of support?

What factors separate successful from unsuccessful CED efforts, including:

- o funding assistance
- o political support
- o condition, sociodemographics and spirit of the neighborhood
- o degree of change being attempted?

Have transit service-related improvements been a significant force in economic development efforts?

What have been the major obstacles?

In what measure is the Bridgeport experience transferable?

2. SITE DESCRIPTION

2.1 DEMOGRAPHIC CHARACTERISTICS

Bridgeport is the largest city in the State of Connecticut. It is an industrial community on the main travelled way of the East Coast, spanning Exits 24 through 30 on the Connecticut Turnpike and lying at the edge of the New York metropolitan area (61 miles east of New York City; see Figure 2-1). The Greater Bridgeport Metropolitan Region is made up of the City of Bridgeport and the neighboring towns of Stratford, Fairfield, Trumbull, Monroe and Easton (see Figure 2-2), although the study area for the demonstration is limited to the towns in the Greater Bridgeport Transit District: Bridgeport, Fairfield, Stratford and Trumbull. The four-town portion of the region accounts for only 62.5 percent (91.2 sq. mi.) of the region's total land area but 87.6 percent (280,925) of the total population.

The City of Bridgeport was formed out of Stratford Township in 1821. Because of its harbor, it attracted industrial development, had early rail connections, and became a very busy port. By 1861 over 15,000 vessels cleared the port in a single month. Its early wealth came from the manufacture of guns and corsets. Dr. Warner's Health Corset was established in 1876 and by 1917 produced 120,000 corsets per week. Remington Arms moved to Bridgeport in 1867, and at its peak in World War I, employed 37,000 people.*

Today, the Region's economy is shifting toward a white collar, non-manufacturing base. Major industries during the 1900's included transportation, fabricated metals and ordinance, machinery, and electrical equipment. Between 1940 and 1970 the orientation toward defense-related goods buoyed growth, and employment, population, housing, and commerce expanded. In the years between 1940 and 1970, Greater Bridgeport's population grew from 200,000 to 311,000. In recent years the demand for

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*Procter, Mary and Matuszeski, Bill, "Gritty Cities," Philadelphia, Temple University Press, 1978.

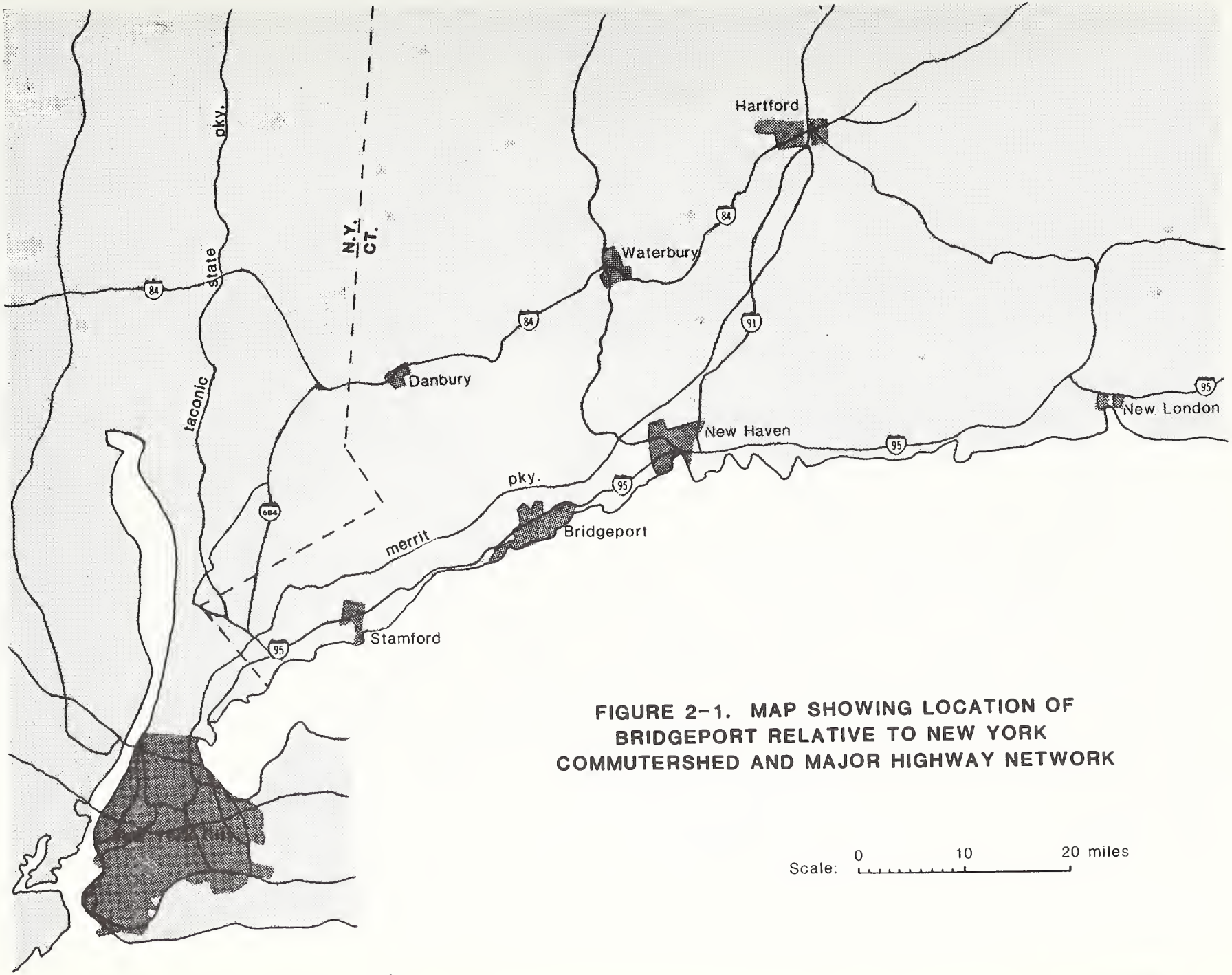

FIGURE 2-1. MAP SHOWING LOCATION OF BRIDGEPORT RELATIVE TO NEW YORK COMMUTERSHED AND MAJOR HIGHWAY NETWORK

Scale: 0 10 20 miles

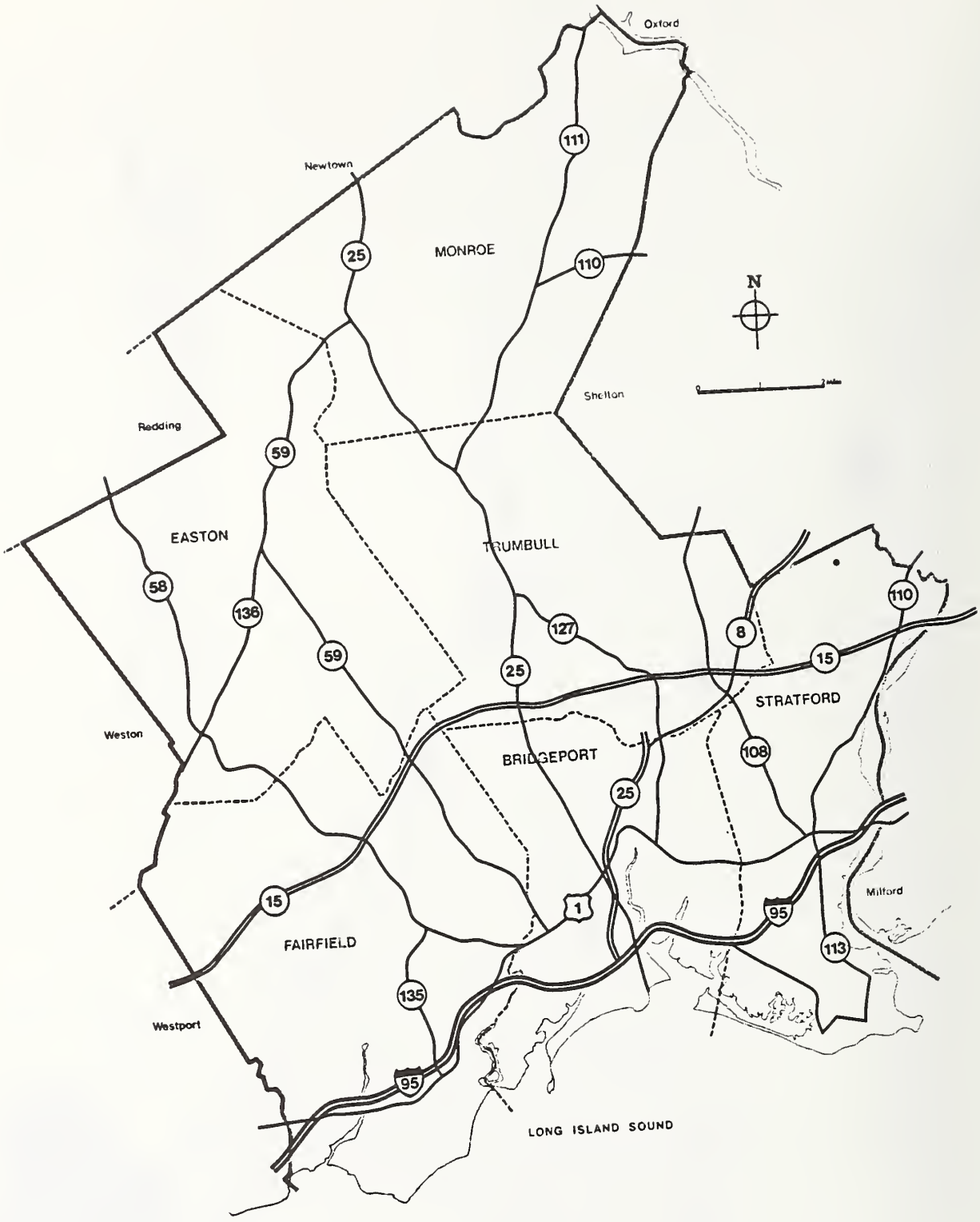

FIGURE 2-2. GREATER BRIDGEPORT METROPOLITAN REGION
Regional Road Network

defense goods has fallen, and, in its place, government, retail and service jobs have increased. The 1970 regional employment was 125,000, with 40 percent in manufacturing and 60 percent in non-manufacturing sectors. Employment projections foresee a stable relationship between the sectors, with total employment expected to increase by 14 percent to 143,000 jobs by 1990, with the manufacturing share dropping to 38 percent.*

As may be seen by the distribution of work trips in Table 2-1, the great majority, or 83.5 percent, of all work trips generated by the four towns of the study area are made to destinations within the Greater Bridgeport Region. Most of these, or 66.5 percent of the trips remaining in the region, end in the City of Bridgeport, with 12 percent destined to the Bridgeport CBD. Fairfield, the westernmost community in the Region, is effectively the last New York City commuter suburb on the New Haven line. Twenty-five percent of Fairfield's work trips are destined outside the Region, with many of these going to New York City. Among the other towns, only 12 percent of the City of Bridgeport's work trips go outside the region, compared to 18 percent of Stratford's and 22 percent of Trumbull's. Generally, the people who live east of Fairfield do not work in New York.

The 1980 population of the Greater Bridgeport Region was 320,690. Its distribution by individual town and growth since 1960 are illustrated in Table 2-2. The data indicate that the Greater Bridgeport Region experienced steady growth from 1940, when its population was about 200,000, to 313,232 by 1970. This growth trend is most pronounced in the four older towns which comprise the Transit District (GBTD); the population of these areas peaked at 296,300 in 1970. Since 1970, both the GBTD area and the total region have lost population. The GBTD area declined by 5.2 percent between 1970 and 1980, while the overall region declined by 4 percent. The City of Bridgeport led the decline, losing 13,996 people or 8.9 percent during this period, although both Fairfield and Trumbull, the two affluent suburban

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*Bridgeport Area Chamber of Commerce, "Bridgeport Connecticut Fact Book," Bridgeport, Connecticut, undated.

TABLE 2-1. TOWN-TO-TOWN EXCHANGE OF WORK TRIPS

Residence	Bridgeport CBD	Bridgeport Remainder	Fairfield	Stratford	Trumbull	Monroe	Easton	Other*	Total Work Trips
Bridgeport-CBD	174	440	56	88	N.A.	N.A.	N.A.	40	798
Bridgeport-Remainder	7,418	36,745	3,613	6,692	1,360	61	42	7,681	63,612
Fairfield	1,639	6,699	7,519	1,173	295	42	44	5,839	23,250
Stratford	1,858	7,374	755	7,349	491	38	18	3,810	21,693
Trumbull	1,053	4,433	535	1,522	2,161	313	53	2,773	12,843
Monroe	222	1,063	148	517	443	1,001	15	1,147	4,556
Easton	202	436	174	69	67	19	195	620	1,782

*Includes out-of-region work trips and improperly coded intra-region work trips.
N.A. = Not available due to deficient coding.

Source: Conn DOT Tabulations, 1970 Census Journey-to-Work.

TABLE 2-2. POPULATION OF THE GREATER BRIDGEPORT REGION AND GREATER BRIDGEPORT TRANSIT DISTRICT, 1960-1980

	1980*	1975**	1970**	1960***
Bridgeport	142,546	142,960	156,542	156,748
Fairfield	54,849	58,084	56,487	46,183
Stratford	50,541	50,656	49,775	45,012
Trumbull	32,989	31,394	33,496	20,379
SUBTOTAL - Greater Bridgeport Transit District	**280,925**	**283,095**	**296,300**	**268,322**
Easton	5,962	5,140	4,885	3,407
Monroe	14,010	13,708	12,047	6,402
TOTAL - Greater Bridgeport Region	**300,897**	**301,942**	**313,232**	**278,131**

Sources:

*"1980 Final Population Counts for Connecticut Municipalities," Connecticut Census Data Center, December 1981.

**"1977 County and City Data Book", U.S. Bureau of the Census.

***"1970 Census Population Report for State of Connecticut," U.S. Bureau of the Census, 1970.

communities, also lost population during the 1970's. Fairfield's population declined by 2.9 percent and Trumbull's by 1.5 percent. Oddly perhaps, the town of Stratford gained population in the 1970's, about 1.5 percent, even though it is second only to Bridgeport in age and industrial composition. Easton and Monroe were the major regional growth centers between 1960 and 1980, and are expected to continue that role. The Greater Bridgeport Regional Planning Agency has projected the population of the Region to increase by 32.8 percent by 2000, based on pre-1980 data. Most of this growth is expected to occur in the three northern towns of Trumbull, Easton and Monroe, and relatively little in Bridgeport, Stratford and Fairfield.*

Regrettably, 1980 Census data are not yet available to assist in describing the sociodemographic characteristics of the Bridgeport Region. The latest available data are taken from the 1970 Census, and are summarized in Table 2-3.

Bridgeport exhibits many of the demographic characteristics expected of a central city in a mature metropolitan area: it contains the largest percentage of elderly (60 and over) of any jurisdiction at 16 percent; the smallest percentage of youth (aged 10 to 16) at 12 percent; and the highest percentage of non-white persons at 17.3 percent, compared to less than 1 percent in most of the other towns. It also has the lowest median family income, at $9,849, with 21.9 percent of all families living below the poverty level, compared to an average of $11,910 for the region, and 15.2 percent below the poverty level. Median family income for the State of Connecticut is $11,811. Similarly, Bridgeport has the lowest rates of auto ownership, at 1.03 autos per household vs. 1.39 for the region and no less than 1.65 for any other town in the region.

Trumbull and Fairfield are clearly the affluent, professional communities, with median family incomes of $14,772 and $14,265, respectively, and auto ownership rates of 1.93 and 1.65 autos per household, respectively. Stratford is more of a

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*Greater Bridgeport Regional Planning Agency, "The Region's Economy, 1975-1978," Bridgeport, 1979.

TABLE 2-3. SOCIOECONOMIC PROFILE OF THE GREATER BRIDGEPORT REGION

	BRIDGEPORT	EASTON	FAIRFIELD	MONROE	STRATFORD	TRUMBULL	REGION
POPULATION:							
Total Population	156,542	4,885	56,437	12,047	49,775	31,394	311,130
Persons 60+ Years	25,721	651	7,338	773	7,411	3,440	45,324
% of Town	16%	13%	13%	6%	15%	11%	15%
Persons 10 to 16 Years	17,999	808	8,411	2,012	6,843	5,186	41,259
% of Town	12%	17%	15%	17%	14%	17%	13%
Non-White Persons	27,148	23	468	131	2,296	236	45,324
% of Town	17.3%	.5%	.8%	1.1%	4.6%	0.8%	15%
LAND AND HOUSING:							
Area in Square Miles	17.9	28.6	30.6	26.2	19.2	23.5	145.9
Persons/Acre in Sq. Miles	8,755	173	1,843	461	2,592	1,338	2,131
Occupied Housing Units (OHU)	52,924	1,436	16,581	3,075	15,488	8,485	97,989
OHU/Acre	4.62	0.08	.85	0.18	1.26	0.56	1.04
Median Dwelling Value	$24,500	$50,000	$33,200	$30,532	$26,900	$35,184	$27,341
EMPLOYMENT:							
Total Labor Force	68,599	1,834	24,500	4,813	23,029	13,513	136,288
% of Total Population	44%	38%	43%	40%	46%	43%	44%
Total Employment	65,350	1,792	23,680	4,658	22,208	13,043	130,731
% of Total Population	42%	37%	42%	39%	45%	42%	42%
INCOME:							
Median Family Income	$9,849	$17,506	$14,255	$13,553	$12,268	$14,772	$11,910
Mean Family Income	$10,673	$20,584	$17,566	$13,937	$13,409	$15,783	$12,830
Families Below $6,000	8,715	82	1,227	186	1,499	467	12,176
% of Total	21.9%	6.5%	9.5%	6.3%	11.1%	5.7%	15.2%
AUTOS AVAILABLE:							
Total Autos	54,469	2,641	27,350	5,733	29,634	16,395	136,395
Autos/OHU	1.03	1.84	1.65	1.86	1.91	1.93	1.39

Source: 1970 Census of Population and Housing

middle-income, working class community, with a median income of $12,268, falling midway between Bridgeport and the two affluent communities. However, its auto ownership rate is quite high at 1.93 autos per household, comparable to that of Trumbull.

The Greater Bridgeport Region covers a land area of 145.9 square miles, and has an average population density of 2,131 persons per square mile. The highest density, of course, is found in Bridgeport with 8,755 person per square mile, followed by Stratford with 2,592 persons per square mile, Fairfield with 1,843 persons per square mile, and Trumbull with 1,338 persons per square mile. Bridgeport's high density is also reflected in its concentration of housing, with an average of 4.62 dwelling units per acre, compared to only 0.85 in Fairfield, 0.56 in Trumbull, and 1.26 in Stratford. Bridgeport's high concentration of dwelling units has been further added to by construction of a large number of multi-family units in the past decade. Based on existing land utilization, the projected increases in population are expected to greatly accelerate growth in the northern towns of Easton, Monroe, and Trumbull.

Bridgeport's climate is typical of southern New England, moderated by Long Island Sound. Temperatures average 24 degrees in January and 74 degrees in August, with extremes of -5 degrees and 103 degrees. There is an average of 39 inches of precipitation, winds out of the northwest in winter and southwest in summer, and 118 days with measurable precipation, based on National Oceanographic and Atmospheric Administration data from Sikorsky Memorial Airport.

2.2 TRANSPORTATION FACILITIES

The income and auto ownership data in Table 2-3 combined with the distribution of work trips by location within and outside the region in Table 2-1 are significant factors in the choice of mode for the trip to work, as presented in Table 2-4. Predictably, the highest rates of bus use (12.3%) and walking (9.2%) occur in the City of Bridgeport. These rates are much less in each of the other towns. Meanwhile, use of auto for

TABLE 2-4. METHOD OF TRANSPORTATION TO WORK

	Bridgeport	Easton	Fairfield	Monroe	Stratford	Trumbull	Region
Total Workers	64,411	1,781	23,265	4,555	21,699	12,841	128,522
% Drivers	63.2	87.8	75.8	86.8	76.6	86.1	71.2
% Passengers	13.0	4.4	10.2	8.3	12.2	8.4	11.6
% Bus	12.3	0.0	2.8	0.8	5.6	1.1	7.7
% Train	0.4	0.7	2.8	0.2	0.4	0.9	0.8
% Walk	9.2	1.9	4.8	1.4	3.3	1.3	6.3
% Other	1.9	5.7	3.2	2.5	1.9	2.2	2.4

Source: 1970 Census of Population and Housing

travel to work accounts for 94.5 percent of all trips in Trumbull, 86 percent in Fairfield, and 88.8 percent in Stratford, compared to 76.2 percent in Bridgeport.

Bridgeport has extensive highway facilities. The region's highway system is an integral part of the Northeast Corridor's main artery system, as can be seen in the previous Figure 2-1. Major components of the system include:

1. Interstate 95, the main corridor of the Boston to Washington megalopolis, which runs through the center of Bridgeport.
2. Interstate 84, the alternative inland corridor, which runs parallel to I-95 some 12 miles north of Bridgeport's center.
3. Interstate 287, the intermediate circumferential highway around Metropolitan New York, which is located 25 miles west of Bridgeport on I-95.
4. Interstate 91, the gateway to central New England, which is located 19 miles east of Bridgeport along I-95.
5. Northern linkages to I-84 in an eastern direction, which is provided by the new limited-access Conn. 8 freeway.
6. Linkage to I-84 and points west is provided by the partially completed Conn. 25 freeway. When completed, this Route 25 will provide the eastern-most link of an outer circumferential highway which would allow westbound New England traffic to by-pass the congested Tappan Zee Bridge - New York City route.

Other major highways, such as the passenger-auto-only Merritt Parkway (Conn. 15) and the Boston Post Road (U.S. 1), parallel nearby I-95 in their east-west traverse of the Greater Bridgeport Region. These facilities and other elements of the regional road system may be seen in Figure 2-2.

Transit service in the Bridgeport Region is provided by the Greater Bridgeport Transit District (GBTD). GBTD was created in 1974 as a multitown transit authority, with its enabling legislation being a local tax appropriation from each of the four member towns. Revenue derived from this local tax fund amounted to $81,000 in 1980. All additional program funds are derived from either state or Federal sources. The Connecticut Department of Transportation serves as the local matching agent for all Federal grants.

GBTD first became an operating agency in July of 1979, when it completed buy-out of the first of four existing private bus companies in the Bridgeport area. Prior to that time GBTD had served simply as regulatory and promotional agent for the private companies. This situation distinguished Bridgeport as, not only the largest city in Connecticut, but the only large city with locally operated transit. The Hartford, New Haven, and Stamford areas are all provided transit service through Connecticut Transit, a special operating agency of the Connecticut Department of Transportation (Conn DOT). Despite its transformation to public ownership, however, GBTD has not incorporated into Connecticut Transit, a situation which forces it to compete for state funding and support with the state-run systems on perhaps a less-than-equal basis.

The transit network serving the Bridgeport Region prior to the demonstration consisted of a 17-route system, with coverage in Bridgeport, Stratford, Trumbull and Fairfield. As of June 1978, system ridership averaged 12,700 passengers a day, with the characteristic of relatively constant loadings throughout the day. Service was provided by four private independent bus companies. These services had developed into marginal operations, with minimal service, characterized by headways of 1-hour or more. The industry had seen little investment over the prior several years, and as a result, the equipment was old, maintenance was deferred, and service and public relations had been poor. GBTD, as regulatory agency, had been unable to reverse this situation, which prompted the decision to acquire, update and operate the existing services itself.

The Bridgeport Region also has a taxi industry, which GBTD expects to use as a major component in its diversified regional service plan. Taxis are presently regulated by the Connecticut Public Utilities Commission, but GBTD has the authority from the State to assume that responsibility. The Transit District is still engaged in study of potential mechanisms it may use to accomplish its service objectives with taxi, which may or may not involve a direct regulatory role.

2.3 INNER-CITY DEMONSTRATION SITE

The Bridgeport brokerage demonstration also incorporates a separately-funded and highly-focused study of innovative transit service development in a prototypical high-density inner-city area. The target area for the Inner-City Demonstration is the East Side of Bridgeport, located between downtown Bridgeport and the East End. The East Side is bounded by the Pequonnock River, Yellow Mill Pond and Boston Avenue, as shown in Figure 2-3.

The 1-square mile area is very dense (population 23,000 pers./sq. mi.) and very diverse in its ethnic makeup and land-use mix. It contains a variety of residential dwelling types, commercial activity along the entire length of East Main Street, and some industrial development. The population is a mixture of Spanish, Black, and many foreign-born East European and Italian immigrants. The median income of the area is the lowest of all planning districts in the region. Unemployment appears to be relatively high, especially in the southern part of the target area (lower East Side). Thirteen percent of the families are below the poverty level, with one census tract having 52 percent living in poverty. The Housatonic Community College is located in the center of the area and the Bridgeport hospital is less than one-half mile to the east. A socioeconomic profile of the area is presented in Table 2-5.

A total of 117 manufacturing and industrial establishments existed in the area in 1970, which contributed approximately 3,500 jobs to the region. Approximately 14 percent (1,079) of

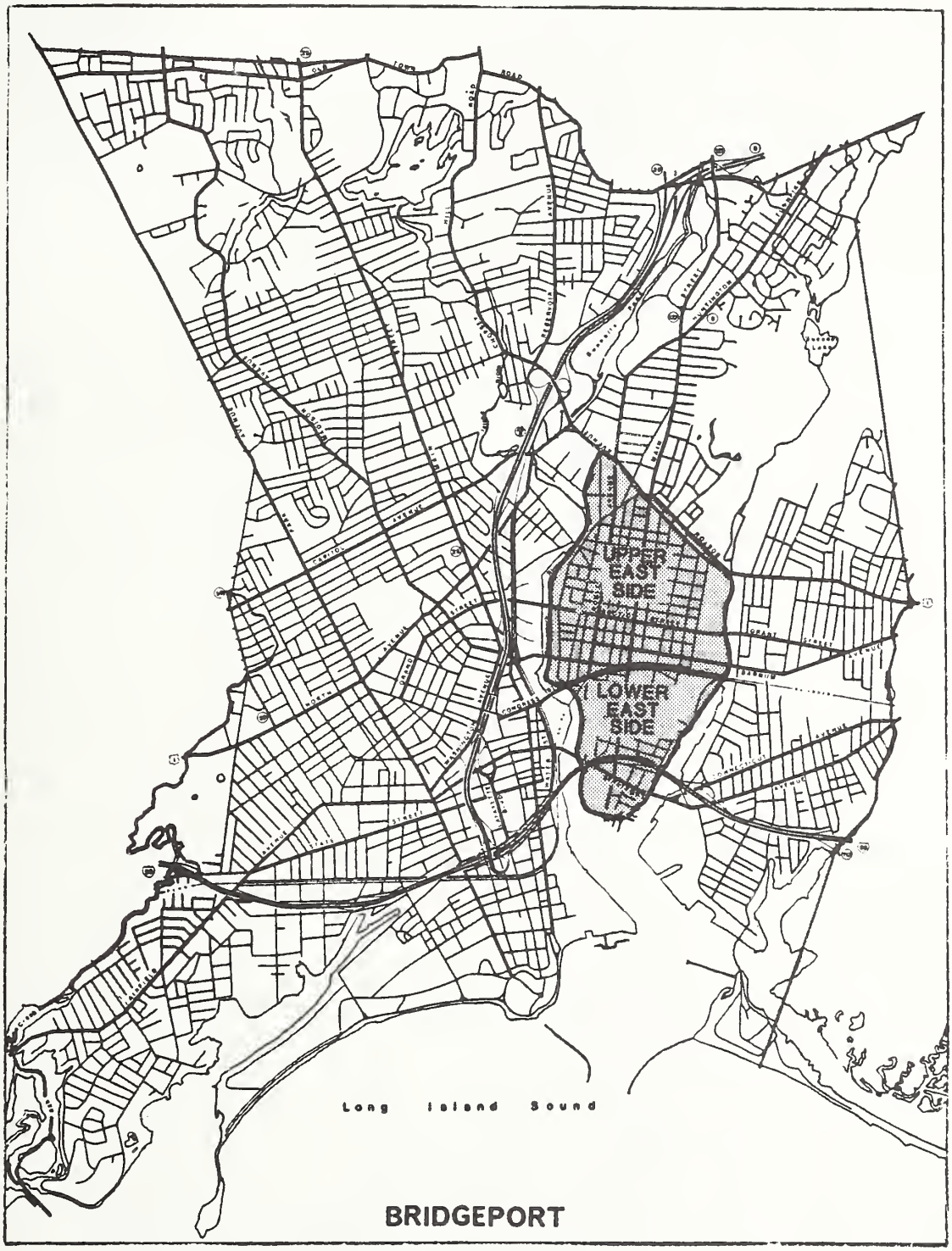

FIGURE 2-3. CITY OF BRIDGEPORT
Location of Inner-City Demostration Site

TABLE 2-5. EAST SIDE SOCIOECONOMIC PROFILE[1]

	Upper East Side		Lower East Side		Total	
Population	13,381		8,640		22,021	
Square Miles	0.67		0.28		0.95	
Pop./Sq. Mile	19,972		30,857		23,180	
Mean Income	$7,152 (Range: $5,600-$8,123)		$5,744 (Range: $3,727-$7,225)			
Labor Force Participation	5,773		2,505		8,278	
Projected Employment	Manufactrng.	Non-Manufact.	Manufactrng.	Non-Manufact.	Manufactrng.	Non-Manufact.
Forces to 1975	2,736	5,329	843	1,035	3,579	6,364
to 1980	3,234	6,163	995	1,194	4,229	7,357
Industrial Establishments (Number)	85		32		117	
Utility Establishments (Number)	--		10		10	
Trades and Services (Number)	72		32		104	
Racial and Ethnic Characteristics						
1. Black	5.2%		46.0%			
2. Hispanic	15.2%		3.5%			
3. White	79.6%		50.5%			
Housing Units						
1. Owner Occupied	1,071	= 21.2%	891	= 26.7%	1,962	= 23.4%
2. Renter Occupied	3,974	= 78.8%	2,446	= 73.3%	6,420	= 76.6%
Total	5,045		3,337		8,382	

[1]All figures based on 1970 Census.

the total 7,749 journey-to-work trips were contained within the target area. The additional 6,670 trips were oriented to employment centers outside of the geographic limits of the program area. The modal split for all work trips generated in the area was 75 percent auto, 16 percent bus, and 9 percent walk or other.

Transportation in the area prior to the demonstration has consisted of fixed-route bus, taxi (licensed and unlicensed), and specialized service supplied by civic and religious organizations. The pre-existing fixed-route transit service had six routes crossing through and serving the inner-city: two routes serving north-south travel between Trumbull and the Bridgeport Central Business District; three routes providing east-west service between Stratford and the Bridgeport CBD; and one route providing service between the south end of the inner-city and the major employment site in the area, General Electric Corporation.

3. DEVELOPMENT HISTORY OF THE BROKERAGE

3.1 INTRODUCTION

This chapter presents a chronology of important events which have contributed to the evolution of the brokerage project in Bridgeport. As discussed in the introductory chapter, two types of results are anticipated from a study of brokerage. The more tangible result is the discrete service concept or operating method which falls out of the process. The less tangible is the process itself, or the combination of planning methods, management tools and judgments which are developed along the way. The point of this chapter is to suggest that the timing of these myriad events has a substantial effect on outcome.

The very thing about brokerage that makes it interesting to study as a transportation management concept also makes it difficult to evaluate in any conventional or systematic way. Brokerage is a process, and as such, it is expected to be dynamic over time. As needs and resources change, the focus and approach change, and along with this the process and its products are altered. While it would be convenient to use discrete accomplishments, such as service concepts implemented or management tools developed, as the measuring device for brokerage, the accomplishments themselves can be misleading if viewed in isolation or at particular points in time. The process evolves and actions precipitate subject to community-defined needs and priorities, the interests, experience and availability of staff, and financial resources. The ultimate test for the brokerage is whether it achieves its long-term goals; short-run accomplishments may only be holding actions en route to the final goals.

Because of the time dependency, this evaluation report describes the progress of the demonstration in two ways. First, in this chapter, the focus is on the chronologic development of the project from the preliminary planning stage beginning in early 1978, through the start of the formal demonstration in September 1979, up to the arbitrary cutoff for this interim report of late fall, 1981. The intention of Chapter 3 is to

present a concise and objective accounting of what events occurred, and key elements in their occurrence, including staffing, funding, and exogenous factors. Later, in Chapter 5, an attempt is made to synthesize the events and their results into an overall appraisal of the success of the brokerage.

The discussion in this chapter is structured around a set of visual aids. The set includes a table which summarizes all of the funding grants that have been acquired by the project, and have not only aided but guided project activities in a substantial way. The remaining aids are comprised of a series of figures that illustrate the time flow of events which account for the development of the overall brokerage and the most significant project and program areas.

This report places a sizeable task on the reader to not only assimilate a large number of project events, but the pattern of their occurrence as well. The brokerage project is attempting to do many things, often simultaneously. The result is frequently the competition for resources and shifting priorities that take place admidst growing capability to plan and execute ideas and an unpredictable sea of exogenous events. Recognizing some of these important activity and event interrelationships is essential in understanding the project's progress (or lack of progress) overall or in specific areas.

Considerable thought, therefore, has gone into structuring project events and development of the visual aids. The first step in this presentation strategy has been to break-off and structure major activity areas as separably as possible, while still retaining the relationship to the core, or more simply, demonstrating how these activities were produced and directed by the brokerage process.

Breaking individual events out of the brokerage for separate study is not as difficult as the residual and perplexing questions of "what is brokerage?" Can it be seen or touched once it is stripped of its tangible products? After wrestling with this question for some time, the reasoned response is that brokerage is the combination of management functions that conceives initiatives, and then sees to their orderly development and operation,

fostering and applying the necessary planning and evaluation tools and criteria to fine-tune the action to success. Figure 3-1 asserts that brokerage is comprised (for illustration at least) of three management functions: comprehensive planning; service evaluation; and overall management. These functions are deemed responsible for discrete programs of action, which are the subjects of subsequent figures and independent discussions:

- Figure 3-2: Fixed-Route Service Development
- Figure 3-3: Elderly and Handicapped Transportation Consortium
- Figure 3-4: Fairfield MiniMover
- Figure 3-5: Shared-Ride Taxi/User-Side Subsidy
- Figure 3-6: Employment-Centered Bus/Ridesharing
- Figure 3-7: Pricing Program
- Figure 3-8: Community and Economic Development Program

Each of these projects or programs, of course, contributes to the evolution of the brokerage management function. Their managers are also the key players in the brokerage. However, the scheme used here for illustration treats these projects and programs (really project activity under programs) as initiatives spun off by the central management to be "fleshed-out." Therefore the central chart, Figure 3-1, shows only those major events in the initiation, completion or major modification of project initiatives. The detail on project development is then the subject of the individual project charts and discussions.

In addition to providing the linkage between evolution of the brokerage and development of specific projects, Figure 3-1 also serves as the overall calendar for the demonstration. It describes timing of all major staffing events and the acquisition of funding grants.

Because the funding grants are so numerous and varied, and so important to understanding the demonstration, they are listed and annotated comprehensively in a separate visual, Table 3-1. These grants combine for a total of over $18 million in Federal and state resources, including $10.9 million in capital grants and $5.1 million in operating grants, in addition to over $2

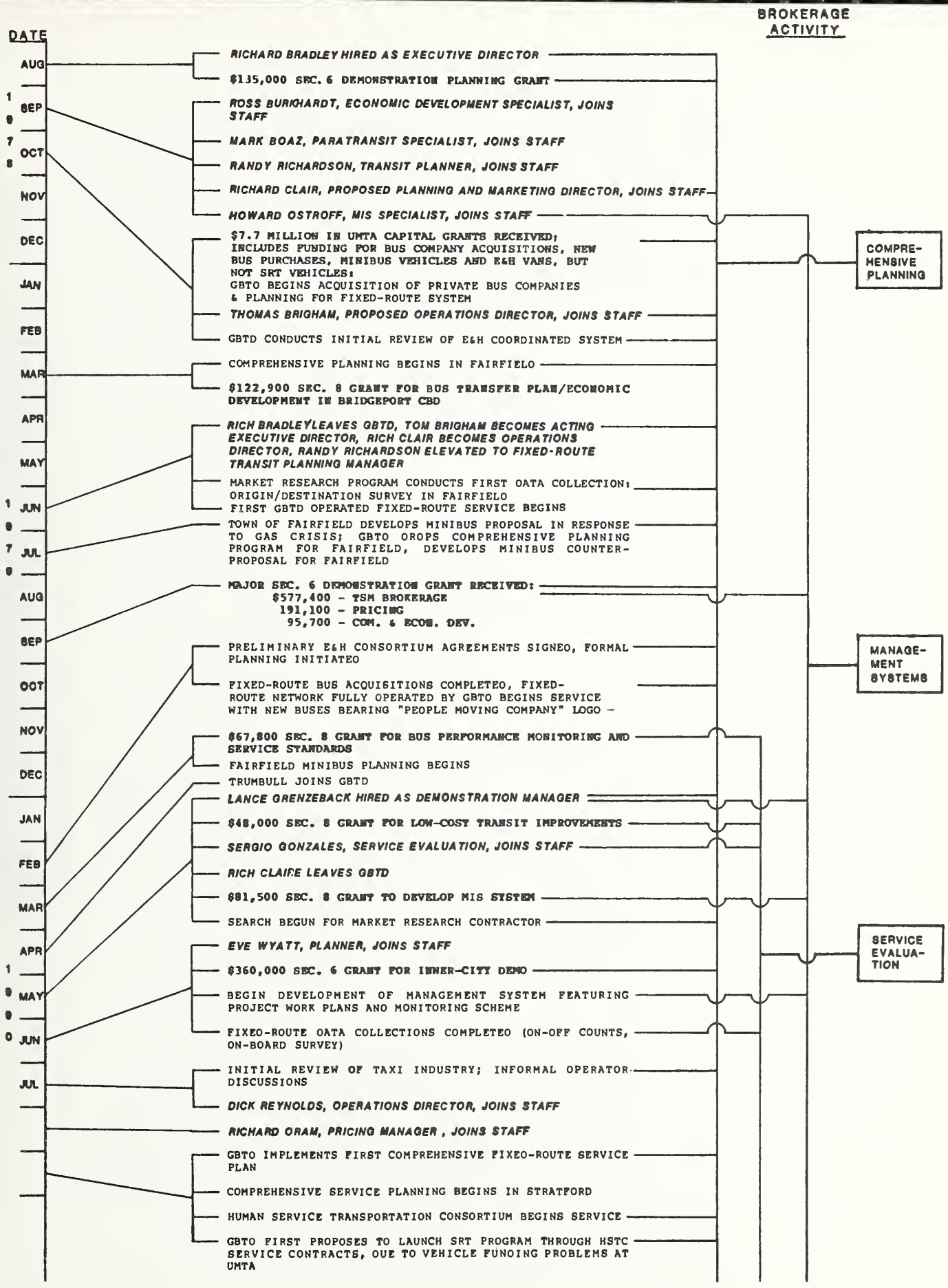

FIGURE 3-1. TIME DEVELOPMENT OF THE BROKERAGE PROCESS

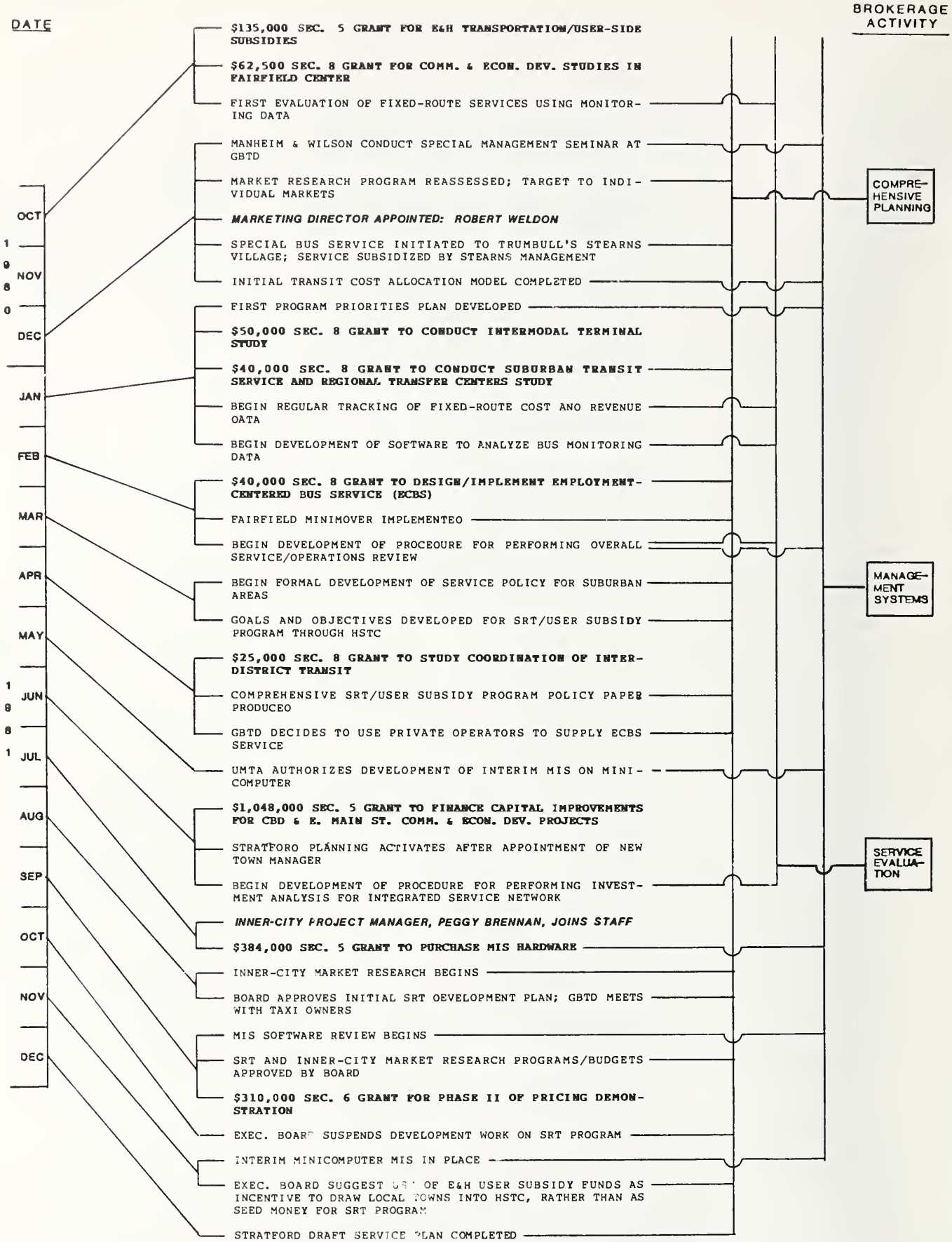

FIGURE 3-1. (Continued)

TABLE 3-1. LIST OF FUNDING GRANTS
BRIDGEPORT BROKERAGE DEMONSTRATION

PROGRAM/PROJECT	SOURCE	AMOUNT	DATE REC	PURPOSE
Demonstration Grants				
Initial Planning	UMTA Sec. 6 (CT-06-0008)	$ 135,000	8/15/78	Study to develop integrated transit system with economic development function.
TSM Brokerage	UMTA Sec. 6 (CT-06-0008-01)	577,395	9/28/79 & 1/80	Establish a TSM planning process.
Pricing				
Phase I	UMTA Sec. 6	191,066	9/28/79	Develop fare & pricing policies for all mass transportation modes with objective of maximizing revenue/minimizing costs.
Phase II	(CT-06-0008-01)	309,936	9/29/81	
	SUBTOTAL - PRICING	$ 501,002		
Community & Economic Development				
Econ. Dev., Phase II	UMTA Sec. 6 (CT-06-0008-01)	$ 95,744	9/28/79	Coordination of transit improvements with neighborhood and commercial center economic development activities.
Central Business District	UMTA Sec. 8 (CT-09-7001)	122,880[1]	3/22/79	Prepare bus transfer plan which will stimulate joint development activity in Bridgeport's CBD.
Community & Economic Dev.	UMTA Sec. 8 (CT-09-7002)	62,500[2]	10/01/80	Encourage community & economic development/ mass transit relationships in regional neighborhoods and suburban centers.
	SUBTOTAL - C&ED	$ 281,124		
Inner-City Demonstration	UMTA Sec. 6 (CT-06-0010)	$ 360,000	6/06/80	Prepare mass transit alternative services for an inner-city neighborhood in Bridgeport.
Bus Performance Evaluation	UMTA Sec. 8 (NY-09-0054/ TS H-492)	67,750[3]	March 1980	Design, develop, implement a performance evaluation and monitoring system to support planning, operations & management.
Low Cost Transit Improvements	UMTA Sec. 8 (NY-09-0064/ TS H-491)	48,000[3]	5/01/80	Development of low cost techniques which will induce auto trips to transit.

TABLE 3-1 (Continued)

PROGRAM/PROJECT	SOURCE	AMOUNT	DATE REC	PURPOSE
Demonstration Grants (Continued)				
Employment-Centered Bus Service	UMTA Sec. 8 (NY-09-0064/ TS H-651)	40,000[3]	2/01/81	Design and implement plan for regional employment-centered bus service.
Section 504 Transition Plan	UMTA Sec. 8 (NY-09-0054/ TS H-551)	12,500[3]	3/17/80	Determine best means for providing full system accessibility before 7/1/82.
Management Information System	UMTA Sec. 8 (NY-09-0054/ TS H-521)	81,500[3]	5/01/80	Design, develop & implement computer hardware and software to support operations management and operations.
TOTAL - DEMONSTRATION		**$2,104,271**		
Operating Grants				
GBTD System Operating	Federal, State & Local	$4,443,980	FY 1981 Only	Cover system operating deficit.
Fairfield	Federal, State & Local	530,161	FY 1981 Only	Cover MiniMover operating deficit.
E&H Taxi	UMTA Sec. 5 (CT-05-4090)	135,603	10/01/80	Elderly and handicapped shared-ride taxi and user-side subsidy program.
TOTAL - OPERATING		**$5,109,744**		
Capital Grants				
Major Acquisitions	UMTA Sec. 3 (CT-03-0019) State of CN	$5,079,126 1,269,794 $6,348,920	10/78 & 2/79	Purchase of private companies, 12 40-foot coaches, 19 35-foot coaches, parts, base station and 72 radios, and 65 automatic registering fare boxes.
Replacement Buses	UMTA Sec. 5 (CT-05-0005) State of CN	$1,086,764 271,691 $1,358,455	2/79	Purchase of 8 35-foot coaches, 8 17-to 24 passenger mini-buses, and 10 vans and 10 2-way radios for HSTC.
Downtown/East Side Improvements	UMTA Sec. 5 (CT-05-0021) State of CN	$ 838,400 209,600 $1,048,000	6/81	Improvements to transit-related facilities in downtown Bridgeport and East Side to facilitate bus operations and increase ridership.

TABLE 3-1 (Continued)

PROGRAM/PROJECT	SOURCE	AMOUNT	DATE REC	PURPOSE
Capital Grants (Continued)				
MIS System Development	UMTA Sec. 5 (CT-05-0022)	$ 307,200	7/81	Purchase computer hardware and software for MIS system.
	State of CN	76,800		
		$ 384,000		
Purchase Buses & Fare Boxes	UMTA Sec. 5 (CT-05-0023)	$ 533,000	8/81	Approval for 7 coach vehicles, when needed.
	State of CN	133,250		
		$ 666,250		
Garage	UMTA Sec. 3 (CT-03-0036)	848,400	10/81	Equipment purchases.
	State of CN	212,100		
		$1,060,500		
TOTAL - CAPITAL GRANTS		**$10,866,125**		
TOTAL GRANTS		**$18,080,140**		

[1]Includes 3.5% GBTD and 6.5% City of Bridgeport share.

[2]Includes 20% GBTD share.

[3]Includes 10% State and 10% GBTD share.

million in demonstration funding. Availability of these grants and skilled efforts of brokerage staff members to access and use them constitute important factors in the evolution of the brokerage. The resources afforded by particular grants, the timing and objectives implicit in their award, and the interests of persons responsible for accessing the grants all have impact on the shape and priority of events, and on the ultimate accomplishments of the brokerage.

3.2 INITIAL PROJECT DESIGN, GRANTS AND STAFFING

The demonstration project in Bridgeport had its origins in early 1978, as illustrated in Figure 3-1. It was initiated largely through the efforts of Richard Bradley, an individual with both visionary ideals and extensive experience in encouraging greater use of paratransit service concepts and managerial innovation in urban transportation. Prior to the birth of the brokerage idea in Bridgeport, Bradley was involved in the management of an experimental paratransit minibus and shared-ride taxi program in neighboring Westport, Connecticut. While at Westport, he was approached by Bridgeport officials who were impressed with his accomplishments and curious to see whether he could also help them revitalize public transportation in Bridgeport. These initial discussions were followed by preparation of a "think piece" by Bradley which delineated a comprehensive program of action, incorporating, as principal elements, a revitalized fixed-route bus system, paratransit for special markets and the establishment of a broad-based brokerage process to manage these improvements. The program design also included community and economic development initiatives to address the city's long-term economic and environmental decline.

Based on this planning paper and the strength of his performance record in Westport and similar UMTA-sponsored programs elsewhere, Bradley's ideas were endorsed by the Greater Bridgeport Transit District's (GBTD) Executive Board. Michael Gratt, Chairman of the Board, was particularly taken with Bradley's visions and the potential they suggested for making Bridgeport a

leader in transit innovation and urban renewal in the State of Connecticut. Through Gratt and the Board, Bradley's proposal also gained the support of the City, and in the summer of 1978 Bradley was hired as GBTD's Executive Director. Shortly thereafter, he succeeded in helping GBTD secure its first grant, an initial $135,000 UMTA Section 6 grant to initiate planning for an integrated transit system with paratransit and economic development functions. Under this grant, a funding application was developed that proposed a major demonstration of transportation brokerage in Bridgeport, which was submitted to UMTA in June of 1979.

Receipt of the initial $135,000 planning grant in August 1978 marked the inauguration of the Greater Bridgeport Transit District as an active planning, management and operating agency. Since its formation some 7 years before, the Transit District had functioned only as a regulatory agency over the activities of the four private bus companies which provided transit service to the Bridgeport region. With acquisition of the planning grant and receipt of an initial capital grant for $3 million (of an eventual $7.7 million) in October 1978, the District began to acquire the staff it would need to carry out the elements of the brokerage plan. Among these were individuals with experience in fixed-route transit planning and operations (Rich Clair and Randy Richardson), paratransit planning and operations (Tom Brigham and Mark Boaz), a management information systems specialist (Howard Ostroff), and a community and economic development specialist (Ross Burkhardt). These individuals were assigned the responsibility of getting the basic transit and paratransit planning and community development activities in motion, to pursue additional capital funds to assist in buying out the existing private bus companies, and to help in developing the major demonstration grant application.

The grant application for the brokerage demonstration was developed in early 1979, and listed as its goals and objectives:*

- o Establish a Transportation Systems Management Process

  Broker demands for transportation services with the fixed-route and paratransit modes able to meet these demands in the most service-effective and cost-effective manner. Maximize the value and impact of public and private sector transportation investments. Coordinate the development and operation of the public transportation infrastructure.

- o Expand the Number and Variety of Transit Services Available Within the Greater Bridgeport Region

  Integrate existing fixed-route and paratransit services into a unified system of services which will provide different types and levels of service at varying prices. Encourage the development of innovative fixed-route and paratransit services within the public and private sector to better serve markets unserved or underserved by existing services.

- o Establish a Comprehensive Planning and Marketing Process to Promote the Development of a Complementary Range of Transit Services

  Implement a major market research program to provide the information needed for detailed program planning. Develop a promotional program covering fixed-route and paratransit services. Focus the planning process on development or encouragement of a variety of service modes.

- o Develop and Implement a Variety of Pricing Strategies to Maximize the Cost-Effectiveness of Fixed-Route and Paratransit Services

  Establish pricing strategies which will integrate public and private sector transportation services into

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*"Application to Establish a Transportation Systems Management Process, Pricing Demonstration Program, and Community and Economic Development Program," submitted to Service and Methods Demonstration Program, Urban Mass Transportation Administration by Greater Bridgeport Transit District, June 19, 1979.

a unified system of regional transit services, maximize user choice among modes and accommodate a variety of transit services at a range of prices within the region.

- Use Investments in Fixed-Route and Paratransit Services to Stimulate and Reinforce Other Public and Private Sector Investments

  Identify community and economic development projects which can potentially impact or be impacted by transit service delivery. Establish a process by which investment decisions of the Transit District and a variety of community agencies and institutions can take place in a unified and complementary manner. Coordinate Transit District and other public and private sector programs to maximize impact on regional development.

This delineation of objectives in the application probably strikes the average reader as both all-encompassing but vague regarding specific actions or how goals like "balance" or "integration" would be realized. In the opinion of Tom Brigham, the current Executive Director who served under Bradley during the early conceptual period, Bradley's aim seemed to be simply to revitalize transit in Bridgeport, but to accomplish that revitalization in an enlightened way. The intention was not to "reinvent the wheel," but to tap and intelligently apply an existing wealth of planning and service development experience, to avoid obvious conventional mistakes and pitfalls, and to innovate where experience indicated that innovations could serve particular markets better or at lower cost. According to Brigham, Bradley described brokerage as the process that would determine where, when, and how much to innovate.

GBTD's major demonstration grant application was submitted on June 19, 1979, requesting $1,142,411. On September 28, 1979 the application was approved, subject to available resources. A grant of $864,205 was awarded, of which $577,395 was to be used

to demonstrate TSM brokerage, $191,066 for demonstration of innovative pricing concepts, and $95,744 for community and economic development. Of the three demonstration areas, only the community and economic development activity was funded at less than its requested amount, since it was reasoned by UMTA's Service and Methods Program (division in charge of Section 6 demonstration grants) that this work could be assisted by other funding programs, e.g., Section 8.

Even before the major demonstration grant was approved under Bradley's leadership, however, the first of many important changes took place in the complexion of the project and its direction toward its defined goals. Bradley left GBTD in June 1979, less than a year after his arrival. His position as Executive Director was immediately assumed by Tom Brigham, who had been hired as the probable Director of Operations. Richard Clair, the other relatively senior member of the staff, was concurrently shifted from the position of Planning and Marketing Director to Director of Operations. The Planning Directorship was essentially dissolved, and replaced by two subordinate positions: Fixed-Route Transit Planning Manager, staffed by Randy Richardson, and Paratransit Services Manager, staffed by Mark Boaz. These service managers worked with considerable freedom, but under the guidance of Brigham and Clair. During this time there was no manager for the demonstration, per se, or the pricing element. These individuals were not acquired until May 1980, almost 8 months after receipt of the demonstration grant. Rich Clair subsequently left in May 1980.

During this period of internal shuffling of staff, objectives, project plans and resources, important changes took place in the planning environment. Specifically, the community and the Executive Board became anxious to see results, and the emphasis began to shift away from long-term, broad-based planning to the implementation of near term actions. This shift may be the single most important factor in understanding the course of the brokerage and in evaluating its ultimate success.

3.3 DEVELOPMENT OF THE BROKERAGE PROCESS

As described in the introduction, the brokerage process has been defined to consist of three management functions that guide overall activity:

- o comprehensive market-based planning and service development,
- o service evaluation, and
- o overall program management.

GBTD's overall aim in service development under the brokerage has been to establish a diversified, multimodal transportation network with hierarchical services designed to meet the needs of distinct travel markets. This network was originally planned to consist of a core, fixed-route bus system to serve high density corridors and connect major activity centers, integrated with various forms of paratransit to serve the needs of lower density or specialized markets. Identification of market needs, identification and targeting of alternatives, development of economically efficient levels of service, and integrating market-based services into a synthesized regional network of services is the purpose of the comprehensive planning function.

Because GBTD did not expect that such an idealistic vision as an integrated network of market-based services would materialize simply through creative initial planning, a significant management function built into the brokerage was service evaluation. This is the second key element of brokerage.

The third element is the overall Transportation Systems Management process itself, or simply "management." This is the nerve center of the brokerage, and is the least visible of all functions. It continuously monitors, evaluates and synergizes all brokerage activities, relative to objectives and resources, and even senses the external climate for particular actions.

The evolution of each of these three brokerage functions is described in a subsection below. The discussion is linked to the time development chart in Figure 3-1.

3.3.1 Comprehensive, Market-Based Service Planning

As the planning process got underway in the fall of 1978, it rapidly became clear that development and implementation of services in an orderly, systematic manner--that is, on a market-by-market basis--would not occur without considerable resistance.

GBTD's initial plan was to develop a service hierarchy from the very start in Bridgeport. While a fixed-route bus element was expected to be the core of the system, minibus and shared-ride taxi services were envisioned to assume important support roles in the service hierarchy, potentially limiting the extent of fixed-route coverage. However, two factors caused departure from this plan. The first was a problem in receiving funding for the required paratransit vehicles. GBTD's original capital grant proposal to UMTA requested, but did not receive, funding for 84 shared-ride taxi (SRT) vehicles (Checker® sedans). This request was deferred indefinitely by UMTA. The second factor was the inevitable pressure placed on GBTD by the community and the Executive Board to get a basic service underway. Thus GBTD proceeded with a more narrow fixed-route development plan.

A similar comprehensive planning and service development effort was planned next for the town of Fairfield, and activities began in March 1979. Fairfield was the site of the first aggressive market research program to define travel markets and establish travel needs. A major origin-destination survey was conducted in June of 1979. However, because the SRT vehicle funding issue had still not been resolved, and a fuel crisis struck in the summer of 1979, GBTD was again shifted off-course. The Transit District was led by events to develop and promote a minibus proposal to satisfy the immediate service needs of Fairfield and encourage their continuing strong support of the Transit District.

External pressures also caused accelerated development of a consolidated elderly and handicapped transportation network. The region's existing Coordinated System for supplying E&H transportation services was poorly organized and in deteriorating financial health. Pressure from individual social service agencies, the Bridgeport Mayor's Office, and the Executive Board forced

GBTD to give early attention to improving or replacing this system, beginning in the fall of 1978, intensifying in the spring of 1979, and consuming a full-fledged planning effort through the fall of 1980 when the Human Service Transportation Consortium was put into service.

The service development efforts behind the fixed-route system, the Fairfield MiniMover, and the E&H consortium are described in separate sections elsewhere in this chapter, along with the reasons why those efforts acquired their particular priority and flavor.

Service development efforts in response to one or more of these initiatives consumed virtually all staff time from the fall of 1978 through the end of 1980. Both the allocation of staff and the external directives significantly hindered the comprehensive planning approach. While intensive planning was involved in each of these service developments, it did not correspond to the envisioned comprehensive model where market characteristics are measured and matched with appropriate services. As a result of its early service priorities, GBTD did not have an opportunity to try its hand at comprehensive, community-based planning until the initiation of planning efforts in the town of Stratford and in conjunction with the special Inner-City Demonstration, which began in September 1980 and August 1981, respectively. These two communities were to be the first sites studied intensively, as complete systems, with a comprehensive inventory of community demographics, economic development, and travel patterns leading systematically to the identification of appropriate travel alternatives and optimal levels of service.

Despite the optimism associated with Stratford and the inner-city, the same problem that limited GBTD's planning capability in the earlier projects also threatened a comprehensive planning approach for these two areas: namely, the shared-ride taxi (SRT) option, which represented the major alternative to conventional public transit, had still not come on line. As a result, GBTD delayed startup of these projects for some time, hoping for the SRT option to materialize. Eventually, however,

pressures from the community and from within demanded that planning in Stratford and the inner-city get underway. The Stratford planning was driven by GBTD's need to maintain a balance of attention among participating jurisdictions, and Stratford was waiting in line following service development in Bridgeport and Fairfield. The inner-city project, which was funded by a separate demonstration planning grant ($360,000) from UMTA, had been dormant since receipt of the grant in June of 1980, and GBTD was concerned that they should get underway or risk losing the grant or credibility with the Board on the project. Using reverse logic, it was also felt that initiating these projects might supply the impetus to move the paratransit programs along.

Planning in Stratford really began as early as September of 1980 in conjunction with the ongoing regional fixed-route service overhaul. At that time, discussions took place with officials of Stratford and Sikorsky (the major local employer) regarding development of a major new north-south route for the community, with the possibility of integrating Sikorsky into the service development plan. However, these initiatives proved to be premature, and faded until more attention could be given by both GBTD and the community. A major reason for the lack of initiative was that Stratford was looking for a replacement for their departing Town Manager, whom the municipal government expected to play a major role in developing a service plan.

The real beginning of the comprehensive planning process in Stratford therefore did not begin until June 1981, when GBTD was able to assign adequate staff to the project and Stratford appointed a new Town Manager. GBTD then began to develop and test a sequential planning process (portions of which originated earlier in Fairfield) that could serve as a prototype for subsequent case studies.

The approach developed and tested in Stratford, and currently accepted as a general form by GBTD, consists of several steps. The process leads off with very general introductory meetings with local officials to discuss local transportation needs and to describe the range of alternative actions which may be taken and are within the power of the Transit District to

pursue. The next step involves data collection. Maximum initial use is made of secondary data on demographic composition, location of major trip generators and attractions, and existing travel patterns. This is followed by informal contacts with local community leaders and the public (through focus group or personal interview) to help better understand travel behavior, community preferences and to identify potential travel needs. If this secondary information is found to be weak or if the service planning requires special detail, primary data collection may be necessary. A household origin-destination survey is the most likely vehicle to supply this data. Near the end of the process a set of alternatives is formulated, and cost analysis performed. These results are shared with the community leaders and aired in public meetings, a preferred development plan is selected, and service design is initiated.

Initial discussions with Stratford on general service offerings took place in June 1981, followed by interviews with influential people in the community in July and compilation of all other secondary data. GBTD knew at the outset that its opportunities to innovate in Stratford with the early service plan were going to be limited due to the status of the SRT and ECBS programs. So while these alternatives were discussed, the primary planning emphasis soon fell on the tangible revamp and revitalization of the fixed-route service network. Revised routing plans were outlined in August. With the criteria that the jurisdiction would receive at least as much fixed-route transit service as it had previously, alternative routing plans were developed along with comparative cost analyses, aiming toward final trade-off analysis by late fall of 1981. However, in November local officials became completely involved in community budget proceedings, and were unable to meet with GBTD's planners. The planning process thus came to a temporary, but indefinite, stop, even though a draft service plan had been effectively completed.

The inner-city demonstration, the second wholistic planning effort, has been affected by several institutional obstacles which have influenced its scope and timing. This project was purposely designed by UMTA to study the role transportation can

have in rejuvinating and improving mobility within an economically depressed central city neighborhood. The specific objectives of the demonstration were to develop a transportation planning process which actively involved members of the community in identifying transportation-related obstacles in accessing educational, employment and social opportunities, identifying barriers to community and economic development, and in designing actual transit and paratransit service improvements that would support revitalization. This grant was secured by Bridgeport because of the ideal suitability of the East Side neighborhood and the complementary activities of the Transit District in the brokerage demonstration.

The UMTA grant was received in June of 1980, but activity did not officially get underway until August of 1981. This delay was not planned, but at the same time was not seen as damaging by the Transit District. The technical reason for not getting underway earlier was the absence of a project manager. It took until April of 1981 to receive Executive Board approval for hiring a project manager, and then it was July before the right individual was selected. The strategic reason for not moving faster was to try to get the shared-ride taxi and user-side subsidy programs underway first, so they could be actively brokered as alternatives during service development. However, the strategy was revised when it was realized that the inner-city project could probably aid the District's Community and Economic Development program on the East side, which had been stalled after termination of Urban Initiatives funds, and could help supply additional impetus to the development of the SRT/user-side subsidy program.

With the hiring of Peggy Brennan as project manager, an individual with prior skills in urban housing programs, planning activity got underway in August of 1981. The process began with extensive community contacts and compilation of maps and other pertinent secondary planning data. From this set of resources, a community activity profile was assembled in September, along with a proposal for additional targeted market research, to include a battery of focus groups and possibly a formal origin-destination

survey. These additional efforts were planned for early 1982. At present, no service development has occurred, although findings from the community feedback process are suggesting various types of service offerings. As can be seen in Figure 3-1, the shared-ride taxi program has gone through many refinements in proposed approach, but has not yet reached the point to where it can be viewed as a viable service alternative.

Trumbull, the northernmost town in the Transit District, joined GBTD in April of 1980. Thus far, Trumbull has received little attention, largely because its low density presents the poorest market for conventional transit service development of all jurisdictions. Also, no pressure has been exerted by the Executive Board or even Trumbull officials to step up activity in Trumbull. The brokerage team believes that an active role will eventually be necessary to maintain balanced regional support, but expects shared-ride taxi to play a major role in Trumbull, and these feelings are endorsed by Trumbull officials. In the interim, GBTD is doing small things to show a presence in Trumbull. In February 1981 they initiated a special service, consisting of select deviation of an existing fixed-route operation to Stearn's Village, an elderly housing project, to offer shopping service to residents. Fares for this service are subsidized by Stearn's management. GBTD is attempting to find opportunities like these elsewhere in order to broker available service capacity. This reasoning initiated development of a service policy for suburban areas, keying on suburban malls and strip commercial districts as development sites, with an important side objective being the minimization of empty backhauls for service returning from the central city. This policy development was motivated by a $40,000 Section 8 grant awarded in January 1981 to study the use of regional malls as service development nodes and transfer centers. Because the grant has not been officially accepted and received by the Transit District, and because the suburban municipalities are not applying pressure for service, project activity has been minimal.

Probably as a result of the difficulty in tying down a comprehensive planning approach, GBTD's market research program has never gotten off the ground. Because of the disruption of early service development responsibilities, GBTD did not begin its search for a market research contractor until May 1980. This search was fraught with confusion about the type of market research that was needed, i.e. global or market specific, and hence the type of capability that was desired in a contractor. By December 1980, GBTD became somewhat sure that it wanted to target market research efforts to specific markets in conjunction with specific services, as had become commonplace in GBTD's service development efforts. However, lack of major new service developments diminished the need for a contractor. The shared-ride taxi program was viewed as the next major frontier, but its development was so tentative that the search for market research assistance also waned. Eventually the firm of Illium Associates was contracted in the fall of 1981 when it appeared that the SRT program was moving toward reality, and a budget was approved by the Board. A work plan for taxi-related market research has been developed, but has not yet been implemented pending further clarification by the District of its SRT program plan.

3.3.2 Service Evaluation

The major Section 6 demonstration grant application listed as a goal of the brokerage process to see that demands for transportation service are met in "the most service-effective and cost-effective manner."* The proposed strategy for accomplishing this goal was "a unified process which weighs the potential costs and benefits of a particular service against a range of modal alternatives."** As the brokerage got underway, the plan to

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*"Application to Establish a Transportation Systems Management Process, Pricing Demonstration Program, and Community and Economic Development Program," submitted to Service and Methods Demonstration Program, Urban Mass Transportation Administration by Greater Bridgeport Transit District, June 19, 1979.

**Ibid.

conduct comprehensive planning and alternatives analysis was quickly altered by external events, as described earlier. The revised fixed-route network and the Fairfield minibus system were service developments that clearly did not result from the "unified process." As a result, these first two development efforts did not involve intensive planning to optimize service delivery relative to demand. Routes were delineated relative to either existing successful service patterns or the locations of major trip generators or attractions in the community as identified by community leaders, rather than through use of primary origin-destination trip data and investigation of price and service level effects on demand.

Because its intended final product is a diversified multimodal regional transportation network in which each mode functions as the most cost-effective service type for its respective market, because other modal alternatives cannot be considered until they become operational, and because detailed analysis of service and cost impacts on demand would have limited value in a system where headways average 30 minutes, GBTD has opted for a more flexible and dynamic planning strategy to realize its original goal. This strategy consists of an extensive service evaluation program, whereby data is continuously collected on system operations and analyzed with special analytic tools to indicate when and how service should be expanded, reduced, replaced or eliminated. There are two major components to this process, having to do with, alternately, cost and performance. The first component is a service cost allocation model, development of which was funded under the pricing element of the main demonstration grant. This model helps convert system operating measures into costs and, more importantly, helps allocate the costs among the various factor inputs (capital, labor, etc.). The preliminary cost allocation model was formulated in December of 1980, and has been in a process of continual refinement in terms of data specifications and sophistication of output. The model was first used in October 1980 to study and reject the feasibility of peak and off-peak fares, and has also been used to study the effects of service changes on several occasions.

The second component is a bus performance evaluation methodology. This component is being developed under a special $67,750 Section 8 grant received in March of 1980 to design and implement a performance evaluation and monitoring system, and eventually lead to a system of service standards. Essentially, this grant was awarded to support a pilot test in a typical transit agency of a methodology developed by UMTA.* When operational, the various models in the performance evaluation methodology will allow analysis of ridership from revenue data (using a fare classification algorithm), and allow monitoring and analysis of bus productivity by route, segment, and day of week. These capabilities can be worked in concert with operating schedules to examine the effects of service changes on performance. The key advantage of the model is that, once calibrated to the specific site, only modest amounts of additional new data should be necessary to update and use the model in a regular monitoring context. Most of the work on this model to date has been in calibration, using special data collected by GBTD under a separate $48,000 Section 8 grant received in May of 1980. Considerable time and effort has gone into collecting and processing the base data, and fitting it to the model, resulting in numerous unexpected modifications. Special outside help was acquired from transit operations specialists at the Massachusetts Institute of Technology (MIT), with the eventual addition of one of these specialists, Sergio Gonzales, to the staff to manage the project. The model has produced some impressive outputs, but is still in the development stage.

3.3.3 Management

The third management function of the brokerage is management itself. While this may seem redundant, the brokerage, like any large process or set of activities, needs a guidance system to

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*"Bus Performance Monitoring System", Urban Mass Transportation Administration, U.S. Department of Transportation, August 1981.

keep it on track. This guidance ranges from day-to-day administration to setting and refining goals and objectives, and in general seeing that activities maintain a proper flow and balance.

It is probably not surprising to learn that in Bridgeport this was one of the last major capabilities to be developed, almost as though the need was not recognized until it was well advanced. Rich Bradley, Rich Clair and Tom Brigham were all senior staff members hired on at the executive level early in the project who were capable of providing this leadership. However, the attentions of these people were essentially occupied by the intense preliminary planning, grant acquisition and service development activities. The demonstration project was run largely from the Executive Director level (Bradley, then Brigham), which necessarily created a competition between the broad objectives of the brokerage and the fire-fighting climate of starting up the Transit District.

It was not until May 1980 that a staff member, Lance Grenzeback, was hired specifically to manage the brokerage. By this time a number of major service developments were well underway, and considerable autonomy had been assumed by individual members of the planning staff. One of the first tasks confronted by the Demonstration Manager was to try to structure project objectives from the large number of individual grants and use these to synthesize the activities of individual staff. Implementation of this management system required project workplans and activity schedules from each staff member, to facilitate monitoring and rationalize activity programs. This management control was not realized easily, because of previous staff freedoms and their doubts regarding the new management, particularly since Grenzeback was more of a management specialist than a transportation analyst.

The first formal project workplans were developed in June 1980, following which program objectives and specific project initiatives received their first comprehensive review and evaluation. Special outside help was called in in December 1980, in form of Marvin Manheim and Nigel Wilson of MIT, who conducted a

management seminar at GBTD on how to plan, organize, and execute a multimodal, multi-objective transportation program. Shortly following this assistance, in January 1981, the first program priorities plan was developed, with development milestones, and budget and staffing allocations for all major project initiatives. This was, however, after the planning and implementation of most of the major service developments (i.e., the fixed-route system and the E&H Consortium), and the Fairfield MiniMover was to be implemented in February. There is some question, therefore, as to how important the absence of a comprehensive management may have been in the initial shaping of project events.

A key element in attempting to manage a program as diverse as the brokerage is information handling. The multiplicity of management and planning tasks in the Bridgeport demonstration was, in fact, seen as an excellent application for development of a Management Information System (MIS). Howard Ostroff, a computer specialist, was one of the initial staff acquisitions of GBTD back in September 1978. Ostroff was hired with the expectation of developing a major MIS capability as a management and planning tool under the demonstration. This objective was cited in the June 1979 demonstration grant proposal.

The MIS was not explicitly budgeted under the main Section 6 demonstration grant received in September 1979. In fact, the first earmarked planning and development money was not received until May 1980, in form of an $81,500 Section 8 grant. Regrettably, due to the delays, Ostroff became caught-up in other activities, most intensively with development of a computerized accounting and payroll system for GBTD's administrative department. Hence, activity on the MIS really did not get underway until February of 1981, when discussions were held with UMTA concerning GBTD's outstanding MIS capital grant application (hardware and software acquisition), and the design of a computer applications software survey. A $384,000 Section 5 hardware grant was awarded in July 1981, which was followed by a survey and review of alternative software packages that continued through September 1981, culminating in a tour of several installations with operational systems. The overall delay in the

schedule of progress for the formal MIS system was particularly distressing in regard to the need for help in project and grant management. The District therefore requested approval and funding to establish an intermediate capability on an APPLE® microcomputer. UMTA approval was received in May 1981, and by October 1981 the interim MIS was substantially in place and in use for the major management functions. This system has significantly improved routine management capability.

The full-scale monitoring and comprehensive planning capability still awaits completion of the original MIS installation, however. The microcomputer system is simply not adequate for these other applications. Service evaluation programs developed by GBTD's staff have storage needs that require a mainframe computer, so absence of the planned MIS has limited service evaluation work. Similarly, comprehensive planning applications, envisioned in the grant application as a highly advanced, interactive capability to allow service design optimization, has not been realized.

3.4 REHABILITATION OF EXISTING FIXED-ROUTE SERVICES

The first major service development activity of GBTD was the rehabilitation of the existing fixed-route bus network. Closely accompanying but preceding the actual arrival of Rich Bradley, the decision was made to buy out the equipment and operating rights of four existing private bus companies. At that time, Bridgeport was the largest remaining metropolitan area in Connecticut where transit services were not under public operation and subsidy. While the private companies serving Bridgeport were sustaining themselves, they were marginal operations, characterized by fragmented and redundant routings and deteriorating capital equipment. The community's greatest initial desire, therefore, was to significantly upgrade existing conventional bus service, and saw public ownership as the most effective strategy to accomplish this.

As a result, the primary mission assigned the planning staff during the first phase of the its existence under the brokerage was to direct all available technical expertise and financial resourcefulness toward development of a functioning and modern conventional transit system. The planning staff applied itself whole-heartedly to this request, because it believed that a stable fixed-route network would be the core of its envisioned integrated regional network, but also as a means for gaining initial credibility and support from the Executive Board and respective municipal governments for future actions. As evidence of its commitment and resourcefulness, GBTD's planning staff has managed to secure some $9.4 million in Federal and state capital grants since 1978 to accomplish the fixed-route rehabilitation plan.*

Development of the fixed-route service program is highlighted by the milestone chart of Figure 3-2. The major elements in GBTD's fixed-route plan included rationalization of routes relative to current travel patterns, revitalization of equipment to improve attractiveness and reliability, and operational modifications to support regional service integration objectives. The program was initiated under the direction of primarily two individuals, Richard Clair and Randy Richardson, both hired in September 1978. Clair, hired as eventual Planning and Marketing Director, was skilled in both transit planning and operations, through experience in other transit agencies, while Richardson was a junior planner with several years experience as a consultant. Activity began with efforts to acquire the existing private bus companies following receipt of the initial UMTA capital grant in October, along with development of specifications and bid articles for the new bus equipment that would be needed. This also marked the beginning of development of the fixed-route service plan. The draft comprehensive service plan, prepared principally by Richardson, was completed in June 1979.

*Including $6.3 million for property acquisitions, $1.1 million for garage equipment, and $2.0 million for bus and related equipment purchases.

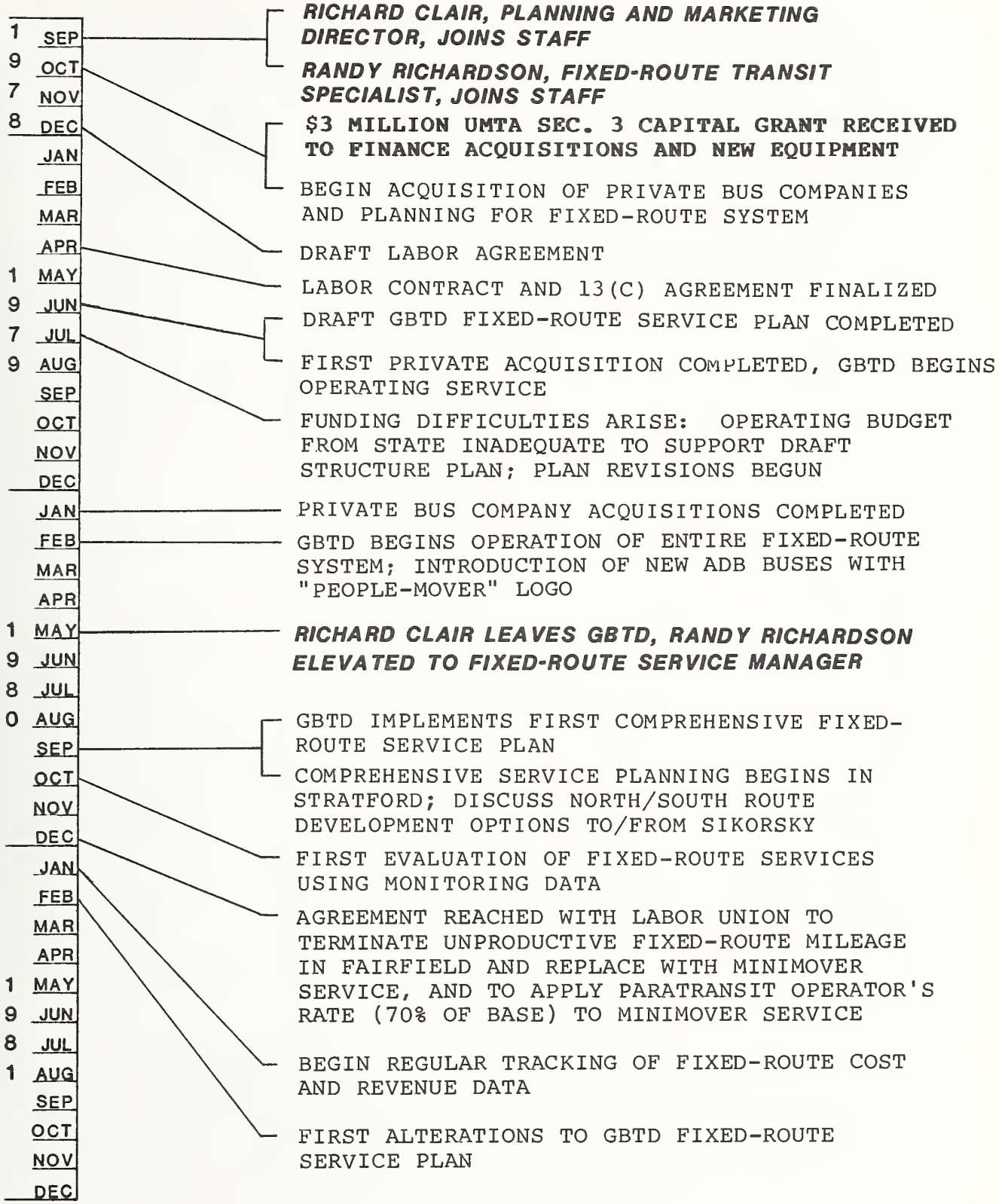

FIGURE 3-2. MILESTONE CHART --
FIXED-ROUTE BUS SERVICE DEVELOPMENT

The plan featured many ambitious modifications to the existing service system. Unfortunately, however, GBTD also became aware almost concurrently that the operating budget from the State would be inadequate to support this plan. After some discussion, the staff proceeded to redraft the service plan to a considerably more conservative design.

Acquisition of the private bus companies occurred over the period June 1979 through January of 1980.* There was no disruption of service during the takeover period. As the individual companies were bought out by GBTD, beginning in June 1979, GBTD immediately stepped in as operator of the service. Following completion of the takeovers, GBTD officially became the operator of the entire fixed-route system for the first time. In February 1980, GBTD began to introduce its new advanced design buses bearing the "People Mover" logo. This interim GBTD network maintained roughly the same route patterns as the private companies had operated. The revised, comprehensive service plan was completed during the ensuing 6-month period, and was implemented in September 1980. Service changes under the revamped plan were largely the elimination of redundancies, reconfiguration of routes for smoother operation, and to some extent, reorientation of routes in Bridgeport's neighboring jurisdictions, particularly Stratford and Fairfield, away from a focus on downtown Bridgeport and more on addressing current travel patterns within these communities. Service routes with substantial existing riderships were kept essentially unchanged, with the idea that disturbing existing strong markets would cause needless and irreparable ridership losses.

While ridership data obtained in the spring of 1980 was used to tie down service designs in the new comprehensive plan, these data were obtained as a result of a separate project to install a performance monitoring system, as described under Section 3.8

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*The bus system acquired by GBTD consisted of 88.5 route miles and 4,000 daily bus miles of service, which carried 12,700 riders per day in 1976. The current system provides 5,470 daily miles of service with a fleet of 55 vehicles, and carries 13,200 daily passengers (period October 10-November 14, 1981).

below. Neither special market research nor advanced planning models were used to design the initial system. GBTD has instead opted to view the fixed-route system as dynamic, to be modified as operating data are obtained, planning tools and economic criteria refined, and as other options come on stream. The first evaluation of the fixed-route service plan was conducted in October 1980, which initiated the first of a series of service modifications in February 1981. Each semi-annual driver "pick-period" has subsequently been used to effect such improvements, which in many cases have meant service cutbacks.

One of the "mistakes" to be "avoided" which Richard Bradley may have been implicitly referring to in his founding philosophy is closing the door to innovation by acting too soon or taking actions which may later be irrevocable. Section 13(c) of the Urban Mass Transportation Act, the labor protection clause, is one factor that has constrained innovation in public transit by making it difficult to reduce or eliminate publicly financed fixed-route services and replace them with privately-operated alternatives or public alternatives that require specialized labor arrangements. GBTD foresaw 13(c) as a potential impediment to diversification, and devoted great care in negotiating its labor agreements with the local bargaining unit following public takeover. The first system operating pact was executed early in the planning phase (December 1978), and served as the agreement under which both continuation services (July 1979) and the first comprehensive service network (September 1980) were implemented. In May 1979 GBTD signed an agreement with its union which set forth rules for providing paratransit services. In this agreement, GBTD negotiated freedoms to (1) close out unproductive services and replace them with more cost-effective options, (2) to pay a reduced wage rate (70 percent of normal base) to bargaining unit members when providing paratransit services, and (3) to engage non-unionized operators in an eventual shared-ride taxi program. GBTD gave up any entitlement it might have had to part-time drivers in order to gain these concessions, but feels that it gave up little since the GBTD network does not display

the traditional peaking characteristics common to large city transit systems. Clearly a major test of how fast brokerage can move, and whether early appeasement strategies foreclose later efforts at innovation, will be demonstrated when the District attempts to exercise these important 13(c) options.

3.5 TRANSPORTATION FOR THE ELDERLY AND HANDICAPPED

Another of the first major activities of GBTD was in the development of a consolidated social service agency transportation network to provide transportation to the elderly and handicapped. At the time the brokerage demonstration got underway in the fall of 1978, a coordinated transportation system was being operated by the local social service agency establishment. However, the program was inefficient and struggling due to fragmented management and administration, lack of a comprehensive service policy, aging vehicles, and lack of consistent funding. GBTD was directly involved with this earlier system through a dispatching function. The system allegedly provided demand-responsive service to all four towns, and averaged 493 trips a week using a fleet of 9 vehicles, only 2 of which were lift-equipped.

GBTD's attention to improving the Coordinated System was motivated by a three-point plan for meeting elderly and handicapped transportation needs contained in its original capital grant proposal to UMTA. This plan included providing lifts on all Transit District buses, continuing and upgrading the existing Coordinated System, and developing specialized E&H transportation services. Since the accessible bus and shared-ride taxi elements were still some ways off as viable services, GBTD's initial attention fell on the Coordinated System. GBTD's Mark Boaz, the eventual Paratransit Service Manager, performed an early study on the status of the Coordinated System in the fall of 1978, as shown in the milestone chart of Figure 3-3.* This was followed

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*"Status Report: The Coordinated System," Greater Bridgeport Transit District, October 1978.

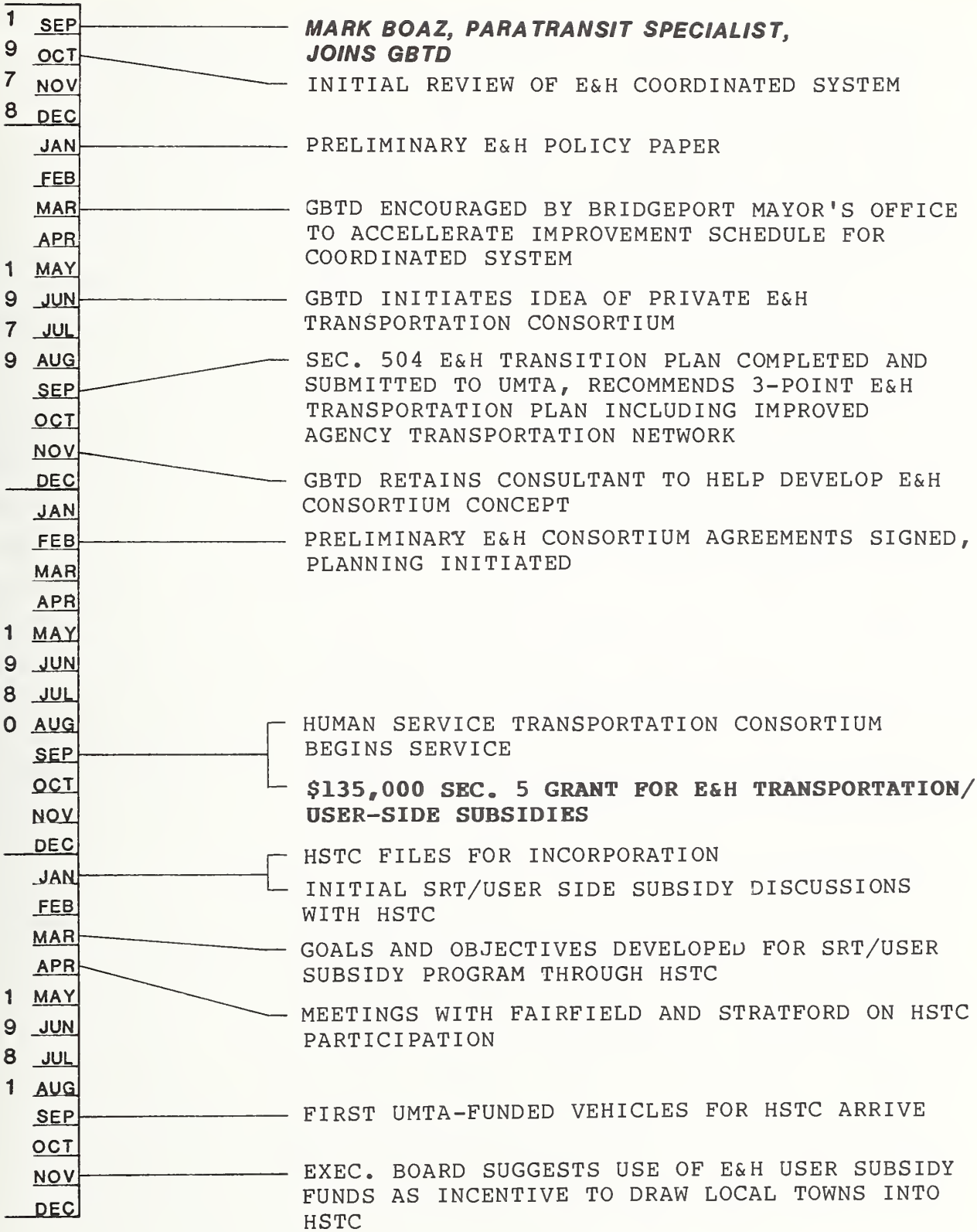

FIGURE 3-3. MILESTONE CHART--
ELDERLY AND HANDICAPPED CONSORTIUM

in January 1979 by a preliminary E&H policy paper.* These initial studies suggested that an effectively coordinated system could provide an important cost-effective dimension to the District's capability to provide transportation service to the E&H market. Moreover, the District believed that if it helped create such a system other benefits could fall out, such as providing a starting point for a regional shared-ride taxi and user-side subsidy program, aiding overall service integration, providing as much regional service as possible, and providing a setting to demonstrate and take advantage of automation in management and operation of a transportation service.

GBTD's initial plan was to assist in the formulation of a cooperative organization involving both public and private agencies, with the District acting as a broker as well as participant to a limited extent, and using its authority to secure UMTA capital funds to help support the organization. However, the January 1979 policy paper raised a note of caution in this approach, lest a direct funding and operating role by GBTD precipitate 13(c) entanglements that would raise costs and constrain operations. GBTD fell into a brief quandry with its approach until mounting pressure from several areas forced them to reach a resolution. First, several of the agencies themselves were becoming increasingly impatient for an alternative, since their Title III funding for the existing Coordinated System efforts had either terminated or was on the verge of terminating. However, most of the impetus came from the City of Bridgeport. The City's Department of Aging was expending considerable time and resources in providing its transportation service (within the Coordinated system), and was facing a budget crisis for the coming fiscal year. It was also an election year, and the Mayor's Office was concerned about its department providing poor but costly service. The City strongly supported formal takeover of the service by

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*"Possible Future Directions for Elderly and Handicapped Services ... The Need for a Policy," Greater Bridgeport Transit District, January 1979.

GBTD. GBTD, on the other hand, did not feel that this was a proper or effective role, and began to pursue alternatives more earnestly.

The plan which emerged by the summer of 1979 drew on the idea of a private, independent, non-profit corporation or consortium, from whom individual agencies would simply buy service. This independent organization had the apparent advantage of limiting GBTD's long-term direct role, and also circumventing possible 13(c) difficulties should GBTD use its authority to secure Federal funding assistance, since the recipients of the assistance would be a private non-profit organization. The consortium idea was further developed and taken into the operational stage in November of 1979 with the retention of Larry Harmon, a special consultant with unique experience in agency service coordination and consolidation. A plan was delineated whereby a small-scale consortium, formed from the resources of existing stable, private, non-profit agencies providing E&H transportation, would receive planning, organizational and perhaps funding suppport from GBTD, and then eventually be set off on its own, responsible for its own financial performance and providing service to member organizations and municipalities at contractually determined rates. The idea, while good, still required considerable development and marketing among prospective participants, who were reluctant to risk resources or lose existing freedoms. Boaz and Harmon provided the interagency liaison to elicit the necessary agreements, employing as a special incentive the notion of the consortium as a demonstration proposal to UMTA and the State to secure capital assistance for vehicles. The incentive strategy worked, as did the demonstration proposal in securing vehicle funding. In February 1980, a core group of agencies executed the consolidation agreements for a 3-year trial demonstration, and by June 1980 the funding proposal submitted to UMTA and ConnDOT requesting 15 vans was approved. Actual vehicle delivery did not begin until the fall of 1981, however. The Human Service Transportation Consortium (HSTC) officially began operations on September 2, 1980, and filed for private incorporation in January of 1981. As of October 1981, the system was

carrying 3,650 weekly passenger trips, compared to 490 previously, and productivity has increased from 1.88 to 3.74 trips per vehicle hour.

The proposed next stage of development for the HSTC is to incorporate the other service agencies and the other member towns of the Greater Bridgeport Transit District: Fairfield, Stratford, and Trumbull. As yet, the municipal governments of the local towns have been slow to seek HSTC membership, and, owing to its early life and associated growing pains, The HSTC itself has not pushed incorporation. The planning staff had hoped to use its $135,000 Section 5 grant received in September 1980 for E&H transportation to fuel HSTC expansion through a shared-ride taxi and user-side subsidy program. As will be discussed in Section 3.7, however, the Transit District has not yet been successful in resolving the institutional details in this approach. As an alternative, GBTD's Executive Board suggested in November 1981 that the Section 5 monies be used instead as grants to the individual towns to purchase existing service from the consortium, as an incentive to incorporation.

3.6 SERVICE DEVELOPMENT IN FAIRFIELD

GBTD's third major service development was the Fairfield MiniMover system, a community-based minibus service with differential peak and off-peak service networks and fare structures. After restoring basic transit service to the region, the Fairfield jurisdiction was GBTD's next highest service development, based on population, current service, logical extension of the regional network and degree of support for the Transit District. Fairfield was to be the District's first attempt at performing comprehensive, community-based service planning. GBTD's earliest vision of a service plan for Fairfield included a composite of conventional fixed-route bus service for the heavily-traveled interdistrict corridors, minibus service for the narrow-street, medium-density, intra-community travel markets, and shared-ride taxi for the low density areas.

As shown in the milestone chart of Figure 3-4, Meetings between GBTD and the Fairfield Representative Town Meeting (RTM) took place as early as March 1979 to discuss alternative approaches for community transit service, which led to an origin-destination survey conducted in June of 1979. The flow of the planning process was interrupted, however, by a gasoline shortage which hit in the summer of 1979. The Fairfield community responded by placing sudden strong pressure on its RTM to "do something" regarding transit service to help ease the problem of waiting in gas lines. The RTM appointed a transportation committee to study the problem, and in August the committee submitted a recommendation for a four-vehicle, demand-responsive minibus system. GBTD perceived that it needed to take quick and decisive action to keep Fairfield from seeking its own solution to this short-term dilemma in order to retain Fairfield in its overall development plan. While Fairfield's support for the Transit District had been strong and there was little concern that Fairfield would formally pull out, GBTD worried that a weak internal effort to supply transit service would be ill-fated and set a negative precedent for future transit development in that community. Without Fairfield, GBTD felt that its plan for an integrated regional transit network would be seriously threatened. Because of GBTD's access to Federal funding assistance, it was able to submit to Fairfield an attractive counter-proposal, offering at least a six-vehicle system operating continually on a fixed-route schedule (compared to Fairfield's four-vehicle demand-responsive approach), at a cost of only $98,000 to Fairfield, compared to $146,000 to $211,000 under Fairfield's competing plan. Based on the GBTD proposal Fairfield deferred its own plan and, in September 1979, agreed to go with GBTD.

GBTD's planning for the minibus system got underway immediately, although the first serious discussion on system characteristics did not occur until early 1980. From this time on, through formal route planning and development of the fare structure and marketing program, GBTD maintained close liaison with the RTM's transportation committee to ensure that assumptions regarding activity patterns and service design elements were

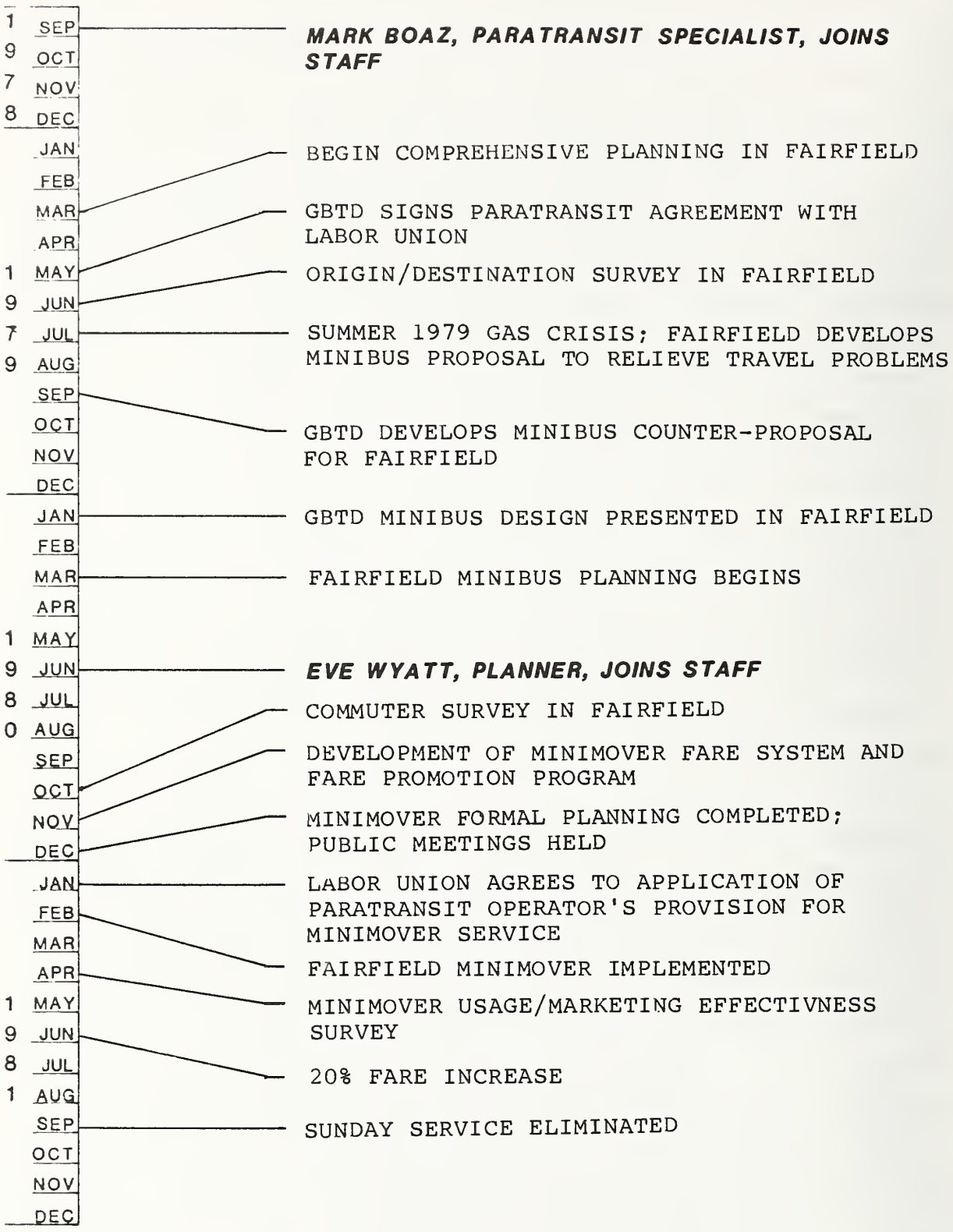

FIGURE 3-4. MILESTONE CHART -- FAIRFIELD MINIMOVER

compatible with local knowledge and community preferences. According to GBTD, the local community was helpful, and exerted relatively little influence on the planning process through this phase. GBTD's planning was assisted in the fall of 1980 by the addition of Eve Wyatt to the project, whose skills as an operations planner were applied to final layout of the routes and scheduling. A special commuter survey was conducted in October to assist in design of the commuter service. Planning assistance was also received from GBTD's Pricing Manager, Rich Oram, who devised the fare structure for the system, as well as a special fare promotional program. Formal planning was concluded in December 1980, and the system was put into operation on February 23, 1981. This was approximately 5 months after GBTD's comprehensive fixed-route service plan was inaugurated, and 1 month (January 1981) after agreement was reached with the local bargaining unit of the Amalgamated Transit Worker's Union on a special paratransit operator's rate (70 percent of normal base).

Since its implementation, the MiniMover has been modified in various ways to improve its operational efficiency and productivity. The system experienced a 20 percent fare increase in June 1981, and Sunday service was eliminated in September 1981. Special planning and community relations efforts are ongoing to identify new markets and modify the service to maximize market penetration and productivity. As of October 1981, the system served 2,020 total weekly passenger trips (430 commuters, 1,325 weekday off-peak, and 265 Saturday). The service operates at a productivity of 4.46 riders per vehicle hour, and achieves a 10 percent revenue-to-operating cost ratio. Operating deficits are met through UMTA Section 5 funds (50 percent), and local match contributed by ConnDOT (33 percent) and Fairfield (16 percent).

3.7 PARATRANSIT

The Transit District has been hoping to use two major service innovations as basic building blocks in its plan for a diversified, multimodal transportation system: the shared-ride

taxi (SRT), complemented by user-side subsidies, and employment-centered bus service (ECBS). Both ideas have been difficult to get off the ground, and both have experienced major changes in thinking and approach.

The shared-ride taxi program has probably been the most elusive service development attempted by GBTD. This has been a source of frustration since this concept represents a threshold to GBTD in its intended metamorphosis (as described in its demonstration grant application) from conventional public transit planning and operating agency to a truly diversified, multimodal regional transportation broker. Obstacles in program development have come from all directions: condition of the local taxi industry itself; problems with regulations and funding at UMTA; internal staff expertise and availability; and general uncertainty and hesitancy on the part of the Executive Board.

Steps in the development of the shared-ride taxi/user-side subsidy program are listed in the milestone chart of Figure 3-5. GBTD's initial service planning for shared-ride taxi was not rushed, for several reasons. First, the planning staff was operating at capacity on service development efforts with the fixed-route system, Fairfield, and the HSTC. GBTD knew that difficult planning, regulatory, and community issues needed to be addressed, and wished to have adequate staff resources to launch an effective approach. It was also believed that UMTA capital assistance would play a major role in SRT development. The existing taxi services in Bridgeport were marginal operations, and the deteriorating state of the vehicle fleet was thought to be a serious impediment to delivery of service and to public acceptance of taxi as a realistic alternative. GBTD included a request for 84 paratransit vehicles (Checker® sedans) in its original capital grant application to UMTA in 1978 for anticipated use in the taxi program. However, this request was deferred indefinitely by UMTA. GBTD submitted a new application to UMTA in June of 1980 under the pending Paratransit Policy to secure 21 van-type vehicles for use in the SRT program.

While GBTD eventually planned to use SRT as a regional, general-purpose extension to the regular transit system, the

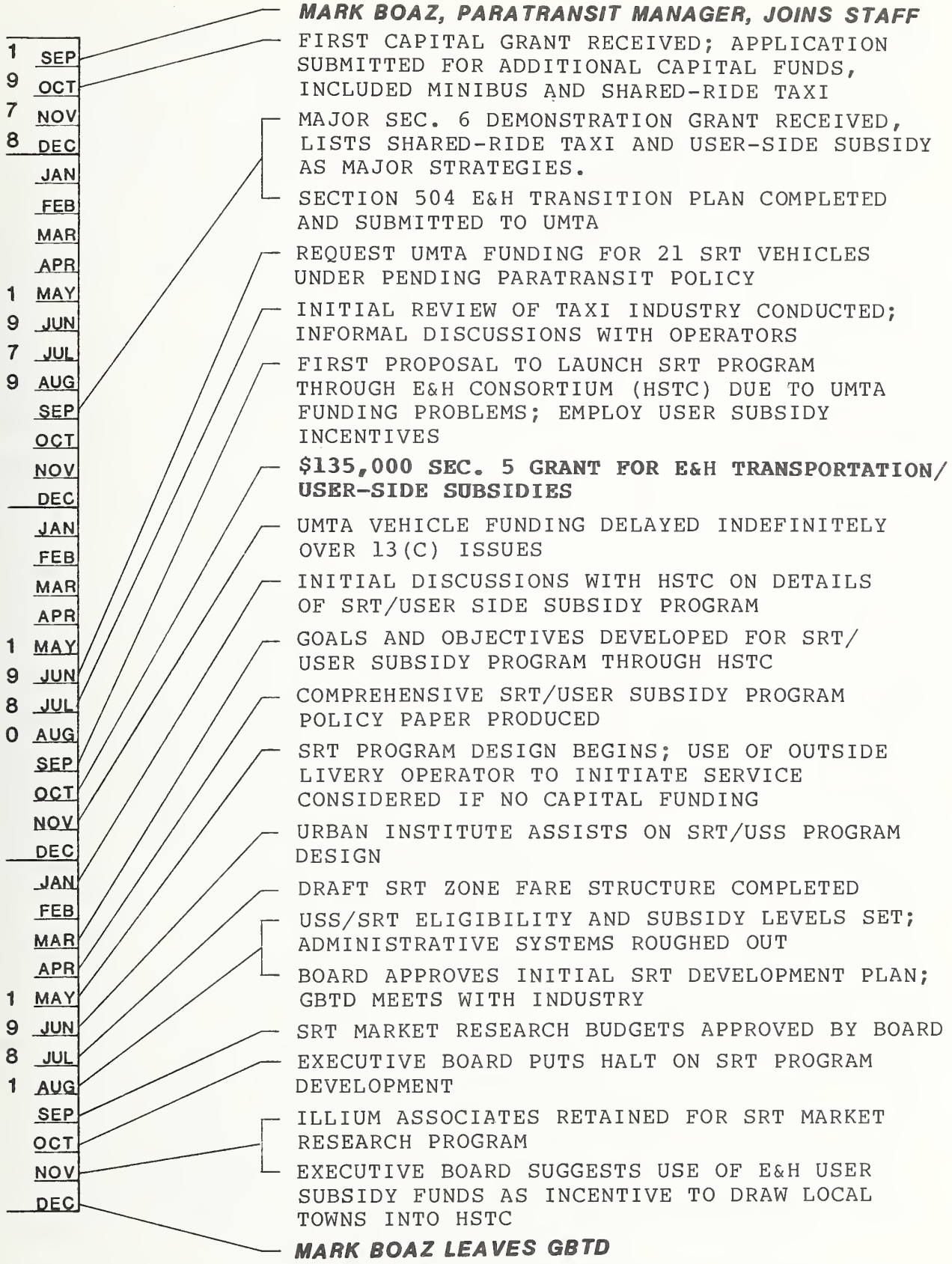

FIGURE 3-5. MILESTONE CHART --
SHARED-RIDE TAXI /USER-SIDE SUBSIDY PROGRAMS

program was to be initiated as an elderly and handicapped service, teamed with a user-side subsidy supplement. GBTD's E&H transition plan, filed formally in September of 1979, cited a three-part E&H transportation program, including accessible bus, coordinated social agency service (HSTC), and shared-ride taxi with user-side subsidy. The transition plan was to be approved in October 1980, along with the award of a $135,000 Section 5 grant to cover the operating costs for an eventual E&H user-side subsidy/shared-ride taxi program.

GBTD's plan was to lease vehicles purchased with UMTA capital assistance to qualifying operators, who would then provide shared-ride taxi service through the Human Services Consortium. GBTD hoped to provide the initial incentives for the program through the user-side subsidy, and then, like the HSTC itself, have the program eventually operate and sustain itself on its own merits and funding sources. Preliminary indication of difficulty with this plan occurred in September 1980 when UMTA notified GBTD that the requested capital assistance might not materialize due to a perceived policy conflict with GBTD's 13(c) provisions. GBTD attempted to counteract the 13(c) block by offering to channel the entire SRT program through the E&H Consortium. However, UMTA still remained non-committal, pending internal resolution of its Paratransit Policy. In the interim, GBTD realized that important time was being lost, and initiated an internal study of alternative shared-ride taxi development strategies. An issue paper was produced by the paratransit service manager in March 1981 which identified planning considerations in the areas of: condition and attitudes of local taxi operators; regulatory issues; subsidy strategies; and the role of GBTD.* The paper also developed goals and objectives for a SRT/user-subsidy program launched through the HSTC. As of March, GBTD still had no word on funding from UMTA, but attempted to move ahead anyway with development of a preliminary program design. A program plan, completed by GBTD in April, considered various approaches

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*"Shared-Ride Taxi, Development: Briefing Paper 1." M. Boaz, Greater Bridgeport Transit District, March 10, 1981.

given the condition of the local taxi industry and existing regulations, and argued for targeting initial SRT program development in small, well-defined contexts including but not limited to the HSTC.* The desire was to steer GBTD around wholesale modifications to the regulatory code by securing services through contract with a limited number of acceptable operators. The first application was still to be the HSTC, where experience could also be gained with fare structures, subsidies, and operator performance. The plan then called for expansion to community-based systems in Bridgeport's Inner City, Stratford and Fairfield. Consideration was even given in May 1980 to contracting with a reputable livery service operator outside Bridgeport, to the extent that the capability simply could not be found in the local industry. The plan also recommended acquisition of outside consulting expertise in the details of SRT system planning.

Program design assistance was received from the Urban Institute in June 1981, and from these meetings specific plans began to develop regarding contracting mechanisms, regulatory revision, subsidy levels, eligibility criteria and methods of administration. By the end of the summer, preliminary design of major program elements was completed, and approval received from the Board to proceed with operator contacts. In September, the first round of discussions was held with local taxi operators, and at that time the Board also approved a market research budget. But then suddenly in October, several Board members began to feel uncomfortable with the program and requested a slowdown. The SRT program has seen only minimal activity since that time, including the market research program which selected a contractor in November. The Board's suggestion in November that available Section 5 user-side subsidy monies be used for more limited HSTC service expansion has further dulled hopes for near-term inauguration of an SRT program. In December 1981, GBTD's project manager for the

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*"Shared-Ride Taxis in the Greater Bridgeport Region: Preliminary Program Design." M. Boaz, Greater Bridgeport Transit District, April 4, 1981.

SRT program terminated his employment for unrelated reasons. The search for a replacement manager has been a further source of delay to the project.

The employment-centered bus service (ECBS) concept is the second major type of service innovation that GBTD has been trying to develop, which has been proceeding hand-in-hand with ridesharing efforts (Figure 3-6). The ECBS is essentially a subscription-type bus service which supplies transportation exclusively to workers at major employment facilities. The concept consists of identifying high-density employee travel corridors, and matching these travel flows with services that recognize the special time-of-day requirements of shift changes at the particular employer. GBTD's objectives in pursuing ECBS services were to accomplish diversification of service and markets, match services with the needs of particular market segments, and to maximize service delivery with available resources.

GBTD had planned to develop ECBS services under its original demonstration grant, and these interests were further propelled by receipt of a special $40,000 Section 8 grant in February 1981 to specifically design and implement a regional ECBS plan. The earliest plans were to work with the large employers in the Stratford area, most particularly the Sikorsky Company (employment: 40,000) and AVCO (employment: 6,000), and develop GBTD-based, fixed-route services to meet identified demands, while also securing employer subsidy to maintain the service if necessary.

Approximately at the time of receipt of the ECBS grant, GBTD also began to refocus its regional ridesharing program, after becoming acquainted with a private ridesharing broker, known as METROPOOL, headquartered in Stamford, Connecticut. GBTD's earliest attention to ridesharing began in 1979 when it attempted to coordinate local employer ridesharing efforts and to broker ridesharing information. These efforts were curtailed in October 1980 when it was concluded that the local (intra-regional) market for conventional ridesharing (i.e., carpooling and vanpooling) was very limited. However, METROPOOL displayed great interest in exploring local and inter-regional ridesharing markets, with no

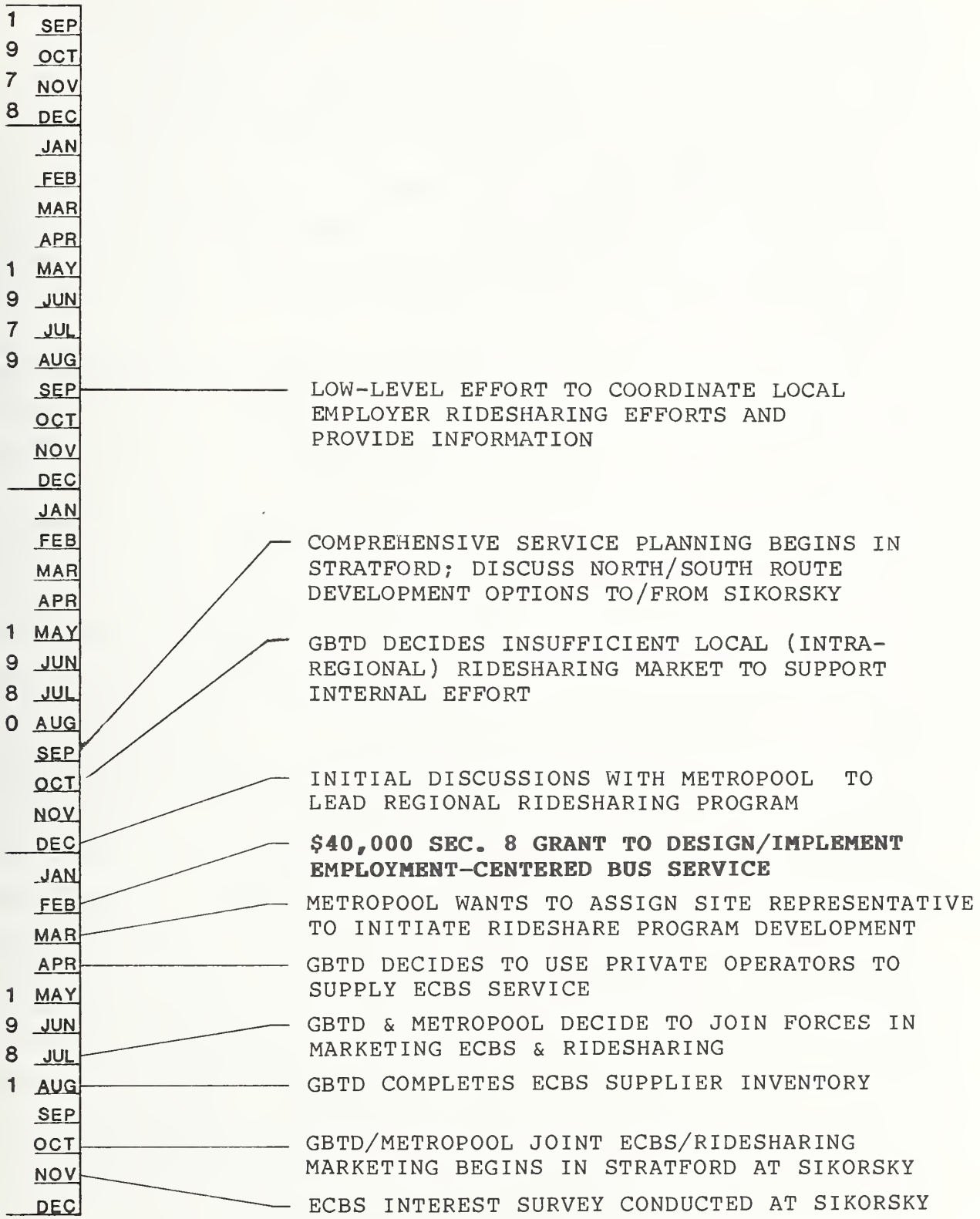

FIGURE 3-6. MILESTONE CHART -- EMPLOYMENT CENTERED BUS AND RIDESHARING

investment required from GBTD. GBTD thus encouraged the METROPOOL effort, with the vision that their own ECBS program might be conveniently merged into the same marketing and promotional effort. A joint marketing and service development program was subsequently formulated in July 1981 as an offering of diverse ridesharing options to Bridgeport's major employers, with GBTD marketing ECBS as a subscription bus-type service for trips within 15 to 20 miles of the employment site, and METROPOOL focusing on vanpool or carpool alternatives for trips over 15 to 20 miles.

Before the joint marketing program could get underway, however, GBTD began to foresee a cut in operating budget for the coming fiscal year, and revised the scope of its role and involvement in an ECBS program. In June 1981, it was decided that a superior approach to ECBS service development was to broker private operators to interested employers, provide a technical assistance role in identifying markets and linking providers with users, but to stay out of a direct role as service provider or financier. The District then began an inventory of potential private suppliers, which it completed in August 1981, immediately before activating talks with employers and initiating the joint venture with METROPOOL. However, when GBTD and METROPOOL mounted their campaign, they found employers slow to reciprocate with dedication of internal staff and resources to the project. The first contacts were with Sikorksy in late October of 1981, and led to plans for an employee interest and origin-destination survey. GBTD helped design this survey, which was then conducted in November. Due to a number of factors, highlighted by the passive support from Sikorsky management, the survey resulted a low response rate and insufficient evidence of employee interest to support any type of service development. Talks have since moved on to AVCO and other large employers in Stratford, with the hope of picking up the program there.

3.8 PRICING

The pricing program has a somewhat distinctive role in the overall brokerage relative to other program areas. Pricing is

not only an important design strategy itself, but pricing policy has a pervasive effect in overall balance, integration, and cost recovery. The test of innovative pricing concepts is, in fact, an explicitly stated and budgeted component of the demonstration, accounting for $501,000, or 25 percent of the total demonstration budget. Of these resources, $191,000 was received with the initial UMTA demonstration grant in September 1979, almost a full year before the arrival of the pricing manager, Richard Oram, at GBTD in August of 1980. The additional $310,000 in funding was received under a Phase II grant in September 1981, based on a continuing work proposal and favorable response by UMTA's pricing division to the accomplishments of the demonstration and the pricing manager in Phase I.

The pricing program has issued several visible products since its inception in August 1980, as seen in the milestone chart of Figure 3-7. These include a market-segmented fare structure for the Fairfield minibus system, a service cost allocation methodology, and a multidimensional fare prepayment program. Early pressure was placed on the pricing manager by the Executive Board in September 1980 to develop and implement a transit pass program. The Board felt that this was a vital and basic long-term feature of an aggressive transit program. While the pricing manager agreed with this in principle, he resisted forcing a program underway prematurely, before adequate data on operations and usage could be obtained, or before examining the allocation of costs by time of day and type of service. His policy in designing all pricing elements has been that of "revenue maximization" (i.e., devising fare policies that differentiate, where feasible, between particular travel markets in relation to their willingness and ability to pay, in such manner as to maximize cost recovery). Convinced that most transit pricing policies, and pass programs in particular, traditionally have represented give-aways to the consumer, the pricing manager conducted analyses and staged lobbying efforts to incorporate revenue maximization into the fare instruments. Steps were then taken to elicit private support of transit through direct employer or merchant subsidies. Based on the revenue maximization

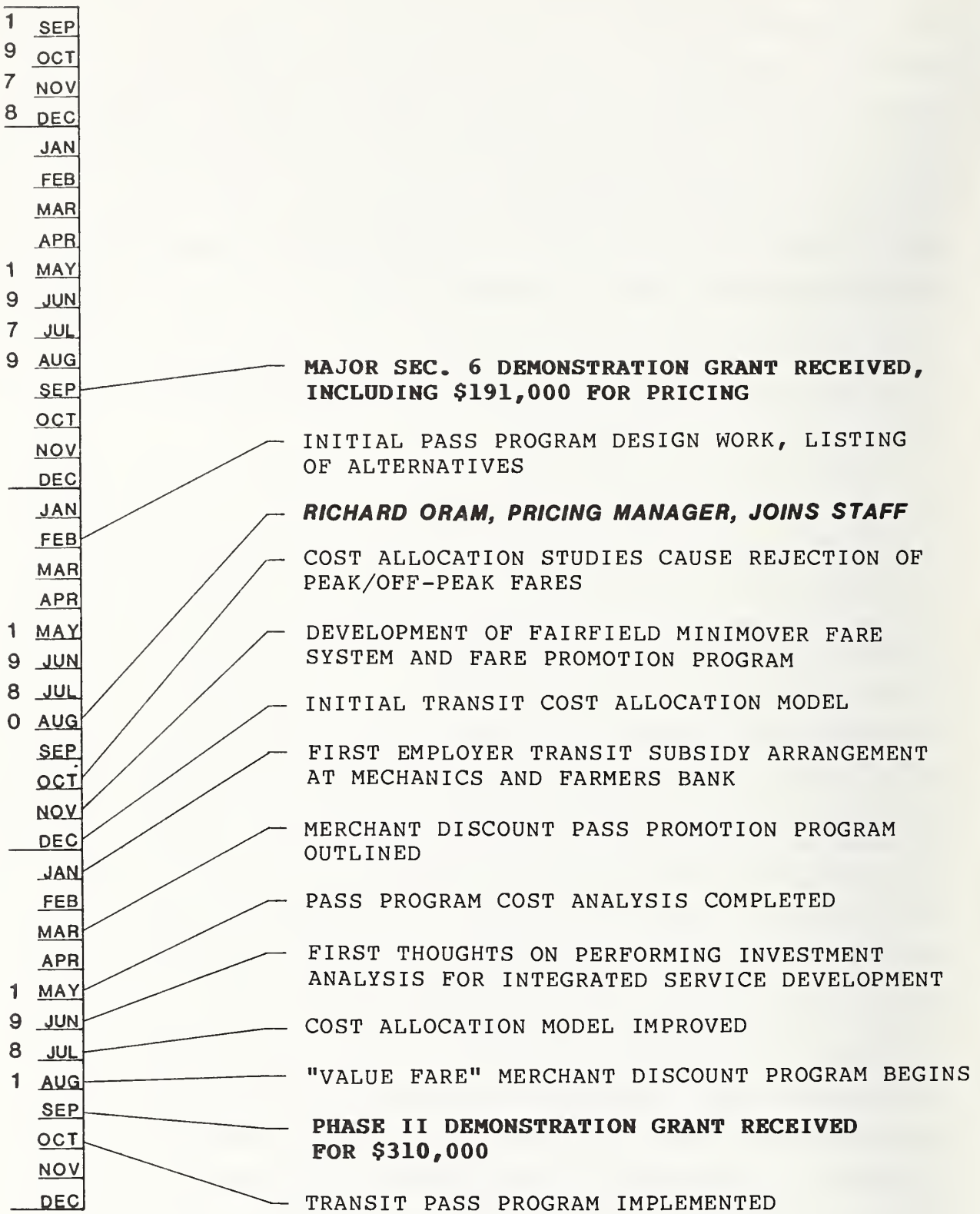

FIGURE 3-7. MILESTONE CHART -- PRICING PROGRAM

principles and adequate supporting data, the pricing manager discouraged an early GBTD plan to institute a fare-free zone in the downtown as a joint economic development initiative.

The pricing program's very first activities involved analysis of existing transit data on loadings, fare classification, and ridership profiles, and in development of a cost allocation methodology. Based on these studies, an early conclusion was reached (October 1980) that Bridgeport's fixed-route system gave insufficient evidence of traditional peaking characteristics, or of sufficient differences between workers and mid-day riders to justify differential peak and off-peak fares.

In designing the fare structure for the Fairfield MiniMover system, however, a differential peak and off-peak fare system was encouraged and developed. The morning and evening peak services in Fairfield serve as a feeder bus to transport commuters, most of whom are high-income, white collar professionals, to the local commuter rail station for travel into New York. Hence, a distance-based fare system with a relatively high average fare was deemed equitable for this market, whereas the off-peak intra-community circulation service, which serves a large number of transit dependents (elderly and youth), was teamed with a flat-fare policy ($.50 for adults, $.35 for students, $.25 for elderly or handicapped, and no charge for children 5 years or under). This fare schedule was developed in the late fall of 1980 and implemented with the minibus system in February 1981. Early complaints were received from users about the steepness of some fares, but the District responded that these fares reflected the cost of providing a high-quality service. No pressure was experienced from local officials to change the fares, so the initial plan remained unaltered.

Preliminary work on the fare prepayment program began in December of 1980. The initial efforts concentrated on soliciting support from the private sector: both promotional support (including assistance in program administration) as well as direct subsidy support. An early success was realized in January 1981 when Mechanics and Farmers Bank entered into an employee subsidy program, offering employees bus tokens as an alternative to

subsidized auto parking. In March of 1981, initial plans were revealed for a merchant discount program as a way of eliciting support from the private sector and encouraging non-work use of transit. Meanwhile, throughout this planning period and reaching a conclusion in May 1981, detailed studies were ongoing regarding trip rates of different submarkets, cost analysis, and experience with pass purchase and use in other pass programs. These studies were used to identify break-even pricing schedules for passes among the different travel markets, with the assumption that any discounting should be realized through private subsidy only. Recognition of different usage rates, price sensitivity, and sources of external subsidy ultimately led to the recommendation of a three-part program. Elements included: a $23 monthly commuter pass, valid only during rush hours and marketed through (and subsidized by) employers; a $15 monthly permit ("Fare Cutter" card) for other users, entitling them to unlimited rides at $.25 when the base fare was $.60; and a token program for less frequent users. The merchant discount subsidy concept, or "Value Fare" program, soon took strong root, enabling GBTD to offer all pass and token buyers an equivalent value in coupons from local merchants. The pass program was implemented in October 1981. Initial pass sales have been modest, as GBTD has been active in marketing efforts to stimulate community visibility, employer participation and overall sales. The "Value Fare" program has been particularly well received, with over 40 merchants joining the program in the first 2 months following its introduction.

3.9 COMMUNITY AND ECONOMIC DEVELOPMENT

Perhaps the program element that comes closest to the essence of brokerage as a community-interactive process is the activity under the community and economic development program. Bridgeport has all the appearances of an ideal site to test joint transit/economic development concepts. While it is an old industrial town suffering from classic dislocational urban decay, it also appears to be on the verge of an economic metamorphosis. Its location in the middle of the busy New York-Stamford-New

Haven-Hartford corridor not only has made it a bedroom community for affluent professionals, but makes it ripe for future investments in banking, services, and light industrial employment, some of which are already underway. An area in the midst of urban revitalization may provide increased incentive for economic reinvestment, and helping to initiate this process is the aim of the joint development aspect of the demonstration.

The community and economic development program is managed by Ross Burkhardt, a seasoned veteran in the area of real estate and development, whose job it is to not only identify unique development opportunities, but then to infuse the confidence and perform the liaison necessary to cause major things to happen with the application of relatively modest resources.

As illustrated by Figure 3-8, the investigation and inventory of economic development opportunities got started under GBTD's initial $135,000 demonstration "planning" grant in September of 1979. Quite early in the process, key opportunities were identified in the Bridgeport downtown, East Side and South Side neighborhoods, and in the regional suburbs, Fairfield and Stratford, and additional planning funds were sought to further develop these projects. One such funding source was the major UMTA Section 6 demonstration grant in September 1979 ($95,744 share for economic development), but resources were also obtained from a Section 8 grant of $122,880 in March 1979 for work in the Bridgeport CBD, and a $50,000 Section 8 grant in October of 1980 for projects related to regional neighborhoods and subcenters. Based on the applicability of the funding, and priorities keyed to interest and potential payoff, attention was eventually focused on the CBD, Fairfield Center, and the East Side. Special development consultants were brought in to investigate and recommend development alternatives for each project. This work was done through third-party consultants both for reasons of expertise and to free GBTD from the conflict of an advocacy role. These consultant reports recommended a redesigned loop system and transit-related street improvements in the CBD

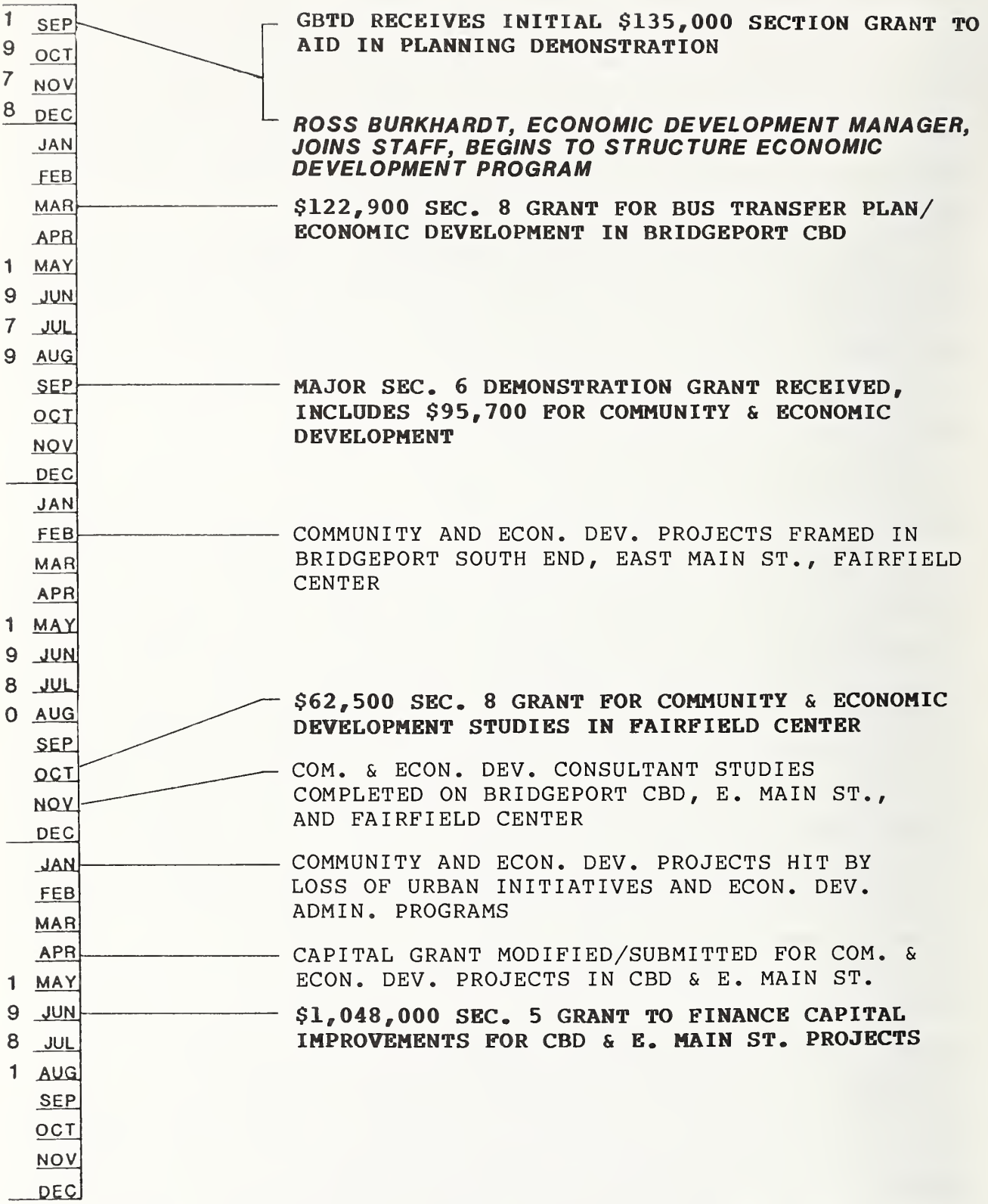

FIGURE 3-8. MILESTONE CHART -- COMMUNITY & ECONOMIC DEVELOPMENT

(December 1980), a revitalization of the East Main Street corridor on the East Side (November 1980), and revitalization of the commercial district in Fairfield Center (April 1981). Burkhardt meanwhile performed the more delicate tasks of getting community leaders together, organizing programs of action, synthesizing community preferences, investigating funding channels, and generally maintaining spirits. At approximately the time when momentum and the general optimism had peaked, a change in Federal administrations occurred, with the immediate impact in early 1981 that Economic Development Administration and UMTA Urban Initiatives funding programs were terminated. This immediately stalled the East Main Street project, and forced Burkhardt into the role of trying to sustain interest without much prospect of providing material aid. The CBD project was less seriously affected; since the bulk of the improvements were transit-related, the project could be slightly modified and submitted for regular UMTA capital grant funding. Fairfield was unaffected for other reasons. Due to internal political battles and a consultant's report which was neither definitive nor encouraging, that project had already reached an indefinite stall. The funding proposal for the East Main Street development project was revised and submitted to UMTA as a capital grant, asking for reallocation of $75,000 of the $750,000 requested for the CBD project. After lengthy discussions and considerable uncertainty, the CBD capital grant was awarded in June of 1981, and along with it the promise of an unexpected additional $300,000 (for the CBD project). Since September, when the grant was actually received, detailed design work has been initiated.

3.10 OTHER DEVELOPMENTS AND SUMMARY

Other projects on GBTD's planning horizon include a study of the legal and operational problems involved in interdistrict transit service coordination, a study of the potential development and benefits of an intermodal terminal facility in downtown Bridgeport, and a study of transit cost containment. Each of

these studies, if finalized, will be funded by a Section 8 planning grant. While grants have been awarded for each of these projects, the grants have not yet been officially accepted by the Transit District's Executive Board.

In summary, the brokerage effort in Bridgeport is moving on many fronts, and is developing procedure and policy along the way to help direct and prioritize specific project initiatives. Several things are apparent from the pattern of events to date. First, nothing happens overnight. No action can move faster than the social and political communities are ready for, the funding resources are available for, or for which the staff expertise has been developed. The staff itself has been learning throughout the initial performance period, not just in terms of planning skills but also in terms of working toward common goals and sensing the political climate. Resolving minor details to everyone's satisfaction can be an intensively time-consuming process. Moreover, not having all elements at hand with which to play the game, namely varied concepts in a state of readiness and availability of appropriate staff expertise, can make it difficult to maintain short-run momentum while staying on-track with long-range program goals. Effectively meeting long-run project goals as all service components and planning strategies become more fully-developed will be the real test of the multimodal broker.

A more comprehensive overview and analysis of the project's progress to date, its accomplishments, failures, and potential for the coming period of operation are discussed in Chapter 5, Findings and Synthesis.

4. COMPOSITION AND ADMINISTRATION OF GBTD

4.1 INTRODUCTION

The structure of the Greater Bridgeport Transit District staff, and the role of the planning process within that structure, are important factors in understanding the brokerage demonstration. Aside from a very brief historical overview of GBTD in Chapter 2, and identification of individual staff as they were added to the project team in Chapter 3, the report has not yet attempted to describe the composition of GBTD and the project team. That is the subject of this chapter, which provides a profile of the Transit District and its key staff, and concludes with a summary of the costs of running the brokerage.

4.2 DEVELOPMENT OF GBTD

As summarized earlier, the Greater Bridgeport Transit District (GBTD) was formulated in 1974 as a regional authority, to serve as the regulatory and promotional agent for a transit system comprised of four private bus companies. GBTD's ability to affect regional transit service was limited by its original charter and funding authority, so it eventually moved to acquire and operate all services. GBTD officially became an operating agency in June 1979, when it acquired the first of the private companies, and eventually took over all operations in February 1980.

Over this period of time, the Transit District organization evolved to keep pace with events, transforming from a simple advisory group to an organization with multiple functions. The growth period began with the hiring of Bradley and Clair in early 1978, who got things started with an initial $135,000 Section 6 demonstration grant and a $3 million Section 3 capital grant in late summer and early fall of 1978. These resources gave GBTD the freedom to acquire its basic planning staff, and the number and diversity of funding grants and staff has grown steadily ever since.

As a way of gauging the relative size and importance of the planning process within the Transit District, an organization chart of GBTD as of the fall of 1981, is pictured in Figure 4-1. The chart is divided into two segments, one which describes planning functions directly related to the brokerage demonstration (Figure 4-1a), and the second which corresponds to the more traditional operating and administrative functions (Figure 4-1b).

Figure 4-1a of the organization chart shows the planning/demonstration group structured into three separate departments: Planning and Demonstrations, headed by Lance Grenzeback; Community and Economic Development, headed by Ross Burkhardt; and Management Services, headed by Howard Ostroff. This is merely a quirk of the formal organization structure, however, since Burkhardt's and Ostroff's activities are, in fact, managed by the Planning Director, Lance Grenzeback. While these two directors plan and operate their own programs, their activities must be coordinated with Grenzeback to assure synergism with the closely allied planning goals.

Directly under Grenzeback's direction are four programs with their respective managers: Fixed-Route Service, headed by Randolf Richardson; Pricing, headed by Richard Oram; Paratransit, headed by Mark Boaz; and the Inner-City Demonstration, headed by Peggy Brennan. These individuals are supported by various planning and technical staff. Program activities and the project management and coordination system is presented in a subsequent section, as are biographical sketches of the principal staff members.

The Transit District currently employs between 170 and 180 people. The majority of these, as seen in Figure 4-1b, are operating staff. The Operations Department accounts for about 80 percent of all staff. In the fall of 1981, the demonstration-related planning section numbered 12 people (excluding the Executive Director), or about 7 percent of GBTD's total staff. The remainder constitute the internal administrative staff and Marketing Department. Overseeing all Transit District activities

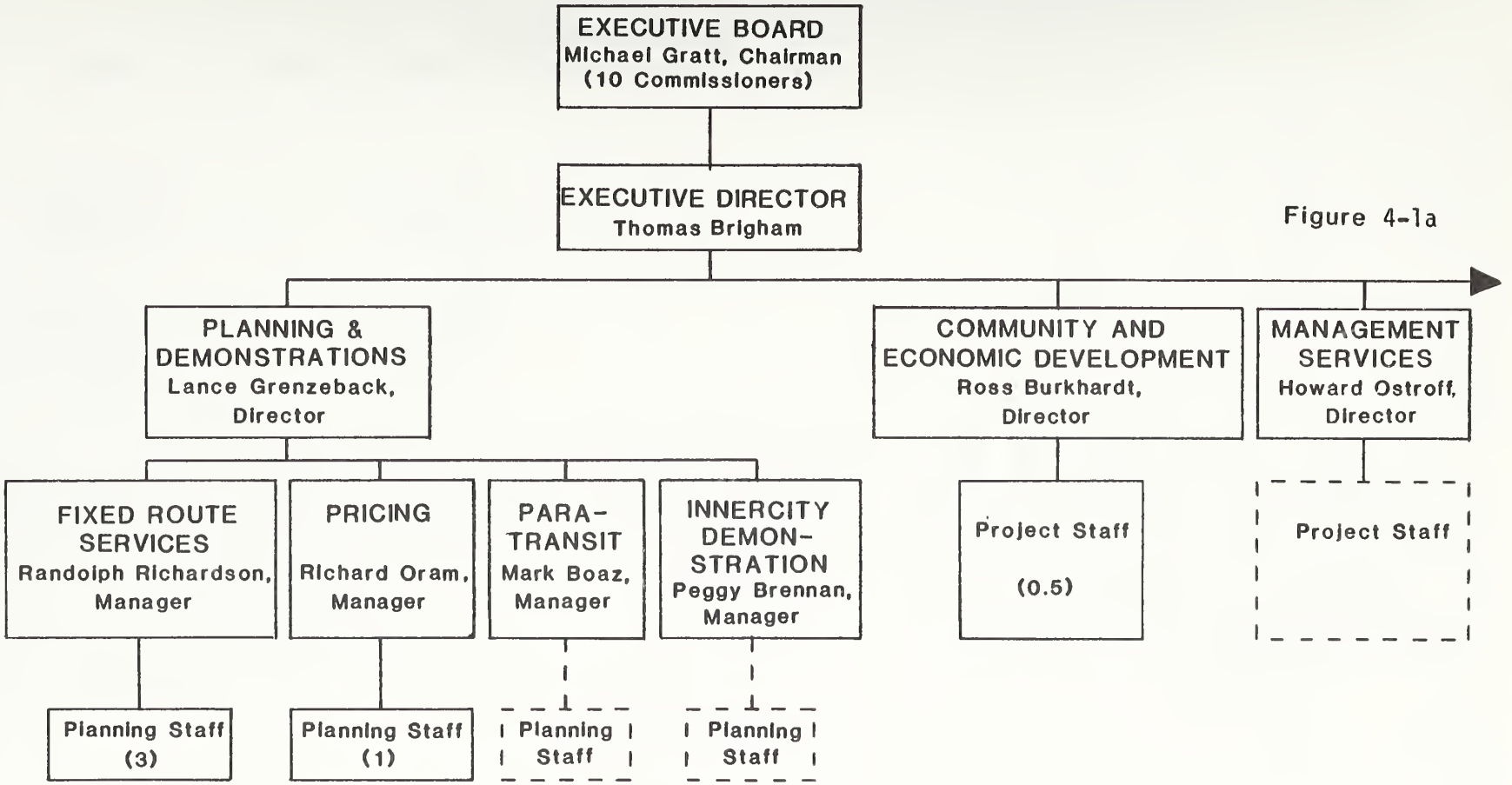

FIGURE 4-1a. ORGANIZATIONAL CHART -- GREATER BRIDGEPORT TRANSIT DISTRICT
Planning Functions

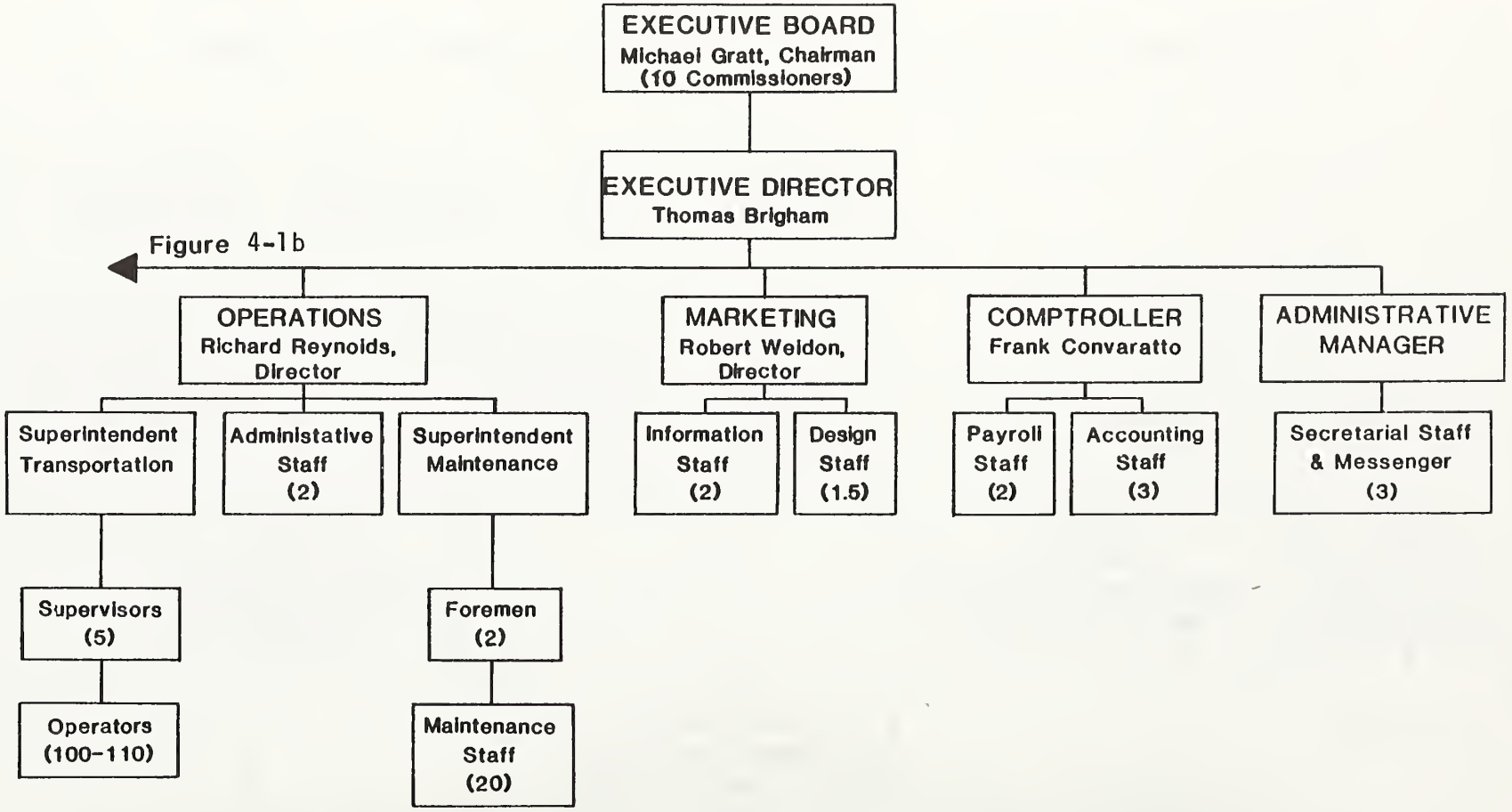

FIGURE 4-1b. ORGANIZATIONAL CHART -- GREATER BRIDGEPORT TRANSIT DISTRICT
Operating Functions

is the Executive Director, who oversees the operations function as well as being substantially involved in the brokerage demonstration.

4.3 INSTITUTIONAL GUIDANCE

GBTD's Executive Director answers directly to an Executive Board. The Board is comprised of 10 Commissioners and a Chairman, Michael Gratt. Board members are influential laypersons from the community who are appointed for 2-year terms by the legislative body of the respective communities. Based on the State of Connecticut's representation-by-size rule, the Board has four Commissioners from Bridgeport, and two each from the jurisdictions of Fairfield, Stratford and Trumbull. The Board convenes on the first and third Tuesday of every month, at which time it reviews activity under each GBTD project. The Board either votes on or appoints special committees to review each major proposal from the planning staff. These proposals include budgeting issues, planning or implementation schedules, and staff hirings. Individual project managers are generally expected to be present at Board meetings, and may be asked to illucidate or defend a particular recommendation. Virtually no actions are taken by GBTD without prior Board review and approval.

The source of all local matching funds is the Connecticut Department of Transportation. The State acts as the distributing agent for Federal Section 5 operating funds, and determines the appropriate local match from general revenues. Individual transit districts may impose local taxing initiatives to improve their revenue base for transit programs, but are generally not permitted to use these resources as matching funds to increase their entitlements for Federal funds through the State. GBTD and the other transit districts submit annual operating budgets to the State to support their programs, and then wait for the State to allocate available funds. GBTD has been at a relative disadvantage in competing for these funds in the past. Three of the largest urban areas in Connecticut have transit districts operated by an agency of the State DOT, known as Connecticut

Transit. These three systems (Hartford, Stamford, and New Haven) have traditionally held a funding advantage over Bridgeport and the 11 other independent districts in budget deliberations. This has been the basis for much lobbying and negotiation between the State and GBTD's Executive Director. Based on special lobbying efforts undertaken by the Executive Director, it appears that fundamental reform will be realized in the funding formula for Fiscal Year 1983, wherein population size will be the major allocation criteria. This will favorably affect Bridgeport.

In addition to the institutional guidance imposed by its Executive Board and the State, GBTD must also cooperate directly with the governments of each of the member jurisdictions. Typically, these ruling bodies will appoint a special transportation committee to interface with GBTD's planners and help direct planning activity in such a manner as to accommodate community views and preferences. All actions are then taken to public hearing and the governing body itself for approval before implementation.

4.4 PLANNING AND MANAGEMENT

Setting objectives and managing the orderly achievement of milestones in a project with as diverse a collection of staff and funding resources as Bridgeport's is no small task. One of the major accomplishments of the project was the development of a comprehensive management and accounting system. This system was devised by Lance Grenzeback in his first activity as Planning and Demonstration Director. The system channels the District's diverse supply of funding grants and staff resources into an organized system of general program areas and specific projects. The system has attempted to frame the original (and evolved) project goals in terms of definite actions, with specific budgets and work schedules. The system has been vital not only in directing project activities toward specific goals, but in providing a means by which to evaluate progress.

The list of programs and projects and their respective managers is presented in Figure 4-2. While this list was developed in March 1981, the projects and assignments are identical to those in existence through the fall of 1981.

The management system breaks down the demonstration into four program areas: TSM Planning, Bus System Development, Paratransit, and Community and Economic Development. These categories are in some sense nominal; pricing and management information services, for example, are major activity areas that have not been designated as individual program areas under the scheme, but rather have been incorporated as related functions within the other programs.

The TSM Planning area is distinct from the other programs. This is the area where the identification and preliminary planning of concepts and initiatives occur, along with eventual coordination and evaluation relative to objectives and other District activities. All study managers conduct their original planning in this area. Projects born in concept in the TSM area are then launched into the physical development stage in their respective program area.

In late 1981 the management system was made operational on a conventional microcomputer. This automation allows the brokerage management to monitor project performance, track grant expenditures, schedule staff and activities and perform short-range project evaluation.

4.5 STAFF PROFILE

Assembly of the brokerage team was a methodical process, with the acquisition of individual staff members motivated by the need for particular skills. Most of the initial planning team was assembled by the original Executive Director, Richard Bradley. These individuals included Richard Clair, Randy Richardson, Mark Boaz, Ross Burkhardt and Howard Ostroff, and brought skills in the respective areas of transit planning and operations, fixed-route service planning, paratransit systems, community and economic development, and computer and management

Program:	ESTABLISHMENT OF TRANSPORTATION SYSTEM PLANNING AND MANAGEMENT CAPABILITY
Project:	PLAN 1: TSM Brokerage (Grenzeback)
	PLAN 2: Pricing Demonstration (Oram)
	PLAN 3: Community and Economic Development (Burkhardt)
	PLAN 4: IMPS (planning applications) (Ostroff)
	PLAN 5: Market Research Survey (Grenzeback)
	PLAN 6: Fare Prepayment Mechanisms (Oram)
	PLAN 7: User-Side Subsidies (Boaz)
Special Studies:	PLAN 10: Energy Contingency (Bash)
	PLAN 11: 504 Transition (Bash)
Program:	REVITALIZATION OF FIXED-ROUTE SYSTEM
Project:	BUS 1: Service Expansion (Phase II) (Richardson)
	BUS 2: Service Expansion (Phase III) (Richardson)
	BUS 3: Service Evaluation/Monitoring (Richardson)
	BUS 4: (Reserved)
	BUS 5: Fleet Replacement and Expansion
	BUS 6: Central Garage Facility (Reynolds)
	BUS 7: Signs and Shelters (Mitchell)
	BUS 8: Service Cost Analysis (Oram)
	BUS 9: Stratford (Wyatt)
Program:	DEVELOPMENT OF PARATRANSIT SYSTEMS
Project:	PARA 1: E&H Consortium (Boaz)
	PARA 2: Fairfield Subsystem (Boaz)
	PARA 4: Trumbull Subsystem

FIGURE 4-2. PROGRAMS, PROJECTS AND MANAGERS LIST AS OF MARCH 1, 1981

FIGURE 4-2. (Continued)

	PARA 5:	East Side/East End Subsystem (Inner-City) (Grenzeback)
	PARA 6:	Employment-Centered Bus Service (Richardson)
	PARA 7:	Ridesharing Brokerage (Raymond)
Program:	COMMUNITY AND ECONOMIC DEVELOPMENT	
Project:	CED 1:	Bridgeport CBD (Burkhardt)
	CED 2:	Fairfield Center (Burkhardt)
	CED 3:	East Main Street (Burkhardt)
(P)	CED 4:	East End
(P)	CED 5:	South End (Burkhardt)
(P)	CED 6:	Stratford Center
(P)	CED 7:	Regional Malls/Transfer Centers (Grenzeback)
(P)	CED 8:	Bridgeport Intermodal Terminal (Burkhardt)

(P) = proposed project; not yet active.

information systems. Thomas Brigham, the current Executive Director, was also an early staff acquisition, hired for his senior expertise in planning and operations. Brigham and Clair were both hired as management: Clair as proposed Planning and Marketing Director and Brigham as Director of Operations. Neither remained in his original position. Brigham assumed Bradley's position of Executive Director after Bradley's departure in June 1979, although he remained acting in that position until March 1980. Following Brigham's ascension to Executive Director, Clair was appointed Operations Director, which elevated Randy Richardson to Clair's position as head of transit planning. Rich Clair left GBTD in May 1980 to take another job, which was when Lance Grenzeback was brought in as a management specialist to organize and run the brokerage demonstration. Other major additions after that were Richard Oram in August 1980, hired to run the pricing program; Eve Wyatt in June 1980, an experienced systems and operations planner; Richard Reynolds, to take over the job of Operations Director for Rich Clair; Sergio Gonzales in May 1980, to manage the service evaluation project; and Peggy Brennan, hired in July 1981 to manage the Inner-City demonstration. The position of Marketing Director was filled by Bob Weldon through internal appointment by the Executive Board. Except for Weldon, all key planning staff were recruited from outside the community.

Biographical briefs on staff members who have had major continuing roles in the brokerage are presented below. The briefs try to give a flavor for the experience and background brought to the project by these individuals. Certainly the outcome of any project is heavily dependent on the capability of its staff, and in Bridgeport this factor is heightened by the ambitious context of the project. The staff is attempting to develop and achieve objectives which are often vague. Moreover, because of the demonstration nature of the project, many of the actions defined to achieve the objectives are unconventional, and hence are generally not blessed with significant prior evidence or full-fledged institutional support. Project development and eventual success depends greatly on how concepts are timed,

packaged and sold, and this reflects heavily on the individuals involved. To the greatest possible extent, the management of the brokerage attempts to control activities which might otherwise be led by the terms of a particular grant or the personal interest of the staff member. At best, management achieves a compromise with these other factors. As a result, much of the responsibility rests on the experience, integrity and even the personality of the individual. It is impossible to capture these factors with a truly objective analysis of GBTD's staff capability. However, individuals are highly related to the outcome of the brokerage, and the following profiles attempt to offer as much insight as possible into the types of skills and characteristics which have been at work. This profile is confined to only the principal staff members (program manager and above) on-board as of the fall 1981 preparation of the report.

4.6 STAFFING BRIEFS

4.6.1 Thomas Brigham, Executive Director

Tom Brigham was brought to Bridgeport to serve as Director of Operations by GBTD's original Executive Director, Rich Bradley. When Bradley left GBTD in June 1979, Brigham took over as Executive Director. Before coming to Bridgeport, Brigham was part of the planning and operations team on the Rochester paratransit project. His formal education is in transportation, and he has also worked as a researcher on transportation projects at MIT. He spent several years abroad with the Peace Corps in the early 1970's.

Prior to the arrival of Lance Grenzeback as demonstration project manager in the late spring of 1980, Brigham served as both chief administrator for GBTD as well as program manager for the brokerage demonstration. His role has since been appropriately narrowed to that of Executive Director, where he is the formal public interface on all aspects of the GBTD program, and most particularly in selling the brokerage innovations to the Executive Board, the community, Connecticut DOT, and UMTA. These

activities require not only a familiarity with transit issues, but administrative skills in budget planning and review, skill in attracting funding, and liaison with a multitude of agencies and interest groups.

Internally, the Executive Director must keep sufficiently up-to-date with individual projects that he can effectively represent them to the Board and to the outside. With regard to the brokerage, this update typically comes from the Demonstration Program Manager, and to a lesser extent, from individual project staff. Brigham's extensive technical experience still places him in the role of chief advisor on various planning issues, which has been both an asset and a problem. While Brigham's knowledge is an important contribution to the team, in the early going, the phase-in of the Demonstration Project Manager was made more difficult by the lack of a clear-cut figure of authority.

Another of his more important contributions to the progress of the brokerage has been the development of a successful continuing rapport with Michael Gratt, Chairman of the Executive Board. Brigham has developed a pattern of negotiation with Gratt that consists of regular communications during the initial planning and development of a concept, with the intention of identifying obstacles and reaching compromises before major problems arise. In effect, once the primary acceptance is reached with Gratt, the action stands a good chance of approval by the Board. This "leading support" approach occasionally extends to discussions with individual Board members prior to formal presentation of proposals to the full Board, particularly those members who are directly affected by and likely to support the actions.

4.6.2 Lance Grenzeback, Demonstration Program Manager

Lance Grenzeback was hired as the official Demonstration Project Manager in April 1980, ending a 4-month search for someone to fill that position. His background is in private consulting, having spent several years with an urban and environmental planning firm in Cambridge. His formal education is in government with an emphasis in political theory, and he also holds a Master's degree in City Planning, specializing in housing

and housing economics. He has not received formal education in transportation, and prior to coming to GBTD, had no earlier experience with transportation development projects. Like Brigham, Grenzeback spent several of the early years of his career abroad as a Peace Corps volunteer.

Grenzeback's mission at GBTD has been to try to organize the brokerage project into a structured, harmonious, objective-oriented process. This has meant transforming broad program objectives and varied funding sources into specific programs and projects, assigning the correct individuals to staff these activities, and establishing implementation schedules, budgets, and guidelines for monitoring progress.

This organization has been a fairly arduous task, for several reasons. First, it is a dynamic process, with objectives and approaches shifting over time in terms of definition and priority. Taking stock of projects and juggling schedules has required Grenzeback to maintain continuous dialogue with project managers on design details, funding and institutional constraints, and progress. He has endeavored to manage the brokerage by using accepted, generalized management concepts with which he is familiar, which makes him stand apart from the typical planning or operations-oriented team member. He has experimented extensively with charts, schedules, and taxonomies, which have helped give him and others a better feel for the complexities of the program. Out of this experimentation has ultimately come a coherent system of projects, managerships and performance targets which have greatly improved the organization and management of the program.

There is still some question about what the ideal skills are for a manager of a multifaceted transportation brokerage program. Grenzeback's management organization skills and his considerable ability to interact with people, ascertain their problems, deal with abstract objectives, and devise courses of action all seem to be relevant and helpful skills. The issue is how extensive a direct background in the subject area is important in order to develop management programs and to exert effective management

control. Controlling several project managers' work areas was initially difficult for Grenzeback because they did not expect that he properly understood the issues or project development details in their area, nor, as a result, that he was able to assign goals and objectives to direct their work. However, it appears that many of these complaints are traceable to the disruption caused by Grenzeback's appointment well into the development of the project, which resulted in the curbing of individual managers' freedoms for the sake of overall coordination, and removal of the direct link to Tom Brigham as senior technical advisor. In a relatively short time, Grenzeback earned the staff's respect and support, and contributes a valuable dimension to the staff as a broad thinker who quickly grasps important funding, institutional, technical and even personnel issues and translates them to management actions.

4.6.3 Mark Boaz, Paratransit Program Manager

Mark Boaz was one of the earliest members of the brokerage team. The impact of his tenure at GBTD is very visible through such projects as the Fairfield MiniMover and the Human Service Transportation Consortium, two of the first projects to physically emerge from the brokerage.

Boaz was recruited by Richard Bradley as eventual Director of Transit Services, although this position never materialized. He worked for a time as Bradley's chief aide, helping to prepare Bridgeport's main demonstration grant application. His education is in sociology and urban planning, and his major on-the-job experience was a previous involvement in the Miami paratransit brokerage project directed by Ellen Casebeer McCarthy, a colleague of Richard Bradley with a common professional interest in brokerage.

Boaz's role in the assigned position of Paratransit Service Manager has been to develop and implement paratransit service concepts. His skills in technical planning are not extensive. Rather, he is most adept at delineating issues, understanding institutional complexities, and managing and negotiating the details necessary to refine and implement a concept. His major

strength is in carrying the Transit District's program to the community, winning their confidence, and integrating diverse interests.

Part of Boaz's success lies in a freelance work style, which was partially compromised with the introduction of Grenzeback. Boaz had to give up considerable freedom in defining goals and actions under Grenzeback, and it was a difficult adjustment. However, the transformation was eventually made, with a solid and complementary association between him and Grenzeback.

Boaz's two major projects were the Fairfield MiniMover and the Human Service Transportation Consortium (HSTC). With Fairfield, he performed the initial design of the daytime minibus service, based on a knowledge of the community gained through meetings and coordination with local officials. He was later assisted with the technical design aspects of the service by GBTD's system planner, Eve Wyatt, and also integrated assistance from Richard Oram, GBTD's Pricing Manager, in establishing the fare structure. He also prepared the UMTA grant application and worked extensively with the local community and operators in getting the service underway, and managed the system through its implementation phase.

His role with the HSTC was perhaps more illustrative of his skills in coordination and organization. In the beginning of the reorganization of a pre-existing E&H Coordinated System, he stepped in as interim manager of the floundering system and gained first-hand operating experience. While helping to design the system, he made various efficiency improvements in the old system and learned much about the structure of the agency network. Eventually a consultant was called in to help in the redesign of the system which resulted in the recommendation for consolidation, and Boaz contributed much of his amassed knowledge to the design. Subsequently, he took the principal initiative in seeking funding resources, helped lay the management framework, and coordinated development of the Consortium's independent charter. However, his greatest contribution again was in the organizational and marketing areas. He has continued to refine the HSTC concept through position papers and perform the difficult and

time-consuming public liaison work with the social service agencies themselves (potential consortium members), the Executive Board, the Mayor's Office, funding agencies and users' groups. In the end, it appears this coordination was a major factor in making the Consortium concept work.

4.6.4 Ross Burkhardt, Community and Economic Development Program Manager

Ross Burkhardt is the District's manager for a program which is exploring methods by which transit service may be planned and marketed in support of broader community development goals, and in some cases as a leading activity to spur economic development or renewal. Projects he has developed thus far include the Bridgeport CBD loop commercial revitalization project, the East Main Street urban mall, and the Fairfield Center project.

Burkhardt is another of the original brokerage team members, having been recruited by Richard Bradley after working with Bradley in Westport. His education and working background are in city planning and development. He is an acknowledged expert in the area of joint transit and community development. Prior to coming to Bridgeport he directed a large study for the City of New York on transit system impacts on local development. There, as with Bridgeport, he was also stationed within the transit agency, to "ease the confrontation situation." The New York study examined development impacts occurring in the Second Avenue subway corridor, and involved Burkhardt in zoning issues, investigating real estate transactions, and substantial community relations efforts.

Burkhardt is trying to provide an important link between GBTD's transit development program and the economic development interests of the community. He provides important information to GBTD on what the growth potential and climate of the community are, leading to more responsive and targeted transit development plans. He simultaneously serves as GBTD's chief liaison to the development community, indicating the willingness of the Transit District to work as a partner to accomplish economic renewal.

The skills he has applied in realizing this role are in recognizing development opportunities, generating a favorable and enthusiastic development atmosphere, organizing action groups, and maintaining public liaison and building support based on a good understanding of development forces. It is generally agreed that he works well with people and has a good sense for the rules and institutional possibilities. While he admits that these skills are useful in what he is trying to accomplish, he also feels he would benefit from better backgrounds in urban design and politics.

A major difficulty has confronted Burkhardt in the termination of UMTA's urban initiatives and EDA's economic development funding. These programs were used to generate the momentum in projects like the East Main Street renewal, giving doubtful private investors a rallying point in the form of public participation and investment. This situation has tested Burkhardt's mettle, as he has labored with reasonable success to keep activities alive without a direct financial role. He thinks that joint development planning is a vital activity for a transit agency to be involved in, but doesn't think that the average transit agency could justify the type of effort he has expended, and is afraid that the funding cuts will cause the joint development concept to be seen as a failure.

4.6.5 Richard Oram, Pricing Program Manager

Richard Oram is not one of the original team members, having arrived in the August 1980. While Bradley was impressed with his work and had desired to add him to the team, he was eventually recruited for the project by Vince Millione, who is in charge of the separately-funded pricing demonstration for UMTA. Oram's official responsibilities are to provide input on pricing aspects of all brokerage services. Practically speaking, the responsibilities are broader than this, since he has a pervasive influence on the design of individual services, directly and through his pricing policies. He also lends a general economic perspective and a national policy linkage to brokerage planning

activities. This broad responsibility (largely self-imposed) causes him to feel pressured, spread too thin, and constantly behind in schedule and in freedom to work on favorite projects.

Oram's educational background is in economics, with a graduate degree in urban and regional planning. He served for 2 years in UMTA's policy office working on issues related to light rail transit, paratransit, and transportation systems management (TSM). While studying for his master's degree, his thesis work concentrated on transit pricing and cost allocation. Elements of the thesis were later published as a professional paper entitled: "The Role of Subsidy Policies in Modernizing the Structure of the Bus Transit Industry." Following graduate school he returned to UMTA where he helped administer the University Research Program. Subsequently he worked with Public Technology, Inc., briefly, during which time he organized a transit pricing conference. He became pricing manager in Bridgeport as a result of his professional interests in pricing and brokerage topics and his association with Vince Millione of UMTA.

Regarding the application of Oram's background and interests within the brokerage environment, most staff members see him as perhaps the most academic person on the team. This characteristic is also somewhat reluctantly admitted to by Oram, although he prefers to regard himself as a "problem solver." He generally attempts to derive national policy impact from what he is working on, and is often frustrated by the institutional bottlenecks and data quality problems that occur in a real world environment. He also admits that scheduling projects and development of innovations still may have more to do with his own professional interests rather than what is of highest priority to the brokerage at a given time. Overall, he feels that the brokerage should be more aggressive, relying less on technical skills and more on interaction with the community. He thinks the brokerage will meet its sternest challenge in moving fast enough to keep up with people's expectations.

Oram's principal accomplishments thus far include the Fairfield MiniMover fare system and the fare prepayment program. He has also worked on a bus cost allocation methodology and a user-side subsidy program.

In Fairfield he devised a time-of-day fare system consisting of distance-based fares for morning and evening peak-period commuter services, and a flat-fare daytime service. A promotional fares program was also devised consisting of free ticket mailings and half-price pass and ticket sales to induce introductory testing and acceptance of the service.

Perhaps has most significant effort has been in designing the District's fare prepayment program. He has developed different prepayment instruments for decidedly different markets, which is a non-conventional approach: an employee pass for commuters, a "fare-cutter card" for daytime travelers, and a token program for less frequent users. A significant aspect of this program is the provision for private sector financial support of transit. Employers are asked to subsidize employee's passes, and merchants are supporting shopping travel through "Value Fare" discounts.

In each of his program elements, Oram has applied economic principles and reasoning in designing concepts, has thoroughly researched previous efforts, and assessed the opportunity for innovation. He has also assumed a significant role in implementing and marketing his concepts, which supports his image of a prototypical broker.

4.6.6 Randy Richardson, Fixed-Route Service Program Manager

Randy Richardson was one of the earliest members of the brokerage team. Richardson engineered the initial fixed route bus system (Phase I Service Development) in Bridgeport following the reorganization of GBTD and the purchase and takeover of four independent bus companies. He performed the market analysis which defined Phase I routes and services, and detailed the service adjustments and expansions under Phase II and III. He has also been significantly involved in the service standards and performance monitoring study and trial implementation for UMTA. Richardson also has the important role of being the interface

between the planners and Dick Reynolds, GBTD's Operations Manager. The impact of this on his relationship with other brokerage team members is mixed--some admiration for being in touch with operations and some friction for citing operational obstacles to the brokerage staff's service development plans.

Richardson's education is in urban planning. Prior to arriving at Bridgeport he was employed by a private consulting firm as a transportation analyst. His only operational experience has been in Bridgeport during the last 2 years.

He sees himself as a technical planner, that is, as a specialist who uses quantitative tools in defining markets, developing services, and resolving operational details. He has not been heavily involved in the "softer" side of service development, namely interactions with the community and the Executive Board, which has perhaps been the major element in service development in Bridgeport. He would like to be more involved at this level, but doesn't feel the current organization allows it, and wonders to some extent how effective he would be.

As a working style, Richardson strongly supports goals and objectives. He feels it is important for the Transit District to develop consistent policies to guide service development. Using the fixed route service program as an example, he suggests that such policies may have given the District the time to effect a basic redesign of the service in the beginning, rather than replicating the old service and trying to modify it later. He feels that many important corridors haven't been served, including some 30 employers who have 500 or more people, who may not be served because of limited Transit District resources. He also feels that the District is critically lagging in development of a marketing program, both in terms of policy to set forth the program's objectives and in retaining a marketing specialist.

4.7 COSTS

The evaluation of the brokerage approach to transportation planning and management would be incomplete without an assessment

of the associated costs. Because brokerage implies consideration of a range of strategies to address the needs of a variety of travel markets and operational situations, staffing needs exceed those of the conventional transit planning staff. In Bridgeport 9 of the 12 members of the planning staff were engaged full-time in brokerage-related activities, financed by special UMTA Section 6 demonstration or Section 8 planning grants, while the remaining 3 were engaged at least a portion of the time.

Despite all efforts to dissect and classify its inner workings, in terms of product brokerage is still a black box. Planning diverse services for multiple markets in the presence of shifting financial and political winds carries with it great uncertainty. Sometimes actions are quickly conceived, planned and implemented, requiring a level of effort similar to conventional planning procedure. This is the exception, however. Typically the need for synergism, the importance of correct timing, and generally pathfinding in strange new areas contributes to extended development schedules. Many strategies are often considered and then dropped, because either the concept itself or the timing is not right. Clearly, the products issued from the black box are the most tangible measures of benefits from the increased costs of brokerage. However, the actions not realized are the intangible benefits--they may well result in an improved service plan tomorrow, or at least represent avoidance of a potentially costly mistake. The conclusion is that knowledge is the product for which the resources have been expended, some of which actually translate to physical actions.

Admittedly, owing to its demonstration or experimental status, Bridgeport's brokerage was given more freedom to operate as an R&D environment than might a more basic brokerage process elsewhere. This means that the costs described below must be qualified in light of Bridgeport's serving as an ambitious and broad-based experiment, not as a least-cost, minimum time path model for brokerage.

Bridgeport was the recipient of numerous Federal grants, which were inventoried and described briefly in Chapter 3. To properly address the question of what it has cost to operate the

brokerage in Bridgeport, it is necessary to try to estimate what the normal costs would be to maintain a planning staff in a transit agency the size of Bridgeport's and compare that with the resources that have been used to sustain the brokerage.

The typical transit agency would support its nominal planning activities out of two primary sources: (1) its operating budget, comprised of revenues, state and local contributions, and Federal Section 5 operating assistance, and (2) Section 8 planning monies. Persons with experience suggest that the typical transit agency on the scale of Bridgeport would have a relatively limited planning capability consisting of part-time supervision by an Executive Director (1/3 time), a full-time planning specialist who would also fill-in as a marketing director, an operations/scheduling manager (1/2 time), and probably one full-time and one part-time junior planner. The estimated budget for such a capability department would be $100,000 to $150,000 per year, assuming $80,000 to $110,000 in labor costs and the remainder in overhead.

Bridgeport's brokerage was fueled primarily by UMTA Section 6 demonstration grants. And while most agencies are able to secure Section 8 planning funds, there is little doubt that the demonstration acted as a magnet for a number of its Section 8 grants. A total of $2,104,271 in Section 6 and Section 8 funds were acquired by GBTD over the period August 1978 through December 1981. These resources are summarized in Figure 4-3.

It is possible to define the costs of the brokerage as the expenditures on these Section 6 and Section 8 grants, particularly since GBTD's "traditional" planning activities, including the route and schedule planning for the fixed-route system and the conventional planning aspects of the Fairfield and Stratford service developments, were covered by GBTD's regular operating budget. Only one qualification to using the Section 6 and Section 8 expenditures as brokerage costs is applied: A transit agency of Bridgeport's site should normally be able to access about $50,000 a year in Section 8 planning grants. UMTA Section 8 grants, acquired by GBTD since the beginning of the demonstration, total about $250,000, or approximately $75,000 per year.

Program Area	Grant	Received	Expended as of 12/12/81
Demonstration General			
Initial Plan, Sec. 6	$135,000	8/15/78	126,459
TSM Brokerage, Sec. 6	557,395	9/28/79 & 1/80	284,859
	$712,395		$411,318
Community & Econ. Dev.			
CED 1, Sec. 6	$ 95,744	9/28/79	$ 87,945
CBD, Sec. 8	122,880	3/22/79	114,456
CED II, Sec. 8	62,500	10/1/81	37,100
	$281,124		$239,501
Section 8 Planning			
Bus Perf. Eval.	$ 67,750	3/80	$66,582
Low Cost Trans. Impr.	48,000	5/01/80	47,059
Empl. Cent. Bus	40,000	2/01/81	3,245
Sec. 504 Trans.	12,500	3/17/80	12,561
MIS System	81,500	5/01/80	39,177
	$249,750		$168,624
Pricing			
Pric. 1, Sec. 6	$191,066	9/28/79	
Pric. 2, Sec. 6	309,936	9/29/79	
	$501,002		$118,707
Inner-City, Sec. 6	$360,000	6/6/80	$13,210
TOTAL	**$2,104,271**		**$951,360**

FIGURE 4-3. SUMMARY OF DEMONSTRATION-RELATED GRANTS AND EXPENDITURES

Therefore, GBTD's Section 8 resources should be reduced by about 2/3 to fairly represent brokerage costs. Reducing the Section 8 expenditures by this ratio results in an estimated $56,208 expended as brokerage activities, or $16,879 per year. This suggest a total cost for brokerage activities of $838,944 over the August 1978-December 1981 period, or $251,935 per year. These are costs over and above the $100,000 to $150,000 estimated conventional planning costs per year.

The incidence of these costs by individual program element is as follows:

- $411,318, or 49.0%, is attributable to the general demonstration, including demonstration planning and TSM brokerage;
- $239,501, or 28.5%, is attributable to the community and economic development activity;
- $56,208, or 6.7%, is related to the special Section 8 planning grants;
- $118,707, or 14.1%, is related to the special pricing demonstration;
- $13,210, or 1.6%, is accounted for by the special Inner-city demonstration, which did not get underway until July 1981.

The uses to which these funds have been put are detailed in Figure 4-4, which recaps resources and expenditures for each of the five program elements in the brokerage, lists the major accomplishments (tangible and intangible products), and describes remaining tasks on the agenda before the demonstration terminates, currently set for March 1983.

The reader may view each of the accomplishments detailed in Figure 4-4 as products of the brokerage. It is doubtful that any of these services, systems, or feasibility investigations (with the possible exception of some of the Section 8 grants) would have occurred outside of the brokerage, i.e., in the environment of the average transit agency. The major tangible products include: the HSTC consolidated E&H network; a highly

Section 6 TSM Planning and Brokerage

Total Funds: $712,395
Expended Funds: 411,318
Remaining Funds: 301,077

Accomplishments:

- Design of Fairfield MiniMover system
- Comprehensive system planning in Stratford
- Shared-ride taxi program planning
- User-side subsidy program investigation
- Develop District's comprehensive planning and management systems, including interim MIS on minicomputer
- Demonstrate use of market research techniques in Fairfield and Stratford
- Establish community participation element in planning and management process
- Planning and implementation of Human Service Transportation Consortium

Remaining Tasks:

- Design and implement shared-ride taxi project
- Design and implement user-side subsidy project
- Refine system for bus service monitoring and performance evaluation

FIGURE 4-4. BROKERAGE EXPENDITURES AND ACCOMPLISHMENTS BY PROGRAM ELEMENT

Section 6 and 8 Community and Economic Development

Total Funds: $281,124
Expended Funds: 239,501
Remaining Funds: 41,623
Accomplishments:

- Pedestrian/transit street improvements program in the Bridgeport CBD
- Economic and joint development potentials study in Fairfield Center
- East Main Street Commercial revitalization project

Remaining Tasks:

- Implement Bridgeport CBD project
- Implement East Main Street project

FIGURE 4-4. BROKERAGE EXPENDITURES AND ACCOMPLISHMENTS BY PROGRAM ELEMENT (Continued)

Section 8 Planning Grants

(a) Bus Performance Evaluation

Total Funds: $115,750
Expended Funds: 113,641
Remaining Funds: 2,109

Accomplishments:

- Collection of baseline data on system performance (boarding centers, on-board surveys, fare classification)
- Development and calibration of baseline performance monitoring models

Remaining Tasks:

- Complete development of fare classification module
- Collect new data and update system

(b) Employment-Centered Bus

Total Funds: $40,000
Expended Funds: 3,245
Remaining Funds: 36,755

Accomplishments:

- Initial employer contacts
- Interest survey at Sikorsky

Remaining Tasks:

- Develop pilot program
- Explore additional employer interest
- Develop additional test programs

FIGURE 4-4. BROKERAGE EXPENDITURES AND ACCOMPLISHMENTS BY PROGRAM ELEMENT (Continued)

Section 8 Planning Grants (Continued)

(c) Management Information System

Total Funds: $81,500
Expended Funds: 39,177
Remaining Funds: 42,323
Accomplishments:

- Preliminary needs assessment
- Research of system options, including visits to site installation

Remaining Tasks:

- Develop system design plan
- Implement system

(d) Section 504 Transition Plan

Total Funds: $12,500
Expended Funds: 12,561
Remaining Funds: None
Accomplishments:

- Completed transition plan

Remaining Tasks:

- None

FIGURE 4-4. BROKERAGE EXPENDITURES AND ACCOMPLISHMENTS BY PROGRAM ELEMENT (Continued)

Section 6 Pricing Demonstration

Total Funds: $501,002
Expended Funds: 118,707
Remaining Funds: 382,295

Accomplishments:

- Design of market-based fare system and fare promotional program for Fairfield MiniMover system
- Development of cost allocation model and investigation of time-of-day fare policies for fixed-route bus system
- Planning, development and implementation of fare prepayment program, including development of innovative promotional techniques

Remaining Tasks:

- Study of marginal cost pricing and fare integration issues
- Continued development of fare-prepayment program
- Continued development of marketing program

FIGURE 4-4. BROKERAGE EXPENDITURES AND ACCOMPLISHMENTS BY PROGRAM ELEMENT (Continued)

Section 6 Inner-City Demonstration

Total Funds: $360,000
Expended Funds: 13,210
Remaining Funds: 346,790
Accomplishments:

- Initial reconnaissance and development of community contacts
- Plans for market research programs

Remaining Tasks:

- Implement market research program
- Service development

FIGURE 4-4. BROKERAGE EXPENDITURES AND ACCOMPLISHMENTS BY PROGRAM ELEMENT (Continued)

individualized transit pass program which sets the stage for private sector cost sharing; two major centers of urban revitalization; a transit cost allocation model; a bus performance monitoring system; and a specialized community-based, market-differentiated transit system (Fairfield MiniMover). The intangible products, which include a shared-ride taxi market development plan, a plan for employment-centered bus development, and a plan for a major, multi-purpose management information system, are all detailed models which might be working systems in any other transit district where the political and institutional climate is less conservative than Bridgeport's.

In summary, evaluation of the costs of brokerage is important, for the average transit agency may not be as financially advantaged as Bridgeport. However, total replication of Bridgeport is not the object of this demonstration. The essence of brokerage is taking transit planning and management beyond the limits of conventional thinking. Rising costs and declining effectiveness of conventional transit approaches dictate a need for a broader role for the public transit agency. More effective service options and management methods do exist and brokerage-like methods, applied in broad or limited context, are important in bringing these methods to bear. The enlightened reader will hopefully see the purpose, the constraints, and the lessons of the Bridgeport experience and utilize those concepts which will bring the most useful results for his or her situation.

5. FINDINGS AND SYNTHESIS

This chapter attempts to perform two difficult and somewhat speculative tasks: (1) to assess where the brokerage is in terms of its development, accomplishments, and remaining potential; and (2) to provide guidance to other professionals on the potential for using a similar planning process elsewhere. In one sense it may be unfair to attempt to draw conclusions about performance of the brokerage demonstration in Bridgeport, since the project is still underway, with considerable remaining resources and strategies to be deployed. On the other hand, some rather clear patterns seem to have emerged and stabilized, and this report would fall short of its objectives if it did not offer the best current insight on these outcomes to other interested parties. The interim findings suggest that a brokerage effort like Bridgeport faces a variety of practical constraints, many of which are likely to affect similar implementations elsewhere. The task assumed by the evaluation is to sort out those aspects unique to Bridgeport, and then, in light of normal constraints, ask whether the potential for brokerage as a planning and management strategy is worthy of recommendation.

The test of brokerage in Bridgeport should be of considerable interest to all who are concerned about continued provision of urban mass transportation services under pressure of growing transit deficits and declining operating subsidies. The idea is to accomplish more efficient and productive delivery of transportation service through application of updated planning and operating methods, and the judicious, enlightened use of innovative service and management concepts. Such innovation is normally stifled by highly institutionalized traditional planning practices, infrastructure, and community leadership. Considerable optimism has been placed on Bridgeport, not only because of the infusion of fresh, young talent to the planning staff, but also because the project was able to start with a relatively clean institutional slate. The region did not possess heavy investment

in existing conventional facilities at the start of the demonstration; in fact, the first task of the new planning and operations staff was to phase out a weak existing service network and prepare the way for a complete overhaul of regional public transportation service. This favorable situation was reinforced by the existence of community leadership that voiced support for fundamental changes in its transportation system.

At this point in time, roughly 2 years into the development of the brokerage, many objectives in the original plan have been realized. However, many others have not been realized, and it appears increasingly doubtful with time that some service concepts or management techniques will ever be implemented as planned. There are several reasons for this, upon which the balance of the discussion in this chapter will focus. Categorized broadly, these reasons include:

- timing of key events, internal and external
- broader political/institutional climate
- funding issues
- capabilities and interests of the planning staff
- composition, attitude, and influence of the Executive Board.

As brokerage manager, GBTD's overall goal has been to create a diversified, multimodal, regional transportation system, where service components (modes, fares, marketing strategies, etc.) are tailored to the characteristics of individual markets. This multimodal plan has been frustrated by the Transit District's inability to bring on-line the important secondary services it needs, such as shared-ride taxi and employment-centered bus, which are its key tools for market-based service development in the low-density or temporally erratic markets. Without these tools, GBTD is greatly restricted in its role as broker. Aside from the Human Service Transportation Consortium, which is not directly under the policy and operational control of GBTD, and the Fairfield MiniMover, which incorporates some innovative paratransit features but is still a fixed-route, publicly-operated

bus system, GBTD is basically operating a conventional fixed-route bus service. Characteristic of other fixed-route systems for a metropolitan area of its size, the Bridgeport transit system covers a wide area with thin service (headways of generally 30 minutes or more), and serves an essentially captive market.

Because it did not view its initial fixed-route service network as permanent, GBTD's service development planning for the fixed-route was not particularly innovative. The early approach put as much new service into operation as the capital and operating budgets would allow, using regional coverage and accessibility as the principal design criteria. The pre-existing route system was largely replicated, with emphasis on eliminating obvious redundancies and operational quirks. Planning did not extend to collection of major new data, but relied on existing maps, data, and negotiations with the communities. Demand estimates were not formulated, nor were service alternatives studied, given the tentative nature of the plans. In the view of GBTD, it made little sense to try to optimize service at the outset, when so many planning variables were beyond their control.

Several events appear to have caused GBTD to proceed with a service development program that centered on early full deployment of the fixed-route service element. This situation is important, since it faces GBTD now with the same types of constraints related to infrastructure that confront the typical transit agency. In other words, the initial "clean slate" has been replaced by a conventional infrastructure, which traditionally has had great stability and resistance to change. Capital resources are committed, as may be important obligations to organized labor. Fixed-route services are difficult to uproot because they represent tangible evidence of public service delivery, require no tampering with unfamiliar rules and regulations, and are operationally expedient since they may be controlled directly by the transit authority.

Richard Bradley, the original Executive Director of GBTD, has suggested in review that the original multimodal service development plan may have been compromised by GBTD's inability to

demonstrate shared-ride taxi (SRT) as a viable alternative to fixed-route bus in the early planning and development stages. The initial GBTD plan to get an SRT program underway in the District relied on infusion of capital assistance into the sagging local taxi industry. By revitalizing the dilapidated vehicle supply, GBTD hoped to alter taxi's local image and make it appear as a viable mode. If necessary, GBTD also planned to apply user-side subsidy assistance to enhance public acceptance and use of the service and elicit favorable service response from the industry.

UMTA's paratransit funding policy, under which GBTD hoped to acquire the initial capital assistance to inaugurate its SRT program plan, was under review during the early SRT planning stage. Uncertainties regarding possible funding affected the strength and scope of GBTD's early planning efforts. UMTA was uncertain about beginning a capital subsidy program for the private taxi industry, and even the industry itself did not support government subsidies. These uncertainties were not resolved until November of 1980, when UMTA advised GBTD that it would not be able to fund its capital assistance request, citing labor complications under Section 13(c) as the reason. By this time, basic fixed-route services were already in operation and planning for the MiniMover service was also well underway. However, it is also possible that, in addition to the distraction caused by the funding delays, the GBTD staff did not sense a critical nature to the timing of the SRT program as an early service development, to the extent that SRT may now prove to be more difficult to implement. The staff has pursued instead a service development strategy that dispenses as much service as possible in the short run to maintain community goodwill, and then relies upon a cooperative relationship with the Executive Board and freedom structured into the 13(c) agreements to implement new services, and, if necessary, displace existing services when new services become viable. This approach may prove to be the major issue in the eventual success or failure of the brokerage. Bradley believed that the development of GBTD would have been different if the SRT alternative had been viable early on,

and suggests that a diversion of staff resources to other consuming projects, like the fixed-route system and Fairfield, may have impeded earlier development of SRT. This observation may be translated to an overall caveat in a brokerage approach, where timing, orchestration and proper emphasis are extremely important in ensuring that options are not foreclosed.

While it is certainly true that fixed-route and MiniMover service development consumed much of the planning staff's interest and capability through the fall of 1980, it is also true that the situation was not entirely under GBTD's control. In this regard, Bradley's departure from GBTD in June 1979 was an important event. As Executive Director and initial project designer, Bradley wielded significant influence with the Board, strengthened by his acknowledged talent in shaping expectations and painting bright scenarios. His management style also often surprised the Board when they learned of actions taken on which they had not been briefed. It is concluded that Bradley's departure created a strategic void; namely, the Board was becoming both anxious for tangible results and was becoming wary of planning staff activities under a management that often appeared deceptive to them. Therefore, when the new management took over, it was placed under scrutiny and pressure to begin implementation of services. Several observers believe that the departure of Bradley helped force the transition of GBTD from primarily a planning agency to an implementing and operating agency.

The other major event that shaped the early direction of the Transit District was the situation in Fairfield. The fuel crisis in the summer of 1979 brought the Fairfield service issues to an early head. Because they did not want to potentially foreclose upon service development opportunities in Fairfield, GBTD advanced its priority for Fairfield and proceeded with design of the Minibus service, since that was what Fairfield was asking for and that was what GBTD was in best position to provide on short notice. A shared-ride taxi component was part of the original 3-part service development plan for Fairfield, but the timing of events caused GBTD to move ahead with what they had to offer. It

is the opinion of several observers, however, that even given the need to take some action, GBTD's design effort on the MiniMover was perhaps an overstatement of the planning and capital resources actually required to meet the Fairfield obligation. The MiniMover service development resulted in a full-fledged, area-wide fixed-route system with extensive off-peak weekday and weekend service. Considerable staff time was devoted to planning minute routing and operational details, and to development of a sophisticated fare structure. Again, however, relatively little attention was given to estimation of demand or cost effectiveness of alternative service designs. Fairfield's mandate to GBTD, as evidenced in the service development, was to cover as much of the area--spatially and temporally--as possible with the available resources. The result of planning to such a mandate is that many markets receive thin service instead of few potentially lucrative markets receiving competitive levels of service. Indeed, the Fairfield MiniMover service has been unable to achieve a cost recovery rate of greater than 15 percent from farebox revenues, and as both ridership and operating budgets from the State have steadily declined, the service has experienced regular cut-backs. There is some question as to whether the level of planning effort and ultimate design of the MiniMover accurately reflected the place for an eventual shared-ride taxi program, either in Fairfield or in the region as a whole.

To the extent that GBTD is now faced with the prospect of not realizing its multimodal diversification plan, it is useful to look even further behind the events described above and see how other, more fundamental elements may have contributed to the status quo. Probably the leading consideration is the political/institutional environment. Virtually all transit agencies are answerable to an advisory board and must also gain the support of local political leaders when developing programs. This has two primary effects: affecting the priority and scope of the agency's activities; and affecting the rate of time it takes to push through an initiative. Transit boards are typically comprised of lay persons who are concerned and influential community representatives. In Bridgeport, Board members have typically

challenged initiatives from the standpoints of jurisdictional equity, political repercussions, and financial prudence. However, these review procedures have often caused implicit modifications in technical design, scope or timing of service development plans, though they may not have been overtly intended as such. The relationship between GBTD and its Executive Board has gone through several transitions. As discussed, a policy of openness and material progress was placed upon the planning staff following the replacement of Rich Bradley by Tom Brigham. The Board wanted to see progress on the basic systems, and to be fully informed on all details. So GBTD's new management proceeded with the policy that it had to build a good faith reputation with the Board in order to maintain the Board's confidence and support. They were assisted measurably in this process by an inside track with the Board Chairman, Michael Gratt, the individual who initially approached Bradley and Clair about major transit revitalization in Bridgeport. The planning staff developed a strategy for working ideas through Gratt, who would then apply his dynamic influence to sell the measures to the other Board members. This strategy was a reliable and expedient way of maintaining progress until Gratt suffered a serious decline in health in mid-1981, which seemed to reduce his persistence, energy level and influence with the Board. Regrettably, since that time, GBTD has begun to push for Board approval on some of its major innovations and for staff hirings to support these programs, but has received little support from the Board for either. Time will tell whether this situation will resolve itself, and whether Gratt plays a major role in the process.

Local politics, per se, appear to have had a surprisingly minor direct effect on the evolution of the GBTD program. Of course, the extent to which individual members of the Executive Board may be influenced by political pressures in the jurisdictions they represent may be the real undercurrent of local politics to which GBTD must react. Local elected officials have exerted little direct force, however, partly because the localities contribute little or no money to the operation of GBTD. It does appear that the initiatives for the Fairfield MiniMover and

the Human Service Transportation Consortium (HSTC) were at least partially driven by political forces, and staging of these events had considerable impact on the timing of other activities. Fairfield officials were aided by the energy shortage of 1979 in capturing GBTD's attention for service development in their community, although this constituted more of a passive than an active political pressure. GBTD proposed action rather than lose the Fairfield opportunity, but was placed under no intentional duress. The community did act out a preference for minibus service; however, this idea was in harmony with GBTD's capacity and interests. After ignition, the level of attention devoted to MiniMover design was propelled largely by staff interests.

GBTD's focus on the elderly and handicapped consortium (HSTC) was driven by the futility of the Bridgeport's Coordinated System. The City of Bridgeport's Department of Aging was having a difficult time as lead agency in operating that service, which was causing the City to realize both cost and image problems associated with poor service delivery. GBTD was asked by the Mayor's Office to assume control of the service, which subsequently led to a concerted effort to identify less restrictive alternatives. This pressure resulted in the allocation of staff resources to the problem, but for the purpose of preparing an effective long-run solution, and not to mete out an executive order.

The more pervasive, less obvious type of political pressure experienced by GBTD has been the influence on service design itself. Political forces have a way of dictating where and when services will be provided, how frequently, and at what price. These are not pressures unique to Bridgeport. However, an important though unstated aspect of this demonstration has been to identify and confront some of the major real-world forces that have constrained transit in the past. Transit as an equity device and transit as an economic enterprise are concepts that generally operate at cross purposes. GBTD was certainly not immune to these forces, just because of the demonstration. It is unfortunate, however, that little progress has been made, either

through the presentation of analytic arguments or through political negotiation, to change these traditional outcomes. Because it felt it was making tentative plans, working with limited resources, and attempting to build confidence and goodwill, economic study of alternative service strategies was not undertaken by GBTD. As a related effect, initial plans for a comprehensive, on-going market research program to support these types of analysis never materialized. Hence, the planning staff has not been in a position to present a "hard line" of reasoning to the Board to support unconventional concepts, but concludes that such an approach would have been ineffectual in that environment.

Another type of problem that has affected the Transit District's progress in implementing its overall plan, a problem that also has political overtones, is the strategy of fund management. An efficient manager generally attempts to gain the maximum distance from his resources. A transit manager with access to capital and operating grants will have his competence measured by the leverage he can get from those external dollars. If the manager does not make use of all the external resources available to his organization and the community, he is not doing his job effectively. This is especially true with operating subsidies. Even the services in Bridgeport, which was to be a model transit system, were planned knowing that they would lose money, and were planned and operated up to the limit where the District could make use of all available subsidy resources. GBTD's fixed route system recovers 47 percent of its costs from the farebox, which is better than most existing systems. Nevertheless, it is a system that was planned on the premise of losing money, and GBTD planners would have been remiss if they had not put out the maximum service their subsidy dollars would buy for their constituency. However, to do so paints an incorrect picture of the effectiveness of the particular service element to local officials and the community, further entrenching its hold. In Fairfield, the situation was even more perverse and illustrative. By tapping an additional source of matching funds in the form of contributions from Fairfield, GBTD was able to leverage still

more Federal funds, thus enhancing its service offering to Fairfield. In effect, thanks to the subsidy leverage, the Fairfield community is able to furnish a dollar's worth of service for every 15 cents of its own contribution. Clearly, such leverage has considerable effect on the type and amount of service the community is willing to provide, and on the efficiency it is willing to tolerate. Whether the Transit District and the brokerage test were better off, in the long run, for freely using these subsidy resources is unclear. Certainly they would have found it difficult to explain to their board why they did not. What the Bridgeport experience does indicate is that innovation is more difficult when there exist artificial forces that distort the true cost, both direct and indirect, of providing certain types of service.

On the subject of funding aspects, it has been suggested that GBTD's overall goal of an integrated, multimodal transportation may have been compromised by the number of grants themselves. In other words, one must ask whether the large number of grants acquired by the Transit District caused them to be "spread too thin," in terms of too many obligations and avenues for staff diversion. After due consideration, however, this hypothesis does not seem to explain the current state of affairs at GBTD. The critical feature of the brokerage plan was to act fast and apply enough resources to create a new, rational infrastructure in the environment which was regarded as a "clean institutional slate", before contemporary institutional constraints could set in. Owing to paratransit funding quirks, GBTD was not able to implement its entire basic service plan, including shared-ride taxi, at the outset. They opted, without choice, to implement the other basic services, hoping to phase-in the shared-ride taxi gradually, when time permitted. What appears to have resulted is that the conventional institutional forces closed in very quickly. The availability of Section 3 and Section 5 funds led the Executive Board and the planning staff into the extensive regional fixed-route transit development program. Once regional coverage was established, the Board became very cautious regarding innovative service development,

especially shared-ride taxi. It is concluded that this major block occurred very early, long before major grants came in and planning staff became preoccupied with peripheral, and possibly personal, projects. Furthermore, planning staff who were involved in projects that held significant personal interest were not part of this "core" service development function, specifically in the case of community and economic development, pricing, MIS development, the inner-city demonstration, and the service standards/performance evaluation project. Pursuit of these and other "non-essential" grants do not appear to have constrained GBTD from its basic service development program.

Another factor that may have affected the pattern of evolution of the brokerage demonstration through this interim stage has been the delay in implementing the District's MIS system. In his initial plan, Bradley envisioned that an MIS system would significantly enhance the management capability of the brokerage. In review, Bradley has suggested that delays in MIS implementation may be a major factor behind the brokerage's inadequate progress in some areas. Bradley believed that the MIS would give the planning staff several capabilities including a tighter rein on projects (perhaps limiting the effort on Fairfield), and an almost space-age planning ability, in terms of computer-assisted design and optimization of alternatives. He concluded that this assistance would have put the planning staff on more solid ground when negotiating courses of action with the Board. A variety of factors are responsible for the slow progress with the MIS. Funding for system development was not realized until May 1980, at which time transit service development programs were well underway and the MIS project manager was heavily involved in development of accounting systems for the administrative component of GBTD. It is not clear that earlier availability of the MIS would have materially changed events. The Demonstration Program Manager, Lance Grenzeback, does not feel that the type of information that could be obtained from an MIS would have allowed any greater control over individual project managers or their projects than has existed through much of his tenure. Nor does

he feel that the best possible technical data would have contributed much to winning or losing planning issues with the Board. He believes that these issues are really based on local politics, and it is generally the case that the mistakes have to be made, and the results presented, before data means anything in such arguments. Regarding the interactive, dynamic design capability, the planning staff views such a capability as a popularly-held misconception of what an MIS system really does.

Another important element contributing to the evolution of the brokerage is the staff itself. Individual backgrounds and experience, working styles, and even personalities, may have much to do with project outcomes. An important personality factor is the contrast noted between the original leadership of Bradley and Clair, and the subsequent leadership of Brigham and Grenzeback. These two administrations have had different effects with the Board and with the planning staff. Bradley's departure from GBTD, just as the Board was getting hungry for progress, placed an immediate burden, if not a suspicion, on his successor, Brigham. This meant that the new administration had to make discernable progress and had to proceed at a pace and at a level of transparency that was comfortable to the Board. Brigham was encouraged to manage with a conservative style, which seems more natural for him, in contrast to Bradley's more flamboyant style. The Board's conservatism often dragged out many project development activities, and proved to be a major source of frustration to the planning staff, which the staff maintains has curbed its spontaneity and made it more detail-conscious.

The other major problem related to personnel was the adjustment that had to be made to incorporate Lance Grenzeback when he arrived as demonstration manager in April 1980. By that time most of the key planning staff had been hired and were intensely involved in projects--most of which were projects in which they had a direct personal interest. When Grenzeback arrived with the assigned task of synthesizing operations, he was perceived as still another bureaucratic cog in the way of progress. Moreover, a number of resident staff members felt that he had inadequate background in transportation planning to offer them enlightened

management, and felt that his intermediate position served chiefly to restrict their freedom on projects and to cut them off from their previous advisor, Tom Brigham, who was to be freed to spend more time managing the overall Transit District. It required some time for Grenzeback to establish credibility and implement management systems that coalesced these disparate interests, talents, and personalities into a controlled work program. While Grenzeback's management systems now efficiently operate the brokerage and keep it substantially on-course, individual project managers still attempt to exert control over the priorities, schedules, and level of detail on their respective projects, and are successful to the extent of their seniority, enthusiasm, and link to the funding agency awarding the grant. It appears that these freedoms are unavoidable where there exist strong personalities, and where program focus is shifting over time. As stated previously, however, it is not clear that these personal factors have had a pronounced effect on the outcome of the brokerage.

In summary, the Greater Bridgeport Transit District has still not completed its evolution. The project is due to run at least through June of 1984. The desired focus of the planning staff for the second half is on innovation, most particularly the shared-ride taxi program and the employment-centered bus, and eventually a diversified service network. Several options are being considered for stimulating the SRT program, most notably by contract deployment through the HSTC or as part of the inner-city demonstration, and perhaps with encouragement from user-side subsidies. The more likely growth plan for the second phase, however, will find the District continuing to experiment with refinements in its existing services and management systems. The combination of political/institutional constraints and a possibly suppressed market for transit may prevent the Bridgeport project from ever realizing its major goal of multi-modal innovation and integration.

There is, however, a great deal to be learned from the Bridgeport experience in terms of the potential for innovative service planning and management in the face of contemporary

institutional constraints. Brokerage is a broad concept. Brokerage in Bridgeport has involved application of considerable resources, of a magnitude not typically available to the average transit agency, to try a great variety of service and management innovations. Clearly much of this work was experimental, and is reflected in the results and the costs. Brokerage in the more transferable sense is much more pragmatic. It represents a continuous search for innovation and improvement in the delivery of mass transportation services, to increase their serviceability, usage, and cost recovery. A major staff and budget is not required to pursue such a program under normal circumstances, and in most cases it is simply necessary for existing staff to broaden their awareness of concepts, techniques, constraints and resources. Special skills can be acquired on an as-needed basis, as Bridgeport demonstrated. Funding for most improvements can be realized under Section 3 or Section 5, and aggressive agencies can probably find support under the Section 8 program or the relatively new Section 4(i) Innovative Methods program. Bridgeport has performed a valuable service in not only piloting several potentially valuable concepts, but in identifying the major constraints to implementation. This knowledge should help sharpen the focus and reduce the effort of would-be users of the brokerage approach.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1984--701-678--398

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