NATIONAL COOPERATIVE TRANSIT RESEARCH & DEVELOPMENT PROGRAM

Report 12

Strategies to Implement Benefit-Sharing for Fixed-Transit Facilities

TRANSPORTATION RESEARCH BOARD
NATIONAL RESEARCH COUNCIL

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Strategies to Implement Benefit-Sharing for Fixed-Transit Facilities

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AREAS OF INTEREST

Administration
Planning
Finance
(Public Transit)

RESEARCH SPONSORED BY THE URBAN MASS TRANSPORTATION ADMINISTRATION OF THE U.S. DEPARTMENT OF TRANSPORTATION

TRANSPORTATION RESEARCH BOARD
NATIONAL RESEARCH COUNCIL
WASHINGTON, D.C. JULY 1985

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Administrators, engineers, and many others in the transit industry are faced with a multitude of complex problems that range between local, regional, and national in their prevalence. How they might be solved is open to a variety of approaches; however, it is an established fact that a highly effective approach to problems of widespread commonality is one is which operating agencies join cooperatively to support, both in financial and other participatory respects, systematic research that is well designed, practically oriented, and carried out by highly competent researchers. As problems grow rapidly in number and escalate in complexity, the value of an orderly, high-quality cooperative endeavor likewise escalates.

Recognizing this in light of the many needs of the transit industry at large, the Urban Mass Transportation Administration, U.S. Department of Transportation, got under way in 1980 the National Cooperative Transit Research & Development Program (NCTRP). This is an objective national program that provides a mechanism by which UMTA's principal client groups across the nation can join cooperatively in an attempt to solve near-term public transportation problems through applied research, development, test, and evaluation. The client groups thereby have a channel through which they can directly influence a portion of UMTA's annual activities in transit technology development and deployment. Although present funding of the NCTRP is entirely from UMTA's Section 6 funds, the planning leading to inception of the Program envisioned that UMTA's client groups would join ultimately in providing additional support, thereby enabling the Program to address a large number of problems each year.

The NCTRP operates by means of agreements between UMTA as the sponsor and (1) the National Research Council as the Primary Technical Contractor (PTC) responsible for administrative and technical services, (2) the American Public Transit Association, responsible for operation of a Technical Steering Group (TSG) comprised of representatives of transit operators, local government officials, State DOT officials, and officials from UMTA's Office of Technical Assistance.

Research Programs for the NCTRP are developed annually by the Technical Steering Group, which identifies key problems, ranks them in order of priority, and establishes programs of projects for UMTA approval. Once approved, they are referred to the National Research Council for acceptance and administration through the Transportation Research Board.

Research projects addressing the problems referred from UMTA are defined by panels of experts established by the Board to provide technical guidance and counsel in the problem areas. The projects are advertised widely for proposals, and qualified agencies are selected on the basis of research plans offering the greatest probabilities of success. The research is carried out by these agencies under contract to the National Reserch Council, and administration and surveillance of the contract work are the responsibilities of the National Research Council and Board.

The needs for transit research are many, and the National Cooperative Transit Research & Development Program is a mechanism for deriving timely solutions for transportation problems of mutual concern to many responsible groups. In doing so, the Program operates complementary to, rather than as a substitute for or duplicate of, other transit research programs.

NCTRP REPORT 12

Project 40-3 FY '82/FY '83
ISSN 0732-4839
ISBN 0-309-03857-X
Library of Congress Catalog Card No. 85-50733
Price: $14.00

NOTICE

Special Notice

Published reports of the

NATIONAL COOPERATIVE TRANSIT RESEARCH & DEVELOPMENT PROGRAM

are available from:

Transportation Research Board
National Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Printed in the United States of America

FOREWORD

By Staff
Transportation
Research Board

This report will be of interest to transit administrators, other transit professionals, private sector land developers and entrepreneurs involved in public sector/private sector partnerships. Transit professionals will find guidance on appropriate techniques for involving the private sector throughout the planning, design, construction, and operation of fixed transit facilities. Those in the private sector will find guidance on the planning and design process for fixed transit facilities that will be helpful in land development and location decisions.

Benefit-sharing for fixed transit facilities is an approach to achieving an equitable relationship between the distributions of public and private costs for transit facility construction, rehabilitation or operation and the distribution of public and private benefits. Opportunities for benefit-sharing occur during the planning and design of new transit facilities, during construction, and during their operation through (1) direct connections of developments to transit facilities, (2) the use of air rights over transit rights-of-way, and (3) development of adjacent and nearby real estate. Furthermore, as a consequence of building fixed transit facilities, various other public facilities and utilities are rehabilitated. These opportunities for benefit-sharing by transit agencies are frequently lost, however, because they are not an important consideration in the planning and design phases (i.e., in location and design of routes and stations). This research satisfied a need to assist transit agencies in implementing benefit-sharing by (1) cataloging strategies and techniques, (2) providing guidance on their application, and (3) evaluating case studies, which provide examples of application. With respect to the recommendations and conclusions arrived at in this report, transit agencies are cautioned on what to anticipate from the private sector and should be aware that "making a deal" with the private sector obligates the transit agency to timely and reliable performance of the planned services.

CONTENTS

ACKNOWLEDGMENTS

This report was prepared as part of NCTRP Project 40-3 by SG Associates, Inc., in association with Rivkin Associates, Moore-Heder Architects and Urban Designers, and Robert F. Walsh Associates.

Jane Algmin Howard, Associate with SG Associates, Inc., was the Principal Investigator. Lajos Heder, a Principal of Moore-Heder Architects, and Sandra Brecher, Planner and Research Analyst with Rivkin Associates, Inc., were co-principal investigators. The three collaborated in the major areas of research and were the major authors of the report. Major contributions to the research report and case studies were made by Goldie Rivkin, Principal of Rivkin Associates; specialist assistance in private development feasibility analysis was provided by Robert F. Walsh, Principal of Robert F. Walsh Associates.

The authors thank Marvin Golenberg of SG Associates for his overall review of the project, and the members of the 40-3 Project Panel who provided valuable assistance in guiding the course of the overall working plan and case studies and in reviewing the interim products of the study.

Special appreciation is extended to the individuals at transit agencies, state departments of transportation and local/regional planning agencies who participated in the case studies and shared their experiences and concerns regarding benefit-sharing with the research team.

STRATEGIES TO IMPLEMENT BENEFIT-SHARING FOR FIXED-TRANSIT FACILITIES

SUMMARY

Benefit-sharing for fixed-transit facilities is an approach to achieving an equitable relationship between the distribution of public and private costs for transit facility construction, rehabilitation or operation, and the distribution of public and private benefits. This research project provides guidance to transit agencies that might pursue benefit-sharing by cataloguing strategies and techniques and providing information on their application. Case studies are presented to offer insight into the dynamics of implementation where benefit-sharing has been successful.

Transit agencies of all sizes and in all regions of the country are increasingly applying benefit-sharing techniques. Opportunities exist in connection with the maintenance and operation of existing transit facilities as well as with new construction. These opportunities range from lease arrangements whereby tenants share operating and maintenance costs for terminal facilities to "deals" in which private investment finances multimillion dollar station improvements. Not to be overlooked are opportunities to generate additional revenues for transit agencies through redevelopment of their own underutilized properties.

Returns to the transit agency from benefit-sharing (or cost-sharing) vary with the specific situation and type of strategy employed. There are, for example, cases where transit service improvements or amenities create benefits in terms of aesthetics, environmental quality, security, convenience, or sound long-range community development without necessarily enhancing direct financial return to the transit agency. These improvements may or may not entail net additional costs to the transit agency.

At another level are benefit-sharing arrangements in which the costs of a specific benefit-generating transit improvement are shared by the beneficiaries from the outset or recovered directly over time.

Value capture approaches represent yet another variation in which the transit agency seeks a financial return based on the *value* of the transit benefit provided over time, as opposed to the initial *cost* of creating the benefit-generating improvement.

To date, most transit agency benefit-sharing has occurred in connection with construction of new transit facilities—mainly fixed rail systems and stations. Now, however, public sector funding shortages in general, and UMTA's policies to decrease the proportion of Federal funding in transit finance in favor of increased private investment, have led to heightened interest in how the benefit-sharing concept can be extended to other types of transit facilities, both existing and new. There is, further, the key question of how to refine the benefit-sharing concept as a basis for financing transit improvements in general. In this respect the state of current practice is still very young.

There has been an evolution in thinking from the days of the 1960's when planning looked toward the Toronto and Montreal transit systems as models. Their institutional arrangements entailed the transit authority's assembling development parcels around the station areas with the express intention of "capturing" some of the increases in land value to come about through the development that would eventually occur there. This approach did not gain acceptance in the United States. Among the reasons were

issues raised by the excess land acquisition aspect. There was also the general public attitude that transit agencies had no proper role in land development, that they were strictly limited to providing transit service.

Alternative proposals in the 1970's turned to the idea of station area "development authorities" that might be created under the auspices of state or local government, or might take the form of public corporations.

While station area development corporations have been successful in several cases (i.e., Baltimore's Lexington Market station), the Bethesda, Maryland, case study illustrates the typical legal/institutional impediments that have hindered more widespread implementation of this type of arrangement.

Today, the issue of generating development benefits to be tapped for financing transit turns the spotlight once again onto the transit agency. In this respect, benefit-sharing is a variation on an older theme. But benefit-sharing with its multiple investors and beneficiaries implies a more complex intervention in the development process than the older development authority idea. Moreover, the focus is on exploiting the development potential of properties the transit agency already owns as opposed to acquiring new development parcels.

Investigation of transit agency benefit-sharing experience to date shows that the agencies are still feeling their way. The major ingredients of success so far appear to be support from the General Manager to broaden the scope of transit agency activities beyond operational concerns to include land use and development, an "entrepreneurial spirit" on the part of the transit agency which leads to continuous identification of opportunities and willingness to act on them, availability of expertise in real estate and finance (whether from in-house staff or consultants) to assist the transit agency in negotiations and explore new financing techniques, and an openness to cooperating and negotiating with local agencies and developers to achieve the highest level of mutual benefit for all parties.

This report summarizes the important findings from seven case studies and other sources regarding the state of the art in benefit-sharing practice among transit agencies of different types and sizes, benefits derived by the various participants in the process, techniques currently in use for measuring the benefits (and the reasons such techniques are used), and lessons for other transit agencies regarding successes and failures in benefit-sharing. The findings provide the basis for the following major recommendations for pursuing benefit-sharing:

- *Review the opportunities for benefit-sharing within the transit agency*—For both large and small transit agencies, a first step in pursuing benefit-sharing is to see what opportunities can be exploited within the existing resources of the transit agency. To this end, a study might be conducted by the planning department or a real estate consultant to identify existing property which might be suitable for development, review opportunities in conjunction with new construction, and look at possible system interface connections or lease arrangements which might be pursued for existing facilities. Where smaller agencies may not have the resources to conduct such studies on their own, state DOT's might provide guidance in this area.
- *Establish an appropriate, continuing mechanism for pursuing benefit-sharing for the transit agency*—In smaller transit agencies, this might mean having planning circles. In a larger transit agency, clear responsibility should be delegated to an individual or existing department, with support and direct communication from the General Manager. In agencies pursuing large-scale new construction projects, with many opportunities, an entire new department might be justified.
- *Incorporate a benefit-sharing philosophy into ongoing planning and implementation processes*—For both old and new transit systems, transit-related benefit-sharing should

be incorporated more closely into all ongoing planning. To facilitate this interaction, the transit agency should become more involved in local land use planning and development, looking beyond operational considerations to development-related opportunities. Because of competing local priorities, however, the transit agency must take an active role in promoting transit to local governments as a primary beneficiary of developer contributions or special financing techniques. UMTA planning funds, passed through the transit agency to local government agencies to fund the added work necessary to alter land use regulations in support of transit and to implement special financial techniques, have been effective in ensuring such coordination.

- *Deal with the private sector in a businesslike fashion*—To enter into agreements with the private sector, the transit agency must understand the elements of cost, risk, and financial return which enter into real estate development decisions. The successful transit agencies have recognized that developers have a fixed budget for public improvements, and that they cannot hold property waiting for protracted public funding decisions. Simply, the developer must make a profit for the development to be feasible. Further, transit agencies and other transportation planning agencies must be willing to involve the private developers early in the selection of route alignments and station locations to achieve the most marketable projects. Most important to securing private sector commitments is the credibility of the public sector in terms of delivering promised construction on time. At the same time, transit agencies are becoming more sophisticated in quantifying the elements of risk reduction, land assembly, and market research, design, and planning support which they bring to a development deal, and can use these benefits as bargaining tools in negotiations.

- *Recognize the importance of design details, phasing, masterplanning, construction coordination, and a high level of maintenance to benefit-sharing*—The importance of these elements cannot be understated. Environmental improvements, pedestrian connections, and amenities that arise from these processes are the most likely elements to be funded through private contributions. However, arrangements must be made to cover a continuing level of added maintenance required to bring the public spaces up to the same degree of amenity as the associated private spaces.

- *Relate benefit measurement to the level of planning required and to the benefit-sharing objectives of the planning process or benefit-sharing strategy involved*—The issues in measuring transit-related benefits are not those of finding new or improved measurement techniques. Techniques for evaluating benefits are readily available from the range of tools commonly used in standard practice by transportation, planning, and real estate professionals. The issues are rather those of defining the development-related impacts or benefits to be measured, collecting the appropriate level of data to measure the impact, and basing regulations, assessment techniques, or leases on tangible, site-specific benefits. Simply put, the more concrete the basis for the benefit-sharing strategy, the easier the task of benefit measurement.

- *Finally, be realistic in evaluating the financial return to be achieved through benefit-sharing*—Benefit-sharing can cover only a very small part of overall system costs. Private contributions are most likely to cover *enhancements* to the system rather than basic system elements. To be both equitable and politically acceptable, return from techniques such as benefit assessment districts, which are levied on those in the immediate area of a transit facility, must be designed to use the monies so derived to deliver a specific product (such as added maintenance or security) within the specific area in which the fees are collected, as opposed to funding a broader or more open-ended item such as systemwide capital or operating costs. Nor can the transit agency expect to gain 100 percent of the funds from innovative techniques because of competing local demands on these sources in times of funding shortages. At the same time, however, transit agencies should be hesitant to seek an equitable return for the

contributions which they bring to the development deal, such as land assembly early site planning, financial guarantees, and the like.

In sum, benefit-sharing cannot be expected to replace the traditional public sources of funds. The contributions to be gained through benefit-sharing programs are often modest in terms of overall cost, are unlikely to be available at the early stages of transit planning and development, are often required just to make up the 20 percent local share for many local governments, and are most commonly applied to elements other than basic transit service. Further, the private sector has been motivated in the past to contribute to transit projects largely because of local government requirements, reductions in their upfront costs, and the availability of a healthy proportion of nonprivate funding in conjunction with their relatively small contribution. While localities differ in terms of private sector relationships with government and the extent of private financial commitment to public improvements, the experience documented here suggests that benefit-sharing cannot be expected to make up for decreased Federal involvement in transit and urban revitalization projects in most urban areas. As one author (*37*) suggests, far from imposing penalties on agencies that do not pursue benefit-sharing, Federal policy should much more appropriately be directed toward rewarding those agencies which experiment with new, flexible approaches.

CHAPTER ONE

INTRODUCTION AND RESEARCH APPROACH

PROBLEM STATEMENT

Benefit-sharing for fixed-transit facilities is the equitable distribution of public and private costs and benefits associated with transit facility construction, rehabilitation, or operation. Its objective is to achieve the broadest benefits for all parties at a reasonable cost to each. This research project was conceived with the thought that transit agencies will be able to take advantage of benefit-sharing in connection with their fixed facilities if they are better acquainted with the range of opportunities that might exist, the techniques or strategies for realizing the opportunities, the methods for assessing feasibility, and the conditions under which the various types of opportunities are most likely to be achieved.

In carrying out the project, the authors have tried to provide guidance of two types: first, a systematic cataloguing of strategies and techniques, with commentary on their consideration and application at various stages of project development; and second, a series of case studies in which considerable attention has been given to providing insight into the dynamics involved in cases of benefit-sharing that either are promising or have proven successful already.

Historical Context

The idea of benefit-sharing is not new; it dates back to the early days of public transportation in North America at the turn of the century when the street railways opened amusement parks at the ends of their lines, both to generate revenue in themselves and to generate off-peak ridership, and when developers such as the Van Sweringens in Cleveland (*1*) invested in rail service to provide access to large real estate holdings at the fringes of urban areas. Until the end of World War I, transit-related benefit-sharing happened naturally; transit provided the necessary access for new development and thus was the major element in determining the urban area structure. After World War I, highways and parking steadily gained over transit as an influence in attracting development, leading to the dispersed urban patterns of today, although Toronto proved in the mid-1950's that carefully planned investments in rail, combined with sound land use planning and zoning, could still be a shaping force in concentrating private development around a transit line.

In the United States, the Urban Mass Transportation Act of 1964, reflecting a major transportation policy change, made Federal funding available to aid the transit industry. With new

funding provided, new rapid transit and light rail systems were begun, and attempts were made to revive existing older systems. However, government involvement in development-related benefit-sharing was initiated for highway air-rights and interchange areas, with AASHTO, DOT, and NCHRP studies on highway-related joint development appearing through the 1960's into the early 1970's (*2,3,4*). Federal programs evolved through the 1970's into the 1980's as policies of urban revitalization and redevelopment were more actively pursued. Passage in 1974 of the Young amendment to the Urban Mass Transportation Act signalled a new interest in coordinating transit construction with development activity. Under the Young amendment, UMTA had specific legislative authority to create transit corridor development authorities and to assist localities in the acquisition of land in the vicinity of transit stations beyond the actual right-of-way for purposes of coordinated development. In the late seventies, professional activity related to joint development markedly increased, and considerable literature was published which explored the notions of joint development, value capture, and public-private partnerships in transit construction.

These efforts reflected a role for the transit agency that had changed markedly from the early days in which development and transit service investment were under unified control. The transit agency of the late 1970's and 1980's was publicly owned and its mandate was perceived more narrowly as simply provision of transportation service. With the exception of larger downtown areas in which transit was well established, private large-scale development had to be enticed to locate near transit lines and local government played a much bigger role in the development process. New constituencies of suburban residents began to offer political opposition to the negative impacts associated with intensified development around transit stations. The thrust of the new efforts was thus to use public investment in transit to attract private investment, particularly in downtown and urban areas, and to recover for the transit agency some of the increased value stemming from the public investment. Basically, the literature focused on large-scale new construction and development projects.

The Surface Transportation Act of 1978 later removed the funding authorization for transit corridor development entities, although it specified aspects of joint development eligible for funding and provided specific authorizations for joint development funds. The Urban Initiatives program of the Carter years funded joint development, intermodal facilities, and transit malls under Section 3 of the Act. In 1984, this authorization remains, but development-related projects must compete for funds with other Section 3 mass transit proposals.

Current UMTA Policy

In 1984, UMTA is seeking to motivate transit systems toward joint development, rather than funding such activities directly. For example, UMTA's new criteria for determining funding eligibility for major investments, as described in its *Urban Mass Transportation Major Capital Investment Policy; Notice,* issued May 18, 1984 (*5*), provide this motivation by requiring evidence of a strong local financial commitment to the system (i.e., a dedicated, stable funding source). UMTA has developed a quantitative project rating system that takes into account local fiscal effort. This system consists of two cost-effectiveness indices:

> The first reflects incremental ridership, travel time savings and . . . operating cost savings . . . and focuses on the capital costs of specific interest to the Federal Government, namely total capital costs offset by funds provided by State and local governments and the private sector to match (or overmatch) Federal funds. Overmatch means funds in excess of that required by Federal law. The second cost-effectiveness index is computed on the basis of total operating and capital costs and reflects project merit irrespective of the source of funding. (*5,* p. 21286).

The formula for the first cost effectiveness ("Federal CE") index is:

$$FCE = \frac{C + O - T - NF}{R}$$

and the formula for the second ("Total CE") index is the following:

$$TCE = \frac{C + O - T}{R}$$

where;

FCE = Federal cost effectiveness index;
TCE = total cost effectiveness index;
C = marginal annualized capital costs for project compared to TSM alternative;
O = marginal annualized operating and maintenance costs over TSM alternative;
T = marginal annualized travel time savings over TSM alternative; and
NF = marginal annualized value of proposed non-Federal capital funding for project as compared to TSM alternative, computed as: (c1)(p1) − (c2)(p2), where; c1 = total annualized capital costs for project; p1 = proportion of non-Federal funding for project; c2 = annualized capital costs for TSM alternative; p2 = proportion of non-Federal funding for TSM alternative; and
R = new ridership resulting from proposed project as compared to TSM alternative.

In evaluating the degree of local financial effort, UMTA uses a higher local match to reduce the Federal capital costs, thus producing a more favorable project rating. UMTA's goal is to reduce the Federal share to 50 percent of total funding for cost-effective major investments. In calculating the degree of local financial commitment, "private sector urban development is also taken into account if private sector commitments to value recapture have been made to financing transit capital or operating costs. This is an indication that developers actually believe in the project" (*5,* p. 21286).

The 1984 UMTA policy also encourages local governments contemplating new projects "to implement a program of local supportive policies and actions designed to enhance the proposed project's cost-effectiveness and financial feasibility" (*5,* p. 21290). These include:

- Zoning policies and development incentives to stimulate high density development in station areas, particularly joint development—to include value recapture mechanisms in support of the transit system.

- Land use plans that support the development shaping influence of the transit system.
- Coordinated feeder bus and paratransit service to the stations.
- Measures to restrict auto use within transit corridors.
- "Financing mechanisms which make use of taxes and/or fees paid by developers and property owners benefitting from the transit investment" (*5*, p. 21290–21291).

Given this Federal funding and policy outlook in the 1980's, agencies involved in construction of new lines and extensions or in rehabilitation or reuse of older systems are interested both in new forms of transit finance, and a broader concept of benefit-sharing, in order to: (1) increase ridership and the mode share for transit, (2) broaden transit's financial base, (3) realize a higher return on transit investments, and (4) compete more successfully for UMTA "new start" funds.

The Benefit-Sharing Concept

The new concept includes obtaining a financial "return" for the transit agency as a result of charging users for benefits realized as a result of transit investments or facilities, but also encompasses the benefits of added ridership and improved system image obtained through better integration of transit and surrounding development and land uses. However, the concept includes not only joint development and value capture, but encompasses many forms of cooperation among the transit agency, the local government, and the private sector in integrating new and existing facilities into the surroundings and maximizing the return on investment dollars.

The Project Statement for this project sets forth the hypothesis that opportunities for benefit-sharing by transit agencies are frequently lost because they are not an imporant consideration in the planning and design phases of system development (i.e., in the location and design of routes and stations), and because there is little quantitative information available to transit agencies to assist them in formulating benefit-sharing approaches or arriving at reasonable charges or other contributions for these transit benefits. The Project Statement described the need to provide: (1) information about existing practices, (2) insights into the development process, (3) guidance in relating to private and public sector beneficiaries, and (4) strategies for negotiating benefit-sharing.

The objective of this report is thus to offer guidance to transit agencies on ways to take advantage of benefit-sharing opportunities. The research team has assembled information on the benefits of various types of fixed-transit facilities and associated development or investment in order to provide:

- Information on development-related benefits and ways to measure them.
- Insights into the development process.
- Recommended strategies for negotiating benefit-sharing.
- Analysis of institutional and legal considerations.
- Practical implementation strategies.

RESEARCH APPROACH

The research approach discussed in the following is based on the tasks specified in the Project Statement. The task descriptions were divided into three parts.

Part I—Investigation of the Development Impacts of Fixed-Transit Facilities

In the first part of the study, published materials covering the fields of joint development/value capture and innovative transit finance were reviewed, along with transit, planning, and urban design periodical literature and telephone contacts to develop a synthesis of information on transit agency experience with benefit-sharing. Six tasks were included in the Part I effort:

1. List fixed-transit facilities likely to produce benefits.
2. Identify and describe the benefits, and the beneficiaries.
3. Describe methods to measure benefits.
4. Identify and describe benefit-sharing techniques, covering the following four categories: planning and acquisition, design and construction, public infrastructure, and special financial arrangements.
5. Identify transit agencies that have attempted to share transit costs with private and public beneficiaries and propose case studies.
6. Prepare an Interim Report, covering Items 1–5.

The Part I effort revealed considerable published literature bearing on the topic, as well as increasing transit agency experience with benefit-sharing strategies, not only for large cities or major capital investments but also for lower cost projects in smaller areas. While much of the published material covered rail systems and large projects, the periodical literature revealed applicable projects in smaller areas. These agencies were contacted by telephone to learn more about the projects and their applicability to this report. The Interim Report summarized this information and presented a list of possible case studies.

In selecting the candidates for transit agency case studies, the following criteria were used:

- Transit agencies which are implementing more than one type of benefit-sharing strategy.
- A mix of types of transit facilities and modes: i.e., rail, light rail, bus.
- A mix of city sizes and types; i.e., older transit-oriented versus newer auto-oriented.
- A mix between planning for new construction versus applications for mature systems.
- A mix of geographic locations and of land use densities within individual locations; i.e., CBD versus suburban.
- Applicability of the benefit-sharing strategies for other transit agencies.

In addition, the case studies were to cover the four areas listed in the Project Statement, of: planning and acquisition, design and construction, public infrastructure, and special financial arrangements.

As the research and literature search progressed, several criteria were added to ensure that the case studies would "break new ground" in terms of usefulness and to reflect the conclusions reached in Part I regarding transit agency involvement in benefit-sharing. These additional criteria included finding:

- Transit agencies that are taking a lead role in benefit-sharing, especially those which appear to embrace an agency-wide benefit-sharing philosophy.
- Agencies that have established various forms of capabilities in real estate, finance, and development to equip them better to deal with local planning and redevelopment agencies, and with the private sector, whether through creation of new departments, use of existing departments, involvement of the general manager, or use of professional consultants.
- Agencies that have established planning processes that take into account development and planning goals.

A long list of transit agencies was considered for possible case studies. Some of these were eliminated because their benefit-sharing experience was adequately described in the existing literature, or because it was difficult to make contacts with key individuals. Although others were eliminated because they had implemented only one major project, a list of candidates emerged which met most of the criteria set forth previously, and further exploration of additional cities was unnecessary.

The result of this search was recommendation of seven case studies. Three additional possibilities were also proposed in the Interim Report, which could have been substituted for any of the recommended cases at the discretion of the panel. A comparison of the seven case studies finally selected is presented in Figure 1, and the detailed case study findings are included in Appendix C. The case studies contribute an important level of practical information. They show, in many ways more clearly than the general reviews and discussions, the way the earlier described UMTA policies and current activities of transit agencies are reconciled, and illustrate the dynamics, opportunities, and limits of benefit-sharing.

Location/ Transit Agency	Regional Population	Modes	Primary Benefit-Sharing Techniques
New York City: MTA - Times Square/42nd St. - East Midtown Developments	16 million	Rapid Transit Commuter Rail Bus	Incentive Zoning Joint Development System Interface Negotiated Investments Voluntary Contributions
Los Angeles: SCRTD - Proposed Metro Rail Stations	8 million	Commuter Rail Bus Rapid Transit (planned)	Station Area Masterplans Incentive Zoning Benefit Assessment Organizational Mechanisms
Boston: MBTA - Real Estate Management Program	2.6 million	Rapid Transit Commuter Rail Light Rail Bus	Real Estate Management Leases and Concessions Public Infrastructure Joint Development System Interface
Washington, D.C.: WMATA - New Carrollton Metro - Bethesda Metro Center	2.5 million	Rapid Transit Bus	System Interface Station Area Masterplans Joint Development Organizational Mechanisms
Portland, OR: Tri-Met - Banfield Transitway	825,000	Light Rail Bus	Construction Coordination Special Assessments Station Area Masterplans Organizational Mechanisms
Toledo, OH: TARTA - Downtown Transit Loop	490,000	Bus	Public Infrastructure Voluntary Private Contributions Cooperative Agreements Tax Increment Financing
Michigan Terminal Projects:			
Marquette: MTA	23,000	Local/Intercity Bus	
City of Cadillac	10,000	Intercity Bus Dial-a-Ride	
Bay City: Metro Transit	85,000	Local/Intercity Bus	Leases and Concessions
Flint: MTA	450,000	Local/Intercity Bus	Cooperative Agreements
City of Pontiac		Local/Intercity Bus	Cost Sharing with
Battle Creek Transit	114,000	Local/Intercity Bus Rail	Tenants, Intercity
City of Kalamazoo	80,000	Intercity Bus Rail	
City of Dowagiac	6,300	Rail Intercity Bus Dial-a-Ride	
Niles	21,000	Intercity Bus Dial-a-Ride	

Figure 1. Comparison of case study transit agencies.

Part II—Select and Conduct Case Studies

Once the list of case studies was agreed on, the study team prepared for and conducted the case studies. For each case, a primary contact person at the transit agency was selected; in most cases, this person assisted in arranging additional interviews with public and private sector participants in the benefit-sharing process. The approach differed according to the nature of the case study. In some of the cases, specific projects were the major focus; here, direct participants in the planning, design, and implementation were interviewed. Others involved a more general look at the transit agency, covering more than one project, or projects still in the planning stage. Here, interviewees were selected from those within and outside of the transit agency who had been involved in the overall planning process, or others who were qualified to comment on the transit agency experience.

The site visits typically required 2 to 3 days, and involved two of the study team members where possible. On completion of the site visits, the materials and interview notes were compiled into individual case study reports. These case study reports were in every instance sent to the primary contact people in each case study for review. This was done to ensure accuracy of facts, especially for projects still in planning or construction where the status was liable to change before publication of this report.

Each case study report ends with a summary of issues, lessons, and recommendations arising from that particular case. These summaries were used as the basis for identifying elements impeding or contributing to the success of benefit-sharing, and recommendations for other transit agencies to follow.

Part III—Develop Recommendations and Prepare Reports

In the final three tasks, recommendations for transit agencies to follow in implementing benefit-sharing practices were developed from the synthesis of existing practice in the Interim Report and from the individual case studies. In addition, suggestions for future research efforts were developed. These recommendations, along with the findings of the research, are presented in this report.

Organization of the Report

The remainder of this report consists of six chapters and three appendixes. Chapters Two through Five include the findings of the project. They are structured to present the solid foundation for benefit-sharing in the literature of joint development and value capture; to discuss benefit-sharing opportunities, costs, benefits and measurement techniques in terms of current transit agency experience with the concept; and to distill elements affecting success and failure in terms of the transit agency role and responsibilities.

Chapter Six presents recommendations for transit agencies to follow in implementing benefit-sharing techniques. Here again, the focus is on practical strategies which transit agencies should pursue, ideally within the framework of existing legislative au-

thority, to seize benefit-sharing opportunities in new construction, system operation, and renovation/modernization projects.

Chapter Seven presents suggestions for further research, information dissemination, and synthesis of practice.

Appendix A presents benefit-sharing summary sheets organized by facility type, so that agencies can identify opportunities for facilities appropriate to the size and type of their agency. Appendix B presents summary sheets organized by benefit-sharing strategy type, so that information and examples can easily be referenced for a specific type of benefit-sharing technique. Appendix C contains the individual case study reports, with contact people, agency listings, and bibliographies included at the end of each.

CHAPTER TWO

FINDINGS—FOUNDATIONS FOR CURRENT CONCEPTS OF BENEFIT-SHARING IN THE LITERATURE OF JOINT DEVELOPMENT AND VALUE CAPTURE

This chapter presents the findings of the literature review conducted for this study, and describes several important studies which provide the basis for current benefit-sharing philosophies.

The literature search performed for this study, supplemented by telephone contacts, was conducted to identify:

- Specific examples of benefit-sharing strategies and opportunities for various types of transit facilities by mode and ways of classifying the strategies.
- Examples and actual statistics related to the type and extent of benefits which can be realized for various types of investments associated with different types of facilities (both financial and other).
- Techniques which are used by various participants involved to choose strategies and measure the benefits.
- Common elements of success or failure/"conditions of applicability" for the various types of investments and strategies.

It was found that five major reports laid the foundation for the current concept of benefit-sharing advanced in this study.

The 1974 four-volume study, *A Value Capture Policy* (*6*), published by the Rice Center, explored:

> [t]he concept, evaluation of legal issues and precedents related to supplemental condemnation, monetary transfers, intergovernmental cooperation and air rights/sub-surface development; community design issues and examples related to mobility, social relationships, services impacts and provisions, employment opportunities and environmental impacts; and finance concerns as to forms and attributes of both capitalization and income realization as well as the total potential for new public and private revenue which can be produced by joint public-private ventures in Value Capture Policy.

In particular, the "Financial Element" (Vol. 4) covers the administrative structures required to implement value capture, including discussions of private corporations, public corporations, special purpose governments such as special districts, public authorities, and "hybrid" instrumentalities/commissions such as metropolitan area transit authorities, general purpose governments, and intergovernmental or joint public/private corporations. The report explores various types of capital instruments and evaluates nine "income realization scenarios" for land disposition. This report introduces a cash flow analysis model to illustrate the advantages and disadvantages of the land disposition scenarios.

The 1976 two-volume study, *Transit Station Area Joint Development: Strategies for Implementation* (*7*), is a major reference on transit station joint development which:

> presents the results of a two year analysis of joint development and contains: 1) an analysis of 19 case studies of examples of transit/land use joint development; 2) an analysis of the impacts of transit on property values; 3) an analysis of 28 techniques—including regulatory mechanisms, taxation, land acquisition, and public assumption of risk strategies—available to local governments which can be used to foster station area joint development; and 4) a proposed model legislation for the creation of Transit Corridor Development Agencies.

A major contribution of this report is its recognition of the interactions between the transit planning process and the related development process. The evaluation of techniques in this reference is based on the ability of the techniques to accomplish six joint development objectives: value capture, joint development incentive, property assemblage, community preservation, development control, and design control. The evaluation stresses the need to relate the choice of techniques to market conditions in the area and the extent to which development in a given area should be either encouraged or controlled. Finally, this report outlines three major constraints to joint development—multiple ownership of land, limited development potential at some stations, and institutional fragmentation.

The 1978 study, *Innovative Financing Techniques: A Catalog and Annotated Bibliography* (*8*), builds on the two earlier studies and broadens the discussion of innovative techniques to include joint development, value capture in the "narrow" sense of recapturing specific property value increases resulting from transit improvements, land use regulation, taxes, assessments and charges, and public land acquisition. This report includes numerous project descriptions and examples from the 1970's, as well as in-depth descriptions of historic examples.

A companion 1979 study, *Financing Transit: Alternatives for Local Government* (*9*), prepared for UMTA by the Institute for Public Administration, looks at the overall question of transit finance in terms of the extent to which transit should be subsidized, and what taxes should be imposed to pay the subsidy. The report discusses and evaluates potential transit revenue sources, including benefit-sharing strategies such as tax increment financing and benefit assessment districts, in terms of economic efficiency, political acceptability, and equity.

The 1979 Urban Land Institute publication, *Joint Development: Making the Real Estate/Transit Connection* (*10*), focuses on the negotiation aspects of joint development projects, drawing conclusions from seven project case studies in five cities. Besides providing detailed information on the elements of land development "deals", this study stresses the need for more coordination between transit and land development planning.

To establish the current state of the art, the literature search covered material from the disciplines of transit planning and finance, city planning, real estate and development, and urban design. The overall finding is that there is a solid basis for understanding and evaluating benefit-sharing techniques in the published literature, supplemented by increasing examples of actual implementation of the techniques by transit agencies which provide expanded data on implementation, participants, costs and benefits. The following points summarize some of the factors that have led to the increasing application of benefit-sharing techniques in the transit industry:

- The Urban Initiatives program of the Carter years, supplemented by UDAG funding and other economic development programs, funded numerous transit station joint development projects, transit malls, and multimodal transportation centers. These programs, following the principle that the Federal investment was to be used as a catalyst for private investment in urban revitalization efforts, required evidence of private sector investment as a condition of funding. The benefits of some of these joint development efforts to UMTA and transit agencies have been summarized in research performed for UMTA by Louis Keefer (*11*). Many of the transit malls have utilized special benefit assessments to fund ongoing maintenance and operations.
- A revival of new rail and light rail starts, combined with decreasing Federal investment, the UMTA "new start" funding criteria, and new state funding sources such as California's sales tax and Michigan's gas and weight tax, has led to more efforts to plan comprehensively for value capture, integrated development, and other innovative financing techniques in new system planning.
- Downtown People Mover projects, funded initially through the UMTA demonstration program, have reached the stages of final engineering and construction, involving close integration with private development and private participation in funding. Several of these projects have been funded through benefit assessment districts. Current proposals involve a "turnkey" operation, in which the private company completely finances construction and operation.
- The private sector has become more actively involved in funding highway improvements needed to accommodate the needs of development projects, particularly in rapidly growing areas. A 1983 study for FHWA by Kimley-Horn Associates documents many examples of such participation (*12*). The willingness of the private sector to cooperate in highway projects provides a precedent for seeking similar private involvement in transit facility construction and operation.

CHAPTER THREE

FINDINGS—IDENTIFYING BENEFIT-SHARING OPPORTUNITIES, COSTS AND BENEFITS

This chapter classifies types of benefit-sharing opportunities by facility type, discusses participants and their roles in the transit and development planning process, and identifies costs and benefits to the various affected parties involved.

As the basis for exploring benefit-sharing, a framework for defining the scope of the study was developed early in the study. The framework was designed to include opportunities for transit agencies of various sizes, and for various types of facilities which had been underrepresented in the literature to date.

TYPES OF FACILITIES FOR WHICH BENEFITS CAN BE REALIZED

To identify the full range of benefit-sharing opportunities, a list of types of facilities most likely to produce benefits was developed from a comprehensive matrix showing types of transit facilities by mode. Figure 2 shows this list, and for each category, those types of investments or actions that are the most likely candidates for application of benefit-sharing strategies. Oppor-

Summary Sheet Page Number (Appendix A)	Benefit-Sharing Opportunities by Type of Facility
	• Corridor/ROW Level
A-2	- Land banking
A-3	- Lease or sell abandoned rights of way for reuse
A-4	- Lease or sell development rights
A-5	- Negotiated investment: Share rights-of-way among transportation modes
A-6	- Negotiated investment: developers or public agencies contribute land for right-of-way, stations or parking
	• Stations/Stops/Shelters
A-7	- Lease or sell existing facility: unused stations
A-8, A-13	- Lease or sell development rights
A-9	- Lease or sell existing space: concessions
A-10	- Negotiated investments: system interface connections to development
A-11	- Voluntary private participation: "adopt a station"
A-12	- Voluntary private participation: advertising bus shelters
A-24	- Lease or sell advertising rights
	• Terminals/Transportation Centers
A-13	- Negotiated investment - joint development of downtown transportation centers with private bus companies, commercial uses
A-14	- Negotiated investment - shopping center shares cost of facilities for bus stops, suburban transportation centers
	• Transit Malls
A-15	- Special financial arrangements - special benefit assessment districts
	• Parking Facilities
A-16	- Special financial arrangements - turnkey development
A-17	- Sell development rights
A-18	- Sell or lease existing facility space (off peak times)
	• Surplus Buildings/Property
A-19	- Lease or sell existing facility
	• Yards/Maintenance Facilities
A-20	- Lease or sell development rights
	• Passes/farecards/tickets
A-21	- Sell advertising rights
A-22	- Voluntary private participation: use businesses for sales outlets
A-23	- Voluntary private participation: employer transit pass subsidy programs
	• Vehicles
A-24	- Sell advertising rights

Figure 2. Fixed-transit facilities likely to produce benefits/benefit-sharing opportunities.

tunities for each type of facility, along with participants in the process, contributions by and benefits to each, conditions under which the strategies are likely to succeed, and recent implementation examples, are summarized in worksheet form in Appendix A. The page number references for locating each strategy in Appendix A are included in Figure 2.

FACTORS INFLUENCING COSTS, BENEFITS, AND OPPORTUNITIES

Once the types of facilities were determined, the next step in the research was to establish a working definition on benefit-sharing. In order to translate the broad concept of benefit-sharing into a format that is meaningful to the transit agency audience, practical applications of benefit-sharing were specifically defined in terms of a number of basic parameters, discussed as follows:

- The *type of fixed transit facility* is a primary determinant of transit-related benefits. Most of the literature prior to the 1980's has documented joint-development and value capture efforts for rapid transit stations, corridors, and terminals, but opportunities are increasingly being pursued for light rail stations, parking areas, transit malls, surplus rights-of-way, surplus land and buildings, elevated viaducts, intermodal transportation centers, major bus stops and transfer points, and even bus shelters. In the broadest sense, benefit-sharing approaches are being followed for every facility or piece of property owned by a transit agency, although not all of this benefit-sharing is directly related to associated private development.
- The *type and size of the transit system* define to some extent the types of opportunities available. New systems such as SCRTD, still in the planning stages, or WMATA, well into system construction, are actively pursuing a coordinated program of station area planning and development, with the goal of recovering a fixed percentage of capital costs through value capture. Mature systems such as New York City's MTA and Boston's MBTA, on the other hand, are attempting to share benefits through management of real estate holdings, private participation in station rehabilitation, connections of existing stations to new and existing development, and reformulating advertising and concession practices. Large systems such as these have more opportunities to launch large-scale single projects, but have also instituted smaller scale projects throughout the system, such as New York City's privately funded bus shelters. While smaller bus systems are less likely to implement large-scale projects, they have benefited from the incremental impact of smaller improvements throughout the system.
- The *type of development or investment* also encompasses a range of projects, from major commercial developments to lease of space, provision of pedestrian connections, inclusion of art work, recreation space, or other amenities, utility relocation, shared parking, or even sale of advertising space. The nature and extent of such private investment is often defined through negotiation among the parties, hence the term, "negotiated investments." Improving connections of existing developments to existing stations in conjunction with station rehabilitation or nearby development projects is occurring in downtowns such as Philadelphia's, Boston's, and New York's, while new buildings are being directly connected to new stations under construction in cities such as Atlanta, Miami, and Washington.
- Benefit-sharing can be initiated by various *participants in the process,* including the transit agency both as an operating agency and as a corporation, local, state or regional government, quasi-public development corporations, the private sector as developers and as property owners or businesses, and the general public. These various participants all realize different types of benefits. In some cities, such as Toledo, the transit agency takes a lead role in the development process; in others, such as Denver, the process is initiated by private sector groups; in still others, such as Los Angeles, partnerships are formed among agencies and the private sector, depending on the areas of jurisdiction and market conditions.
- *Market conditions* in the vicinity of the facility are always critical factors in determining the viability of development projects. Projects that succeed under certain conditions may prove dismal failures under different conditions. Downtown transit malls, for example, have proven successful in revitalizing some downtown retail areas, but have not succeeded in areas that had deteriorated beyond a certain point prior to mall construction. Studies conducted for light rail in Denver (*13*) and for rapid transit in Los Angeles (*14*) have identified stations where market

demand is currently so weak as to preclude development opportunity in the immediate future. In general, where development pressure is strong, direct assessment districts and regulatory approaches such as San Francisco's are feasible; where development must be "lured" to a site, local agencies must provide tax incentives and other inducements to attract new projects or postpone development until conditions change.

- Similarly, *the location of the facility itself,* whether in a central business district, suburban area, highway-transit interface, or city neighborhood dictates different approaches and implies a different scale of benefits. In a radial system serving downtown, suburban locations, with the exception of terminal locations, are unlikely to generate increases in land value as extensive as those resulting for downtown stations, which draw upon many suburban stations for patronage (*7*). The relationship of the facility to surrounding land uses is also important. Facilities located in rail or highway rights-of-way, while cost-effective in terms of acquisition costs, often fail to generate private development because of poor connections or distance from activity centers.
- *Distance from the facility* is another factor. While "active" benefit-sharing approaches can be pursued in the immediate vicinity of the facility, "passive" benefit-sharing occurs at a greater distance. The impact area around a facility generally tends to increase in size as overall density decreases, for two reasons (*7*). In high density situations, stations are located closer together so that impact areas overlap. Second, higher density areas are more pedestrian-oriented, making shorter walking distance a more important factor in determining the area of influence than the longer driving distances in suburban areas. The experience of BART shows that differential assessments can be developed for properties at varying distances from a station. In addition, legislative authority granted to transit agencies for taking property is generally limited to a narrow radius of the transit facility.
- Finally, benefit-sharing is not an isolated event, but, ideally, it is pursued at all *stages in the life cycle of the transit facility:*

  In initial location and site selection of new facilities, where a transit agency can acquire extra land for future development or negotiate contributions of land from property owners, and where zoning tools or transfer of development rights can be used to direct investment to the transit corridor.

  In new facility design, where direct connections can be made from developments to the transit stations, circulation systems designed, amenities provided, and potential negative impacts mitigated.

  During construction, where projects can be phased to save time and share costs through coordination with other programmed improvements.

  During operation of the facility, where the benefits of improved access, passenger traffic, aesthetics, and reduced environmental impacts are realized.

  In the rehabilitation, reuse, relocation, lease, or sale of older or surplus facilities, where many imaginative and profitable strategies have been developed to suit the nature of individual facilities and the demands of the marketplace.

PARTICIPANTS IN THE PLANNING AND DEVELOPMENT PROCESS

For the purposes of this investigation, the *major* participants in the benefit-sharing process are best classified by the nature of their interests and roles; for example, public and private sector entities, institutions, and constituencies among the general public, including groups with special interests. This classification scheme is shown in Figure 3.

The literature and case studies indicate that those participants directly and constructively responsible for planning and development of the most commonly used techniques of transit benefit-sharing are usually the transit agency, local jurisdiction(s) and their agencies (particularly planning and redevelopment agencies), land-owners and developers, and, in some cases, retail or service business proprietors.

ROLES OF PARTICIPANTS

In a general sense, participants in the transit benefit-sharing process play two types of roles: as *contributors* (those involved in creating/supplying the transit improvement(s) and related benefits) and as *beneficiaries* (those receiving benefits from the transit improvement(s). Further analysis reveals that, in fact, "those who give also receive." The same participants fill both types of roles; that is, they may be both suppliers and beneficiaries at different points in the process. A measure of effectiveness of the process is whether the value of benefits actually

PUBLIC SECTOR

Transit agency (the central, key beneficiary of concern in this study and the primary audience for its findings and conclusions)

Local government jurisdiction or jurisdictions

Local neighborhoods or communities (e.g., through reduced traffic and/or reduced parking on local streets, increased property values, improved ambience, air quality, improved local and regional access, improved availability of retail services as a result of stimulation to upgrade merchandising in transit-affected commercial areas)

Metropolitan or regional governmental or quasi-governmental entities (single purpose or multi-purpose)

State governments (including line agencies such as DOT's)

Federal Government interests

PRIVATE SECTOR

Landowners, developers, building managers, tenants

Retail or service business proprietors

INSTITUTIONS

Universities

Hospitals or other similar major employers

Cultural institutions

CONSTITUENCIES AMONG THE GENERAL PUBLIC

State and local economic development interests

Environmental organizations

Transit riders

Groups with special needs such as the handicapped, elderly, school children (not likely to be participants, but may be beneficiaries)

Figure 3. Major potential participants and beneficiaries of transit-related investments.

realized is in proportion to the contributions of those who have supplied the wherewithal (capital, labor, ideas) to generate those benefits.

Specific roles vary greatly, depending on the techniques being used and on the institutional framework within which the participants are operating. There are as many different roles for the various participants as there are examples of benefit-sharing. Each example, each case—even within the same city—appears to have its own peculiar set of circumstances, its own "subplots, quirks and contrivances." However, some general principles have been distilled from the literature and the case studies. Of all the techniques examined, those involving joint development and other coordinated planning and development projects (including the techniques of lease or sale of development rights and negotiated investments) appear to have the most definable set of typical roles.

A series of development-related analysis steps must theoretically be conducted by public planning and development agencies and developers concurrently with the transit planning process to achieve coordinated transit facility and land development projects. These steps, as they ideally should relate to the UMTA project development process for major investments, are presented in Figure 4, according to the participants involved at each point. In fact, the planning activities are typically conducted on very different schedules. In many instances, development opportunities or benefit-sharing strategies are not considered until after the system is in final design, thus precluding many opportunities. In a typical case, a land use planning agency will be approached by a developer with a proposal in a new station area. Upon taking the proposal to the transit agency, it is found that the design is so far along that changes to integrate the development with the station would be too costly to complete. The proposal is either abandoned or designed independently from the station, to the ultimate loss of all. A key factor in encouraging benefit-sharing is thus to adapt to the varying public/private schedules by:

1. Anticipating instances where future transit facility connections can be provided for in prior private construction (Los Angeles Citicorp/Seventh Street Metro Rail Station).
2. Designing prior transit facility construction to accommodate future private development connections (Toledo Seagate Station).
3. Negotiating a common design and construction schedule to achieve economies and coordinated design (Toledo Perry Station).

UMTA TRANSIT PLANNING ACTIVITIES (TRANSIT AGENCY)	PARALLEL LAND USE PLANNING ACTIVITIES (LOCAL PLANNING, DEV'T AGENCY)	PARALLEL PRIVATE SECTOR DEVELOPMENT ACTIVITIES (PRIVATE DEVELOPERS)
I. System Planning	Regional Plan Development	Regional Market Analysis
II. Alternatives Analysis/ Draft EIS	Corridor Level Masterplanning Land Use Regulation/Financial Framework Development	Alternative Site Analysis Conceptual Plan Development
III. Preliminary Engineering	Station (Facility) Master Plans Develop Design Guidelines Implement Land Use Regulations Prepare Financial Formulas	Finalize Development Program Project Investment Decision Site Planning Seek Tenants, Financing
IV. Final Design	Design Review Negotiate Financial Agreements with Developer and Transit Agency	Negotiate Design, Taxes, Leases with City, Transit Agency Final Project Design
V. Construction	Coordinate Public/Private Elements Implement Financial Mechanisms	Construction
VI. Operations	Monitor Impacts Refine Zoning, Financial Mechanisms if Necessary	Property Management

NOTE: While parallel in terms of purpose and level of detail, the three sets of activities may (and in fact are likely) not to be conducted in the same time frame.

Sources: Adapted from (5) and (8)

Figure 4. Points of coordination between UMTA transit planning process and land use agency and private developer planning activities.

In recent years, UMTA has fostered land use/development planning coordination in conjunction with new system planning by allowing transit agencies to pass planning funds through to appropriate local agencies for land use and development planning in the early stages of system planning, as shown in the Portland and Los Angeles case studies. This funding helps to integrate the public and private processes more effectively, to ensure the land use regulatory coordination necessary to maximize transit-related development opportunities, and to foster good design.

It is evident that the process of joint development, from initiation through operation, can involve a variety of participants in a variety of roles. Examination of the complexity and variation of the required functions to be performed during the course of this process led the SCRTD in Los Angeles to conclude in its joint development policy formulation study (*14*, pp VI-8-9) that:

> One of the major constraints of joint development throughout the United States is that local jurisdictional authority remains divided, with no single mechanism in place for overseeing effective coordination of transportation system planning and land use . . .
>
> The comprehensive legal authority and specialized staff resources required to: (1) coordinate the station area development process, (2) package and implement joint development, and (3) provide financial incentives and secure value capture agreements—are not embodied in any single public agency in the Los Angeles Metropolitan Area. This statement would prove a valid observation in *every* major U.S. metropolitan area that has sponsored the construction of an initial phase, regional rapid transit system during the last twenty years.

After enumerating the public agencies necessary for the implementation of a joint project, the Urban Land Institute in its case study analysis of joint development (*10*) observes somewhat forlornly, "It would be more efficient to have the required powers consolidated in a single public agency, but such an occurrence would be rare indeed."

Successful implementation of joint development, according to the literature and the case studies conducted for this research, requires that the public agency(ies) possess the following powers and resources, which also define some of the roles assumed by these agencies:

- Personnel experienced in real estate and urban development.

- Financial capability such as the authority to receive grants, sell bonds, and perform underwriting activities.
- Powers to enter into agreements, contracts, etc. with the public and private entities, including buying, selling and leasing real estate, and when necessary, invoking the power of eminent domain.
- Authority to alter zoning designations and provide incentive zoning where necessary around stations.
- Authority to provide incentives such as tax abatements, public facilities, density bonuses, or land cost write-downs.
- Authority and ability to effect and enforce intergovernmental and interagency pacts and agreements.

In most cases the multiple resources that need to be tapped require that a consortium of agencies be involved. The case studies have shown that the successful projects have all been characterized by interagency cooperation and a strong leadership role by one of the agencies to bring these resources together.

SCRTD's review of joint development experience identified five "fundamental capabilities" within the public agency(ies) involved that are necessary to optimize joint development, transportation, and economic benefits:

1. Comprehensive planning and redevelopment coordination.
2. Station facility design and location authority.
3. Real estate project packaging resources and authority.
4. Ombudsmen support and interagency representation authority.
5. Financial leverage resources and value capture negotiation authority.

The case studies have shown that the extent to which these roles are recognized and provided for either by establishing the capability within the transit agency itself, or by entering into agreements with appropriate local agencies, is an important factor in influencing the successful implementation of many benefit-sharing techniques, particularly those involving land use controls or innovative financing techniques.

BENEFITS TO THE PARTICIPANTS INVOLVED

The specific benefits that flow to a given beneficiary vary with each individual situation. The ease of measuring these benefits also varies, depending on the level of analysis and the measures being applied. In general, the transportation benefits of transit facility construction or improvement (reduced travel time, traffic reduction, added ridership) are readily quantified given current forecasting practices. General economic benefits of transit-related development are similarly measurable, such as increases in property values, increases in potential development density, increases in rental rates, reduced cost to the transit agency of land or of construction of a given facility, and so on. Other benefits, particularly those relating to the degree of amenity or "marketability" added to a project area as a result of coordinated design, are not as readily quantifiable, though nonetheless real. In fact, perceived benefits from transit-related projects often arise more from associated design improvements or parking than from the transit facility or service improvements. Finally, transit agency involvement often affords the important benefits of absorption of predevelopment costs and reduction of risk. Unfortunately, this category of benefits to the developer is often not fully measured or taken into account by the transit agency in calculating its own contributions to the real estate development and negotiating an appropriate return for that investment.

In addition to difficulty of measurement, a further complication is that the benefits of transit projects to private real estate values are in fact not fixed but contingent on the way projects are designed and coordinated. Some physical designs and development phasing schemes may produce great mutual benefits, while others for the same site do not. Alternative urban design schemes and development scenarios must be first conceptualized and then evaluated before the potential benefits to each party can be assessed. There is very little literature related to the role of physical design in maximizing benefits, although these considerations have a critical impact.

Because the benefits to both the transit agency and to other beneficiaries of fixed-transit facilities are often multifaceted and their precise measurement complex, in many situations the value of transit benefits is included in a negotiated "deal," culminating in a lease or sales contract. Such a contract often contains a variety of provisions spelling out the responsibilities of the respective parties in view of the benefits to be received.

These provisions become the instruments through which the balance of interests and values is weighed, with the bottom line cost to the lessee or purchaser the final quantification of the net value received over and above any costs incurred. The lease or sales contract thus becomes the instrument through which all of the various costs and benefits, even the less-quantifiable ones, are balanced. The Urban Land Institute report on transit-related joint development (*10*) effectively articulates the components of such deals. Observing that deal-making can occur both before and after transit planning, the report concludes there are three major objectives to "deal-making":

- To create the conditions and formalize the relationships that make joint development possible, including leases, access agreements, and construction management agreements.
- To overcome deficiencies in the planning process or remove obstacles not addressed in the process, such as making provisions for extra station entrances or increased load bearing capacity for air rights construction.
- To cement the standard legal relationships that constitute real estate development, such as land transfers, insurance, financing, construction, leasing, and management.

These objectives are then translated into five elements, or type of joint development deals:

- Land acquisition and disposition.
- Access agreements.
- Agreements to ensure financing and construction of public facilities.
- Management of combined or coordinated construction.
- Operating agreements for long-term management.

In working out the details of these deals, factors particular to each case—e.g., type and scale of the development, market environment, political climate and values, regional location—define the nature and extent of benefits for each project and the role of each participant. The final balance of benefits is worked out in a dynamic fashion, over time, in a process of negotiation

among all parties involved. To be able to achieve the greatest benefits, then, the transit agency must have the capability to sustain this ongoing process at a level suited to the size of the agency. As stated by the Los Angeles SCRTD (*14*):

> Real estate project packaging is a complex process that involves: market and financial feasibility analyses, architectural and construction cost reviews, land use appraisals, and direct private sector negotiations. Essentially, it is an "active," not a "reactive" function, that stimulates financially sound, high quality real estate investment in locations that meet adopted public sector/local community development objectives. In the case of transit station joint development, the professional staff carrying out this function must also be intimately aware of the individual land use market and financial impacts of a rapid transit system. Finally, the staff must have the professional background and ability to effectively interface with the private sector. . . . Generally, this type of real estate expertise is not present in the property management or planning departments of public transit authorities.

Benefits to the Public Sector

The ULI study (*10*) identifies six major benefits that flow to the public sector participants in the process:

- *Economic development,* defined as the growth of investment in urban areas and the commitment of private venture capital, resulting in development of real estate, creation of employment opportunities, and attraction and retention of business.
- *Growth management,* through encouraging high density development at transit sites and reducing low-density development not in conformance with public service plans. The resulting development patterns are easier to service and permit more efficient and less costly provision of infrastructure.
- *Urban design improvement,* including both improvement in urban aesthetics, by incorporating transit facilities into the design of structures, and improvement in the efficiency of the urban form, through increased efficiency of pedestrian traffic, reduced congestion, and greater internal access among urban uses.
- *Cost recovery,* both directly through disposing of publicly owned development sites and leasing concession space, and more indirectly through property taxes and other taxes (including special benefit assessments and other techniques discussed in the present study).
- *Increased transit ridership,* through placement of intense, highly integrated projects at the stations that attract large numbers of people.
- *Cost efficiencies,* in both design and construction, when there is proper advance planning and execution by the transit authority.

With respect to the broader scope of transit benefit-sharing schemes, which is the subject of the present analysis, a somewhat wider range of potential benefits to the public sector exists. Rice Center identified three major groups of benefits, discussed as follows in the context of benefit-sharing:

1. *A broadened financial base for transit*—On the assumption that fares alone will probably never provide adequate revenues, and in view of the rapidly diminishing sources of support from general governmental sources, the broadening of revenue sources represented by transit benefit-sharing techniques, however modest its contribution, may become critical to many transit systems, particularly in view of current UMTA policy requiring increasing local participation in financing new rail projects.
2. *Establishment of an equitable allocation of costs*—Equity requires that transit costs be spread among transit beneficiaries. These techniques represent a mechanism for allocating costs commensurate with benefits received by spreading costs among direct users (e.g., through fares), neighboring property owners, developers, landlords, and retailers (e.g., through levies on adjoining properties), and the public at large (e.g., through general purpose revenue sources such as the sales tax).
3. *Realization of a higher return on investment*—Transit could be a means for achieving multiple public objectives (e.g., urban revitalization, economic development, energy conservation). These benefits are enhanced by the use of transit agency benefit-sharing techniques, particularly those involving intensive land use and transit facilities. Exploiting these opportunities would mean better planned station areas and greater ridership. The authors of the study argue that it should be seen as incumbent upon officials to exploit these opportunities by utilizing the range of techniques available in order to "support taxpayer investment in transit and help guarantee the system's success" (*15,* pp. 1-9).

Benefits to the Transit Agency

Reducing capital investment and achieving a net reduction in its annual operating deficit are the overall goals of any new financing mechanism for the transit agency. Because of the complex nature of transit agency funding, however, monetary benefits must be classified into reserve benefits, capital development benefits, and operating cost benefits. In general, the literature treats benefits on a project-by-project basis. However, in line with the UMTA policies requiring private sector contributions and encouraging local "overmatch," more recent efforts are geared to quantifying the benefits of comprehensive value capture and benefit-sharing approaches on a corridor level.

A consultant study of a more active role in the development process is underway for UMTA in 1984. This study surveys transit agencies to compare on an agency-wide basis, dollars expended for staff and consultants in development planning versus dollar benefits realized by the agencies from the developments. In a similar vein, a second study (*11*) was conducted comparing nine UMTA-funded joint development projects to ascertain their benefits in terms of UMTA dollars spent per new transit rider attracted. The study concluded that the nine projects would generate net additional farebox return sufficient to "repay" UMTA's $49.5 million investment in the projects in less than 6 years. UMTA's cost for inducing this ridership will be $1,000 to $2,000 per net additional daily transit trip. This ratio is significantly lower than that found in most other kinds of UMTA Section 3 capital assistance grant investments examined. A third study was just completed for UMTA (*13*) comparing the revenue potential for Denver's RTD of a conservative, moderate, and an agressive pursuit of value capture techniques for the proposed 22-mile light rail transit system. The "conservative approach," as defined in the study, could be implemented today, while the "aggressive" approach would entail considerable political risk and legislative changes. According to this study, a range "from less than one percent to over 16% of the total LRT system cost of $2.004 billion may be paid for

with value capture revenues. . . . The aggressive scenario yields 21 times the revenues of the conservative scenario." (*13*, p. iv.)

Such theoretical studies generally focus on systemwide financial benefits to be gained through development-related value capture. However, such studies can unfortunately lead to overly optimistic expectations of revenue generation and an overdependence on such revenue for system funding at too early a stage in the process. As noted by the SCRTD Director of Real Estate (*16*):

> [S]tation area development is a small part of the whole impact of constructing and providing transit. It plays a very small part with respect to finance, but is a stimulus for much other activities without a direct financial benefit. [Transit related development] is "frosting"; it stimulates activity, provides amenities, insures proper growth. The key to finance is really dedicated revenue sources.

Benefits to Other Government Agencies

Benefits to the local jurisdictions in which transit-related developments occur are most direct, the most visible of which being increased employment, sales, property values, and tax revenues. However, other levels of government can also realize broader levels of benefits, such as achieving regional land use policies, improved air quality, less auto travel, reduced regional assessments in transit operations. The WMATA station area development program, for example, supports the year 2000 regional policy plan adopted in 1961 and the Metro Rail project in L.A. reinforces the "Centers Concept" of the city's General Plan. Such broad impacts on shaping growth are more visible, of course, in newer, growing metropolitan areas, where transit can be used to support intensification of development with reduced traffic impact. On the other hand, in older cities, transit-related investment can be a catalyst for urban renewal activity and replacement of infrastructure.

Benefits to the Private Sector

In the ULI study of transit-related joint development (*10*), three of the benefits to the public sector of the joint development process, as identified and discussed earlier—economic development, increased return on investment, and cost efficiencies—accrue as well to the private sector. Economic development benefits accrue to the private sector investor in terms of creating a market for commercial space in the development, enabling him to collect higher rents and achieve a higher return on his investment. Opportunities are also created for cost efficiencies for the developer in both design and construction, where there is appropriate planning and execution on the part of both the public and private participants involved. Further, public agencies can absorb upfront costs for site assembly and initial design, and can lessen the risk associated with the development.

In summary, private developers realize the major benefit of improved access to transit for their project, with the related benefits of passenger foot traffic and enhanced marketability for their developments. The developer may also benefit from incentives such as reduced taxes, public subsidy of land costs or reduced parking requirements offered to induce the development to the site. In addition, the developer may be able to achieve higher rents in transit-related developments. The exact nature and extent of private sector benefits are very much dependent on the details of the particular "deal." In general, also, the benefits as perceived by the developer are closely related to the immediate impacts on his particular project's cash flow.

Benefits to Institutions and Groups with Special Needs

In return for their financial participation in providing a service or facility this group of participants realizes the benefit of specialized in-services to meet particular needs. In Dallas, for example, a private developer financed a study of public/private financing of a 23-mile line to connect his office/shopping development with the rest of the city.

Employers are willing to fund transportation projects in tight labor markets where traffic congestion and poor transit service become an impediment to attracting and keeping employees. Hospitals and universities in urban locations often will fund transit service or other facilities to ease parking and traffic congestion and to accommodate complaints of neighbors.

Benefits to Other Constituencies among the General Public

While benefits at this level are further removed from the individual projects, the aspects of increased security, amenity, urban design, maintenance, and increased economic base, and improved system image cannot be totally left out of benefit assessments, especially as they affect the transit riders themselves. Although such broad considerations may not enter into financial negotiations among principal actors involved, they do play a critical role in overall political acceptance of transit-related investments, particularly large-scale developments. Cases such as the Toronto and Montreal systems, which show the incremental impacts of comprehensive benefit-sharing approaches over time, are the best illustration of these more global, long-term benefits; however, even small projects such as Toledo's have had major impacts on system image through providing a new environment for system facilities.

COSTS TO THE PARTICIPANTS INVOLVED

Costs, of course, are implicit in every benefit-sharing technique. Obviously the major public and private sector participants involved in benefit-sharing will incur costs in order to achieve the benefits of the benefit-sharing technique in question.

Direct Costs to Participants

The various participants outlined above all will incur direct costs related to designing and implementing each component of the project. For example, the public sector will incur costs for land banking related to the appraisal, negotiation, condemnation, purchase, settlement, and holding of the property acquired. These costs are incurred with the assumption that the benefits obtained will at least equal in value—though not necessarily in cash—the cost of the action. In the example of land banking, the acquiring agency will either develop the property for public

use or will, eventually, seek to sell or to lease the property at prices that permit direct recovery of costs, at least. If the agency uses the property for a public facility, the benefit is the value of the difference between land cost at the time of purchase plus expenses incurred during the holding period and the price at the time the land is actually needed for development. Ideally, in benefit-sharing the benefits are at least equal to the costs. Of course, all participants seek a more favorable ratio between benefits and costs. Unfortunately, transit agencies do not always quantify the costs incurred in predevelopment planning, and thus may forfeit benefits which they might realize if they are prepared to use these contributions as bargaining tools in negotiating development deals.

These direct costs become a much more vital concern when they are not offset by equal benefits. If sites purchased for land banking are found to be unsuited for any public facility and not marketable for sale or lease at prices adequate to cover the costs of acquisition and holding, there is a residual cost to the transaction. Costs in excess of benefits can accrue to either public or private sector, as well as to some of the more peripheral participants in the benefit-sharing process. For example, a given merchant may be assessed a special benefit charge because he is located within a newly created transit mall. Yet his business is not actually any better off as a result of the transit service. In fact, he may have lost business because his customers can no longer park in front of his building, while they continue to enjoy this access advantage at his competitors' location. The cost accruing to this particular participant in the benefit-sharing process could be greater than the benefits received. Eventually, a given normal market processes that one might expect, merchants in a situation like this, who are not benefited by transit, would be unwilling to pay the increased costs associated with such a location, and would move to a location of lower cost, while those who stand most to benefit from this type of location would seek it out.

Over the longer term, the benefit-sharing process should act to bring these costs into parity with the benefits received on a regional scale. However, there may well be uncompensated costs to individuals. These are discussed in the following.

Opportunity Costs

Another type of cost likely to exist is opportunity cost; that is, the cost of missed chances to recapture for the public sector some of the value created by public actions. Whether by failure to plan adequately for joint development, or failure to implement another appropriate technique for cost recovery, such as special benefit assessment or tax increment financing, the costs of lost revenue are very real. This underscores the point made earlier regarding the opinion expressed by one source (*8*) that utilization of the widest possible range of benefit-sharing techniques should be incumbent upon public officials.

Opportunity costs may also accrue to the private sector. Failure by a developer to participate in a development that would provide benefits both to him and the public is an opportunity cost.

Externalities

Finally, a third type of cost present in transit benefit-sharing processes (alluded to earlier) is that of "externalities": i.e., costs resulting from factors not accounted for in the process itself. This type of cost raises some troubling fundamental equity issues with respect to the concept of benefit-sharing.

Studies of the impacts of transit on land development are inconclusive about the extent to which transit stimulates new development in the region which otherwise would not occur. It is clear, however, that transit has a redistributive impact on development within a region (*7, 17, 18*). New development that locates near a transit station as opposed to another place within the same region, and existing enterprises that move from parts of the region unserved by transit to locations that enjoy transit service, are effecting a redistribution of land use within the region. This, in turn, has an impact on land values and land uses as well as investments within the region. Depending on the surrounding land uses, it can create benefits in the vicinity of the transit stations such as increased property values for landowners and developers and concentrated pedestrian traffic for businesses such as retailers in the vicinity of the transit station. The benefit-sharing techniques addressed in this report are designed to maximize and recapture these values, at least in part, for the public which finances the transit investment in the first place. Alternatively, the expectation of these benefits might justify the requirement that these beneficiaries make some or all of the initial investment in the transit improvement itself.

However beneficial to some, the concentrated development transit encourages also creates costs or "externalities" that are not generally acknowledged in the literature on benefit-sharing. Concomitant with rising land values in the transit station area are rising rents. Some small businesses, forced to relocate from older buildings, cannot afford to occupy space in the new developments. Older buildings that remain standing may also be subject to substantial tax increases and rising rents, forcing tenants out in any event. Some communities on the WMATA system are quite concerned about losing established businesses and services on this account.

Another of these externalities is the impact on areas not served by transit. Businesses near transit stations may be gaining patronage (from which the transit agency may be recapturing certain values), but this may well be at the expense of deteriorating commerce at other locations unless people are spending more just because they are riding transit (which is unlikely). In other words, some merchants can lose business, and buildings can lose tenants because transit creates competitive advantages in its immediate vicinity. Transit agencies can address this concern in some cases by revising bus service in some threatened neighborhoods to alleviate the adverse impacts.

A transit agency sensitive to development impacts can work with local development and planning agencies and community groups to do even more. The MBTA in Boston, for example, is currently working with the Boston Redevelopment Authority and the Roxbury community to shape new development around the relocated Orange Line stations. They are trying to minimize competition with the existing Dudley elevated station business district, and to reduce the extent of negative impacts when they raze the elevated line. In Bethesda, even before the volume of programmed new construction is fully underway, signs on older buildings throughout the CBD fringe announce the availability of vacant space for lease. Montgomery County Government is so concerned about this situation in Bethesda and others of its business districts that they have commissioned studies to develop recommendations for mitigation programs.

One could postulate any number of other types of negative effects of transit on land values, rents, vacancies, residential neighborhoods, etc. While the public sector happily—and justifiably—seeks to share in the benefits to the "winners" in this process, there is no mention made of compensating the losers.

In point of fact, most metropolitan areas with new transit lines are experiencing growth in population and purchasing power sufficient to minimize losses due to such shifts. Where transit is channeling new growth rather than simply rearranging existing activities, there is little likelihood of speculation on "what might have been." But if transit ever begins to achieve the potential that the most optimistic projections suggest, many now-vibrant commercial areas that are bypassed by transit service will feel the effects.

If the public sector wants to share in reaping the benefits of its policies, equity would require that it also be prepared to share in the costs of the readjustment necessitated by those policies by assisting at a minimum some of those least able to cope with the effects. These may include merchants serving ethnic or minority groups, and others unable to afford the higher rents at transit station locations or those for whom the necessity of relocating or reorienting themselves would be especially difficult.

Some real and perceived "disbenefits" may enter into the process as well. Cost-benefit calculations of the transit agency and potential developer-beneficiaries notwithstanding, some parties at interest such as residential neighbors or transit riders who travel to and from suburban stations by automobile may not perceive the "benefit-sharing" as any benefit to themselves at all. Changes in the character of development in the vicinity of the station, for example, tearing down of lower density buildings of architectural or historic interest to make way for high density, high-rise (albeit taxpaying) development, transformation from neighborhood-serving retail business to the types of stores typically associated with office building complexes, altered balance in daytime-nighttime activity, and increased congestion may not enter into the transit agency's or developer's equations. Concerns of this nature may be expressed in resistance to the "benefit-sharing" project. Depending on the strength of the opposition, the responsiveness of the public agencies involved, and the momentum behind the project, such resistance is:

- Positively addressed by modifications to the project which reduce the nature and extent of the negative impacts.
- Ignored, or left to the courts to decide, as in Toledo, where a merchant lost a lawsuit against the transit authority for damages when the bus loop plan relocated a stop away from his store.
- Insufficiently addressed to the extent that the project is significantly delayed or even abandoned.

CHAPTER FOUR

FINDINGS—TRANSIT AGENCY EXPERIENCE WITH BENEFIT-SHARING

In this chapter, transit agency experience in benefit-sharing is discussed with respect to six categories of strategies, including planning, design and construction, financial, and regulatory mechanisms. Examples from the case studies are used to illustrate current issues relevant to transit agencies of various sizes.

TYPES OF BENEFIT-SHARING STRATEGIES

The Project Statement listed four categories of benefit-sharing techniques to be examined in this study, including: (1) planning and acquisition, (2) design and construction, (3) public infrastructure, and (4) special financing arrangements. The literature review and case studies were used to revise this categorization scheme based on types of techniques currently most in use by transit agencies. The case studies uncovered a wide range of benefit-sharing techniques in use by transit agencies, which include not only these categories, but others. In some cases, various techniques were combined in the implementation of a single project. In others, the agency routinely uses a range of techniques in its overall planning and project implementation. In others, transit agencies are studying the feasibility of implementing new techniques. In still others, the techniques are employed by other public agencies involved, with the transit agency a peripheral participant. The resulting classification is included in Figure 5. Summary sheets describing each benefit-sharing strategy are included in Appendix B, and transit agency experience in each category, including examples from the case studies, is described below.

TRANSIT AND DEVELOPMENT PLANNING, DESIGN AND LAND ACQUISITION

This group includes techniques typically employed by an organization that owns and manages property, either as its primary

Summary Sheet Page Number (Appendix B)	Benefit-Sharing Strategies by Category
	• Transit and Development Planning, Design, and Land Acquisition
B-2	- Land Banking
B-3	- Lease or Sale of Development Rights/Supplemental Property/ Air rights
B-4	- Negotiated Investments -- Land Contribution for Transit
B-5	- Negotiated Investments -- Shared Right-of-Way
B-6	- Negotiated Investments -- System Interface
B-7	- Negotiated Investments -- Cost-Sharing
	- Sale of Advertising Rights
B-8	- Lease of Concession or Commercial Space
	- Turnkey Development
B-9	- Real Estate Management
	• Urban Design and Construction Management
	- Urban Design Plan Formulation
	- Urban Design and Construction Coordination
	• Special Financial Arrangements
B-10	- Special Assessment Districts
B-11	- Tax Increment Financing
	• Land Use Regulation
B-12	- Incentive Zoning
B-13	- Performance Zoning
B-14	- Transfer of Development Rights
B-15	- Subdivision/Site Plan Approval Process
	• Organizational Mechanisms
B-16	- Transit Corridor Development Corporations/Authorities
	- Consolidation of Development Related Functions within the Transit Agency
	- Removal of Legal/Institutional Impediments to Implementation
	• Voluntary Private Participation

Figure 5. Categories of benefit-sharing strategies.

responsibility, such as a land development company, or as an ancillary responsibility, such as a redevelopment authority. To implement techniques in this group, the agency must have the ability to acquire and dispose of land and the ability to enter into lease agreements. For many of the techniques, the transit agency is able to take a lead role based on existing authority, given adequate staff capabilities or consultant support in real estate and development. Specific techniques are described as follows.

Land Banking

Land banking is the public acquisition and holding of land for future use to implement public land use policy. "Land banking" is sometimes defined as acquisition undertaken for general public purposes, as distinguished from "advance acquisition" undertaken for specific public facilities such as schools or transit (*19*). However, in transit system literature and applications, the terms appear to be used interchangeably.

A wide variety of benefits have been attributed to land banking, including the following benefits particularly applicable to its use in transit systems:

1. *Cost reduction*—Land can be acquired at lower cost, before value due to its ultimate development potential attaches to it, and before speculative increases in value occur due to planned transit and other planned public sector investments. It also serves to avoid inflationary increases in land prices.
2. *Parcel assembly*—Land can be retained in, or more readily assembled into, tracts large enough for major developments.
3. *Value capture*—Gains in land value due, at least in part, to public investment in transit and other facilities will accrue to the public sector and can be recaptured through later sale or lease of development rights.
4. *Control of development*—The timing, pace, and character of development around transit facilities and along potential transit routes can be controlled. This is particularly true if additional land surrounding the facilities is also acquired. Depending on the extent and location of acquisition, opportunity may exist to prevent leapfrogging development, thus reducing the cost of supplying public services, including transit. Consequently, land banking can be a means of producing revenue as well as a means of reducing costs.

Land banking can occur either through negotiated purchase or through the exercise of eminent domain. Authority for land banking or advance acquisition varies from state to state and among local jurisdictions. While most jurisdictions permit some form of land banking or advance acquisition, some state constitutions and statutes preclude acquisition or condemnation of property for future use (*15*). Federal regulation generally discourages acquisition of excess property beyond what is required for transportation purposes. In cases where it is permitted, there are provisions for a maximum holding period beyond which land not yet used for a public purpose must be resold.

Effective use of land banking requires a long-term plan for transit and its relationship to surrounding land uses. Political opposition often can arise from such an exercise. In addition, in tight financial times, short-term investments and requirements are often perceived by elected officials and the public to be of higher priority than long-term investments, even if the latter will eventually more than pay for itself. If property purchased for transit purposes is later found not to be needed for transit, either it can be turned over to another public agency (usually passing along the savings on land costs), or it can be sold, in most cases realizing a profit that can then be used to offset other transit agency expenses.

Despite these advantages, and perhaps because of the constraints noted, locally funded use of land banking for transit-related purposes apparently has been limited. In many cases, only land that is necessary to accommodate facility construction is acquired. Excess land often is ignored after construction, remaining in the transit authority's hands, unused and tax tree. The MBTA property inventory in Boston uncovered several instances of such parcels that had been used as staging areas for the Red Line extensions to the north and south. Now, after construction is complete, the MBTA is looking at these parcels in terms of revenue potential. The point is, as noted by the Director of Real Estate Development of the MBTA: "Older transit agencies have land banked by default. We must change this to land bank *strategically.* When an agency is involved in development, it must look at all publicly owned land and join forces with other public agencies" (*20*).

A few examples of this type of strategic land banking in association with new construction have been reported, however. In 1973, Fairfax County, Virginia, established a $500,000 revolving fund for acquisition of critical sites, including those adjoining Metro stops. The initial purpose of the program was

to enable the county to recapture the increment in land values and to ensure an appropriate development mix around the Metro stops. In 1974, however, the County revised the program, limiting it to the acquisition of future sites for low- and moderate-income housing (*19*).

When the Metropolitan Transportation Authority (MTA) of Harris County, Texas, in the Houston area, was established, the state enabling legislation included a provision permitting the MTA to use eminent domain to acquire land within 1,500 ft of the center of a transit station. Land so acquired can be used for a variety of purposes, including residential, commercial, and industrial development (*15*). SCRTD in Los Angeles, similarly authorized by legislation to acquire land for joint development purposes, made a strategic decision to move its stations from locations in the middle of the street right-of-way to midblock locations, partially to ease traffic impacts during construction, but also to allow extended land acquisition for joint development. On the Federal level, the Urban Mass Transportation Administration has provided funding for land banking through its Advance Land Acquisition Loan Program, under which loans of up to 100 percent of land cost are available at lower than market interest rates. Plans for actual facilities need not be finalized at the time of purchase. According to UMTA regulations, land so purchased must be used for transit purposes, and must be used within 10 years. If the property is so used within the 10-year time limit, both the property and the development cost are eligible for a further UMTA grant which effectively retires the loan on an 80/20 basis. If the land is not so used, it may be resold to repay the loan. As of the end of 1982, this program had been used only four times since its creation in 1970.

One of those utilizing the UMTA program was the Massachusetts Bay Transportation Authority (MBTA), which in 1973 and 1976 spent $43.7 million to purchase 270 miles of former railroad right-of-way for future transit use. As of late 1982, the MBTA had been unable to allocate funds adequate to repair the right-of-way purchased in 1973; however, they are seeking in 1984 to have the unpaid loan balance forgiven by UMTA.

Another user of the UMTA loan program is the Southeastern Pennsylvania Transportation Authority (SEPTA), in Philadelphia. SEPTA used $800,000 from UMTA to purchase suburban right-of-way from the Penn Central Railroad after the railroad declared bankruptcy. The land purchased is located in areas remote from the City of Philadelphia, and as of late 1982, had not yet been used for transit.

Lease or Sale of Development Rights

These techniques all involve action by the transit agency, often in conjunction with other public agencies, to dispose of surplus property rights acquired during the performance of its transit functions, and to do so in such a way as to bring a financial return to the agency(ies).

Property rights can be leased or sold, and can include property within, and air rights over or under transit and transit-related facilities, or on land supplemental to that actually required for the transit improvement.

These techniques encompass one aspect of what is traditionally thought of as "joint development," whereby the transit agency participates in the planning and implementation—but not the development—of projects developed in conjunction with its stations, corridors, or other facilities. The discussion here will focus on the two basic types of actions that a transit agency can take to provide for joint development without itself actually participating in the development: (1) lease or sale of supplemental property, and (2) lease or sale of air rights.

- *Lease or Sale of Supplemental Property*—Acquisition of private property by the public sector requires the exercise of eminent domain. Use of eminent domain by transit agencies to acquire more land than is actually needed for transit purposes has been quite limited for a number of reasons. From a financial standpoint, such acquisition requires expenditure of additional public funds at a time when demands for those funds to support essential transit acquisition and construction functions are greatest. For this reason, often the only supplemental land acquired by a transit agency is very small remainder portions of parcels.

In addition, there are legal constraints to the use of eminent domain for purposes other than specific transit needs. The acquiring entity must have statutory authority and, preferably, ample local legal precedent as well, to acquire land for the broader public purpose of joint development or value capture. Even in cases where such authority appears to exist, such an effort may be subject to court challenge. In practice, however, most agencies not only lack such specific authority and precedent, but also lack the administrative mechanisms to enable them to undertake such an effort.

Older systems, however, have the opportunity to dispose of surplus property no longer needed for transportation purposes. In Boston, early efforts in a systemwide property management program involved examining the MBTA's legal authority to dispose of surplus property through lease or sale. The conclusions were that the MBTA had proper authority to sell or lease its property for development, and to choose developers based on economic, market and design criteria, providing that "sound reasons in the public interest for choosing other than the highest bidder were established (*21*)."

- *Lease or Sale of Air Rights*—Unlike supplemental property, air rights are usually acquired in the course of normal acquisition of right-of-way for transit purposes. Air rights consist of development potential that exists either over or under a given facility. It is often possible to use these surplus property rights in such a way as to benefit the public sector without major additional public cost. In many cases, air rights over subway stations or bus terminals have been leased to a private developer who then constructs and operates the building, paying the transit agency (or sometimes a public development entity) annual rent, and, in some cases, a percentage of retail sales or other form of additional payment. Air rights developments are also possible over (or under) other types of transit facilities, including parking lots and garages, maintenance facilities, transportation centers, or even viaducts. Air rights development is usually economically feasible only where surrounding land is developed in high density use and the market for further high density development is strong, and/or where developable land is scarce. At the North Quincy Station, for example, the MBTA was approached by a developer with a proposal for an air rights development over the parking lot. In this case, the MBTA property was the last available site in an area which had experienced an office development boom in the last few years. In the case of WMATA's Bethesda station, County land development policy created what was, in effect, a temporary, localized land scarcity to support the public development priorities articulated in the CBD Sector Plan.

While air rights can be sold or leased, long-term leasing is usually favored over outright sale, because leasing permits the agency to retain some control over the development and may permit them to participate in long-term property value appreciation. In addition, transit agencies usually prefer the steady stream of income that comes from a long-term (usually 50 years or more) lease to a one-time, lump sum payment.

A major constraint to lease or sale of property or development rights is that in large metropolitan areas neither the transit agency nor any other single purpose public agency has the comprehensive legal authority or the specialized staff resources to coordinate and manage the joint development process from beginning to end.

The elements of such a process range from coordinating the station area development process to planning, packaging, and implementing the joint development proposals, to providing the financial analysis and negotiation necessary to maximize return to the public sector. In larger metropolitan areas, authority and expertise of this type are usually scattered among a multitude of agencies. Often, in smaller jurisdictions, the staff resources for this type of undertaking simply do not exist. For this reason, until relatively recently, transit-related joint development tended to be undertaken primarily in larger metropolitan areas. However, as experience with joint development has become more widely publicized, some of the techniques have gained broader understanding and acceptance, and these techniques have been applied in nonrapid transit and nonmetropolitan settings, as shown in the facility summary sheet examples in Appendix A.

Negotiated Investments

"Negotiated investments" refers to the process of bargaining between two or more parties, usually public and private sector interests, to determine which portions of the costs associated with a public facility will be borne by whom. Parties to this process can be solely public sector agencies, as in the case of a transit agency sharing the cost of acquiring a right-of-way with a local highway agency. However, often private sector interests are involved as well. Private sector interests are usually developers or landowners whose properties adjoin the public facility in question or who stand to benefit in some other direct or indirect way from the facility.

The catalyst for a negotiated investment can be regulatory; e.g., the developer desires modifications to the land use regulations in order to accomplish his development objectives better. It is often simply economic, i.e., the opportunity for each party to save money on one or more aspects of a development or public facility, usually land and/or construction costs. Or the motivation can arise from an opportunity to design a public or private facility so as to provide greater benefit and utility for other segments of the public. The vehicle for the negotiated investment is typically either a cooperative agreement between the parties or a lease.

The element of *negotiation* in the planning and design process for this type of cooperative effort is critical to its success. In a benefit-sharing approach, the objectives of each of the parties—the transit agency, the developer, the local public agency, the surrounding neighbors—must be taken into account in negotiating design and financial aspects. The Urban Land Institute report (*10*) contains excellent case study descriptions of negotiated investments for such projects as the Gallery at Market East in Philadelphia. The WMATA Metrorail station study (*22*) contains worksheets describing benefits of negotiated investments in "system interface" connections for Metrorail stations. The "Aesthetics in Transportation" report (*23*) describes negotiated agreements for Freeway Park in Seattle and the Montreal Metro stations.

Four types of negotiated investments have been identified in the context of the present study:

- *Land contribution*—Developers or public agencies contribute land for corridor or right-of-way, stations, parking, recreation use, etc. TARTA's Government Station in Toledo, for example, is built on land leased by TARTA from the city for $1 per year. Park Station in Toledo, on the other hand, was built on land acquired by TARTA. Surplus land not needed for the station is leased by TARTA to the city for $1 per year for use as a small park.
- *Shared right-of-way*—Developers or public agencies share the use and or cost of the right-of-way necessary for their operations. This sharing can include costs of acquisition and maintenance. In Bethesda, Maryland, for example, a state road (Wisconsin Avenue) separates the Metro station and its joint development. Some additional major development will incorporate a second transit portal. Montgomery County has leased subsurface rights below the road for a token payment. The County will build and maintain a connecting tunnel that was designed by Metro's joint developer. The developer on the opposite side of the road will be responsible to build and maintain the escalators to carry passengers between the tunnel entrance and street level. WMATA has saved the cost of building and maintaining a second Metro portal and tunnel connection to accommodate an anticipated heavy pedestrian volume across Wisconsin Avenue.
- *System interface*—Provision of a direct physical tie-in from adjoining private or public development to a transit system; e.g., mezzanines, entrances, parking or bus boarding areas. This type of feature can also be thought of as "access integration." Many examples of such connections were found in the case studies, from subway entrances integrated with building lobbies years ago in New York and Boston, to new connections built in Washington Metro Stations to connections planned in Los Angeles. Provision of such system interface connections in Los Angeles is used as the basis for density bonuses proposed in incentive zoning provisions of the Transit Corridor Specific Plan. In New York, in fact, developers are required *as a minimum* in the zoning ordinance to rebuild subway entrance stairways within their property lines. At designated stations, the developer may propose to provide more extensive capital improvements in exchange for a zoning bonus of up to 20 percent of additional FAR allowed.
- *Cost-sharing for other features*—Shared costs of shelters, terminal facilities, park-and-ride lots (e.g., at shopping centers, stadiums, or race tracks). In Toledo, private corporations shared construction and operating costs for pedestrian bridges linking five downtown transit stations to their buildings, primarily because of the weather protection feature, and the overall improvements to downtown circulation afforded by the walkways. In Michigan, the passenger terminal program funded by the state was designed around cost sharing arrangements among the local government, the transit agency, the state program, and

various UMTA funding programs. Funds and in-kind services were packaged in each case to implement multimodal terminals; the state funds, in particular, were used to fund concessions and commercial office space (not eligible for UMTA funding) in order to help fund terminal operations through lease revenues.

Sale of Advertising Rights

Sale of advertising systemwide yields an average of 1.5 cents per passenger in annual revenue, according to a recent national survey (*14*). Use of comprehensive bid procedures for long-term contracts to allow for inflation of annual guaranteed revenues can significantly increase revenue per passenger. Boston and New York City currently achieve the highest revenue from this source; New York's MTA has recently updated procedures to maximize revenue. SCRTD is looking into adapting their procedures for the new Metro Rail facilities.

Typically, advertising is sold inside stations and on vehicles (both interior and exterior). A widely applicable revenue producing mechanism, advertising is sold on over 90 percent of public transportation buses in the United States, producing nonfarebox revenue amounting to $50 million per year, according to the Transit Advertising Association. A transit agency typically receives 50 percent of the revenue from advertising sold by the contracting agency. A simple benefit-sharing technique for bus systems is to ensure that specifications for new buses allow for provision of standard advertising frames (*24*). A bus will accommodate four standard exterior signs; one front, one rear, and two "kings" on the sides of the bus. Placement of gas fill caps, headlights, doors, and fenders can prohibit installation of these standard signs, unless it is clearly indicated in vehicle specifications that frames for standard size signs must be accommodated.

A new area of transit facility advertising is the back of schedules, passes, farecards, and tickets. These materials, which reach a broad daily market, are an attractive advertising medium. A successful WMATA/Roy Rogers promotion offered a 50 cent discount at Roy Rogers restaurants to farecard holders. The pass promotion customers accounted for an average of 11 percent of the restaurant chain's total sales over an 11-week period (*25*). Because printing of such materials is infrequent, this medium is less flexible than vehicle or station advertising. Thus, revenues produced should be targeted mainly toward recovering the costs of pass production as opposed to seeking a higher return. A longer time commitment to a single advertising message is typically involved. In addition, it is difficult to target these systemwide materials to a particular route or station location. Thus, the passes and tickets are best suited for coupon promotions for businesses that operate in many locations throughout the system service area. Having the patron return the pass or ticket to the participating merchant as a money-off coupon provides a direct proof of sales, which is attractive in marketing the advertising to potential clients.

Lease of Concession or Commercial Space

Lease of space within transit facilities for privately operated concessions provides revenue to the transit agency, adds convenience for passengers, and improves security. The foot traffic generated in high-boarding locations is attractive to many types of retailers, including news vendors, tobacconists, flower vendors, outlets, snack bars, photo stores, or locksmiths. If the transit agency allows private sale of transit passes, these concessions provide an excellent location for pass sales as well.

PART 1

(Average Daily Ridership) x (% of Ridership patronizing kiosk) x (Average Expenditure) x (260 Days) = Annual Gross Income

PART 2

(Annual Gross Income) x (% Payment) = Annual Lease Amount

PART 3

(Annual Lease Amount) x (Location Value) = Annual Lease Payment

Kiosk Location Values

Kiosk Location	Multiple
a) Waiting platform Good visibility - inside location	1.00
b) Waiting platform Fair visibility - outside location	.95
c) Turnstyle/corridor Good exposure	.95
d) Turnstyle/corridor Poor exposure - out of way location	.80

Source: Robert F. Walsh Associates

Figure 6. Lease formula: MBTA station concession kiosk.

In some older systems, such as the CTA in Chicago, concessions and small businesses in station locations were developed when the initial private rail lines were built. These uses have remained after the stations were publicly acquired, paying rent to the transit authority (*17*, pp. 16 and 68). Transit agencies can increase revenues from these existing concessions by bringing rental fees up to market rates (particularly in downtown locations) and through providing for increases in revenues tied to inflationary indices.

Boston's MBTA has successfully redesigned and standardized its concession leasing procedures systemwide. In response to findings of the MBTA's property management study that many concession leases were out-of-date in terms of revenues generated, the General Manager in 1983 commissioned a consultant study to examine lease procedures, and develop a formula for setting concession fees which is tied to the volumes of passengers going through the station, as shown in Figure 6. This formula guides the transit agency in determining rates that are fair, in terms of differing station locations, and comparable to other rentals in the station areas. This formula is being applied as leases come up for renewal. As part of the Southwest Corridor station area planning, the MBTA is using its design consultants to refine lease procedures for concessions in the Southwest Corridor stations. Each station in the Southwest Corridor includes concession spaces either within or adjacent to the station, ranging in size from 5,500 to 12,000 sq ft. The study is looking to find tenants for these spaces which will help integrate the stations into the surrounding areas; i.e., a flower shop/garden store in the Massachusetts Avenue Station, which is adjacent to Horticultural Hall, headquarters of the Massachusetts Horticultural Society.

Provision of space for private businesses or concessions has been greatly discouraged by prohibition in the Urban Mass Transportation Act of the use of Federal funds for commercial components of projects. However, such space can be paid for from the local share. Nevertheless, transit agencies find some types of concessions attractive in terms of potential to generate operating revenue. Denver, for example, has considered concessions for many of its proposed light rail stations, projecting revenue from an average 2,000-sq ft concession ranging from $1.6 million to $2.3 million over a 12-year period (*13*, p. 80). The State of Michigan DOT has encouraged provision of concessions, restaurants, and commercial office space in its multimodal transportation center program statewide, generating revenue that makes the centers self-supporting in terms of operations. In intermodal terminals, rentals of space to the commercial tenants intercity carriers sharing the terminal can help fund overall operating costs and subsidize rentals to the local transit agency. Some of the Michigan terminals, which are "adaptive reuse" projects in facilities designed for other purposes (supermarket, auto body shop, car dealer), are able to accommodate this rental space on second floors or other space not needed for the transit operations. In Flint, Michigan, a new intermodal terminal serving intercity bus, local bus and train, is being designed to include a luxury restaurant on the second level, the rents from which are projected to subsidize entirely the center's operating costs. In Georgia, revenues from food vending machines alone covered 17 percent of operating costs of 13 highway rest stations and 5 welcome centers, with revenues of $205,000 on gross sales of $639,000 (*26*).

Issues that arise in providing concession areas, particularly food concessions, are related to maintenance, vandalism, and fire and safety requirements. The perception of increased litter due to concessions, particularly food concessions, has been a traditional obstacle posed by transit agencies, in what is known as the "hot dog wrapper on the platform" syndrome. This negative factor has led to prohibition of concessions in stations by WMATA, and prohibition of food concessions by SCRTD. Maintenance responsibility, however, is usually assigned to the concessionaire in the lease agreement. Vandalism can be lessened through location of the concessions near turnstile or ticket areas. Fire and safety provisions must be monitored and inspected periodically to ensure compliance. In addition, certain vending machines and the increasingly used automatic teller machines (ATM or "magic banker") outlets require special provisions for wiring, repairs, and servicing. In Toledo, the downtown bus stations were all designed with service areas to accommodate such equipment, which will eventually be used for automatic ticket machines. The TARTA General Manager made an attempt to find banks willing to install their ATM machines in the stations in return for maintaining the stations (in lieu of a rental fee). As of summer, 1984, however, TARTA had been unable to find a bank that would accept this offer (*27*).

Turnkey Development

In a turnkey development scenario, construction of the transit facility itself becomes the vehicle for private investment. The transit agency develops specifications for the type of transit facility desired, issues a Request for Proposal to the development community, evaluates proposals, awards a contract, and purchases the finished product from the developer for a fixed lump sum cost. Houston has successfully used turnkey development for ten park-and-ride lots serving its bus system. The benefits of this arrangement to the transit agency are time savings (8 months from initial RFP to construction compared to 20 months when MTA designed and built facilities in house), cost savings of 20 percent over constructing the lots in-house, and simplification of the site selection and construction process. The developer receives a quick profit on his investment, without tying up his capital for an extended period, particularly in the case of parking lots that have a short construction period, and where construction costs are a known quantity. The potential of using turnkey methods for more complicated construction is yet to be tested. The issue in this case is developing a standard product that will instill lender confidence in terms of costs and timing. Houston is looking toward using turnkey financing for its maintenance facilities, and Portland's Tri-Met is considering issuing an RFP to cover private construction for the entire proposed Westside Light Rail Line, for which UMTA FY 1985 preliminary engineering funds have been allocated.

REAL ESTATE MANAGEMENT

While land banking and lease or sale of development rights have typically been associated with new construction, mature transit systems are beginning to examine development possibilities to maximize return on their often substantial property holdings. This technique is increasingly being used by private corporations whose real estate holdings account for 25 to 40 percent of corporate assets, according to a recent Harvard Real Estate, Incorporated, study (*28*). Transit agencies often own large parking areas in suburban locations which, given positive market indicators, can be prime development sites. Areas in which these holdings are located often have changed markedly in character since the properties were acquired years ago. Similarly, closed station buildings, particularly those with architectural character, can be adapted to commercial use in certain locations. Even abandoned power plants or maintenance facilities may have potential for reuse or redevelopment.

These property holdings represent "hidden assets" for the transit agency, which can be leased or sold to produce revenues, given a willingness of the transit agency to "get into the real estate business." Short-term benefits of sale versus long-term management through leases must be evaluated in determining appropriate strategies for each site. To make these determinations, the agency needs professional real estate advice. For example, professional development consultants inventoried property holdings for CTA in Chicago, and found numerous properties owned by the Authority for which they had not collected rent in years. In San Francisco, BART officials were shown the opportunity cost involved of using large suburban sites for free parking, as opposed to exploiting development potential (*29*).

The MBTA in Boston has embarked on a systemwide property management program, initiated in 1973 with a review of the inventory of properties supplied by Penn Central for properties acquired by MBTA in association with their acquisition of railroad right-of-way. This inventory included estimates of income potential. As outlined by ULI, this inventory, which involved 300 holdings, presented problems of information gaps, extremely old leases, and "obscure bits of property." A second inventory was conducted of the 2,000 leases and agreements in force at

the time of the Boston & Maine RR property sale. Again, many of the leases were extremely old, and many discrepancies with the sale inventory were found. "The railroads had administered [the leases] through their land or tax departments and had not considered the property values as distinct from the function of the railroad. Thus, properties with the potential of producing high incomes (including joint development possibilities) were often rented to low-rent tenants under outmoded agreements. Also, air and subsurface rights had not been developed, and 'squatters' claiming adverse possession of some property were an additional aggravation" (*10*, p. 140).

Prior to 1980, real estate matters within the MBTA were the responsibility of a Property Committee, chaired by the director of the budget with membership from each major MBTA department. In 1976, the Property Committee chose to take an "incremental approach" to gathering accurate information on all the properties, renegotiating leases, and encouraging joint development, as opposed to launching a comprehensive inventory.

In 1980, however, property management functions were consolidated into a Department of Real Estate Management. Given staff capabilities in the real estate area, the new department undertook the task of systematically producing a real estate parcel inventory and providing a consistent, comprehensive data base to enable the MBTA to "gain quick access to information on its property holdings, to develop better knowledge of the revenue generating potential of these holdings and to prepare for a reports generating capacity" (*30*, p. 1). Phase I of the study, completed in January 1983, involved a real estate parcel inventory and information base for the rapid transit system and a property management study that analyzed all MBTA leases in detail and provided recommendations on lease administration.

In the course of the study, the consultant identified 27 properties suitable for joint development, primarily located in rapid transit station areas. Most of the larger parcels, more suited to joint development, are on the commuter rail lines and are thus not yet inventoried.

Phase II of the study, underway in 1984, will expand the inventory and data base to the commuter rail system and explore options for computerization. Expansion of the system to include buildings, major structures, and other important appurtenances is contemplated.

In an outgrowth of this study, the MBTA's General Manager hired a second consultant specifically to evaluate the redevelopment of MBTA property holdings, prepare guidelines for property disposition, prepare developer's kits, work out lease agreements, and negotiate with local governments. In one project resulting from this effort, a mixed-use development and parking garage is underway at the Route 128 commuter rail station. Other projects are in earlier planning stages, while opportunities in more depressed market situations are reserved for longer term action.

Essentially, a three-step process is required in evaluating development potential of real estate holdings, according to the President of a real estate consulting firm in Beverly Hills, California (*28*):

1. Make an inventory of existing property;
2. Develop a property monitoring system;
3. Decide how active a role the corporation wants to take in making better use of its real estate; the spectrum ranges from passively holding onto the property all the way to becoming an active developer.

In some instances, it will be necessary to win political acceptance for this broadened role for the transit authority. This process can be aided by making sure that the needs of transit riders are accommodated in development plans, in negotiating taxes, or in lieu payments with the local communities involved in individual projects, and clearly presenting the financial benefits to the transit agency governing boards in terms of reduced requirements for local participation in funding transit operations.

URBAN DESIGN AND CONSTRUCTION MANAGEMENT

The role of urban design in transit-related development and the potential benefits it can contribute are often misunderstood. This role is often seen merely as adding amenities (trees, streetlights, benches, signage) to the already established, functional parts of the system. In fact, the most important contribution of urban design is at the conceptual stage when the basic framework is set, functions are spatially allocated, and connections and separations are determined. While technically not a benefit-sharing strategy in itself, urban design is a strategic planning process that identifies benefit-sharing opportunities and enables synergistic combinations of activities to be translated into physical form.

The traditional process of transit-related development consists of first generating alternative proposals for meeting the technical requirements of the transit objective and then testing the impacts of these proposals on other aspects of urban development. This sequence builds in a bias toward minimizing negative impacts on urban development as opposed to maximizing opportunities. Often the design implications of a given transit facility proposal with respect to surrounding development are not considered until after the facility is in final design, making changes to accommodate the development costly, if not impossible. Or, cosmetic changes to alleviate negative noise, air or traffic impacts are added to a facility in a piecemeal way to appease community concern.

By incorporating urban design and development planning into the early stages of system planning, however, the transit agency can not only avoid costly future changes, but can incorporate cost-saving features (such as shared infrastructure) and achieve combinations of activities that will generate both ridership and development-related revenues. The urban designer's training enables her/him to continually scan the field for inventive combinations to create new opportunities—i.e., how to bridge a divisive transit line in such a way that the bridge itself will attract rather than discourage people? If commuter parking must be provided, how can it be positioned in such a way that it can generate additional uses on week-ends? A good urban designer will continually generate inventive ideas for synergistic combinations and enhancement of overall environmental benefits. The urban designer functions most effectively in direct collaboration with experts in real estate development and the major engineering specialties involved, who can evaluate the feasibility and cost/benefit implications of proposed concepts.

By inventing synergistic combinations of transportation and land development, the urban designer can help to increase the total benefits to be shared. For instance, designing the major pedestrian flow of transportation facilities may create potential for retail development where none had existed (underground

Montreal transit and pedestrian network) or bridging over a transportation line might make previously unattractive land parcels developable (Copley Square air rights project in Boston). The urban designer can also help to shape the image and public perception of a piece of real estate that is key to its development potential. Increasing the total benefits by generating new potential makes the concept of sharing development costs a great deal more palatable.

The clients for this conceptual work are the agencies or private parties most concerned with creating new development potential. In the past these clients usually included city organizations concerned with revitalization (community development or redevelopment agencies and downtown business organizations) and private developers working on large and complex sites (such as waterfronts, railyards, expressway air-rights on major transit station/joint development projects). Transit agencies have generally taken a more technical, narrower view of their mandate. But some, such as Los Angeles and New York, have already taken the lead in encouraging comprehensive development of station areas. The concepts of benefit and cost sharing with other public agencies and the private sector require that the transit agency act in a more entrepreneurial manner in generating new developable resources along with transportation projects. This direction suggests that a greater involvement of urban designers in conceptualizing transit projects will become necessary.

Actual private development activity near new transit stations often does not begin until after the transit project is fully designed or under construction. This is due to the long lead times and uncertainties that accompany the early phases of transit planning. However, it is essential to generate masterplans for the station areas which set out development and urban design goals well in advance of the development pressures that are likely to materialize once the new transit project is completed. This kind of station area masterplanning with major urban design components has been carried out for the Banfield LRT project in Portland, various projects of WMATA including the New Carrollton and Bethesda stations, and for Metro Rail stations of the proposed Wilshire Boulevard rail line in Los Angeles (see "Measuring the Benefits").

While urban design is essentially a continuous process, its use to the transit agency is discussed here in terms of two types of benefit-sharing strategies: first, urban design plan formulation; and second, urban design and construction coordination.

Urban Design Plan Formulation

For large and complex projects (such as new rail, bus terminal, or multimodal transportation center) the urban design plan provides the needed focus for cooperation among different interests. The success of the plan depends on solving technical problems of transportation and urban infrastructure and creating new potential for development and activity and improving the physical environment. Plans for the Montreal Metro System, the Market East area of Philadelphia, and Boston's South Station have succeeded on this level. Such plans, in addition to meeting transportation needs, address the complex urban fabric around them and set up manageable private development parcels with the site.

In many city center areas' revitalization, the attraction of new development and activity into a declining area is a major objective of the city government and the business community. In these cases, the urban design plan is a particularly important tool in selling the private components of joint development. The urban designer can create and graphically illustrate ways that the transportation and other public investments can improve the character and image of an area as well as provide the necessary services to make it attractive for private investment. This kind of imaging is important, because in order to generate development interest, not only the developer but the potential lenders, investors, tenants, and the abutting community must be shown the potential attractiveness of the project.

In smaller cities where buses are the only means of public transportation and they carry only a modest share of total trips, transit projects above can rarely leverage major joint development. In combination with other transportation modes, (parking, highways, intercity rail, street and pedestrian improvements), however, major development potential can be generated (as in the Toledo downtown transit loop and the Hartford Walking City Plan, particularly at the proposed I-84 Crossing). In a low or medium density situation such as the Banfield LRT corridor in Portland, careful urban design plans have ensured a good fit and integration of the new transit, its stations, and adjacent new development into the fabric of existing communities. In Toledo, the design theme for the downtown bus stations was carefully developed to reinforce the image of the transit agency, while still fitting each station into its immediate surroundings. The fact that the stations had unique designs was important in convincing the private sector of their desirability and the wisdom of incorporating such stations into private buildings.

Thus, urban design plans provide the framework and overall character of both public and private development. They establish the physical allocation of space, building massing, the character of important connections and separations among different functions, and the channelling of the flow of vehicles and pedestrians to minimize conflict and maximize constructive contact. They set up guidelines for architectural and landscape design. They also establish the physical framework for legal and financial structures and development phasing. Urban design plans are particularly important in conjunction with zoning-related strategies where density bonuses or other considerations are offered in return for certain design features. In these cases, the design plan is the vehicle for equating the value of the desired feature (i.e., escalator) with the impact of the bonus. The New York City Department of Planning is currently developing measures for setting a value on desired transit station features requested of developers in conjunction with the incentive zoning regulations in Manhattan.

The urban design plan is not a single fixed design, but one that evolves in interaction with other development decisions. Initially the plan (which may include diagrams, cross sections, perspective drawings, or models as well as plan drawings) illustrates the potential and feasibility of the joint developments and attracts the various parties to join the process. As commitments are made and more detailed negotiations commence, the urban design plan evolves to reflect these and to illustrate the way each component interacts with the others. It helps those responsible for each component to always see where their projects fit in and how they physically relate to the whole. The urban design plan is particularly important in community participation since it is often more easily understood by lay people than other planning documents.

While the physical plan sets up a framework, many other aspects of joint development must be coordinated. Each aspect of the development has different schedules, risk points, politics, and pitfalls. Each of the public and private parties must be prepared to make a series of contingent commitments that become increasingly firm as the conditions set for them are met.

Some of the areas where such contingent commitments are required from the public and private participants and are usually of great concern to the other parties can be generally listed as follows:

Public (Transit Agency and City)
- Completion date of transportation facility
- Level of service
- Infrastructure functional improvement
- Environmental contributions and impacts
- Public connections to private facilities
- Parking
- On-going management/maintenance/security arrangements

Private Developer
- Amount and type of development
- Development phasing and schedule
- Contributions to infrastructure (parking, loads, utilities)—$ or "in kind"
- Contributions to public amenities (pedestrian connections, landscaping, shelters, seating, etc.)—$ or "in kind"
- On-going contributions to management/maintenance/security

The function of the evolving urban design plan is to reflect the physical consequences of the commitments negotiated in all these areas. It must result in an integrated environmental design with distinct phases of development achievable with a flexible schedule and alternative strategies.

In the route and station selection phase of a transit development project (Alternative Analysis) urban designers need to be involved in the following steps:

1. *Inventory of physical features* associated with each alternative in relation to development opportunities and problems—new access, barriers, land and building resource configurations, current use and physical condition, system conditions.
2. *Opportunities and problems* analysis of the inventory.
3. *Generating conceptual configurations* for potential joint development (or other development that may be stimulated by the transit project).
4. *Testing and evaluation* of these concepts in cooperation with real estate and engineering specialists for feasibility, costs, and benefits.

In the design phase the foregoing steps need to be repeated by the urban designer in a more detailed manner. The areas where more detail will be developed will vary with the nature of the project and the surrounding community, but are likely to include:

1. *Connections* to both vehicular and pedestrian access to ensure optimal circulation not only to transportation but also for development and activity potential, and to sort out these connections in a way appropriate to the surrounding city patterns.
2. *Physical zoning of site* to ensure that the uses and sites are in the appropriate relationships to one and another and to the surrounding urban fabric and that they mutually reinforce each other.
3. *Avoiding "left over" pieces of land,* barriers to access and development.
4. *Maximum use of parking* resources to serve both transportation and development needs.
5. *Special attention to pedestrian paths* to ensure adjacency to lively, supportive activities, spatial interest, environmental comfort, attractiveness and basic amenities such as information, seating, lighting, etc.

Urban Design and Construction Coordination

In order to maximize the benefits of transit projects, their development must be constructively integrated with other public and private projects in their vicinity. This integration is a complex task since the related developments may include a wide variety of projects: public street road or parking improvements; urban renewal or revitalization programs; private development of new or renovated buildings; and a variety of business and other community activity development within these structures. Each of these developments responds to its own variety of technical, financial, political, and market conditions. Some of these developments are interlocked and depend on each other; yet their feasibility and scheduling may vary with uncontrollable outside factors.

In the past, many conceptually attractive joint development opportunities have been rejected by transit agencies because of the burden these additional complexities would have imposed on the already difficult transit development process. Yet, if true joint benefits and justifiable cost-sharing are to be realized, it is essential that transit agencies respond to these complexities with creative initiatives rather than avoidance.

Imaginative urban design coupled with active cooperation among interested public and private parties can in many cases produce the creative solutions needed. The specifics of such solutions vary for each situation, but the successful programs tend to share certain general features:

1. All of the major participants in the process are brought together in some structured format (such as a Task Force or Steering Committee) at key stages of the process to share information and review options for important decisions consisting of the agencies involved and the business community. Portland has recently established such a committee to oversee light rail construction in the CBD.
2. In addition to the formal structure, a well-developed informal communication network is fostered for day-to-day keeping in touch.
3. The design team, whether it is internal to one of the agencies or consists of outside consultants is charged with addressing the concerns of all of the parties and with maximizing the aggregate benefits.
4. The process is oriented to generating specific products (designs, budgets, alternatives for decision, etc.) on a schedule that is compatible with the needs of the participants (elections,

funding applications, bond issues, options on land, financial commitments of developers, etc.).

5. Mechanisms of contingent commitment among different actors are developed to allow interdependent project elements to proceed. For instance, if, as part of a joint development agreement, a certain level of transportation service is required by a private developer before a project can be financed or leased, the public agencies must have a way to ensure that this service will be delivered on time.

6. The physical allocation of public and private project elements must be evolved as an organic mosaic of parts. All the parts must work synergistically when completed, yet must allow for a variety of different schedules for development.

7. Physical provisions must be made for addition of or connection to other planned project elements in the final design, engineering and construction phases of the transit project, whether these are scheduled for immediate or later construction.

Points 1 through 5 are administrative arrangements and are dependent on the will to cooperate among the parties involved. Successful efforts in these areas have been initiated by city governments (CRA-LA, with SCRTD), transit agencies (WMATA, Tri-Met), and private downtown consortia (Denver Partnership, Hartford Downtown Council), but they can only succeed if all of the major parties are strongly committed to cooperation. This type of planning is complex and time consuming and only succeeds where the parties are willing to continue to work toward common objectives even when problems and conflicts arise.

Points 6 and 7 are functions of the design and construction management team. The concerns must be reflected in the urban design plan and in the architectural/engineering designs, construction documents, and construction management process.

Integration of different public and private development elements into a construction program presents some added demands on already complex transit construction programs. The issues may be divided into two types: concurrent construction and anticipated future construction.

In the case of *concurrent construction,* ULI (*10*) suggests three options:

1. *Phased construction*—Where construction by multiple parties is coordinated by contract (MBTA Washington St. Station).
2. *Joint contractor*—Where a cooperative agreement designates the private developer's contractor as contractor for the transit facility (WMATA, International Center; New York, Times Square/park Towers).
3. *Master developer*—Where a single agency "packages" the construction, assuming many of the private sector functions and specifying conditions for the participation of the other parties (The Gallery, Philadelphia).

Options 2 and 3 are more completely integrated than 1 and are desirable when the physical interrelationships among the project elements are complex and extensive and when a great deal of cooperation and coordination among the parties can occur before construction. Option 1 is most likely when the transit project must proceed on its own schedule separately from the other elements. With option 1, a simpler procedure prior to construction start is traded for a construction process that is more prone to conflicts among the different parties and possible missed opportunities for integration.

The choice between options 2 and 3 is often dictated by the nature of the project, its components, and the financial positions of the public and private parties. For instance, in the WMATA International Center example, the subway portal was a relatively small component of the development compared to the block-sized private project and it made sense for the developer to coordinate the whole project since the developer had to carry the major interest and risk. For New York's Times Square project, the public agencies involved are negotiating to have the developer build the station improvements along with the office towers. In the Gallery in Philadelphia, the City's Redevelopment Agency ended up in the master developer's role, an unusual arrangement due to the fact that the private developer was unwilling to carry the major risk in this complex, high risk venture. In addition to the local conditions, the legal and administrative requirements of the federal funding agency also influenced the choice of contracting arrangements.

In Portland, the downtown section of the LRT (including Lloyd Center) was considered a more complex problem and a special Office of the Downtown Project Manager (ODPM) was established. A private consultant was retained to run the office. The ODPM is composed of staff on loan from Tri-Met and the City. The Project Engineer is designated by the City, and the Light Rail Engineer is from Tri-Met. The staff also includes a Public Information Specialist, a Construction Coordinator, a Utilities Coordinator, two Civic Field Inspectors, LRT Field Inspectors, and support staff, and they are drawn in roughly equal numbers from the City and Tri-Met. The ODPM personnel is assembled in an office right on the LRT route, specially established for this purpose.

This style of managing the project was carefully established to capitalize on some of the lessons learned earlier during the Transit Mall construction. The project manager of the ODPM, who was involved in managing that project as well, observed (*31*) that, at that time, problems with communications and approvals developed because the City and Tri-Met staffs were insulated inside their separate bureaucracies. The ODPM forces the City and Tri-Met staffs into a functional team. The physical concentration of the staff and removal from the customary agency framework tends to focus everyone's attention on solving problems creatively and efficiently. The responsibilities of ODPM and its staff are carefully delineated in a contract between Tri-Met and the City (*32*).

Construction coordination is a complex problem that involves scheduling, interim traffic management, and constant liaison with the many affected downtown interests. The downtown LRT section includes the rebuilding of a bridge, traversing two historic districts, and construction along a number of existing retail frontages that are highly sensitive to disruption, all demanding constant attention. The ODPM publishes a tabloid-style newsletter "Tri-Met Light Rail" and conducts a number of different forms of community outreach including block-by-block notification and discussion with property owners.

The cost/benefit-sharing component of concurrent construction programs is conceptually simple, although often technically complicated. The guiding concept would logically be to assign the appropriate share of all costs to the beneficiary. For instance, if incorporating private development on the air rights of a transit station requires a special foundation design, the principle is clear that the extra cost of the special foundation (over that without air rights) should be assigned to the private development. However to technically evaluate this cost difference, a whole range

of building components and construction procedures has to be evaluated for both alternatives. Often these issues are negotiated to trade-offs, i.e., the public agency may pick up the extra foundation cost in return for some other consideration such as parking provided by the developer for station patrons, public amenities, or a maintenance agreement.

In the case of anticipated future construction of additional joint development, the main construction-related issue is the provision of potentially required structures and access provisions. Aspects of the initial construction may have to be specifically modified in order to provide for these future phases. These modifications can include foundations, utilities, passageways, mezzanines, changes in entrance configurations, and many other elements. The complex issue here is to sort out which of the future opportunities is worth how much present investment, how such funding can be advanced, and who will pay. The ability of the transit agency to have these costs paid by the private sector depends to a large extent on how certain the construction date of the transit facility is. If funds are committed, a construction start date is set, and a realistic estimate of opening day provided, the transit agency will have less trouble convincing a developer that his investment in the connection will not be wasted if the station is not built. If the implementation date is uncertain, or far into the future, the transit station will not enter into the developer's profit picture, thus lessening his motivation to pay for the desired transit feature.

For instance, an extra $200,000 spent concurrently with transit construction may provide the foundation for several million dollars worth of future construction, but because of market conditions, financing, or other reasons, no developer is ready to sign up for the project. If the foundations are not provided, the opportunity for the development may be lost altogether. On the other hand, extra cost may be a major burden on a tight budget. In the case of the Banfield LRT, the provision of a sewer main parallel to the rail line on Burnside Street was critical to any future development. The concurrent cost was around $3 million, compared to $8 million if built separately, so the sewer was included in the project. In situations like this, innovative financing techniques should be considered in order to allow the transit agency to treat the cost as an investment towards likely future profit.

In addition to the foregoing design decisions, some specific construction-related details may facilitate future joint development without significant extra cost. These may involve building in utility branch connections, knock-out panels for passageway connections, or leaving adequate room for future foundations. While this may seem like simple common sense, it requires a constant advocate during the construction program where attention tends to be dominated by immediate urgencies and expedient solutions. The main requirement here is foresight and consistent concern for future potential during the construction process.

SPECIAL FINANCIAL ARRANGEMENTS

Into this category fall the financial mechanisms that have typically been discussed in the literature of "value capture," which is the concept of dedicating portions of the increases in land value generated by the transit facility to fund capital and operating expenses. While applications have been limited to date, the evolving UMTA policy of requiring local financial commitment as a condition of receiving Federal funds for new rail starts will clearly serve as an incentive to localities to pursue such mechanisms further.

Two types of financial arrangements are directly related to development associated with transit facilities, as discussed below.

Special Assessment Districts

A special assessment district is a designated area within which a special tax or "special benefit assessment" is levied on all properties to pay for the cost of certain improvements within the district. Historically, special benefit assessments have been used to fund local improvements such as streets, sidewalks, and sewers. More recently, this approach has been used to fund less standard facilities such as pedestrian and transit malls, parking garages, and other transit facilities. Proceeds from special benefit assessments can be used to fund both capital and operating costs of improvements. In Toledo, a downtown benefit assessment district is being considered to fund maintenance costs for the pedestrian concourse system, now maintained by the abutters, TARTA, and the City. The benefit assessment district was considered when the walkway system was extended, such that overall downtown pedestrian circulation benefits accrued to other downtown buildings besides the abutters themselves.

Under this technique, improvements are usually financed by bonds issued by the taxing jurisdiction. These bonds are then retired using the proceeds from the special benefit assessment. However, proceeds can be used on a direct, pay-as-you-go basis. Assessments can be based on one or more factors including lot area, appraised value, front footage, distance from the improvement, or even trip generation.

Special benefit assessments generally produce less revenue than other forms of property-tax-based financing because the special assessment district is a relatively circumscribed area. Revenue produced will depend on not only the size of the district, but also its desirability and the market potential within the district, both before and especially after the improvements in question are constructed. Political acceptability of the concept is tied to the degree of direct benefit those in the district perceive as coming to them from the improvement (i.e., improved accessibility). If the market factors within the district are not favorable, particularly relative to competing locations, businesses may move out of the district or refuse to move in in order to avoid the additional taxes.

Special benefit assessment districts have been used in recent years to fund construction and operation of several transit malls, including those in Denver, Chicago, and Minneapolis. Denver's Downtown Mall Management District was created by the City and County of Denver to support operations and maintenance of the 16th Street Transit Mall. In effect as of January 1, 1983, the original district was two blocks wide (15th to 17th Streets), including approximately 420 properties (Fig. 7). After initial implementation of the benefit district, two economic benefit studies were conducted to determine whether its boundaries should be expanded to a wider area, to include all properties that might be determined to have a special benefit. The first study, conducted by Gladstone Associates (*33*), summarized mall services, associated special benefits, and beneficiaries. Benefits are discussed in three categories, including transportation benefits, amenity benefits, and revitalization benefits. For each category, a "zone of influence" around the mall is delineated,

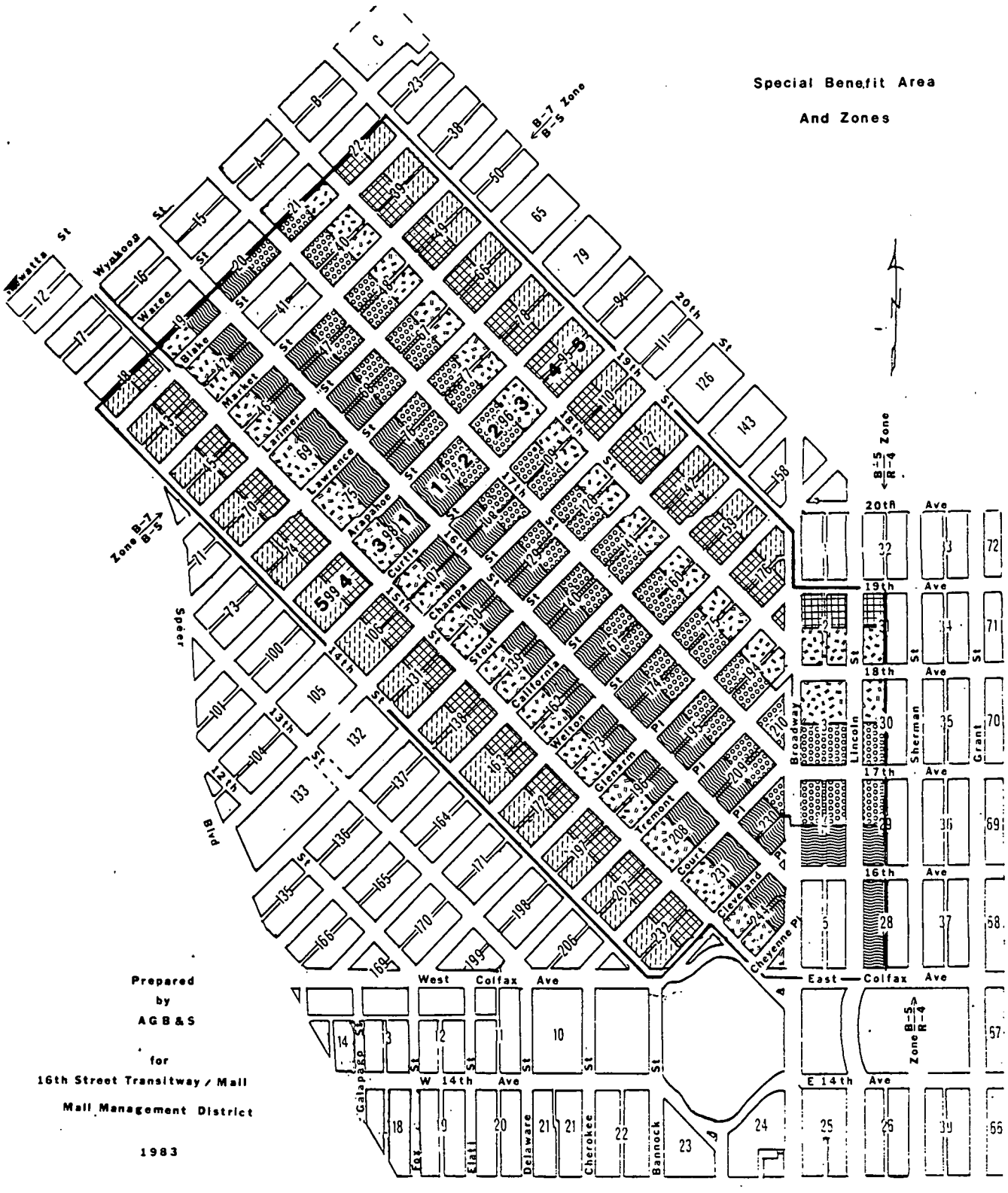


Figure 7. Denver Sixteenth Street Transitway Benefit District and zone boundaries. (Source: A. G. Bowes & Son, Inc., Benefit Study: 16th Street Transitway/Mall, Downtown Mall Management District. Prepared for Downtown Mall Management District, July 1983).

from which the overall mall impact area boundaries were derived. The second, conducted by the real estate valuation firm of A.G. Bowes and Son (*23*), translated the benefits into five "zones of contribution" from 14th to 19th Streets, including 865 properties. A formula is presented for determining assessments by zone based on square footages, as opposed to land assessed valuation which was the basis for the original assessment formula. The recommendations of this study were approved by the Board of Downtown Denver, Inc., in July 1983. These studies both provide useful guidance in developing a benefit assessment formula and implementing the districts. According to Downtown Denver, Inc., "the Denver District budget for 1984 will be $1,675,000, with each property owner paying a proportionate share based on such factors as distance from the Mall and square footage of land area included in the ownership. Proportionate rates vary from a high of $.45 per square foot of land directly adjacent to the mall to a low of $.05 per square foot of land several blocks from the mall" (*35*) (see "Measuring the Benefits").

In Portland, a form of benefit assessment was used in the downtown area to fund two aspects of the LRT project: street amenities on Morrison and Yamhill Streets and the addition of four vintage trolleys to be restored and operated on the LRT rails between the downtown and Lloyd Center during mid-day and weekend off-peak hours. Both of these programs were added to the plans after the initial Tri-Met proposal of a "bare-bones" transitway design was rejected by the downtown business interests. Both programs are funded with UMTA grants with the local share of the costs being raised from the property owners through a Local Improvement District (L.I.D.).

The L.I.D. is governed by Oregon State law and enables the district to levy a special assessment for shared benefits on approval of the owners of at least 40 percent of the affected property (by square footage of land). The ODPM was instrumental in organizing the L.I.D.'s and continually works with the private sector on these projects.

The Morrison/Yamhill L.I.D. was generated to provide funding for better quality paving, more street improvements, and amenities along these two transitways. Of the total of $5.5 million excess cost, $1.5 million was raised by the L.I.D. and $4.0 million is funded by UMTA. The UMTA grant has been approved and the L.I.D. assessment has been voted in with near unanimity. The assessment formula was generated as a combination of frontage of the property on the transitway and the assessed valuation of the property back to 100 ft of depth. The capital contributions were financed by city through a bond issue which the L.I.D. members are paying off over 20 years, which makes the yearly burden on the property owners quite small.

The $1.5 million is 0.4 million higher than the usual 20 percent local match, and this helped persuade UMTA to approve the addition to the project. At the same time the owners received almost 4 dollars worth of improvements at their doorstep for each dollar contributed to the L.I.D. and this, according to the businessman who helped sell the L.I.D. to fellow property owners, made the task of convincing owners to participate quite easy (*36*).

The Vintage Trolley L.I.D. involves all of the owners along the line from Lloyd Center through Downtown in raising $800,000 in local funds to match a $1,000,000 UMTA grant. The funds will cover the purchase and restoration of four antique trolley cars which Tri-Met will operate 11 AM through 3 PM weekdays and on Saturdays and Sundays. The property owners and merchants will benefit from the promotional attraction of these trolleys. Similar cars already operate successfully in retail areas of Detroit, New Orleans, and Seattle. UMTA was persuaded to grant funds for the project with the argument that the impact of the new trains traversing two historic districts needed to be mitigated by the use of the vintage trolleys. The individual who conceived this concept and persuaded local businessmen and UMTA to fund it actually acquired and stored four Portugese trolley cars with his own funds to be used in the project. He felt that having the vehicles on hand was necessary in order to persuade all the parties of the realistic possibility of making the project work, and so he took the risk. When negotiations for the project are completed, Tri-Met will acquire and restore the cars and reimburse him.

Local jurisdictions in California have authority to create special taxing districts adjacent to the routes of transit systems. In June 1981, San Francisco passed an ordinance requiring a one-time payment of a Transit Impact Development Fee (TIDF) on new downtown office space, whether through new construction or conversion, "assessed at the time permanent financing is taken out in the case of new construction or at the time the space is ready for occupancy in the case of space converted from another use. The fee is calculated to recover the projected incremental capital and operating costs to be incurred as a result of the increase of projected incremental [transit] capital and operating costs to be incurred as a result of the increase in office space over the life of that space" (*37*). A tax on existing office space may also be implemented. The ordinance is being challenged in court by developers. Although the City has been allowed to collect the fee and deposit the proceeds in an escrow account, as of early 1984, it is expected that the city will not be allowed actually to use the proceeds before 1986, if the ordinance survives the court challenge through the expected appeals (*37*).

In addition, San Francisco tried unsuccessfully to implement an annual special assessment within a downtown district to cover transit operating and replacement capital costs for service provided to the downtown area "over and above that provided elsewhere in the City" (*37*). Late in 1981, the City worked with an economic consultant (*38*) and a financial consultant (*39*) to conduct the necessary studies to prove that the benefits conferred by the downtown service exceeded the cost to be assessed. The procedures involved "measuring access provided to each of nearly 350 grid squares to identify the contiguous area receiving an extraordinary level of service. Costs were allocated first to this extraordinary service, then to the area receiving the special benefit of this service. Needless to say, these studies were complex, required development of data that did not exist previously, and were accordingly costly" (*37*).

Both successful and unsuccessful experiences with benefit assessment strategies lead to the conclusion that in establishing such districts it is desirable, if not essential, to have the involvement and cooperation of the private sector groups which will be affected. Such cooperation can assist in the equitable implementation of a special benefit district—and thus possibly avoid court challenges. In addition, it is important to instill confidence in those affected that the full program of improvements will be completed, and that the benefits of the improvements will be worth the cost, in order to obtain a certain degree of commitment from those affected to "stick with it" for a while to enable the full effect of the improvements to be felt. Establishing this commitment is contingent on defining both costs and benefits specifically enough so that they are real to those affected. For this reason, assessments to cover items such as transit mall promotion or maintenance for which a predictable annual budget

can be prepared are more easily implemented than those covering more amorphous items such as transit operating costs.

If the reasonableness of the total assessment itself, the boundaries of the impact area, and the formula are not well established, the effort may backfire, not only failing to produce the intended benefits, but also failing to generate adequate revenues to cover costs, as those who would have been taxed flee what is perceived as a less desirable, more costly location. On the other hand, special benefit assessments have worked very well under certain circumstances, and are sometimes particularly appealing to local elected officials from the standpoint of avoiding limitations on local taxation and borrowing.

The suggestion has been made that benefit assessment is most suitably introduced after some "momentum" for a new system has been gained in terms of successful developments at several locations. Such actual experience helps to ensure credibility for the system and the process, to create confidence that the system will be built, and to illustrate actual benefits to property owners in terms of increases in value, rentals, sales, and other indicators. In addition, actual experience as measured through "before and after" studies can indicate more accurately where benefits of varying degrees accrue. It is important to retain the flexibility to alter the district boundaries both to reflect actual experience and to account for "spillover" effects which expand the area of influence of the improvement. In Denver, for example, the boundaries of the transit mall assessment district were expanded after the first year to incorporate a larger impact area, as a result of property owner petitions representing 72 percent of the assessed value of the land in the proposed expansion area. While those in the outer areas away from the mall pay a lower rate, the expansion of the assessment base lowers the overall burden to be paid, even by those in the original district closer to the mall, who are still assessed at a higher rate.

The case of SCRTD in Los Angeles illustrates some of the issues which have arisen in trying to incorporate the benefit assessment district concept into pre-implementation planning. Under its authorization to form special benefit assessment districts as the basis for issuance of tax-free bonds to support Metro Rail acquisition, construction, joint development, operations and maintenance, SCRTD Planning has been the primary actor in preparing the way for benefit assessment districts. While SCRTD is empowered to set the district boundaries, fees, and the land use classification scheme, however, the local jurisdictions have the right to approve, amend and approve, or disapprove the district plans. SCRTD, therefore, is working closely with the City, County, and CRA to set up the boundaries and assessment formula. As of spring, 1984, SCRTD had consultant studies underway to prepare the implementation plans, and had launched a participatory process through the various working committees. As part of the planning, SCRTD conducted a literature review on the land use effects of other recently built transit systems, interviewed owners and tenants in the corridor regarding their attitudes about potential benefits of a transit location, and conducted legal research to identify possible hurdles to implementation. The SCRTD goal is to implement the districts and start to sell bonds by August 1985, and to start to collect the assessment fees when construction begins.

Although the assessment districts are still in the planning stage and no detailed information on the boundaries or fees was available as of the case study visit, it is clear that this particular tool has already attracted considerable public attention. The SCRTD planners and local agency participants raised a number of pending issues which are summarized below.

- The precedent for benefit assessment districts in other cities has largely been voluntary districts in support of localized downtown projects such as pedestrian malls, people movers, or parking garages. In these cases, those affected perceive a direct benefit to their particular location. In Los Angeles itself, for example, a voluntary assessment district which would have generated $1.3 million per year had been established to fund the ill-fated Downtown People Mover project. In the case of Metro Rail, SCRTD is establishing a nonvoluntary district, the rules for which must be defensible against possible legal challenge. (For this reason, SCRTD was unable to release preliminary information on their methodology to the study team). SCRTD has had difficulty in obtaining comparable long-term data to assist in setting equitable boundaries and fees. Thus, they have had their consultants take the approach of gathering as much local information as possible as the basis for their decisions.

- The question of whether residential uses should be assessed has been a political issue between SCRTD and the City of Los Angeles. The City has drawn the boundaries of its Specific Plan districts to exclude residential areas, even those adjacent to the stations, as a result of political pressure, effectively excluding residential uses from the assessment districts. However, if the land use changed, the property would be subject to the special assessment. While SCRTD has supported this policy in the interest of achieving political consensus to build the system, the policy does reduce development potential in station areas. Because it is dependent on the assessment district revenues, SCRTD naturally would like to see maximum development in the station areas, which conflicts with the City's desire to protest residential areas from speculation and development impacts.

- The support of benefit assessments has been threatened by the zoning changes pending in the Metro Rail Corridor. As discussed in the next section, the City was mandated by state law to reduce zoning densities citywide to conform to the provisions of its General Plan. The implementation of the Specific Plan for the Metro Rail corridor thus combined density bonuses in the station areas with the general density reductions in the rest of the city. Because the two separate issues were unfortunately combined in the Specific Plan, the business community has associated the overall downzoning with Metro Rail. Density reductions, of course, are not consistent with the idea of special benefit fundamental to the assessment district concept, and thus have caused some difficulties in garnering public support for the assessment districts. As one participant put it: "The downzoning is identified with Metro Rail and has caused some opposition we might not have had otherwise. It compounds out difficulty in getting special assessment districts through. Had the downzoning already been in place, the public would have jumped behind Metro Rail as a means to get increased density." (*40*)

- The business community is concerned that assessments at varying distances from the stations should be equitable among different station locations, by means of such strategies as basing the assessment formula on passenger volumes. In addition, the businessmen want to be sure that assessments collected in a given station area are used only for improvements which will directly benefit that area. This requires an accurate breakdown of costs related to each station. The Central City Association President stressed the feeling that it would overburden the assessment district concept to subsidize the system operations as a whole (*40*), while SCRTD is perceived as intending to do just that.

• The timing of the collection of the assessment fees is another issue. SCRTD wants to collect the fees at the start of construction so that monies will be available to fund construction activity. However, it is during construction that businesses will actually experience the greatest *disbenefits* from the Metro Rail project. One developer stressed that it would be wiser politically to delay the actual fee collection until after the system is operating, noting that SCRTD could still float bonds against the future income stream (*41*).

• Finally, uncertainty regarding the ultimate funding of the system and its length has affected attitudes toward the benefit assessment concept. Attitudes are generally favorable toward assessment districts for the entire 18.6 mile line; however, if only 4.4 miles are constructed, the concept will be more difficult, if not impossible to sell. Further, the uncertainty has called into question the credibility of the public agencies involved. As noted by SCRTD itself, "[i]n most cases, a cooperative relationship between the property owners, businesses, and public agencies affected by the benefit assessment district is the key to successful implementation. A type of trust and direct involvement in the planning and development process is ... a vital element in minimizing political conflict. In the case where the benefit assessment failed, distrust of the political officials and the public agencies involved was considered one of the greatest stumbling blocks" (*42*, p. 3-1). This funding uncertainty threatens to jeopardize the careful work put into the planning for the assessment districts to date by SCRTD.

Tax Increment Financing

Tax increment financing (TIF) earmarks the prospective increase in property tax revenues in a designated area to support the cost of public improvements in that area. Funds either can be used annually as received, or can come from the sale of bonds which are secured by and repaid from the (expected) increment in property tax revenues.

The mechanics of TIF are as follows: A tax increment finance district is designated, usually corrsponding to the area benefitting from the proposed improvements. A "base year" assessed property value is determined for each of the properties within the district, and assessments are "frozen" at that level for normal taxing purposes.

However, as actual values, and thus assessments, of those properties within the TIF district increase—presumably at least, in part, due to the public improvements implemented there—the increment in tax revenue beyond the frozen base level is diverted to the agency financing the improvements in question. These funds are then either used directly to pay for the improvements or are used toward retiring the TIF bonds.

TIF bonds can be "general obligation" (GO) bonds, or they can be "tax allocation" bonds. GO bonds, while intended to be retired with tax increment revenues, require the locality to pledge its full faith and credit as backup security. While these bonds usually have lower interest rates than revenue bonds, they also usually require voter approval and thus may be subjected to the exigencies and delays of the political process. GO bonds also may be subject to municipal debt limitations.

Tax allocation bonds, on the other hand, are not backed by the full faith and credit of the locality. To enhance their marketability (and reduce interest rates), a jurisdiction can make provisions to levy special assessments within the project area if the expected tax base increments do not materialize. These bonds generally do not require voter approval, and are often considered attractive because they do not affect a municipality's debt limitations.

While TIF has the advantage of not requiring any additional tax burden for either the properties within the designated TIF district or for the remainder of the properties in the jurisdiction, use of TIF still may be controversial. Resistance often comes from other taxing entities and revenue recipients which rely heavily on property tax revenues; for example, school or hospital districts. These interests will be deprived of increments in revenue from property taxes within the TIF district unless the property tax rate in general is increased. Citizens may also oppose TIF out of fear that property tax rates will, indeed, need to be raised to keep up with the rising costs of other services.

In Toledo, TIF is being used to finance a $1 million pedestrian concourses linking the Hotel Sofitel and the concourse system. Bonds have been issued to pay for the construction, which will be retired through the tax increment financing. The increment goes directly to a bond fund to pay principal and interest, with the hotel responsible to pay the incremental taxes even if it is no longer on the site. The legislation requires that the TIF be used to fund separate, identifiable, mortgagable assets. The facilities must be owned by the City of Toledo, and no retail uses can be bonded. These criteria do not preclude using TIF for transit facilities, although the concept was not explored for the downtown loop project. Prince George's County, Maryland, is financing the local share of the New Carrollton Amtrak parking facility through TIF-backed revenue bonds.

LAND-USE REGULATION

While not within the authority of the transit agency, land-use regulation can effectively be used by local and, in some cases, metropolitan government to provide transit-related benefits to the public, cost savings to the transit agency, and incentives to developers to locate new developments in areas well served by transit. UMTA has, in fact, funded local planning agency efforts required to rezone station areas in Portland, Los Angeles, and Washington. In general, land-use regulation, more than any other tool, can create the overall environment whereby benefits from transit are most clearly perceived, either by combining transit improvements with auto use disincentives such as parking restrictions, or by providing bonuses for locating developments near or with direct connections to transit facilities, thus creating higher densities in station areas, with corresponding ridership and tax benefits.

Opportunities can be lost, however, if transit agencies are not keyed into local and regional planning efforts. Where UMTA funds the planning effort, passing the funds through the transit authority, some degree of coordination between the transit agency and local governments is assured. This has proven to be the case in Los Angeles, where SCRTD has guided the local agency efforts through detailed work programs set forth in the funding contract documents. The techniques described here are all variations on zoning and subdivision ordinances.

Incentive Zoning

Incentive zoning involves the relaxation of development constraints in exchange for provision of certain public benefits. For

example, density bonuses or fast-track processing of development permits may be granted in exchange for inclusion of specific amenities within a development project. Incentive zoning has been in use in the United States since the 1950's. New York City was one of the earliest users and has made extensive use of this technique to obtain public plazas, other public spaces, and transit improvements in redevelopment of portions of the City, most notably in the redevelopment of Sixth Avenue during the 1960's.

Incentive zoning relies for its effectiveness on relief from the relatively restrictive zoning and development controls which would otherwise obtain. Thus, to provide maximum incentive to developers to utilize this option, there must be maximum restriction in the absence of its use. In this regard, the technique can become controversial and may encounter substantial opposition, particularly if downzoning is undertaken to make basic zoning more restrictive. In Los Angeles, the Specific Plans developed by the City for the Metro Rail corrodor unfortunately combined density bonuses in station areas with an overall downzoning required by state law to bring city zoning into conformance with the city's General Plan. As a result, although density bonuses will be allowed in Metro Rail station areas, the bonuses will serve only to bring the maximum FAR using all possible bonuses to the same density which is allowed today by right. The unfortunate combining of the downzoning and incentive zoning has caused the undesirable downzoning to be equated in some developers' eyes with Metro Rail, an intuitively illogical concept. This misperception has caused some difficulties in gaining acceptance for the concept which would not have been faced had the downzoning been in place before the Metro Rail bonuses were incorporated into the zoning ordinance.

In general, however, density bonuses are an attractive incentive to developers to provide desired improvements, since the marginal costs for adding the "bonus" floor area above the original building costs are very low. Effectiveness is also dependent on a planning process which is well grounded in market factors, as well as thorough analysis of the public objectives sought and the most efficient ways of achieving them. Administrative efficiency in the processing of developments participating in the incentive program is also essential. Because of the level of expertise required, and the other factors cited, incentive zoning appears to be best suited for use in larger metropolitan areas.

Incentive zoning alone cannot provide cash returns to a transit agency. It can, however, affect the character, scale, and design of private development surrounding transit stations, and thus not only increase the tax base, but also provide desirable transit-related amenities and other improvements, as well as potentially increasing ridership. In addition, if used in conjunction with some of the other techniques described herein, such as benefit assessment districts and tax increment financing, it can provide a more direct return to the transit agency, or, as in the case of the Bethesda Metro station, enhance the development value of WMATA's air rights, and consequently the authority's annual joint development revenues.

New York's MTA, in cooperation with the New York City Department of City Planning, Midtown Planning Office, has been working on an incentive zoning master plan which is expected to yield substantial private funds for station improvements. The preferred method of implementation is for the developer to construct the entire improvement, with public approval of the plans, rather than to contribute the cost in cash (*43*).

The concept is illustrated by three private developments, each of which is tied into the 53rd Street, Lexington Avenue 51st Street Subway station complex, and which are expected to yield $15–20 million in funds for station improvements. The developments, at 875 and 885 Third Avenue and 599 Lexington Avenue, are each contributing substantial capital improvements to the subway station complex in exchange for zoning bonuses allowing additional density.

The current zoning law evolved over a more than 20-year history of incentive zoning programs in New York City and stipulates the following for Midtown Manhattan:

1. Any new development or enlargement of a building adjacent to a subway entrance is *required* to rebuild the subway entrance stair to the TA's standards, within the property lines.
2. At designated stations the developer may propose to provide more extensive capital improvements to the subway station in exchange for a *zoning bonus* of up to 20 percent of additional FAR allowed.

The procedure for obtaining the zoning bonuses is set out in the Zoning Resolution. If the station area is designated as eligible, the developer can make a proposal of improvements. The TA reviews the plans for conformance with its standards and policies and submits a letter of approval to the City Planning commission. The City Planning Commission then reviews the proposed improvements and determines the appropriate level of zoning bonus (from 0 to 20 percent of FAR) based on the following required findings:

1. The degree to which the station's general accessibility, rider orientation and safety will be improved by the provision of new connections, additions to circulation space or easing of circulation bottlenecks;
2. Provision of escalators or elevators where justified by traffic or depth of mezzanine or platform below street level;
3. Convenience and spaciousness of street level entrance and compatible relationship to the ground floor uses of the development or enlargement; and
4. Improvement in the station's environment by provision for daylight access or improvements to noise control, air quality, lighting or other architectural treatments. (*44*)

In practice, there is considerable informal consultation between the developer, the City Planning Commission and the MTA staff in structuring the developer's proposal. If the density bonus is approved, the developer is obligated to obtain acceptance of the completed subway improvements from the TA prior to receiving an occupancy permit for the building.

The following describes the three development projects and their specific contributions under the zoning bonus program.

875 Third Avenue. This office building is located at the corner of 52nd Street and Third Avenue. The developer for the building is Madison Equities, Inc. The first phase of the project, consisting of the main office tower, was recently completed. An additional and smaller structure and atrium will be built at the corner of 53rd Street and Third Avenue when the leases remaining in the existing older buildings at that corner run out or are bought out by the developer.

The project received a 20 percent additional FAR bonus in exchange for improvements including a ground level enclosed pedestrian arcade and improved access through a lower level mezzanine to the 53rd Street IND Station. As part of the deal

the existing subway mezzanine space was improved by the developer through the addition of new wall tile, flooring, and lighting, and the commercial space available on the mezzanine was leased by the developer. When the second phase atrium is built it will penetrate to the subway mezzanine level and bring in daylight and a more direct connection to the surface.

875 Third Avenue preceded the formal enactment of the subway station zoning bonus ordinance and received its bonus under a covered pedestrian bonus program. Nevertheless, it followed the general pattern of the subway bonus program as described above and was considered a test case for the new zoning. The strict requirement for TA sign off before occupancy permit was added partly in response to a problem that occurred on this project when the developer occupied some of the building spaces prior to completing the committed subway improvements.

885 Third Avenue. This office building with ground retail is proposed for the other side of 53rd Street from 875 Third Avenue. The developer of the building is Gerald D. Hines Interests. The architect is Philip Johnson and John Burgee. The tower building which has an elliptical floor plan is in the design stage.

The developer has applied for an 18 percent FAR bonus and is now seeking approvals. The proposed contributions to the 53rd Street IND subway station include a new monumental stair in a landscaped well from the corner of the open plaza to the mezzanine and a new escalator from the mezzanine to the station platform 70 feet below. The latter is a complex undertaking, constructed wholly within the station area and requires cutting through bedrock. The total value of the subway station improvements is estimated in the $5–7 million range. This dollar figure is given only as an indication of the scale of contribution and not part of the official agreements. The developer's obligation is tied to delivering the finished improvements, not a specific dollar contribution. The developer's first submission consisted of improving the appearance of the platform area, but the Community Planning Board insisted on circulation improvements to increase access capacity. The escalator was a difficult project element. The developer did not like it because of the expense involved not only in construction but on-going maintenance of a very high-wear item. Some community groups have reservations about allowing a bonus to a developer for an improvement that they feel the TA should install as a standard feature of station modernization and avoid giving a density bonus in an area many in the community consider already overbuilt. After the recent hearing in front of the City Planning Commission these issues are still open.

This development raises an issue about the optimal type of bonusable development. Robert Selsam, departing Director of Planning for the MTA, stated as an important criterion: "Concentrate the subway improvements in direct logical physical relationship to the developer's project so that he has an inherent interest in doing a good job on construction and maintenance." The escalator, the major contribution of the 885 Third Avenue project violates this criterion. Yet it is the highest priority improvement for the station and conflicting claims on TA funds make it unlikely that such a costly improvement could be publicly funded.

559 Lexington Avenue. This office and mixed use commercial building is proposed for the east side of Lexington Avenue between 52nd and 53rd Streets, just south of the Citicorp complex. The developer is Boston Properties, Inc., the architect Edward L. Barnes. The project is just starting construction.

The developer has received approvals for 20 percent FAR bonus. This site provides the opportunity for a critical improvement in the subway system. By a historic quirk in the independent development of the IRT and the IND subway lines there is no transfer connection between the IND Lexington Avenue Station at 53rd Street heading east-west and the north-south IRT 51st Street Station along Lexington Avenue. Incorporating a new mezzanine running the whole length of the block between 52nd and 53rd Streets within the 559 Lexington Avenue development was the only opportunity to make this connection. The proposed mezzanine will include a paid transfer section and an unpaid access area. It will connect to the 53rd Street Station mezzanine at its northern end. (The Citicorp mezzanine level with its successful commercial area connects to this mezzanine from the other side already.) From the 52nd Street corner of the development to the north end of the IRT station the TA will build a connection under the street which will cost an estimated $6 million in public funds. The estimated construction value of the developer's contribution to the subway is $5–6 million, but the contribution of the right-of-way and integration with the development creates a greater added value.

The participatory arrangements are as complex as the project. The developer is responsible for the design and engineering of all of the connecting concourses, and construct, and maintains only the portions within his property. He will provide all escalators, stairs, and elevators connecting the new mezzanine to the surface. The TA's section of the connector will be built later because funds could not be made available at the time the developer was ready to bid his contracts. This is a major inconvenience and inefficiency, but this type of compromise is often necessary to keep different schedules of public and private development from blocking each other.

This project provides the optimal conditions for bonusable improvements sought by the City Planning Commission and the MTA. The project clearly provides necessary access and circulation elements that could not otherwise be obtained. At the same time it is within the developer's property, intimately connected to important public and retail components of the development, and thus it will be in the developer's own best interest to do a high quality job of design, construction, and maintenance. The compelling logic of this project already secured approvals for the zoning bonus. It is also expected to make easier-to-enforce agreements between the city, the TA and the developer for construction and maintenance.

The three separate private contributions to the East-Midtown Station complex occurred over time in an incremental pattern. When 875 Third Avenue was planned there were no plans yet for the other two projects. Thus, access and mezzanine improvements incorporated there were expected to function with or without further contributions.

885 Third Avenue and 599 Lexington Avenue were planned concurrently, and the subway improvements for both are designed by the same engineering consultant, Vollmer Associates. Vollmer is also the design engineer for the TA's portion of the new mezzanine connection. Thus, they play a key role in ensuring that these three components, to be constructed under three separate contracts, will fit together.

Planning for these privately contributed subway improvements presents a dilemma for the MTA and the TA. Community organizations such as Community Planning Board #6 and the 59th Street Task Force have voiced concerns about the lack of

a previously approved master plan by the MTA as a basis for the bonuses (*45*). Planners for the MTA, on the other hand, pointed out that the opportunities for doing any of the improvements depend on the proposals of the developers and cannot be anticipated. For instance, at the time when decisions were made about bonusable subway improvements in conjunction with 875 Third Avenue, intentions to develop the other two sites had not been publicly expressed. Planners at both the MTA and the Manhattan Office of the Planning Commission continue to discuss major subway station needs and potentially "soft" sites where development can be anticipated. But the agencies are still convinced that responding to the opportunities as they arise rather than promoting a fixed plan is the more productive approach.

Montgomery County, Maryland, offers developers in CBD zones an "optional method" of development on parcels of 22,000 square feet or more. Under the optional method, a density bonus is granted for provision of open space and other facilities and amenities specified by the master plan for the CBD. The zone is designed to encourage assembly of larger parcels in order to permit "more cohesive development and assure provision of open space, pedestrian walks, and other amenities" (*46*). Most of the CBD zones in the county are located in areas served by transit stations, so in effect the incentive zoning provided is transit-related. Developments under the optional method are subjected to both development plan and detailed site plan review and approval processes. The density bonuses granted under this approach may be as much as 100 percent more than the maximum development allowed under standard zoning. That numerous developments are under construction or planned gives evidence of the attractiveness of the incentives to developers.

Performance Zoning

Performance zoning is generally considered to be a regulatory technique which requires as a condition of zoning approval that a proposed development meet certain objectively established criteria with respect to impact on the environment. These standards are usually engineering measures pertaining to characteristics such as noise, air quality, and water quality.

Performance standards of this type are usually used in industrial zones as a way of protecting the surrounding communities from adverse impacts. Proposed developments must achieve desired performance levels in order to receive appropriate zoning, or can be granted greater densities than allowed if performance standards are met. Performance zoning has also been used to control runoff in residential communities and to control traffic impacts. Given the purpose and structure of performance zoning, it would appear to be well suited to use in transit applications to supply incentives for transit ridership.

Montgomery County, Maryland, has planned and zoned entire areas of Metro transit station impact areas using a performance zoning approach. Following a determination that the major constraint on additional development at station sites was traffic capacity of the street system, detailed master plans, called "sector plans" were developed for each station impact area, using calculations of the maximum feasible development envelope, based primarily on traffic capacity, but also taking into account market, environmental, and community impact factors. In calculating road system capacity, assumptions were made regarding the impact Metrorail service would have by diverting auto trip from the road system.

Peak-hour traffic capacity for each of the Sector Plan areas was distributed among the various parcels in the area, based on the parcels' relative sizes and distances from the entrance to the Metro station. Using the market analysis, land uses and densities were then selected which met the trip generation limit for each parcel. The sector plans acknowledge that changes in market conditions may require changes in the development mix. But it is stressed that "trip allocation by parcel should be the governing factor throughout the planning period." This factor is also the basis for determining the total FAR and land use mix for projects in the Los Angeles Metro Rail Corridor Specific Plan.

A similar type of approach has been used in Montgomery County in revising the parking requirements applicable within station areas. Baseline parking requirements for office space have been established on the basis of assumptions regarding modal split and auto generation, varying with distance from the transit station. These baseline requirements can be incrementally reduced, however, if the developer commits to implementing a series of measures to encourage ridesharing and transit use. In addition, the developer must pay a set fee to the county for each parking space reduced from the required total, these funds to be used for promoting transit and ridesharing programs.

Many other communities also permit reductions in parking in return for actions designed to encourage transit and ridesharing. For example, Chicago grants a 10 percent reduction in required parking for buildings with direct transit connections, and 15 percent reductions for related underground pedestrian circulation. Portland, Oregon, has set ceilings on parking space ratios and permits provision of no parking at all, to encourage transit and ridesharing (*47*).

These examples are indicative of the range of potential applications of performance zoning and similar techniques. In the first example, performance zoning is rooted in a transit oriented planning process. Developments in a given station area must generate no more than a specified level of auto traffic and therefore must be of a character which will generate a certain proportion of transit trips. In the parking examples, performance zoning is being used in a manner that is similar to incentive zoning. Rather than an FAR bonus, the potential developer is permitted a *relaxation* in parking requirements in exchange for actions (transit use and ridesharing) designed to achieve performance standards (a ceiling level of auto traffic generation).

Transfer of Development Rights

Transfer of development rights (TDR) has most widely been used to achieve preservation of open space and buildings of historical importance or architectural merit, and was first introduced in the "Chicago Plan" of 1971, authored by Professor John Costonis. TDR makes distinguishable (and thus "assignable") the right to develop and improve upon a parcel of land from fee ownership of the land itself. The technique involves determining a maximum development potential of a parcel of land, based on zoning, then assigning the right to transfer unused development rights from one parcel to another. The recipient of development rights from one parcel must purchase these rights from the original owner; or, rights may be transferred among parcels under single ownership.

The SCRTD in Los Angeles has effectively articulated the use of TDR in transit applications in two references (*48, 49*). Provision of transit service theoretically increases the effective capacity of parcels for development within a certain distance of

stations, thus creating an impact area which can be used to create a development rights transfer district, within the boundaries of which development rights could be bought, sold, or leased. The rights could be defined in terms of dollars, dwelling units, or floor space by use. This would be complemented by zoning controls and standards for implementing the TDR procedures.

The Specific Plan for the Metro Rail corridor, developed by the City of Los Angeles, allows for use of transfer of development rights to increase densities in station areas, as shown in Figure 8. As shown in the figure, the process involves designating "donor" and "receiver" zones, based on land use and distance from the transit station. Development rights are bought from property owners within the donor zones by owners in the receiving zones, up to maximums allowed by the Specific Plan. Owners within the zone immediately surrounding the station (Subarea 1) are allowed to transfer development rights only within Subarea 1, thus reinforcing the highest densities in the zone closest to the station. In Montgomery County, Maryland, a corridor which has been designated as a TDR reception area, faces serious capacity constraints. The County is exploring how their local paratransit service can be used to expand the effective development "envelope."

Subdivision/Site Plan Approval Process

In suburban areas, subdivision and site plan approvals represent a point at which public agencies can negotiate provision of improvements by developers. Required dedications or "exactions" have universally been used to require street and intersection improvements, signs, land for parks or schools, or open space within the subdivision. In some instances, exactions have been used to require off-site improvements as well.

Several transit agencies, including Tri-Met in Portland, SEMTA in the Detroit area, and the Capitol District Transit Authority in the Albany, N.Y. area, have prepared materials to aid developers in designing suburban subdivisions to accommodate bus vehicle turning radii, and to provide suitable paved areas and pedestrian connections for bus shelter "pads," to help the developers understand the transit agency's needs in providing bus service to these low-density areas. An outgrowth of these handbooks, which call for voluntary action on the part of developers, is to incorporate these provisions into the subdivision ordinance itself. This approach, which has been successfully implemented in Winston-Salem, North Carolina, is best suited at present for rapidly growing areas that are experiencing considerable new residential construction.

ORGANIZATIONAL MECHANISMS

The literature and case studies clearly show that implementing development-related benefit-sharing requires new mechanisms for coordinating transit system planning with the development process. Depending on the structure and size of the transit agency, the local and regional government structure, and the overall attitude of the business community, various types of organizational mechanisms can be pursued to facilitate benefit-sharing. Two types of strategies are discussed in this section.

Transit Corridor Development Corporations/ Authorities

The 1974 amendments to the Urban Mass Transportation Act authorized the "establishment and organization of public or quasi-public transit corridor development corporations or entities" to consolidate the transit and development planning functions. Such corporations (TCDC's) have been used in several cities (Baltimore, Portland, Boston) to coordinate development activity in conjunction with new rail starts and major rehabilitation projects. Precedent for such entities exists in the numerous Downtown Development Authorities which have been created to stimulate downtown revitalization in Florida, Michigan, New Orleans and Denver, and the Metropolitan Districts created in Denver to help fund and coordinate highway and other infrastructure improvements necessitated by the demands of new development. Montgomery County, Maryland, tried unsuccessfully to secure enabling legislation for a variant of this mechanism that would have handled development in certain of that jurisdiction's Metro station areas.

Implementation of a TCDC involves filing nonprofit incorporation papers, establishing a Board of Directors including public and private sector representatives, and funding the initial operations. The TCDC is typcially empowered to coordinate planning and land development, manage publicly owned land, and issue bonds or secure other types of long-term financing.

Experience with TCDC's to date indicates several points worthy of mention regarding their use, as follows:

- As noted by SCRTD, "unless the magnitude of documented joint development opportunities related to the proposed transportation facility are viewed to be quite significant, consideration of a TCDC is usually not warranted" (*14*, p. VI-18). SCRTD itself chose not to take this route for Metro Rail planning.
- Coordination between the TCDC and the transit agency must be carefully maintained, or the desired integration of transit construction and development may not occur. Responsibilities of the transit agency line departments with respect to the TCDC must be carefully worked out.
- Timing of the potential development and overall market conditions are critical to the success of the TCDC in implementing coordinated development. Boston's Southwest Corridor project is an example of a TCDC whose detailed development plans for the relocated Orange Line lay fallow due to market interest up to 1984. Now the plans are being pursued, but within the new department of development in the MBTA.

Consolidation of Development-Related Functions within the Transit Agency

Several transit agencies have responded to the challenge of becoming more actively involved in the development process by establishing their own land development resources. At SCRTD and WMATA, this has meant establishing a transit agency development department to handle development issue related to new system construction. At the MBTA in Boston, an older agency with a different perspective on development, the development function is being established incrementally.

SCRTD

To handle development related to Metro Rail, the General

A. Subareas 1 and 2 may be both Receiving and Donor Areas. A lot in Subarea 1 may transfer Development Rights only to lots in Subarea 1. A lot in Subarea 2 may transfer Development Rights to lots in Subareas 1 and 2. Subarea 3 shall be a Donor Area only to Subareas 1 and 2. The Transfer of Development Rights from any lot in Subareas 1, 2 and 3 may equal, but not exceed such Donor Area lot's development rights under Section 3.2.A.1(a).

B. A Project in a Receiving Zone may receive Development Rights from more than one Donor Zone lot.

C. Development Rights transferred from a Donor Zone site may be replaced on that site by acquiring the Development Rights of another Donor Zone site.

D. Any additional floor area created by development bonuses shall not be transferable. Such floor area may only be utilized in the Project which qualified for such bonuses, unless such Project is a parking structure as defined in Section 3.5.A.7 of this Ordinance.

E. The Department of City Planning shall maintain a record of the Transfer of Development Rights made, pursuant to the provisions of this Ordinance. Such record shall be available for public inspection.

F. Any proposed Transfer of Development Rights shall conform with the intent and objectives of this Ordinance. Transfer shall be evidenced by a notarized document, signed by the owner of the lot or lots involved and recorded in the Office of the Los Angeles County Recorder in a form designed to run with the land and satisfactory to the City Attorney. Such document shall restrict the Development Rights allocated to the transferor site to the extent that said Development Rights have been transferred to another site. Copies of such document shall be forwarded to the Department of City Planning and Building and Safety.

Source: (50). NOTE; PRELIMINARY, AS OF JUNE, 1984. SUBJECT TO CHANGE.

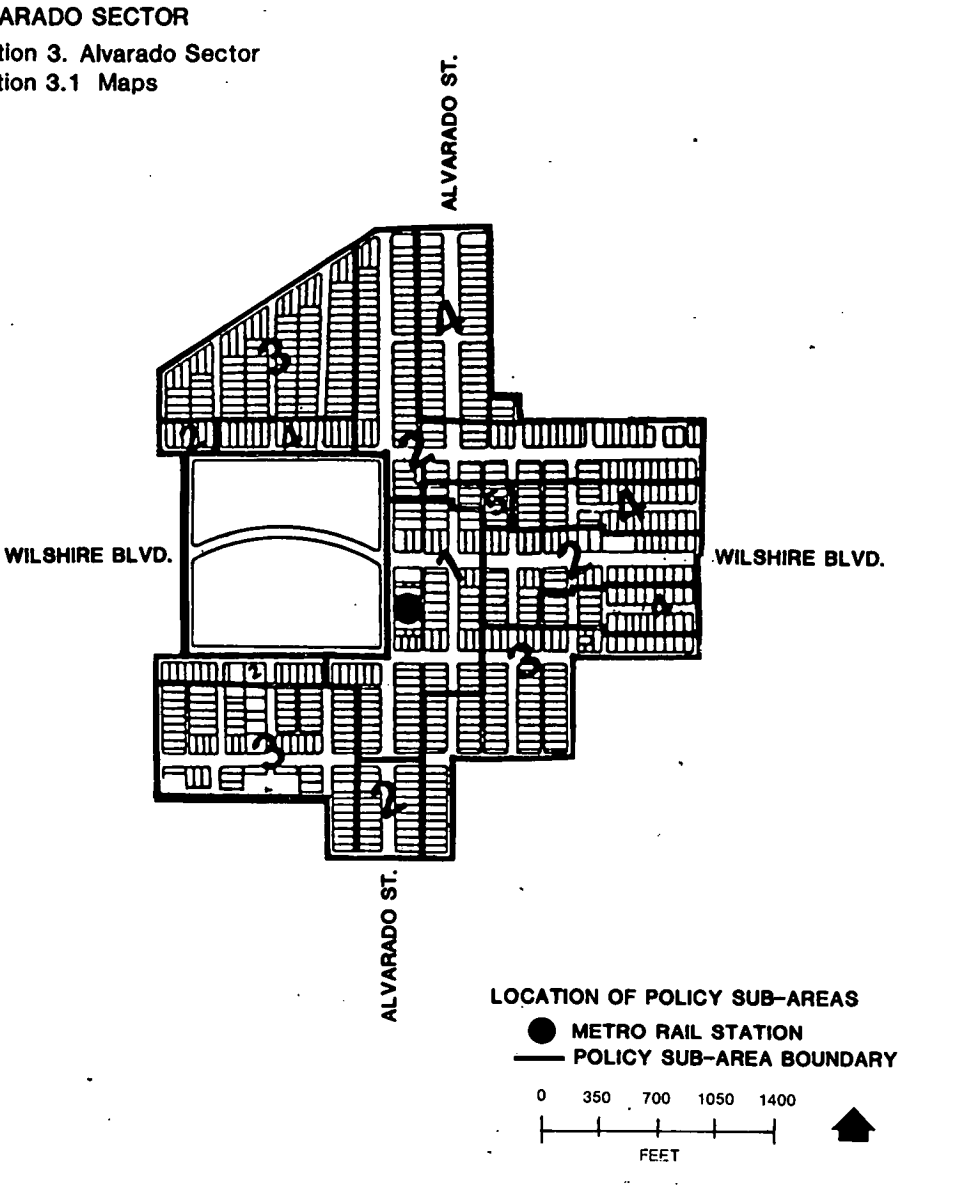


Figure 8. Steps in use of transfer of development rights: Los Angeles Metro Rail Alvarado Sector.

Manager established clear development responsibilities for each department which are summarized in "Policies and Procedures for Implementing Joint Development" (Nov. 1983) (*51*). At the top level, the SCRTD Board has responsibility for setting joint development policy and reviewing and approving agreements both in the negotiation stages (agreements in principle) and the final contract stages. SCRTD departments are responsible for reporting any negotiation progress and strategy to the Board on an ongoing basis.

Reporting directly to the Board is the SCRTD General Manager, who is responsible for directing all staff activities related to joint development. The General Manager has appointed an assistant who is the primary contact point for developers and the liaison between the general manager and the departments.

At the staff level, the Planning Department is responsile for station area joint development planning (overseeing the contracts with the CRA and the City and County of Los Angeles, as discussed below), for establishing benefit assessment districts (as SCRTD is authorized to do by state legislation), for analyzing the financial feasibility of development proposals, and for providing staff support to the interdepartmental and interagency coordinating committees. Each Metro Rail station is assigned to one of the seven professionals in the department. The Real Estate Department within Metro Rail is responsible for assuming the lead role in negotiations, determining land availability for joint development and acquisition requirements for each station and administering agreements with developers. The legal department is responsible for drafting agreements and reviewing legal form and content, and the community relations department for coordinating community support and meetings. Finally, the Metro Rail architecture and engineering departments are responsible for station design and construction issues.

To provide "internal coordination and policy identification on issues related to joint development and to "present a unified and consistent approach in dealing with all external parties" the SCRTD established an interdepartmental Operations, Planning, Engineering, Real Estate and Architecture committee (known as OPERA). This committee, which meets regularly, makes decisions that are binding on the line departments regarding SCRTD policy on public private coventures, joint development/value capture and division of infrastructure costs. Chaired by the representative of the General Manager, the committee is charged with developing a negotiating framework and procedure, reviewing developer proposals, establishing SCRTD negotiation postures and recommending final development agreements.

Besides the "in-house" OPERA committee, three interagency committees meet regularly. The Professional Development Committee (PDC) involves staff level interaction between SCRTD, the City (Departments of Transportation and Planning and the Bureau of Engineering), County and the CRA. The Interagency Management Committee (IMC) brings together the agency heads. Finally a benefit assessment task force, composed of local agencies and property owners who might be affected by the proposed assessment districts, has been formed. A flow chart delineating how the departments and committees work together toward implementing a joint development project is included as Figure 9.

SCRTD has chosen to enter into cooperative agreements with the staffs of the three land use planning agencies responsible for Metro Rail station areas to conduct station area master planning with its UMTA planning funds. The first set of agreements covered general station area planning; and a second set will cover construction, negotiations with developers, and interagency information flow. SCRTD, through being the pass-through agency for the funding, has ensured its own major role in the development planning. The other agencies, while they have welcomed the funding to do the additional work necessary to change zoning and develop benefit assessment districts in the station areas, have had mixed feelings about the degree of SCRTD involvement and their desire to "proceduralize everything."

WMATA

Established in 1981 as part of a comprehensive reoranization, WMATA's new office of Planning and Development is charged with carrying out an ambitious Station Area Development Program designed to promote and capture potential benefits flowing from the transit system. In initiating the program, the General Manager outlined WMATA policy as follows:

- To promote, encourage, and assist in the creation of high-quality, more intensive development at or near appropriate station areas.
- To study the development potential which may exist at present or future station areas and to prepare a development program both in an intermediate time frame, with a three to five year work program, and a longer range time frame.
- To advocate positions before the public, local governmental entities, the development community and others which promote high quality, more intensive development at or near station areas.

The Station Area Development Program, consisting of three elements—joint development, system interface, and transit zone development—is administered by the Assistant General Manager of the Department of Public Services of WMATA, who is also responsible for management, planning, and implementation of the Station Area Development Program. The Development Branch staff in the Office of Planning and Development consists of seven professionals, a head Development Manager, a Senior Development Specialist, and four other Development Specialists. Additional professional support is drawn as needed from other WMATA departments, such as Engineering and Architecture, General Counsel, Contract Administration, Real Estate, and Construction. Figure 10 shows the overall Station Area Development Work Program. Lead responsibility shifts in the course of the planning and development process, depending on which jobs have priority at a given stage.

MBTA

In 1983, following publication of its Property Management Study, the MBTA initiated a development program to intensify the use of its property, capitalize on the opportunity for additional revenue, upgrade transportation facilities, and allow for private management of MBTA property. As a first step in the program, the MBTA General Manager hired consultants to evaluate development potential at selected MBTA properties. Nine sites in four categories were initially examined, including:

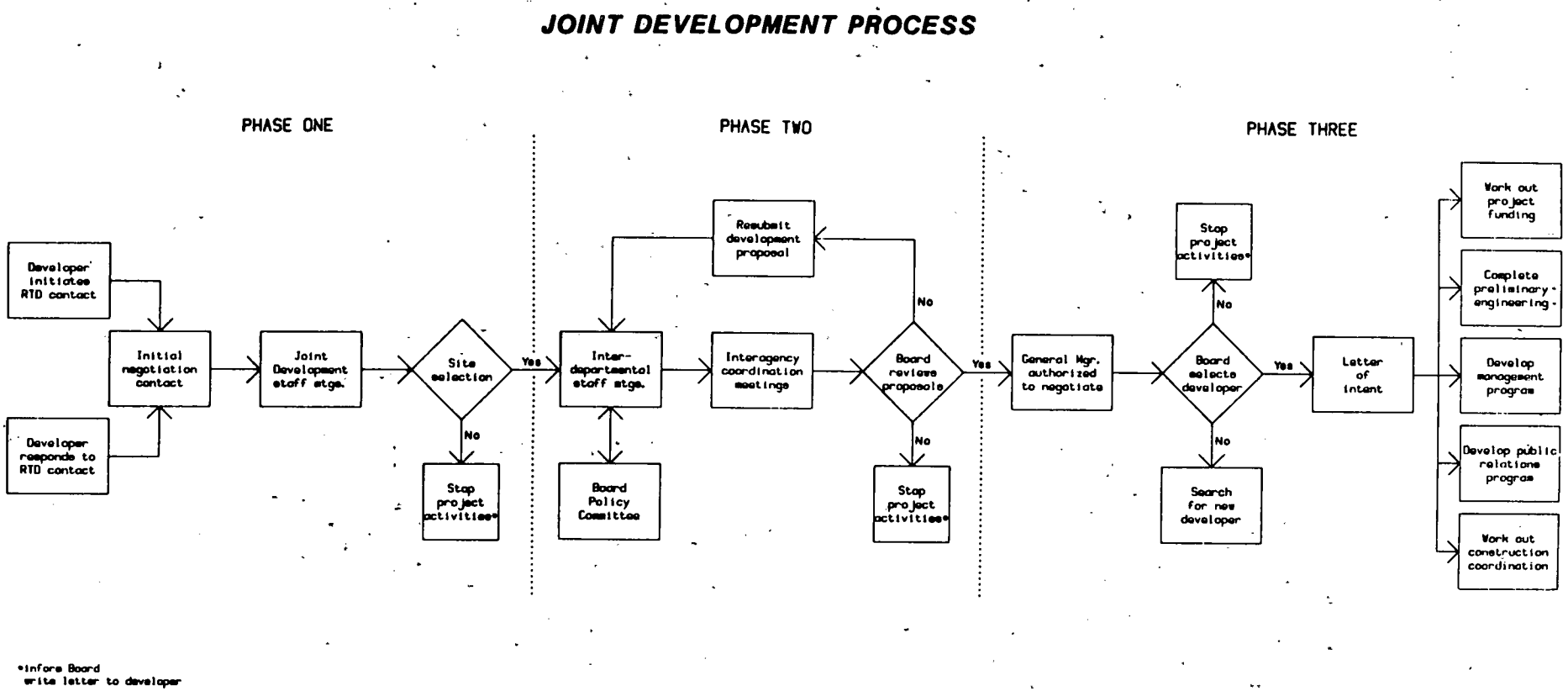
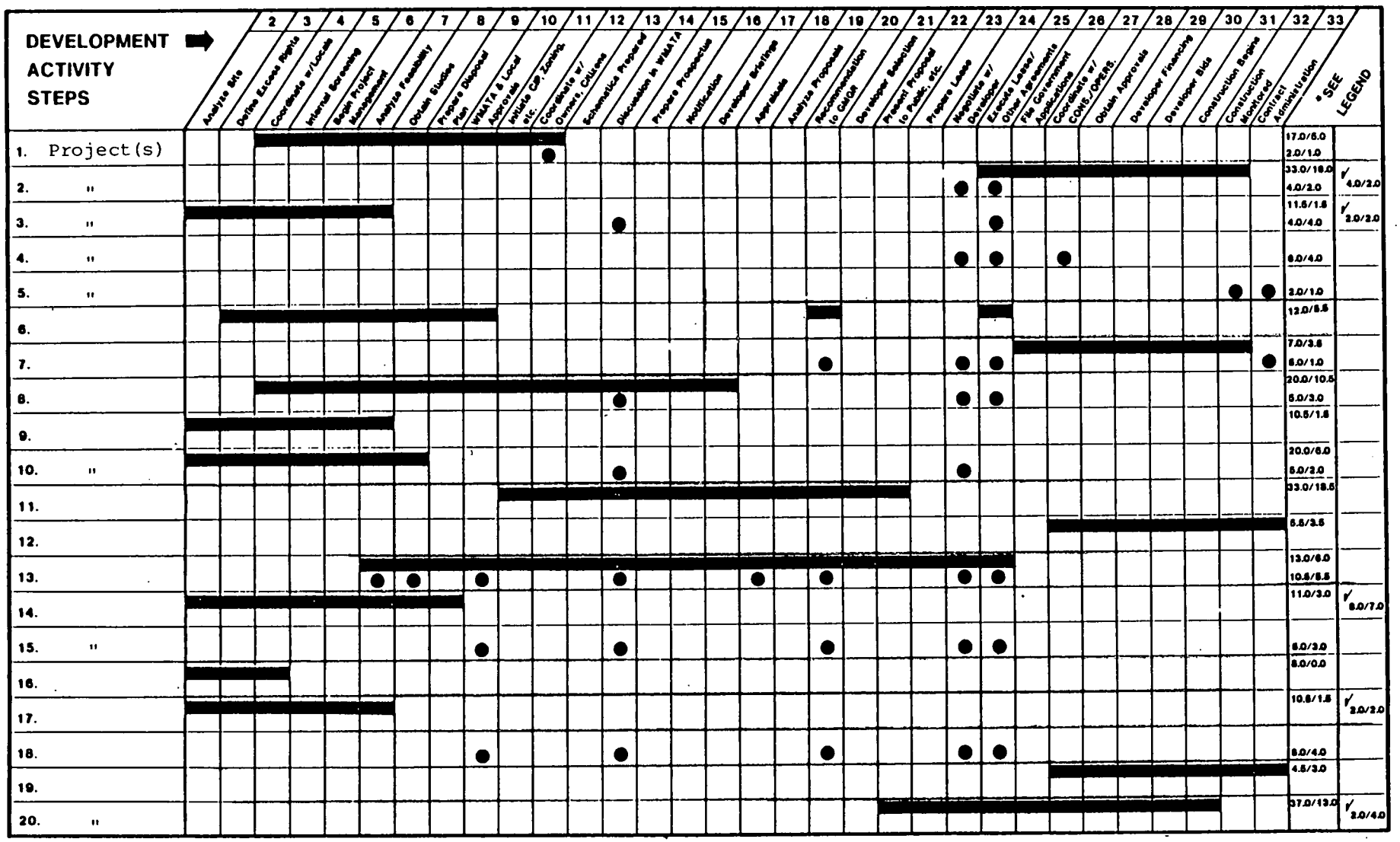


Figure 9. Joint development process—SCRTD.

BASIC 20 STATION FY82 WORK PROGRAM IN WORK-WEEKS



LEGEND

JOINT DEVELOPMENT ▬▬

SYSTEM INTERFACE ●

*SYSTEMWIDE ACTIVITIES ✓

*DEVELOPMENT BRANCH/SUPPORT WEEKS, e.g. 17.0/5.0

Source: WMATA Office of Planning and Development

Note: Illustrative Only

Figure 10. Station Area Development Work Program—WMATA.

obsolete power plants, underutilized land in high market demand areas, parking facilities in commercial areas and town centers. From these, four sites were chosen for detailed analysis because they represented a range of issues of interest to MBTA, including: the Route 128 commuter rail station in Westwood/Dedham, the Riverside light rail station, maintenance facility and parking lot at Route 128 in Newton, a surplus property in Dedham Square, and an obsolete East First Street power plant in East Boston.

In developing the program, the objective of the General Manager was to devise a process that would not require enabling legislation or in any way affect existing legislation. Because the MBTA is a regional authority, responsible to its 79 cities and towns, it was important to determine whether development of its land holdings was authorized under the "public purpose" the Authority was set up to serve. It was also necessary to determine whether the MBTA could choose a developer based on economic, market, and design-related criteria rather than sell or lease land to the highest bidder. Thus a first step was to contact the Transportation Committee of the State House of Representatives to make sure the MBTA would not violate any statutes by engaging in joint development activity and to obtain approval from the Inspector General that the MBTA had proper authority to pursue development opportunities and to establish its own criteria for selling or leasing its property. The conclusions were that the MBTA could sell or lease its property for development and choose developers providing that "sound reasons in the public interest for choosing other than the highest bidder were established" (*21*). Since the MBTA has obtained these approvals, development projects will be less likely to be challenged politically or legally.

Other issues that arose early in the process involved the MBTA's tax exempt status and its exemption from zoning, both granted to the Authority, of course, as a public transportation provider and not as a developer. Clarifying the extent to which new developments might improve transportation service and ridership was also a concern. To address these issues, a set of formal Procedures for Joint Development of Property was developed by the MBTA's consultant and circulated for review to affected parties. Comments were sought from the MBTA Board of Directors, the Advisory Board, the transportation committees in the legislature, the Inspector General, the Greater Boston Real Estate Board, and the Chamber of Commerce. The result is the procedures shown in Figure 11. These procedures provide the basis for dealing with development in a more coherent fashion within the MBTA. Traditionally, the development function at the MBTA had been carried out by the operations directorate under the General Manager. Short-term leases or licenses of MBTA property, on the other hand, were handled by the Real Estate Management Department. The decision was made to locate the new development program initially in the Real Estate Management Department.

Of the projects initially evaluated for development feasibility, the Route 128 redevelopment project was selected as a "test case" of the new development functions within the Authority. The consultants assisted the MBTA in preparing a developer's kit for the property, evaluating proposals, and selecting a developer. The approved development plan consists of a 250 room hotel with 200,000 square feet of office space in three buildings and parking to serve the development and MBTA commuters. The project is currently in the environmental review stage, with a construction start projected for spring, 1985.

I. Designation of a Site as Surplus for Future Transportation Needs

II. Board Approval and Notification of Surplus Designation

III. Preparation of Preliminary Development Plan and Public Hearing
- Conduct Market Feasibility Analysis
- Prepare Preliminary Development Plan
- Submit Plan to Local Planning Board or Agency
- Hold Public Hearing in Development Area
- Submit Plan and Responses to Public Comment to Board

IV. Preparation of Joint Development Prospectus (Request for Proposal)

V. Developer Selection
- Convene Development Review Committee
- Review and Evaluate Proposals
- Recommend 2-4 Firms for Negotiation
- Designate Preferred Firm
- Conduct Negotiations
- Obtain Board Approval
- Select Firm

VI. Final Approvals

Source: (52)

Figure 11. Summary of MBTA Procedures for Joint Development of Property.

With the Route 128 project well underway, the Joint Development program has reached a point where it is generally recognized as being of positive value to the MBTA as a revenue generator, a source for improved facilities, and an opportunity to provide more convenient facilities for commuters. The MBTA has now begun to focus more attention on the program by hiring a director of development and by making this program part of the management family of the MBTA.

Hired in the summer of 1984, the MBTA's new real estate development coordinator is responsible for consolidating development-related functions within the Authority which have been dispersed among many departments. The impetus for the new role is found both in the revenue-generation potential of the considerable MBTA property holdings and the desire of the Authority to work with communities within its district to stimulate and ensure appropriate development.

As the development coordinator sees it, the issue in an older area such as the Boston region is less one of directing growth than in working with localities to support their established growth policies. While the MBTA is exempt from local zoning, its development policy does stipulate that the Authority work with local communities in deciding the type and extent of development on MBTA property. MBTA has a powerful negotiating tool in its tax-exempt status. Development on MBTA property will thus result in negotiated "in lieu" payments to the towns as opposed to property taxes. These new revenues represent a new revenue source for the localities which is outside the limitations of the Proposition 2-1/2 property tax bill. Beyond

its property holdings the MBTA has substantial financial resources that enable it to participate in development deals, including its bonding authority, its pension funds, and its leverage with the financial institutions with whom the MBTA does business.

For the next three years, the new department will take an incremental approach to consolidating development-related functions within the agency moving some staff from existing MBTA departments and slowly adding new staff. The agenda for the new department will include completing joint development projects currently underway, identifying new sites with sufficient market interest and where the MBTA has something to gain, looking at development possibilities for core area stations where the station improvements would be a catalyst for area redevelopment, and increasing revenue from leases and concessions in stations and station areas. In the longer term, the new department will look at development possibilities related to the commuter rail system. Establishing this type of role at the MBTA will involve gradually changing some long standing attitudes: "Development is a dynamic process which is very different [from] providing a service, which is what transit agencies are geared to do. Even new construction is done to the end of providing service. In development decisions are made for development' sake (*20*).

To make the development function permanent, the new staff is looking eventually to develop ways to recoup a percentage of revenues generated through the development efforts to pay for salaries and expenses. To do this, accounting procedures must be modified to account for income generated by development separately from other sources. This will help to justify and protect the development function to build in accountability and to provide motivation for generating new projects.

While setting up a whole new department may not be justified in many cases, other transit agencies, both large and small, have hired consultants to advise their General Managers on real estate management, financial, and development issues. Such arrangements have tended to occur where the General Manager takes the initiative in pursuing a more active role in the development process. Professional development or real estate consultants can work to educate existing staff on the development process, agency roles, and benefit-sharing opportunities without the long-term expenditures necessary for establishing a new office, and with less resistance from other departments within the agency.

Removal of Legal/Institutional Impediments to Implementation

Many of the problems in implementing benefit-sharing have arisen not from lack of knowledge of strategies or appropriate techniques for determining benefits, but from legal constraints on the role of the transit agency and from institutional impediments. The case studies conducted here have shown, however, that a transit agency wishing to pursue a benefit-sharing philosophy can overcome many institutional and political hurdles that have hindered implementation. Key to overcoming these hurdles are: leadership from the general manager, establishment of constructive working relationships with the other public agencies involved, use of qualified legal, financial, and real estate experts, and a willingness to use cooperative agreements to expedite, rather than hinder, implementation.

From the smallest transit properties to the largest, leadership of the chief executive was in evidence in bringing about successful benefit-sharing. In the smaller transit properties such as Toledo, Flint, or Bay City, Michigan, the general managers took a direct role in dealing with the private sector. In larger cities such as Boston, New York, and Los Angeles, the general manager delegated the responsibility, but only after establishing clear policies to govern the transit agency role and establishing direct lines of responsibility from the person in charge of development negotiations to the manager's office. If responsibilities are delegated, it is important for the person in charge to have decision-making authority in order to establish credibility with the private sector. As noted by one, formerly with MTA of New York, "you need to go out on a limb—take a risk yourself." The case studies also showed that the most successful projects and planning processes occurred when agencies worked together in a coordinated fashion, maximizing their combined areas of expertise and authority. The Los Angeles case study illustrates the use of cooperative agreements and funding provisions to bring the various land use planning and regulatory powers of the agencies involved together to plan for the Metro Rail stations, as opposed to creating new structures which might require lengthy legislative approvals. By delegating what could be accomplished through existing authority, SCRTD could devote its legislative efforts to establishing new authority for benefit assessment and excess acquisition. Further, the SCRTD was able to use its UMTA planning funds to finance the activities of the other agencies with respect to Metro Rail. This funding arrangement ensured close coordination of all efforts regarding the stations, and allowed SCRTD to become more involved with land use planning than it would have been if it were not the pass-through funding agency. In Boston, early effort was spent in gaining a positive reading from the state Inspector General to make certain that the MBTA could act within its existing authority to develop its own real estate. By launching the program with actions totally under its own control, the MBTA could establish a positive precedent for implementation before seeking expanded authority for later projects. In Michigan, many of the smaller transit properties were closely intertwined with other government agencies through shared space arrangements or operating agreements. In many of these cases, local government funds or contributions of land or "in kind" services were used in a flexible way to match the state terminal program funds.

All of the cases illustrate the importance of using experts in the fields of real estate, law, finance, planning, and urban design to implementing benefit-sharing projects. In real estate and law, it is important to have qualified advice on aspects particular to a given locality, such as real estate values, market factors, developer attitudes, and case law in order to conduct necessary analyses, draw up necessary agreements, leases, or assessment formulas. The Denver transit mall assessment formula, for example, was carefully worked out based on a thorough analysis of case law. In finance, it is important to have advisors with up-to-the-minute knowledge of everchanging tax law and municipal finance. In planning and design, it is important to have expert assistance in formulating site plans, drawing up requests for proposals, and evaluating proposals submitted. In the cases, this assistance was gained in several ways. The larger cities had expertise in house, buttressed by specialist consultant studies. In Toledo, the expertise of the private sector participants was utilized by the city and transit agency. In the smaller Michigan cities, the State DOT provided technical assistance to the transit properties.

Finally, implementation is greatly aided by a flexible attitude toward use of public-private and interagency cooperative agreements. For Toledo's Promenade Station, for example, four separate agreements over a period of two years were drawn up between TARTA, Toledo Edison, Toledo Trust, and the City of Toledo to cover shared costs for design, construction, and maintenance. When a situation calling for cooperation arose, the lawyers involved were not hesitant to break new ground in drawing up an appropriate document to cover what was needed to take the next implementation step. An important factor was that the terms of these agreements were short enough to allow for future changes if necessary. For example, maintenance agreements between abutters to the pedestrian concourse system may be amended to a downtown-wide maintenance assessment, now that the system is expanded to serve more users. In Denver, the transit mall assessment district boundaries and formula were both changed in response to property owner petition. Of course, achieving agreement, even on short-term agreements, requires a mutual commitment of the parties involved to implement the project, and consensus among the decision-makers involved.

VOLUNTARY PRIVATE PARTICIPATION

In some situations, private businesses or institutions are willing to contribute to transit facilities without compensating public contributions. The contributions to capital improvements or operations are likely to be modest but may be effective in enhancing amenities, art work, maintenance, or security. Such contributions are likely only when they serve coinciding goals of the private party and the transit agency. Such areas may include:

1. Improvement of the immediate surroundings of the private facility, such as upgrading a subway entrance in or near the property or altering the blighted appearance and undesirable use patterns at a bus stop.
2. Improvement of the development potential of a site by tying directly to a transit stop.
3. Improvement of marketing opportunity for a private facility by marketing the transit connection as well as marketing to transit patrons.
4. Specific advertising or display of products (such as museum display cases in subway stations).
5. Improvement of general community image of the business or institution through a public service contribution to transit (often participation of chief executive officers on transit boards or planning task forces).
6. Contributing to the local share in order to leverage a major Federal grant (as in the UDAG or Urban Initiatives programs).

Some voluntary contributions are made by the private sector because it is perceived that the public agencies will not move expeditiously to respond to a problem. An example is the construction of a bus waiting room by the owners of a shopping mall in downtown Bridgeport, Connecticut. A major bus stop and transfer point occurs in front of the main entrance of the mall. In inclement weather, a large number of transit riders used the entrance as a shelter, interfering with shopper traffic. The Transit District and the owner entered negotiations to develop an adjacent vacant storefront as "the Moving Company Cafe" to provide accommodations and passenger services. The administrative and legal details of this joint development led to protracted negotiations until the building owners decided to proceed on their own and build a waiting room privately. Unfortunately, the waiting room is barren and unsupervised and does not incorporate any of the services originally planned. It has not succeeded in drawing substantial numbers of bus patrons away from the mall entrance. This case illustrates that a hasty voluntary contribution is not a good substitute for a carefully planned joint development, even if the latter is more expensive to construct and more complicated to manage.

In Toledo, on the other hand, several corporations, including the Owens Illinois Corporation, Toledo Trust, and Toledo Edison combined to pay the 20 percent local share on the UMTA downtown transit loop grant. Their involvement was motivated by several factors; the city was unable to provide the local share itself at the time, the transit loop and pedestrian connectors fit into overall downtown planning such that the companies saw definite benefits to themselves in providing the monies, and there the companies shared a general spirit of civic cooperation and interest in the future of downtown Toledo. The city and TARTA made special efforts to make sure that they did their part to implement the plans effectively, ensuring the private sector that their contributions would not be squandered or spent inefficiently due to public agency bureaucracy or red tape. In San Francisco, voluntary fund raising generated the 20 percent local share to match UMTA's grant for overhauling the cable car system.

Other examples of voluntary contributions include the Adopt-a-Station program in New York City. In this case, private businesses and institutions like museums agreed to supply amenities, decoration, displays, and/or art work in subway stations closely associated with their facilities. Seed money grants (funded by an initial $1 million UMTA grant) to the sponsoring art organizations to solicit and administer the voluntary contributions played an important role. In 1984, this program has been incorporated into MTA's ongoing station modernization program. In order to make voluntary contributions an integral part of transit design, this type of administrative initiative from outside the contributing organization is often essential.

Another issue related to voluntary contributions is that they are often vulnerable to fluctuations in corporate profitability or policy. It is probably best to anticipate such changes and either use corporate sponsorship for legitimately one-time efforts (such as the contribution of a work of art) or obtain a specific time commitment (such as a five-year security/maintenance assistance program) or have alternative methods ready to substitute.

Finally, apart from physical contributions, the voluntary service of corporate executives on transit agency boards and task forces has proven valuable in gaining acceptance for transit, marketing programs to employees, and lobbying for funding referenda. Corporate lobbying efforts are not directed only to the general public. In Los Angeles, the Greater Los Angeles Transportation Coalition, composed of the Chief Executive Officers of major corporations and property owners in the region, as well as other constituencies affected by Metro Rail, has put major efforts into Federal and state lobbying to secure funding for the system. This lobbying has a very practical motivation from the private sector point of view. Because Federal funds for the Downtown People Mover in Los Angeles were withdrawn after substantial private commitments were made, the private sector in 1984 wants to be certain that Metro Rail will be funded before they commit further funds or make major

economic decisions based on this project. However, one Los Angeles businessman noted that the money and time so spent might more effectively be used by having the public agencies tap the financial expertise of the corporate executives for devising alternative funding strategies which would reduce the need for UMTA funds.

CHAPTER FIVE

FINDINGS—MEASURING THE BENEFITS

Techniques for measuring the benefits resulting from various strategies must be selected to correspond to the stage of planning, the type of strategy, and the decisions to be made. This section presents measurement techniques appropriate to obtain the information required at various decision points and for various participants in the process.

As the preceding material has illustrated, the concept of "benefits" in benefit-sharing is not fixed, but is defined differently for the various participants in the transit-related development process at different stages in time. Thus, the task of measuring the benefits, the level at which benefits must be examined, and the techniques used differ depending on the stage of planning and implementation involved. The choice of measurement techniques used by public and private participants at various stages of the process to identify costs and benefits should be dictated by: (1) the type of benefit to be measured; (2) the desired level of detail of the information should be commensurate with the information needed for decisions which must be made at each stage; and (3) the cost of obtaining the required information and conducting the analyses.

The measures of benefit and the analysis techniques progress in level of detail from broad strategic planning for a system or corridor (based on broad aggregate measures of regional activity) to detailed short-term cash flow analysis for a development project (based on very specific income and cost data for a specific project design), as shown in Figure 12. This figure, which is keyed to the UMTA transit planning process and associated planning and development activities outlined in Figure 4, illustrates the major stages in the transit/development planning and implementation process at which measurement of development-related benefits occurs, benefits typically measured, and typical measurement techniques used at each stage. The point regarding benefit measurement is to gear the use of techniques to the immediate planning or implementation objective, not using any more detailed or expensive techniques than are necessary to make the decision at hand. Techniques and data at the level of detail required to determine special assessment district formulas, for example, are not necessary to determine the regional effects of a transit line on land use density.

It is important to note at the outset of this section that appropriate tools are available for measuring most transit-related benefits from the range of techniques commonly used by transportation, planning, and real estate professionals. The issues in benefit measurement as shown by the case studies and literature are not related to improving these measurement techniques, but rather encompass the following:

1. Making the initial decision within the transit agency even to include development-related considerations as a criterion for planning and design decisions.
2. Establishing sufficient professional capacity (either within the transit agency or through coordination with planning/development agencies) to address development issues.
3. Funding this activity.
4. Obtaining reliable before and after data upon which to judge impacts for new systems and long-term impacts.
5. Assessing the long-term trade-offs between density bonuses or other considerations offered in incentive zoning ordinances and transit-related amenities provided in return by the private developer.

Given these issues, transit agency experience in benefit measurement at various stages of the planning process and appropriate measurement techniques are discussed below.

SYSTEM PLANNING/REGIONAL PLAN DEVELOPMENT/REGIONAL MARKET ANALYSIS

For new system or line planning, regional-level benefit measurement should take place at the route alignment/station location phase of the planning. Route alignment and station location are critical to determining the potential for transit-related development and the potential for positive land value impacts. Within CBD's, close station spacing can promote associated development by improving internal circulation within the downtown, especially when the stations are located to serve and connect activity centers (*10*). In Toledo, for example, the downtown transit loop project was specifically designed to serve development concentrations in the central business district. The downtown fare free zone enhanced the internal circulation component, which was an important selling point for the project with the downtown community. In downtown and suburban areas, "proper attention to joint development opportunities can widen the range of alternative alignments beyond the least cost alignments" (*10*). In this regard, the frequent decision to locate transit lines in highway or abandoned rail rights-of-way, based mainly on acquisition and construction cost reduction considerations, illustrates the absence of attention to benefit-sharing

TRANSIT/LAND USE/ DEVELOPMENT PLANNING ACTIVITIES (SEE FIGURE 4)	TYPICAL BENEFITS MEASURED AT THIS STAGE	APPROPRIATE MEASUREMENT TECHNIQUES
I. System Planning	Reg'l Transp. Benefits	Standard Transp. Models
Regional Plan Development	Economic Benefits/Transit Conformance of Transit and Land Use Plans	Reg'l Economic Models Analyze Zoning/Transit Location Relationships
Regional Market Analysis	Regional Development Potential	Analysis of Past/Future Reg'l Dev't Trends/ Supply/Demand by Use
II. Alternatives Analysis/ Draft EIS	Transp.,Econ., Ridership Benefits of Alternatives	Cost/Benefit Analysis Methods
Masterplanning/Land Use Regulation	Development Potential by Use in Station Areas	AMRA Method
Choice of Financial Strategies	Comparative Financial Benefits of Alt. Strategies	Cash Flow Models (i.e., Rice Center)
Site, Initial Development Feasibility Analysis	Cash Flow/Return on Investment	Cash Flow Models Analyze Timing in terms of Land Price, Availability, Interest Rates
III. Preliminary Engineering	Determine Cost-Sharing Opportunities	Cost Estimating
Develop Design Guidelines	Public Benefits of Design Elements	Urban Design Analysis
Implement Land Use Regulations	Equation of Public Benefit to Developer Bonuses, Etc.	Urban Design Analysis Impact Analysis
Draw Up Financial Formulas	Specific Benefits of Improvement to Owners Total Costs to be Assessed	Before & After Studies Case Law Examine "Comparables"
Investment Decisions/ Seek Tenants, Financing	Cash Flow/Return on Investment - Design Options	Cash Flow Models Appraisal Techniques
IV. Final System and Project Design Design Review Financial Negotiations	Annual Contributions of, Financial Returns to Each Party Value of Bonuses or other Considerations	Detailed Pro Formas Cost Estimates
V. Construction Implement Financial Mechanisms	Cost and Time Savings Long-Term Costs/Revenues	Financial Projections
VI. Operations/Property Management	Coverage of Continuing Operations/Maint. Costs	Standard Accounting Procedures
Monitor Impacts/ Refine Tools if Necessary	Property Value Changes Impact Area Boundary Changes Identification of Unanticipated Impacts/ Costs/Benefits.	Before and After Studies

Figure 12. Types of benefits measured and appropriate measurement techniques at various stages of transit and development planning and implementation.

at this important stage. While such alignments may be less costly in terms of acquisition, the station locations often are removed from activity centers. Such locations rarely generate positive land value impacts, and can actually generate negative impacts (*10*).

Analysis of benefit-sharing opportunities in the early stages of system level planning and route alignment selection has a parallel with the regional market scanning a private developer does to gauge the magnitude, timing, and location of an area's potential when he considers a land purchase. But the transit system's time frame may be much more long range. At the system planning stage, the transit agency looks to define overall regional population and land-use characteristics and trends, existing and planned transportation facilities that would be competing (such as highways or other transit providers), potential route alignments for new or upgraded service, compatibility with areawide plans and policies, and location of future concentrations of activities called for in those plans. In general, transportation and overall economic benefits are measured through use of standard regional modeling techniques. Measuring the impacts of transit on development and the impacts of development on ridership and operations at this broad level is a function of determining:

- Extent to which land-use regulation in the transit corridors and station areas reinforces regional policy; i.e., if the policy is solely to reinforce the CBD, will the zoning provide incentives at CBD locations and discourage development at outlying stations, or, conversely, if the policy is to encourage development both in the CBD and also regional activity centers, will zoning allow for higher density at both CBD and outlying stations.
- Extent to which market conditions in the transit corridors will allow for development to occur at the time of transit construction.
- Extent to which provision of the new service will lead to land-use regulation, financing strategy, or policy changes.
- Whether or not institutional structures are in place for implementing regulatory or policy changes.

Thus, the groundwork for developing a benefit-sharing program at this stage should include:

- Regional market analysis to determine extent and location of timing of demand for office, retail, industrial and residential space (requires broad demographic data usually updated regularly by regional planning agencies).
- Analysis of availability of land for development and extent of development possible under existing or proposed zoning (as conducted by Los Angeles City Planning Department for Metro Rail planning studies).
- Institutional analysis to determine the best strategies for assembling land and implementing any proposed changes.
- Broad fiscal impact analysis; i.e., short- and long-term tax implications, and need for services resulting from potential development.
- General feasibility analysis of alternative financing strategies.

At the systemwide or regional level, attention to land use and development concerns is often limited to ensuring that the system location is consistent with the comprehensive plan for the region. This is mandated by UMTA's original 1976 policy on major investments (*53*, p. 37). In fact, this criterion is easily satisfied in most cases by planning the system to maximize ridership or service coverage. Generally, this means that the service will be located in high density corridors. In Los Angeles, such an analysis was complicated by the fact that the city's zoning itself was not consistent with its master plan, leading to a requirement for a comprehensive citywide rezoning. In this case, the transit alignment was accompanied with proposed higher density zoning in the transit corridor to achieve conformance with the General Plan's objectives.

However, because many corridor analyses limit considerations of land use and development to those aspects required by UMTA regulations, they devote relatively little attention to the potential of major transit investments for *improving* long range plans (*53*, p. 37). Further, many analyses do not consider potential development as it might relate to alternative systemwide or corridorwide value capture strategies; e.g., partial or total financing of a new facility. Case studies of new construction conducted for this research in Los Angeles and Portland have shown that broad strategic planning analysis is conducted, but usually after basic location decisions have been made. In the case of WMATA's system, early planning was very concerned with linking those areas designated in the local master plans for employment concentrations and other intensive land use. The objectives then were primarily to maximize ridership and reduce future highway congestion in those corridors, rather than benefit-sharing *per se.* Some local governments, such as Montgomery County, were very mindful of potentials for transit-related development, however. Their important inputs into the route alignment and station site selections were certainly grounded in concern for future development potential, access issues, and mitigation of community impacts as well.

ALTERNATIVES ANALYSIS/CORRIDOR AND STATION AREA MASTERPLANNING/CHOICE OF FINANCIAL STRATEGIES/INITIAL DEVELOPMENT FEASIBILITY ANALYSIS

Once long-term system needs are defined, more detailed planning is pursued at the corridor level, where alternatives analysis is pursued to identify potential modes and alignments to meet transit demand. At this stage, land development potential is evaluated along with land acquisition, construction and operating costs, traffic and transit demand and operating characteristics, sociocultural factors, and natural and environmental resource impacts to arrive at overall "cost-effectiveness" indications for the alternatives. In general, development-related benefit measurement has not been a primary factor in decisions made at this stage, beyond the extent to which development influences ridership projections. However, if benefit-sharing or value capture strategies are to be pursued, alternative development scenarios and financial mechanisms at station locations under considerations should be evaluated in terms of financial benefits to all parties. In this regard, two levels of benefit measurement are appropriate, depending on whether aggressive land use regulation or value capture approaches are to be pursued. These include: (1) planning and market research techniques; and (2) property value/financial impact measurement techniques, as discussed below.

Planning and Market Research Techniques

The first level of benefit-measurement is more general, in-

volving strategic planning or masterplanning at the corridor/station area level to establish the context for development-related benefit-sharing of any type. The case studies revealed corridor-level benefit measurement conducted in Los Angeles and Portland, as follows.

The "Milestone Six" process followed by SCRTD for the proposed Metro Rail line in Los Angeles provides the context for identifying and measuring the impacts of benefit-sharing strategies in varying station settings. While the method was applied in Los Angeles for a new rapid rail system, it is applicable, at the facility level, for any type of major transit facility—light rail stops and stations, bus terminals, or transportation centers—as well as for assessing development possibilities at existing station or facility locations. At the strategic level, measurement objectives are to describe potential benefits in broad terms and to get a general outline of development and financial policy issues for station areas along the corridor. This is but the first step in an iterative measurement process. Here again, the principle of cost-effectiveness should be applied in the choice of measurement techniques; i.e., they should be sufficient to provide a degree of detail appropriate to the level of planning involved and the imminence of implementation. At this level, the measurement of benefits is really a planning task—identifying interest groups, overall uses to be considered, and general categories of impact or benefit.

The SCRTD methodology proceeds as follows:

First, land-use characteristics, market potential and zoning designations in station areas are analyzed to identify common characteristics affecting planning and design. For the Metro Rail system, six categories were developed, including:

Type One:	High Density Downtown Development
Type Two:	Wilshire Corridor Deelopment
Type Three:	Major Independent Development
Type Four:	Strong Local Community Context
Type Five:	Under-Utilized Corridor
Type Six:	Residential Station

For each category, general land-use characteristics are summarized, development potential is outlined, and types of benefit-sharing strategies generally suitable for the type of area are listed. For example, for high-density downtown stations, density bonuses, parking requirement reductions, transfer of development rights, and subterranean connections to transit stations are proposed as means to achieve development goals. For residential stations, on the other hand, development is neither likely nor suitable due to community sentiment, strict development controls, and lack of available sites. Stations in this category are designated to serve the immediate area and to provide intermodal transfer points, with low priority for development programming or benefit-sharing. At this level, it can be seen that the analysis proceeds in terms of general land use categories, summaries of floor space, and broad design guidelines. Data required to conduct the analysis are readily available from existing sources. Detailed financial data for individual properties are not necessary at this point.

Tri-Met in Portland also used market research and strategic planning techniques to measure general development potential for the Banfield Light Rail Line, through the Station Area Planning Process (TSAP). TSAP was established in 1980 to identify how the light rail line will "affect the development, redevelopment or conservation of neighborhoods along the route" (*54*), and to channel these anticipated impacts into development programs desired by the communities. The cities of Portland and Greshm, Multnomah County, Tri-Met and the Oregon Department of Transportation participated in TSAP. The program was funded by a $1.2 million UMTA grant and was coordinated by the Metropolitan Service District (Metro).

Staff members from the participating agencies worked as a team under Metro. TSAP helped fund the complementary land-use planning efforts carried out by the local governments. In addition, consultants were retained in the areas of market analysis, transportation, urban design, and implementation for a total cost of about $375,000.

The market analysis conducted by Economic Research Associates (ERA) was critical to establishing the basic policies and directions related to private real estate development. The summary conclusion was that the LRT is not expected to create new growth in the region, but with sound planning it can influence where that growth occurs. This conclusion strongly influenced the type of development-related planning that was conducted for the station areas. The main thrust of the plans and resulting zoning ordinances were directed toward shaping the projected development demand into a pattern focused on the transit stations and supportive of the existing community fabric.

The market analysis was also used to give a general indication of appropriate benefit-sharing strategies to be pursued. It was concluded that the LRT did not result in sufficient increases in land value to extract direct contributions from land owners or developers to the transit project. But it was also concluded that it was in the very strong interest of both Tri-Met and the localities to carefully coordinate plans in order to yield benefits to both sides. The benefits to transit include increased ridership attracted by concentrating activities at the stations, better access, and a more comfortable and attractive environment for the transit patrons. For the station area communities the plans minimize the impact of station area parking, and help create an attractive and lively community fabric.

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Property Value/Financial Impact Measurement Techniques

The literature review revealed two additional benefit-measurement techniques appropriate for use in the corridor/station area masterplanning phase *if* more detailed property value or financial information is required to establish the basis for particular zoning, value capture, or assessment techniques.

The first, presented in the AMRA study (*7*), was designed to estimate aggregate increases in land value in a station area

which are attributable to transit. While the method was not applied for a single system in their study, it might successfully be applied in developing benefit-sharing strategies in the station area planning phase. The authors, in fact, suggest that "the methodology should be employed, as it is ultimately intended, within a planning context . . . to suggest station locations and even route alignments" (*7*, Vol. 1, p. 38). The method recognizes three constraints on realizing property value increases: (1) market constraints, (2) difficulties in assembling large enough parcels for development to be feasible, and (3) zoning constraints.

As stressed by the authors, such detailed measurement of land value increases as performed in their case studies is only necessary for *(1) "taxing techniques, such as benefit assessment which rely on neither the ordinary assessment price nor sales prices to determine property value; and (2) some regulatory techniques, such as special districts involving mandatory controls which impose heavy costs on developers and do not rely on developer initiative"* (*7* Vol. 2, p. 6).

The authors also stress that *"a first step in using this method is to choose a real estate consultant—usually a real estate appraiser or economist—who possesses extensive experience in the analysis of development conditions within a given metropolitan area."* Large transit agencies often have such professionals on their real estate or property management staffs. Smaller transit agencies may have their local planning or development agencies perform this function, or else hire a consultant.

Steps in the methodology include:

1. Describe existing development in the station area.
2. Describe the station itself, boardings, completion date and place in the overall system.
3. Map existing zoning.
4. Analyze land value history in the area and current sales prices and compare with other areas.
5. Define impact area boundaries, based on zoning, physical barriers, and walking distance from the station.
6. Describe anticipated future zoning, likely market and predicted future development (10–15 year time frame).
7. Summarize total existing property values in impact area, in terms of total square footage, and broken down into land value and value of improvements on a square foot basis.
8. Estimate land value increases due to transit, based on a synthesis of comparable land value, supportable land value by potential intensity of development and relationship of land value to total development costs.

The methodology was applied in 14 station area case studies in four cities. The impacts vary greatly in the 14 cases, with larger impacts shown for downtown stations which draw upon patronage afforded by the entire system. The value of this method for station area planning lies in its identification of potential development sites, its indication of likely overall revenues to be generated from the new development and property value impacts, and its guidance in formulating value capture strategies at appropriate locations. Not only is the method practical and easy to use, relying on accepted techniques of land-use planning and real estate appraisal, but it is also specifically geared to a transit application. Since the AMRA study is available now only through the National Technical Information Service (NTIS), it is recommended that the study be reprinted for broader redistribution, given the current revival of interest in benefit-sharing.

The second financial impact measurement methodology was applied in the Rice Center study of Revenue Forecasts for Innovative Light Rail Financing Options in Denver (*13*). This method uses standard cash flow analysis procedures employed by developers to evaluate the magnitude of revenues that can potentially be generated by alternative benefit-sharing techniques, including:

- Lease or sale of undeveloped air and ground rights.
- Lease or sale of developed air and ground rights.
- Lease of concession space.
- Tax increment financing.
- Turnkey ventures.

This benefit measurement technique involves three major steps, summarized here:

1. Identifying development programs at stations, based on system background, community background, development trends, market factors, and zoning constraints.
2. Selecting appropriate value capture techniques for three scenarios: conservative, moderate, and aggressive.
3. Forecasting resulting revenue for each scenario through use of the "cash flow model," developed by the Rice Center in 1976 and subsequently updated.

The Rice Center method parallels the SCRTD "Milestone Six" process in that policies and plans for benefit-sharing are developed for the entire system on a location-by-location basis, with the development programs and benefit-sharing strategies specifically developed to suit market conditions, surrounding land uses and controls, and community concerns at each location.

The cash flow model, reproduced in Figure 13, was applied to develop a systemwide program for Denver, but can also be used to evaluate strategies at individual locations. A useful feature of the cash flow model is its distribution of costs and benefits over time, to show not only immediate effects of development implementation but also implications for 10–15 years into the future. This method is useful also in seeing how various strategies can be packaged to meet a systemwide value capture target or goal.

PRELIMINARY ENGINEERING/LAND-USE REGULATION/FINANCIAL FRAMEWORK DEVELOPMENT

Once the general parameters of station location, zoning and development policy, and financial strategy are determined, benefit-sharing involves formulating specific plans for station area development and doing the preparatory work necessary to implement the specific benefit-sharing strategies which are to be pursued. While benefit measurement in the first two planning phases was pursued at a broader geographic level, implementation of specific strategies for each station area must be based on more detailed information regarding actual design features (as developed in the preliminary engineering phase) and the impacts of transit on individual property owners.

Benefit measurement at this stage necessarily becomes more detailed because parameters such as the boundaries and density limits for zoning districts, impact areas and formulas for benefit assessment areas, or bonus provisions for incentive zoning or-

The cash flow model used in this type of value capture analysis determines the amount of revenue that transit a agency can generate on an annual and cumulative basis by various value capture techniques. The model has the capacity to evaluate the profitability of six different scenarios using the same data base from the perspective of either the private investor, the transit agency, or both. The model also has the capacity to analyze a proposed project with more than one scenario and more than one participant (e.g. one or more private investors, with or without the transit agency).

The scenarios are:

- Develop/Lease - in which the transit agency acquires land for station development and/or adjacent development, develops the site, and leases the facilities to private investors.
- Develop/Sell - in which the transit agency acquires adjacent land, develops the site, and sells the facilities to private investors.
- Lease - in which the transit agency leases undeveloped air rights or land within the station site to private investors.
- Sale - in which the transit agency holds air rights or adjacent land for a period time before selling the property.
- Special Benefit Assessment - in which the transit agency finances the cost of construction using revenues from assessments collected from property owners within a predetermined district, considered to be benefitting directly from the transit improvements.
- Tax Increment Financing (TIF) - in which the transit agency finances the cost of construction using property tax revenues collected on the increase in property values attributable to the development of the transit system. The TIF District is usually larger than the special benefit assessment district which includes only those properties directly benefitting from the transit system.

Input

To evaluate the cash flow of different scenarios, three computer programs were developed: (1) a sale model, representing a sale of properties, (2) an income model, representing a lease of properties which generates a stream of income over a fixed term, and (3) a tax model, representing the special benefit and tax increment financing methods of taxation. These computer programs analyze the "flow" of dollars over a fixed term generated by a given land use project at a specific station. The programs take into account such factors as the tax status of participants, capital gains realized from property sales, and inflation rates, as well as depreciation of the project, amortization of debt, and conditions of the local real estate market. Hence, the programs analyze a project for a transit agency by the same methods used by private sector real estate developers and investors.

A number of input factors are needed to perform cash flow analysis. These factors are based on economic and financial assumptions about market demand for various land uses, about inflation and interest rates, and on legal assumptions about the authority of the transit agency to purchase, lease, sell or tax property. In general, the models require the following input:

1) The land uses proposed for development in terms of square footage of building requirements.
2) Land costs.
3) Project construction costs.
4) Cost, term, and amount of money borrowed to construct the facilities.
5) Marketability and vacancy rates.
6) Years in which the project is to be completed and sold.
7) Income and capital gains tax rates of the participants (which is assumed to be 0%, if it is the transit agency, since government entities are tax exempt).
8) Inflation rates for construction, expenses, and land costs.
9) Local tax rates.

Output

The computer programs produce results which can be used to evaluate the profitability of the investment on an annual and cumulative basis. It also calculates the net present value of the total accumulated cash flow for a variety of discount rates. For projects that involve leases, the program calculates:

- Net Operating Income: the amount of dollars which the project generates annually.
- Cash Flow After Taxes: the amount of annual income after taxes.
- Cash Rate of Return: the ratio of net operating income to total investment.
- Internal Rate of Return: the discount rate at which the sum of the discounted costs and revenues equals zero.

For projects that involve sales, the program calculates:

- Revenue at Sale: the amount of dollars for which the property can be sold in a particular year.
- Proceeds After Tax: the net revenue which the project generates at sale, minus capital gains, ordinary income taxes, sale related expenses, and the outstanding mortgage balance.
- Return on Equity: the ratio of the owner's net proceeds after tax to the owner's initial investment in the project.

For the taxation scenarios, the program calculates:

- Total Tax Base: the assessed value of the properties within the taxing jurisdiction, including existing and new improvements and increases in land values.
- Special Benefit Assessment Revenues: revenues collected from the special assessment on property values.
- Tax Increment Revenues: the revenues collected by the property tax on the increase in the total tax base for a given year over the total tax base in the predetermined base year.

Source: (13), Appendix A, pp. A-1 - A-3

Figure 13. Cash flow model for value capture analysis (RTD, Denver).

dinances must be defined. Because the end products of this process have the force of a legal contract, or of a law or regulation, parameters must be specifically measured to ensure equity and fair charges or bonuses in terms of land use types, densities, and market factors. Thus, detailed data on factors, such as trends in property values by parcel, rental values, and ownership patterns, must be developed in order to determine the precise boundaries of zoning and assessment districts and, for special assessments, the types and extent of transit-related impacts affecting owners, residents, and businesspeople at varying distances from the transit facilities.

Benefit measurement at this level is most often the responsibility of the local planning agency rather than the transit agency itself, and the techniques for identifying types of impacts and delineating impact areas are, again, essentially planning techniques. Of course, when the transit agency is seeking a direct value capture benefit from the zoning or financial strategy being pursued, or when UMTA is funding the planning efforts, transit agency involvement is likely to be stronger. The case studies have shown various forms of cooperation between transit agencies and local planning agencies to perform the analyses necessary to identify benefits and set impact area and zoning area boundaries for transit station areas.

In Los Angeles, UMTA has funded detailed station area masterplanning for the Metro Rail stations, which is carried out by the three local planning agencies which have jurisdiction over the 18 stations under subcontract to SCRTD. UMTA funded this effort with the understanding that the work was "over and above" the planning work the local agencies would have done in any extent in anticipation of Metro Rail. The preparation of specific station area master plans involves three basic steps:

1. Establishing the legal context for zoning, development reviews, and benefit assessment district formation.
2. Developing site-specific development plans and design guidelines for station areas.
3. Putting implementation mechanisms into place.

In carrying out these steps, SCRTD has entered into cooperative agreements with the City, County and Community Redevelopment Agency of Los Angeles to conduct detailed station area planning for station locations within each jurisdiction. The planning follows a two-stage process. In the first stage, plans have been prepared for each station area to regulate the maximum amount of total development to be permitted within each station area. The City has developed a "Specific Plan" for the transit corridor that is actually a revision to the zoning ordinance. The specific plan sets forth the ground rules for density bonuses in return for provision of direct connections to the transit stations or other transit features, as well as Transfer of Development Rights to allow higher densities in the immediate station areas. Provision of transit improvements is equated in value to specified FAR bonuses, as discussed in the description of incentive zoning, above. The value equation is based on units of traffic impact resulting from land use types (defined as "trips"), whereby bonus square footage which would generate a certain number of vehicular "trips" is allowed in return for transit facility provision. The County has produced "station area plans" for its stations, which cover the same issues, but do not have the force of law. The County has also incorporated zoning incentives into these plans in station areas, but is hesitant to make the plans public until plans for extending Metro are definite, for fear of speculation. For stations within urban renewal areas, the CRA has produced "redevelopment plans" at the same level.

At the more detailed level, development feasibility, urban design, and implementation strategies are being analyzed for three impact zones within each station area by the three local agencies. The elements included in these plans are described in Figure 14. Through its coordination of these plans, SCRTD is taking a lead role in station area land use and development planning to set the framework for private investment, yet is using the institutional and staff resources of the local agencies involved to supplement its own staff and to translate the plans into definitive regulations and development guidelines.

In Portland, also, a station area planning process was used to define and initially measure transit-related benefits. In this case, the urban design and development plans for each station area, developed under the lead of a Portland architect and urban design firm who are also the architects for all of the LRT stations, provide the basis for zoning changes and bonuses. The urban design study provides a description and analysis of the physical characteristics of each station area (called here the "Urban Frame"). It identifies most likely and desirable sites for development and sets out plan guidelines, criteria, and illustrations for preferred development patterns. The principle behind all the plans is to achieve a degree of compactness and ease of pedestrian circulation around the stations and to protect the existing neighborhoods. Through a participatory process, the plans were eventually incorporated by each local jurisdiction into revisions to its Zoning Ordinance to guide development in the direction provided by the station area plans.

1. IMPACT AREA DEFINITION

   -- Immediate station impact area (to 600 feet from station)
   -- Primary station impact area (to 1,200 feet from station)
   -- Secondary station impct area (1,200 feet -- 1,800 feet from station)

2. DEVELOPMENT COMPONENT

   -- Assessment of development opportunities
   -- Identification of joint development/system interface opportunities
   -- land use mix
   -- Urban design concepts
   -- Public amenities
   -- Joint development/value capture opportunities and tools

3. DESIGN COMPONENT

   -- Identification of sites to treat in detail
   -- Three dimensional design plans
   -- Detailed sections illustrating station interface, integration of public/private spaces

4. IMPLEMENTATION COMPONENT

   -- Applications of joint development/value capture tools to specific sites
   -- Application of development controls
   -- Application of bonuses and incentives
   -- Benefit analysis (with SCRTD)

5. AGENCY REVIEW AND PUBLIC PARTICIPATION

Source: (55)

Figure 14. Los Angeles Metro Rail station area development plan summary.

The Zoning Ordinance changes, such as the Multnomah County Transit Station Area Zoning Ordinance, establish special zoning categories in the vicinity of the stations including medium and high density residential, neighborhood and general commercial, and office districts. These new zones are distinguished from preexisting zoning categories by a greater level of attention to eliminating traffic conflicts, concealing parking lots, ensuring a desirable pedestrian environment, facing commercial structures towards the transit stations and setting minimum criteria for density and building mass near the stations.

In New York City, the Midtown Office of the City Planning Commission is working at the station area level to develop quantitative cost/benefit measures to assess whether bonuses offered by the incentive zoning ordinance are equal in value to the transit contributions made by the developers. In this case, where demand is high, and densities extremely high, the public is beginning to question whether developers are reaping undue profit from the density bonus provisions. When measures are developed, they will be used as general guidelines in evaluating development proposals to help streamline decisions which are all made today on a case-by-case basis. The results of this work, which is seeking to avoid some of the problems encountered in offering density bonuses offered for pedestrian plazas on Manhattan's East Side, will help to fill another gap in terms of benefit measurement as it relates to zoning techniques.

In Los Angeles, planning efforts are also laying the groundwork for implementation of benefit assessment districts in the station areas by defining impact areas and delineating types of impacts. In this area, SCRTD is taking a lead role. As discussed above, detailed measurement of property value and other impacts is necessary to prepare for use of this technique in order to assure that charges are equitable between stations and that those assessed receive equivalent benefits from fees paid. Here the difficulty of benefit measurement is directly related to the exact nature of the purposes of the assessment. If the assessment is related to a fixed product, such as maintenance, the measurement of the benefit is relatively easy; i.e., proportion the maintenance budget according to services actually provided at varying distances from the facility. As the product to be covered through the assessment becomes more amorphous (i.e., transit operating deficit), the measurement of benefit and the political acceptability of the special assessment become more difficult, as shown in the case of the San Francisco downtown transit assessment district. Here, costly consultant studies were undertaken to calculate the costs for transit service which provided a special benefit within the proposed downtown assessment district, using a method that involved measurement of access to nearly 350 grid square areas to identify "the contiguous area receiving an extraordinary level of service" (*37*). The studies, which required original data collection and analysis methods, were exceedingly costly. However, after all this expense, the assessment district has been tabled by the city council due to lack of consensus on the overall concept.

One way to avoid costly data collection is to rely on "comparable" data from other locations. In Los Angeles, however, SCRTD has attempted with little success to develop comparable information on property value changes in other cities that have built new transit lines. Long-term data at the level of detail required to apply the results to the Los Angeles situation have simply not been collected for most transit lines. In the absence of this information, the SCRTD planners are conducting their own surveys of property value trends in the corridor, and interviewing property owners regarding perceived benefits of the rail line. This research was still in process as of summer, 1984, and not yet available to the public. The problems of SCRTD point up a true problem in benefit measurement—the lack of "before and after" studies or "comparables" upon which to base projections for new facilities in other cities.

One approach to measuring transit impacts which solves this problem is to wait until the facility is constructed, and conduct studies of its actual effects. While this approach precludes obtaining revenues from "Day 1" of construction, a variation is to set an initial boundary based on the best available data, reserving the right to alter it after an initial term based on actual impact data. In Denver, a transit mall assessment district (Mall Management District) was enacted by the City Council in 1978, prior to construction, based upon the best local knowledge on mall impacts that could be obtained at the time, and knowledge of the continuing maintenance and promotion functions which would need to be funded through the district. However, during the first year of mall operation (beginning in October 1982) based on petition of property owners both within the initial area and in the rest of the downtown, planning began to expand the assessment area based on "before and after" evaluation of the actual nature and extent of benefits provided by the mall.

As discussed earlier in the section describing benefit assessment district techniques, two studies were conducted for Downtown Denver, Inc., to prepare for expansion of the initial district. The first, conducted by Gladstone Associates (*33*), set forth the general types of benefits provided by the mall. The second, conducted by A. G. Bowes and Son, Real Estate Valuation Consultants (*34*), developed the actual formula for determining degree of benefit and apportioning annual mall costs to specific districts. The straightforward steps in the benefit measurement methodology, as described in Ref. (*34*), are the following (refer to Fig. 7 for district boundaries):

1. Define mall location with respect to overall downtown area boundaries in terms of zoning requirements and land use. In this case, the downtown was defined as the limits of the B-5 and B-7 zones (Fig. 7).
2. Inventory all downtown land use in terms of five categories, as follows:
    a. Office, defined in terms of net leasable area and land area.
    b. Retail, defined in terms of total building area and land area.
    c. Warehouse/factory, defined in terms of total building area and land area.
    d. Miscellaneous (including residential), defined in terms of numbers of units or total building area and land area.
    e. Vacant or parking use, defined in terms of land area only.
3. Map concentrations of each type of use within total downtown area.
4. Define area to which special benefits from Transitway Mall accrue, based on consideration of the following criteria:
    1. The special benefits of the Mall Management District must have some relationship to the purposes for which the Mall and its terminals were constructed;
    2. The special benefits accrue to properties within reasonable walking distances from the Mall and its terminal facilities;
    3. Types of uses and intensity of use permitted, and parking

requirements or lack of parking requirements in the B-5 and B-7 zones;
4. The concentrations of people already established by existing downtown developments;
5. The areas in which special benefits can be distinguished from general benefits; and
6. The areas encompassed by lines that are as straight as possible. (*34*, p. 41)

5. Allocate proportional mall benefits within the boundaries of the benefitted area, through a three-step analysis, as follows:

a. List all reasons for benefit that will result from mall activities. Ten "benefit reasons" were developed, as described in Figure 15.
b. Assign weights (benefit points) to each characteristic (see Fig. 15). (It is interesting to note that property value increases were assigned a weighting near the bottom of the benefit scale, because, "as opposed to all other features, this factor probably increases in importance in inverse proportion to distances from the mall, . . . we cannot see how the amount of special benefits can be related to the benefitted properties in direct proportion to the present land values or present revision of land values proposed to the Assessor's Office, . . . [and] it might be that the areas near the confluences of the Mall and the terminal buildings might over a period of years attain greater proportionate special benefits than the land closer to the center of the downtown district. Also it is significant that the points of higher land assessments for ad valorem taxes are on 17th Street while the points of highest special benefits are on 16th Street" (*34*, pp. 51-52). Further, the consultants warned that "increase in land value . . . does not necessarily mean a measurable jump in land prices within a short period of time after mall completion. Rather, it denotes the difference over a longer period, say 10 years, between what the land values would be without the Mall and what the level of land values would be with the Mall" (*34*, p. 49). Thus the criterion of value increases was expressed in terms of *probable* increases in market value, rather than actual measurements.
c. Select boundary lines for each zone, based on concentrations of uses.

6. Demonstrate how probable land value increases in benefitted areas will exceed capitalized value of mall operating budget over time.

7. Distribute operating costs based on total operating budget for District, percent of total land area square footage per zone (as opposed to total assessed value), and a modification of the formula to eliminate possible inequities between the B-5 and B-7 zones (Fig. 16). Within each of the zones, the square footage area of ownership, divided by the total square footage in the zone, multiplied by the B-5 versus B-7 rate for that zone, is used to determine individual property owner assessments.

Three major observations can be made about the applicability of this method to other types of projects or to other areas, as follows:

1. The client for this study was *not* the transit agency, but the direct beneficiary of the proceeds of the special assessment—

Benefit "Reasons"	Total Maximum Points	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Proximity	100	100	100	75	50	25
Higher net income	80	80	80	60	40	20
Lower employee costs	80	80	70	40	20	10
Increased security	70	70	40	20	10	5
Maintenance costs	70	70	60	10	5	5
Commercial intercourse	50	50	40	30	20	10
Increased demand for transient housing, cultural	40	40	30	30	10	10
Improved health, sanitation	40	40	20	10	5	5
Probability of value increase	30	10	10	20	20	30
Recreational betterments	30	30	20	20	5	5
TOTAL	590	570	425	270	140	100
Total of all zones	1505					
Percent in zone		38%	28%	18%	9%	7%

Source: (34, p. 53)

Figure 15. Calculation of "special benefit points" by zone—Denver Transitway Mall.

Downtown Denver, Inc. In this case, the transit agency was not the appropriate client to initiate the study. In cases where the transit agency would be the direct beneficiary, such as Los Angeles, it would be more appropriate to have the transit agency commission the study.

2. A *professional real estate valuation consultant* was selected to perform the study. Use of professionals ensured:

a. familiarity with the parameters to be measured and conditions specific to downtown Denver.
b. Use of appropriate methods.
c. Credibility with the downtown community.

3. While probability of land value increases due to the Mall was one important benefit to be measured, the study found that in this case other factors were more important determinants, and that property values were not the appropriate basis for levying the assessment. It was important to show, however, that probable increases in land value would equal or exceed the assessment fees paid over time. Because the assessment was so low, this was relatively easy to demonstrate.

FINAL DESIGN, PROJECT PLANNING AND PUBLIC-PRIVATE NEGOTIATIONS

At the final design level, cost and benefit measurement must be undertaken in the most detail to provide the basis for negotiating leases and cooperative agreements. At this level, detailed financial information must be developed as the basis for cost and benefit-sharing. Such analysis is ideally undertaken when the transit facility and the adjacent development are de-

16TH STREET TRANSITWAY/MALL

DOWNTOWN MALL MANAGEMENT DISTRICT

DISTRICT EXPANSION PROJECT

DISTRICT ALLOCATION AS APPROVED BY THE BOARD OF DIRECTORS ON JULY 21, 1983 [1]

Approved 1984 Budget Estimate - $1,675,000

Zone	% of Budget	Share of Budget($)	Assessable Zone[2] Area (Sq. Ft.)	Share per Sq. Ft.($)	B-7 Zone Area (Sq. Ft.)	B-7 Dollar Share ($)	B-7 Discounted Share ($)	B-5 Dollar Share	B-5 Share %	B-7 Share %	B-5 Share per SqFt($)	B-7 Share per SqFt($)
1	38.00%	$ 636,500	1,474,312	$00.4317	149,964	$ 64,739.46	$ 31,322.50	$ 605,177.50	36.13%	1.87%	$00.4570	$00.2089
2	28.00%	469,000	1,390,014	00.3374	150,240	50,690.98	23,115.00	445,885.00	26.62%	1.38%	00.3597	00.1539
3	18.00%	301,500	1,504,264	00.2004	199,986	40,077.19	21,440.00	280,060.00	16.72%	1.28%	00.2147	00.1072
4	9.00%	150,750	1,182,830	00.1274	187,648	23,906.36	12,562.50	138,187.50	8.25%	.75%	00.1389	00.0669
5	7.00%	117,250	1,109,307	00.1057	201,922	21,343.16	10,887.50	106,362.50	6.35%	.65%	00.1184	00.0516
	100.00%	$1,675,000	6,660,727		889,760		$ 99,327.50	$1,575,672.50	94.07%	5.93%		

[1] On July 21, 1983 the Board of Directors of the Downtown Mall Management District adopted the A. G. Bowes & Son, Inc. Benefit Study , dated July, 1983, subject to a 1984 budget estimate reduction from $1,750,000 to $1,675,000 and the exemption of certain governmentally-owned properties from the special assessment.

[2] The special assessment formula, as recommended by A. G. Bowes & Son, Inc., is based on square footage of land area.

8/26/83

Figure 16. Summary of Denver Mall Management District Budget Assessment—1983.

signed simultaneously so that potential coordination problems can be identified early and cost-sharing agreements negotiated. However, when simultaneous design is not possible, the station design must take into account possibilities for future connections to development sites. In Washington and Los Angeles, knockout panels within the stations have been used to accommodate potential future connections which might be made. As the SCRTD Real Estate Director noted: "Our emphasis now [in the early Metro Rail planning] has to be not to preclude development opportunities. Developers need a return today. They are willing to take a risk of not providing a connection today if transit is not coming for seven years" (*16*). However, developers, if they will not go so far as to construct a transit connection in advance, are often willing to alter designs to accommodate a potential future connection, as evidenced by projects built in advance of transit allowing easements or using knockout panels in Toledo, Boston (SW Corridor), Los Angeles and Washington. Measurement of these benefits is a function of identifying opportunities in the design and estimating the costs of providing for the connections in advance versus altering the project later. This type of benefit measurement can be facilitated through use of the same architects and engineers. Use of the same firms has obvious advantages in coordinating design elements and in ensuring consistent cost estimates. In Los Angeles, for example, the CRA has hired SCRTD's engineers to investigate connections to the Pershing Square station.

In order to participate effectively in the negotiations that occur in the design process, the transit agency not only must seek to incorporate its own future needs into the planning and design, but it also must have an understanding of the objectives of the private developer and the local government unit involved. The case studies conducted for this project did not cover the dynamics of project-level negotiations in detail, both because data were generally not available for negotiations in progress, and because the subject is well covered in the Urban Land Institute report, *Joint Development: Making the Real Estate-Transit Connection* (*10*), which provides step-by-step descriptions of negotiations (or "deals") conducted for seven major joint development projects, and is an excellent source on this subject. However, the objectives of the participants as they involve benefit measurement include the following.

In the design phase, the developer works to:

- Select the type of development and mix of uses appropriate for the market and site.
- Make early marketing and income decisions, taking into account risks involved in terms of time and investment of capital.
- Make initial financial assumptions and run preliminary development budgets.
- Make preliminary design and building system decisions.
- Put together the design team—architect, engineer, contractor, leasing agent.
- Begin the public approval process.
- Find a lead tenant (office or retail).
- Approach potential lenders.

The local government agency, on the other hand, has a broader mandate to consider:

- The appropriateness of land-use mix and density.
- Effects on adjacent environment and neighborhood.
- Financial implications in terms of taxes or in lieu payments.
- Availability of infrastructure and responsibilities for financing necessary capital improvements.

At the same time, the transit agency should be looking at:

- Effects of the project on ridership and operating costs.
- Accessibility and parking (especially potential conflicts with transit user needs).
- Unique operational and structural requirements.
- Potential legal restrictions on the land, building, or air rights.
- Revenue implications in terms of leases or benefit assessments.

While objectives vary depending on the type of development, the "bottom line" for all parties in negotiating final agreements is generally financial return. In general, certain key measures are evaluated in determining financial feasibility, as summarized in "Public Private Partnerships for Economic Development: A Reference Manual for Local Government (*56*), including:

- *Net operating income (NOI),* which is operating income less operating expenses before debt service payments. Generally, lenders require NOI to be 1.25 to 1.35 times the debt service.
- *Cash flow,* which reflects NOI after debt service payments, and is generally calculated on a year-by-year basis until the debt is retired.
- *Equity retirement,* which is the difference between total development costs (including land acquisition, site preparation, construction, indirect, and financing costs) and the amount of debt that is covered by NOI.
- *Return on investment,* which is basically cash flow divided by required equity. Calculated on a discounted cash flow basis, return includes expected future income flows, tax shelter benefits, and future sales proceeds.

Income and cash flow are typically evaluated in a "pro forma" statement which summarizes costs and revenue to obtain a "bottom line" indicator of return on investment, as shown in Figure 17, for a mixed use development. The developer uses this pro forma statement to obtain commitments from lending institutions for long-term or "permanent" financing and also interim financing to cover start-up costs and the construction period. Figure 17 summarizes development costs, operating costs and benefits, and investment requirements as shown below:

- In the first section, all actual development costs are summarized, including interest costs, to obtain a total project cost.
- In the second section, operating revenues and expenses are estimated to obtain an estimate of net operating income (NOI), line 13. From this figure, an estimate is made of the maximum yearly debt service which can be covered by the operating income. Lending institutions typically limit the maximum mortgage payment to 70–80 percent of income; in this case it is 77 percent. Subtracting the debt service from the NOI yields cash flow before taxes (line 15).
- In the third section, the maximum debt service payment which the development can carry is used as the basis for estimating the required equity—in this case, 62.5 percent, the pretax return on investment and the internal rate of return (after

Development Costs		
1.	Acquisition of Land	$1,050,000
2.	Site Preparation	350,000
3.	Subtotal Land Development (1 + 2)	1,400,000
4.	Construction Costs (100,000 sq. ft. @ $50)	5,000,000
5.	Indirect Costs and Financing	2,100,000
6.	Total Costs (3 + 4 + 5)	$8,500,000
Operating Results		
7.	Office Revenues (90,000 sq. ft. @ $18)	$1,620,000
8.	Retail Revenues (10,000 sq. ft. @ $9)	90,000
9.	Subtotal Revenues (7 + 8)	$1,710,000
10.	Less vacancy (5% of 9)	(85,500)
11.	Total Revenues (9 - 10)	$1,624,500
12.	Operating Expenses (45% of 11)	731,500
13.	Net Operating Income (11 - 12)	$ 893,500
14.	Maximum Debt Service (13/1.3)	687,300
15.	Cash Flow Before Taxes (13 - 14)	$ 206,200
Investment Results		
16.	Maximum Mortgage (14 @ 18% @ 30 yrs)	$3,791,700
17.	Required Equity (16 x 1.4)	5,308,400
18.	Percent Equity (17/6)	62.5%
19.	Return on Investment - Cash, pretax (15/17)	3.9%
20.	Internal Rate of Return -- after tax	5.1%

Source: (56, p. 68)

Figure 17. Example of a private development investment analysis.

taxes). This "bottom line" is used by the investor to determine whether the project is worth pursuing. This example indicates a positive cash flow, but represents a marginal investment in terms of potential return. The internal rate of return of 5.1 percent in this example is much less than the 15–20 percent usually viewed as acceptable under current market conditions. As a result, the source (*56*) concludes that "public incentives will likely be necessary to achieve project development" in this case.

Negotiations between the transit agency, other public agencies and the developer can affect various cost and revenue components. While "bottom line" return on investment can be affected by negotiations regarding land price, lease agreements, site preparation and construction cost sharing, and taxes, the major elements affected in the design phase are the square footages allotted to various uses and the rents which can be charged. The main benefits of transit are in reducing space requirements for parking (measured as increases in leasable area), and making the space more marketable (measured as increases in rents). The exact dollar amounts of the transit-related benefits must be determined on a case-by-case basis.

The ULI study (*10*) points out that "in a downtown commercial development, the retail components of a project normally are the most lucrative, providing the building owner with high base rents and often percentages of sales as well." Transit, especially in downtown stations, provides the high level pedestrian traffic desired by retailers. Therefore, facility designs which accommodate maximum retail use, located in areas of high pedestrian flows, can increase developer revenue. Location of street level entrances to maximize opportunities for desirable corner retail locations can also increase retail rentals.

As pointed out in a WMATA study (*57*), direct "system interface" connections to underground stations can also bring about both "changes in use of portions of affected properties to a higher use offering greater economic return" and "more intensive use opportunities created by improved access, convenience, more direct routing and shelter—generating increased rent potentials." Potential for such conversions of space use is increased when zoning provides incentives for density bonuses or reduced parking in return for the transit connection.

WMATA analyzes system interface impacts by using the Land Value Residual Method, which is a standard technique used in real estate appraisal. Summarized, this method includes four steps, as shown in Figure 18, along with an example of use of the method in determining the added value resulting from provision of retail use and a subway connection in place of underground parking. Alternatively, the added rentals could be calculated in the pro forma statement, along with the added costs of providing the subway connection and upgraded space to obtain a new bottom line rate of return on the investment. As discussed above, the Rice Center's cash flow model for value capture analysis (*13*) applied for the proposed LRT station areas in Denver takes this approach to quantifying transit agency benefits over time resulting from various value capture strategies or development project investments.

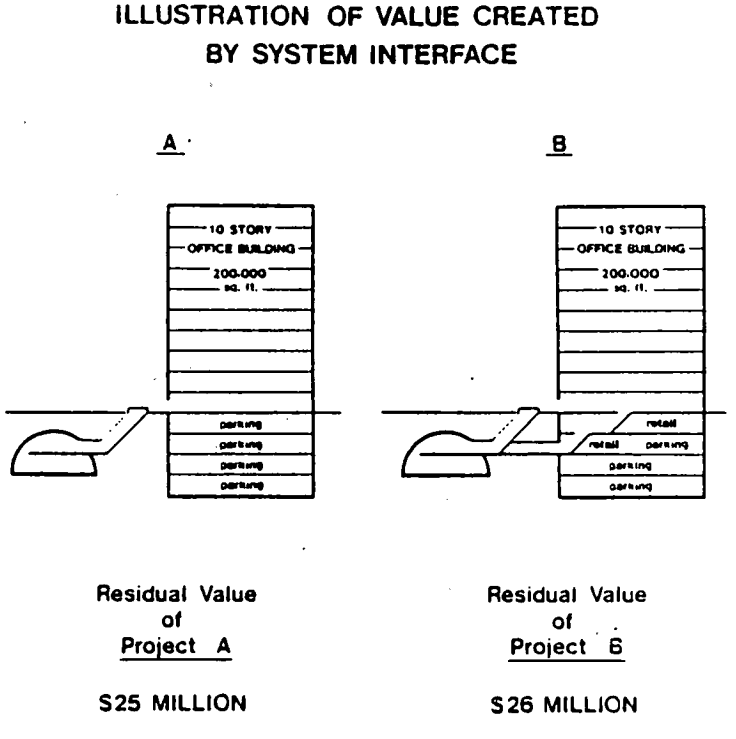
In addition to the typical development analysis of a project, the transit agency should approach a project with a view to quantifying the value that it brings to the project, evaluating future impact on transit-related activities, and identifying contributions that the transit agency can make toward the success of the project.

The fact of a transit facility or station is usually a positive factor. At a minimum, the transit facility attracts an additional number of people, and brings a degree of convenience that otherwise would not be available to the developer. This positive factor translates into value to a developer, and the transit agency should include that value in determining lease or sales value. The "value" of the station is generally quantified in terms of transportation parameters that are obtained through standard transportation analyses, i.e., ridership, reduced traffic congestion or parking demand, travel time savings to downtown, headways, pedestrian volumes through the station. This type of value is clearly maximized in downtown locations in large cities, such as New York, where the transit facility substitutes for required parking, thus allowing more leasable space in the development. Ridership projections have a particular influence on income projections, support services, and ultimately net income. A transit agency that can guarantee a date for station construction and project ridership with a reasonable degree of credibility can use that information in determining value. An interesting finding of the study, however, is the often intangible nature of the perceived transit benefits, particularly in suburban locations. Suburban transit station locations are perceived by developers as more "marketable," even where developers provide the same amount of parking as they would in a location not served by

In the case studies, this approach utilized the Land Value Residual Method, which is routinely used by professional appraisers and others in the real estate industry. As applied to any development project, the Land Value Residual Method includes the following steps:

- Calculation of net income from the project (expressed as net operating income);
- Capitalization of net income (in which project income is divided by a predetermined annual interest rate) to determine project value (expressed as supportable development costs);
- Establishment of building cost estimates (expressed as system interface improvement costs in this study); and
- Derivation of residual value (project value less improvements value yields a residual imputable to the land or other contributing factors such as system interface).

Once a residual value is established for a project's "base case" (without system interface), increases in that value under a "system interface case" can be attributed to direct subway access. This approach is illustrated in in the following Exhibit, Illustration of Value Created.



Source: (57)

Figure 18. Use of Land Value Residual Method to estimate increased value created by system interface (WMATA).

transit or where a very small percentage of employees actually commute by transit. One Boston area planning official summed up this perception as a feeling of security in case of a new fuel shortage as occurred in the early 1970's. The developers like to know that transit service is available as a back-up, even if it is not heavily used today.

It is also important for the transit agency to evaluate the public investment it contributes to a real estate development and to receive a reasonable return on that investment. A number of predevelopment expenses (site planning, land costs, feasibility studies) can be absorbed by the transit agency because of the eventual benefit that will be achieved from the real estate development. However, that investment should be quantified and a reasonable return secured by the transit agency. When the transit agency participates in these project activities at a time when the project is at risk or in a planning phase, then it is logical to conclude that it should participate in the success of the project through some form. Typically, a percentage of gross on net income is one avenue of participation.

On the other hand, the transit agency must be realistic in negotiating its own financial return from development projects, and not forget the objectives of the local agency and the private developer. The point of benefit-sharing is that *all* the parties share the benefits as well as the costs. The transit agency cannot ignore the fact that the developer must achieve a certain rate of return from the project and that his public contributions have a limit. Similarly, the local government seeks a certain tax revenue from the development to finance necessary infrastructure and services. While transit access is one element in making the project feasible and marketable, the transit agency cannot hope to secure *all* the financial benefits from a given project. In some cases, particularly in slow market situations, the non-financial benefits of better image or environment may actually be the major benefits realized by the transit agency. In addition, particularly in suburban areas such as New Carrollton Station in Prince George's County, Maryland, where the marketability of the site is determined as much or more by its excellent highway access as its transit access, the public costs of providing auto access roads and parking to serve the development must be weighed not only against eventual revenues, but also against alternative highway investments that would not take advantage of the access to transit and might even have negative effects on transit use.

Thus, besides financial analysis, evaluation of design options and site-level environmental impacts must also be performed at this stage. The benefits of good conceptual design can be assessed in terms of realized versus missed opportunities. The opportunities cover a wide range from easy pedestrian access through developable parcels to security and surveillance provided by the appropriate mix of activities. The potential value of these opportunities is very high. A few acres of land made attractive for development may add value in the millions of dollars. An appropriately mixed pedestrian environment may make the difference between the complete success or failure of projects costing in the tens or even the hundreds of millions of dollars.

The costs for construction of good conceptual designs are not necessarily any higher than for those poorly conceived. The main costs are the additional design services and the additional administrative costs and time required for client coordination.

The design services of the best urban designers will add only in the tens (or at the most a few hundreds) of thousands of dollars to the cost of a project and will return many more times their cost in ultimate project value. The difficulty usually is that this design cost must be incurred at the front end while project funding and commitments may not be firmly in place. Yet raising adequate front-end funding for high quality conceptual design should be a high priority because of its extreme cost-effectiveness. Public agencies can absorb some of these costs by funding the initial design and site planning studies, or preparing developers' kits setting forth the basic land use and design specifications.

Expenses for client coordination and project administration are usually not such a clear out-of-pocket cost but are in fact more often the cause of a lack of good conceptual design. The problem here is that until clear concepts have been proposed where individual parties can assess their relative interests and negotiate their participation, it is hard to obtain firm commitments to the efforts and costs of a program. In practice, it is often necessary for one party to take the lead in starting a professional team to generate conceptual designs, then bring the other parties on-board and revise the concepts in cooperation with the new participants. The initiative has in different situations been taken by downtown groups, city development or planning departments, or, less frequently in the past but now increasingly, by the transit agency. The cost of such efforts is considerable in time and services, but these can be exceeded by orders of magnitude in the ultimate value created.

Environmental amenities lend themselves to a different type of cost-benefit analysis. Here the benefits of making the project more attractive must be judged qualitatively in terms of what is required for the public acceptance of public spaces and the marketability of private facilities. These marketing conditions are routinely evaluated for any real estate development. The analysis method is usually based on a combination of an objective study of who the clientele is likely to be and a judgment based on comparable facilities of the appropriate level of quality for this client. To assist in this evaluation, the costs of different levels of amenities such as spatial quality, finish materials, lighting, seating, planting, art work, etc. can be accurately evaluated by the project designers. Depending on how much effort is invested in the analysis at this point, the benefits of these various scenarios can be estimated through such marketing techniques as user surveys or focus groups. Alternative levels of amenities can be illustrated and cost-evaluated and the level of commitment as well as cost-benefit-sharing can be negotiated among the public and private parties.

CONSTRUCTION, OPERATIONS, PROPERTY MANAGEMENT, MONITORING

The measurement of costs and benefits does not stop after projects are constructed. Responsibilities and costs for operations of the commercial components of projects become an issue where the transit agency leases concession space or easements within publicly owned space to the private sector. Operations also is an issue for transit malls, bus shelters, and transfer facilities in downtown areas where a higher degree of servicing than is normally provided by the public sector is necessary to maintain the more elaborate design elements and amenities provided as part of the improvement project. Maintenance responsibilities must also be defined in the instance of shared public spaces as in the case of the New York, Boston, or Washington subway stations. Security of public areas also is a concern. In

addition, marketing and promotion are necessary to attract patrons to the area as well as to attract suitable tenants for vacant space. Because operating and maintenance costs are continuing expenditures and subject to cost escalation, it is in the transit agency's interests to secure participation of the private tenants or developers in paying their share on a continuing basis. Measurement of costs in this case is straightforward; the cost sharing is usually based on relative floor space owned or leased, and the actual costs are tracked through standard accounting procedures.

The vehicle for sharing operating costs is typically a cooperative agreement which defines public and private responsibilities. In such agreements, responsibilities and costs are presented in detail. The Michigan passenger terminal programs have tried a variety of arrangements for sharing operating costs. The most effective, as employed in Battle Creek, is to renegotiate the leases every year, based on projected operating costs for that year. In Toledo, numerous cooperative agreements were made for construction and maintenance of the transit stations and pedestrian concourses among TARTA, the city, and the private sector. Total commitments are revised annually based on proportional shares of actual operating costs.

Besides determining the levels of participation in ongoing operations, the final task involved after the facilities are built is that of monitoring impacts. As stated above, this task, while often neglected, is important in order to:

1. Obtain actual data on transportation, land use, environmental, and financial impacts resulting from construction of the transit facility.
2. Identify any unanticipated costs or benefits which should be taken into account in assessment formulas or public-private cooperation agreements.
3. Identify possible changes in the boundaries of impact areas, which might change assessment formulas or broaden the number of owners affected.
4. Identify long-term impacts on property values, transportation patterns, land-use changes, and other measures.

Allocations of funds to pay for such monitoring should be made either as part of the transit planning work elements or as a budget item to be paid for from assessment district proceeds. In addition, assistance from UMTA on conducting such monitoring and publishing the results would be extremely helpful to many agencies.

CHAPTER SIX

RECOMMENDATIONS FOR IMPLEMENTING BENEFIT-SHARING TECHNIQUES

This investigation has assessed the growing body of experience with benefit-sharing across the country, and has found that the successful examples all share two qualities in common. One is a willingness of the transit agency general managers and key department heads to look beyond strict operational considerations for new development-related opportunities. The second is a cooperative spirit between the transit agency, local planning agencies, and the private sector.

Feasibility in benefit-sharing is as much a matter of a basic entrepreneurial attitude and adaptivity to the elements of a specific situation as it is the result of positive cost-benefit computations. Indeed, it would be misleading to suggest to a transit agency audience that benefit-sharing can be reduced to a systematic application of procedures and calculations that will reliably produce returns on a regular schedule. The state of the art is still too new, and benefit-sharing is, by its nature, an opportunistic endeavor. Political skills and bargaining strategies may be even more crucial than the calculations or the technical design skills involved in crafting a benefit-sharing "deal." Nevertheless, the findings of this study do point to a number of concrete recommendations and some guidance for transit agencies that would seek benefit-sharing opportunities, choose appropriate strategies, and negotiate argreements to maximize benefits for all participants. These recommendations are presented in the following.

1. *As a first step, review opportunities for benefit-sharing within the transit agency.* As in most fields of endeavor, opportunities for transit-related benefit-sharing come in all shapes, sizes, and disguises, and thus are not always readily recognizable. This study has identified general types of opportunities. Uncovering specific applications depends on local knowledge and creativity in discerning and then responding to the particular set of circumstances presented by each individual situation. No set formula can be given for this process, but there are several pieces of advice for identifying opportunities successfully:

- In the case of new construction, whether for rail, transit, terminals, maintenance facilities, or transit malls, look at opportunities for joint development and value capture as early as

possible in the planning process. Do not use Federal funding criteria as a starting point; rather, determine how an attractive total package can be put together, then look at how Federal and local sources can be combined with private monies to make the project work. This is as true for small transit properties (Michigan and Toledo case studies) as for large.

- In the case of existing stations, look at system interface possibilities which might not have been explored before, investigate the possibility of having corporate neighbors assist in station maintenance, review lease and concession terms to ensure market rates are being charged.
- Investigate the potential (magnitude and timing) for enhancing revenue generation from existing property holdings through joint development, lease, reuse, especially in areas where demand is high. Work with local jurisdictions to carry out the "front end" planning, financing this effort or lending staff expertise where possible.

Identification of opportunities is not a one-time process, but should be continuous. The transit agency should thus seek to develop an entrepreneurial orientation, scanning the horizon for opportunities, seeking out appropriate public and private partners for each project, and working toward implementation. In this regard, market factors must be recognized as a critical consideration in developing strategies. While property availability can be identified early, the site must be "ripe" for development to get projects going. This is true not only with respect to the real estate market, but other factors as well, such as road access, utilities, planning and regulatory context, image of the area, and the overall financial climate.

Once the transit agency gets an idea of the general scale, time framework, and constellation of issues surrounding realization of each of the benefit-sharing opportunities identified, it should be possible to set some priorities and lay out an implementation program. For an agency undertaking its first benefit-sharing effort, target-setting may be a matter of outlining a schedule for the steps to be accomplished in connection with a single, specific project. More experienced agencies may be dealing with a more complex program, meshing flow charts for multiple projects—some short-term, some long-term—at different stages of implementation. Or, state Departments of Transportation may be trying to "package" strategies employed in individual transit properties to meet a statewide benefit-sharing goal. Factors to be considered in setting implementation priorities are quite like those that govern other real estate development programs—i.e., the anticipated return (amount, timing and associated risk), the demands on staff and top management, the resources that would have to be invested in realizing the project (amounts, timing, and availability), and the prospective returns from alternative investments of these resources. Realizing that benefit-sharing does incur costs to the transit agency—if only in terms of staff time and budget for outside professional services—that should be recognized and taken into account. Over time, it will be possible to subject benefit-sharing itself to cost-benefit analysis. The MBTA in Boston, for example, is beginning to see if benefit-sharing revenues can meet the staff costs associated with running the program, and investigating budget mechanisms to do so. It may even be possible, where benefit-sharing programs are well established and local circumstances are very predictable, to set revenue targets for implementation in terms of dollar amounts.

2. *Establish an appropriate continuing structure to pursue benefit-sharing opportunities.* Since the process of identifying and responding to opportunities is continuous, and the strategies themselves, particularly financial strategies, change over time, access to real estate and financial expertise is essential. Transit agencies can obtain such expertise either through use of in-house staff or by retaining consultants. Most agencies active in benefit-sharing efforts have found that it is necessary to have at least a minimum of in-house expertise. Most important is direction from the General Manager to launch and support the effort.

Consensus building is key to accomplishing benefit-sharing. The organizational structure and process developed should promote consensus building by accommodating the need for interrelationships among many different departments of the transit agency and providing for liaison with outside agencies' staffs as well as community groups. In a smaller agency, the General Manager can play a key liaison role by keeping up with municipal circles, as was the case in Toledo. Having worked with key city and private leaders to set the framework, the Toledo general manager then hired an experienced local planner to carry out the working liaison. The state Department of Transportation can also play a valuable role in assisting smaller transit agencies with the liaison effort. In Michigan, the UPTRAN representative traveled to the communities with projects pending, testified at hearings, assisted in planning and funding applications, and, in general, convinced local leaders of state support for the program.

In a larger transit authority, such as WMATA or SCRTD, it is most effective to give one specific department or individual the clear lead role for benefit-sharing. However, as seen in the MBTA case in particular, care must be taken to link other departments within the agency into the effort formally as well as informally. Benefit-sharing is outside the traditional mandate of most transit agencies. Its implementation often involves organizational, political, and administrative hurdles. Without top level conviction and support for the effort, it will inevitably meet its demise from one of these stumbling blocks.

In addition to the formal organizational structure, it is important to create and maintain good informal contact and good working relationships with the other agencies and community groups involved in the process. This is particularly critical at the staff level, and helpful as well at the management level. The case studies showed that such relationships come about to some extent both locally and nationally through informal "networking" and job changes among the professionals who have been involved in transit-related development over the years.

Obviously these types of relationships cannot be mandated. However, opportunity for these types of relationships should be maximized through the formal liaison processes. Los Angeles set up three levels of committees at the political, executive officer, and staff level to coordinate Metro Rail planning. In general, the formal processes are set up such that staff at similar decision-making levels talk to each other.

Transit representatives dealing with the private sector should be knowledgeable about planning and financial details. Assigning the participatory process for development-related projects to a marketing or public relations department alone is a practice to be avoided. Private developers want to talk to someone whom they perceive to be on their own level—someone who can "talk their language." In addition, they want to feel they are speaking with a party who has authority to make decisions, or, at least,

clear and direct linkage with the relevant decision-makers. In addition to responding to private sector desires, assigning the liaison function to high level personnel also helps ensure that these individuals have enough flexibility and perspective to respond to unusual situations, to negotiate effectively for the transit agency, and to "seize the day" in terms of opportunities which arise.

3. *Incorporate a benefit-sharing philosophy into the ongoing planning and implementation process.* Ideally, planning for benefit-sharing should begin when planning for transit begins. Benefit-sharing potential should be a key factor in decisions on routing and station location. Benefit-sharing considerations should be conveyed to the local jurisdictions and be brought to bear in planning and zoning policy for those areas. The role of the transit agency in these efforts can be one of communicating issues and opportunities, informing local decision-makers on benefit-sharing opportunities and options, and monitoring and attempting to influence the planning and zoning process.

Since most areas are not initiating new transit systems, there will be few opportunities to adopt a comprehensive approach to planning for benefit-sharing. However, where routes and station locations are not yet fixed, or where extensions or changes in service routes are contemplated, early consideration of benefit-sharing implications is still possible.

The transit agency should also keep track of development activity in areas where the market is strong, particularly in downtown areas where connections to stations could be incorporated into development projects as conditions of project approvals. In this case, the transit agency must work to have local government accept transit as a beneficiary of private development. Thus, the transit agency planners must become involved in local efforts to revise zoning ordinances, set parking policy, or institute other policies which might encourage transit. The work necessary to alter zoning regulations or establish benefit assessment district boundaries is considerable and in many cases beyond the resources of local governments. In this regard, the case studies showed that the pass-through of UMTA funds from the transit agency to the local planning agencies in Los Angeles and Portland was very effective in funding the additional planning work necessary to incorporate transit provisions into land-use regulations, and in ensuring coordination of the planning and transit agency activities. The case studies also showed that major direct capital contributions from the private sector to transit construction are only likely where there is a great demand for large transit-dependent projects and the local government is willing to make transit the primary beneficiary of the developer's contribution. Midtown Manhattan was the only example of this, although Los Angeles had set up a framework for granting the highest density bonuses only if transit improvements were provided. Portland, however, gave other public needs precedence.

Different localities differ greatly in their style of implementing and respecting plans. The Transit Station Area Planning Program in Portland is likely to bear fruit because that region has a long history of making plans with extensive community participation and carrying them out with a high degree of ongoing public and private consensus. Similar plans in an area where community interests may be in greater conflict and local politics are more volatile may prove a fultile exercise. In such areas shorter range plans geared directly to implementation are likely to be more fruitful. In Kalamazoo, the rehabilitated station failed to act as a catalyst to revitalization of its surrounding area due to lack of public action to support redevelopment and an "anti-urban renewal" philosophy. Without the supportive planning efforts in the old station area, the terminal might have more effectively been located elsewhere in terms of both its operations and its ability to generate operating revenues through leases.

4. *Gear benefit "measurement" to the type of facility, the stage of planning, the level of impacts, and the financial goal.* A goal of this research project was to identify improved techniques for measuring the benefits of benefit-sharing. A major finding of the study has been that adequate techniques for measuring the full range of transportation, aesthetic, financial, and real estate benefits are readily available from standard professional practice in the various fields.

The difficulty of detailed benefit measurement, particularly of long-term increases in property values in response to transit improvements, is perceived as a major obstacle to implementing benefit-sharing. In fact, the case studies showed that detailed benefit-measurement *per se* is an issue only in two cases—special benefit assessment districts and *quid pro quo* incentive zoning bonuses. But even in these cases, strategies have been successfully employed through use of standard planning, market research and real estate techniques and they have been defeated in spite of costly innovative data collection procedures.

The recommendations for transit agencies to follow in terms of benefit-measurement are, therefore:

a. Gear the level of detail of the benefit measurement to that required for the immediate planning or implementation decision.
b. Employ professionals to conduct necessary studies from nontransportation disciplines, whether through in-house staff, interagency cooperation, or use of consultants.
c. Simplify the measurement task required for assessment districts by defining a specific product to be paid for by the assessment for which benefits can be readily identified, identifying (mainly through planning techniques) all the areas of benefit, clarifying the *probable* areas of property value increase only as a factor in assigning boundaries, not as a basis for the assessment itself, making the basis for the assessment a stable characteristic such as land area square footage, and making the term of the initial ordinance short enough that it can be easily revised based on actual impacts.
d. When in doubt, let the marketplace dictate benefit value through competitive bidding procedures, lease terms, or negotiations leading to cooperative agreements.
e. Collect good data on an ongoing basis which can be used to demonstrate the real value of transit in terms of modal split, station ridership, travel times, service additions, etc.
f. Achieve political consensus on innovative strategies or ordinances before conducting costly studies.

5. *Approach the private sector in a businesslike fashion.* Transit agencies should establish good communication with the private sector and work to obtain a strong private sector commitment to the benefit-sharing program. The philosophies on which benefit-sharing is based—of seeking new revenues to support public programs, and of seeking to conduct public business on the same basis (payment for value received) as private business is conducted—carries a certain inherent logic to those involved in

private enterprise. The success of the transit agency's efforts to convey the equity of these principles and the programs used to implement them may be critical to the success of the program. Very visible support from key business leaders is particularly helpful. On the broadest level, corporate executives are often willing to lobby for Federal funding or state funding referenda for transit, because it helps the health of the downtown and region.

For benefit-sharing to succeed, the public-private partnership must be a true partnership, with genuine desire on the part of all parties to create mutual benefits, or a "win-win" situation. The successful case studies have shown a positive transit agency attitude which incorporates a willingness to explore with the private developer opportunities that might work synergistically to raise the level of both public and private benefits. The successful transit agencies have recognized in their development negotiations that developers must achieve a certain financial return for the project to be feasible, and that their budgets for public improvements have limits that are tied to factors such as location, types of uses, total scope of the project, interest rates, and other factors. At the same time, transit agencies are becoming more sophisticated in quantifying the financial benefits such as risk reduction, land assembly, market research, and planning/design support which they bring to a development deal, and in using these benefits as bargaining tools in negotiations.

Critical to maintaining private sector support, however, is the long-term credibility of the public sector in carrying out its responsibilities in terms of time-tables and agreements and in general following through on its commitments. In short, to do business with the private sector, the public sector must adopt a business-like way of doing business. In negotiating development deals, risks over timing and cost should be spread among the parties. Bureaucratic delays and funding uncertainty, because they greatly incraese risk to the private developer, have thus been major obstacles to public-private projects. In Toledo, the city and transit agency made a special effort to overcome past ineffectiveness in implementing the downtown loop project, thereby creating an atmosphere of trust and cooperation that has since continued. On the other hand, Los Angeles, despite sound planning for benefit-sharing, has been greatly hampered in dealing with the private sector due to uncertainty over Federal funding. Development is generally proceeding there as though Metro Rail was not a real proposition. With no assured funding, SCRTD has nothing to bargain with in negotiating with developers.

Establishing this public credibility is dependent on certainty that public funds for transit facility construction—whether from Federal, state, or local sources—can be committed at an early enough stage and over a long enough period so that the public agencies will be able to operate in a predictable businesslike manner when involved in projects with significant potential private financial commitments. In Michigan, both the availability of state funds to cover costs ineligible for Federal funding and the assistance of the State DOT in creatively combining Federal funding programs into workable projects both lent credibility to the terminal program and helped establish momentum for implementing the projects.

Early experience with benefit-sharing can be critical in setting the tone for what follows. Whether for new or older systems, initial projects should be selected with a view to those that have a high probability of success. These can then be used to "sell" other land owners, developers, and local governments on the benefit-sharing approach. In Washington, major successes of two initial projects, the Connecticut Connection and the Woodward and Lothrop development, served to heighten interest in other opportunities and to reduce private sector hesitancy about getting involved with the transit agency. Woodward and Lothrop executives have subsequently become one of the most visible supporters of benefit-sharing arrangements at other locations. In Boston, the Route 128 project was selected as a "trial balloon" of the real estate development program, due to high market demand and developer interest. This approach may be valid for implementation of value capture techniques as well. In Los Angeles, the development community has suggested that "momentum" for the system, and for associated development, be established to illustrate transit benefits before benefit assessment districts are created.

6. *Pay careful attention to design details, phasing, and coordination of planning, design, and construction.* Careful design of transit-related facilities is often critical to their effective functioning as benefit-sharing mechanisms. The case studies have revealed many design issues, but the most critical are related to the perception of benefit by the private sector. In this regard, private sector contributions are most likely for special amenities that are clearly related to the contributor's property and business activity and that are perceived by the owners to enhance directly the value of these properties and the success of the business activities. In this regard, the transit agency may have to combine transit improvements with other improvements wanted by the private sector in order to achieve private participation in funding as well as political support. The transit agency must thus be open to considering features other than those strictly needed for safe and efficient operation in order to attract private funds.

Environmental improvements, special pedestrian connections and amenities are good candidates for benefit-sharing programs. These types of enhancements can be distinguished from a basic "bare bones" transit system and can be convincingly demonstrated to serve the interests of abutting property owners. In many of the case studies (Toledo, downtown Portland, Manhattan East Side), private participation focused on these aspects of transit. An important consideration is the timing of these elements. They should be considered after commitments to build the basic transit elements are firm, but before the final engineering, in order to allow some flexibility in responding to pedestrian and amenity-related criteria. Urban designers searching for pedestrian and amenity-related opportunities and public managers searching for creative benefit-sharing schemes to fund them should be part of the transit design team as soon as basic route alignments and station locations are established.

Designing facilities so as to create a direct, logical relationship between the developer's project and the transit-related spaces helps both to convince the developer of benefits and to create in the developer inherent interest in doing a good job on construction and maintenance. In this regard, the environment of the transit-related space should be built as closely as possible to the standards of the private sector space. This higher amenity level is easier (though not inexpensive) to achieve for new facilities; the New York case study illustrated dramatically the differences in light, ceiling clearances, materials, and temperature experienced on opening the door from the building lobby to the transit station stairway. In older stations, such obstacles are difficult to overcome without major rebuilding and massive costs (such as will occur in Times Square).

To maintain an attractive station environment and a higher level of maintenance, higher costs are required. Leasing of commercial space and concessions that are selected to be appropriate to the transit facility location in terms of use and market served can help offset operating and maintenance costs, even in small facilities. While UMTA does not pay for these spaces from the Federal share, they are worth funding from the local share, as shown by Michigan's policy of encouraging these arrangements to help meet operating costs of bus terminals. The most important caveat in leases is to include cost-sharing for maintenance and utilities in the lease terms, and to make provision for increasing costs either through escalator clauses or yearly renewal provisions.

In terms of phasing, if simultaneous design and construction are not possible, efforts should be made to accommodate the possibility of future integration of facilities with development projects. At the earliest stage, stations should be designed at a minimum so as not to preclude future connections. Some low-cost features, such as knockout panels can accommodate future connections without significantly adding to the costs of construction; in the case of more costly items, such as reinforced foundations to support air rights development, cost-sharing will have to be worked out carefully in advance.

In terms of construction, many large-scale joint development projects are too demanding and complex to be managed within the "business as usual" bureaucractic atmosphere of agency hierarchies and with the inefficiencies of interagency disputes. Organization of special interagency public management teams for major transit design and construction projects can help focus public attention on the project until the job is done. Such teams were evident in some form or other in most of the case studies.

7. *Use legal agreements to expedite, not delay implementation.* Use of legal instruments can be helpful in clarifying respective rights, responsibilities, relationships, and future intent as agreed to at a given point in time in the benefit-sharing process. These instruments should be adapted to serve the needs of individual situations and pursued one step at a time to move projects along, rather than used as an excuse for delay until all the "fine print" is worked out. Cooperative agreements and memoranda of understanding have proven to be particularly adaptable tools in this regard. It is important to note that such agreements need not always await final agreement on all details of an arrangement. Rather they may reflect progress to date and serve to ensure that all parties have a clear understanding of further actions required. In the cooperative agreement between WMATA and Prince George's County, WMATA agreed to lease to the County specified property to be used for the Amtrak parking garage. The terms of the lease and the rent to be charged were later detailed in a separate lease agreement.

Another important point is that such agreements can be changed if necessary. Several of the agreements reviewed in the cases have been revised after the initial lease term based on actual operating data. Others have been translated into more detailed contracts as designs have been finalized.

The point also applies to land-use regulations and special districts. Rather than complicating the task of achieving support for an assessment district which tries to fund too broad a scope of services, the agency might try to design the initial district to fund a smaller, well-defined and limited item such as station area maintenance. If the total amount to be funded is reasonable and the proportional assessment to each owner low enough, it is easier to gain support. At the same time, the tasks of data collection and benefit measurement are simplified. The initial ordinances can then be revised after the first period of implementation to respond to problems or concerns that occur in the initial months of operation. In Denver, for example, the downtown management district was revised after the first year to expand the assessment area and change the assessment formula. Revision of the formula was made easier because of the availability of actual "before and after" data on some of the mall's impacts.

8. *Be both realistic and flexible in evaluating transit agency costs and benefits.* While the case studies did not reveal any easily applied universal formulas for predicting development-related benefits from transit facilities, they did illustrate some caveats that must be applied in developing realistic benefit-sharing strategies, as discussed below.

First, the limitations of cost/benefit analysis should be recognized. The long-term nature of benefit accrual must be noted, while the bulk of the costs are incurred in the short-term. This is particularly true for large-scale projects. In New York, the subway system and its efficiency of operation have enabled the current development densities. The current development market is thus a "benefit" accruing from investments in the subway made half a century ago. In Denver, property value impacts of the transit mall were based on judgments regarding "probability of value increase," and the consultants noted that the true value impacts would probably not be seen until 10 years after implementation.

WMATA staff emphasize that the long-term nature of benefit accrual is one of the chief difficulties attendant to trying to do a cost/benefit analysis of benefit-sharing projects, or of trying to make policy decisions on the basis of quantitative evaluation through this type of approach. They stress that despite great strides in analytic techniques, it is impossible accurately to quantify everything. As noted earlier in this report, it is for this reason that the best method of ensuring fair valuation of all factors to the extent possible is through competitive bidding and negotiation among the parties involved. It is in the actual bids, the lease agreements, the cooperative agreements, and other such legal documents that the true costs and benefits of each individual situation are weighed. In this regard, the transit agency should recognize the definite benefits it brings to a development project in terms of land costs, reduction of risks, assumption of planning costs, and so on, and use these factors as bargaining tools in establishing an appropriate financial return.

However, this does not mean that long-range or nonquantifiable objectives should be sacrificed to short-term financial benefits. For instance, the planners of the Banfield LRT in Portland made a sound decision to emphasize a long-range community planning process that will mutually reinforce transit patronage and community development over exacting short-term contributions from property owners or other beneficiaries. In Toledo, the major benefits for TARTA have been in improved system image, convenience, and weather protection, which in turn have led to an improved image and coherence of downtown (with consequent implications for business retention and attraction). Additional benefits to TARTA include increased ridership and future expansion capability.

Similarly, the transit agency must not overlook its own mandate of providing better service and encouraging transit use in pursuing financial goals. Many of the suburban sites that are most marketable for lucrative joint development projects derive

their attraction from auto accessibility as much as transit accessibility. In fact, such developments draw many of their employees from outer suburban areas rather than from the transit line itself. In meeting the needs for auto access and parking which developers require at such sites, large public costs may be incurred which may undermine transit ridership and outweigh the benefits to the transit agency generated by the real estate deal. In addition, transit-related parking supply may be reduced by development-related use. The New Carrollton and Route 128 case studies both illustrated public controversy caused by such conflicts.

Evaluation of costs and benefits—and plans for financing based on those evaluations—should take into account the inevitable lag time in initiation of benefit accrual. Development commitments that will eventually produce revenue cannot be rushed ahead of the marketplace in order to finance transit. Whether benefit assessment districts, joint development, system interface, tax increment finance, or other benefit-sharing techniques, the value capture components of benefit-sharing efforts may take years to accrue to a substantial extent. Depending too heavily on development-related financial returns at too early a stage is unrealistic and may cause the whole effort to fail.

Maximizing benefit-sharing revenues may also conflict with other public agency goals. In Los Angeles, SCRTD is perceived as less than enthusiastic about the down-zoning that affects maximum densities in station areas because it will ultimately mean less revenue generation to the transit agency from the benefit assessment districts. The City of Los Angeles, however, must respond to the constituency of corridor residents who want to protect residential neighborhoods from higher densities.

Further, the transit agency cannot expect to gain 100 percent of revenues from all innovative financing tools. Other local agencies have their own properties for added funding sources, particularly in light of tax limiting measures such as those in Massachusetts and California. Revenues received from such techniques as tax increment financing or benefit assessment districts must be closely related to the immediate benefits accruing to the surrounding area from the transit facility. In general, to ensure acceptance, revenues must also be committed to continuing maintenance and amenity for this immediate area as well. It is difficult to justify a benefit assessment on a specific station area to support overall system operations.

Nor should benefit-sharing be expected to replace the current traditional public sources of funds. The contributions that can be gained through benefit-sharing programs are: (1) relatively modest in terms of overall costs; (2) unlikely to be available at the early stages of transit planning and development; (3) often required just to make up the 20 percent local match for hard-pressed local governments; and (4) most commonly applied to elements other than the basic components of transit service.

It must be remembered that benefit-sharing can only contribute a very small share of overall system revenue. As stated earlier in this report, "This [joint development] is a small part of the whole impact of constructing and providing transit. It is a very small part as far as finance, but the stimulus for much other activity without financial benefit. This is 'frosting'; it stimulates activity, provides amenities, insures proper growth. The key to finance is really dedicated revenue sources" (*16*).

Further, experience both with zoning and regulatory techniques and with assessment techniques in support of transit is still very young. As noted by one author (*37*):

> [C]onsiderably more research and experimentation is needed before [the role fees or assessments should play] in financing transit is well defined. State and Federal encouragement of such research and experimentation is thus welcome and encouraged. Policies which reward transit agencies for the use of fees or assessments should be constructed quite flexibly to account for differences in conditions between agencies and between projects. Finally, policies which penalize an agency for failure to use such financing measures are clearly inappropriate at this time.

It has been suggested that some (small) fixed percentage of the capital costs of new construction might be set as a target for the contribution of joint development and other benefit-sharing strategies. This could be a good exercise where transit agency staff are advanced in the skills of implementation and market conditions warrant. There are too many uncertainties, too little experience, and too many factors involved that are beyond the control or influence of transit agencies, however, to make commitment to achieving such a target a general condition of approving new construction.

Finally, the private sector has been motivated to contribute to transit projects largely because of local government requirements, reductions in their upfront costs, and the availability of a healthy proportion of public funding in conjunction with their relatively small share. The experience documented here suggests that benefit-sharing cannot be expected to make up for decreased Federal involvement in transit and urban revitalization projects in most urban areas.

CHAPTER SEVEN

SUGGESTED RESEARCH

Although this research has identified considerable new transit agency experience with benefit-sharing approaches, it has not uncovered any universally applicable techniques for quantifying transit-related development benefits. Rather, the finding has been that the perception and measurement of benefits are closely tied to individual projects, settings, and market characteristics. Further, while attention to benefit-sharing is evident in the planning and project implementation phases of transit system construction, the effects of various strategies on overall agency costs and revenues over time have not yet been quantified.

Finally, ways to overcome the paradoxical expectation that the private sector will both assume development risks and make long-term financial commitments to transit on the basis of uncertain year-to-year Federal funding appropriations are only in the initial stages of exploration. With these thoughts as background, the following areas are suggested as worthy of further research and information dissemination efforts.

1. *Help transit agencies identify local opportunities through training and on-site assistance.* First, since benefit-sharing strategies and results vary so much by location, the most effective way to analyze potential opportunities for agencies of various sizes is through on-site analysis, suggestions of appropriate strategies to transit agency managers, and staff training sessions. To facilitate this, traveling workshops of a small team of professionals (similar to those conducted by the Urban Land Institute) would be useful. The case studies conducted for this research would make excellent course materials. The report could also be easily adapted into a "marketing" brochure for transit agency use in explaining benefit-sharing techniques to the public and to the development community.

2. *Explore dedicated local financing and multi-year Federal funding commitments.* Credibility of the public sector in dealing with the private sector, as well as other public sector agencies, is critical to the success of benefit-sharing strategies. More research is needed on mechanisms by which funding agencies such as UMTA and state Departments of Transportation can ensure that funds will be committed at an early enough stage and for a long enough period to enable transit agencies to operate in a predictable, businesslike manner. The transferability of programs such as the MDOT Passenger Terminal Program, which is funded through a dedicated gas and weight tax, to other states and to other types of assistance for small transit agencies, should be explored.

3. *Support monitoring of long-term impacts, and disseminate this information.* In so far as benefit-sharing serves as a means by which a transit agency can realize revenues from the value of access of its ridership to land developers, it has some analogies to media's sale of access to their readers' or viewers' attention through advertising. As benefit-sharing practices develop and become institutionalized, it will be necessary to monitor the ridership regularly and to measure the actual value of the access that is made available by the transit agency.

Most projects examined in this research are still in the planning stages or new enough that no body of information yet exists concerning such measures as modal split of employees and visitors in buildings at varying distances from the transit stations or the locus and volume of actual expenditures by the transit riders and the precise nature of the market they represent. Most benefit-measurement techniques are still in the realm of projections or hypothetical models or improvised speculation. They may be excellent tools for planning but they are not the measurement of actual experience that can only occur over time. Eventually, benefit-sharing will require actual counts.

The Toronto Transit Commission performs cordon counts annually and monitors the modal split for employees in their joint development projects in order to negotiate its lease agreements based on indicators such as passenger volumes. In many of the areas encountered in this study, however, such regular, systematically collected data on mode use and market patterns simply do not exist. Looking toward future research needs, this study anticipates an ever-greater pressure for information of this type. Once collected, such information can become part of a data base of great value to the entire community of transportation planners and operations agencies, appraisers and developers, local government and planning bodies and environmental agencies as well as the transit agency itself. The broad range of potential users for such data suggests that there may be opportunities for the transit agency to recover the costs of developing the information. UMTA's Service and Methods Demonstration Program includes funding for "before and after" evaluation of demonstration projects, and UMTA has financed an overall study of the impacts of UMTA-funded joint development (*11*), which was based on the impacts projected in Urban Initiatives grant applications. A real service to benefit-sharing could be performed by funding these types of evaluative studies to actual implemented projects.

Longitudinal (follow-up) studies would be useful to see how some of the systems which are incorporating planning for benefit-sharing into the early stages of system planning fare in 5 to 10 years. In this regard, the actual results of benefit-sharing revenues on transit agency budgets should be examined to the extent possible. The Boston case study brought up the possibility of transit agencies' funding benefit-sharing efforts within the agency directly through project revenues. How such an arrangement might be brought about in agencies of various sizes is worthy of research. In addition, ways in which transit agencies can make the transition from making development-related decisions by strict bidding procedures to using more flexible negotiating tools should be explored.

Another recommendation, also in line with the dearth of longitudinal studies in this field, is that the cases and places analyzed in such seminal studies as the 1974 AMRA work (*7*) and the "final" impact studies for BART be revisited for the purpose of measuring what has happened there over time. A sample of environmental impact statements prepared for developments in a variety of city sizes and downtown/suburban density situations might also be selected and data collection organized to discover how closely events have come to the predictions.

4. *Provide technical guidance for transit agencies to use in incorporating transit improvements into incentive zoning ordinances and other land use regulations.* In terms of measurement techniques, New York City is struggling with the problem of equating density bonuses in return for transit improvements in implementing their incentive zoning ordinance. Several cities have used trip generation limits as a factor in granting density bonuses. In general, there is an increasing use of incentive zoning to bring about transportation objectives. Because land-use regulation is within the jurisdiction of planning rather than transportation agencies, a need exists to make transit professionals more aware of how their systems might gain from their involvement in formulating such ordinances, and to provide guidance in setting a floor space or trip generation "value" for transit facility provision or improvement.

5. *Provide guidance in setting appropriate financial "targets."* In a related problem, the case studies and literature have uncovered the distinction between three ascending levels of benefit-sharing financial objectives:

- Facility provision with no direct financial benefit (often a "token" payment is involved as in the $1/year charge to the

city by TARTA for park land associated with the downtown bus stations), but with benefits of enhanced aesthetics, convenience, sound long-range planning, etc.

- Cost recovery, as in the lease arrangements in Michigan which prorate operating costs for tenants, the sale of advertising space to cover the costs of transit passes, or the negotiation of leases based on relative costs to each party.
- Value capture, which seeks to charge for facility provision on the basis of actual benefits received as opposed to costs.

As this study has discussed, all of these objectives are found in active transit agency strategies today. A need exists, however, to explore further the conceptual and theoretical basis for each type and how each fits into the long-term transit agency finance picture for agencies of different sizes. Transit agencies in smaller cities where market conditions are weaker, transit facilities themselves more modest, and ridership much lower, for example, are most likely to succeed in implementing strategies in the first two categories. Actual value capture is a realistic goal in many fewer situations. As localities and State Departments of Transportation (such as California, Pennsylvania) explore the idea of setting targets for private involvement in transit finance, the incremental impacts of strategies of all three types must be considered, in combination with other nondevelopment-related benefit-sharing strategies, such as use of private carriers for service provision. The idea of private financing targets has tended to focus on new construction and on larger urban areas. This study has identified many strategies that are applicable to existing transit systems and to smaller transit properties. The contributions of these types of techniques, even if more modest, should be identified and included in statewide programs as well.

6. *Identify factors which lead to the private sector to finance transit completely.* Finally, there is increasing implementation of "turnkey" operations of entire transit lines, particularly people movers. The motivation of the private sector in choosing to finance these types of projects, the methods of feasibility analysis used to determine whether to invest, and the actual financial outcome of the investment for the developers as the systems are built and operated will provide valuable lessons in setting realistic goals for private sector/transit agency participation as well.

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APPENDIX A

TRANSIT FACILITY BENEFIT-SHARING SUMMARY SHEETS

The following pages in this appendix summarize opportunities for benefit-sharing by transit facility type. They are keyed to the list of opportunities presented in Figure 2 in the text. Their intended use is simply as a brief introduction to what types of projects are appropriate for facilities of different types and for transit agencies of various sizes. For each type of opportunity, major participants are listed, along with the types of benefits that accrue to the different parties. Examples of recently implemented projects are included, as are "conditions of applicability" or points which influence success or failure in a given application. These examples and points are, in many cases, explored more fully within the text of the report and case studies.

Transit Facility
Benefit-Sharing Summary Sheet

Facility:	Corridor/ROW
Mode:	Commuter rail, Light Rail, Rapid Transit, Bus
Type of Opportunity:	Land Banking
Stage:	Planning/Acquisition
Participants:	Transit agency Property owners Local government Federal government
Benefits:	Transit agency: long term benefit - depending on amount of land to be acquired and value of land
Conditions of Applicability:	UMTA provides funding through Advanced Land Acquisition program -- lends 100% of land costs for properties to be used for transit purposes wihlin ten years Eminent domain, legal issues Political feasibility
Examples:	Toronto Boston MBTA

SG Associates, Inc.

Transit Facility
Benefit-Sharing Summary Sheet

Facility:	Corridor/ROW
Mode:	Commuter Rail, Light Rail, Rapid Transit, Bus
Type of Opportunity:	Lease or sell abandoned rights-of-way for reuse
Stage:	Reuse/rehabilitation
Participants:	Transit agency Owner of land (i.e., bankrupt railroad) Highway department
Benefits:	Owner of ROW gains revenue from sale or lease of land User of ROW saves land acquisition costs
Conditions of Applicability:	Federal Reorganization Act gives transit agencies authority to purchase land from bankrupt railroads to use for transportation purposes, or, if not used within specified time, to sell for other purposes
Examples:	Bikeway on railroad right-of-way, Martha's Vineyard Sturgeon Bay, Wisconsin, abandoned rail embankment crossing bay converted to marina MBTA Boston acquired Penn Central ROW Prudential Center, Boston Florida DOT acquired Seaboard Coastline RR ROW for clearwater/St. Petersburg light rail link

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Transit Facility
Benefit-Sharing Summary Sheet

Facility:	Corridor/ROW
Mode:	Commuter Rail/Surface Transit
Type of Opportunity:	Lease or sell development rights:
Stage:	Operations, Reuse
Participants:	Transit agency City planning/redevelopment agency Developer
Benefits:	Lease revenues from formerly unused space Increased activity/security at station Aesthetic improvements, mitigating negative effects of elevated or depressed ROW
Conditions of Applicability:	Room to provide parking Activity at station to support uses Market study to determine need for uses Sufficient physical room to accommodate store space Can work for air rights over ROW or spce under viaducts (less common)
Examples:	Redevelopment of area under viaduct in New Jersey (Ref 51) Copley Place, Boston (air rights) Chevy Chase Land Co./WMATA at Friendship Heights Miami/Dade, over parking

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Corridor/ROW

Mode: Commuter rail, Light Rail, Rapid Transit, Bus

Type of Opportunity: Negotiated investments: Share rights of way among transportation modes

Stage: Planning/acquisition, operation/maintenance

Participants:
Transit agency
Highway Agency
Local government

Benefits:
Reduced land expense for facilities
Reduced construction time

Conditions of Applicability:
Adequate width for right-of-way, suitable profile (grades and curves)
Ability to connect to existing system
Ability to mesh planning, funding and construction schedules (failure to achieve rapid transit in Dulles access road, Phoenix highway transit, I-270 also failed)

Examples:
Chicago airport transit line
Houston busway
MBTA Riverside Station -- use light rail ROW for access road
Los Angeles freeway busways
BART Concord line

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Corridor/ROW

Mode: Commuter rail, Light Rail, Rapid Transit, Bus

Type of Opportunity: Negotiated investments: Developers or public agencies contribute land for ROW, stations, parking, recreation use

Stage: Planning/acquisition

Participants:
Transit agency
Developer
Local government

Benefits:
Transit agency: saves in land costs
Developer: tax benefits, potential for future development
Public Agency: can write conditions for station access, development, etc. into sale agreement

Conditions of Applicability: Single ownership of large parcels or ability to assemble parcels

Examples:
Southwest Corridor, Boston
Toledo downtown bus loop stations

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Stations

Mode: Commuter Rail, Light Rail, Rapid Transit

Type of Opportunity: Lease or Sell Existing Facility: Unused Stations

Stage: Rehabilitation/reuse

Participants:
Transit agency
Redevelopment authority
Developer

Benefits:
Transit authority: sale or lease revenue
Developer: reduced land costs or upfront cost, development revenue, patronage from transit passengers
City: tax revenue

Conditions of Applicability:
Existing station -- surface transit
Excess space not needed for transportation purposes (yet station may still be active and a catalyst for activity)
Architectural value of station enhances development potential
Surrounding parking is desirable
Very large spaces in old stations may be difficult to convert to new uses; yet preserving station character is desirable
Must overcome multiple ownership/thorny title questions

Examples:
Concord Depot, Concord, MA,
Union Station, Dallas, TX
Newton Centre Light Rail Station

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Stations

Mode: Commuter Rail/Light Rail/Rapid Transit

Type of Opportunity: Lease or Sell Development Rights

Stage: Planning, Design, Operation, rehabilitation/reuse

Participants:
Transit Agency
Municipality
Developer
General Public

Benefits:
Tax revenue (government)
Lease/Sale revenue (transit agency)
Activity at site/jobs (public)
Development revenue (developer)
Reduced land cost, other incentives (can accrue to developer if the market demand is weak)
Transit access improves marketability of site
Reduced need to provide parking

Conditions of Applicability:
Title to or legal ability to assemble land
Land/structures air rights available for redevelopment
Certainty as to alignment of new routes
Helps reduce delay to have established plan for station area
Insure station construction proceeds on schedule
Use zoning to create development opportunities at high enough density to be financially feasible
Political acceptability -- involve neighborhood groups
Not only applicable to new stations; examine existing station areas; e.g. parking, air rights, for opportunities

Examples:
International Center, Washington, D.C.
Van Ness Station, Washington, D.C.
Market Street East/Galleria, Philadelphia
Montreal Metro stations
Denver transit mall terminals
Santa Cruz
Seattle
WMATA-New Carrollton, Bethesda, Friendship Heights

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Stations

Mode: Commuter Rail, Light Rail, Rapid Transit, Bus

Type of Opportunity: Lease or sell existing facility space: concessions -- news, food, "magic banker," video games, lottery, OTB,gifts, etc.

Stage: Planning, acquisition, operations

Participants:
Transit Agency
Lessee
Local government (licensing agency for certain uses)

Benefits:

Transit Agency:
- Maintenance cost savings (require lessees to maintain
- Lease revenue
- Added security, amenity for station
- Can use concessions as pass sales outlets

Lessee:
- High traffic location

Public:
- Convenience
- Added security for station

Conditions of Applicability:
Locate concessions in areas of high pedestrian traffic yet in areas where they do not interfere with circulation
Maintain adequate security and maintenance for station to attract tenants
Gear rents to market rates in vicinity of station
Many vacant spaces in existing stations -- need to upgrade overall station environment to fill

Examples:
Toledo, Ohio -- attempted to install "magic bankers" in downtown bus loop stations.
MBTA, Boston -- recently completed comprehensive study to procedures and charges for concessions -- resulted in substantial revenue gain for the transit agency
SCRTD, Los Angeles -- comprehensive planning for concessions in all new rail stations

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Stations/Stops/Shelters/Terminals

Mode: Commuter Rail, Rapid Transit, Light Rail, Bus, Downtown People Mover, Paratransit

Type of Opportunity: Negotiated investments: "System Interface" -- Direct physical tie-in of access from adjoining private or public development to transit system; i.e., mezzanines, entrances, parking, or bus areas

Stage: Planning/acquisition, design, construction, operation

Participants:
Transit agency
Developer
Local government

Benefits:

Developer:
- added value to property from improved transit station access and internal circulation, added pedestrian traffic, potential for reducing parking, substituting higher intensity uses, and achieving higher revenue

Transit Agency:
- save on capital costs of station/parking construction, and, potentially, station maintenance through lease revenue or user fees
- achieve higher degree of amenity and security for station

Public:
- added convenience, security
- attractive urban design

Conditions of Applicability:
Design connections to insure logical pedestrian flow
Negotiate fees/compensation/incentives on a case-by-case basis, depending on market conditions
Identify connection opportunities early in planning stages
Provide for future connections during construction via knock-out panels or similar means

Examples:
Toledo, Ohio -- privately funded skyway and underground pedestrian connections to five downtown "bus loop" stations

WMATA -- 150 projects possible, could yield $60-75 million in benefits shared by WMATA and owners -- Farragut North, Bethesda, Silver Spring, and others

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Stations

Mode: Commuter Rail, Rapid Transit, Light Rail, Bus

Type of Opportunity: Voluntary Private Participation: "Adopt-a-Station" -- private entities share responsibility for station maintenance

Stage: Operations

Participants:
- Transit agency
- Station area businesses
- Private organizations

Benefits:
- Transit agency: reduced maintenance costs; higher degree of maintenance - better image for system
- Public: station maintained better, better security
- Private groups: certainty that the station is well maintained; improved image, property values in area

Conditions of Applicability:
- Problems with union labor to be surmounted
- Liability issues
- Potential problems related to duration of agreement

Examples: New York City,
Boston Post Office Square, Boston Five Park, Filene's Park
Seattle Freeway Park

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Bus Shelters

Mode: Bus

Type of Opportunity: Voluntary Private Participation: private provision and maintenance of bus shelters in return for advertising rights, "magic banker," post office space

Stage: Planning, construction, operation

Participants:
- Transit agency
- Advertising shelter company
- Local government (approve locations)

Benefits:
- Transit agency: free construction and maintenance
- Company: advertising revenue
- Public: amenity

Conditions of Applicability:
- Sufficient pedestrian or auto traffic to attract advertisers
- Sufficient sidewalk space and other physical conditions to accept available shelter designs or willingness of company to provide custom design
- Acceptable design of shelter
- Also used for benches -- could be used to help pay for interior station improvements, lighting
- Provide security for unattended facilities such as the "magic banker"

Examples:
- New York City (urban application -- pedestrian traffic)
- Rhode Island (rural application -- auto traffic)
- Toledo - "magic banker"

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Downtown Transportation Center

Mode: Bus, Rail, Transit, Light Rail, Ferry, Remote Air Terminal, Paratransit

Type of Opportunity: Negotiated Investment: Lease or Sell Development Rights, in conjunction with private carriers, commercial development)

Stage: Planning/acquisition, design, construction, operation

Participants:
Transit agency
Private bus companies (i.e., Greyhound and Trailways)
Developer
Local government
Parking authority

Benefits:

Transit agency: new terminal, improved amenity for less cost, consolidated operations, better transfer facilities, lease revenue from joint development or lease of space to private carriers, focus/image for system

Developer: "critical mass" of activity on site to support development; best transit access for system, reduced need to provide parking

Conditions of Applicability:
Can work for new structures or rehabilitation
Private bus company can participate either by financing terminal construction and leasing back to transit agency, or vice versa.
Coordinate with local governments to be sure requirements for bus circulation, parking are met

Examples:
Cedar Rapids, Iowa (used tax increment financing)
Michigan Passenger Terminal Program (see case study)
Vancouver, B.C. (combined with rail, ferry terminal)
Brockton, MA (rehabilitated older CBD commercial block)
Seattle, Washington
Portland, Oregon -- Clackamas Town Center
South Station, Boston
Bridgeport, CT - small city example
Fargo, N. D.
Downtown Chicago (includes remote air terminal/travel agencies connected with subway extension to O'Hare)

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Suburban Transportation Center

Mode: Bus, Paratransit, (possibly Light Rail)

Type of Opportunity: Negotiated investment: Shopping center or other use such as stadium, park, race track, or other park and ride facility shares costs of shelters, terminal facilities, designates distant parking spaces for park-and-ride on weekdays (except peak demand days)

Stage: Planning/acquisition, design, construction, operation

Participants:
Transit agency
Shopping center developer/manager

Benefits:

Transit agency: provision and operation of facility at lower cost

Developer:
better service to mall
reduced need for parking (especially for employees)
providing waiting space discourages waiting passengers in front of stores
revenue from concessions at bus facility
public funds possible for bus facility,

Public:
Convenience, comfort
Increased reliability of service to mall

Conditions of Applicability:
Separate buses from other traffic
Approval from shopping center lender/bondholders, etc. may be required - new development
Liability issues must be worked out
Cost sharing for internal roadways as result of added demands from buses has to be worked out

Examples:
Serramonte Transit Center, San Mateo, CA
Mission Valley/Fashion Valley, Calif (Hahn Co. developer)
Bellevue, WA
Portland, OR

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Transit Mall

Mode: Bus, Light Rail

Type of Opportunity: Benefit assessment district

Stage: Planning, construction, operation

Participants:
Transit agency
Downtown business organization
Abutters
Local government

Benefits:

Transit agency:	facilities maintained at no cost improved amenity, focus for system
Local government:	higher level of maintenance paid for from dedicated revenue source transit mall used as catalyst for downtown renewal activity
Private sector:	higher level of maintenance provided; continuing funding for mall area increased property values as result of mall

Conditions of Applicability:
helpful to have organized downtown business association
preferable to have mechanism in place before mall development (use mall as "carrot"); some states require special district to be set up as condition of mall approval
gear amount of assessment to degree of benefit from mall

Examples:
Denver 16th Street Transitway Mall
Chicago State Street Mall
Memphis Mid-American Mall
Portland, Oregon 5th and 6th Avenues Transit Mall
San Jose, CA
Madison, WI State Street Mall
Minneapolis, MN Nicollet Mall

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Park and Ride Lots

Mode: Bus

Type of Opportunity: Turnkey development: developer acquires land, finances and constructs lot, then sells lot to agency

Stage: Design, Construction

Participants:
Transit agency
Developer
Local Government
Parking Authority

Benefits:

Transit agency:	saves on construction costs saves time -- only needs to issue one RFP
Developer:	short-term profit on land deal; quick turnaround time as opposed to other development, thus do not tie up cash for too long

Conditions of Applicability:
Attractive land costs
Few barriers to land assembly
Land not developable for more intense use
Exploring use for maintenance facilities, entire rail lines

Examples:
Houston, TX (uses for many lots)
Chattanooga, TN
Hartford, CT
Mid-Pike Center, Montgomery County, MD

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Parking Facilities

Mode: Systemwide

Type of Opportunity: Lease or Sell development rights: (share parking between transit facility and development)

Stage: Operations, reuse

Participants:
- Transit agency
- Developer
- Local government

Benefits:
- Transit agency: More intense use of land; Sale or lease revenue
- Developer: Transit access for site; Reduced parking requirements
- Local government: Tax revenue from development; Jobs, activity

Conditions of Applicability:
- Political acceptability
- Conduct market research to make sure development can be supported
- Highway access desirable
- Make sure enough parking to meet both commuter needs and those of development (also financial analysis necessary to see if rates/rents can support construction cost for structured parking)

Examples:
- Route 128 commuter rail station, Dedham/Westwood, MA
- WMATA - New Carrollton master plan/Amtrak garage

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Parking Lots

Mode: Systemwide

Type of Opportunity: Sell or lease existing facility: Lease parking lots in off-peak times for flea markets, carnivals, etc.

Stage: Operation

Participants:
- Transit agency
- Lessee
- Local government

Benefits: Transit agency: Lease revenue

Conditions of Applicability:
- Political acceptability
- Use must be confined to weekends
- Develop tight maintenance agreements

Examples: Seattle leasing parking lots for flea markets

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Transit Facility
Benefit-Sharing Summary Sheet

Facility: Surplus Buildings/Property

Mode: Systemwide

Type of Opportunity: Lease or sell existing facility

Stage: Rehabilitation, reuse

Participants:
Transit agency
Developer

Benefits:
Transit agency: Sale or lease revenue
More productive return on holdings
Developer: Reduced land cost or other incentives (weak market situation)

Conditions of Applicability:
Building or property clearly not required for transit use
Revenue potential depends on condition, strength of real estate market, proportion of original investment made by transit agency (return UMTA and local government share of original deal)
Transit agency can use space for its own non transit purposes

Examples:
Car Barn reuse for housing -- New Bedford, MA
MBTA Power Plant - Sargent's Wharf, Boston
Many rail station reuse examples - see station sheet
MBTA car barn converted to police station, Somerville, MA
CTA Chicago sells surplus property items for "nostalgia" value at special store
SW Corridor, Boston - salvage materials from corridor construction (removal of embankment) donated to City of Boston for Franklin Park landscaping job
Fill from subway excavation used to fill old Cambridge dump for future park use
MTA, NYC uses abandoned transit station for driver training (save cost of new facility), another abandoned station for transit museum

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Yards/Maintenance Facilities

Mode: Light Rail, Rapid Transit, Commuter Rail, Bus

Type of Opportunity: Sell or lease development rights

Stage: Planning, design, operation

Participants:
Transit agency
Developer

Benefits:
Transit Agency: Sale or lease revenue
Higher intensity use of land
Local government: Tax revenues
Developer: Revenue from development

Conditions of Applicability:
Allow for physical requirements of transit operations
Make sure uses are compatible -- i.e., transit agency offices
Because this type of air rights development is very expensive, feasibility depends on land scarcity, high prices in area, and a high premium on location (or high level of government subsidy)

Examples:
Riverside Station joint development (portion over light rail maintenace facility), Newton, MA
Illinois Central Air Rights, Chicago
Vancouver Rail Yards
Toronto Rail Yards
Pan American Bldg, NYC at Grand Central Station

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Passes, Farecards, Tickets, Schedules

Mode: Systemwide

Type of Opportunity: Sell advertising rights

Stage: Planning, operations

Participants: Transit agency
Advertising agency

Benefits:

Transit agency:
- Revenues can support printing of materials
- Incentive to pass purchase
- Make businesses near transit aware of purchasing power of transit riders

Advertisers:
- Reach wide market of transit riders
- Gain new customers

Public:
- Added bonus for riding transit
- Public service advertising
- Artwork and poetry - bus ad space

Conditions of Applicability: Most useful for businesses which operate within entire service area; hard to target systemwide materials to individual locations

Less flexible than staion or vehicle adverising - materials generally printed only a few times a year

More useful for coupon-type promotions, advertisers see direct return from promotion

Examples: WMATA - Roy Rogers promotions on farecards
SCRTD - pass promotions, coupon books with pass purchase

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Passes/Farecards/Tickets/Schedules

Mode: Systemwide

Type of Opportunity: Voluntary private participation: Use stores, banks near bus stops/transit stations as sales outlets

Stage: Operation

Participants: Transit agency
Businesses

Benefits:

Transit agency: Expand sales network at no/low cost

Businesses: Bring customers in -- offsets perceived negative impact of bus stop

Public: Convenience

Conditions of Applicability: Good pedestrian connections between stores and transit station or bus stop

Examples: WMATA, Washington, D.C. using Fotomat stores for farecard sales

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Passes/Farecards/Tickets/Schedules

Mode: Systemwide

Type of Opportunity: Voluntary private participation: Employer pass subsidy

Stage: Operation

Participants: Transit agency
Businesses

Benefits:

Transit agency: Increase regular ridership/pass sales
Allows greater incentive to purchase passes at no extra cost to agency

Employers: Low cost benefit to keep and attract labor
Save on parking

Public: Cheaper pass price
More convenient purchase

Conditions of Applicability: Most attractive to employers in services, hospitals and universities; many clerical workers, students
Tight labor market
Good transit service

Examples: Seattle
Des Moines, Iowa

Transit Facility
Benefit-Sharing Summary Sheet

Facility: Vehicles, stations, terminals, ROW, shelters

Mode: Systemwide

Type of Opportunity: Sell advertising rights

Stage: Operation

Participants: Transit agency
Advertising agency

Benefits:

Transit agency: Added revenues
Advertisers: Wide exposure to passengers (interior) and drivers and pedestrians (exterior)

Conditions of Applicability: Applicable for all facilities
Reexamine advertising program, bid procedures, fees for various locations
Make sure specifications for bus purchase allow for provision of standard advertising signs

Examples: New York City
SCRTD. Los Angeles

APPENDIX B

BENEFIT-SHARING STRATEGY SUMMARY SHEETS

The following pages in this appendix summarize overall categories of benefit-sharing strategies, as listed in Figure 5 of the text. They are intended to briefly summarize the strategies described in the text, in "Transit Agency Experience in Benefit-Sharing." In addition, the summary sheets list the types of facilities for which each strategy is applicable, and so can be cross-referenced with the summary sheets by facility type in Appendix A. As with the Appendix A work sheets, brief "conditions of applicability" which influence success or failure are listed, along with examples of recent applications. The cases, references, and text can also be consulted for fuller explanations of techniques of interest.

Benefit-Sharing Strategy Summary Sheet

Technique:	Land banking: public acquisition and holding of land for future use to implement transit and land use polic
Types of Facility/ Development for which Applicable:	Corridor/ROW, Stations, Terminals, Transportation Centers Park and Ride Lots, Yards/Maintenance Facilities
Stage in Process at which Applied:	Planning, design, acquisition
Legal Authority Required to Implement:	State constitutional and statutory authority, local legislative and budget authority
Typical Role of Transit Authority:	Advance planning of routes, major facilities in conjunction with local planning efforts Designation of property for reservation/acquisition Appraisal, negotiation, acquisition and condemnation Interim use of property, or lease for interim use
Conditions of Applicability:	Political feasibility Adequate funds for acquisition, interim maintenance Long term planning process enabling designation of required properties well in advance of actual need or price increases UMTA - Advance Land Acquisition Program -- 100% of land costs for properties to be used for transit within ten years.
Examples:	Houston -- Harris County MTA Boston -- MBTA Philadelphia -- SEPTA Toronto

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B-2

Benefit-Sharing Strategy Summary Sheet

Technique:
Leasing/Selling Development Rights: Action by the transit agency, usually in conjunction with other public agencies, to dispose of surplus property rights

Types of Facility/ Development for which Applicable:
Corridor/ROW, Stations, Stops, Terminals, Downtown Transportation Centers, Parking Facilities, Yards/ Maintenance Facilities

Can apply on air rights or supplemental property

Stage in Process at which Applied:
Planning, design, acquisition, construction, operation/maintenance, reuse

Legal Authority Required to Implement:
Statutory authority for condemnation of supplemental property
Statutory authority to lease or sell air rights or supplemental property for private development

Typical Role of Transit Authority:
Plan routes and alignments to maximize market and opportunities for use of this technique
Participate in planning/design of stations and surrounding areas in cooperation with local planning agencies
Negotiate with private developers -- participate in "deal making" process, coordinate design and construction, post-development operating agreements

Conditions of Applicability:
Market studies to demonstrate type and scale of markets
Title to, or ability to assemble, land
Availability of development rights not necessary for transit operations.
Accommodate needs of transit riders (esp. parking)
Political feasibility
Existing station areas may also possess potential

Examples:
International House, Washington, D.C.
Van Ness Station, Washington, D.C.
Market Street East Galleria, Philadelphia
Montreal Metro Stations
Denver transit mall terminals
Johnstown, Cedar Rapids transportation centers
WMATA -- New Carrollton, Bethesda, White Flint, Friendship Heights

Benefit-Sharing Strategy Summary Sheet

Technique:
Negotiated Investments -- Land Contribution: Developers or Public Agencies contribute land for transit use

Types of Facility/ Development for which Applicable:
Corridor/ROW, Stations, Stops, Shelters, Terminals, Transportation Centers

Stage in Process at which Applied:
Planning, acquisition

Legal Authority Required to Implement:
Statutory authority by the recipient agency to accept only the portion of the property rights donated. In the case of a public agency donor, statutory authority/administrative procedures to effect the transfer

Typical Role of Transit Authority:
Initiates contact with landowner/prospective developer
Negotiates value of property (or portion of property rights to be donated), terms of donation, access agreements for future development, other aspects/ limitations on future development and use

Conditions of Applicability:
Single ownership of large parcels
Property/development rights remaining in possession of donor after donation to permit recoupment of the value of rights donated, or other "quid pro quo".

Examples:
Southwest Corridor, Boston
Friendship Heights, Washington, D.C./Maryland

Benefit-Sharing Strategy Summary Sheet

Technique:	Negotiated Investments -- Shared Right-of-Way: Two or more public and/or private entities share use of a common right-of-way
Types of Facility/ Development for which Applicable:	Corridor/ROW
Stage in Process at which Applied:	Planning, acquisition, operation/maintenance
Legal Authority Required to Implement:	Statutory authority to negotiate common use and operation/maintenance agreements
Typical Role of Transit Authority:	Study/seek opportunities for cost savings through shared right-of-way Plan transit routes in conjunction with local planning process to take advantage of such potential Initiate contact with prospective co-user/owner Negotiate value of access or other portion of property rights required, access arrangements, other aspects/limitations on use
Conditions of Applicability:	Adequate width for right-of-way, suitable profile (grades and curves); easier to create HOV/bus lanes in existing ROW, for new rail, must consider in early planning stage Ability to connect to existing system Ability to mesh planning, funding, and construction schedules May not be best action in terms of encouraging development; more difficult to create station-related parcels; abandoned rail ROW's, in particular, removed from activity centers
Examples:	Chicago Dan Ryan subway, airport line Houston busway Los Angeles freeway busways BART Concord line WMATA use of Amtrak right-of-way

Benefit-Sharing Strategy Summary Sheet

Technique:	Negotiated Investments -- System Interface: Direct physical tie-in of access from adjoining private or public development to transit system; i.e., mezzanines, entrances, parking or bus areas
Types of Facility/ Development for which Applicable:	Stations, stops, shelters, terminals
Stage in Process at which Applied:	Planning, acquisition, design, construction, operation
Legal Authority Required to Implement:	Statutory authority to negotiate common use and operation/maintenance agreements
Typical Role of Transit Authority:	Work with local planning effort to seek opportunities for system interface to increase ridership, promote joint development Negotiate with other parties, public and private; participate in "dealmaking" process Coordinate design and construction efforts Reach post-development operating agreements
Conditions of Applicability:	Appropriate planning early in station location and design process Design connections to insure logical pedestrian flow. Negotiate fees/compensation/incentives on a case-by-case basis, depending on market conditions Provide for future connections during construction by use of knock-out panels or similar means
Examples:	Toledo, Ohio - pedestrian skyway connections to five downtown bus stations WMATA - 150 projects possible, could yield $6075 million shared by WMATA and owners -- Farragut North, Bethesda, Silver Spring, White Flint, others Montreal Metro -- every type of connection explored Toronto -- borough constructed two chambers above subway tunnel in anticipation of future development Miami -- air rights development at Dadeland South, developer and station jointly to build 1,000-car garage for transit patrons

Benefit-Sharing Strategy Summary Sheet

Technique:	Negotiated Investments: Cost-Sharing: sharing of costs of transit facilities.
Types of Facility/ Development for which Applicable:	Stations, shelters, terminals, transportation centers, park and ride lots
Stage in Process at which Applied:	Planning, acquisition, design, construction, operation
Legal Authority Required to Implement:	Statutory authority to negotiate common use and operation/maintenance agreements; appropriate liability coverage
Typical Role of Transit Authority:	Plan and design for opportunities in conjunction with local planning process Negotiate agreements Initiate or respond to opportunities which arise after operation begins
Conditions of Applicability:	Especially applicable for park and ride facilities, where shopping center, stadium, or similar use shares fixed and operating costs of park and ride operation Separate buses and other transit vehicles from autos Approval from shopping center lender/bondholders, etc. may be required Liability issues must be worked out Cost sharing for internal roadways as result of added demands from buses must be negotiated
Examples:	Serramonte Transit Center, San Mateo, California Mission Valley/Fashion Valley, CA (Hahn Co., developer) Bellevue, Washington Portland, Oregon

Benefit-Sharing Strategy Summary Sheet

Technique:	Lease of Concession Space
Types of Facility/ Development for which Applicable:	Stations, terminals, bus shelters, transit malls
Stage in Process at which Applied:	Design, operations
Legal Authority Required to Implement:	Statutory authority to enter into lease agreements
Typical Role of Transit Authority:	Lessor of space to concession operators
Conditions of Applicability:	Maximize revenue through tying rentals to "comparable" rentals in surrounding area, and providing escalator clauses Adequate space within station Secure locations Electronic installations or vending machines may require special wiring, provisions for servicing
Examples:	Toledo hoping to install automatic bank teller machine ("magic banker") outlets in downtown bus stations SCRTD, Denver, planning for concessions in new rail and light rail stations MBTA, Boston, increased concession revenues through updating rentals and procedures Downtown Crossing, Boston, funding mall maintenance through lease of pushcart space on street within mall area to merchants

Benefit-Sharing Strategy Summary Sheet

Technique:	Real Estate Management
Types of Facility/ Development for which Applicable:	Systemwide -- all property owned by the transit agency
Stage in Process at which Applied:	Operation of mature systems
Legal Authority Required to Implement:	Within the authority of the transit agency; individual projects may require approval of citizen or government boards
Typical Role of Transit Authority:	Acts as development packager, puts together guidelines for development. Leases or sells property
Conditions of Applicability:	Strong real estate market for parcels intended for short-term redevelopment Look at large suburban parking lots in terms of development potential Accommodate needs of transit riders, especially with respect to parking Use professional experts to inventory property, analyze value, rentals, and potential reuse Consult with local governments to secure plan approval
Examples:	MBTA in Boston, Route 128 redevelopment project CTA, Chicago BART, San Francisco, exploring development potential for suburban parking lots

Benefit-Sharing Strategy Summary Sheet

Technique:	Special Benefit Assessment/Special Assessment District: a special tax levied on all properties within a designated area (or "special assessment district") to fund specified improvements made within that area
Types of Facility/ Development for which Applicable:	Stations, stops, terminals, transportation centers, transit malls
Stage in Process at which Applied:	Planning, design, construction, operation/maintenance
Legal Authority Required to Implement:	Special state enabling legislation. Agreement between interagency or intergovernmental transit agency collecting taxes to transfer revenues to transit agency
Typical Role of Transit Authority:	Develop proposal and shepherd through administrative and political process. Develop assessment formula, distinguishing between special benefits to certain property owners and broader benefits to general community Work with local jurisdiction's tax office to determine basis for assessment formula (i.e., site size, floor area, etc.)
Conditions of Applicability:	Helpful to have organized business association or mechanism in place before development of improvements planned. (Some states require implementation of the district before transit mall approval, for example). Must work closely with those affected Gear amount of assessment to degree of benefit from the improvements For new systems, helps to have system "momentum" going before instituting assessment mechanism Tie specific benefits such as higher levels of maintenance into the ordinance to help sell the added fees
Examples:	Denver, Chicago, Memphis, Portland, Minneapolis, Madison, Wisconsin, New Orleans, San Jose, mainly for pedestrian or transit malls Under study in Los Angeles for rapid transit Miami, Florida - downtown people mover

Benefit-Sharing Strategy Summary Sheet

Technique:	Tax Increment Financing: the prospective increase in property tax revenues from a designated area are earmarked to support the cost of transit improvements. Funds can be used either annually as received or be derived in advance through sale of bonds which are then repaid through annual increments of tax revenues.
Types of Facility/ Development for which Applicable:	Corridor/ROW, stations, terminals, downtown or suburban transit center
Stage in Process at which Applied:	Operation/maintenance (initial commitment may need to be made in early planning stages)
Legal Authority Required to Implement:	State and local enabling legislation, which may entail restrictions on the applications of TIF (i.e., only in "blighted" areas) Statutory authority to float bonds under this scheme Statutory authority to assign a portion of property tax revenue to works of a specific agency or to bonding outside normal budgetary procedures Possibly authority for local government to back bonds with full faith and credit and adequate debt ceiling Voter approval (in most cases)
Typical Role of Transit Authority:	Can initiate consideration of TIF as a source of funds for transit improvements, or respond to other public or private groups' interest in providing additnal improvements (transit or nontransit). Usually authority for implementation rests with a redevelopment agency
Conditions of Applicability:	Adequate increments in property values projected to repay bonds or to pay directly for improvements Adequate base revenues remaining to cover other jurisdiction expenses -- or authority and political feasibility to increase tax rates
Examples:	California - over 200 projects in 32 cities, including 15 in L.A., ranging from CBD's to neighborhoods San Francisco - BART Embarcadero station Cedar Rapids, Iowa - downtown transportation center Beaverton, Oregon - TIF zone established incorporating most of the CBD to finance urban renewal project including improved bus stops and additional lanes

Benefit-Sharing Strategy Summary Sheet

Technique:	Incentive Zoning: Relaxation of development constraints in exchange for provision of certain public benefits
Types of Facility/ Development for which Applicable:	Stations, stops, terminals, transportation centers
Stage in Process at which Applied:	Planning, design, operation
Legal Authority Required to Implement:	Local zoning ordinance must permit incentives to be used; e.g., density bonuses, lifting of height restrictions, acceleration of development permits process Possibly authority for downzoning; incentive zoning does not work unless surrounding zoning is restrictive
Typical Role of Transit Authority:	Transit authority unlikely to control planning or implementation of this technique. Must work closely with local planning and zoning offices as they plan for and implement this approach
Conditions of Applicability:	Relatively restrictive zoning in force as base-line condition, in order to encourage developers to avail themselves of incentives Political feasibility, particularly if downzoning necessary Well-based market analysis, and strong demand for higher density Administrative expertise and efficiency Best suited for large metropolitan areas
Examples:	New York City MTA midtown master plan San Francisco Chicago - lifts parking requirements Toronto Montgomery County, Maryland (suburban D.C.) Los Angeles Metro Rail Corridor Specific Plan

Benefit-Sharing Strategy Summary Sheet

Technique:	Performance Zoning: requirement as a condition of zoning that a proposed development meet certain criteria with respect to its impact on the surrounding area and the systems (e.g., traffic, transit use) operating in that area
Types of Facility/ Development for which Applicable:	Stations, stops, terminals, transportation centers
Stage in Process at Which Applied:	Planning, design, operation
Legal Authority Required to Implement:	Statutory authority, plus local zoning and development ordinance provisions
Typical Role of Transit Authority:	Transit agency unlikely to control planning or implementation of this technique. Must work closely with local planning and zoning agencies as they plan and implement this approach.
Conditions of Applicability:	Ability to specify objectives and mechanisms for achieving them, as well as measurement techniques to be used in enforcement Enforcement provisions, and adequate staff to enforce Political feasibility and support, both during planning and during implementation and enforcement
Examples:	Montgomery County, Md - North Bethesda Sector Plans, parking ordinance revisions Chicago Portland, Oregon

Benefit-Sharing Strategy Summary Sheet

Technique:	Transfer of Development Rights (TDR)
Types of Facility/ Development for which Applicable:	Parking lots, terminals, storage and maintenance facilities, stations, bus waiting areas
Stage in Process at which Applied:	Usually considered where transit-related improvements are existing, but could come up in context of planning for more intensive redevelopment of transit-owned properties
Legal Authority Required to Implement:	Enabling legislation and procedures for accomplishing TDR Authority on part of transit agency to engage in TDR
Typical Role of Transit Authority:	Initiator or responder when local jurisdiction may propose this approach in negotiating station area development acceptable to all actors and those parties-at-interest on whose behalf the local government acts
Conditions of Applicability:	Transit property is in a location zoned for quite intensive development, but where opposition exists from neighboring area Unavailability or unworkability of joint development techniques Presence of existing buildings of low density and high architectural or historic value
Examples:	Most examples are of architectural preservation i.e., Grand Central Station, N.Y. Los Angeles seeking to implement in Metro Rail station areas as part of Metro Rail Corridor Specific Plan

Benefit-Sharing Strategy Summary Sheet

Technique:	Subdivision/Site Plan Approval Process
Types of Facility/ Development for which Applicable:	Suburban residential, commercial and industrial development, bus shelters and transfer areas, street design to accommodate buses
Stage in Process at which Applied:	Planning and design, bus service planning
Legal Authority Required to Implement:	Local subdivision enabling ordinances
Typical Role of Transit Authority:	Provide design standards to local governments Participate in design/planning meetings Lobby to have transit-related provisions incorporated into ordinances as requirements
Conditions of Applicability:	Transit agency must take initiative to educate local governments and developers Low density suburban areas Greatest results would accrue in rapidly-growing suburban areas experiencing significant new residential construction
Examples:	SEMTA, Detroit area - design standards book for developers, local governments CDTA brochure, Albany suburban area WinstonSalem, North Carolina, has adopted design standards for bus shelter "pads" into subdivision ordinance

Benefit-Sharing Strategy Summary Sheet

Technique:	Transit Development Districts/Authorities
Types of Facility/ Development for which Applicable:	Rail, light rail corridors and stations
Stage in Process at which Applied:	Planning and design of new facilities, major rehabilitation or relocation of existing facilities
Legal Authority Required to Implement:	Enabling legislation to establish corporation Authorization to issue bonds
Typical Role of Transit Authority:	Participates on board of directors or administrative body
Conditions of Applicability:	Significant development opportunities at many locations in the corridor Close liaison with transit agency/operations planning
Examples:	Southwest Corridor Development Corporation, Boston Portland, Oregon, Downtown Local Improvement District

APPENDIX C

CASE STUDIES

The following pages in this appendix contain the seven case study reports as submitted by the research agency.

This research was essentially undertaken in 1984. Institutional factors affecting private/public partnerships were—and still are—in the process of radical change, largely as a result of new federal policies governing local transportation assistance. The local programs discussed and the conclusions and recommendations drawn from them are essentially a reflection of the situation existing at the time the major research work was carried out.

CASE STUDY

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY, BOSTON, MA

INTRODUCTION

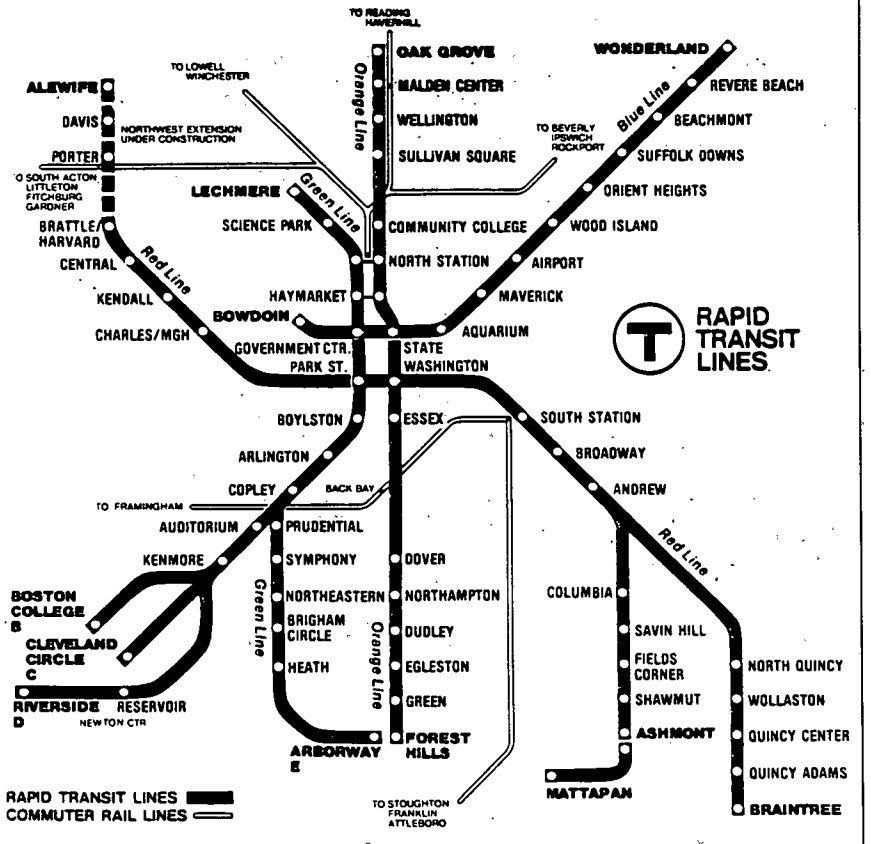
The Massachusetts Bay Transportation Authority (MBTA) was created in 1964, pursuant to Massachusetts General Laws, chapter 161A, section 7, to replace the Metropolitan Transportation Authority. Its primary purpose is to provide mass transportation service to the 79 cities and towns in its metropolitan Boston district. The MBTA is governed by a seven member Board of Directors, composed of six members appointed by the Governor, and the Secretary of Transportation, who serves as chairman. A General Manager appointed by the Board, currently James O'Leary, is in charge of the day-to-day operations. The Advisory Board to the MBTA was also established in 1964 under Chapter 161A. It is a regional body created to review and approve the MBTA's annual operating budget and the state required Program for Mass Transportation. The Advisory Board consists of the chief executive officers (or their designees) of each of the 79 member municipalities. Each municipality has a weighted vote on the Advisory Board.

Carrying approximately 150 million annual passengers on its rapid transit, light rail, commuter rail and bus lines (Figure 1), the MBTA serves a population of 2,608,638 (1980 Census). With 79 operating rapid transit stations and 84 commuter rail stations operating in 1983, two major construction projects are currently underway -- the Red Line Northwest extension, proposed to terminate at Alewife station in Cambridge, and the Southwest Corridor Orange Line relocation project, proposed to terminate at Forest Hills in Boston. Recently completed rapid transit extension projects have added new stations to the Red Line south (Quincy Adams and Braintree stations) and the Orange Line north (Community College, Sullivan Square, Wellington, Malden Center, and Oak Grove stations).

Until the 1970's, the MBTA became involved in property development principally through its Construction and Operations Directorates, dealing with property owners, local governments, and developers as new lines were extended and stations were de-

Figure 1

MBTA SYSTEM MAP



Source: Massachusetts Bay Transportation Authority Advisory Board

signed and constructed. The planning process focused mainly on operational and engineering considerations, and "joint development was frequently only an incidental consideration." (1, p. 139). A shift of perspective occurred in the early 1970's, however, as a result of the Boston Transportation Planning Review (BTPR) which stressed the philosophy that transit should be located and designed to support development.

Since the BTPR, the MBTA has become involved in benefit-sharing through three types of scenarios, as discussed below.

- In the most typical case, the MBTA is approached by a local redevelopment or planning agency or a developer regarding the feasibility of station improvements or connections in conjunction with a redevelopment project. Or, the local agency initiates contact based on its ideas for use of a Federal funding program (such as Urban Initiatives) available only to MBTA. In this scenario, the impetus for joint development comes from outside the transit agency. Given market conditions in the Boston region, most of the instances of this type have occurred in downtown Boston; however, in the 1980's redevelopment activity in Quincy and Cambridge (Lechmere, Kendall, Davis Square and Alewife stations) has led to pursuit of transit related projects in the inner suburbs as well.

- In the Southwest Corridor scenario, the MBTA has been a lead agency in transit-related development planning. In this case, due to the long political history of the abandoned Southwest Expressway project, redevelopment objectives were equal in importance to transit service objectives in planning and design. The plan involves rebuilding the Orange Line rapid transit from downtown Boston to Forest Hills and the Amtrak/commuter rail right of way in the corridor. Because extensive land had already been cleared for the abandoned highway, its redevelopment was specifically planned concurrently with the transit plannning. Benefit-sharing strategies employed for the Southwest Corridor, scheduled to open in 1987 include:

  -- Publication by MBTA of the Southwest Corridor Development Plan which discusses in detail development opportunities for each land use parcel;

  -- The Southwest Corridor Memorandum of Agreement which establishes a comprehensive citizen participation program;

  -- Station area joint development projects at nine new stations;

  -- Arterial street relocation and upgrading;

  -- Improved pedestrian linkages across decked-over sections of the corridor;

  -- Provision of a linear park extending along the corridor from downtown to Forest Hills;

-- Lease of retail and concession space within and adjacent to each station to stimulate activity within and around the stations and to produce revenue for the MBTA.

The case of Southwest Corridor illustrates the sensitivity of the development community to construction timing and market considerations. The Southwest Corridor Development Plan was issued in Fall, 1979. Actual developer interest in the various parcels has lagged, however, until 1984. Today, now that there is certainty that the new line will indeed open in 1987, developers are ready to make commitments in the station areas. Due to its lead role in the early planning, the MBTA continues to take an active role in furthering development in the corridor.

- Finally, the MBTA has begun to pursue a new role in development, that of exploiting the development potential of its own extensive property holdings. This new direction has been motivated by several factors, including:

  -- the acquisition by MBTA in 1976 of 149 miles or Right-of-Way and subsidiary holdings from Penn Central and 451 miles from the Boston & Maine line under UMTA's Property Acquisition Program;

  -- Passage of an amendment to "Proposition 2-1/2", property tax cutting legislation in Massachusetts, which limited the annual local government assessments for the MBTA district as a whole (funded wholly through the property tax) to 102% of the previous years's assessment. This legislation has led the MBTA to examine new revenue sources as alternatives to the property tax.

  -- Interest of developers in MBTA property at the North Quincy station: In this case the developers approached the MBTA about an office development on air rights over the station parking lot. This development, now under construction, showed the MBTA it might generate lease revenue through joint development deals.

In the course of pursuing this final area, the MBTA has also begun to consolidate all of its development related functions. The history and status of these efforts are the focus of this case study.

MBTA PROPERTY MANAGEMENT PROGRAM

The first effort of the MBTA in evaluating the potential value of its land holdings involved examining the 1973 inventory of properties supplied by Penn Central, which included estimates of income potential. As outlined by ULI, this inventory, which involved 300 holdings, presented problems of information gaps, extremely old leases, and "obscure bits of property." A second inventory was conducted of the 2,000 leases and agreements in force at the time of the B & M property sale. Again, many of

the leases were extremely old, and many discrepancies with the sale inventory were found. "The rail-roads had administered /the leases/ through their land or tax departments and had not considered the property values as distinct from the function of the railraod. Thus, properties with the potential of producing high incomes (including joint development possibilities) were often rented to low-rent tenants under outmoded agreements. Also, air and subsurface rights had not been developed, and 'squatters' claiming adverse possession of some property were an additional aggravation." (1, p. 140)

Prior to 1980, real estate matters within the MBTA were the responsibility of a Property Committee, chaired by the director of the budget with membership from each major MBTA department. In 1976, the Property Committee chose to take an "incremental approach" to gathering accurate information on all the properties, renegotiating leases, and encouraging joint development, as opposed to launching a comprehensive inventory.

In 1980, however, property management functions were consolidated into a Department of Real Estate Management. Given staff capabilities in the real estate area, the new department undertook the task of systematically producing a real estate parcel inventory and providing a consistent, comprehensive data base to enable the MBTA to "gain quick access to information on its property holdings, to develop better knowledge of the revenue generating potential of these holdings and to prepare for a reports generating capacity." (2, p. 1) Phase I of the study, completed in January, 1983, involved a real estate parcel inventory and information base for the rapid transit system and a property management study that analyzed all MBTA leases in detail and provided recommendations on lease administration.

Figure 2 illustrates the information collected for each parcel. As of Summer, 1984, this information was contained in a card file maintained by the Real Estate Department. The information on the cards was gathered from municipal assessors re-

Figure 2

PARCEL INFORMATION CARD

Parcel ID Number:_____ MBTA Document #_____

Street Address:_____City_____ County_____

Description of Parcel Physical Characteristics: _____

_____

_____

_____

UMTA Grant Number: _____Original Cost of Land: _____Zoning: _____

MBTA Order of Taking #:_____ Areas: a) Land_____ b) Building_____

Date of Acquisition:_____ Land Plan Map #/Parcel #: _____

Book & Pg. # of Deed or Order of Taking: _____

Land Court Cert. # _____ Assessor's #_____

Previous Owner: _____

Statutes Affecting Use:_____ Easement:_____

Value Capture Code: _____Comments on Value Capture: _____

_____

_____

Additional Data: _____

_____

_____

Source: (2)

C-7

SG Associates, Inc.

cords and mapped on a tracking plan. Data on the cards were collected from MBTA and municipal sources, including deeds, orders of taking, land court certificates and registry books. Field visits were made as a check on the plans and to obtain up to date land use and physical condition information. A directed effort was made to collect information related to parcel developability and value capture potential. Figure 3 illustrates the simple 5 digit code used to summarize the information. This format is easily adapted for computer sorting.

In the course of the study, ERA identified 27 properties suitable for joint development, primarily located in rapid transit station areas. Most of the larger parcels, more suited to joint development, are on the commuter rail lines and are thus not yet inventoried.

Phase II of the study, underway in 1984, will expand the inventory and data base to the commuter rail system and explore options for computerization. Expansion of the system to include buildings, major structures and other important appurtenances is contemplated.

EVOLUTION OF PROCEDURES FOR JOINT DEVELOPMENT OF MBTA PROPERTY

In 1983, following publication of the Property Management Study results, the MBTA initiated a development program to intensify the use of their property, capitalize on the opportunity for additional revenue, upgrade transportation facilities and allow for private management of MBTA property. As a first step in the program, MBTA General Manager James O'Leary hired Robert F. Walsh Associates as consultants to evaluate development potential at selected MBTA properties. Nine sites in four categories were initially examined, including: obsolete power plants, under-utilized land in high market demand areas, parking facilities in commercial areas and town centers. From these, four sites were chosen for detailed analysis because they represented a range of issues of interest to MBTA, as follows:

1. Route 128 commuter rail station in Westwood/Dedham was chosen because of its apparent marketability, the apparent need by a major corporate neighbor to

C-8

Figure 3

VALUE CAPTURE AND PHYSICAL DESCRIPTION CODES

VALUE CAPTURE CODE

Each parcel has been assigned a 5-digit value capture code. The five digits pertain directly to parcel developability and are located under "value capture code" on the parcel information cards. The meaning of each digit is summarized below.

First Digit - - Value of Adjacent Land Uses

- A High (eg: high density commercial).
- B Medium (eg: low density commercial, waterfronting).
- C Low (eg: low value residential, industrial, rundown commercial).

Second Digit - - Development Status of Parcel

- 0 Currently developed (includes tracks, buildings, bridges).
- 1 Not developed (includes vacant land, parking lots).

Third Digit - - Parcel's Relationship to Rail Operations

- 0 Actively used for transit operations (includes R.O.W., actively used station parking areas, bus garages).
- 1 Not actively used for transit operations (includes underutilized parking areas, vacant property).

Fourth Digit - - Complexity to Develop Parcel for New Uses (from construction standpoint)

- 0 Complex to develop on or over.
- 1 Easy to develop on or over.

Fifth Digit - - Potential for Creating Direct Passenger Access Between an Adjancent Land Use and a Station Area Property

- 0 Little or No Economic Advantage from Tie-in
- 1 Good Economic Advantage from Tie-in
- 9 Non-station Area Parcel, Tie-in Not Economically Advantageous

The coding allows quick interpretation of the parcel's developability status. For example:

Alll..... Indicates that the parcel has the ideal conditions for lease or sale to commercial development interests.

Source: (2)

Figure 3 (cont'd)

Blll..... Indicates that the market is not quite as strong (as "A") but that the physical conditions for the development are nevertheless ideal.

Clll..... May be indicative of a parcel that may be "excessed" to adjacent land owners.

C000..... Is typical of right-of-way parcels.

These codes can be visually interpreted while manually sorting through the cards or, even more ideally, the code can be used for computer sorting of the most developable parcels. Computer software can effectively insulate the terminal user from the actual code itself. For example, the user could instruct the computer to locate all of the parcels with priority development potential. The computer might then locate all Alll and Blll coded parcels automatically and create a "report" which would list each parcel and show the address, parcel description, and the "comments on value capture."

The fifth digit in the value capture code indicates the parcel's potential for creating direct passenger access between an adjacent land use and a station area property (Washington Station being an example). This is not joint development in the sense of more intensely developing transit property, instead it is tieing-in a station with adjacent, privately owned property. A "9" indicates a non-station area property. A "0" indicates a station area property that is not ideally suited for creating a direct passenger tie-in. This is usually because adjacent land uses aren't intense enough to merit a direct station linkage. A "1" indicates a station area property that has good potential to be directly linked to adjacent land uses, where the tie-in would create development value for those adjacent uses. The MBTA might benefit from these instances by, 1) generation of MBTA ridership from buildings erected on adjacent parcels and, 2) leasing of tie-in facilities to the owner of the adjacent property.

expand and the fact that the parking area was significantly under utilized.

2. The Riverside light rail station, maintenance facility and parking lot at Route 128 in Newton was chosen because of its obvious marketability and the history of attempts to develop it.

3. Dedham Square was chosen because the land had no future transportation related purposes and was a parcel that could be declared surplus and conveyed to the municipality or made available for private development.

4. The obsolete East First Street power plant in East Boston was chosen because of the lack of apparent transportation purpose and because Boston Edison was actively negotiating to purchase it from the MBTA.

In developing the program, the objective of the General Manager was to devise a process that would not require enabling legislation or in any way affect existing legislation. Because the MBTA is a regional authority, responsible to its 79 cities and towns, it was important to determine whether development of its land holdings was authorized under the "public purpose" the Authority was set up to serve. It was also necessary to determine whether the MBTA could forego traditional bidding procedures and choose a developer based on economic, market, and design related criteria rather than sell or lease land to the highest bidder. Thus a first step was to contact the Transportation Committee of the State House of Representatives to make sure the MBTA would not violate any statutes by engaging in joint development activity and to obtain approval from the Inspector General that the MBTA had proper authority to pursue development opportunities and to establish its own criteria for selling or leasing its property. The conclusions were that the MBTA could sell or lease its property for development and choose developers providing that "sound reasons in the public interest for choosing other than the highest bidder were established" (3). Since the MBTA has obtained these approvals, development projects will be less likely to be challenged politically or in court.

Other issues that arose early in the process involved the MBTA's tax exempt status and its exemption from zoning, both granted to the Authority, of course, as a public transportation provider and not as a developer. Clarifying the extent to which

new developments might improve transportation service and ridership was also a concern. To address these issues, a set of formal Procedures for Joint Development of Property was developed by the MBTA's consultant and circulated for review to affected parties. Comments were sought from the MBTA Board of Directors, the Advisory Board, the transportation committees in the legislature, the Inspector General, the Greater Boston Real Estate Board, and the Chamber of Commerce. The result is the procedures shown in Figure 4. These procedures provide the basis for dealing with development in a more coherent fashion within the MBTA. Traditionally, the development function at the MBTA had been carried out by the operations directorate under the General Manager. Short term leases or licenses of MBTA property, on the other hand, were handled by the real estate management department. The decision was made to locate the new development program initially in the real estate management department.

The first test case of the development program has been the development of a six-acre MBTA commuter rail station and a 600 car parking lot at Route 128 in Westwood/Dedham, one of the sites identified by Walsh Associates as a feasible development parcel. From a transportation point of view, the station serves both MBTA commuter rail service to Boston and Amtrak intercity service between Boston-Providence, New York City and beyond. The project was developed through the following process:

- Walsh Associates performed initial site analysis and market studies to determine an optimum development program for the site;
- A developer's kit was prepared and circulated;
- Proposals were received from two developers, one of which was clearly superior to the other in terms of meeting the MBTA's objectives;
- This developer was selected and approved by the MBTA Board;
- Financial negotiations between the MBTA, the developer and the two towns proceeded; and
- The Massachusetts environmental review process was initiated.

The approved development plan consists of a 250 room hotel with 200,000 square

Figure 4

SUMMARY OF MBTA PROCEDURES FOR JOINT DEVELOPMENT OF PROPERTY

I. Designation of a Site as Surplus for Future Transportation Needs

II. Board Approval and Notification of Surplus Designation

III. Preparation of Preliminary Development Plan and Public Hearing

- Conduct Market Feasibility Analysis
- Prepare Preliminary Development Plan
- Submit Plan to Local Planning Board or Agency
- Hold Public Hearing in Development Area
- Submit Plan and Responses to Public Comment to Board

IV. Preparation of Joint Development Prospectus (Request for Proposal)

V. Developer Selection

- Convene Development Review Committee
- Review and Evaluate Proposals
- Recommend 2-4 Firms for Negotiation
- Designate Preferred Firm
- Conduct Negotiations
- Obtain Board Approval
- Select Firm

VI. Final Approvals

Source: MBTA

feet of office space in three buildings and 1070 parking spaces, 320 to serve the development and 750 to serve MBTA commuters. Market conditions support this upgrading from warehouse-distribution use (current zoning) to more intense commercial development. The design allows for a coherent phasing of the development with minimal disruption to the MBTA commuter.

As of autumn, 1984, it is envisioned that the environmental approval process will be completed and necessary negotiated solutions reached to allow construction to begin in Spring, 1985.

Issues which have arisen in the environmental review and negotiation process include:

- Sufficiency of parking on the site to serve both the development, the MBTA commuters and intercity rail passengers;
- Height of buildings as raised by the adjoining residential neighborhood in Westwood;
- Impacts of the development on the quantity and quality of water supply; and
- Impacts on municipal services.

The financial details have not been finalized because the development has not been finalized. In fact what will occur is an annual ground lease to the MBTA plus MBTA participation in net income after a certain level of return to the investors and developers. When the project is built in its entirety the payment in lieu of tax to the towns would be approximately $600,000-$700,000 and annual revenue to the MBTA would approach $600,000. The revenue implications to the MBTA are apparent when compared to the ongoing gross revenue to the MBTA for parking of $1.00-$1.50 per space per day. The in lieu payments to the towns are significant as an alternative to property taxes which are limited by Proposition 2-1/2 to 2-1/2% of assessed value, and thus represent a valuable negotiating tool for the MBTA.

The Route 128 package is more than a simple land development opportunity because of the fact that the land is in two towns which have a history of competition rather

than cooperation. Both Westwood and Dedham have at best part-time government which impedes progress in the public development process as far as obtaining necessary municipal approvals. Issues of impact on municipal services, infrastructure, height, liquor licenses and just a general antidevelopment feeling that prevails in both towns present problems that have been difficult to work through.

It is interesting to note that a policy decision was made that the developers and the development would be subject to local approvals, even though the MBTA is not subject to local building or zoning codes. The decision was based upon a judgment by the General Manager that the public development should be subject to public review through whatever process the affected town establishes. The situation is compounded because the MBTA has other issues that affect both towns and as often happens the governing bodies of both towns want to negotiate all outstanding issues between the town and the MBTA around the development project. The MBTA has used its consultants to work out the financial negotiations and arbitrate the development and transit service issues of concern to the towns. As of Autumn, 1984, the likelihood of a successful agreement appears good.

NEW DIRECTIONS FOR MBTA REAL ESTATE AND DEVELOPMENT PLANNING

The Joint Development Program has reached a point where it is generally recognized as being of positive value to the MBTA as a revenue generator, a source for improved facilities, and an opportunity to provide more convenient facilities for commuters. It is obvious at this point that the MBTA is beginning to focus more attention on the program by the hiring of a director of development and by making this program part of the management family of the MBTA.

Hired in the summer of 1984, the MBTA's new real estate development coordinator, Jaci Hall, is responsible for consolidating development related functions within the Authority which have been dispersed among many departments. The impetus for the new role, which arose from the ERA property management study and the Walsh consultant

studies is found both in the revenue-generation potential of the considerable MBTA property holdings and the desire of the Authority to work with communities within its district to stimulate and insure appropriate development.

As Hall sees it, the issue in an older area such as the Boston region is less one of directing growth than in working with localities to support their established growth policies. While the MBTA is exempt from local zoning, their development policy does stipulate that the Authority work with local communities in deciding the type and extent of development on MBTA property. MBTA has a powerful negotiating tool in its tax exempt status. Development on MBTA property will thus result in negotiated "in lieu" payments to the towns as opposed to property taxes. These new revenues represent a new revenue source for the localities which is outside the limitations of the Proposition 2-1/2 property tax bill. Beyond its property holdings the MBTA has substantial financial resources which enable it to participate in development deals, including its bonding authority; its pension funds and its leverage with the financial institutions with whom the MBTA does business.

For the next three years, the new department will take an incremental approach to consolidating development-related functions within the agency moving some staff from existing MBTA departments and slowly adding new staff. The agenda for the new department will be:

1. To complete joint development projects currently underway, such as the Route 128 development, creation of condominiums in an abandoned power station on Lincoln Wharf on the downtown Waterfront, and the Southwest Corridor parcels;

2. Identifying new sites with sufficient market interest and where the MBTA has something to gain;

3. Looking at development possibilities for core area stations where the station improvements would be a catalyst for area redevelopment, such as Broadway and Fields Corner Red Line station in Dorchester, Maverick Blue Line station in East Boston and Davis Square station in Somerville;

4. Increasing revenue from leases and concessions in stations and station areas. The focus will be on new stations, such as those on the Southwest Corridor where every station has concession space ranging from 5500 square

feet to 12,000 square feet. The ERA study concluded that updating lease terms and preparing new leases could generate significant revenue increases, particularly in the areas of advertising and parking. Concession revenues were assigned a "medium" potential in revenue generation. In 1983, Walsh Associates had looked at MBTA lease procedures for the General Manager and developed a formula for setting concession lease fees which was tied to the volumes of passengers going through the station (Figure 5).

As part of the Southwest Corridor project the MBTA is using its development consultants to refine the lease procedures and apply them to the Southwest Corridor stations. As other leases come up for renewal, they will also be looked at in terms of the new formula. Lease revenue is a major factor for the South station project, for example.

In the longer term, the new department will look at development possibilities related to the commuter rail system. As Jaci Hall sees it, a whole different set of issues applies to the commuter rail stations in the less dense suburban and semi-rural areas. Different types and densities of development are desirable and different types of approaches are necessary in these other communities which are less sophisticated in planning and implementing development projects.

Ms. Hall sees the development department as pursuing many opportunities over the next few years. She would like to coordinate the newly completed property inventory data with other system data for transit and rail, and expand the information to be more useful for development purposes. The role she foresees for her department will lead to more involvement by MBTA in land use and development planning and more coordination with other agencies. "Older transit authorities have land banked by default. We must change this to land bank strategically. When an agency is involved in development, it must look at all publicly owned land and join forces with other public agencies" (4). To support the interagency coordination, the Massachusetts Executive Office of Transportation and Construction has appointed its own coordinator for all transportation related land development. He serves as official state agency liaison on development matters.

Hall agrees, however, that establishing this type of role at the MBTA will involve gradually changing some long standing attitudes. "Development is a dynamic

Figure 5

LEASE FORMULA

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
STATION CONCESSION KIOSK

PART 1

(Average Daily Ridership) x (% of Ridership patronizing kiosk) x (Average Expenditure) x (260 Days) = Annual Gross Income

PART 2

(Annual Gross Income) x (% Payment) = Annual Lease Amount

PART 3

(Annual Lease Amount) x (Location Value) = Annual Lease Payment

Kiosk Location Values

Kiosk Location	Multiple
a) Waiting platform Good visibility - inside location	1.00
b) Waiting platform Fair visibility - outside location	.95
c) Turnstyle/corridor Good exposure	.95
d) Turnstyle/corridor Poor exposure - out of way location	.80

Source: Robert F. Walsh Associates

process which is very different than providing a service, which is what transit agencies are geared to do. Even new construction is done to the end of providing service. In development decisions are made for development's sake" (4).

To make the development function permanent, the new staff is looking eventually to develop ways to recoup a percentage of revenues generated through the development efforts to pay for salaries and expenses. To do this, accounting procedures must be modified to account for income generated by development separately from other sources. This will help to justify and protect the development function to build in accountability and to provide motivation for generating new projects.

ISSUES: ELEMENTS OF SUCCESS AND FAILURE

The MBTA case illustrates an older transit agency whose General Manager, motivated both by funding restrictions and the recommendations of an internal property management study, came to an awareness of the revenue generation potential of MBTA property development. The actions initiated by the General Manager have led to a new awareness by the agency of the relationships between transit and development and to institutional efforts to further a development role. In this regard, several elements will influence the outcome of the new development role within the Authority.

Consolidation of Development-Related Functions Within MBTA

As mentioned above, functions related to real estate and property management have been scattered throughout the Authority. The Real Estate department, only formed in 1980, has primarily been concerned with right-of-way acquisition and maintenance issues. Leases and concessions have long been neglected in terms of revenue potential. Basic materials such as plans, assessed values, or even the leases themselves have been overly difficult or impossible to obtain. Station area development has largely been an incidental concern of the Construction and Operations Directorates. Far from pursuing benefit-sharing, the concern has rather been one of making certain development does not interfere with MBTA operations. Station area design for all

stations systemwide has been delegated to a single individual without direct responsibility to the General Manager. The one active effort to integrate transit and development, the Southwest Corridor project, was conducted in its own department, isolated to some extent from the MBTA line departments and subject to political pressures at the State level. Summarized, dealing with the MBTA on a development issue has been confusing, time consuming and unbusinesslike from a developer's point of view.

In establishing a development related function within the MBTA the General Manager wisely took an incremental approach. He first worked with a consultant to explore the implications of developing MBTA property. The consultant reported directly to him at a management decision level. In the initial stages, the legal and political feasibility of establishing a new role was verified before any implementation was pursued.

Now that the Route 128 test case is well underway and other opportunities have been identified, the General Manager is ready to establish a new function within the Authority to carry out and expand the development program. Now, one department will coordinate all development activity and there will be a clear contact point within the agency for developers and localities dealing with the Authority. Here again, however, the new development department will not be created overnight. As opposed to a new system such as Metro Rail where UMTA planning funds were used to finance new staff positions, the MBTA has limited funds to finance new hires. Thus the new department will be gradually built up from existing staff positions within other departments. This reorganization will have to be carefully done so as not to threaten existing departmental roles.

A New Look at MBTA Financial Resources

The MBTA's property holdings, bonding authority, tax-exempt status, exemption from zoning, pension funds and bank deposits all represent powerful financial and

negotiating resources which can be of use in implementing development deals. The new directions in development planning at the MBTA are leading to a new objective for use of these resources and staff capabilities for putting them to work more effectively. The MBTA Advisory Board has received UMTA funds for a study of long-term capital financing for the Authority. Given the State tax laws and Federal funding requirements it is likely that development-related revenue will play an increasing role in the MBTA's long term revenue picture.

Relationship With Local Communities

In pursuing its new development role, the MBTA has learned the importance of working closely with the local planning and development agencies involved to insure an acceptable package. In its negotiations with local governments, the MBTA must contend with its generally negative image as a service provider in pursuing its new role as a developer. The Route 128 "test case" and the Southwest Corridor project have taught several lessons regarding the advisability of working closely with the local governments to resolve problems early in the planning. One issue from the MBTA's point of view has been the lack of professional planning capabilities in some of the smaller communities or the inability of communities to fund some of the planning studies necessary to put the development projects in the proper context. The MBTA is exploring funding this upfront planning for the communities, or doing this planning itself, and recouping the funds through its negotiations with developers. The MBTA can also use its greater leverage to have other public agencies conduct some of the necessary studies.

Market Factors

The new development activity at the MBTA is tied to some extent to favorable market conditions in the Boston metropolitan area, both downtown and in the suburbs. In the case of the North Quincy station joint development for example, the MBTA owned

site was the last parcel available for new development in the station area. In addition, the MBTA construction program launched in the early 1970's is reaching completion. The Southwest Corridor is a good example of a case where, even though development was integrated into the planning, actual interest has lagged until construction has proceeded to a point where completion seems certain. In other areas, however, such as Wellington station in Medford, air rights sold to the city for development in 1969 have still not been developed. The MBTA is preparing, through its new department, to keep track of its holdings and construction projects so that the Authority can respond in a timely fashion to developer requests and act on its own initiative when the time is right.

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2. Economics Research Associates. "Computerized Property Management System Services Project: Phase I," prepared for the Massachusetts Bay Transportation Authority (January, 1983).

3. Massachusetts General Laws, Chapter 161A, Section 5(c).

4. Interview with Jaci Hall, Director of Real Estate Development, Massachusetts Bay Transportation Authority, July 11, 1984.

LIST OF AGENCIES AND PEOPLE INTERVIEWED FOR MBTA CASE STUDY

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  LewJean Holmes, Executive Director
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CASE STUDY

MICHIGAN PASSENGER TERMINAL PROGRAM

INTRODUCTION

Michigan DOT's statewide passenger terminal program has been in existence since 1976. The impetus for the program actually came from intercity carriers seeking to meet the threats of escalating fixed costs in the industry and to coordinate all transportation modes into single facilities. Administered by the Bureau of Urban and Public Transportation (UPTRAN) of Michigan DOT, the program's goals are to:

1) Assist communities in the construction of new facilities;

2) Insure that all facilities are designed to serve all public transportation modes in the communities by integration of all services and development of intermodal transportation, and to improve the convenience of travel by public transportation;

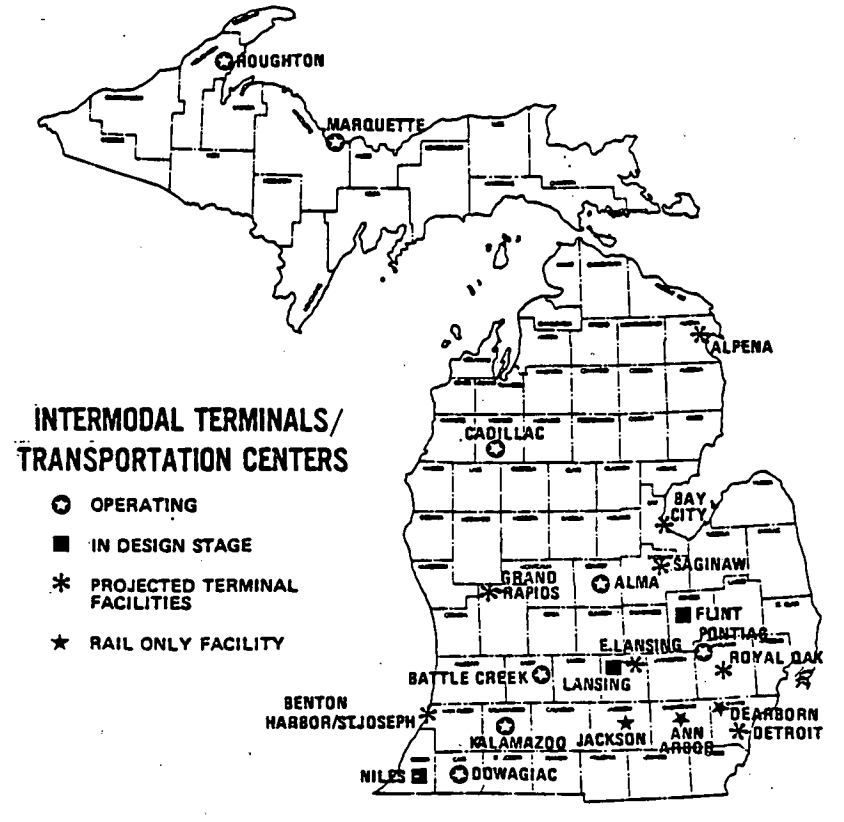
3) Improve the safety and comfort of intercity travellers and stimulate increased patronage of intercity carriers by providing bright, safe and attractive public transportation facilities; and

4) Design facilities to become self-supporting operations (emphasis added) with all income used to offset the operating and maintenance expenses.

The program makes funding available for upgrading and construction of intermodal transportation centers and terminals, although funding is available for single-mode terminals as well. Covered are new construction, rehabilitation of existing buildings, marketing, training, signing, and equipment. The program has been implemented in small to medium sized cities throughout the state, with 10 terminals operating, two under design or construction, and eight proposed (Figure 1).

The emphasis of this case study is on the effectiveness of the program in making the terminal facilities self-supporting in their operations through lease agreements with the participating carriers and the lease of office and concession space in the terminals. In most cases, the program has met this goal, although the examples point up the need for vigilant property management both in keeping costs down and in adjusting leases to cover costs.

Figure 1



Source: Michigan DOT, Urban and Public Transportation Division

SG Associates, Inc.

This case study was based on a tour of nine Michigan cities conducted by the study team in June, 1984, with the assistance of Steven Cook of UPTRAN. The nine projects illustrate both the positive role of the state in encouraging benefit-sharing approaches for smaller communities and transit properties, and the importance of market considerations, maintenance and management to successful operation of the facilities on the local level.

BENEFIT SHARING STRATEGIES/PROJECTS

The benefit-sharing techniques of most interest in the Michigan case study are the sharing of costs between the local bus or paratransit companies and the intercity rail or bus carrier tenants of the terminals, and the lease of commercial space to other tenants to meet operating costs for the terminals. The nine projects examined in Michigan illustrate various types of arrangements in meeting the goals of the program, with varying degrees of success. The projects include both imaginative reuse/rehabilitation projects and new construction. Project costs range from $50,000 in Dowagiac to $3,000,000 in Flint. Of the nine projects considered, seven are operating, one is in final design, and the last is in the initial proposal stage. A brief description of each of the projects and the benefit-sharing approaches used follows.

- Marquette Transportation Center, Marquette, MI

  The Marquette Transportation Center opened in April, 1983 in a renovated A & P supermarket building to the east of the Central Business District. The facility includes a local and intercity bus terminal, a maintenance and storage area, and 10-12,000 square feet of leasable office space on the second floor. Total project cost was $1.4 million, of which $652,000 was UMTA funds for the maintenance facility and $750,000 was state terminal program funds. The facility is owned by the City of Marquette and operated by the Marquette Transit Authority. Rents from Greyhound, the Alger-Marquette Intermediate School District (which leases storage/maintenance space for its vehicles and office space for dispatching), and the three second-floor office tenants cover operating expenses, with a small surplus. Rental revenues are expected to increase when some vacant second-floor space is rented to a pending tenant. While the public transit authority also leases its space, it is able to do so at a much lower rate due to the higher rents charged the other tenants (Figure 2).

Figure 2

RENTAL RATES: MARQUETTE TRANSPORTATION CENTER

JULY 1, 1984 - JUNE 30, 1985

Tenant	Space	Rate Per Sq. Ft.	Annual Rent
Lower Level			
Greyhound Bus Storage	450 s.f.	$3.60	$ 1,620.00
MAISD	4,087 s.f.	$3.74	$15,285.00
MTA	4,612 s.f.	$1.60	$ 7,379.00
MARQ-TRAN	3,597 s.f.	$1.60	$ 5,755.00
Upper Level			
AMCAB	4,352 s.f.	$3.07	$13,361.00
GNT & A	675 s.f.	$6.30	$ 4,252.00
Cablevision	2,100 s.f.	$5.00	$10,500.00

- Cadillac Transportation Center, Cadillac, MI

Opening in 1980, in a former auto dealership and garage, the Cadillac Transportation Center serves the local county wide dial-a-ride system , and the intercity Shortway/Northstar Bus Lines (formerly sharing space in a flower shop). The facility, which is owned and operated by the city, just breaks even financially. The main source of income is rent paid by the dial-a-ride service; the intercity bus company pays no rent, only a commission on tickets sold and packages handled. A small shoe store on the site which was operating before the center was built pays a monthly rent; also several parking spaces are rented to nearby lounges. Initially, some small offices in the terminal were rented to non-transportation tenants; now these offices are occupied by the transportation carriers and the Shortway/Northstar package operation. Office space upstairs is unusable for rental purposes due to handicapped accessibility regulations in the state of Michigan which require ramp or elevator access. The city created a small park on land not used for parking; however, some problems have occurred with regard to loitering and vandalism. To help keep up with utility costs, the center, with the help of a MDOT demonstration grant, has installed a $10,000 waste-oil heating system. Heating oil is recycled into the system from the transit vehicles, several state highway offices, and the general public. The program has led to a significant reduction in utility costs, with a total annual heat bill for the entire terminal of only $1100.

- Metro Center, Bay Metro Transit, Bay City, MI

The application of Bay Metro Transit to construct a downtown transportation center combined with a mixed use development project is currently pending with MDOT. The proposed site, city owned, is adjacent to a parcel currently used by a ban for a drive-through facility. When the bank learned that the transit authority was considering the abutting site for a transportation center, bank officials offered to deed their site to the city in exchange for space in the new building. The proposed facility will house Bay Metro and intercity bus operations on the ground level. Building on the basic Bay Metro passenger market group of elderly retirees and farmers, and the interest of the bank in the terminal location, the General Manager has planned a service-oriented commercial center to include the bank facilities, a fast food restaurant, a city bill-payment center, and a Secretary of State office to share the ground level terminal facility. As the manager puts it, "Lots of people come downtown to pay bills and taxes. Now they have to walk upstairs in City Hall. . . With the terminal, and the restaurant (there is now no fast food restaurant in Bay City), the trip downtown to the bus terminal could be their biggie for the week (1)." In addition, Bay Metro has interested a private syndicate in financing 60,000 square feet of upper-level office space which would also be rented to help cover operating costs. A UDAG grant and tax increment finance bonds issued by the city would also be used to finance a 300-vehicle parking garage. Total funds required are $8.5 million, of which only $56,000 are requested from UMTA (Section 9) in support of the local bus transfer facility portion of the terminal.

- Flint Transportation Center, Flint, MI

The Flint Transportation Center is in the final design stage. The proposed facility, to be located on a large site on the outskirts of downtown which currently houses the authority's offices and maintenance/storage facility, will serve Amtrak, Indian Trails , Michigan Trailways, Greyhound, and the Flint Transit Authority. The site is well located near I-69, a major interstate, the north-south track providing rail service to Detroit and the east-west track providing service to Chicago and Toronto. The transit authority is counting on substantial rail tour traffic to a new theme park attraction, Auto World, opened in Summer, 1984. The lower level of the futuristically-designed terminal will provide the transportation facilities plus 1200 square feet for carefully controlled retail concessions. A second floor will provide 8500 square feet for which a 200-250 seat "Class A" restaurant is being sought as a tenant, based on market studies identifying this as the most feasible use. The General Manager will hold construction bids open until a commitment from a restaurant tenant is secured. Operating costs are estimated at $150,000 per year, which will be covered by the restaurant lease; i.e., the restaurant is expected to generate enough revenue to run the entire facility. Concession rentals will be used to establish a contingency fund. The transit authority goal for this facility is to make it a first class transportation center, and to overcome the negative image of bus and train stations.

- Pontiac Transportation Center, Pontiac, MI

Opened in Spring, 1983, the Pontiac Transportation Center is a new three-level facility, with a heliport on the roof. An underground level serves as the terminal for Greyhound, Tower Bus, and SEMTA bus operations. The street level serves as a waiting room and ticket office and contains rental space housing a travel agency and a Detroit Convention Bureau information booth. Another area currently used for vending machine food service is intended for a convenience type store/food service operation catering to passengers and office workers in the building. The third level contains 7200 square feet of leasable office space, which is connected by a pedestrian bridge (under construction in June, 1983) to Phoenix Center, a General Motors office building and parking garage across the street. The City of Pontiac, which contributed the land as its share of the $2.8 million project, operates the center. The City is currently negotiating with GM to lease the second floor office space. Since the space requires substantial interior finishing to meet GM's needs, the amortized costs of the necessary improvements will be accounted for in the lease agreement. Partially because the rental spaces on the ground and second floor are not rented, operating costs of $127,000 last year were not met by the rental revenues. The deficit for the first year was $50,000. Within 2-3 years, however, the City hopes to rent out all vacant space and to show a profit.

- Battle Creek Transportation Center, Battle Creek, MI

Another new facility, the Battle Creek Transportation Center was built to the south of the downtown when a rail consolidation program eliminated service from the north tracks, the site of the existing downtown Amtrak station. The current site was assembled from the former site of the old

Greyhound station, which was acquired by the city, and adjacent city owned parcels. The city donated the land as its share of the project costs. The transportation center serves Amtrak, and Greyhound, Indian Trails, Shortway and Battle Creek Transit buses. This center does not contain any concession space beyond a small newsstand leased at no charge to the State Association for the Blind. Operating expenses of $43,469 per year are funded through rental revenues from the carriers. Each of the carriers pays for the exclusive use of its own offices and crew rooms, plus its share of common area space, and maintenance/utility costs for the facility. Rents are based on year to year leases which are negotiated based on total estimated costs for each year.

- Kalamazoo Transportation Center, Kalamazoo, MI

The Kalamazoo Transportation Center, in a remodeled historic train station, was the first of the terminal facilities to be implemented. The land and building, located on the fringes of the CBD, were acquired in 1976, the first year of the program, and the center opened in 1977. Owned and operated by the City of Kalamazoo, the facility serves Amtrak, Indian Trails and Greyhound. Although the local transit authority has a large maintenance facility across the tracks from the terminal, its bus stop, on the street, is not directly incorporated into the facility. Rental space in the terminal includes a vacant 2700 square foot restaurant, and a vacant 880 square foot office at the opposite ends of the terminal. Within the waiting room is a 160 square foot newsstand and a 100 square foot video arcade, which together generate $5000/year in revenue. The transportation carriers in this center pay only their share of utility costs, on a 20 year lease, offered as an inducement to to locate in the center. The city is thus responsible for all maintenance costs. Last year, the center operated at a $32,300 loss.

- Dowagiac Intermodal Terminal, Dowagiac, MI

Located in a town of only 6300 population, the Dowagiac Intermodal Terminal serves Amtrak, Greyhound, Indian Trails, and the local dial-a-ride system. The center opened in December, 1977 in a renovated train station which was acquired by the City. Operating expenses run approximately $11,000 per year and are basically paid for by rental of part of the terminal to the Secretary of State's office, which runs a busy public service office at the center. This office had been on a five-year lease which was recently renewed to include cost escalation provisions to cover higher utility costs. The City has a second grant application pending with MDOT for site work and building improvements to improve energy efficiency and reduce utility costs.

- Niles Transportation Center, Niles, MI

Still under construction, the Niles Transportation Center has been serving a ten vehicle local dial-a-ride operation and a county wide demand responsive service since May, 1983. The facility, located in a renovated auto body shop, will upon completion house maintenance and cleaning facilities. Originally, the City had looked to acquire the Amtrak depot for the center, but sought another site when Amtrak refused to sell the station and lease space

in the new center from the city. The size and layout of the building made no space available for commercial leases; however, Indian Trails and Indiana Motor Coach buses started operating as tenants in the building in July, 1984. The intercity operators will lease space to help defray operating costs. The transit operator, which runs the facility and the transit system under contract to the city, will have to make up any operating deficits from his operating budget for the system. The manager noted, however, that bus maintenance costs will be greatly reduced in the new facility since many items now have to be shipped out. "I hope the utilities will not kill us," he observed (2).

ELEMENTS OF SUCCESS AND FAILURE

Because the Michigan case involves so many projects, and because lessons arise from the examples both alone and in contrast with each other, the following discussion focuses on the entire statewide program, with individual cases cited where applicable.

Funding and Interagency Coordination

The MDOT terminal program illustrates an effective use of state funds as a supplement to private funds, local resources, and UMTA funding programs to achieve the goals of the program in a flexible manner. In general, MDOT dealt with the local governments (rather than the transit agencies) in putting together the terminal projects. However, in three cases (Flint, Marquette, Bay City), the transit agency took a lead role in putting the project together. In each case, UPTRAN staff worked closely with the local lead agency at each step of the program, an important factor in bringing about such large scale projects in the smaller communities.

Another factor in implementation was that MDOT designed the program so that the local match was relatively easily obtained. City contribution of land, building, or in-kind services served as the local match in most instances. In many of the cases, the city owns the facility and the local transit operator runs it on a contract basis. In several, the city actually operates the facility as well. In addition, MDOT assisted the localities in packaging funds from various sources. In Marquette, for example, the MDOT funds were combined with UMTA storage/maintenance facility funding to achieve the combined terminal and maintenance facility. Costs were prorated based

on the 2/3 share of the Marquette Transit Authority in the total floor space for the entire facility. The second floor office space, ineligible for UMTA funding, was funded totally by the MDOT grant. The revenue generation potential of the commercial space, made possible because of the MDOT support, helped sell the terminal to the city council, which had been reluctant to support the idea due to fear of operating deficits. Niles also combined a state grant for the terminal with an UMTA grant for the storage/maintenance facility. In Bay City, the transit authority is packaging the state funds with a UDAG, private funding, tax increment bonds, and a small UMTA grant. The point is the key role of MDOT in assisting the local communities to identify opportunities for combining funding resources and to prepare necessary applications, and the importance of flexibility in the program's guidelines and eligibility requirements in insuring that cost-effective projects were implemented.

Urban Design and Planning

The nine Michigan facilities illustrate a number of different design approaches to providing intermodal transportation centers in smaller communities, including new construction, rehabilitation of train stations, and adaptive reuse of non-transportation buildings. The type of construction dictates the amount and type of commercial space which can be included within the facility. With new construction, the space can be designed to accommodate likely tenants based on market studies. Of the four new facilities, three have incorporated leasable commercial space in order to generate operating revenue. In Flint, 8500 square feet on the second level have been set aside for a restaurant whose rents will cover operating costs for the entire transit facility. In Pontiac, the second floor and the pedestrian bridge across the street were designed to accommodate General Motors as tenant. In Bay City, the transit agency has designed the office and commercial space based on private investor interest and market studies.

In the case of rehabilitated facilities, the availability and marketability of

commercial space is defined by the building location, the amount of space left over after transportation requirements are met, and the interior layout of the building. In this regard, the Kalamazoo transportation center provides interesting lessons. The restoration of the train station into a multimodal transportation center was intended to act as a "catalyst for revitalization" of its location at the fringes of downtown (3). However, the facility has failed in this goal, and its location has served as an impediment to its successful operations. While the presence of a restaurant and a small office at the ends of the terminal promised to generate rental revenue to support terminal operations, the city has had difficulty in finding stable tenants for either space due both to building design and to the blighted nature of the surrounding neighborhood. The restaurant can only be entered through the station, and its location is removed from the passenger traffic in the terminal. The city is currently redesigning the restaurant to provide an entrance to the street as it negotiates with a new tenant. The office fronts on a vista of a mission and a transient rooming house across the street. While some low density parcels in the vicinity of the terminal could be assembled for redevelopment, local officials, with an "anti-urban renewal" philosophy, were reluctant to take any public action (3). Unfortunately, the terminal improvement failed in itself to generate sufficient market interest in the area to bring about any private investment.

Further design issues in Kalamazoo relate to the insufficiency of the restored train station to meet the combined needs of Amtrak and the intercity buses. The facility suffers from insufficient waiting area for all the bus and train passengers, as well as insufficient room for the Amtrak and bus carrier offices. Possibly because of dissatisfaction with their space, the carriers had to be lured to locate in the facility with 20 year leases which required only that they share utility costs. Small areas for newsstand and video arcade concessions have been created in the terminal, but the overall effect is crowded. In addition, there is insufficient parking to

serve the terminal, restaurant and office space.

While the terminal is an architectural classic, with an interior quite beautiful in terms of its paneling and fixtures, local officials suggested that "we would have better off, and this area would have been better off if we had gone with a whole new facility to the west (3). Under that scenario, the terminal could have been designed to meet the transportation requirements and the old station could have been redeveloped privately for other uses. (This was the case in Battle Creek where the transportation facilities moved to the new center and private interests will redevelop the former train station.)

In Dowagiac, a very small community, the rehabilitation of the train station has been more successful. Location is not a problem, and the Secretary of State's office is a stable long-term tenant. In addition, the transportation carrier demands are not as heavy since less service is provided to the area. The one problem in Dowagiac has been the burden of utility costs caused by the antiquated structure. A second grant from MDOT is now being sought to improve energy efficiency.

The Marquette, Cadillac, and Niles facilities illustrate how a building designed for a totally different use -- a grocery store, a car dealership, and an auto body repair operation -- can be adapted to serve as transportation centers and even storage/maintenance facilities. In the Marquette case, the major modification necessary to the former A & P building was lowering and reinforcing the floor in the garage area, and installing a pit for vehicle maintenance. (A hoist was infeasible due to low ceiling heights). The A & P was well suited for rental of ancillary space. Second story office space, which had formerly been leased to Blue Cross, required only minor renovations to accommodate new tenants. One adjustment had to be made to prevent diesel fumes from the bus terminal from entering the second level ventilation system; the vents were put on a timer which switched them off at the hours when buses were departing. In Niles and Cadillac, the renovated car dealership and auto body shop, while easily adapted to meet transportation center requirements, did not contain

sufficient office space to rent to non-carrier tenants. Cadillac rented some small offices on the terminal level to commercial tenants for a time, but now uses the spaces for its own offices and package delivery storage.

The Cadillac experience illustrates the importance of finding tenants which are compatible with the transportation center use. Unless the space is completely segregated from the transportation center, with a separate entrance, rental potential is enhanced if an effort is made to find tenants who will benefit from, or at least not mind, the transit passenger traffic, or those which have their own transportation purpose. In Cadillac, the activity in the terminal itself interfered with the business of the tenants of the small offices -- a novelty company, a cleaning service -- so that the tenants eventually moved. In Marquette, on the other hand, office space within the terminal as well as storage/maintenance space is leased to the Alger-Marquette Intermediate School District, which runs its school bus service from the terminal. The school district, an enthusiastic proponent of the center from the start, appreciates the improved facilities for its buses and drivers and the opportunities to save money through joint purchases of fuel and supplies. The terminal location for their offices and dispatching center is perfectly compatible and logical. In Bay City, the transit agency is seeking tenants which will contribute to the concept of a downtown service center in the terminal to meet the needs of the elderly and retired, a large component of Bay Metro ridership. The likely tenants -- a bank, Secretary of State's office, fast food restaurant, city service office -- appreciate the passenger traffic and the convenience of the location. Other compatible terminal tenants in the Michigan examples include travel agencies, restaurants, and a chamber of commerce information center.

A last major design issue is the ability of the facility to create a positive image for the transportation carriers using the center, and for the center itself. The Flint General Manager stressed creating an image of a "transportation center, not

a bus station or a train station (4)." The point is to overcome the negative public image associated with bus and train stations. With a new facility, perhaps, it is easier to create a new image because it can "start out first class in terms of the building, maintenance, design, controls, security (4)." Several of the new facilities, implemented for relatively low cost, have won design awards. For the smaller cities, the facilities created out of non-transportation buildings served the same purpose. For them, it was an issue of having a terminal versus no terminal. In Cadillac, for example, the intercity buses had formerly operated out of a flower shop. The new terminal, signing, and location in the center of the downtown have definitely helped the visibility of the system. Ironically, the rehabilitated train station in Kalamazoo had the biggest hurdle to overcome in image building, in spite of its beautiful architecture and the careful restoration work.

Maintenance/Management

Essential to achieving a positive image for the transportation center is the ability to sustain a high level of maintenance. To keep up with rising maintenance and utility costs, careful property management on the part of the center operator is required. As was the case in the Toledo, it is desirable to "negotiate out of" as large a portion of the utility costs as possible through leases and agreements with the center's tenants.

One successful method is to require in the lease direct payment by the tenant of his share of maintenance and utility costs. This approach, which is used in Battle Creek, requires that:

> "In lieu of rent, IBC (the Intercity Bus Carriers) agrees to pay the City an amount equal to the annual cost of maintenance, utilities, and insurance on a square foot basis for all 1275.38 square feet exclusively used by IBC and one-third of the 3912.13 square feet of the common area (Amtrak and the local bus company pay the other 2/3). . . The initial cost per square foot per year for the first year of this agreement is estimated to be $5.06. For the second and subsequent years, the City will estimate the IBC pro-rata share of the cost of maintenance, utilities and insurance for the forthcoming year and shall, according to the above formula, invoice IBC for the total amount of its pro-rata share, which shall be paid monthly. . . Within thirty (30) days of the conclusion of the

> first and each subsequent year, the City will calculate the actual cost of maintenance, utilities, and insurance for the premises and establish the actual cost per square foot per year. The City will then invoice IBC according to the above formula for its pro-rata share of any amount by which the actual cost shall exceed the estimated cost or shall refund to IBC its pro-rata share of any monies collected from IBC upon the estimate for that year in the amount the estimate shall exceed the actual costs (5)."

The City, responsible for maintenance and utilities, contracts out routine janitorial services and outside maintenance, landscaping and snow removal. The city performs non-routine maintenance itself. The contracted maintenance provisions make it easy to account for funds actually expended on the terminal and to prorate the costs to the tenants. The year to year lease provisions allow for timely adjustment of the rents to meet current costs. Contrasted with the Battle Creek experience is Kalamazoo, where the transportation carriers negotiated 20-year leases calling only for payment of utility costs. Although Kalamazoo also contracts out its maintenance, both the level of maintenance and the ability of the city to pay for it have suffered due to the lack of escalator provisions in the leases. Similarly, the city is responsible for security in the Kalamazoo station. Because the tenants do not share the costs, no special security detail is in effect in the terminal beyond city police protection. Loitering and vandalism have thus become somewhat of a problem at the terminal.

In cases where non-transportation uses are involved, the commercial space rentals can be adjusted to help subsidize the rentals for the transportation carriers themselves. For these cases, market rentals for the office/restaurant space can be established and the "profits" put into reducing rentals paid by the transit carriers. In Marquette, for example, the local bus company pays only $1.60 per square foot for its facilities. Here, the manager of the facility (MTA administrator Robert Niemi) pays close attention to keeping his office space rented and to adjusting the rents to keep up with rising costs. The Marquette leases are escalated at 10% per year; however, post-1984 leases are escalated at 5% per year. Niemi charges 10% of his time

to the city to cover his ongoing responsibilities for building management. He notes that there has been some public complaint about the city and transit agency being in the rental business and competing with downtown property owners (7). In his view, however, the role is justified in terms of its subsidy of the transit center operations: "The city has resources which it should put to the highest and best use. We owe it to the taxpayers to keep the facility self-supporting (7)."

Summary of Costs and Benefits to the Participants

The MDOT terminal funding program has made possible the creation of consolidated terminal facilities for local buses and paratransit, intercity bus and rail systems in small communities across the state. The requirement that the centers must be self-supporting has led the cities and transit agencies involved to pursue cost sharing arrangements with the intercity carriers, lease of concessions and commercial space, and ongoing property management to keep up with maintenance and utility costs.

Beyond the transportation benefits associated with the intermodal connections, the facilities have produced the benefits of:

- improved terminal facilities, a better image, and focal point for the local transit system;
- improved maintenance and storage facilities;
- transportation and public investment support for downtown redevelopment efforts;
- subsidized rents for the local transit agency through cost sharing with intercity carriers and other space leases; and
- ongoing support for utility and maintenance costs.

On the other hand, in the cases where there have been problems with the terminal facilities, they have arisen from:

- failure of local government to support the transportation center investment through planning and urban renewal in the surrounding area;
- failure to secure prime tenant commitments before constructing commercial office space;

- failure to include cost escalator provisions in the leases;
- leases signed for too long a term;
- lack of agressiveness and market research in finding tenants for vacant space; and
- failure to maintain a high standard of maintenance and security.

In sum, the major ingredients of success of either a new or rehabilitated terminal in meeting its costs through lease revenues are sound site selection, market research, and property management skills. The manager of the facility must be able to devote sufficient attention to the facility to be sure it is operating smoothly on an ongoing basis.

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3. Interview with Scott E. Townsend, Director of Special Services, City of Kalamazoo, June 22, 1984.
4. Interview with Robert Foy, Assistant General Manager, Mass Transportation Authority, Flint, MI, June 21, 1984.
5. City of Battle Creek, "Battle Creek Intermodal Passenger Facility Lease," January, 1982, pp. 2-3.
6. Interview with Robert Niemi, Marquette Transit Authority, Marquette, MI, June 20, 1984.

LIST OF AGENCIES AND PERSONS INTERVIEWED

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CASE STUDY

MIDTOWN NEW YORK

NEW YORK MIDTOWN CASE STUDY

INTRODUCTION

This case study describes two large projects in Midtown Manhattan. They both involve major new real estate development in direct proximity to subway stations which require significant remodelling. They are both in a very high density, high land value environments and take advantage of the economic benefit of additional density in exchange for private contributions to the subway improvements. The comparison of these projects is of interest because they use different techniques for publicly guiding the private developments and for incorporating benefit-sharing.

The subway system in New York City is by far the largest and most complex in the country. It was built during the first three decades of this century as an agglomeration of many independent lines. It has carried very high volumes of people for a long time and operates 24 hours a day. It is largely responsible for permitting the extraordinary density of Manhattan. But it is aging, badly worn and beset by operational, security and environmental problems.

The subway system is run by the New York City Transit Authority (TA) in its day-to-day operations and is overseen for general policy, planning and budget matters by the Metropolitan Transportation Authority (MTA). Currently the system is undergoing a major station renovation program with approximately $5 billion committed from local bond issues. In spite of this commitment, the very large expenditures required for the two station complexes discussed here required substantial private contributions to be feasible.

The station areas discussed here are the Times Square/42nd Street complex and the East 53rd Street/Lexington Avenue/51st Street stations. The former is a major interchange with critical problems in circulation, orientation, security and environmental quality. The latter is experiencing extensive congestion and inadequate circulation facilities and lacks a direct transfer connection between the two lines.

The development conditions are somewhat different at the two sites. The East Midtown is highly desirable for development, in great demand, and is considered overbuilt. Recent zoning changes have reduced the allowable floor area ratio (FAR) from 18 to 15 times the lot area at major avenue sites. The land values are extremely high. This means that developers are generally eager to take advantage of any available means to increase the density. The Times Square area on the other hand is considered blighted. Even though major new development there is also potentially very valuable, it has been considered necessary to launch a major publicly initiated development program to achieve revitalization of the area (Figure 1).

Thus, the case study discusses two different types of development programs and the related benefit sharing strategies:

1) Publicly initiated development at Times Square/42nd Street with mandated contributions to subway renovation as an integral part of the program; and

2) Privately initiated developments in East Midtown where the private contributions to subway renovation are negotiated with each developer in exchange for density bonuses.

TIMES SQUARE/42ND STREET

Project Description

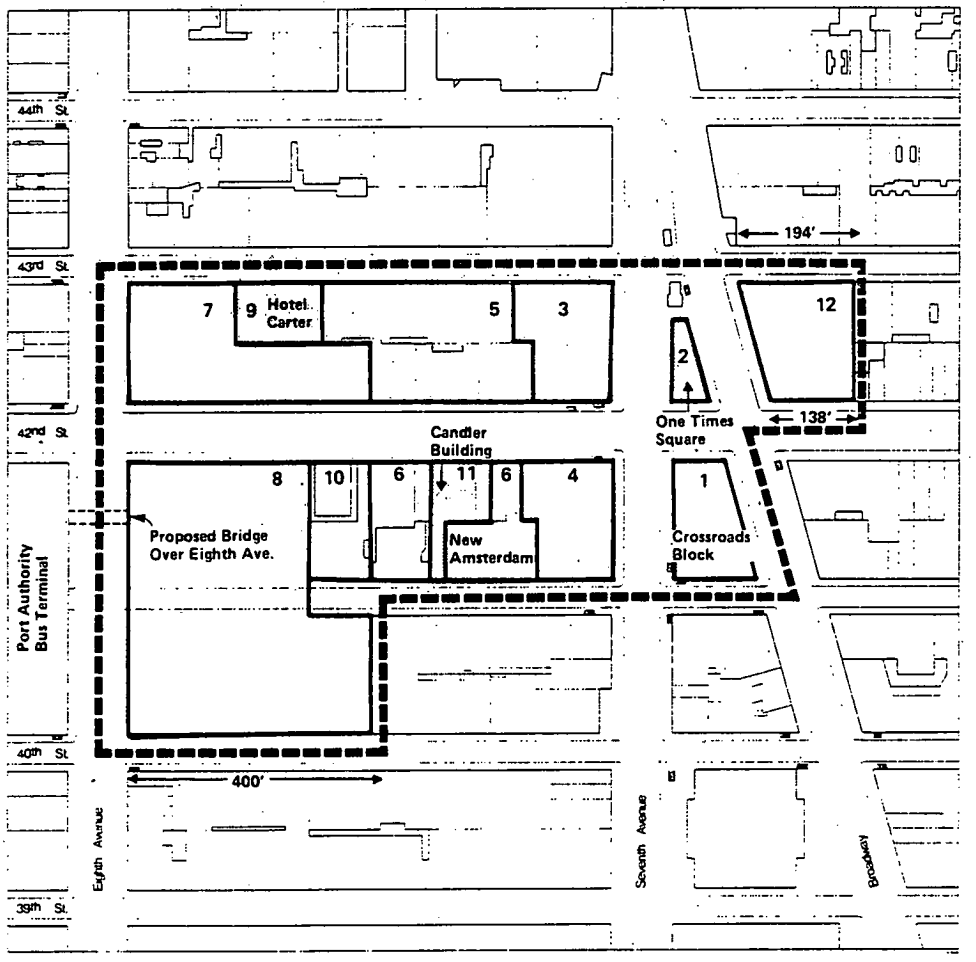
The project consists of the publicly initiated redevelopment of three full city blocks and portions of two other blocks in the Times Square area of 42nd Street. From this larger area (Figures 2-3), the case study concentrates on the Seventh Avenue/Broadway sites (1,2,3,4 and 12) grouped around Times Square. These sites contain high density office development and some ground level retail. This project contains approximately 4.1 million square feet of new construction on approximately 112,000 square feet of land and is being developed by a single developer according to a uniform architectural design. The office developer is contributing the major share of private funds for the reconstruction of the Times Square Subway Station complex. The other parts of the project, developed at a lower density, consist of the renovation of

Figure 1

TIMES SQUARE - 42nd STREET
EXISTING CONDITIONS

Figure 2

TIMES SQUARE DEVELOPMENT SITES



Project Area Development Sites

Project Area Boundary

7 Site Designation

Existing Buildings to be Retained

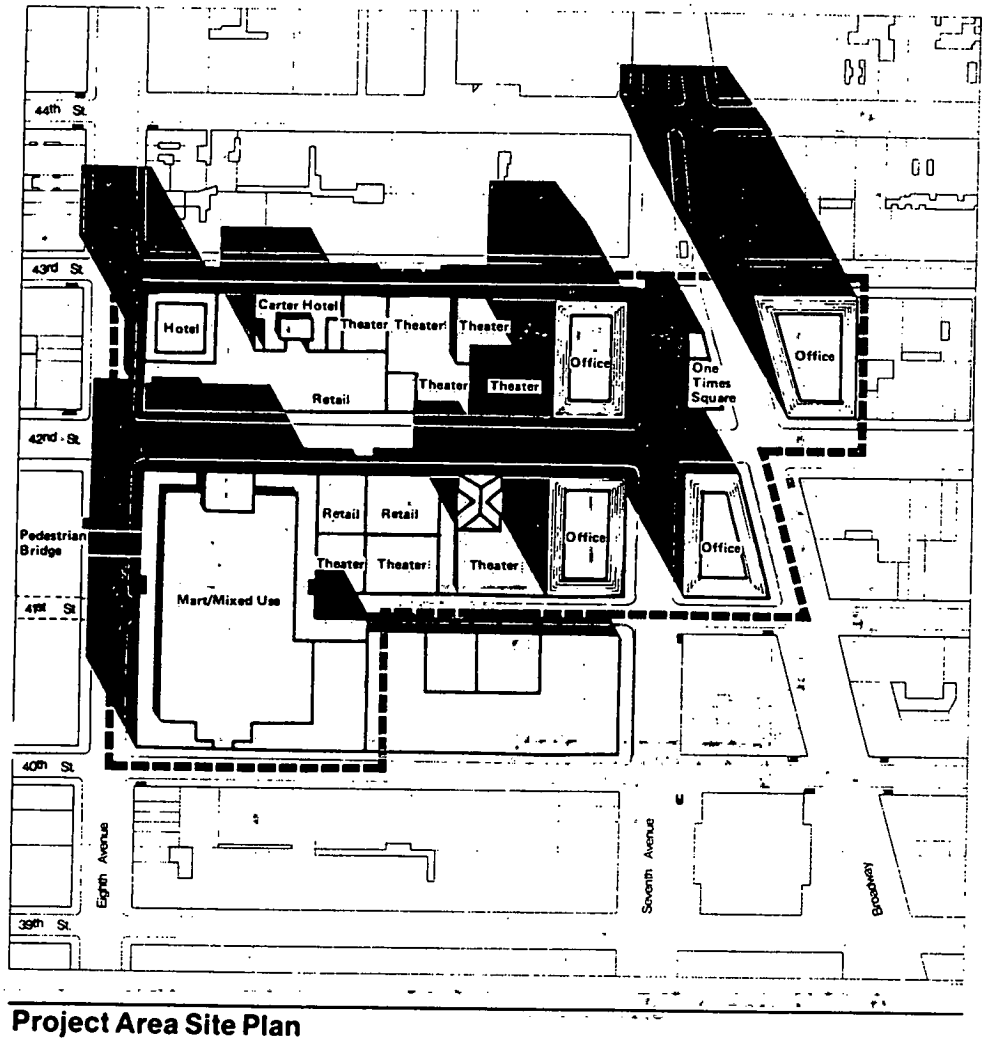
Site	Predominant Future Use	Land Area (Sq. Ft.)
1	Office	22,300
3	Office	29,000
4	Office	27,200
12	Office	33,300
5	Theaters/Retail	58,500
6	Theaters/Retail	39,600
7	Hotel	57,500
8	Mart	138,250
10	Theater/Retail	19,800

0 100 200
Scale in Feet

42nd Street Development Project

Figure 3

PROJECT AREA SITE PLAN



nine historic theater buildings and an office building, a new hotel (site 7) and a wholesale mart (site 8).

The New York State Urban Development Corporation (UDC) and the City of New York Public Development Corporation (PDC) were the joint initiators of the 42nd Street Project. The UDC has sweeping powers of land acquisition through condemnation, but it agreed to act in consort with the City as a joint client entity. The PDC acts as the day-to-day master developer and as the direct client for the subway station improvements.

The city and UDC have defined the following goals for the project: (1)

1. "Eliminate the blight and physical decay as well as the crime and frightening street life" that now exist;
2. Preserve and restore the area's older theaters;
3. Develop the project area's commercial and retail potential;
4. Upgrade public facilities in the project area, particularly the Times Square Subway Station;
5. Increase economic contributions to the City;
6. Have positive impact on adjacent communities;

The subway staton reconstruction has been an accepted major project goal from the beginning. It was specified in the 1981 Design Guidelines. Along with the restoration of the theaters, subway reconstruction will be substantially financed by the profits of the commercial developments. The transit agencies have been active parties to the subway planning and design. The MTA's major role is in conceptual planning and "deal making" while the TA's role is administering design standards and insuring detailed functional fit.

The station itself is one of the busiest complexes in the city, at the intersection of four different lines. The planning team projects that by the year 2000 over 200,000 people will pass through the complex daily.

The major goals of the subway reconstruction are the following: (2)

1. Eliminate pedestrian congestion;
2. Improve security by opening up spaces and direct sight lines;
3. Improve orientation by creating a focal point to the station;
4. Improve the architectural quality of the spaces, finishes, lighting and graphics;
5. Create a strong street level identify for the entrances - currently just "hole-in-the-sidewalk" character; and
6. Integrate the subway complex with the new development at Times Square.

The preliminary designs for the Times Square subway reconstruction have been completed by the architectural firm William Nicholas Bodouva Associates. They propose to dramatically change the now dismal and labyrinthian station by introducing the following (Figures 4-5):

1. New free-zone concourse and transfer ramps to separate transfer flows from exiting/entering flows and to integrate the new buildings with the subway complex;
2. A Central Rotunda as a major focal point;
3. Expanded mezzanine under 7th Avenue;
4. Reconfiguration of the Shuttle; and
5. Large, in-building entrances at ground level at each of the development sites.

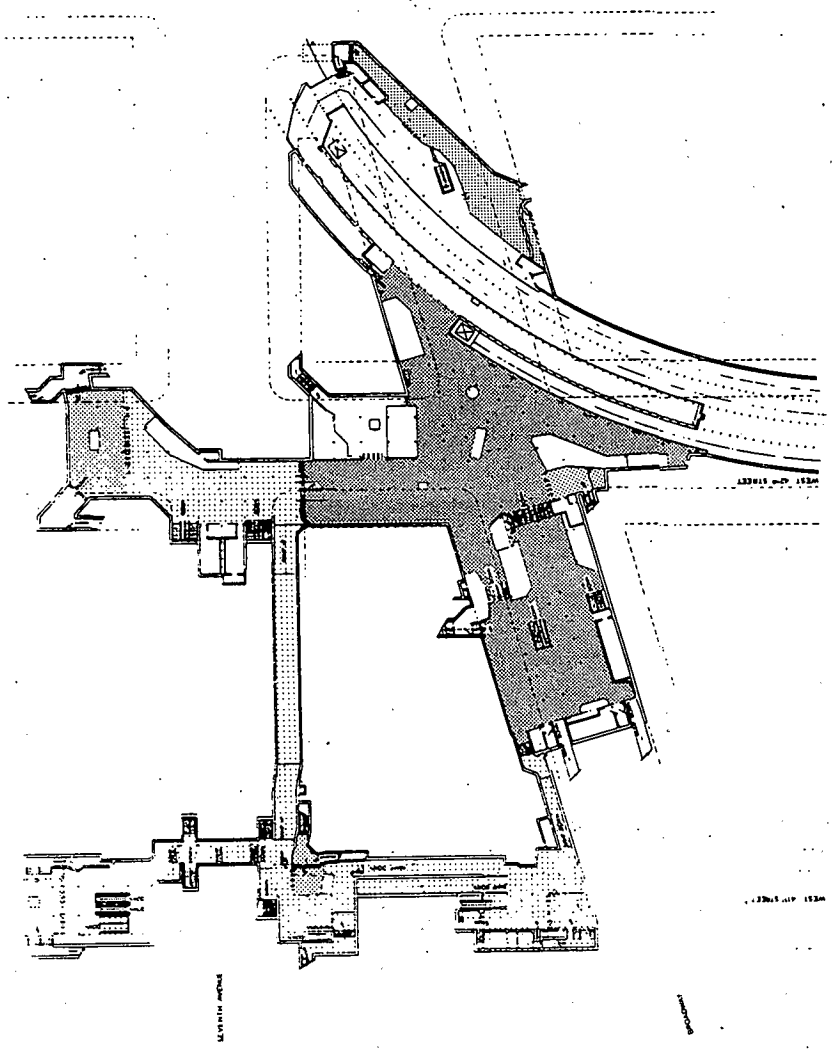
The result is expected to be a dramatic improvement in the function and image of the station complex (Figure 6).

The Development Process

Decline in the Times Square/42nd Street areas and various public attempts for revitalization have a history of several decades. The current program of public redevelopment was initiated four years ago when UDC and PDC commissioned a comprehensive planning/urban design study and the development of detailed Design Guidelines for

Figure 4

STATION CIRCULATION ZONES



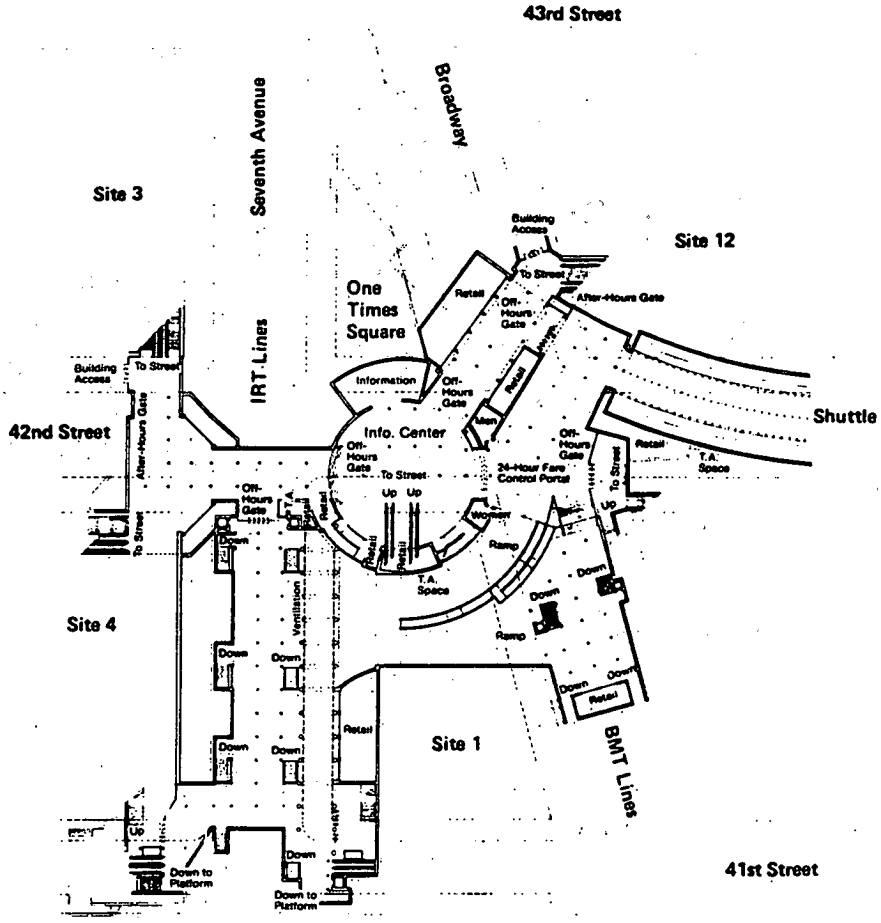
CIRCULATION ZONES

- Entry
- Concourse
- Transfer
- Platform

Source: William Nicholas Bodouva Associates

Figure 5

SUBWAY MEZZANINE IMPROVEMENTS



Subway Mezzanine Improvement Below Times Square

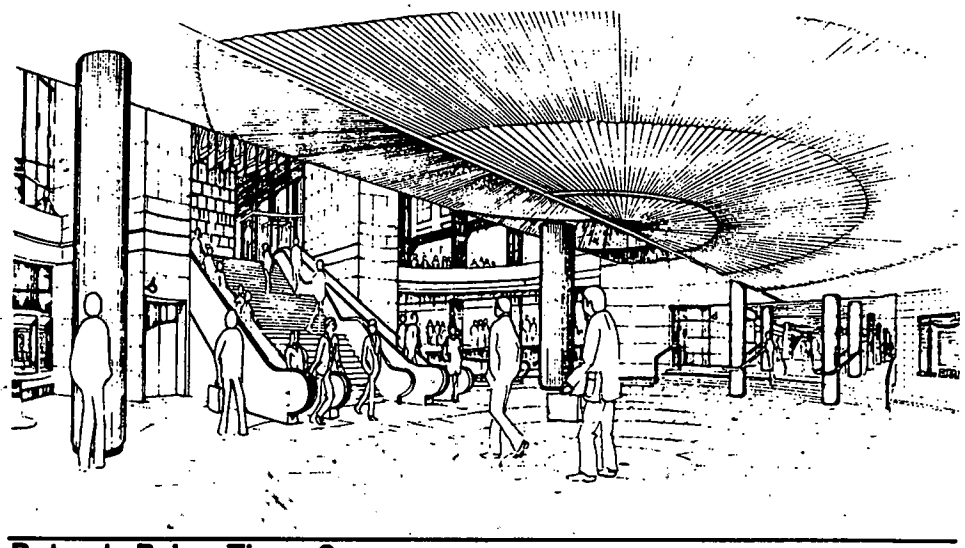
Note: Generalized layout only, subject to change.

Scale in Feet 200

42nd Street Development Project

Figure 6

PROPOSED ROTUNDA BELOW TIMES SQUARE



Rotunda Below Times Square

42nd Street Development Project

the area (3). The Guidelines set up very specific requirements for use mix, density, height, bulk, urban design treatment and subway renovations. The level of design detail incorporated into the guidelines is unusual for such projects and was intended to exercise a high degree of public control over the development. The guidelines became the basis for the public request for proposals to developers published during the summer of 1981.

Park Tower Realty, Inc. was the developer designated to develop the office sites. The project proposed substantially follows the Guidelines in height, bulk and mix of uses. The architectural design by the architects Philip Johnson and John Burgee has a monumental uniformity that has created considerable public controversy. Much of the criticism focuses on the elimination of the glittering, neon dominated historic character of the area. The project is now undergoing some redesign to incorporate a greater level of lighting and signage. It will be submitted for approvals to the New York City Board of Estimate this fall. Current schedules project construction start by 1986, completion of the subway station reconstruction by 1989 and of the entire project by 1991.

Benefit and Cost Sharing Strategies

The office development package offered to the private developers at Times Square included major benefits that would not have been available without the public intervention:

1. Considerable extra density allowed by the Guidelines over the zoning limits;
2. Public land assembly insuring availability of sites at a known price and within a controlled time schedule;
3. A very large, coherent complex of sites at a highly visible location that would have great visibility and market potential; and
4. Insurance that adjacent blocks and public facilities will be redeveloped in a compatible and supportive manner.

The public's "return" on these benefits includes the revitalization of a now

blighted area, increased public revenue (4) and the reconstruction of historic theaters and the Times Square Subway station. The developer's offer of public return in all of these categories was part of the submission and was competitively evaluated among the candidates.

According to the original developer's submissions the developers were to contribute a total of $29.2 million computed in 1982 dollars distributed as follows:

Office developer	$21.6 million
Mart developer	$ 7.0 million
Hotel developer	$ 0.6 million
TOTAL	$ 29.2 million

More recent negotiations are in the process of increasing the office developer's contribution by $4 million, bringing the total to $33.2 million. Negotiations are still open on the formula for escalating these sums to compensate for inflation until the expected 1986 construction.

The project cost estimates in roughly comparable 1983 dollars are approximately $39 million for the mezzanines and new entrances. The private contributions pay for the majority of this cost. Design fees are covered by the City through PDC and negotiations are currently under way for the MTA financing to close the gap. Additionally, the transit agencies will publicly finance through the state bond issue an approximately $20 million improvement of the existing platforms, stairs and escalators. Other related project elements, also to be publicly financed include alteration of the Shuttle line platforms and the provision of access for the elderly and handicapped.

A persistent question in the public discussion of the project is whether the returns to the public are in balance with the advantages gained by the developer in the project. The office development by Park Tower Realty is the largest and most prominent component and many of the questions focus on this project.

The extra density permitted by the Guidelines allows the developer of the office

sites to build approximately 2 million square feet of space in excess of what normal zoning would allow on those sites (Figure 7). The $25.6 million subway contribution, if considered to be the price of this extra right would yield a cost of about $13 per extra square foot of additional new space. There are, of course, other factors. On the benefit side to the developer are the less easily quantified but very substantial benefits listed above in points #2, 3, and 4. On the cost side, the developer also agreed to contribute monies to the renovation of theaters and will be responsible for maintaining the subway mezzanines. The developer also has to provide the financing to cover the costs of land acquisition. A comprehensive quantitative evaluation of developer vs. public benefit is not realistically possible and the competitive bidding by developers used here is probably the best method of insuring fair valuation.

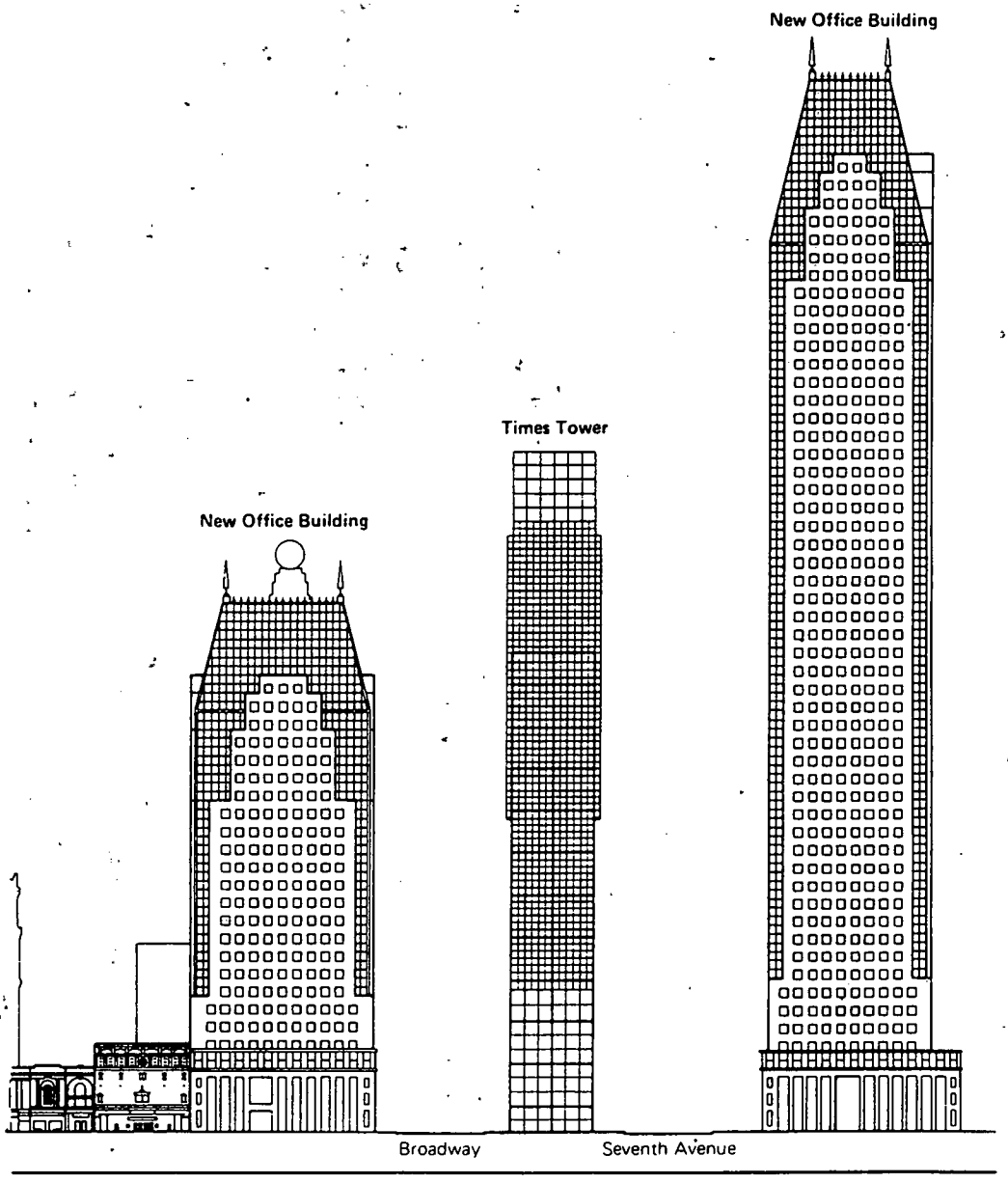
Design Coordination Issues

The subway station reconstruction is physically interlocked with all of the office building sites. This creates some complex problems for coordinating design, development phasing and construction. The most complex interface occurs on site 1 where the main entrance, central rotunda and major transfer ramps of the subway station occupy about half of the area of the site. The subway entrance on this site will occur in a large open area under the 42nd Street side of the building. The architecture of the building and the subway, developed by different architects with different design philosophies must be reconciled. There are also some technical conflicts that have surfaced during the current preliminary design phase: the columns and shear bracing walls proposed by the building architects would interfere with the concept of the Rotunda as conceived for the subway station. These conflicts will be resolved through negotiations conducted by PDC.

Construction of the subway station may be carried out under contract to the developer, since both parties seem to prefer this. Potential cost escalations cause some concern. Neil Klarfeld representing Park Tower Realty has expressed concerns

Figure 7

OFFICE DENSITIES PERMITTED IN PROJECT AREA



42nd Street Development Project

that construction under the streets of Manhattan, particularly the new excavation for the expanded mezzanine under 7th Avenue are very unpredictable and could cause major cost escalation. Howard Cohen, Project Manager for Bodouva said the architects were confident that they have anticipated all major cost elements. Negotiations are still open on the question of who picks up the cost of overruns if they should occur in spite of the precautions.

Another still open question is the phasing of the office development. The developer prefers to start on site 12, the largest building on the least complex site. The PDC and the transit agencies want to start on site 1 to get the major portion of the subway construction under way. It would appear risky from the public point of view to allow the developer to build the largest building on the site before making a substantial built commitment to the public improvements.

Transit Agency Roles

In the case of this project the PDC has taken on the primary responsibility as client for the subway station improvements. The MTA and the TA are represented on the Subway Steering Committee and review the plans regularly. The portion of the reconstruction funded directly by the transit agencies ($12.6 million is presently allocated) is being designed by the same consultant team responsible for the rest of the project. In practice, the staff people responsible for the project at each agency are in daily contact with each other in a very close working relationship.

EAST MIDTOWN DEVELOPMENTS

This part of the case study focuses on three private developments, each of which is tied into the 53rd Street/Lexington Avenue/51st Street Subway station complex. The developments, at 875 and 885 Third Avenue and 599 Lexington Avenue, are each contributing substantial capital improvements to the subway station complex in exchange for zoning bonuses allowing additional density.

The current zoning law evolved over a more than twenty year history of incentive zoning programs in New York City and stipulates the following for Midtown Manhattan:

1. Any new development or enlargement of a building adjacent to a subway entrance is required to rebuild the subway entrance stair to the TA's standards, within the property lines; and

2. At designated stations the developer may propose to provide more extensive capital improvements to the subway station in exchange for a zoning bonus of up to 20% of additional FAR allowed.

The procedure for obtaining the zoning bonuses is set out in the Zoning Resolution. If the station area is designated as eligible, the developer can make a proposal of improvements. The TA reviews the plans for conformance with its standards and policies and submits a letter of approval to the City Planning commission. The City Planning Commission then reviews the proposed improvements and determines the appropriate level of zoning bonus (from 0 to 20% of FAR) based on the following required findings:

" 1. The degree to which the station's general accessibility, rider orientation and safety will be improved by the provision of new connections, additions to circulation space or easing of circulation bottlenecks;

2. Provision of escalators or elevators where justified by traffic or depth of mezzanine or platform below street level;

3. Convenience and spaciousness of street level entrance and compatible relationship to the ground floor uses of the development or enlargement; and

4. Improvement in the station's environment by provision for daylight access or improvements to noise control, air quality, lighting or other architectural treatments.":(5)

In practice, there is considerable informal consultation between the developer, the City planning Commission and the MTA staff in structuring the developer's proposal. If the density bonus is approved, the developer is obligated to obtain acceptance of the completed subway improvements from the TA prior to receiving an occupancy permit for the building.

The following describes the three development projects and their specific contributions under the zoning bonus program.

875 Third Avenue

This office building is located at the corner of 52nd Street and Third Avenue. The developer for the building is Madison Equities, Inc. The first phase of the project, consisting of the main office tower, was recently completed. An additional and smaller structure and atrium will be built at the corner of 53rd Street and Third Avenue when the leases remaining in the existing older buildings at that corner run out or are bought out by the developer.

The project received a 20% additional FAR bonus in exchange for improvements including a ground level enclosed pedestrian arcade and improved access through a lower level mezzanine to the 53rd Street IND Station. As part of the deal the existing subway mezzanine space was improved by the developer through the addition of new wall tile, flooring and lighting and the commercial space available on the mezzanine was leased by the developer. When the second phase atrium is built it will penetrate to the subway mezzanine level and bring in daylight and a more direct connection to the surface.

875 Third Avenue preceded the formal enactment of the subway station zoning bonus ordinance and received its bonus under a covered pedestrian bonus program. Nevertheless, it followed the general pattern of the subway bonus program as described above and was considered a test case for the new zoning. The strict requirement for TA sign off before occupancy permit was added partly in response to a problem that occurred on this project when the developer occupied some of the building spaces prior to completing the committed subway improvements.

This is the only project among the Midtown case studies that is completed and can be critically viewed as a built environment. The results are mixed. The building provides an attractive enclosed pedestrian arcade and escalators leading from there to a lower level mezzanine which gives access through a set of glazed doors to the subway mezzanine. The arcade is reasonably attractive but is more like a traditional private

building lobby than a true public space. The lower level of the building appears as an extension of the lobby. The transition from there to the subway mezzanine is abrupt. The movement pattern from street to arcade to escalator to lower lobby to subway mezzanine is circuitous and confusing. The improvements provided on the subway mezzanine are unrelated to the adjacent building level. The subway mezzanine is considerably less attractive than the private mezzanine. On a hot day the transitions from the air conditioned private area to the stifling public mezzanine emphasize the contrast. The completion of the atrium in the second phase is expected to improve most of these conditions; however, the schedule for this phase is uncertain.

885 Third Avenue

This office building with ground floor retail is proposed for the other side of 53rd Street from 875 Third Avenue. The developer of the building is Gerald D. Hines Interests. The architect is Philip Johnson and John Burgee. The tower building which has an elliptical-shaped floor plan is in the design stage.

The developer has applied for an 18% FAR bonus and is now seeking approvals. The proposed contributions to the 53rd Street IND subway station includes a new monumental stair in a landscaped well from the corner of the open plaza to the mezzanine and a new escalator from the mezzanine to the station platform 70 feet below. The latter is a complex undertaking, constructed wholly within the station area and requires cutting through bedrock. The total value of the subway station improvements is estimated in the $5-7 million range. This dollar figure is given only as an indication of the scale of contribution and not part of the official agreements. The developer's obligation is tied to delivering the finished improvements, not a specific dollar contribution. The developer's first submission consisted of improving the appearance of the platform area, but the Community Planning Board insisted on circulation improvements to increase access capacity. The escalator was a difficult project element. The developer did not like it because of the expense involved not only in construction but on-going

maintenance of a very high-wear item. Some community groups have reservations about allowing a bonus to a developer for an improvement that they feel the TA should install as a standard feature of station modernization and avoid giving a density bonus in an area many in the community consider already overbuilt. After the recent hearing in front of the City Planning Commission these issues are still open.

The open well stair benefits the mezzanine by bringing light and air to this presently subterranean level, but its configuration at the busy street corner leaves no additional plaza space to add needed pedestrian capacity to the sidewalk. The very formal Philip Johnson design leaves no flexibility for adjusting to this condition.

This development raises an issue about the optimal type of bonusable development. Robert Selsam, departing Director of Planning for the MTA, stated as an important criterion: "Concentrate the subway improvements in direct logical physical relationship to the developer's project so that he has an inherent interest in doing a good job on construction and maintenance". The escalator, the major contribution of the 885 Third Avenue project violates this criterion. Yet it is the highest priority improvement for the station and conflicting claims on TA funds make it unlikely that such a costly improvement could be publicly funded.

559 Lexington Avenue

This office and mixed use commercial building is proposed for the east side of Lexington Avenue between 52nd and 53rd Street, just south of the CityCorp complex. The developer is Boston Properties, Inc., the architect Edward L. Barnes. The project is just starting construction.

The developer has received approvals for a 20% FAR bonus. This site provides the opportunity for a critical improvement in the subway system. By a historic quirk in the independent development of the IRT and the IND subway lines there is no transfer connection between the IND Lexington Avenue Station at 53rd St. heading east-west and the north-south IRT 51st Street Station along Lexington Avenue. Incorporating a new

mezzanine running the whole length of the block between 52nd and 53rd Streets within the 559 Lexington Avenue development was the only opportunity to make this connection. The proposed mezzanine will include a paid transfer section and an unpaid access area. It will connect to the 53rd Street Station mezzanine at its northern end. (The Citi-Corp mezzanine level with its successful commercial area connects to this mezzanine from the other side already.) From the 52nd Street corner of the development to the north end of the IRT station the TA will build a connection under the street which will cost an estimated $6 million in public funds. The estimated construction value of the developer's contribution to the subway is $5-6 million, but the contribution of the right-of-way and integration with the development creates a greater added value.

The participatory arrangements are as complex as the project. The developer is responsible for the design and engineering of all of the connecting concourses, and construct and maintain only the portions within his property. He will provide all escalators, stairs and elevators connecting the new mezzanine to the surface. The TA's section of the connector will be built later because funds could not be made available at the time the developer was ready to bid his contracts. This is a major inconvenience and inefficiency, but this type of compromise is often necessary to keep different schedules of public and private development from blocking each other.

This project provides the optimal conditions for bonusable improvements sought by the City Planning Commission and the MTA. The project clearly provides necessary access and circulation elements that could not otherwise be obtained. At the same time it is within the developer's property, intimately connected to important public and retail components of the development and thus it will be in the developer's own best interest to do a high quality job of design, construction and maintenance. The compelling logic of this project already secured approvals for the zoning bonus. It is also expected to make easier to enforce agreements between the city, the TA and the developer for construction and maintenance.

PLANNING AND DESIGN COORDINATION

The three separate private contributions to the East-Midtown Station complex occurred over time in an incremental pattern. When 875 Third Avenue was planned there were no plans yet for the other two projects. Thus, access and mezzanine improvements incorporated there were expected to function with or without further contributions.

885 Third Avenue and 599 Lexington were planned concurrently and the subway improvements for both are designed by the same engineering consultant, Vollmer Associates. Vollmer is also the design engineer for the TA's portion of the new mezzanine connection. Thus, they play a key role in insuring that these three components, to be constructed under three separate contracts, will fit together.

Planning for these privately contributed subway improvements presents a dilemma for the MTA and the TA. Community organizations such as Community Planning Board #6 and the 59th Street Task Force have voiced concerns about the lack of a previously approved master plan by the MTA as a basis for the bonuses. (6) Planners for the MTA, on the other hand, pointed out that the opportunities for doing any of the improvements depend on the proposals of the developers and cannot be anticipated. For instance, at the time when decisions were made about bonusable subway improvements in conjunction with 875 Third Avenue, intentions to develop the other two sites had not been publicly expressed. There is some continuous thought and discussion given by planners at both the MTA and the Manhattan Office of the Planning Commission to what major subway station needs are and what may be likely "soft" sites where development can be anticipated. But the agencies are still convinced that responding to the opportunities as they arise rather than promoting a fixed plan is the more productive approach.

SUMMARY, COMPARISONS AND EVALUATION OF TIMES SQUARE AND EAST MIDTOWN PROJECTS

The Similarities

When considered as lessons for transit authorities around the country, the similarities of these two Midtown Manhattan projects may be more striking than the differences. Both projects are in very high density areas where the value of land and the market for development make density bonuses extraordinarily valuable. These conditions are only approached in some of the densest downtown areas of other metropolitan centers.

The city has made a commitment to make transit the major beneficiary of the private contributions in exchange for the bonuses. This is an important political decision with a clear transportation logic: densities of the level generated in Midtown are only possible through a very efficient transit system. The subway system, which carries the great majority of trips to and from the Midtown area has in fact made the current densities and development market possible. Thus the current development market could be considered a "benefit" accruing from investments in the subway made a half a century ago. It is recognized by the city that "the greatest threat to the continued successful functioning of Midtown would be the (subway) system's breakdown (7)." Thus it is logical to reinvest some of the benefits of development into updating the now troubled subway system.

Other cities where the core area relies considerably on transit access (Boston, Chicago, Philadelphia, San Francisco) have not chosen to reinvest significant portions of the revenues gained from private development into transit facilities. Part of the reason is that the transit dependence of these cities is still much less than that of Midtown Manhattan. Another part is that their problems are less severe and in the recent past they have successfully obtained massive federal funding to renovate or extend their systems. By contrast, New York is carrying out its station modernization program with a $5 billion state bond issue and no significant federal capital contributions. Current nationwide funding trends suggest that several other major cities may do well to consider the New York models presented here. Federal resources are dramatically decreasing while downtown densities and development pressures are in-

creasing. The serious attention paid to joint development and benefit sharing in the development of the new Los Angeles Metro Rail System corroborates this trend. (8)

Another common feature of the case studies worth noting by other localities is the amount of publicly sponsored professional planning effort that is contributed by the city and the MTA to these projects. The continuous long term cooperation between the city and the transit agencies and good understanding by the staffs of both agencies of the private development process. Many of the staff people involved at the MTA Planning Department, the City Planning Commission and the PDC are seasoned veterans of similar projects in New York who have been committed to the ideas implemented here for many years and have long standing working relationships with each other. The MTA's planning staff's role in anticipating opportunities and capitalizing on them through a creative "deal-making" approach is particularly worth emulating for large metropolitan transit agencies, many of whom are too overwhelmed by just keeping the trains and buses running to invest the required amount of talent and energy into this type of planning.

The Differences

The differences between the two Midtown Manhattan case studies can be equally instructive. The objectives of the two project areas were very different. In Times Square/42nd Street redevelopment has been actively sought by the public agencies to eliminate blight and decay, enable the preservation and renovation of historic theaters and renovate the subway stations and public spaces. In the East Midtown projects higher density new development was not a public goal but a predictable consequence of private real estate activity. Here the public objective was that if these developments are to occur, certain public trade-offs benefiting the subway stations should be incorporated.

The public roles and types of activity correspond to the objectives. At Time Square the UDC/PDC took an aggressive lead role to initiate, plan and control the

project. At the East Side projects initiatives are left to the developers where the public agencies take a more reactive role, negotiating based on the developers' proposals.

Lauren Otis at the Midtown Manhattan Office of the City Planning Commission pointed out that Times Square/42nd Street is a one-of-a-kind situation while zoning-based benefit sharing such as shown in the East Midtown case studies is likely to continue on a regular basis. However, while Times Square/42nd Street is certainly unique, other large, unique publicly endorsed redevelopment projects occur regularly in major cities and can gain valuable lessons from the New York process even if they are unlikely to duplicate any of its concrete elements.

The benefit sharing strategies of the two projects also varied somewhat. At Times Square/42nd Street developer contributions to a specific plan, not of the developer's making, were sought and later negotiated as dollar amount contributions. At the East Midtown projects, the emphasis was placed on the contribution of fully completed improvements offered by the developer to the subway station, de-emphasizing the dollar value of these contributions and focusing on the delivery of a particular agreed upon product. The reason for this stated by Robert Selsam (9) was to place the responsibility on the developer and insure that the improvements were fully delivered, regardless of any future cost escalations. Another reason for avoiding the discussion of monetary value of contributions is the legal proscription of "putting zoning up for sale" and negotiating a monetary price.

The benefits to the public vs. to the developers in both of these projects continue to be debated in public. No extensive quantitative cost/benefit studies have been published for any of the projects and these would be difficult to do in a way that reflected all of the factors. At Times Square/42nd Street, the developers were bidding for the project competitively so it could be assumed that their bids fairly accurately reflect the market value of the development benefits offered. In the case of the zoning bonus system the issue whether the contributions are worth the added

bonuses gets resolved case by case in the political arenas of the city: through the Mayor's Office, the Planning Commission, the Commmunity Planning Boards and the Board of Estimates. The fact that the projects described have passed or are moving forward through these channels shows, if not necessarily a consensus, a majority favorable response.

The transit station designs and improvements obtained through the two methods are quite different. Times Square, in response to a currently intolerable situation, is producing a single comprehensive redesign and complete change of character. The East Midtown approach provides necessary facilities, amenities and some cosmetic improvements on an additive basis but does not fundamentally change what is already there. Each approach seems suited to the nature of the particular problem.

Transit agency responsibilities are somewhat different as well. At Times Square the ground rules were established in the design guidelines and PDC has taken a lead role in retaining the design consultants and managing the project. The PDC also administers communications with the MTA and TA. Thus, the process is very complex but also highly structured and managed. The zoning based system demands a more flexible response where the MTA has to continually define and redefine the improvement opportunities and the TA has to participate in detailed reviews of proposals as they are tendered. This latter type of project puts the MTA and TA more into the political fray between the developers pushing for maximum bonuses and speedy approvals and community organizations questioning the development. This system demands resources at the transit agencies that can deal with evaluating real estate development, short deadline planning and design studies and close coordination with the city. The presence of these resources at the MTA has been a major factor in the success of the case study projects.

In summary, each of the Midtown Manhattan case studies presents a successful model for using the benefits of large scale high density development for transit

improvements. The two different approaches to development and public agency roles are appropriate to the particular conditions. The City and the transit agencies have been successful because they set a clear policy of cooperation and have retained professional staffs that can imaginatively structure and manage this cooperation and the required planning and ongoing negotiations with the private developers.

REFERENCES

1. From the 42nd Street Develoment Project Draft Environmental Impact Statement Executive Summary p. S-3, S-4.
2. From presentation notes, May 1, 1984 supplied by William Nicholas Bodouva Associates.
3. 42nd Street Development Project, Design Guidelines by Cooper, Eckstut Associates, 1981.
4. UDC will retain ownership of the land so that income will be in terms of lease payments including in-lieu-of-tax payments to the city.
5. Exerpted from the NYC Zoning Resolution Par.74-634(d).
6. Comments recorded at the 7/25/84 public hearing of the City Planning Commission.
7. Midtown Development Report, N.Y. Department of City Planning, June 1981, p. 29.
8. See SCRTD case study.
9. Selsam interview, 7/24/84.

LIST OF AGENCIES AND PEOPLE INTERVIEWED
FOR MIDTOWN MANHATTAN CASE STUDY: July 24-25, 1984

Metropolitan Transportation Authority (MTA)
347 Madison Avenue
New York, N.Y. 10017

Robert Selsam, Director of Planning (left agency since interview)
Edward Helenius, Urban Designer (212) 878-7268

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Jeanette Lee, Senior Development Manager
Steve Gerber, 42nd Street Project Staff

New York City Department of City Planning
Midtown Manhattan Office
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Lauren Otis, Deputy Director
John Phillips

Park Tower Realty, Inc., Developers
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Neil Klarfeld, Times Square Project Manager

William Nicholas Bodouva and Associates
Architects and Planners
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Howard Cohen, Project Manager

CASE STUDY

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT, LOS ANGELES

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT (LOS ANGELES) CASE STUDY

INTRODUCTION

The Southern California Rapid Transit District (SCRTD) of Los Angeles has directly incorporated planning for benefit-sharing and value capture into its planning for the Metro Rail system since preliminary engineering began in 1980.

Metro Rail is the "starter line" of a 150 mile rail transit network which was approved by the voters of L.A. County through the "Proposition A" transit initiative approved in November, 1980. Sponsored by the L.A. County Transportation Commission, Proposition A authorized a 1/2 cent increase in the state sales tax collected in the County. The funds are dedicated to transit operations and rail rapid transit construction. The Metro Rail project is an 18 mile route with 17 stations running from Union Station through downtown L.A. west along Wilshire Boulevard, then turning north on Fairfax Avenue to Hollywood and North Hollywood (Figure 1). The system is proposed to carry 364,000 passengers per day for the Locally Preferred Alternative by the Year 2000 (19). Estimated costs for the 18.6 mile starter line are $3.3 billion, being sought from Federal, state, county, local and private sources. The SCRTD has set a goal of funding 5% of the project's capital cost through private sector joint development ventures and benefit assessment districts to be created within commercial areas near station sites (1).

The basis for the development and value capture efforts is set forth in the "Milestone Six" planning report, issued January, 1983 (2). The Milestone Six report presents land use and development policies, establishes a station area masterplanning process and suggests options for institutional mechanisms and value capture techniques for the Metro Rail Corridor.

Milestone Six sets forth SCRTD joint development goals, including:

(1) To coordinate comprehensive planning and development around station sites;

(2) To obtain station facility and related transportation service design and location authority;

(3) To package real estate projects;

(4) To provide ombudsman support and interagency representation; and

(5) To obtain financial leverage and value capture negotiation authority;

and objectives, including:

(1) Establishment of a Joint Development decision making process which fosters positive relations with the private sector

(2) Maintain an active role in all public/private coventure activities;

(3) Infuse public sector capital or "in lieu" contributions to leverage Joint Development projects as necessary;

(4) Undertake limited use of eminent domain actions to acquire fee title for land in and around station sites; and

(5) Use station cost sharing, connector fees, and lease agreements, among other mechanisms, to ensure long term value capture in support of the public benefit.

Since publication of this report its recommendations have been carried forward through:

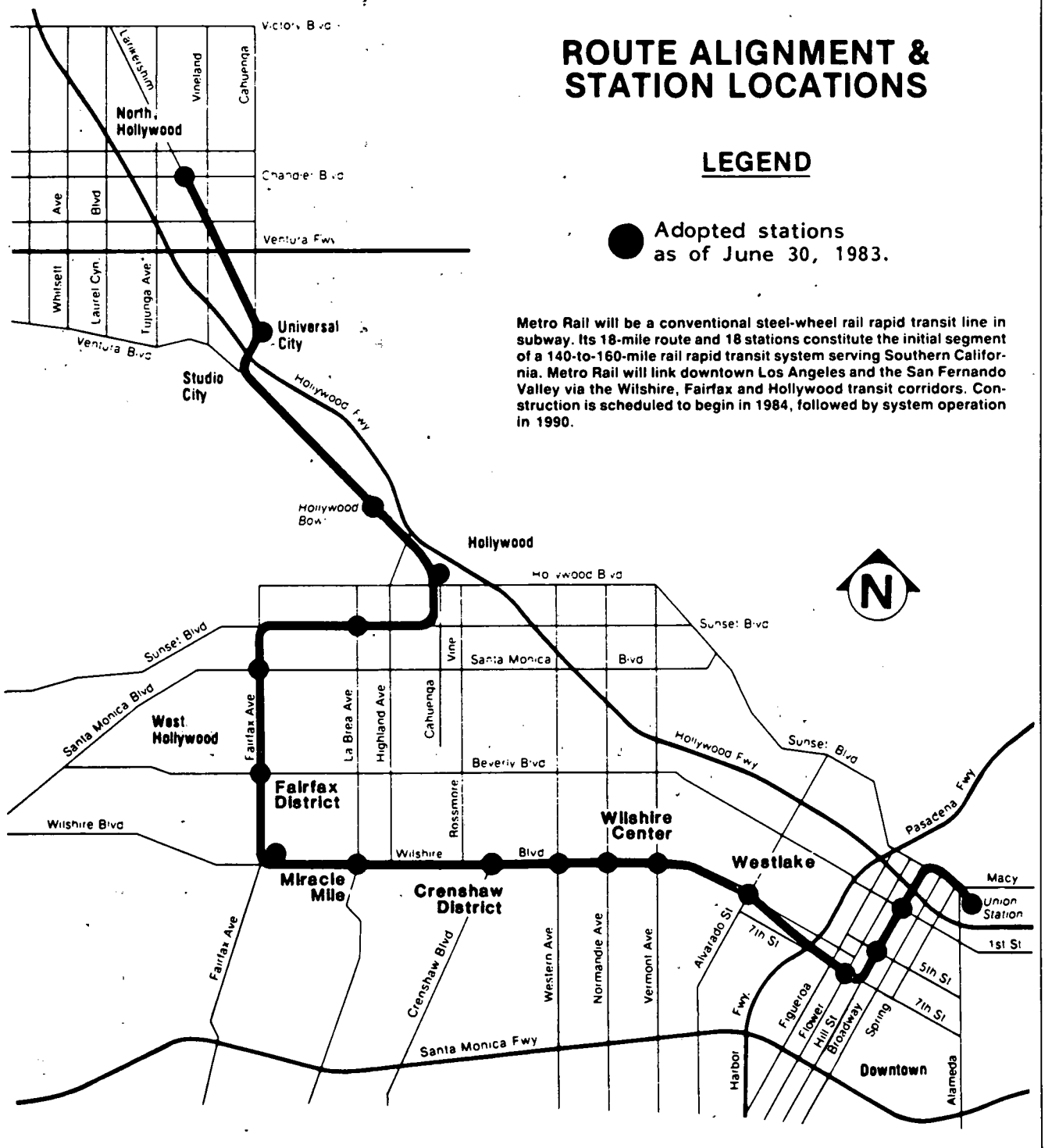
- adoption of joint development policy and procedures by the SCRTD Board;
- delegation of responsibilities for joint development and value capture within the RTD's planning and real estate departments;
- establishment of cooperative agreements with the City, County and Community Redevelopment Agency of L. A. for station-area master planning;
- passage of enabling legislation authorizing SCRTD to acquire land in station areas for purposes of joint development and to implement benefit assessment districts (subject to local approval); and
- public participation and education efforts.

Subsequent to publication of the Milestone Six report in January, 1983, its philosophy was reinforced by publication of both state and local policy statements including:

- California Transportation Commission "Policy on Local Public or Private Support of Guideway Projects" (October, 1983) (3) which requires as conditions of competing for discretionary state funds, both a dedicated local revenue source to support transit (in addition to state and local support) and implementation of an acceptable private sector financing program, beginning with the 1984-85 programming year; and

Figure 1

METRO RAIL SYSTEM MAP



Source: SCRTD

- UMTA's "new rail start" funding criteria (May, 1984) (4) which stress increased local government support and private sector commitments to value recapture.

Further, SCRTD's role in the development process has been strengthened by passage of two major pieces of legislation. California Senate Bill 1159, adopted July 28, 1983, grants to SCRTD the statutory ability to "acquire develop, jointly develop, lease or dispose of property which is necessary to, or incidental to SCRTD facilities," to jointly develop non-transit facilities with local approval, and to contract with others in exercising these powers. Senate Bill 1238, adopted October 1, 1983, authorizes SCRTD to form special benefit assessment districts and to collect these assessments to use the funds to finance the "acquisition, construction, development, joint development, operations and maintenance of the Metro Rail System," and "to issue tax free bonds which would be paid by these assessments."

At the same time that RTD has been laying the groundwork for its joint development and value capture strategy, however, uncertainty over system funding has hampered SCRTD's efforts to enter into obligations with developers regarding joint development or system interface opportunities and has threatened its ability to carry out some of its more ambitious strategies. As of summer 1984 SCRTD had, at UMTA's strong urging, reduced its funding request to UMTA from $3.3 billion for the 18.6 mile system to $1.174 billion for a 4.4 mile "minimum operating segment" which would extend from Union Station only as far as Alvarado Street, although RTD is still seeking a "letter of no prejudice" indicating Federal approval for eventual construction of the entire 18 mile line (5). In spite of this setback, the SCRTD Metro Rail example was nevertheless chosen as a case study because it illustrates:

- a transit agency which is taking an active role in integrating system planning and design with land development;
- planning issues involved in rezoning, density bonuses, transfer of development rights and benefit assessment districts in station areas;
- mechanisms for interagency and interdepartmental coordination put into place to facilitate the transit/development planning process; and

- the importance of timing, funding and public agency credibility in negotiating developer commitments and in imposing land use controls, assessment districts and other institutional mechanisms.

AGENCY ROLES IN BENEFIT-SHARING

Because Metro Rail was not yet under construction as of the case study visit in June, 1984, the discussion of benefit-sharing strategies is focused on the planning process and institutional arrangements which SCRTD is pursuing as the framework for later implementation. In setting forth policies for joint development and value capture in the Milestone Six report, SCRTD articulated the "fundamental capabilities" within the public agency(ies) involved that are necessary to optimize joint development, transportation, and economic benefits, namely:

1. Comprehensive planning and redevelopment coordination;
2. Station facility design and location authority;
3. Real estate project packaging resources and authority;
4. Ombudsmen support and interagency representation authority; and
5. Financial leverage resources and value capture negotiation authority.

Noting that the resources required "are not conferred upon any 'single' public agency in the Los Angeles metropolitan area, SCRTD goes on to propose alternatives for providing the resources including 1) development of a new department within RTD, 2) formation of a transportation development corporation and 3) development of cooperative agreements between RTD and local public agencies. Since publication of Milestone Six, SCRTD has proceeded with Option 3, by entering into cooperative agreements with the City, the Community Redevelopment Agency, and the County of Los Angeles for station area planning within their jurisdictions. SCRTD chose this route because this type of arrangement will combine all the land use regulations and taxing powers of all four agencies. The cooperative process was facilitated by the fact that SCRTD has funded the local agency planning efforts through its UMTA Metro Rail planning grant.

At the same time SCRTD has clearly set forth its own joint development policies and departmental roles within the agency.

Together the mechanisms represent a comprehensive institutional approach for carrying out transit related benefit-sharing whether on a system-wide basis as is the case with SCRTD, or for individual projects or station areas. Because the institutional arrangements and responsibilities differ by jurisdiction, the discussion of benefit-sharing strategies below is organized by agency.

SCRTD Agency Structure for Joint Development Activity

Recognizing that joint development planning within the agency cuts across departmental boundaries, the SCRTD General Manager established clear responsibilities for each department which are summarized in "Policies and Procedures for Implementing Joint Development" (November, 1983) (6). At the top level, the SCRTD Board has responsibility for setting joint development policy and reviewing and approving negotiating agreements both in the negotiation stages (agreements in principle) and the final contract stages. To spread the burden on the board members and require that each member be intimately familiar with only nine of the eighteen stations, the SCRTD established two policy committees consisting of no more than five Board members empowered to:

1) approve the initial negotiating position for joint development;

2) review the negotiation process and provide appropriate guidance for agreements in principle; and

3) approve the final binding agreement for adoption by the whole Board.

Each committee is responsible for nine of the eighteen Metro Rail stations eventually planned. The SCRTD departments are responsible for reporting any negotiation progress and strategy to these committees on an ongoing basis.

Reporting directly to the Board is the SCRTD General Manager, who is responsible for directing all staff activities related to joint development. The General Manager

has appointed an assistant, who is the primary contact point for developers and the liaison between the General Manager and the departments.

At the staff level, the Planning Department is responsible for station area joint development planning (overseeing the contracts with the CRA and the City and County of Los Angeles, as discussed below), for establishing benefit assessment districts, for analyzing the financial feasibility of development proposals, and for providing staff support to the interdepartmental and interagency coordinating committees. Each Metro Rail station is assigned to one of the seven professionals in the department. The Real Estate Department within Metro Rail is responsible for assuming the lead role in negotiations, determining land availability for joint development and acquisition requirements for each station and administering agreements with developers. The legal department is responsible for drafting agreements and reviewing legal form and content, and the community relations department for coordinating community support and meetings. Finally, the Metro Rail architecture and engineering departments are responsible for station design and construction issues.

To provide "internal coordination and policy identification on issues related to joint development and to "present a unified and consistent approach in dealing with all external parties" the SCRTD established an interdepartmental Operations, Planning, Engineering, Real Estate and Architecture committee (known as OPERA). This committee, which meets regularly, makes decisions which are binding on the line departments regarding SCRTD policy on public private coventures, joint development/value capture and division of infrastructure costs. Chaired by the representative of the general manager, the committee is charged with developing a negotiating framework and procedures, reviewing developer proposals, establishing SCRTD negotiation postures and recommending final development agreements.

Besides the "in-house" OPERA committee three interagency committees meet regularly. The Professional Development Committee (PDC) involves staff level interaction between SCRTD, the City, (Departments of Transportation and Planning, and the Bureau

of Engineering), County and the CRA. The Interagency Management Committee (IMC) brings together the agency heads. Finally, a Benefit Assessment Task Force has been formed, composed of local public agencies and private property owners affected by the value capture programs associated with the transit system.

A flow chart delineating how the departments and committees work together toward implementing a joint development project is included as Figure 2.

SCRTD Efforts to Establish Benefit Assessment Districts

Under its authorization to form special benefit assessment districts as the basis for issuance of tax free bonds to support Metro Rail acquisition, construction, joint development, operations and maintenance, SCRTD Planning has been the primary actor in establishing the district boundaries and the assessment formula. While SCRTD is empowered to set the district boundaries, fees, and the land use classification scheme, however, the local jurisdictions have the right to approve, amend and approve, or disapprove the district plans. As of Spring, 1984, SCRTD had consultant studies underway to prepare the implementation plans, and had launched a participatory process through the various working committees. As part of the planning, SCRTD conducted a literature review on the land use effects of other recently built transit systems, interviewed owners and tenants in the corridor regarding their attitudes about potential benefits of a transit location, and conducted legal research to identify possible hurdles to implementation. The SCRTD goal is to implement the districts and start to sell bonds by August, 1985, and to start to collect the assessment fees when construction begins.

Although the assessment districts are still in the planning stage and no detailed information on the boundaries or fees was available as of the case study visit, it is clear that this particular tool has already attracted considerable public attention. The SCRTD planners and local agency participants raised a number of pending issues which are summarized below.

- The precedent for benefit assessment districts in other cities has largely been voluntary districts in support of localized downtown projects such as pedestrian malls, people movers or parking garages. In these cases, those affected perceive a direct benefit to their particular location. In Los Angeles itself, for example, a voluntary assessment district which would have generated $1.3 million per year had been established to fund the ill-fated Downtown People Mover project. In the case of Metro Rail, SCRTD is establishing a non-voluntary district, the rules for which must be defensible against possible legal challenge. San Francisco's mandatory downtown assessment districts, for example, is currently under court challenge. However, SCRTD has had difficulty in obtaining comparable long-term data to assist in setting equitable boundaries and fees. Thus, they have had their consultants take the approach of gathering as much local information as possible as the basis for their decisions.

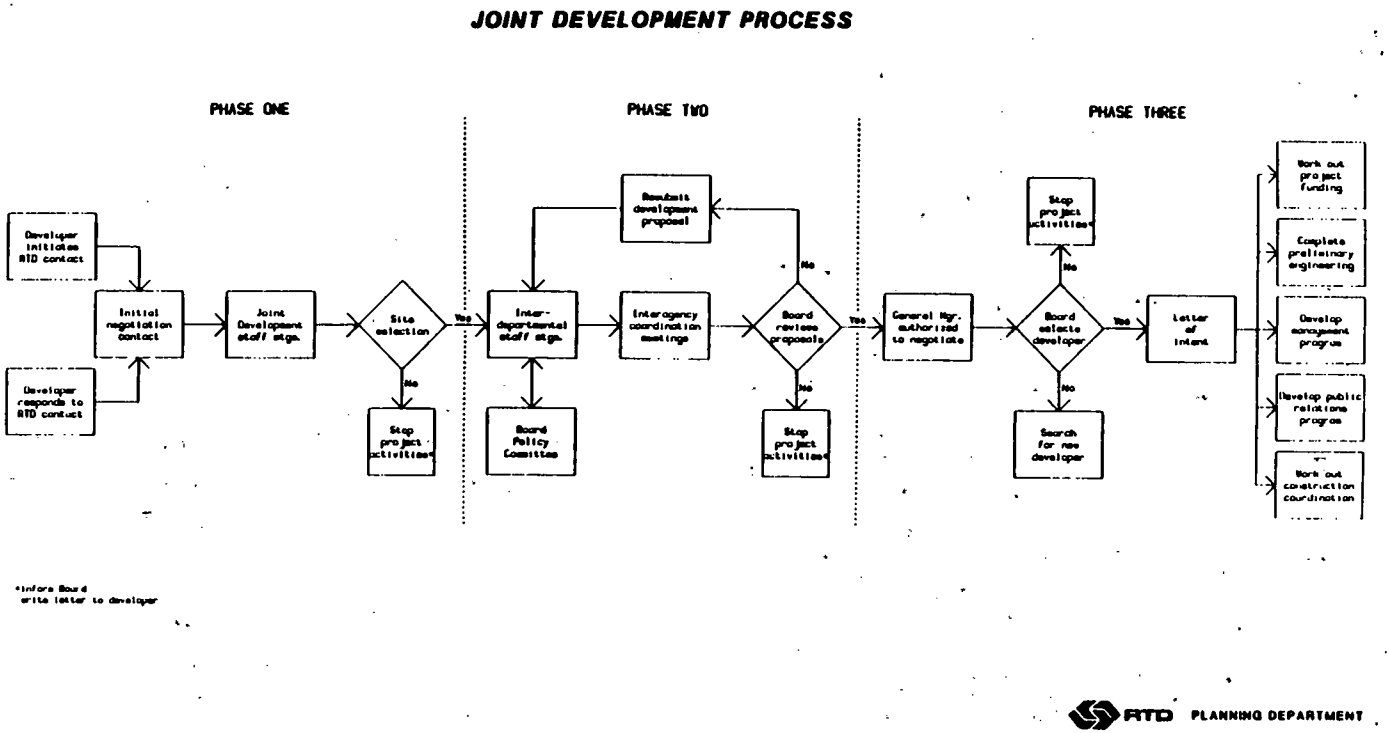
- The question of whether residential uses should be assessed has been a political issue between SCRTD and the City of Los Angeles. The City has drawn the boundaries of its Specific Plan districts to exclude residential areas, even those adjacent to the stations, as a result of political pressure, effectively excluding residential uses from the assessment districts. However, if the land use changed, the property would be subject to the special assessment. While SCRTD has supported this policy in the interest of achieving political consensus to build the system, the policy does reduce development potential in station areas. Because it is dependent on the assessment district revenues, SCRTD naturally would like to see maximum development in the station areas, which conflicts with the City's desire to protect residential areas from speculation and development impacts.

- The support of benefit assessments has been threatened by the zoning changes pending in the Metro Rail Corridor. As discussed in the next section, the City was mandated by state law to reduce zoning densities citywide to conform to the provisions of its General Plan. The implementation of the Specific Plan for the Metro Rail corridor thus combined density bonuses in the station areas with the general density reductions in the rest of the city. Because the two separate issues were unfortunately combined in the Specific Plan, the business community has identified the overall downzoning with Metro Rail. Density reductions, of course, are not consistent with the idea of special benefit fundamental to the assessment district concept, and thus have caused some difficulties in garnering public support for the assessment districts. As one participant put it: "The downzoning is identified with Metro Rail and has caused some opposition we might not have had otherwise. It compounds our difficulty in getting special assessment districts through. Had the downzoning already been in place, the public would have jumped behind Metro Rail as a means to get increased density (9).

- The business community is concerned that assessments at varying distances from the stations should be equitable among different station locations, by means of such strategies as basing the assessment formula on passenger volumes. In addition, the businessmen want to be sure that assessments collected in a given station area are used only for improvements which will directly benefit that area. This requires an accurate breakdown of costs related to each station. The Central City Association President stressed the feeling that it would overburden the assessment district concept to subsidize the system operations as a whole (9), while SCRTD is perceived as

Figure 2

SCRTD JOINT DEVELOPMENT PROCESS



Source: SCRTD Planning Department

intending to do just that.

- The timing of the collection of the assessment fees is another issue. SCRTD wants to collect the fees at the start of construction so that monies will be available to fund construction activity. However, it is during construction that businesses will actually experience the greatest disbenefits from the Metro Rail project. One developer stressed that it would be wiser politically to delay the actual fee collection until after the system is operating, noting that SCRTD could still float bonds against the future income stream (16).

- Finally, uncertainty regarding the ultimate funding of the system and its length has affected attitudes toward the benefit assessment concept. Attitudes are generally favorable toward assessment districts for the entire 18.6 mile line; however, if only 4.4 miles are constructed, the concept will be more difficult, if not impossible to sell. Further, the uncertainty has called into question the credibility of the public agencies involved. As noted by SCRTD itself, "In most cases, a cooperative relationship between the property owners, businesses, and public agencies affected by the benefit assessment district is the key to successful implementation. A type of trust and direct involvement in the planning and development process is . . . a vital element in minimizing political conflict. In the case where the benefit assessment failed, distrust of the political officials and the public agencies involved was considered one of the greatest stumbling blocks (18, p. 3-1). This funding uncertainty threatens to jeopardize the careful work put into the planning for the assessment districts to date by SCRTD.

It is clear from the efforts which have been expended so far that the SCRTD is taking a lead role in coordinating development at the Metro Rail stations, and in laying the groundwork for value capture through benefit assessment. However, SCRTD is at the same time using a portion of its UMTA planning funds to support station area planning by the CRA, City and County, as well as the support work necessary to establish new land use regulations in station areas. Its status as funding agency enables SCRTD to maintain a continuing role in the development planning. The efforts of the three planning agencies, as set forth in three contracts between the agencies and SCRTD, are discussed briefly below.

City of Los Angeles Department of Planning

The City of Los Angeles is responsible for comprehensive land use planning and zoning within its jurisdiction. The basis for this planning is the "Centers Program," adopted as part of the 1974 Concept Los Angeles general plan for the city. The goal of the program is to encourage high density development in defined centers and promote the preservation of the predominantly low-density neighborhoods outside of the centers.

In response to Metro Rail, the City prepared Specific Plans for those station areas which are within designated centers. The Specific Plan is a City "ordinance governing land uses composed of zoning maps and text provisions which control the intensity and type of development which may occur (7, p. 1)". As noted in the plan, the City Council determined that a specific plan was the best method to guide development around the rapid transit stations and along portions of the route of the Metro Rail Line (7, p. 3)." The Preliminary Metro Rail Transit Corridor Specific Plan thus covers the following stations:

- Wilshire and Alvarado
- Wilshire and Vermont
- Wilshire and Normandie
- Wilshire and Western
- Wilshire and La Brea
- Wilshire and Fairfax
- Beverly and Fairfax
- Universal City

The only station not covered in the corridor specific plan is Wilshire/Crenshaw, which is not in a center but which is regulated by the previously adopted Park Mile Specific Plan. (In this case the Park Mile Specific Plan will be amended to reflect the Metro Rail station.)

Issued by the City in June, 1984, the Preliminary Metro Rail Transit Corridor Specific Plan sets forth development standards, bonuses and incentives "intended, in the aggregate to focus the most intense development near the Metro Rail transit stations, to minimize traffic and parking problems, to improve pedestrian access, to

minimize impacts on residential areas, to guide development opportunities, and to improve the quality of life within the Plan area. Further, it is the purpose of the Plan to generate regional and community employment opportunities and to create an environment which fosters the successful integration of transit stations with a desirable mix of land uses and with varying intensities of development (7)."

The major incentives employed to carry out these goals are density bonuses and transfer of development rights. The application of these tools is illustrated in Figures 3, 4 and 5. The details shown here are preliminary, and will undergo substantial modification before the plan is finally approved in 1985.

The bonus and incentive provisions within the transit corridor were made possible because, independent of Metro Rail planning, the City has been required by State law to modify its zoning to be consistent with its adopted land use plan. This requirement led to the 3.1 maximum FAR limit set forth in the Specific Plan under the "before Metro Rail" condition for station areas and both before and after Metro Rail in areas outside the corridor. This limit, which in effect is a "downzoning" of the entire city outside the CBD, was based on the desire to accommodate anticipated growth to the year 2000 while preserving the low density character of residential areas. Under the Specific Plan, development up to 13:1 FAR can occur only in transit station areas, and there only if the transit-related bonus provisions are utilized.

Within the framework of the Specific Plan, the Department of City Planning is under contract to SCRTD to prepare station area development plans for individual parcels within Metro Rail station areas. The level of planning conducted here was judged eligible for UMTA funding because it was "over and above" the planning that the City would have conducted in anticipation of Metro Rail in any event. LADOP was granted funds by SCRTD in 1983 to cover the station area planning. The station area development planning process is discussed later in this section. As of June, 1984, the City submitted four station area development plans to SCRTD for review,

Figure 3

STEPS IN IMPLEMENTING INCENTIVE ZONING IN METRO RAIL CORRIDOR

- A development capacity (i.e., FAR 3:1) is assigned for each zoning category within the station area under "before Metro Rail" conditions. Development can proceed "by right" up to this limit.
- For "after Metro Rail" conditions, floor area bonuses can be granted within specified zones in the station areas up to specified maximums, subject to discretionary review. Developments may exceed a maximum FAR of 9:1 up to FAR 13:1 only if the bonusable features related to transit are provided. These include:
  - direct connections to the station from the project;
  - off-street bus terminal incorporated into the project;
  - off-street Metro Rail parking (in addition to development-related parking required by zoning) incorporated into the project.
- Additional FAR bonuses may be granted by use of Transfer of Development Rights (see Figure 4).

Source: (7) NOTE: PRELIMINARY, SUBJECT TO CHANGE

Figure 4

STEPS IN USE OF TRANSFER OF DEVELOPMENT RIGHTS: ALVARADO SECTOR

A. Subareas 1 and 2 may be both Receiving and Donor Areas. A lot in Subarea 1 may transfer Development Rights only to lots in Subarea 1. A lot in Subarea 2 may transfer Development Rights to lots in Subareas 1 and 2. Subarea 3 shall be a Donor Area only to Subareas 1 and 2. The Transfer of Development Rights from any lot in Subareas 1, 2 and 3 may equal, but not exceed such Donor Area lot's development rights under Section 3.2.A.1(a).

B. A Project in a Receiving Zone may receive Development Rights from more than one Donor Zone lot.

C. Development Rights transferred from a Donor Zone site may be replaced on that site by acquiring the Development Rights of another Donor Zone site.

D. Any additional floor area created by development bonuses shall not be transferable. Such floor area may only be utilized in the Project which qualified for such bonuses, unless such Project is a parking structure as defined in Section 3.5.A.7 of this Ordinance.

E. The Department of City Planning shall maintain a record of the Transfer of Development Rights made, pursuant to the provisions of this Ordinance. Such record shall be available for public inspection.

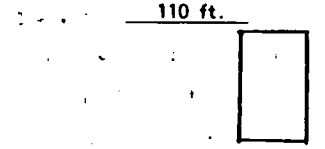
F. Any proposed Transfer of Development Rights shall conform with the intent and objectives of this Ordinance. Transfer shall be evidenced by a notarized document, signed by the owner of the lot or lots involved and recorded in the Office of the Los Angeles County Recorder in a form designed to run with the land and satisfactory to the City Attorney. Such document shall restrict the Development Rights allocated to the transferor site to the extent that said Development Rights have been transferred to another site. Copies of such document shall be forwarded to the Department of City Planing and Building and Safety.

Source: (7) NOTE: PRELIMINARY, SUBJECT TO CHANGE

Figure 5

AN EXAMPLE SHOWING HOW A PROJECT WITHIN A STATION SUBAREA COULD ACHIEVE ITS DEVELOPMENT POTENTIAL

Site - Miracle Mile Sector - Subarea 1 (13 to 1 maximum)

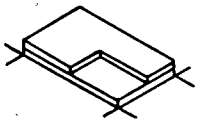


18,810 sq. ft.
Commercial site
Assume: 100% Buildable Area

By-right Level of Permitted Development

24.36 Trips per 1,000 sq. ft. of commercially zoned Buildable Area

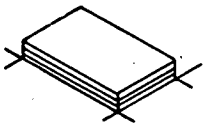
Result: 32,730 sq. ft. office building (FAR 1.74)



Discretionary Level of Permitted Development Prior to Metro Rail Being Assured

42 Trips per 1,000 sq. ft. of commercially zoned Buildable Area

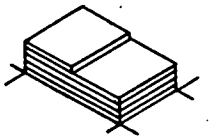
Result: 56,430 sq. ft. building (FAR 3.0)



Discretionary Level of Permitted Development After Metro Rail Being Assured - Using Bonus Provisions to Achieve FAR 4.5

For example: Ground Floor Retail Bonus 5 to 1
5,650 sq. ft. of Retail on Ground Floor allows
28,250 sq. ft. of additional office building

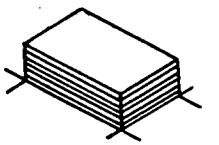
Result: 84,680 sq. ft. building (FAR 4.5)



To Achieve FAR 6.0*

For example: Buy Transfers of Development Rights
28,200 sq. ft. of T.D.R.'s allows
28,200 sq. ft. of additional office building

Result: 112,880 sq. ft. building (FAR 6.0)



* Development above FAR 4.5 may be achieved by any combination of development bonuses and Transfers of Development Rights.

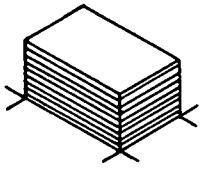
Figure 5 (cont'd)

To Achieve FAR 9.0*

For example: Motion picture theater bonus 4 to 1, rooftop garden bonus 3 to 1

9,100 sq. ft theater
6,700 sq. ft. rooftop garden allows
56,500 sq. ft. of additional office building

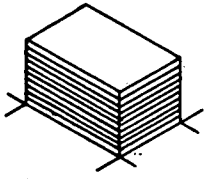
Result: 169,380 sq. ft. building (FAR 9.0)



To Achieve FAR 10.0*

Provide Direct Connection to Metro Rail station (Mandatory for development greater than FAR 9.0)
Bonus: Additional FAR 1.0 allows
18,800 sq. ft. of additional office building

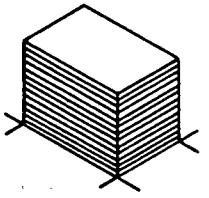
Result: 188,180 sq. ft. building (FAR 10.0)



To Achieve FAR 13.0*

For example: Senior citizen and/or low/moderate cost housing, bonus 5 to 1
11,300 sq. ft. of senior citizen/low cost/moderate cost housing allows
56,500 sq. ft. of additional office building

Result: 244,680 sq. ft. building (FAR 13.0)



* Development above FAR 4.5 may be achieved by any combination of development bonuses and Transfers of Development Rights

Source: (7) NOTE: PRELIMINARY, SUBJECT TO CHANGE

covering the Wilshire/Vermont, Wilshire/La Brea, Wilshire/Fairfax and Fairfax/Beverly stations. The station area development planning process is described briefly in Figure 6.

Community Redevelopment Agency of the City of Los Angeles

The Community Redevelopment Agency of Los Angeles (CRA) is responsible for planning and development in designated Redevelopment Projects in the City of Los Angeles. Within redevelopment project areas, the CRA can acquire land, assemble property and sell or lease the property or development projects to developers. Further, CRA is authorized to grant density/floor area variations on a case by case basis to relieve public objections in redevelopment areas.

Another important CRA asset is its ability to obtain revenues from tax increment financing based on increased tax returns created within its project areas. As a redevelopment agency the CRA is the most experienced of the agencies involved in Metro Rail planning in terms of negotiating with developers and implementing development projects. The agency offers staff services to developers on a case-by-case basis including "property appraisal, relocation assistance, physical and economic feasibility analysis, environmental review, plan development, schematic design, financial packaging ... and condemnation with the executive, legislative and technical levels of City government (8, p. 2). Seven of the Metro Rail stations are located within redevelopment project areas, including Civic Center, Hill Street, Seventh Street, North Hollywood, Sunset/La Brea, Hollywood/Cahuenga and Hollywood Bowl.

The CRA has prepared station area master plans (parallel to specific plans but without the effect of our ordinance) for each of the seven stations. As part of this effort CRA distributed a brochure on the three downtown stations to 3,000 property owners in January, 1983. Besides articulating CBD-wide Metro Rail design and development objectives, the brochure outlines for the Civic Center, Hill Street and Seventh Street stations:

Figure 6

STATION AREA DEVELOPMENT PLAN SUMMARY

1. IMPACT AREA DEFINITION

   -- Immediate station impact area (to 600 feet from station)
   -- Primary station impact area (to 1,200 feet from station)
   -- Secondary station impct area (1,200 feet -- 1,800 feet from station)

2. DEVELOPMENT COMPONENT

   -- Assessment of development opportunities
   -- Identification of joint development/system interface opportunities
   -- land use mix
   -- Urban design concepts
   -- Public amenities
   -- Joint development/value capture opportunities and tools

3. DESIGN COMPONENT

   -- Identification of sites to treat in detail
   -- Three dimensional design plans
   -- Detailed sections illustrating station interface, integration of public/private spaces

4. IMPLEMENTATION COMPONENT

   -- Applications of joint development/value capture tools to specific sites
   -- Application of development controls
   -- Application of bonuses and incentives
   -- Benefit analysis (with SCRTD)

5. AGENCY REVIEW AND PUBLIC PARTICIPATION

Source: (1)

- station area context and development objectives; and
- portal specific land use and design objectives for those entrances designated by SCRTD and additional portals recommended by CRA.

As of summer, 1984, CRA is proceeding with the detailed design level. SCRTD partially funded this design effort in 1984, with a match of CRA funds. CRA spends one fourth of its planning budget on Metro Rail. In the course of their Metro Rail planning work, the CRA staff have concluded that of the benefits sharing tools available to CRA, "density variation is likely the most effective method of achieving land use/transportation integration, enhancing the transit system and creating opportunities for value capture (2, p. 6)".

The CRA proposes to use the station area master plans, environmental impacts and unique site characteristics as the bases for offering bonuses on a case-by-case basis, noting that "it is difficult to predict in advance the type of solutions that will be identified. Densities, amenities, mitigation measures and potential value capture levels are generally established through careful study and negotiation on a site by site basis. This method of operation has worked well in the past and holds promise for the coordination of land use and transit development (2, p. 6).

In the course of ongoing work with developers on downtown redevelopment projects, CRA has already been involved in several negotiations regarding Metro Rail, including:

- The $1.2 billion mixed use California Plaza project, on an 11.2 acre site between 2nd and 4th Streets will contribute an easement for a station portal at the Hill Street station. To insure compatibility with the California Plaza design, SCRTD has rotated the portal 45 degrees from the original design.
- CRA has a commitment from Citicorp to fund the Metro Rail Seventh Street station entrance within the development. SCRTD will provide knockout panels to allow for underground pedestrian connections to the station.
- At Pershing Square, CRA has hired the SCRTD architect independently to design two extra station portals for the Hill Street station within the park, in conjunction with a private sector effort to improve the park.

At the same time, other CRA negotiations for connections at Home Savings Bank,

Broadway Plaza and Robinsons at the Seventh Street station, have been frustrated due to uncertainties over system funding and timing. In the Home Savings case, for example, "the developer has been trying for some time to get RTD to make commitments. The one reality of private investment is that when you have the ability to go ahead, you can't wait. The likely result in this case is that he will go ahead and build his building without providing for a portal (9)."

County of Los Angeles Department of Regional Planning

Like the City, the County of Los Angeles is responsible for comprehensive land use planning and zoning within its jurisdiction. In terms of Metro Rail, the County is responsible only for the Fairfax/Santa Monica station area and approximately one-half at the Universal City station area (the other half falling under the City's jurisdiction). The County was granted $87,400 in 1984 by SCRTD for station area master planning in these areas. The planning sequence followed by the County is similar to that followed by the City and the CRA, although the legal and zoning provisions differ. The steps include:

- A boundaries report, which established the exact boundaries of the station impact zones, in conjunction with citizens' groups;
- Land use plan alternatives report, in which three alternatives were developed and a preferred alternative selected;
- Station area plan (parallel to specific plan), which set forth details on the preferred option; and
- Community Standards District, which creates a new "transit corridor mixed use zone" to allow special zoning in station areas. Because the County zoning was more restrictive than the City's, the County is upzoning in the station areas by offering density bonuses for transit connections, pedestrian oriented ground floor uses and amenities.

As of summer, 1984, the Community Standards District plans were awaiting public approval. The County is unwilling to release the plans, however, until funding for the two stations is secured. Contrary to the City which implemented its zoning changes for both before Metro Rail and after Metro Rail conditions (due to the state

requirement), the County fears speculation and disinvestment if the station area rezoning is put into effect on a contingency basis.

ISSUES AFFECTING SUCCESS AND FAILURE

Because the system is not yet under construction, it is impossible at this time to evaluate the success of SCRTD's planning for Metro Rail benefit-sharing. The Los Angeles experience to date, however, does contain lessons regarding interagency coordination, SCRTD's attempts to incorporate value capture and benefit-sharing in the early planning for a new system, and public agency credibility in negotiating with the private sector in terms of the funding and phasing of the transit construction.

Transit Agency Organization/Relationships with Other Actors

Motivated by UMTA's Section 3 "New Rail Start" program requirements to establish and implement a "private/public coventure program," (1, p. 7), SCRTD acted early in the Metro Rail planning to establish its own resources for development related planning. Rather than creating a corridor wide planning and development agency, RTD chose to enter into cooperative agreements with the three planning agencies involved to cover station area planning. In spite of UMTA's requirement for development related planning, SCRTD encountered UMTA reluctance to subcontracting its planning funds in this way. As a condition of passing through the funds, UMTA required assurances that the City, County and CRA planning efforts were "over and above" planning which they would have performed for Metro Rail in any event.

The contracts, and the numerous interagency coordinating committees set up in the contracts, have insured that SCRTD is continually involved in the land use and development planning associated with Metro Rail as opposed to UMTA's choice to leave the land use/development planning to the local governments. A second round of contracts covering construction, negotiation with developers, and interagency information flow is currently in preparation. Not surprisingly, the planning agencies involved have mixed feelings about the degree of SCRTD involvement. The funding, of course,

was welcomed by the agencies. The County, in particular, noted that the RTD funding "was the impetus for the planning work. Their funding allowed more detail -- more emphasis on pedestrian aspects. We had earlier involvement, and more involvement with joint development. If they had not been involved, this might not have occurred (10)."

The CRA, on the other hand, put up more of its own funds than the SCRTD funds for Metro Rail planning. With its own funding (through tax increment financing) and the most involvement with development and developer negotiations, CRA is skeptical about what they see as SCRTD's attempts to "proceduralize everything." The CRA staff experience has shown that negotiations are a sensitive process, which must proceed on a case-by-case basis. They view RTD's desire to "know at every point what their role will be in everything" as unreasonable in a fluid "deal-making situation." The SCRTD staff, on the other hand, wants to have the opportunity to "learn the ropes" in negotiating with developers to protect their own interests.

Nonetheless, the contracts and coordinating committees have been effective in insuring not only that the agencies communicate with each other on development and land use issues but also that departments within individual agencies communicate. For example, SCRTD's OPERA committee has helped to involve the engineering department more closely in planning and design decisions, helping to avoid integration problems when plans are drawn in isolation.

In addition, the cooperative agreements and use of the outside agencies' land use control powers have led to a solid zoning and land use control framework which when approved will encourage transit-related development. The City, County and CRA have all made provision for density bonuses in station areas in return for direct station connections and other amenities. It is highly unlikely that in three separate jurisdictions reinforcing land use policies and controls could be successfully implemented without the mandate of the SCRTD contracts and the funding provided for applying the zoning concepts in specific areas.

Incorporation of Benefit-Sharing into Early Planning

From the point of view of land use and urban design, it is clear that the work carried out so far by SCRTD and the three planning agencies has been effective in insuring that development opportunities in transit station areas will be maximized and that direct subway connections will, at the least, not be precluded by system design. The UMTA funds provided for the detailed station area planning work enabled both a level of interaction between the transit agency and the local agencies which might not have occurred otherwise, and the incorporation of provisions in support of transit into local land use controls.

From the point of view of value capture, however, it is also clear that development commitments which will eventually produce revenue for the system through benefit assessment districts cannot be rushed ahead of the marketplace. Several of the Los Angeles participants noted that the major benefits of joint development are not necessarily the direct financial returns to the agency; that development related benefit-sharing can only be counted upon for a very small portion of transit costs. Depending heavily on development-related financial returns at too early a stage can be unrealistic.

As the SCRTD Director of Real Estate stated: "projects can take three years just to get an agreement in place -- and it's seven years after construction starts that we run the first train. The emphasis now has to be not to preclude future opportunities. The developers need a return today. They are willing to take the risk of not providing a connection today if transit not coming for seven years (11)."

Conflicts Between Value Capture and Other Goals

The intensity with which SCRTD has been pursuing its value capture goals has led to several areas of conflict with other public agencies. First, the City has noted SCRTD disappointment in the overall downzoning taking place in the Wilshire Corridor, even with the transit related density bonsues. According to the City, "the RTD is

interested in encouraging development and ridership; their goals translate into maximum zoning. We have the same goals but also must be concerned with other impacts. There are different constituents and more conflicts for us to contend with (12)." Another issue has related to whether or not residential uses in station areas will be assessed. The City and County have drawn the boundaries of the assessment districts to exclude all residential. RTD would prefer to see at least multi-family residential assessed but is "going along with this to get the system built. We need political consensus to build the system (13)."

There have also been conflicts between SCRTD and the CRA over tax increment financing. SCRTD sought to have a percentage of tax increment revenues collected in the seven redevelopment project areas in which stations are located dedicated specifically to Metro Rail, planning to use these funds as part of the local share of project costs (14, pp. 17-18). CRA, however, has committed its tax increment funds to an ambitious housing construction and rehabilitation program and social programs. Since passage of the Proposition 13 tax cuts, local agency budgets have been severely cut, leading to the fact that CRA is the major source of housing for Los Angeles. The CRA point of view is "we do not want to pit transit versus housing; transit will lose. Proposition 13 took away everyone else's budget." In CRA's view, tax increment funds will not be available for other purposes for at least ten years.

Public Agency Credibility

The most serious obstacle to achieving results from the extensive planning conducted in Los Angeles is the uncertainty surrounding implementation of the system. As one developer bluntly put it, "Nobody in his right mind would make investments contingent on Metro Rail coming (16)." Uncertainty exists not only as to the timing of construction, but also as to the extent of the system which will be built. The uncertainty as to whether the system will extend beyond the current 4.4 mile segment for which RTD is requesting funds is affecting the feasibility of instituting benefit

assessment districts ("they're saleable for the 18 mile system, but not for the four mile system") (15), as well as weakening RTD's bargaining position with developers. Several deals have fallen through due to RTD's inability to assure developers the system will really happen. As one participant put it: "Developers see Metro Rail as a risk because of funding uncertainties. We are in a weak position right now -- we don't have much to offer. We have to proceed very cautiously right now in dealing with the development community. Until we get the program approved, there is not much we can do (17)."

The issue of credibility is particularly sensitive in Los Angeles where $15 million in private funds were spent for easements for a Downtown People Mover (DPM) system from which UMTA funding was withdrawn. For the DPM, a $1.3 million annual Voluntary Special assessment district had been in place to fund operations. Said one DPM veteran, pointing through the window at several "buildings with holes in them" ready for the people mover guideway, "developers are reluctant to make another mistake. Failure tempers what can be done in the real world here in Los Angeles (15)." The irony of the situation is that while UMTA is seeking significant private sector commitments to transit construction, it is UMTA reluctance to commit federal funds to the system that is the biggest obstacle toward obtaining the commitments they seek.

Not only the public agencies involved are frustrated by this chicken and egg situation. The President of the Los Angeles Central City Association stressed that "there are big economic decisions to be made regarding increased density, parking reductions, etc." in development projects regarding whether they should build for access to rail. "It hurts the overall project when the agency can't go ahead and start cutting deals." The way he sees it, "all the Feds have to do is put in the $2.6 billion and private investment would follow to the tune of $10.2 billion. There is over $1 billion pending right now (9)."

To summarize the prevailing attitude in Los Angeles, "there will be a big quantum leap in credibility when the first contracts are signed (12)."

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LIST OF AGENCIES AND PERSONS INTERVIEWED
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CASE STUDY

TARTA, TOLEDO, OHIO

INTRODUCTION

TARTA, the Toledo Area Regional Transit Authority, was formed in 1971 when the city's transit system, the Community Traction Company, owned by Cities Service Corporation, was about to fail. The authority is subsidized by an annual one mill property tax levy (based on 1971 property valuations) which has been renewed through 1991. The system's 220 buses travel 6.2 million vehicle miles/year, and serve a regional population of 471,000, in nine political jurisdictions. Charles Whitten, General Manager, has been with TARTA since its first year.

Downtown Toledo, the focus of the TARTA system, has undergone a major revitalization effort since the late 1970's, initiated in large part by major downtown employers. The revitalization has focused on the Summit Street corridor paralleling the Maumee River. Current downtown employment is 20-22,000, and the Chamber of Commerce has set a target of 34-36,000 employees by 1995. The estimated transit share for downtown work trips is 15%.

TARTA serves the downtown area through a downtown bus loop operation, with five fixed stations along a 1.1 mile route. With strong leadership from the TARTA General Manager and close working relationships with the City and the private sector, the planning, design, funding and operation of the downtown bus loop were carefully integrated with the CBD land use and development planning to achieve mutual benefits for TARTA, the City, and the private sector. This process, and the detailed arrangements pursued for each of the stations, are the focus of this case study. The Toledo case illustrates:

- active participation by a transit agency in downtown revitalization planning;
- successful physical integration of bus facilities with downtown development projects and pedestrian network;

- packaging of public and private funds from many sources to implement the plan;
- construction phasing and management to coordinate the transit facility and development construction; and
- cooperative agreements for private assumption of ongoing maintenance responsibilities.

THE DOWNTOWN BUS LOOP

The bus loop planning and the downtown redevelopment planning efforts were both launched in 1976, when Owens Illinois, a major downtown employer, made a decision to locate its new world headquarters building in downtown Toledo. The City of Toledo, which was in financial difficulty at the time, entered into an agreement with Owens Illinois which provided that Owens Illinois would acquire a vacant 10.8 acre parcel on the banks of the Maumee River as its headquarters site, and act as developer and development coordinator for the remainder of the site. This major commitment on the part of the private sector served to boost confidence in downtown's future, and served as a catalyst for further public and private investment. As one city executive put it, "until private enterprise decided they wanted something to happen in this downtown, it didn't happen (1)."

In 1976, meetings were also initiated between TARTA and the city for a CBD transportation plan, and meetings were held between public agency officials and the private sector regarding downtown parking and transportation problems. At the time, TARTA had 31 lines operating over 16 different paths on a one-way street pattern. Travel time was slowed due to traffic conflicts, and understandibility of the system for users was poor due to the one-way routing patterns and a lack of common transfer points. Relying on recommendations from past planning studies, TARTA consultants conducted a feasibility study for a transit mall on Superior Street. This street, however, was removed from the new downtown activity centers along Summit and Jackson. Feeling that the Superior Street mall plan would not be useful in serving the new riverfront development, TARTA's General Manager cooperated with the city traffic

engineer, Gene Riser, to develop the transit loop plan. The idea was to run all buses around a loop which would circle the downtown, serving all the new development sites on the periphery of the loop. No site inside the loop, however, would be more than a three minute walk from any point on the loop. Whitten convinced Riser, the mayor, and the city manager of the benefits of the loop plan. Instrumental in selling the plan was the element of a fare-free zone downtown, to be accomplished initially through a free "Looper" shuttle bus, then eventually through a pay-board-inbound, pay-leave-outbound fare system which would allow free passage downtown on all buses. City officials had been only lukewarm about the transit loop to start, but the free system had "political moxie" to it, according to Whitten (2).

Once the city officials endorsed the plan, TARTA approached the UMTA regional office in Chicago to seek funding. At that time TARTA learned of the Urban Initiatives funding program, and adapted their application to take advantage of this program, adding the stations, a one block pedestrianization scheme, and weather protected pedestrian concourses to link the stations to nearby office buildings. The concourse idea had long been supported by the city and the private sector. While transit agency goals were to improve operations and reduce the number of stops downtown, the city and business community were definitely oriented toward implementing the pedestrian concourse system. The linking of the transit loop with the concourse plan made possible by the Urban Initiatives program was a major factor in gaining private sector support. Downtown employers were brought in to support the application, and to furnish funds for the local share, which the financially strapped city was unable to provide at that time. Once the city was sold on the idea, the private sector support followed. Again, the concourses and the free loop were the major selling points, along with the 80% UMTA funding that would result if the 20% local share were raised.

The plan was funded with a 1979 Urban Initiatives Grant, combined with a separate Section 5 capital grant and local share funding to total $8.01 million. The transit

loop is a 1.1 mile exclusive curbside bus lane around a 12 block area in the heart of the CBD (Figure 1). The loop has five permanent stations which provide weather protection, replacing 36 bus stops in the downtown. The five stations provide five common transfer points for all buses entering the central area. All buses stop at all stations. Many of the stations are directly tied to downtown office buildings through a weather-protected pedestrian concourse system. Each weekday, approximately 1300 buses traverse the loop. During the morning peak hour, the average headway on the loop is less than 30 seconds. Four buses at a time are permitted to board and discharge passengers at a station. The downtown ride itself is a fare free ride, made possible by the pay board inbound, pay leave outbound system which was initiated in June, 1983.

BENEFIT-SHARING STRATEGIES

The five downtown stations, designed by Charles Stark, a local architect, offer a new approach to downtown bus facilities which in Toledo has definitely helped improve the image of the system. The five stations illustrate a variety of interagency and public-private benefit-sharing strategies in design, construction and operation of the loop and stations. Four of the five stations are directly integrated into adjacent structures. Two of the five are linked to adjacent developments by pedestrian concourses and future linkages are planned for other stations. TARTA maintains the stations, but the concourses are maintained through various cost-sharing agreements. Miniature parks around two stations were built by TARTA, and are maintained by the City. A pedestrian mall was constructed on one of the streets intersecting the transit loop; Promenade Station is built on the discontinued right-of-way. City police provide security, assisted informally by the private buildings' security forces. Each of the stations, shown in photographs in Figure 2, is very different in terms of benefit-sharing scenarios, as discussed below.

- **Seagate Station** was the first station built. The land for the station was

purchased by TARTA from the City for $24,648. In anticipation of future development, the city reserved an aerial easement above the station to allow the future developer (Webstrand) to incorporate the station into the development. The building, now nearing completion, was built after the Seagate Station was standing. The station is connected directly to the corporate headquarters of the Owens Illinois Corporation by an enclosed pedestrian concourse. This concourse was paid for by TARTA through the Urban Initiatives grant, but was built by the city so that its construction could be coordinated with two other concourses being constructed at the same time by the city. Owens Illinois provided the 20% local share, and is now responsible for providing ongoing maintenance and utility costs for all three concourses, with the exception of the elevator required in the TARTA concourse. The City of Toledo is responsible for security. Currently, the concourse is being extended by private construction to link a new Hotel Sofitel being constructed by the Galbreath interests and the recently opened Portside Market. The extension is being funded through tax increment financing.

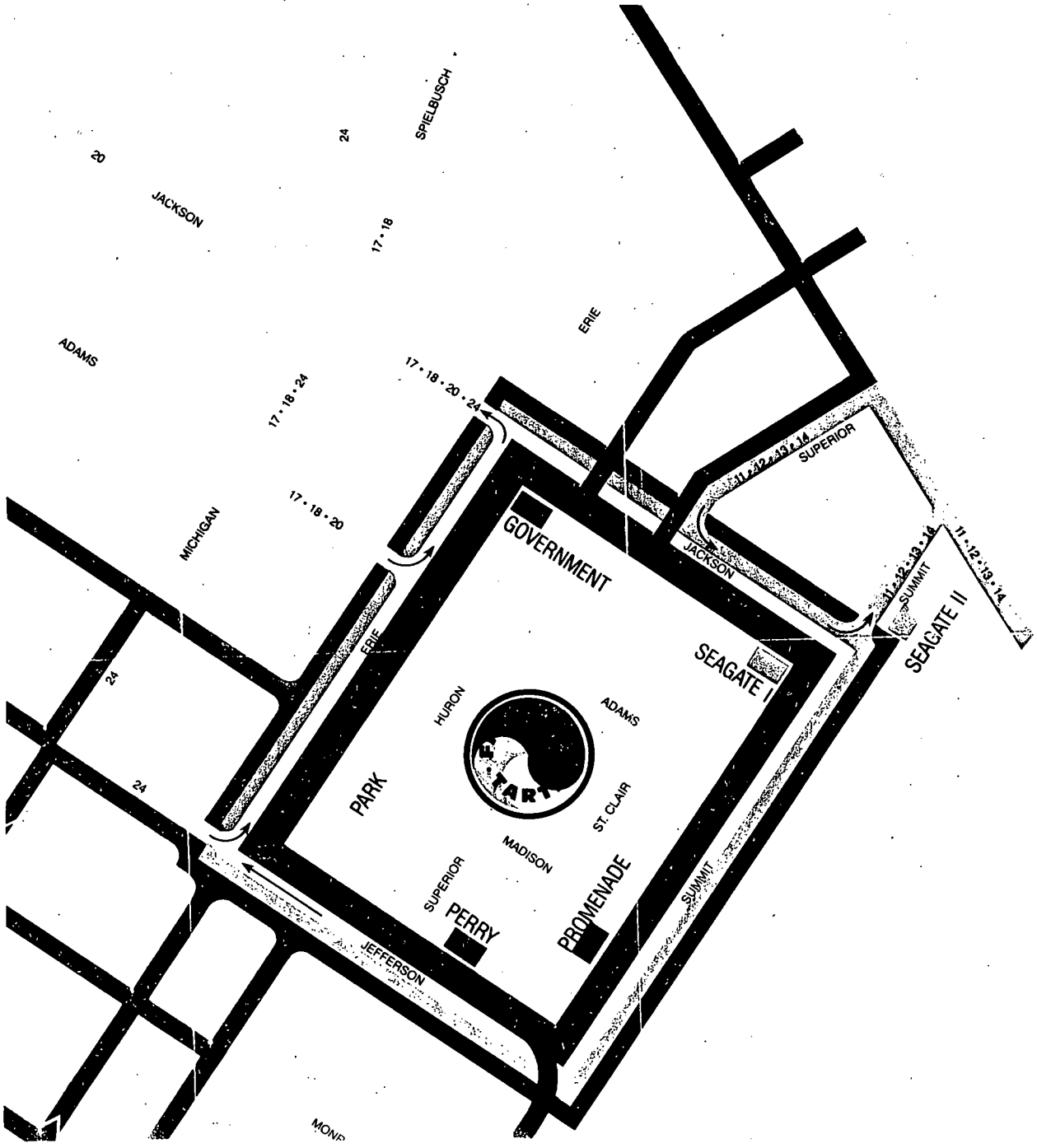
- **Promenade Transit Station** is linked directly to the Toledo Trust, Toledo Edison Company and the older Toledo Trust Tower by a second level pedestrian concourse. The station was built in the right-of-way made available by the closing of Madison Street for a pedestrian mall (funded by the UMTA Urban Initiatives grant). The station and the second level concourse were added onto the existing Toledo Edison building. The Toledo Trust Company and the Toledo Edison Company each paid one-half the 20% local share for concourse construction. The maintenance and security responsibilities are shared among the participants. Toledo Edison and Toledo Trust each pay approximately $1800/month for maintenance and utilities for the concourses. In addition Toledo Trust is responsible for maintaining the escalator connecting the station to the second level concourses. TARTA maintains the station, and the City maintains the pedestrian mall. A new concourse, the Levis Square concourse will link the Fiberglas Tower, the corporate headquarters of the Owens Corning Fiberglas Corporation and the Riverview One commercial parking structure with the station. The 20% local funding for the proposed Levis Square Concourse will be provided by the Toledo Trust Company, the Owens-Corning Fiberglas Corporation, and John W. Galbreath and Company, with each party providing one-third the costs. The 80% share will come from the UMTA Urban Initiatives grant.

- **Perry Station** is incorporated into the street level of a city parking garage structure. It is linked by a third city-financed concourse to the Ohio Citizen's Bank and office building. When built, Toledo's new convention center is expected to be linked to Perry Station. While Perry Station was financed by TARTA, its construction was delayed until the new garage structure was under construction. TARTA let its construction contract through the City so that the same contractor could be utilized.

- **Park Station** is not directly linked to any development project. In this case, it was necessary for TARTA to acquire an existing building on the site, which was demolished to make room for the station, and an adjacent small park. The park, which is leased to the City for $1/year by TARTA, is maintained by the city. This station is the only one with perceived problems related to loitering, and teenagers "hanging out." It is also the only one where merchants complained about the station location. A lawsuit was brought by one merchant against TARTA for loss of business when the station

Figure 1

TOLEDO DOWNTOWN BUS LOOP



Source: TARTA

Figure 2

TOLEDO DOWNTOWN TRANSIT STATIONS

Promenade

Seagate

Perry

Park

Government

was moved; however the case was dismissed from court.

- **Government Station** was originally intended to be connected to Government Center by a pedestrian concourse under Jackson Street. This concourse was eliminated because the construction of the Government Center was not underway in time. This station is attached to an existing two story parking garage; the owner paid the 20% local share for station construction because it improved his facade. Surplus land on the site was used for a small park, which is maintained by the city. TARTA leases the land for this station from the city for $1/year.

ELEMENTS OF SUCCESS AND FAILURE

Transit Agency Organization/Role

TARTA's success in implementing the loop plan is attributable in large part to the lead role taken by the transit agency in developing a plan which was responsive to overall downtown planning goals and directions, and the extent to which the transit agency staff interacted with city and private decision makers to bring the plan about. In a smaller city such as Toledo, the transit agency manager is afforded direct contact with key executives in the city and the private sector, should he choose to become involved. General Manager Whitten was praised by one participant for his "private enterprise approach to transit." He understood the need to gain the support of key executives early in the planning. As he put it:

> "The manager of any system like this should know what's going on. Too many times the transit agency does not want to be an actor, but you have to be involved. It's not hard to be involved, because who else in town has as high visibility as we do with all our buses going around. . . I'm glad that we got into the act early; you must get in there when you hear the first rumors. . . Join the clubs, talk to the executives, etc. -- before the planning is done (2)."

After the early planning, meetings of top level executives were held only "when necessary" to resolve problems. To supervise the project, Whitten hired Bill Herr, former Planning Director for the City, as TARTA Director of Planning, with day-to-day project management responsibility. Herr had established good working relationships with the parties involved and had good skills in "diplomacy" according to the project architect. Whitten then only came in for "command performances" with chief executives

(3).

Community/Private Sector Participation

The loop plan was introduced at a time when public and private forces were coming together to revitalize downtown Toledo. The Owens Illinois decision, and the direct involvement and "vision" of its Board Chairman, Mr. Edwin M. Dodd, established new confidence in the downtown and started the momentum for the public and private improvements. On the private sector side, the chief executive officers of the large corporations took the lead and participated actively in the planning. The CEO involvement insured the participation of their staff. As Toledo Trust V.P. David Snaveley put it: "Once the CEO's are involved, other corporate staff 'gets on the bandwagon' (4)."

On the public side, former City Manager Mike Porter, now Executive Vice President of the Chamber of Commerce, notes special efforts of city staff to expedite the project. Porter states that he alone as City Manager attended 300 meetings in one year, as often as 2-3 times per day. According to Porter: "Within the City we had an 'A Team.' All the city directors met weekly and went over strategy. We had two lawyers working full time on this project. When we got into this, we decided that we, as government, would not be the ones to screw it up (emphasis added). We worked nights and weekends. . . There were times we worked all day and all night. . .We kept up with, even surpassed the private sector. The private sector developed more respect for us as a result. (5)."

This observation brings up the issue of government credibility in dealing with the private sector in implementing a major project. Local governments and transit agencies often must overcome the hurdle of the perception on the part of the private sector that government will not "produce" in implementing a project, that funding is uncertain, or that bureaucratic red tape and delay is a given in working with a public agency. In this case, the private sector stepped in to provide local share funds and

development support because the city, "flat broke" at the time, was unable to respond financially. The City and TARTA did rise to the occasion, however, by packaging Federal funding programs and by providing sufficient political commitment and staff support to move the project ahead in a timely fashion.

In sum, Porter cited three conditions for successful public-private cooperation: "willingness to take a risk, confidence between the parties; and cooperation and the ability to 'bend egos;' i.e., not letting your ego screw the thing up. (5)."

Urban Design/Planning

The careful integration of the bus loop plan with downtown development planning was a key factor in winning private sector support. Sensitivity to land use and development considerations was manifested early in the process when TARTA dropped the Superior Street Mall idea and started to develop a new plan which better served development centers. Linking the transit stations to the sought-after pedestrian concourse scheme and providing the free loop to facilitate downtown circulation further strengthened support for the project. As Porter put it: "The project had to be bigger than just the transportation aspect; transportation had to be one piece of the puzzle. (5)." Snavely suggested: "Our motivation was based on the fact that this was part of a transportation scheme for all downtown. . . You can't isolate the stations; it was part of a bigger thing. It was the connector system that sold us, -- plus the feeling that you're doing something for the community (4)."

From a design point of view, each station was designed to relate to its own environment, while still creating a unified identity and upgraded image for the bus system. An additional design goal of the stations was to upgrade the image of the bus riders themselves through attractive and well-maintained stations. Linking the stations directly to buildings has had the positive effect of added security, both from office security personnel and from employees who can see into the stations from their windows. More vigilant maintenance is another advantage. Because the stations are so

closely related to the buildings, the office maintenance crews help informally with maintenance, and TARTA is phoned by management if maintenance is neglected.

Finally, the direct linkages afforded by the concourse system have been well received, particularly in the winters, when TARTA is more heavily used. People tend to walk and wait for the buses outside in nice weather, but the concourses are "gradually changing use patterns. People are taking the bus for lunch trips; combined with the concourses, the system extends the distance people can travel on lunch hour. People are still 'discovering' the system (1)." In anticipation of heavier use of the concourses, Toledo Edison has provided for future expansion of its concourse to the west, and also for provision of second level retail space along the concourse.

Legal/Institutional

Numerous cooperative agreements were developed to cover cost-sharing for design, construction and maintenance of the pedestrian concourses among TARTA, the city, and the private sector. Whitten commented that TARTA was not shy about developing new types of agreements to meet the unique situations which occurred. For example, for the Promenade Station and concourses, the following agreements were signed:

- August 14, 1981 -- Design agreement between TARTA, Toledo Edison and Toledo Trust providing that Toledo Edison and Toledo Trust fund 20% of the design costs for the pedestrian concourse up to a maximum of $14,085 each, and that TARTA reimburse Toledo Edison $10,000 for an engineering feasibility study conducted for the pedestrian concourse;
- August 14, 1981 -- Construction agreemenht between TARTA, Toledo Edison and Toledo Trust providing that Toledo Edison and Toledo Trust pay 20% of construction costs for the concourse;
- August 23, 1982 -- Promenade Pedestrian Concourse Agreement between TARTA, Toledo Edison, Toledo Trust and the City of Toledo clarifying ownership, maintenance, and operation responsibilities; and
- January 21, 1983 -- Maintenance agreement between TARTA and Toledo Trust providing that Toledo Trust and TARTA will share maintenance of the escalators linking the Promenade Station with the second level pedestrian concourse.

The Seagate Station required similar agreements in addition to clarification of easement rights to allow for construction of the office building over the station.

In Toledo, bringing these numerous complex agreements about in a timely fashion was accomplished through the mutual desire of all parties to implement the plan. The momentum established for the project gave the public and private participants the confidence to take action. "People went out on a limb to do some things they never would have done before. Some private construction went ahead even before documents were signed (5)."

Maintenance and Management

All the parties agreed that a "Class A" standard of maintenance in the stations and concourses must be kept up to maintain the positive image of the corporations involved and to extend this positive image to TARTA. Assignment of maintenance responsibility for the complex network of public and private spaces involved was worked out incrementally among the parties involved; details are specifically set forth in the numerous cooperative agreements.

Basically, TARTA's responsibilities are limited to maintenance and utility costs for the stations themselves, with the City and the private employers sharing costs for the concourses. TARTA spends $30,000 per year on maintaining the five stations, which are cleaned twice a day. To assure special attention to the downtown stations, and to reduce costs, Whitten created a separated maintenance program for the loop in his personnel department. The program uses part time help and is completely independent of the regular maintenance department.

TARTA has devoted considerable effort to reducing its maintenance responsibilities and costs; however, its recent attempt to persuade local banks to pay for station maintenance in return for the privilege of installing Automatic Teller Machines (ATM's) in the stations was unsuccessful. TARTA had also hoped partially to fund maintenance through lease of advertising space on frames provided in all the stations. In this case, the frames were mistakenly designed to a non-standard size, making the ads too expensive for the local market to bear. Escalator and elevator maintenance

has been another difficult issue. In Seagate Station, TARTA abandoned an escalator because of the unwillingness of Owens Illinois to pay for its maintenance. In Promenade Station, Toledo Edison refused to share escalator maintenance costs, although Toledo Trust was willing to share the cost with TARTA in this case.

Maintenance is a responsibility that TARTA would definitely like to "negotiate out of." While the private sector has willingly maintained the concourses to this point, they have expressed interest in the benefit assessment district which has been proposed to fund and carry out cleaning, maintenance, and security functions for the loop and other CBD improvements. The point of view of Owens Illinois on this matter, for example, is that the concourse connections, when initially built, served only Owens Illinois. Now they will also serve the new hotel and the Portside market. As the system expands, more buildings will be served and more benefits will accrue. As this network expands, either all should share in the costs, or the responsibility should revert again to the city.

Summary of Costs and Benefits to the Various Participants

As stated above, the main benefits of the transit loop for the private sector are tied to the convenience and weather protection of the concourse system and the downtown circulation aspects of the fare-free loop. These connectivity benefits have been seen as important in lending coherence to a downtown which has been characterized by scattered development with no clear center of activity. Owens Illinois, for example, saw the loop as an important selling point in convincing their employees to move to what was then "the middle of nowhere." Secondary in the eyes of the employers was the actual transportation benefit of the loop, although increased transit use and convenience for employees and visitors was mentioned by all the employers interviewed. Owens Illinois stated that employee transit use had increased from 1/3 to 1/2 of all employees after the move to the new building and the loop construction (and the construction of an expensive parking garage to serve the development). In general,

the private sector felt the benefits of the loop and concourses well worth the costs they paid, although they were interested in broadening the cost-sharing base through an assessment district for maintenance and utility costs.

For TARTA, the increases in maintenance costs for the stations were made up by decreased operating costs for the loop and more efficient downtown operations in general. Further, the loop gives TARTA adequate downtown capacity to serve potential increased ridership in the future, as development expands. The stations were designed to accommodate five buses at a time; however, only four stop at each location today. The ability to add the fifth bus allows for a 25% increase in capacity.

Because of the expense of conducting passenger counts in the fare free loop, TARTA has not established ridership impacts of the loop plan. Generally, they agree with the private sector that the greatest benefit has been an improved image for the TARTA system, afforded by the development connections, the heightened maintenance of the stations, and the fare-free loop. Increased use of the fare free loop by management personnel who typically drive to work increases their sense of ownership and interest in the TARTA system. As Toledo Trust Vice President Snavely put it: "The loop will remove the stigma from riding the bus. You never used to see guys with suits and briefcases getting off the bus five years ago; now you do (4)."

In sum, the transit agency has had a direct influence on the shape of downtown redevelopment and revitalization in Toledo through the sensitivity of its management and staff to development plans, their willingness to incorporate urban design and pedestrian planning goals into their plans, their skill in packaging funding, and their active participation in the interagency and public-private committees formed to expedite the project. The result has been a downtown system which enhances the image of the system, directly serves development, and offers enough capacity to meet the needs of expanding downtown employment in the years to come.

REFERENCES

1. Interview with Gene Riser, Safety Director/Commissioner of Traffic Engineering, City of Toledo, June 18, 1984.

2. Interview with Charles Whitten, General Manager, Toledo Area Rapid Transit Authority, June 19, 1984.

3. Interview with Charles Stark, Principal, Bauer, Stark and Lashbrook, Toledo, Ohio, June 19, 1984.

4. Interview with David Snavely, Vice President, Toledo Trust Company, June 19, 1984.

5. Interview with Michael Porter, Executive Vice President, Toledo Area Chamber of Commerce (former City Manager), June 18, 1984.

LIST OF AGENCIES AND PERSONS INTERVIEWED
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CASE STUDY

TRI-MET, PORTLAND, OREGON

FOCUS OF THE CASE STUDY

This case study focuses on the Banfield Light Rail Transitway Project currently under construction by Tri-Met, the Portland area transit agency. The project incorporated a comprehensive land use planning program including successful cooperative arrangements between Tri-Met and other public agencies and cost sharing arrangements with downtown landowners. This medium sized system provides useful lessons in the areas of:

1. Comprehensive transit and land use planning for the whole corridor and at station areas located in three different jurisdictions;
2. Joint development efforts at stations; and
3. Downtown construction management and cost sharing to improve community acceptability and environmental quality.

BACKGROUND AND CONTEXT

The City of Portland is a medium sized regional center. City population is 355,000 and metropolitan region 1.5 million. The climate is temperate, typical of the Northern Pacific coast. The city has a liveable, fairly homogeneous character and prides itself in its long standing concern for its natural and built environment. The downtown area has visibly improved in the last 10 years as a result of carefully coordinated public investment, enlightened planning regulation and private development. The region was hard-hit by the 1981-83 recession but is now making a substantial recovery.

The transit agency is the Tri-County Metropolitan Transportation District of Oregon (Tri-Met). Tri-Met was established in 1970 and by 1982 it nearly tripled the average week day ridership to about 150,000 (1). Tri-Met has been successful both in improving transit service and in creatively coordinating it with land use planning and development. The construction of the Transit Mall downtown on 5th and 6th Avenues was

completed in 1978 and established Tri-Met's commitment to a high quality bus operation which contributed to the physical improvement of the urban environment. The close cooperation with the many other public agencies and private interests involved in making this complex project very successful established the basis of trust and communication that set the stage for the planning effort for the Light Rail Transit (LRT) Project. Many of the political supporters, professionals, agency personnel and business people who worked on the Mall also became involved later in the LRT and brought to it a history of cooperation.

In addition to the Mall, the downtown which is the focus of the bus routes includes a "Fareless Square" enabling people to circulate by bus along the length of the Mall free of charge. This ease of movement, in combination with the large number of new retail developments and new office and residential structures, makes an unusually lively and attractive downtown for a city this size. The extensive renovations of the three downtown historic districts creating many new specialty shops and offices greatly contribute to the vitality. Public open space improvements along the riverfront and at Pioneer Square have provided a focus for downtown activities. The 3 block, $130 million Morrison Street Retail and Mixed Use Project currently being developed will add another major increase in activity.

The unusual feature of the success of downtown Portland is the degree to which transit played a role in it. The policies to support transit are combined with restraints on parking and auto related uses. The Transit Mall excluded almost all auto traffic from two major streets. Riverside Drive was eliminated and turned into a grassy park. Pioneer Square was built on the site of a former parking garage at the 100% corner of downtown. Open lot parking and ground level garages fronting on downtown sidewalks are not permitted. The pedestrian can walk along sidewalks continuously lined with buildings containing stores, restaurants and other activities of interest throughout the downtown. The new Morrison Street project proposes only about 850 parking spaces and expects well over half of its patrons to arrive by transit.

The East Side route of the LRT traverses Lloyd Center, the Hollywood Business district, and unincorporated areas of Multnomah County and arrives at the center of the suburban town of Gresham. Lloyd Center is a major privately developed commercial office development. Hollywood is an older, once self-contained town, now within the city of Portland, that still retains a special identity. The rest of the route runs through a flat stretch of mostly developed middle-income suburban area.

THE BANFIELD TRANSITWAY PROJECT

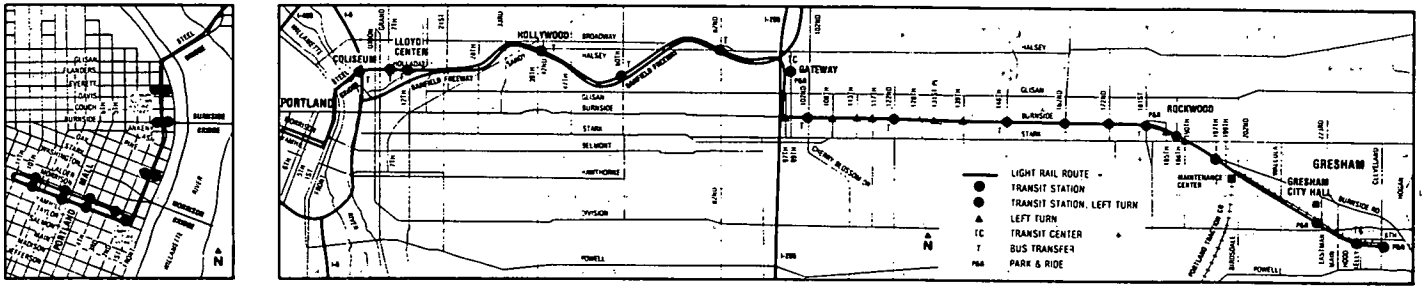
The new LRT will follow a 15-mile route from downtown Portland to Gresham. It connects the suburban residential areas of the East Side to the primary employment centers at downtown and Lloyd Center (Figure 1). In the downtown the LRT will run on streets designated as transitways with special pedestrian improvements and limited auto traffic. The central section runs along the limited-access rights of way of the Banfield Freeway and I-205. Finally, the eastern sections follow Burnside Street and a former trolley right of way into Gresham.

The cost of the LRT is projected at $211.7 million in 1985 dollars. Headways will be 5 to 10 minutes at commuter hours, 10 to 20 minutes at off-peak. Two-car trains will be able to carry up to 332 riders with only one operator on board (2). Self-service fare collection will be used with fare inspectors randomly checking passengers for proof of payment and imposing stiff fines on those found without a ticket or pass. Construction started in 1983, completion and service start are scheduled for mid-1986.

The development of the Banfield LRT included a complex set of community planning, professional analysis, urban design, architectural and engineering design, joint development, project management and construction coordination efforts which all contain some valuable lessons for other localities. They are described below roughly in the chronological sequence in which they occurred, although there was overlap between many of the activities.

Figure 1

BANFIELD LRT ROUTE MAP



Source: Tri-Met

THE TRANSIT STATION AREA PLANNING PROGRAM (TSAP)

TSAP was established in 1980 to identify how the light rail line will "affect the development, redevelopment or conservation of neighborhoods along the route" (3), and to channel these anticipated impacts into development programs desired by the communities. The cities of Portland and Gresham, Multnomah County, Tri-Met and the Oregon Department of Transportation participated in TSAP. The program was funded by a 1.2 million dollar UMTA grant and was coordinated by the Metropolitan Service District (Metro).

Staff members from the participating agencies worked as a team under Metro. TSAP helped fund the complementary land use planning efforts carried out by the local governments. In addition, consultants were retained in the areas of market analysis, transportation, urban design and implementation for a total cost of about $375,000.

The market analysis conducted by Economic Research Associates (ERA) was critical to establishing the basic policies and directions related to private real estate development. The summary conclusion reached by ERA was that the LRT is not expected to create additional growth in the region, but, with sound planning, it can influence where the already anticipated growth occurs. This conclusion strongly influenced the type of development-related planning that was conducted for the station areas. The main thrust of the plans and resulting zoning ordinances was directed toward shaping the projected development demand into a pattern focused on the transit stations and supportive of the existing community fabric. The development market concentrations projected for each station area are shown in Figure 2. The intervening deep recession in 1981-83 has slowed down the demand, but the distribution pattern indicated still appears accurate.

The benefit-sharing strategies pursued were strongly influenced by the market analysis. It was concluded that the LRT did not result in sufficient increases in land value to extract direct contributions from land owners or developers to the

transit project. But it was also concluded that it was in the very strong interest of both Tri-Met and the localities to carefully coordinate plans in order to yield benefits to both sides. The benefits to transit include increased ridership attracted by concentrating activities at the Station, better access and a more comfortable and attractive environment for the transit patrons. For the station area communities the plans minimize the impact of station area parking, and help create an attractive and lively community fabric.

The transportation analysis component of the TSAP generated one important, unusual conclusion: the LRT will not depend on park and ride as a principal mode of access by patrons. This policy was encouraged by the observation that park and ride lots create physical development and traffic patterns that are destructive of the community environment and discourage joint development which might link the station with the streets of the neighborhood. To provide alternate patron access and avoid illegal parking on local streets the transportation analysis generated for each station area an appropriate balance of access by feeder service, walk-in, kiss-and-ride and parking and development controls.

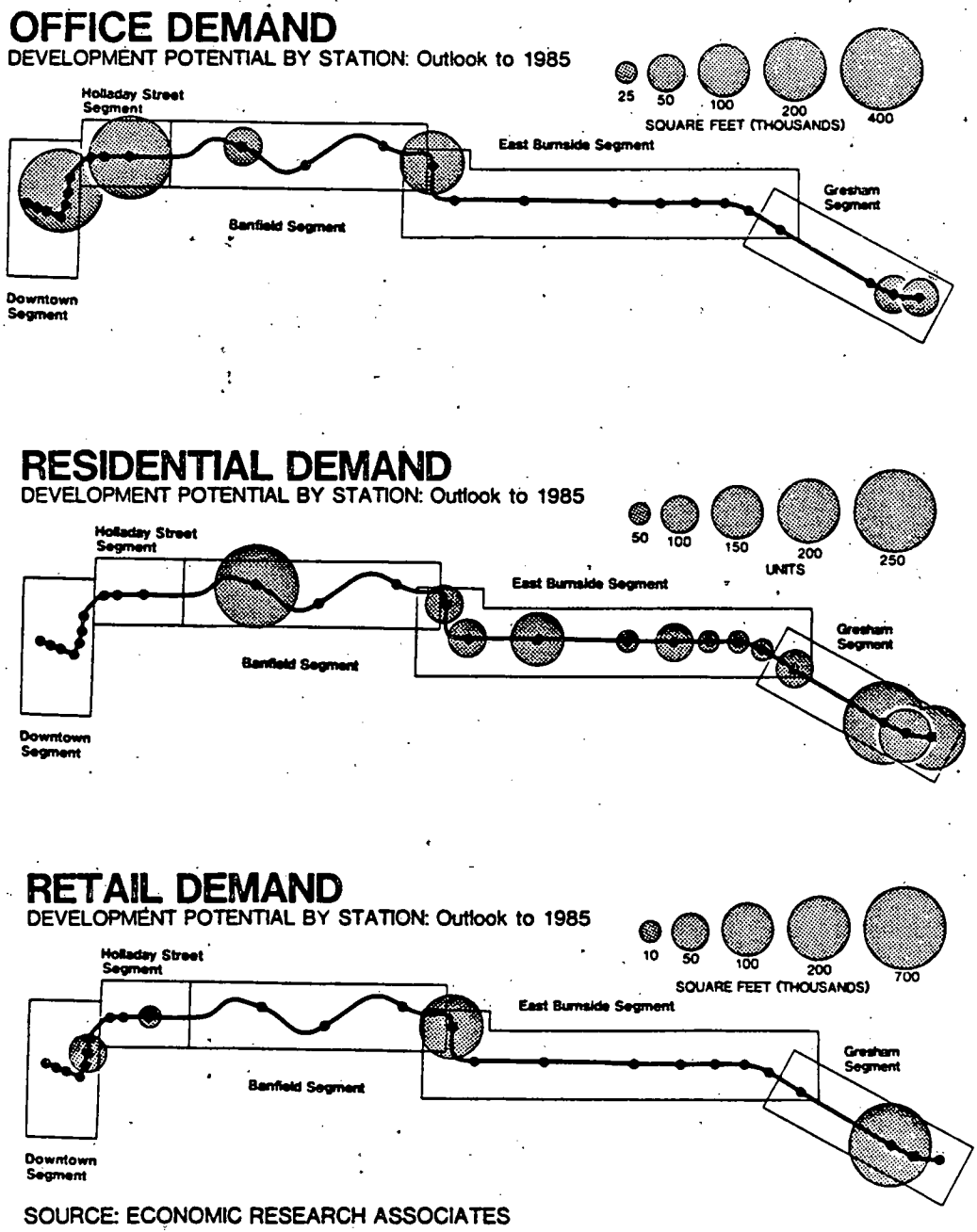
The urban design and development plans for each station area were developed under the lead of Zimmer Gunsul Frasca (ZGF), a Portland architectural and urban design firm who are also the architects for all of the LRT stations. ZGF who won an award from Progressive Architecture Magazine for this project describes the Urban Design Component as "...essentially promotional. It recognizes that successful urbanization of the Banfield corridor is not assured, nor able to be mandated (4)."

The urban design study provides a description and analysis of the physical characteristics of each station area (called here the "Urban Frame"). It identifies most likely and desirable sites for development and sets out plan guidelines, criteria and illustrations for preferred development patterns. The principle behind all the plans is to achieve a degree of compactness and ease of pedestrian circulation around

Figure 2

DEVELOPMENT POTENTIAL BY STATION

FROM MARKET RESEARCH STUDY



SOURCE: ECONOMIC RESEARCH ASSOCIATES

the stations and to protect the existing neighborhoods.

Certain relationships between LRT station, commercial development, parking and residential structures are suggested as prototypical and applicable throughout the suburban sections (Figure 3). At the same time each station area plan took account of the specific conditions of the surrounding neighborhood and was generated with a great deal of community participation, review, debate and revision. Eventually each local jurisdiction generated revisions to its Zoning Ordinance to guide development in the direction provided by the station area plans.

The Zoning Ordinance changes, such as the Multnomah County Transit Station Area Zoning Ordinance, establish special zoning categories in the vicinity of the stations including medium and high density residential, neighborhood and general commercial, and office districts. These new zones are distinguished from pre-existing zoning categories by a greater level of attention to eliminating traffic conflicts, concealing parking lots, insuring a desirable pedestrian environment, facing commercial structures towards the transit stations and setting minimum criteria for density and building mass near the stations.

So far development demand has not caught up with the plans and no new developments have occurred under the new zoning, so that the actual results cannot be observed. Some planners expressed the concern that by essentially up-zoning the station areas way ahead of the development demand the public lost its leverage to shape the development through incentives and bonuses given in return for compliance with plan objectives. The reason for these early zoning changes is the "promotional" attitude described earlier, the perceived need to attract development to cluster around the stations and thereby reinforce both transit and urban structure.

The TSAP ended in March 1982 and gave way to more modest local efforts to implement the plans. Many of the planners involved in the program were disappointed that further UMTA funding was not available to pursue specific implementation work and joint development projects. The economic recession that was very deep in the Portland

region in 1982-83 removed the immediate incentive since there was no present demand for private development. Now that development demand is reviving, the results of the TSAP and its products of development guidelines, community consensus and zoning ordinances will be tested. It was believed by everyone interviewed that the plans will be generally observed and given the history of cooperation and good planning in Portland, this is likely to be the case.

Station design concepts grew out of the planning concepts generated during the TSAP. The stations are modest, attractive structures (Figure 4) located in the transit rights of way. ZGF Partner-in-Charge, Gregory Baldwin pointed out that the stations were designed in the tradition of modest public buildings to emphasize "local fit" of the LRT over unified regional identity (5). The station buildings are not physically linked to any joint development sites and are not intended to be directly incorporated in major development. The linkage occurs through careful planning of street crossings, stairs and bridges from the depressed right of way and through integrated streetscape treatment that makes the stations seem to visually belong in the communities. This style of station design seems appropriate to the relatively modest physical scale and expected activity level at most of the LRT stops.

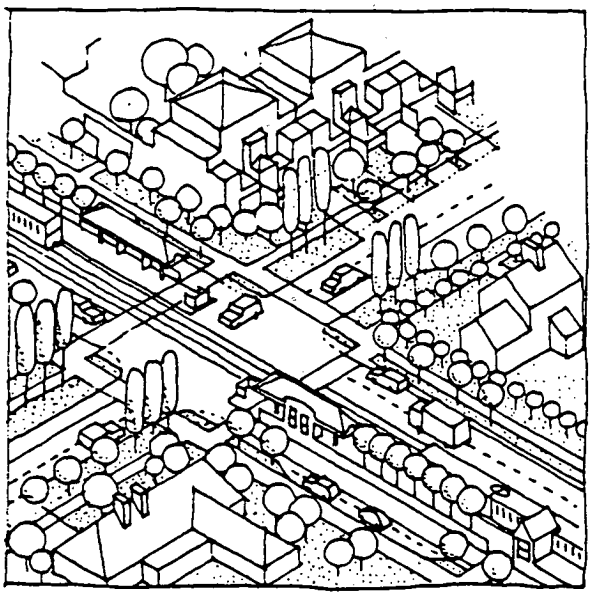
JOINT DEVELOPMENT

As it was described previously, the slow development market on the East Side has produced few development proposals in the LRT station areas. It is a common perception in Portland that the LRT is a necessary public investment to catalyse increased private interest in development. For instance, the Hollywood Development Program, a business community based study conducted through the Portland Bureau of Planning is devoted to promotion of high density development on sites near the station with the goal of revitalizing the business area. The report makes it clear that development must be attracted to the area through incentives in addition to the transit. This makes the type of joint development that would help fund transit developments with

Figure 3

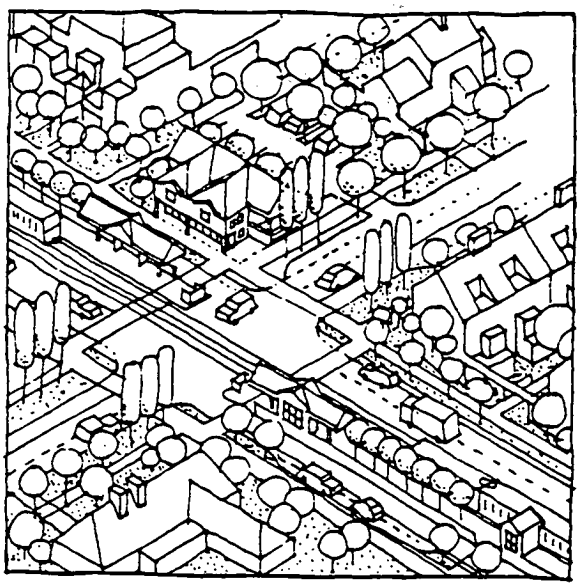
STATION NODE DESIGN GUIDELINES

Fig. 4.7
Station Node



The architecture of the transit station and related new development should respect the scale and function of the residential neighborhood to which they are added.

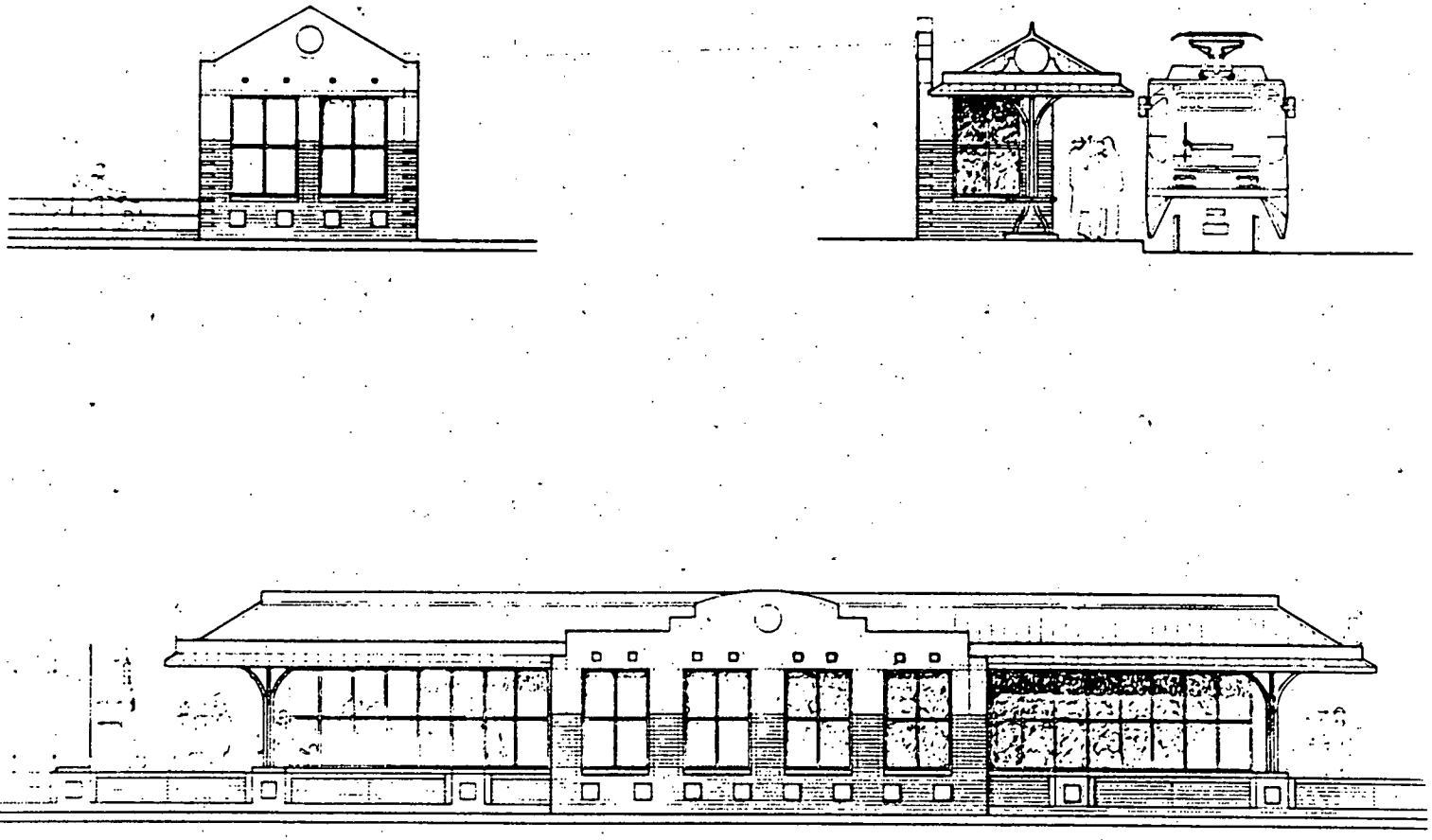
Fig. 4.8
Station Node



At Burnside and 148th, 162nd and 172nd, a mix of densities and uses may be readily integrated as long as: 1] concentrations of parking are located off-street away from intersections, and landscaped; 2] visual privacy is maintained with appropriate barriers; 3] the scale and character of commercial development is complementary to that of existing single family homes; 4] strong pedestrian and spatial relationships are established between commercial development and an adjacent station platform; and 5] vehicular access to commercial development and multifamily housing is generally provided from north-south streets or parallel (to Burnside) roadways.

Figure 4

SUBURBAN TRANSIT SHELTERS



Suburban transit shelters are brick and expandable to accommodate changing patronage requirements. The masonry structure, land on site, may be provided in different colors and executed in several shapes to permit each station its own architectural identity. Replaceable, prefabricated systems [windows, steel structure, roofing, etc.] are of standard configuration and finish.

private contributions unlikely.

Lloyd Center is one commercial area outside of downtown that has continued to develop and experience demand. Joint development occurred there to the extent that the Hallyday Street station was relocated by one block to better connect to the pedestrian circulation within proposed Lloyd Center developments. Lloyd Center Corporation will, with its own funds (ca. $500,000), create a pedestrian connection between Lloyd Center office buildings and the station. Zoning was simplified by the city and allowed density was increased in the station area which benefits Lloyd, the major property owner. On the other hand, some additional design and planning controls were imposed. On balance it appears that Lloyd probably got the better deal in these negotiations. One problem for the public agencies was that since no capital contributions to transit facililties were requested of any other property owner along the line, it was difficult to argue that Lloyd alone should contribute.

The Gateway Station contains the one joint development project currently proceeding. Gateway is at the junction of the Banfield Freeway with Interstate 205 and is adjacent to an aging suburban shopping center and considerable undeveloped land. The YMCA will develop an approximately $7 million new facility on the air-rights over the park-and-ride lot (one of only three in the system).

Phil Whitmore, Director of Development for Tri-Met, approached the YMCA to initiate this joint development. The YMCA is expected to attract 2,000 to 2,500 people daily, and while now 89% of the YMCA's patrons come by car, the location directly by the station is expected to dramatically increase the number of those arriving by transit. At this location the YMCA expects to pick up substantial additional patronage among the car-less, particularly the elderly and teenagers. Tri-Met will benefit considerably since the YMCA will generate new ridership at off-hours and in reverse flow to commuter traffic.

The value of the land at this location is only $4-6 per square foot. Construc-

tion on the air-rights over parking is estimated to cost around $12 per square foot more than on grade construction, amounting to an excess cost of about $300,000. Tri-Met is not authorized by the UMTA regulations to pay directly for such extra building costs, but it can do so indirectly by reducing land rent costs and waiving lease payments altogether for the first 5 years. Phil Whitmore constructed this rather complex deal, based it on an interpretation of section 3a1D of the UMTA regulations and nursed it through 18 months of difficult negotiations and approvals (6).

Douglas H. Leeding, volunteer project manager for the YMCA was gratified by the way the project was working out and optimistic about its success. Yet, as a mortgage banker, he commented that a private profit-oriented development would never have gotten through the process. He cited UMTA's complex approval regulations which were often difficult to interpret, and caused substantial delays and the requirement for retaining UMTA control over the land as serious obstacles for private joint development on the modest scale that would be feasible at LRT stations (7).

The installation of sewer main lines under Burnside Street concurrently with the LRT construction was a form of joint development. The lack of a sewer would have precluded most of the development at the station areas suggested during the TSAP. In the fall of 1982 the State Emergency Board appropriated 3 million dollars to construct the sewers. Building the sewers concurrently with the LRT resulted in a saving of 4 or 5 million dollars compared to the cost of separate construction. UMTA agreed to accept the cost of the new sewers as a portion of the local match toward the LRT construction grant.

The result is that there was a shared benefit between the transit agency and the localities from the joint construction of the sewer and the LRT. However, there was no attempt to immediately capture the monetary value of these benefits for the transit construction. The reason was that the LRT and the sewer were both considered necessary public utilities to shore up the economic health of this area and the real benefits were to be reaped in longer range healthy community development and in-

creased ridership.

DOWNTOWN SECTION LRT PROJECT MANAGEMENT

The downtown section of the LRT (including Lloyd Center) was considered a more complex problem and a special Office of Downtown Project Manager (ODPM) was established. Roger Shiels, a private consultant and partner with the Portland firm Shiels and Obletz was retained to run the office. The ODPM is composed of staff on loan from Tri-Met and the City. The Project Engineer is designated by the City and the Light Rail Engineer is from Tri-Met. The staff also includes a Public Information Specialist, a Construction Coordinator, a Utilities Coordinator, two Civic Field Inspectors, LRT Field Inspectors and support staff and they are drawn in roughly equal numbers from the City and Tri-Met. The ODPM personnel is assembled in an office right on the LRT route, specially established for this purpose.

This style of managing the project was carefully established to capitalize on some of the lessons learned earlier during the Transit Mall construction. Shiels was involved in managing that project as well, and observed (8) that, at that time, problems with communications and approvals developed due to the fact that City and Tri-Met staffs were insulated inside their separate bureaucracies. The ODPM forces the City and Tri-Met staffs into a functional team. The physical concentration of the staff and removal from the customary agency framework tends to focus everyone's attention on solving problems creatively and efficiently. The responsiblities of ODPM and its staff are carefully delineated in a contract between Tri-Met and the City (9).

Construction Coordination is a complex problem that involves scheduling, interim traffic management and constant liaison with the many affected downtown interests. The downtown LRT section includes the rebuilding of a bridge, traversing two historic districts, and construction along a number of existing retail frontages that are highly sensitive to disruption, all demanding constant attention. The ODPM publishes a tabloid-style newsletter "Tri-Met Light Rail" and conducts a number of different

forms of community outreach including block by block notification and discussion with property owners.

The Morrison Street Project, a three-block retail and mixed-use development to be constructed by the Rouse Company is a good example of some of the complexities faced by the ODPM. The project is sited at the intersection of Morrison and Yamhill Streets, the one way transitway pair carrying the LRT, with the 5th Avenue half of the existing Transit Mall (Figure 5). The project will maintain the visual separation of the three building blocks at street level and above, but below ground the parking and basement retail areas connect under Yamhill Street. Thus, the Yamhill portion of the LRT transitway must be constructed over three levels of new underground construction. The Morrison Street Project has not yet started demolition at the site while the transitway construction is well under way. Some complex solutions had to be considered. Current discussions include the issue of whether Tri-Met builds this section or assigns a portion of the budget to the developer to build one block of the transitway as part of the development. The developer must be obligated to complete this section by winter 1985 in time for the 1986 opening of the LRT which is two years ahead of the construction schedule for the retail and parking structures adjacent to this section. Portland Development Commission Project Coordinator, Chris Kopca said the developer was considering two options (10):

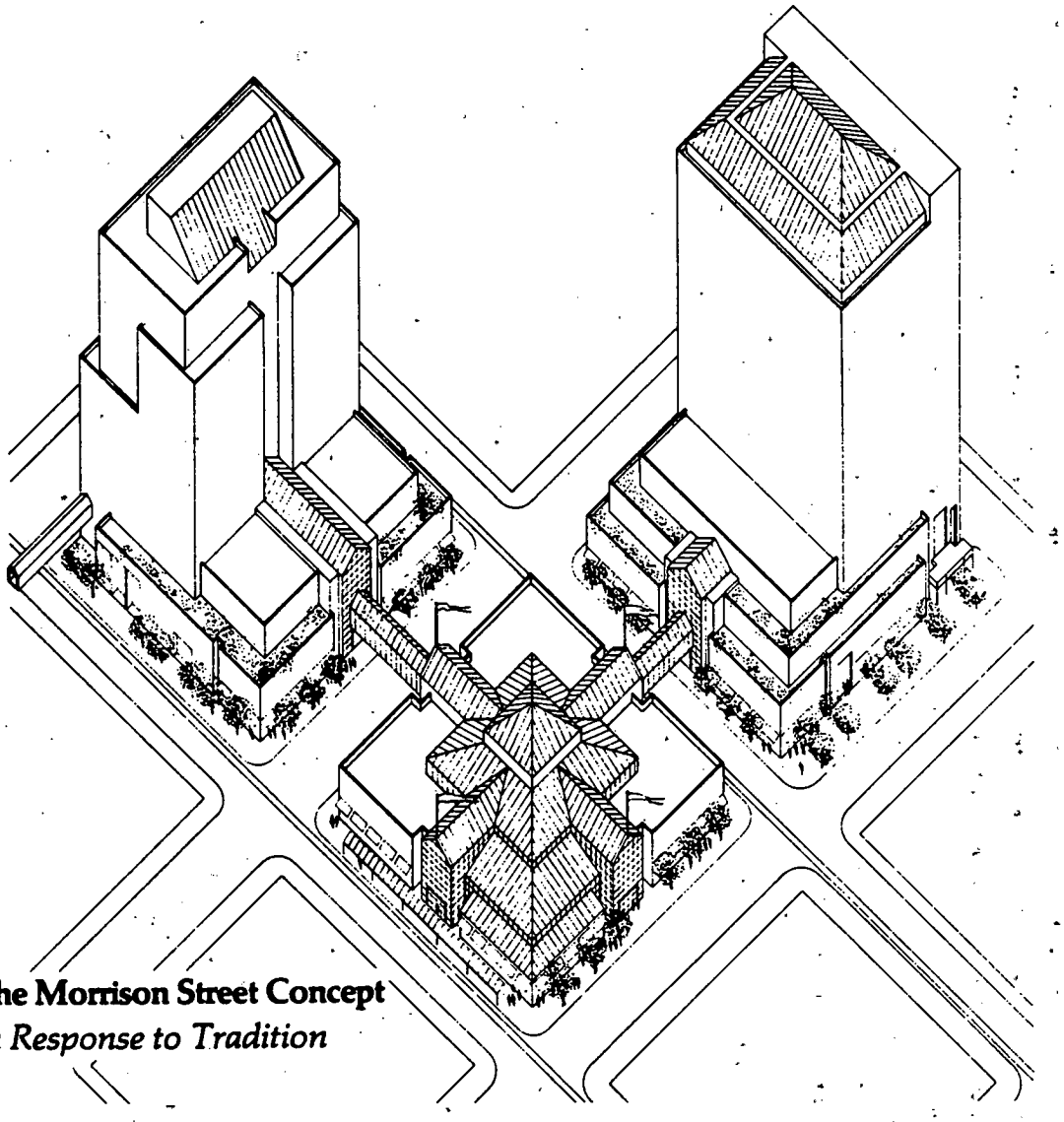
1. Build a temporary trestle; or
2. Build the permanent structure under Yamhill Street ahead of the rest of the project.

There is a great range of technical and negotiating points raised in this situation and the ability of the ODPM to speak with one voice for all of the public agencies involved greatly improves the public's ability to negotiate creative and mutually advantageous solutions.

Benefit-sharing issues at the Morrison Street project present an interesting

Figure 5

THE MORRISON STREET PROJECT



The Morrison Street Concept
In Response to Tradition

THE MORRISON STREET PROJECT
The Rouse Company

C-131.B

contrast to the Midtown Manhattan case studies. In both the Times Square and East Midtown projects the private developers near a transit station were required to contribute substantial capital to the construction of transit stations. The Morrison Street project would appear to be in a similarly essential relationship to transit. It is located at the intersection of the LRT with the existing bus mall, it will have probably the busiest LRT stations at both Morrision and Yamhill directly adjacent to the property and it greatly reduced its parking provisions and expects to draw over half of its clientele via transit. Yet, according to both Tri-Met staff and Kopca the issue of the development contributing to the capital cost of transit facilities was never raised. Instead, the perception is that the provision of the transit system through public funding is similar to providing other public utilities such as water, sewer, streets and traffic control and is essential in order to attract top quality development. The Morrison Street Project was conceived and promoted during the years of recession and dearth of development initiatives. The present, much stronger downtown development market would probably justify a more aggressive approach to benefit/cost sharing, but the deals have now been made for both the LRT and the Morrison Street Project.

DOWNTOWN LOCAL IMPROVEMENT DISTRICTS

Direct cost sharing in the transit project was negotiated with downtown property owners for two aspects of the LRT project: street amenities on Morrison and Yamhill Streets and the addition of four vintage trolleys to be restored and operated on the LRT rails between the downtown and Lloyd Center during mid-day and weekend off-peak hours. Both of these programs were added to the plans after the initial Tri-Met proposal of a "bare-bones" transitway design was rejected by the downtown business interests. Both programs are funded with UMTA grants with the local share of the costs being raised from the property owners through a Local Improvement District (L.I.D.).

The L.I.D. is governed by Oregon State law and enables the district to levy a special assessment for shared benefits upon approval of the owners of at least 40% of the effected property (by square footage of land). The ODPM was instrumental in organizing the L.I.D.'s and continually works with the private sector on these projects.

The Morrison/Yamhill L.I.D. was generated to provide funding for better quality paving, more street improvements and amenities along these two transitways. Of the total of $5.5 million excess cost, $1.5 million was raised by the L.I.D., and $4.0 million is funded by UMTA. The UMTA grant has been approved and the L.I.D. assessment has been voted in with near unanimity. The assessment formula was generated as a combination of frontage of the property on the transitway and the assessed valuation of the property back to 100 feet of depth. The capital contributions were financed by city through a bond issue which the L.I.D. members are paying off over 20 years, which makes the yearly burden on the property owners quite small.

The $1.5 million is .4 million higher than the usual 20% local match and this helped persuade UMTA to approve the addition to the project. At the same time the owners received almost $4 dollars worth of improvements at their doorstep for each dollar contributed to the L.I.D. and this, according to businessman Bill Naito who helped sell the L.I.D. to fellow property owners, made the task of convincing owners to participate quite easy (11).

The Vintage Trolley L.I.D. involves all of the owners along the line from Lloyd Center through Downtown in raising $800,000 in local funds to match a $1,000,000 UMTA grant. The funds will cover the purchase and restoration of four antique trolley cars which Tri-Met will operate 11 AM through 3 PM weekdays and on Saturdays and Sundays. The property owners and merchants will benefit from the promotional attraction of these trolleys. Similar cars already operate successfully in retail areas of Detroit, New Orleans and Seattle. UMTA was persuaded to grant funds for the project with the argument that the impact of the new trains traversing two historic districts needed

to be mitigated by the use of the vintage trolleys. Bill Naito who conceived this concept and persuaded local businessmen and UMTA to fund it has actually acquired and stored four Portugese trolley cars with his own funds to be used in this project. He felt that having the vehicles on hand was necessary in order to persuade all the parties of the realistic possibility of making the project work, so he took the risk. When negotiations for the project are completed, Tri-Met will acquire and restore the cars and reimburse Naito.

EVALUATION AND CONCLUSIONS

The Banfield LRT includes a number of successful elements that can provide useful lessons for other localities.

The TSAP process seems useful and appropriate for the Portland area. Even though implementation has lagged due to development slowdown, this type of thorough planning backed by community consensus will be sustained and respected in the Portland area and will encourage a constructive interaction between the LRT and station area development over the coming years. The style of planning, community participation and political decision making in the Portland area is crucial in taking advantage of the investment in the TSAP. Regions with less respect for plans and more volatile community and regional politics are less likely to benefit from such careful, long range efforts and can only make useful plans if these lead directly into implementation.

The Downtown Project Management Program appears exemplary and should be studied by any city embarking on a similar project. Portland was quite successful with the earlier Transit Mall construction and seems to have capitalized on that experience to make the LRT a model effort. There is, however, still more than a year of major construction to come, and ultimate success must be judged after completion.

Joint development, as represented by the Gateway/YMCA project is a difficult first step in the right direction. While UMTA expresses considerable encouragement of joint development, it appears that in practice the regulatory and administrative

obstacles raised in conjunction with Federal Funding are formidable. LRT projects and the medium density land uses that usually accompany them do not usually create the extreme demand for development near the transit that would cause developers to choose to deal with these difficult conditions. Thus, if UMTA wants to encourage joint development, the regulations governing land acquisition and disposition and the administrative procedures for approval should be reviewed from the point of view of potential private developers.

Benefit-sharing strategies generally assumed that soliciting private capital contributions to basic transit components was not feasible or desirable. It was agreed by Tri-Met and the localities that the true benefits of the project were the longer range strengthening of the region. The shift of the mode of transportation into the downtown core and the gradual shift of development into patterns that were increasingly supportive of transit over auto use. A consistent promotion of such a policy throughout the project area is the great success of the Banfield LRT project.

In the current planning of the West Side LRT project funding presents a great problem. There is a reluctance at UMTA to provide Federal funding for new rail starts. There is a shortage locally of public funds to raise the local match which may have to be much higher than the 20% required for the Banfield LRT. There are efforts beginning to raise private sector commitments for this project as well as studies of "Creative Capital Financing" techniques involving sale-leaseback arrangements and private investment for tax shelter. The development market in the West Side Corridor is much stronger; it is a wealthier area with considerable new commercial/industrial high technology development. Yet, raising money for this project has, so far met with little success.

The downtown L.I.D.'s do contribute private funds toward transit development. But the nature of these contributions must be carefully noted:

1. The contributions do not support basic transit components but amenities clearly related to the contributors' property and business activity, and

perceived by the owners as directly, in the short term, enhancing the value of these properties and the success of the business activities.

2. The contributions raise the local match only and are matched by larger amount of UMTA grants which convinces the property owners that the amenities they are gaining are worth more than the contributions they are asked to make.

These points are critical for the conclusions of the whole study on benefit sharing. It is evident that private business contributions of any kind to transit development should only be expected if the value obtained by the business shows a gain of benefits over costs in the relatively short term (2 or 3 years are more reasonable than 5 to 10 years). Any business asked to participate, whether as a joint development partner or a member of a L.I.D. will make such a cost-benefit judgment. As the benefits of transit, particularly the medium-density oriented LRT are more likely in the longer range, cost sharing with private business is only likely to be feasible on a very limited range of transit-related investments.

A number of the people interviewed in Portland expressed frustration with current attempts to switch federal transit funding policies from supporting transit with public funds as a utility and a tool for catalyzing urban revitalization to the expections that major portions of funding can be abruptly replaced by funds from local governments and private beneficiaries. The Portland case study is interesting in this regard because of the exemplary results Tri-Met, the local governments and the private sector have achieved in making transit and transit oriented development successful, acceptable and recognized as economically desirable. If the shift in funding policy described above cannot work in this atmosphere of transit success and acceptance, it is likely to encounter much greater difficulties in most other localities.

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10. Christopher Kopca Interview, 7/12/84.
11. William Naito Interview, 7/12/84.

LIST OF AGENCIES AND PEOPLE INTERVIEWED
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CASE STUDY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

CASE STUDY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

INTRODUCTION--THE ORGANIZATIONAL SETTING

Background

WMATA, the Washington Metropolitan Area Transit Authority, came into being in 1966 through an interstate compact signed by Maryland and Virginia and the District of Columbia. Conceived from the beginning as a development-shaping as well as a people-serving system, Washington's transit was an outgrowth of comprehensive planning for the National Capital region going back to the late 1950s and early 1960s.

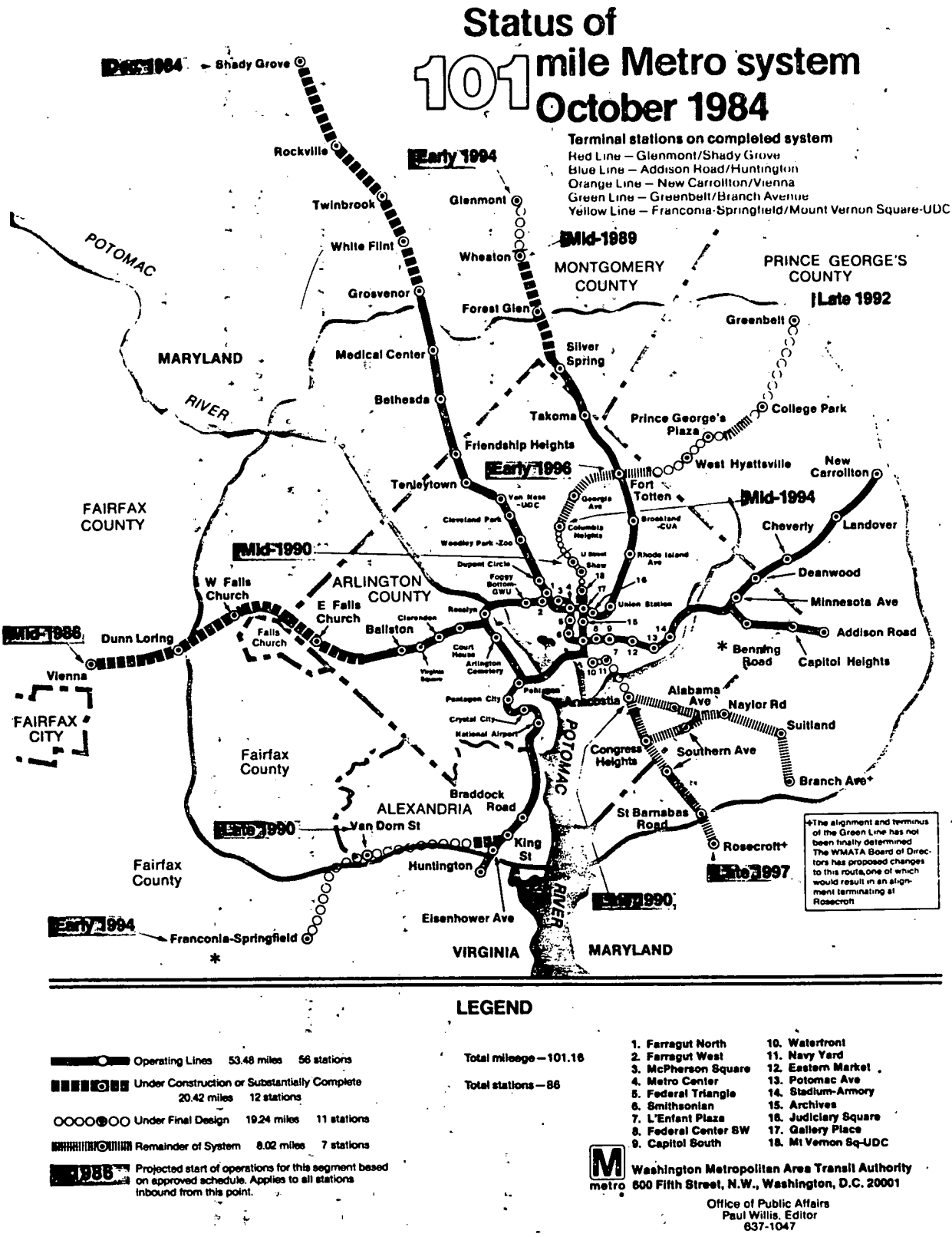
Looking toward the turn of the century, planners saw a metropolitan area population growing from two million in 1960 to five, and the prospect of major physical impact on the area's then-largely undeveloped 2,000 square miles. They concluded, on analysis of various alternatives to continuous sprawl, that the most realistically achievable urban settlement pattern -- and thus, their recommended policy framework -- would be one with Washington at its hub and new growth concentrated along radial corridors like spokes of a wheel. Wedges of agricultural land, recreation facilities and low density residential uses would fan out between the intensively developed corridors, exposing them to the benefits of accessible open space and keeping the region from being blanketed by formless suburbs. Low density zoning, public acquisition of open space and preferential tax assessments for farmland were recommended means of maintaining the wedge pattern. A new rapid transit system serving the radial corridors was to be a key component of the regional infrastructure, intended both to encourage and to enable concentrated development in the corridor areas, with the highest densities immediately surrounding the transit stations.

Much of Metro's development history is, thus, bound up with the development and redevelopment of the jurisdictions it serves. Local planning has been an integral part of WMATA's planning for route alignments, station locations and access. The degree to which Metro has been a focus of state and local planning has, however, varied from one part of the region to another.

In 1968 plans were approved for a 98-mile regional rapid rail system with 86 stations. WMATA acquired the four private bus companies operating in the metropolitan area in 1974 to achieve better coordination of rail and bus transit service. The Metrorail system, now planned for 101 miles and including other subsequent modifications, is currently scheduled for completion by 1997.

WMATA's operating deficits are allocated among the jurisdictions it serves through a formula based on factors such as their respective ridership, numbers of stations and populations. Local jurisdictions fund their shares from a shifting combination of sources such as property tax, state and/or Federal assistance and taxes on gasoline, utilities and general sales.

FIGURE 1


Status of
101 mile Metro system
October 1984
Terminal stations on completed system
Red Line – Glenmont/Shady Grove
Blue Line – Addison Road/Huntington
Orange Line – New Carrollton/Vienna
Green Line – Greenbelt/Branch Avenue
Yellow Line – Franconia-Springfield/Mount Vernon Square-UDC
Dec. 1984 – Shady Grove
Rockville
Twinbrook
White Flint
Grosvenor
Medical Center
Bethesda
Early 1994
Glenmont
Wheaton
Forest Glen
Mid-1989
MONTGOMERY COUNTY
PRINCE GEORGE'S COUNTY
Late 1992
Greenbelt
Silver Spring
Takoma
Prince George's Plaza
College Park
Friendship Heights
Early 1996
Tenleytown
West Hyattsville
New Carrollton
Fort Totten
Mid-1994
Cheverly
Landover
Deanwood
Minnesota Ave
Addison Road
Benning Road
Capitol Heights
Alabama Ave
Naylor Rd
Suitland
Southern Ave
Branch Ave+
Congress Heights
St Barnabas Road
Rosecroft+
Late 1997
Late 1990
Van Ness -UDC
Cleveland Park
Woodley Park -Zoo
Dupont Circle
Foggy Bottom-GWU
Georgia Ave
Columbia Heights
Brookland -CUA
U Street
Shaw
Rhode Island Ave
Union Station
Rosslyn
Clarendon
Ballston
Court House
Arlington Cemetery
Pentagon
Pentagon City
Crystal City
National Airport
Potomac Ave
Anacostia
Mid-1990
Mid-1986
W Falls Church
E Falls Church
Falls Church
Dunn Loring
Vienna
FAIRFAX CITY
FAIRFAX COUNTY
ARLINGTON COUNTY
Fairfax County
Fairfax County
Braddock Road
ALEXANDRIA
Van Dorn St
King St
Huntington
Eisenhower Ave
Early 1994
Franconia-Springfield
VIRGINIA
MARYLAND
POTOMAC RIVER
POTOMAC
RIVER
+The alignment and terminus of the Green Line has not been finally determined. The WMATA Board of Directors has proposed changes to this route, one of which would result in an alignment terminating at Rosecroft
LEGEND
Operating Lines 53.48 miles 56 stations
Under Construction or Substantially Complete 20.42 miles 12 stations
Under Final Design 19.24 miles 11 stations
Remainder of System 8.02 miles 7 stations
1988 Projected start of operations for this segment based on approved schedule. Applies to all stations inbound from this point.
Total mileage – 101.16
Total stations – 86
1. Farragut North
2. Farragut West
3. McPherson Square
4. Metro Center
5. Federal Triangle
6. Smithsonian
7. L'Enfant Plaza
8. Federal Center SW
9. Capitol South
10. Waterfront
11. Navy Yard
12. Eastern Market
13. Potomac Ave
14. Stadium-Armory
15. Archives
16. Judiciary Square
17. Gallery Place
18. Mt Vernon Sq-UDC
metro
Washington Metropolitan Area Transit Authority
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Office of Public Affairs
Paul Willis, Editor
637-1047

Evolution of WMATA's Benefit Sharing Program

Early Experience. Construction of Metro began in downtown Washington in the late 1960s, and trains began serving the first five stations on the Red Line between the Farragut North and Rhode Island Avenue stations in March, 1976. In the early years, when Metro and the extent to which it could enhance accessibility of its station areas was still unproven, two highly successful projects helped set the tone for what was to follow.

In 1975, WMATA advertised in The Washington Post, inviting bids for development of air rights and a small amount of surplus land at the Farragut North station. One of six developer groups responding, the Miller Companies were awarded the contract to construct their Connecticut Connection proposal, a 200,000 square foot office building with ground floor shops and a two-story below-ground retail and eating mall. "I saw that concept work in Toronto and Montreal," said Judith Miller, president of the Connecticut Connection, "and I thought, 'Why can't it be done here?' In Montreal, there's a whole city living and breathing and eating underground. It's marvelous (1)."

Another joint development success was the system interface agreement WMATA negotiated with one of the area's largest retailers, the Woodward and Lothrop Department Store ("Woodies"). Woodies granted WMATA easements at 50 per cent of market value, enabling WMATA to utilize surface and subsurface rights on Woodies' property in the center of the downtown retailing district. In exchange, Woodies received authorization to build a direct pedestrian access between its flagship downtown

store and the Metro Center station (a major transfer point between two of the subway system's lines) as well as a commercial mezzanine linking the facilities. WMATA saved $250,000 in construction costs by sharing with Woodies the cost of common structural elements for the Metro tunnel and Woodies' commercial mezzanine. In 1977, Woodies undertook a $6 million renovation of its downtown store focused on the new underground Metro connection. Subsequent shopper surveys and sales figures testified to the wisdom of their decision. Within two years over one-fourth of their customers were arriving by Metro, and sales in the renovated areas had skyrocketed. Subsequently, Woodies officials have said their sales increase every time a new section of Metro opens.

Reorganizing to Promote Benefit Sharing As construction progressed and more stations became operational, the benefits of Metro access to surrounding property and development became increasingly apparent. Newspaper and magazine articles noted the escalating housing and office space prices in the vicinity of Metro stations (1),(2). A Congressional subcommittee study was undertaken in the fall of 1980 to evaluate some of these effects. The study concluded that Metro and the local jurisdictions should take a more active role in recapturing some of the benefits bestowed by Metro and use them to help fund the system (3).

In 1981, as part of a comprehensive reorganization, WMATA established a new Office of Planning and Development. The Development Branch was charged with carrying out an ambitious new Station Area Development Program designed to promote and capture potential benefits flowing from the transit system.

In initiating this new program, General Manager Richard S. Page outlined WMATA policy as follows:

1. It shall be the general policy of WMATA to promote, encourage, and assist in the creation of high-quality, more intensive development at or near appropriate station areas.
2. It shall be the policy of WMATA to study the development potential which may exist at present or future station areas and to prepare a development program. This program shall be expressed in both an intermediate time frame, with a three to five year work program, and in a longer range time frame, which will identify actions and positions by the Authority to enhance or protect the longer range development potential.
3. It shall be the policy of the Authority to advocate positions before the public, local governmental entities, the development community, and others which promote high-quality, more intensive development at or near station areas (4).

The Station Area Development Program

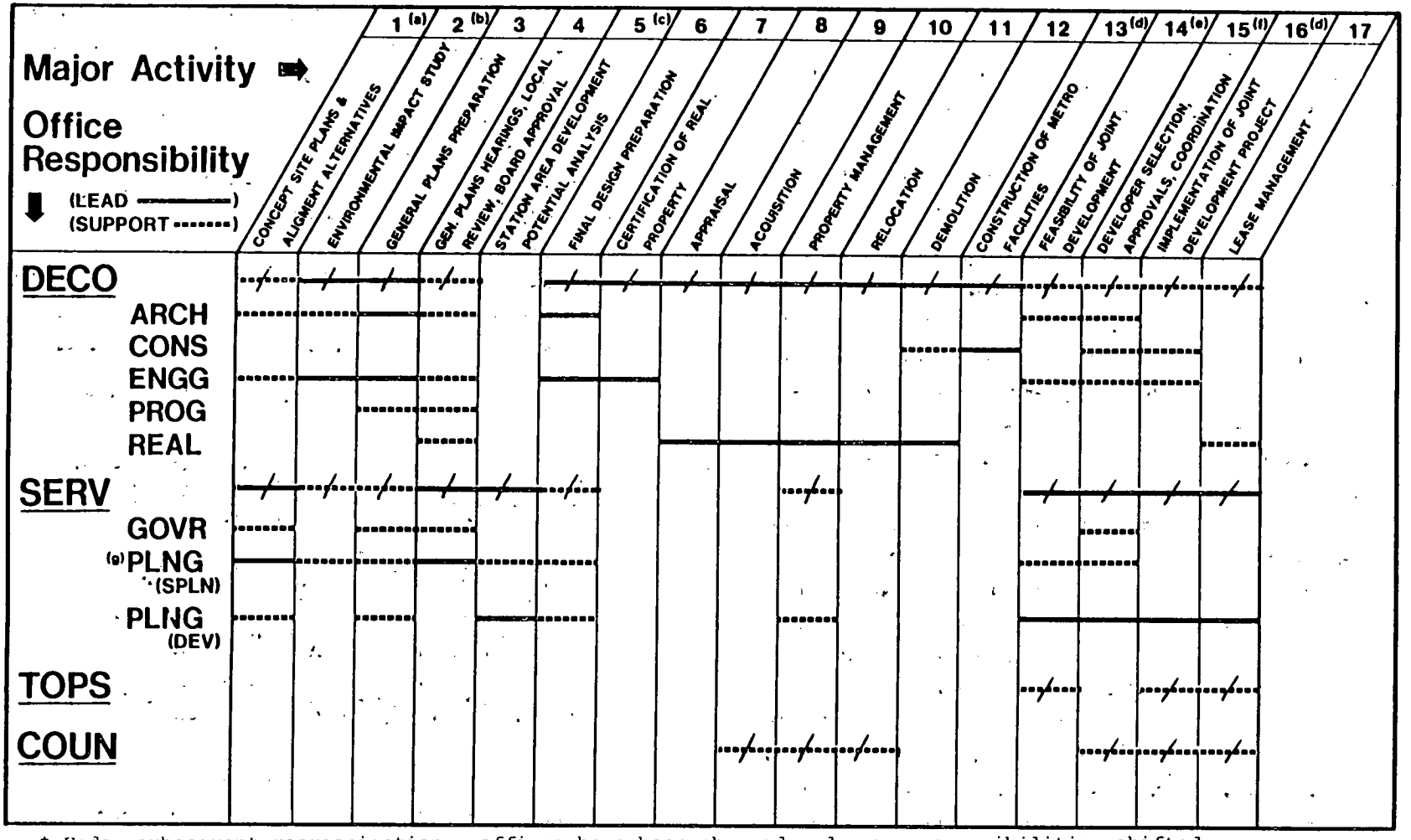
The Station Area Development Program consists of three principal elements: (1) joint development, (2) system interface, and (3) transit zone development. WMATA defines joint development as development integrated with transit which occurs on property owned or controlled by WMATA. Until recently, such development has involved primarily air rights or small remainder parcels. System interface is defined as a direct physical connection of transit to an individual property. Joint development projects generally include some system interface component. Transit zone development refers to any development or substantial rehabilitation within a 3,000 foot radius of a station entrance, other than joint development or system interface projects.

Since the 1981 reorganization, the Station Area Development Program has been administered by the Assistant General Manager of the Department of Public Services of WMATA, who is also responsible for management, planning, and implementation of the Station Area Development Program. (Note: WMATA is currently undergoing a reorganization under which specific titles and responsibilities are being changed. The organizational arrangements described here and in the materials presented as Exhibits were those in effect when most of the work detailed in the New Carrollton and Bethesda case descriptions was performed.) The Development Branch staff in the Office of Planning and Development consists of seven professionals--a Head, a Development Manager, a Senior Development Specialist, and four other Development Specialists--and one secretary. Staff have expertise in real estate and development, planning, urban design and finance, and have experience from both public and private perspectives. Additional professional support is drawn as needed from other WMATA departments such as Engineering and Architecture, General Counsel, Contract Administration, Real Estate, and Construction. Consultants are retained for special studies.

Included as an Exhibit is a bar chart entitled "Real Property Utilization: Office Responsibility." This chart shows how the Station Area Development Program fits into the overall process of Metro property acquisition and utilization. Then-General Manager Richard Page noted in his initial memo creating the Development Branch, "This organizational structure recognizes the close inherent relationship which exists between Metro system planning and land development functions (4).

REAL PROPERTY UTILIZATION: OFFICE RESPONSIBILITY *

FIGURE 2



* Under subsequent reorganization , offices have been changed and some responsibilities shifted.

NOTES:

(a) Includes initial analysis and coordination with local planning documents & offices of station area.

(b) May be Environmental Impact Statement or Assessment.

(c) Includes: Analysis of site characteristics; definition of excess rights and development potential; discussion & coordination with local government bodies.

(d) In some instances, these activities may proceed concurrently.

(e) Includes steps from internal screening and disposal plan through preparation of a prospectus.

(f) Includes steps from developer notification #16 on flow chart of J.D. process through final approvals & committments (#30).

(g) Office of Planning & Development (PLNG) include Urban & Site Planning Branch formerly part of SPLN and a Development Branch.

Source: WMATA Office of Planning and Development

Development Branch personnel emphasize that, as the Real Property Utilization Chart shows, lead responsibility shifts in the course of the station planning and development process. Their involvement in the early stages prior to acquisition is limited to monitoring the status of the planning and acquisition process in each station area. Direct Development Branch involvement and the Station Area Development Program itself commence only once acquisition is complete.

WMATA currently adheres to a relatively stringent interpretation of transit need for purposes of determining property acquisition. Joint development considerations are excluded from this decision-making process, due to concern over potential legal challenges regarding excess acquisition. However, some within the agency have speculated that if the burden of financing transit continues to shift to the local jurisdictions, the timing and strategy of real estate acquisitions and their joint development potential will play a larger role in the planning process for future station areas.

Following property acquisition, the Development Branch reviews the site acquired and, in conjunction with other offices, defines the excess property rights which may exist. Once a joint development or system interface opportunity is identified by the Station Area Development Program, a specific set of procedures is followed, as outlined by the General Manager when the program began in 1981. These procedures coordinate each step with the relevant offices in WMATA and outside agencies. A flow chart outlining this process for a joint development project is included as an Exhibit. There are thirteen points at which a project can be stopped if indications are negative.

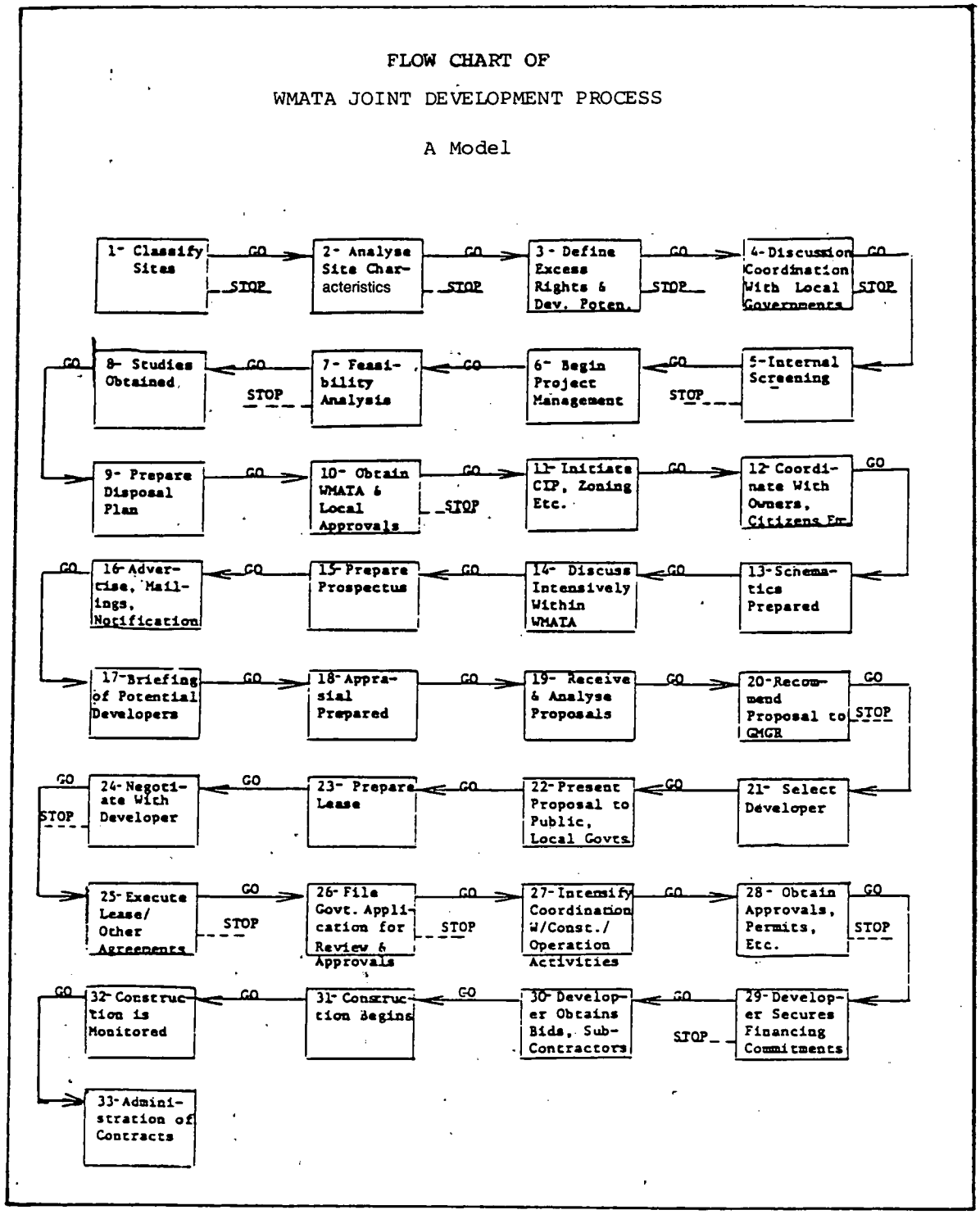
System interface projects go through a similar, but usually less complex, set of steps. The Fiscal Year 1982 Work Program for 20 station project areas, also included as an Exhibit, shows for each project the steps expected to be completed during that year. Also displayed are the anticipated number of work weeks for both the Development Branch and support professionals on each of the project areas.

Evolution of System Interface Policy

In negotiating system interface projects (beginning with the downtown Woodies/Metro Center) WMATA's orientation was toward the limited objective of "cost recovery", i.e. recovering capital and operating costs incurred in creating the system interface. As the number of requests for system interface grew, WMATA increasingly recognized the importance of these connections. Thus, in 1981, WMATA retained the station architects, Harry Weese and Associates, to study the system interface potential of existing and future stations throughout the Metro system. Another consultant, Gladstone Associates, was separately commissioned to study the economic and financial aspects of system interface.

These studies indicated there was far more system interface potential in the Metro system than WMATA had ever foreseen. A total of 150 potential system interface projects were identified, with an added value (estimated in 1982 dollars) of $60-75 million. The financial analysis concluded WMATA could be sharing to a greater extent in the financial benefits created by system interface, thereby generating substantial revenues to offset operating costs.

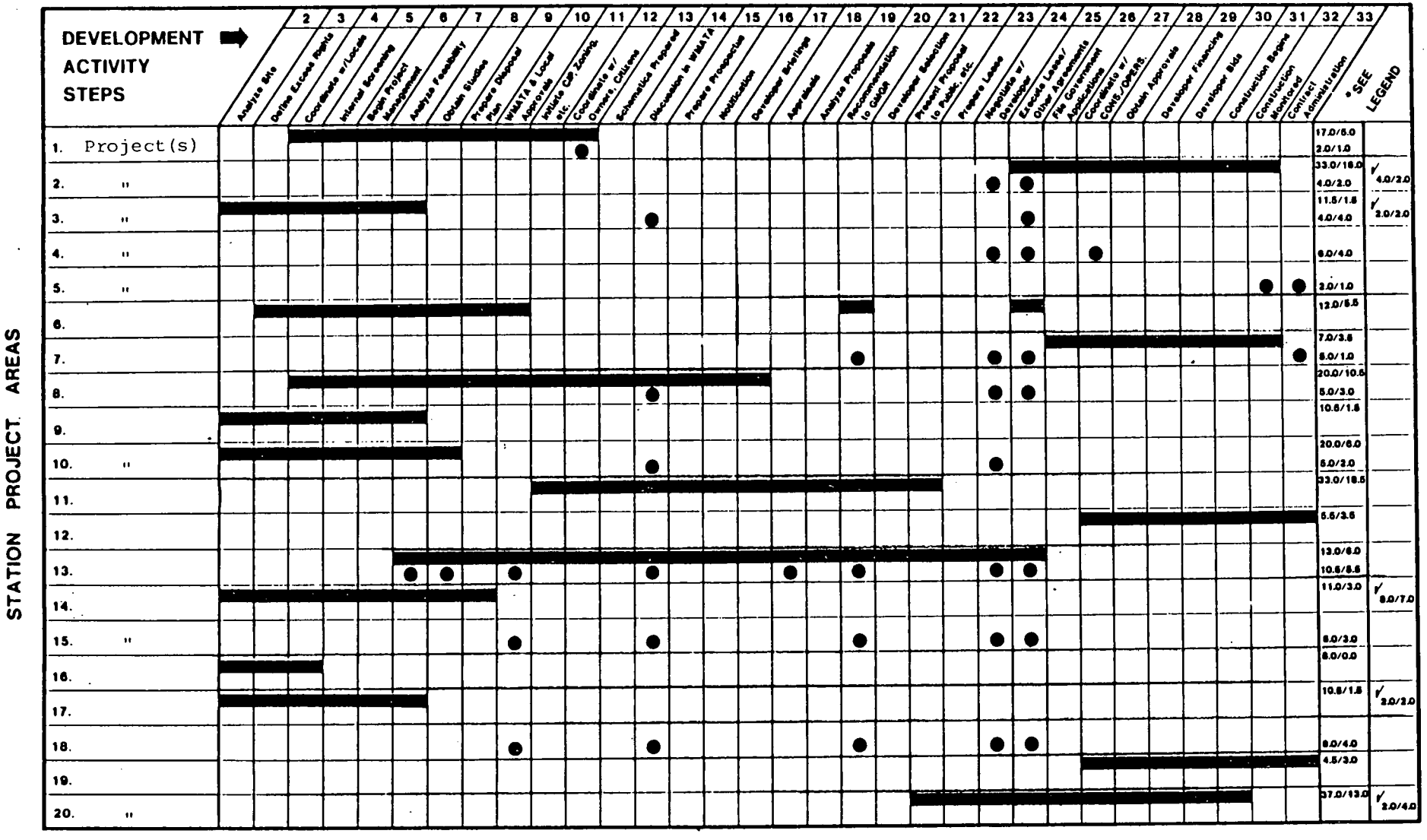
FIGURE 3



Source: WMATA Office of Planning and Development

BASIC 20 STATION FY82 WORK PROGRAM IN WORK-WEEKS

FIGURE 4



STATION PROJECT AREAS

LEGEND

JOINT DEVELOPMENT ■■■■

SYSTEM INTERFACE ●

*SYSTEMWIDE ACTIVITIES ✓

*DEVELOPMENT BRANCH/SUPPORT WEEKS, e.g. 17.0/5.0

Source: WMATA Office of Planning and Development

Note: Illustrative Only

Based on these conclusions, WMATA revised its policies to focus more specifically on system interface opportunities and adopted a benefit-sharing approach whereby WMATA negotiates to recover part of the increase in real estate and related values resulting from the Metro interface. WMATA has developed a sophisticated analytic technique for assessing the increment in value created by a system interface project. The Exhibits include a hypothetical example of this approach and a summary of the development and negotiation process for a typical system interface project. Also included is an example of the computer analysis of the value of a given project with and without system interface.

WMATA's Entrepreneurial Orientation

WMATA has had several years' experience with benefit sharing, involving both joint development and system interface. Their approaches have evolved with new information and insights, changes in the private development climate, and variations in political and institutional context. WMATA's willingness to re-examine its procedures and policies -- on impetus originating in many cases from the Development Branch -- may be more responsible than anything else for the success with benefit sharing.

In many respects WMATA's Development Branch acts as any successful entrepreneurial landowner or developer would. They constantly scan the horizon for opportunities to maximize objectives and protect their interests and seek creative approaches to solving problems that arise.

Skill in devising ways to turn a mutual advantage for private sector, transit agency and local government alike, has enabled WMATA to collaborate successfully in these complex development projects.

Benefit-Sharing Cases

Much has been written already about WMATA's successfully completed joint development and system interface projects. Projects are completed or underway at eleven stations. Joint development and/or system interface feasibility studies are currently in process for at least a dozen additional station locations. These studies examine land use and design issues, transportation and traffic considerations, and financial, fiscal, and market factors.

Two cases of suburban station area development planning have been selected for closer examination here. Both have received some attention in the planning and transportation media recently. Project context, scale, combination and role of actors -- especially local government -- are different from the cases previously well-documented. These cases also present some interesting variations in the dynamics that lie behind the flow charts and organizational relationship diagrams, illustrating yet another dimension to the implementation of benefit sharing strategy.

1. New Carrollton Metro Station

   WMATA has initially taken the lead in orchestrating a complex series of actions designed to maximize development potential of a large area of WMATA-owned land at this station in Prince George's County, Maryland.

2. Bethesda Metro Center

Local government has taken the lead in planning and negotiating to maximize the public benefits of integrating development on the private and publicly-owned properties in this transit station area in Montgomery County, Maryland.

The suburban development context differs considerably between these two cases. Located outside the city limits of Washington, D. C., Bethesda has a development pattern typical of an older, more densely settled suburb on an urban arterial road, with a strong retail and office market, relatively frequent existing bus service, and limited Metro-related parking. Development pressures and planning policy together, have destined Bethesda for transition from its moderate density, residential community-serving character to a major central business district of regional stature.

New Carrollton's setting is historically rail, and more recently road oriented. It is in an area of low to medium density industrial and office development on the fringe of its own local planning district as well the merging point of the fringes of three major urban centers to which it is linked by Interstate highways and a major State route. As New Carrollton is a terminal station for Metro, WMATA has devoted its large landholdings there to patron parking lots and a yard for railcar service and storage. An Amtrak station and related parking facility reinforces the function of New Carrollton as a transportation interchange point. Important as this intermodal transportation function is,

it is juxtaposed rather than integrated with land use and development patterns in the surrounding area. A sizeable office park adjoins the Metro station area. Begun in the 1970s, it is a region-oriented, highly auto-dependent development, planned with large surface parking lots to accommodate the employees drawn from a broad hinterland. Historically the right-of-way which Amtrak and Metro share has been a barrier separating the industrial-office land and New Carrollton station area from the residential communities and their related commercial activities to the west and north.

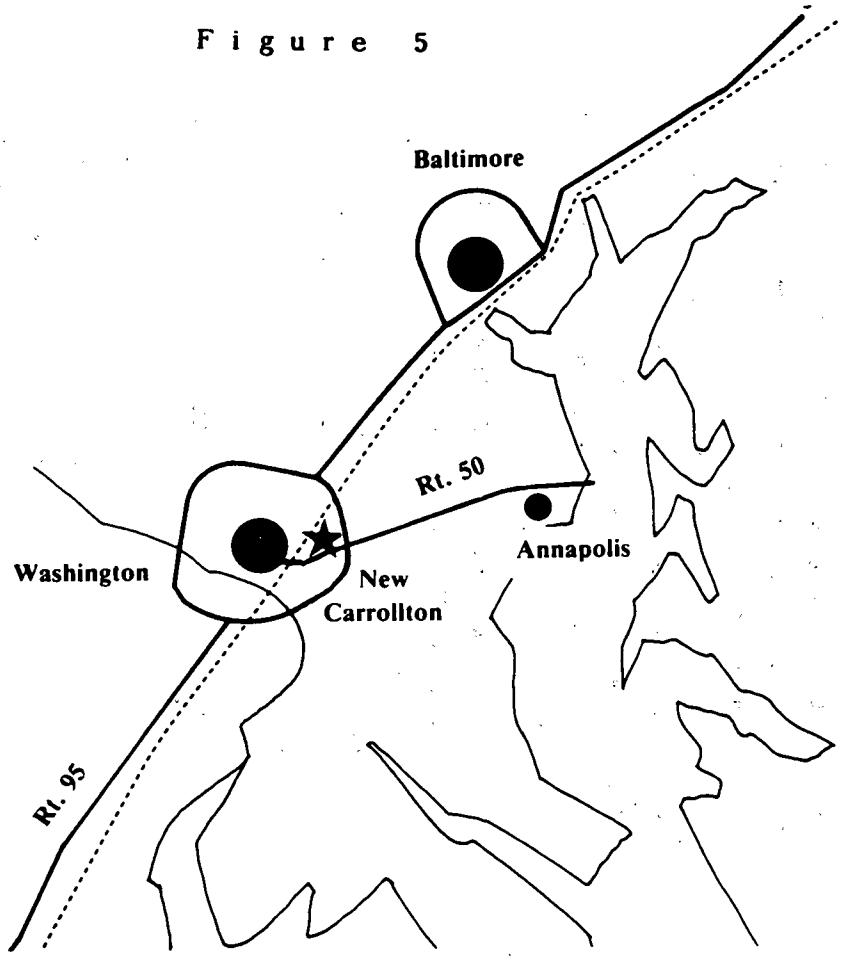
The roles of local government and planning agencies have been quite different in New Carrollton and Bethesda, corresponding with the nature and imminence of development pressures, the issues in the two cases and with the different public agendas and styles of their respective jurisdictions. WMATA's actions, too, have been adapted to the specific combinations of circumstances.

BENEFIT SHARING STRATEGIES/PROJECTS -- NEW CARROLLTON METRO STATION AREA

Background

The New Carrollton Metro Station is located in Prince George's County, Maryland, in the Ardmore Triangle, a wedge-shaped area of 160 acres bounded by I-95 (currently a segment of the Capital Beltway), U.S. Route 50 (John Hanson Highway, scheduled to be converted to Interstate 68), and the right-of-way shared by Metro and Amtrak rail lines. The Ardmore Triangle is proximate to three important cities of the region: Washington D.C. (10 miles to the south), Annapolis, the state capital,

Figure 5



REGIONAL LOCATION

NEW CARROLLTON METRO STATION

Source: Metro Station Development Plan -- New Carrollton, Prepared for WMATA by Perkins & Will, Greenhorne & O'Mara, and Rivkin Associates, 1983.

(20 miles to the east), and Baltimore (30 miles to the north).

New Carrollton is the terminal station on Metro's Orange line. In operation since 1978, this was the first Metro line to reach the Beltway. As one of the few stations with a large parking facility, New Carrollton has experienced steadily increasing patronage from a large area beyond the Beltway, reaching as far as Annapolis.

The Ardmore Triangle enjoys unique multi-modal access -- Metrorail rapid transit, Interstate highway and State road interchanges and intercity rail service as well. The Amtrak station there is the only suburban station on the Beltway in the entire metropolitan area. It affords the Ardmore Triangle convenient access to the Baltimore-Washington International Airport as well as linkage with the entire eastern seaboard. Via Metrorail, the site has ready access to the entire Washington, D. C., metropolitan area, including National Airport.

Planning and Development History

Because of access advantages, substantial development potential of the New Carrollton station area is anticipated by both WMATA and Prince George's County. WMATA, in particular, has been eager to maximize development on its land, which is one of largest properties they own that could accommodate joint development. WMATA owns virtually all the land immediately south of the Metro/Amtrak station, a total of more than 26.5 acres. Existing improvements consist of the station itself, bus bays, a "kiss-and-ride" area, and three large parking lots. In addition, to the east is a storage and inspection yard for Metrorail

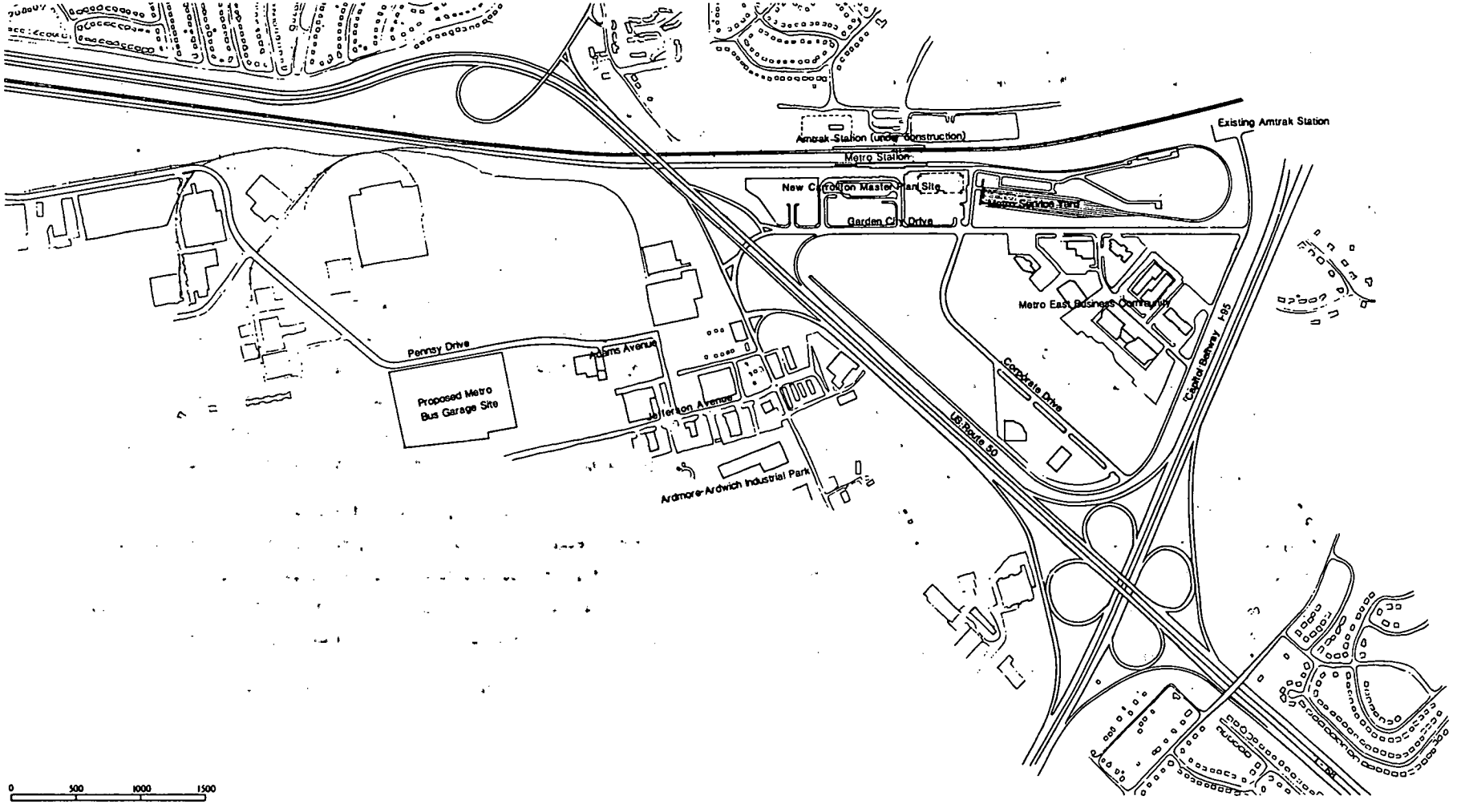
cars covering still more acreage. WMATA owns land north of the tracks as well, including a "kiss-and-ride" area and a parking lot.

Beginning in the early 1970s, when the station was approved, a series of impact, planning, access, and market studies have been performed for this area. The County's master plan called for industrial park and office development in the Ardmore Triangle. The office development has occurred at such scale and rapidity, however, that it has outpaced the capacity of the surrounding road system. As of 1983, over 800,000 square feet of office space had been developed in "Metro East", a privately developed office park south of WMATA's station property. An additional 300,000 square feet of office space is planned, plus a 310-room hotel and 60,000 square feet of retail space.

The Ardmore Triangle's multiple access and attractive market characteristics are also responsible for its chief development constraints. Despite the addition of two lanes on Route 50 in time for the Metro opening in 1978, traffic in the area has been routinely snarled. Getting traffic generated by Metro, Amtrak and the office park in and out of the Triangle, and providing adequate circulation and parking for them once they are inside, are widely recognized as the major hurdles which must be overcome if further development is to occur in the area.

FIGURE 6

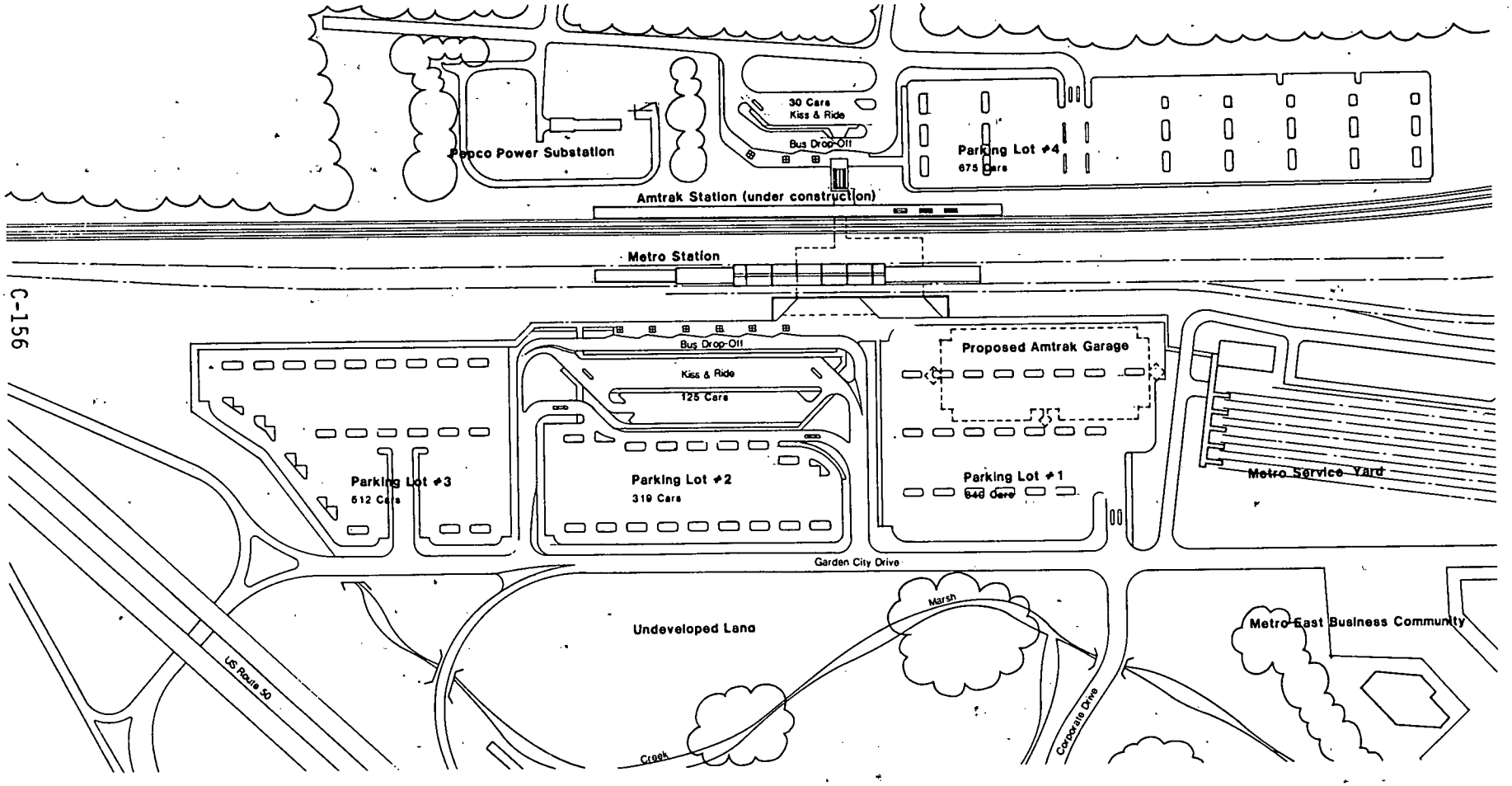
ARDMORE TRIANGLE AND NEW CARROLLTON METRO STATION SITE



Source: Metro Station Development Plan -- New Carrollton, Prepared for WMATA by Perkins & Will, Greenhorne & O'Mara, and Rivkin Associates, 1983.

FIGURE 7

NEW CARROLLTON METRO STATION SITE AND VICINITY



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Source: Metro Station Development Plan -- New Carrollton, Prepared for WMATA by Perkins & Will, Greenhorne & O'Mara, and Rivkin Associates, 1983.

Description of Benefit Sharing Strategies

Benefit sharing strategies used by WMATA in New Carrollton have focused on the ongoing planning and interagency coordination necessary to lay the groundwork for future development of WMATA's property. Consistent throughout have been WMATA's efforts to protect its interests: primarily those of serving transit patrons and maximizing their numbers, but also those of preserving options for future development of WMATA land, and ensuring the necessary infrastructure will be in place to support such development when the market is ripe. Three specific examples of these efforts are summarized and further analyzed below.

Amtrak Parking Garage. For a number of years the Federal Railroad Administration (FRA) had operated an Amtrak station at the New Carrollton site at a location some distance from, and quite inconvenient to, the Metro station. In 1980, as part of an overall upgrading of facilities in the Northeast Corridor, FRA planned construction of a permanent station on the north side of the tracks across from, and connected by underground passageway to, the Metro station, as recommended in the County's master plan. FRA made construction of the new station contingent on assurance that parking would be available for 600 cars within 1,000 feet of the station site. Because parking was deemed a "nonessential" facility, FRA agreed to pay only half its development cost. Prince George's County was responsible for paying the other half. Strapped for funds, the County made several unsuccessful attempts to procure supplemental public funding for the parking facility and finally turned to WMATA for assistance.

WMATA's Board of Directors did not consider provision of Amtrak parking an appropriate role for WMATA. However, the planning staff felt it was worth exploring whether it would be possible to provide the Amtrak parking as a component of private development on the WMATA property. A consultant was retained to undertake a joint development feasibility study for the WMATA site. As part of this study alternative funding arrangements for the Amtrak parking garage were investigated.

The feasibility study found there was substantial development potential on the WMATA site -- as much as one million square feet of office space plus a hotel. Achievement of the site's fullest development potential was determined to be contingent upon three key actions: (1) increasing the limited capacity of the transportation system, (2) rezoning to permit greater development density, and (3) reducing parking requirements.

The consultants also concluded that, given current market conditions, any effort to supply Amtrak parking as part of a joint development without substantial public financial assistance would be only marginally feasible. Further negotiations among the County, FRA, and WMATA led to a Cooperative Agreement between Prince George's County and WMATA to enable the County to lease two acres of WMATA-owned land for the garage. (A copy of the Cooperative Agreement is included as an Exhibit.) The subsequent lease agreement was for a lump sum payment of $500,000 for a renewable term of 50 years. FRA will pay half this ground rent amount plus half the construction cost of the garage. Prince George's County will fund its portion of the construction costs through tax increment financing.

Master Planning of the Site. Armed with the insights obtained in the joint development feasibility study, WMATA began to focus on a number of important decisions being made with respect to the Ardmore Triangle which would have impact on both future Metro ridership and the development potential of their land. These decisions included leasing of WMATA land for construction of the Amtrak garage; provision of parking for Metro and other uses in the Triangle; and a variety of access improvements, including the State Highway Administration's plans to reconfigure Route 50 as an Interstate highway, possibly with flyover ramps into the Ardmore Triangle. It became evident that WMATA needed to represent and protect its interests in these decision-making processes. In addition, WMATA was aware that it would become necessary at some point to seek a rezoning for its property at New Carrollton; but in order to represent its interests effectively in this process and also to engage the support of County planning staff and policy-makers, WMATA needed to project a clear image of its development objectives and concepts. It was evident to all concerned that the various circulation and parking demands in the vicinity of the Metro station needed careful planning. WMATA and Prince George's County agreed that, to enhance marketability of the New Carrollton area, the Metro development should capitalize on the opportunity to convey a "sense of place", a true landmark, to an area sorely lacking a definable image.

Thus WMATA retained a consulting team to prepare a master plan for the WMATA site. County planners also saw the usefulness of such a plan for their own work in the area. Indeed, WMATA's completion of a master plan had been specifically included as an element in the Cooperative Agreement between the County and WMATA.

The master plan which resulted calls for a mixed-use development with a first phase project consisting of a dramatically curved 350-room hotel, a 24-story office building of 300,000 square feet, and 45,000 square feet of retail space oriented toward transit and rail riders, hotel workers and patrons, and Metro East office employees and visitors. The Metro/Amtrak stations would be linked to the multi-use project with a 200-foot high interior atrium containing two levels of retail and commercial facilities. Outdoor plazas and recreational facilities on garage rooftops are additional components of the plan. WMATA intends that the development be a "signature" for the entire area.

Coordination of the feeder bus and commuter access with other vehicular and pedestrian circulation systems for each of the existing and proposed uses on the site (including hotel, office, rail, and Metro) is carefully addressed in the plan. Accommodation of parking for all uses, a particularly thorny problem, is also resolved. Initially, a second five-story garage is planned for the hotel/office complex. WMATA will use excess capacity in the Amtrak garage and will build two additional levels onto the Amtrak parking garage. A clause in the land lease required that the Amtrak garage be built with the capacity to support additional floors, in the event of future need. In the second phase of development, when Amtrak parking needs are expected to absorb the entire garage, an additional parking garage would be built to accommodate Metro's needs and those of an additional 480,000 square feet of office space.

Influencing the Regulatory Context. As part of the Cooperative Agreement between the County and WMATA, the Office of the County Executive and County's Department of Program Planning and Economic Development agreed to "recommend and support the rezoning of WMATA's site in order to permit high-quality joint development of the site," although it was expressly recognized that the final decision regarding use of the subject site rests by law with the County Council. In addition, the Cooperative Agreement calls for the County to examine the ratios of parking spaces required under the zoning regulations with a view to reducing parking requirements in Metro station areas.

In an effort to promote high quality development in this and other Metro station areas where substantial mixed use development is appropriate, and to provide the flexibility necessary for successful joint development, Prince George's County recently developed a new Transit District Overlay (TDO) zone. This new zone is responsive in part to provisions of the Cooperative Agreement. Normal parking requirements are suspended for development under the TDO zone. Instead, a methodology for determining the necessary number of spaces for the development is to be established as part of a Transit District Development Plan. This methodology is to include provision for reduced parking due to availability of mass transit and car or van pool programs.

Next Steps

The New Carrollton Metro Station Development Plan has already begun serving part of its original purpose as an organizing principle for public sector action in the station vicinity. It remains to be seen if

the plan, in combination with the public sector investments in the site and the incentives provided through increased flexibility of development, can generate the kind of private sector interest necessary to bring about the fulfillment of the site's fullest potential.

Recommendations contained in the New Carrollton Metro Station Development Plan form an outline of the next steps WMATA will pursue:

> WMATA will seek endorsement by Prince George's County of a Metro Station Development Plan for New Carrollton.
>
> WMATA will continue to seek implementation of the plan, in conjunction with Prince George's County and the Maryland-National Capital Park and Planning Commission (the planning agency for Prince George's County), including rezoning of the site to permit development of the type and density called for in the plan. (The site is currently zoned for industrial park use, permitting low-to-moderate density office buildings. Development in accordance with WMATA's master plan would require rezoning to a more flexible zone, despite the TDO overlay zone provisions.)
>
> WMATA will solicit interest in the development from the private development community through preparation and issuance of a Prospectus for development of the first phase of the project.

Elements of Sucesss or Failure

Interagency Coordination and Funding. WMATA played an important role as development facilitator and interagency coordinator for the Amtrak parking garage. When construction of the permanent Amtrak station was in jeopardy due to Prince George's County's inability to come up with funds for their half of the Amtrak parking garage construction, WMATA stepped in with expertise to analyze alternative solu-

tions. Then later WMATA served as coordinator and negotiator in implementing the selected course of action.

WMATA viewed the construction of the permanent Amtrak station with its direct connection to the Metro station as critical for increasing ridership at the New Carrollton station and maximizing the development potential of WMATA's surrounding land. To help find a way of supplying the parking necessary, WMATA retained a consultant team to conduct a joint development feasibility study for the Metro station site. As part of this study, the County's, FRA's, and WMATA's development objectives were clarified, and alternative arrangements for funding the Amtrak parking garage were investigated. These products of the study served as the basis for the negotiations which followed.

Although the consultant concluded it would not be feasible to expect a private sector developer to provide the Amtrak parking facility in context of a joint development project in the short run, Prince George's County did try to pursue this avenue. They obtained one proposal which, on evaluation by WMATA and the County, proved to have insurmountable limitations. WMATA's input contributed to the County's decision to seek alternative funding sources. The County decided to use tax increment finance bonds, permitted under recently enacted State enabling legislation, to raise the necessary funds for the garage.

WMATA's negotiations and discussions with the County and FRA led to the Cooperative Agreement between Prince George's County and WMATA, enabling the County to lease WMATA land for the parking garage. In return, WMATA obtained the County's agreement to cooperate in WMATA's

efforts to develop its own site. In addition, Metro may supply its needs for additional parking by using excess capacity in the parking garage for Metro parking, and by building two additional floors on the garage for transit-patron parking. The County implemented the State's first-ever tax increment finance district in the New Carrollton area. The approach has worked well, and the County has subsequently used TIF in many other areas.

WMATA's joint development feasibility study also identified major traffic constraints on further development in the Ardmore Triangle. Pursuant to the Cooperative Agreement, WMATA and Prince George's County worked together to obtain highway improvements for the area. Subsequently, the State Highway Administration agreed to accelerate programmed access improvements in the area. A total of $100 million in state and local highway improvements will be in place by the end of the decade, including two flyover ramps providing access from the upgraded Annapolis highway (I-68) directly into the Triangle.

Partly as an outgrowth of the attention WMATA's feasibility study focused on the access and parking constraints at New Carrollton, the Maryland-National Capital Park and Planning Commission for Prince George's County initiated a Transportation System Management (TSM) study to explore opportunities for reducing congestion through intersection improvements, traffic signal synchronization, improved bus service, ridesharing, and parking reductions. During the course of the subsequent master planning effort, WMATA's traffic consultant worked closely with the County's TSM consultant to explore a range of short,

intermediate, and long term options including new design ideas for achieving more efficient access/egress for the Ardmore Triangle as a whole.

Urban Design/Planning The joint development feasibility study made it clear that while there was substantial development potential at the New Carrollton Metro station site, that market could not be captured without substantial improvements in the access, parking, and zoning context of the area. Moreover, as noted earlier, many decisions were being made regarding access and development in the Triangle area. Although some in the agency felt it was premature in view of market conditions in the area, staff in WMATA's Development Branch were convinced that a master plan for the site was the only way to ensure County decision-makers would have a clear image of WMATA's development in their minds as they took critical actions that would determine the scale of development and services in the area that could be achieved in the future. The master plan also serves WMATA as a guide for its own activities in representing its interests to ensure that necessary improvements will be properly sequenced and in place when needed.

The master plan was primarily intended to serve as a tool for managing WMATA's resources as well as for identifying, coordinating, and promoting the public and private actions necessary to achieve the site's development potential. Indeed, it has thus far served these functions well, forming the basis upon which final highway access improvements for the Triangle were designed and upon which further planning by the County in the New Carrollton area is proceeding. The value of the master plan

for New Carrollton in "leading" development, a function WMATA is hoping it will also perform, remains to be seen, and will in any event remain dependent upon market conditions.

The value of WMATA's policy of planning to preserve future options is demonstrated in another respect on WMATA's site. One of the additional parking garages to be built at a later phase of WMATA's joint development is planned as an air rights structure over the WMATA service and inspection yard. Construction of this garage in the air rights was made possible by the fact that spacing of the car storage tracks was designed to permit subsequent placement of building support columns between the tracks.

Legal/Institutional. The Cooperative Agreement proved to be a useful instrument in New Carrollton for articulating inter-agency relationships and responsibilities in a complex institutional setting. In some respects the Cooperative Agreement used here was as much an expression of good faith and an acknowledgement of common interests as a spelling-out of specific responsibilities and commitments to action. It was, nevertheless, an important first step in the process of inter-agency coordination.

In disposing of land, WMATA generally prefers leasing to sales in fee simple. WMATA's policy is to obtain wherever possible annuitized lease payments, rather than lump sums. For the Amtrak parking garage site, such an annuitized payment was also preferred by Prince George's County. However, administrative difficulties in working out such an approach with respect to FRA's half of the ground rent resulted in

agreement on a lump sum payment of $500,000 for a 50 year renewable lease.

The flexibility with which WMATA's site can be developed will be substantially increased with final adoption of Prince George's County's new Transit District Overlay zone. However, since this is an overlay zone, it will still be necessary for WMATA to obtain a rezoning of its site to permit the type of mixed use development envisioned by the master plan. As part of the Cooperative Agreement, WMATA obtained the agreement in principle of both the Office of the County Executive and the County's Department of Program Planning and Economic Development to "recommend and support the rezoning of WMATA's site in order to permit high-quality joint development of the site." While it was recognized that the final decision rests with the County Council, WMATA has worked closely with local government officials in developing its master plan and is optimistic the rezoning and other necessary development permissions will be granted.

Costs and Benefits to Various Participants. WMATA's funding of the joint development feasibility study was aimed, in part, at resolving the Amtrak parking garage issues. Its role in the subsequent negotiations among the parties had the benefit of preserving WMATA's own ridership and development interests as well as benefiting both the County and FRA. WMATA's efforts facilitated resolution of issues between the County and FRA, opening the way to construction of the parking garage, and thus the permanent Amtrak station as well. In return, WMATA

obtained the increased ridership resulting from the direct connection between the new Amtrak station and the New Carrollton Metro station, and the increased attractiveness of its site for office and hotel development.

Through its master plan, WMATA created an instrument useful not only for identifying and coordinating the various actions necessary to achieve the site's development potential, but also one useful in promoting the site and its requirements before both the public and private sectors. The master plan has enabled WMATA to better define its own interests and thus become a more effective advocate for those interests. It has also served as an impetus to County planning efforts in the New Carrollton area, and to County efforts to provide the types of flexible development control tools necessary to implement these plans, including new zoning and parking provisions. These new tools will in turn make achievement of the full development potential of WMATA's land more feasible, and together with the master plan hopefully will stimulate the interest of the private development community in the joint development potential, as well as encouraging development of other parcels within the station vicinity -- all of which will contribute to increased Metro ridership, as well as increasing the tax base of the County. In recognition of the need for a comprehensive approach to planning and implementing transit-related development, Prince George's County is creating a "Transit Development Team" within the Planning Department, comprised of urban designers, traffic engineers, economists, and planners. This team will be responsible for implementing the TDO zone and other transit-related actions.

By working cooperatively with Prince George's County to lobby before the State Highway Administration for accelerated access improvements to the Ardmore Triangle to benefit Metro, WMATA improved access not only to Metro but to its potential development as well. Other beneficiaries included the County, FRA, and the private office development in Metro East, by virtue of the increased ease of access to all development within the Ardmore Triangle. Further, since additional access and other types of amenities and improvements within the New Carrollton area can be funded through the County's Tax Increment Financing program now in place there, all those living or working in the vicinity stand to benefit from the successful resolution of the development constraints within the area and the achievement of the area's fullest potential.

The biggest benefits of WMATA's and other agencies' efforts at New Carrollton must await construction of the development itself, the first phase of which is not projected to be completed until at least 1990. According to WMATA's analyses, the extended effort and substantial expense necessary to bring the project to fruition should have a significant payoff -- to both WMATA and Prince George's County.

In an "illustrative" cost/benefit analysis made for the New Carrollton joint development project in 1981, WMATA staff estimated the New Carrollton project would generate net benefits to WMATA of $25 million over 50 years, and net benefits to Prince George's County of $48 million over 50 years. The ratio of benefits to costs for WMATA is 3.21 to 1; for Prince George's County the ratio is 33.37 to 1. A copy of the

format used by WMATA for this cost-benefit analysis and a summary of their technique for analysis of the benefit stream is included as an Exhibit.

In evaluating the cost-benefit approach to analysis of joint development projects, WMATA recommended that the techniques be further refined. The authority noted that not all significant benefits were included in the analysis and others were underestimated. Despite WMATA's limitations in applying the technique at the time, the general approach proved quite useful for evaluating potential development projects and, particularly, for evaluating prospects at alternative station areas to determine the most productive use of limited resources. However, it was emphasized that cost-benefit analysis should not be used exclusively in such evaluations. "There are other important considerations both to WMATA and to local jurisdictions (5)." As noted elsewhere in the report, not least of these are the nonquantifiable benefits which flow from a well-planned environment.

BENEFIT-SHARING PROJECTS - BETHESDA METRO CENTER

Bethesda Metro Center is a joint development/system interface project likely to be studied for years as a "textbook" case of integrated transit and community planning. Opened on August 25, 1984 with the inauguration of Metrorail Red Line service, Bethesda's station area development has been called the "crown jewel" of the Montgomery County, Maryland's Metro system by that jurisdiction's planners.

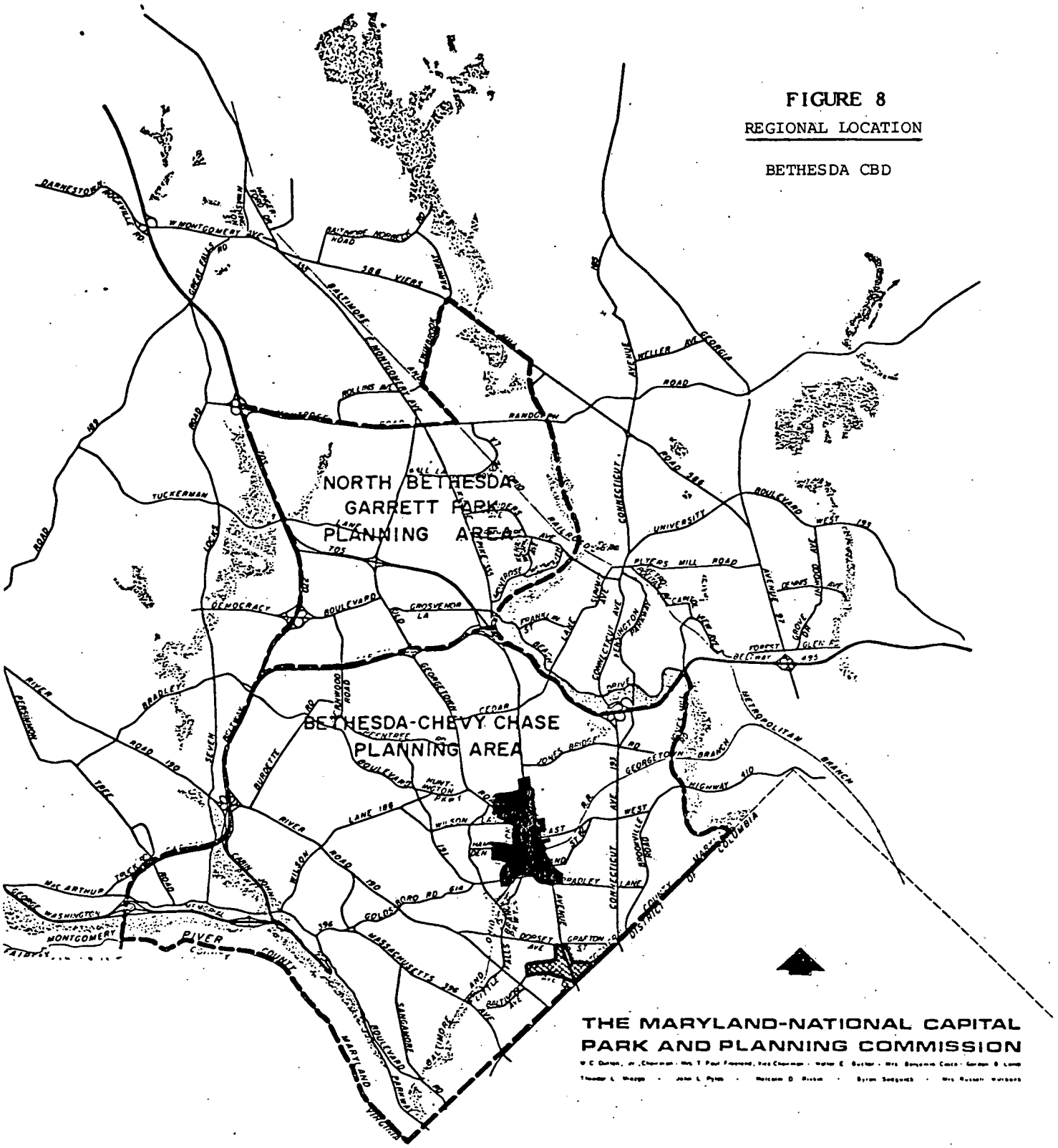


FIGURE 8

REGIONAL LOCATION

BETHESDA CBD

Components of the $160 million project on WMATA's 156,000 square foot site include a 17-story office building (enclosing 268,000 square feet of leasable office space), a 12-story luxury class hotel (with 355 rooms), 1,400 parking spaces in a four-level underground garage, an underground Metrobus and auto pickup/dropoff ("kiss and ride") level with 10 bus bays and 32 parking spaces and, at grade level -- integrating all this and linking it with two adjoining developments -- a landscaped plaza-deck with a depressed multi-use area in the center designed for community activities; winter ice skating and outdoor performing arts.

The two new buildings sharing Metro Center's six-acre superblock (on land not owned by WMATA) will have over half a million square feet of office space and 109,000 square feet of commercial space. One of these buildings will have shops below grade with direct access onto the north side of the underground bus area, Both will have access onto the plaza at street level. Another access point at the east side of the bus level will permit pedestrians to pass through a tunnel below Wisconsin Avenue, the arterial road that abuts Metro Center, and exit to the street through yet another new office-retail development of almost 170,000 square feet. The tunnel will be built and maintained by the County through an arrangement with the State for subsurface rights under Wisconsin Avenue.

Under lease agreement with WMATA, the joint developer of WMATA's land will pay annual rent of $251,000 until the end of 1985, when the hotel and office building are expected to be occupied and generating

revenue. At that time yearly ground rent will be $1.6 million. After April 1987, this rental will become a minimum guaranteed level to which will be added a percentage of the project's gross income over a base amount. The developer is responsible for building the underground bus bays and kiss and ride parking spaces, the portion of the plaza that decks over WMATA's property and the vertical circulation facilities between the two levels. They have also designed the tunnel which will link Metro Center with the east side of the main artery. Developers adjoining Metro Center to the north and south are committed to extending the plaza platform, making a seamless connection between WMATA's property line and the entrances of their respective buildings.

By having the tunnel between the Metro station mezzanine and the east side of Wisconsin Avenue exit in the below-grade level courtyard of a private development, WMATA has saved the cost of building and maintaining the additional vertical circulation element. Without this arrangement, WMATA would have had to build a second Metro portal and tunnel connection, for, according to County planners, the anticipated volume of Metro-generated pedestrian traffic across Wisconsin Avenue could be accommodated only by altering the signalization at the Wisconsin Avenue intersection with another heavily-traveled state route, Old Georgetown Road/East-West Highway. This would reduce the intersection capacity below already-critical levels, seriously disrupting the flow of vehicular traffic on both major arteries.

So far as Montgomery County is concerned, the benefits of Metro in Bethesda go well beyond the Metro Center project. Metrorail transit

improvements enable additional concentration of apartment residences and office employment in the Bethesda CBD while controlling adverse effects on surrounding residential neighborhoods at acceptable levels. The 1976 Sector Plan for the Bethesda Central Business District says, "the County can 'begin to reverse the historic dependence on automotive commuting. The net effect for the County will be a reduction in vehicle miles of travel, energy consumption, and degradation of air quality.'"

Bethesda's Metro Center is a key element and a focal point of the general intensification of development now under way in the forty-odd contiguous blocks that comprise this once-rural crossroads, now-suburban commercial center in transition. In this quarter-square mile area, a little over a mile northwest of the Maryland-District of Columbia boundary, almost 3.2 million square feet of new office, retail and residential space has been approved for construction by the winter of 1986-87.

Chronology

The potential for transit station area development was a product of planners' vision twenty-five years ago. Its realization today is the result of at least a dozen years of concerted effort and interaction among Montgomery County agencies and Council, the private sector (including citizens of the Bethesda community as well as developer-builders) and WMATA. It is doubtful that development of this scale could have come about without reflecting the mutual interests of all these actors. Though each of these actors has moved forward into the

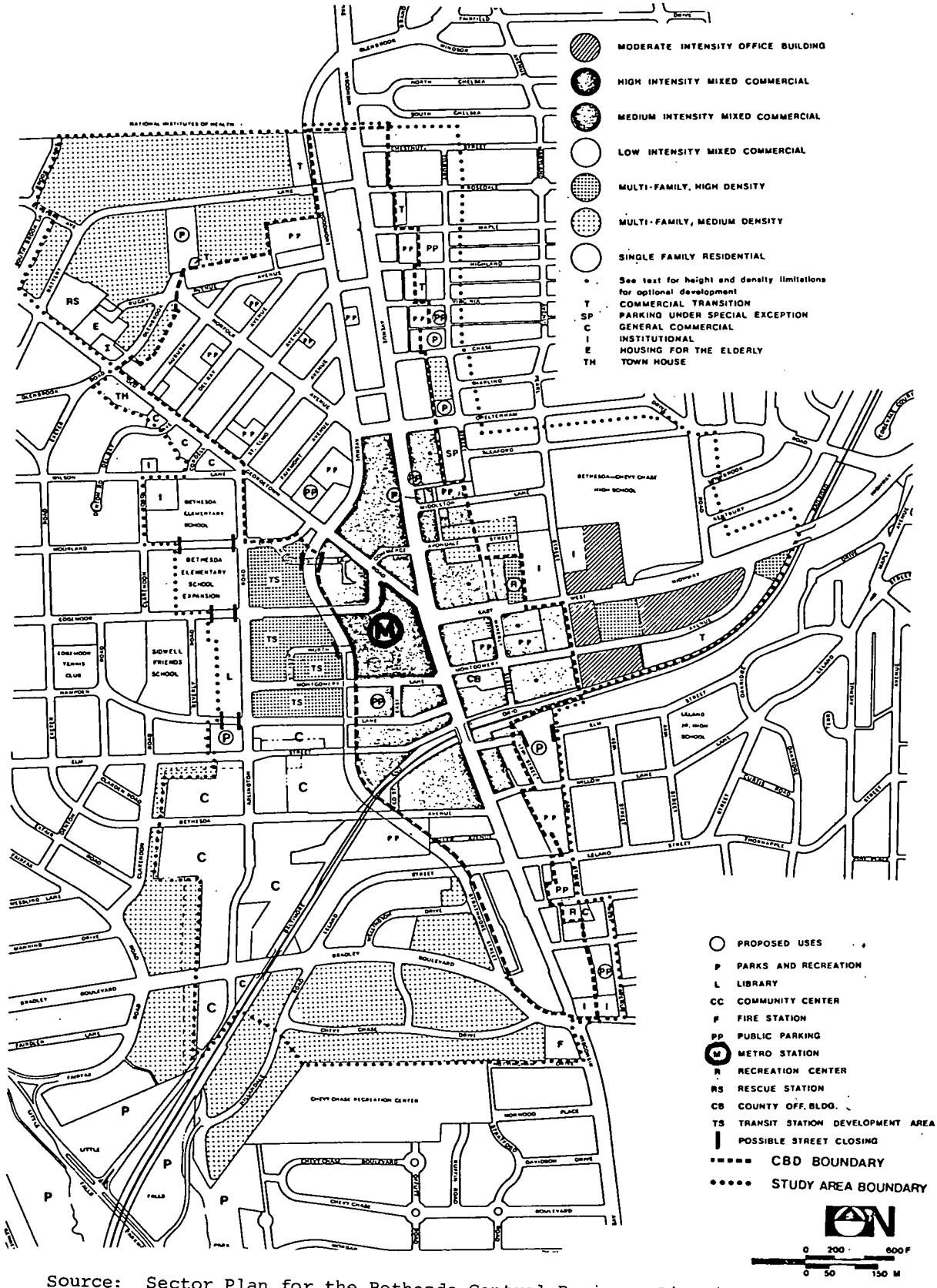
spotlight at various times over the years, local government has been the crucial source of leadership and continuity through all the turns this project has taken.

Montgomery County, like all the other Washington area jurisdictions, had been involved in the initial studies of alternate rapid transit alignments and station locations and in review of the preliminary plans for Metrorail submitted to President Kennedy in 1962 by the National Capital Transportation Agency, WMATA's predecessor. From those early days, planning for Metro and for the two urbanizing Maryland counties (Montgomery and Prince George's) that adjoin the District of Columbia, proceeded in parallel, each incorporating key recommendations of the other.

WMATA sought to locate its stations where local plans called for concentrations of employment and higher density residential development. The Maryland-National Capital Park and Planning Commission (MNCPPC), the state's bi-county planning agency for Montgomery and Prince George's, produced "On Wedges and Corridors", a general plan for the 900 square miles under their purview. This plan treated Metro as an integral functional element of the regional infrastructure. In fact, a central objective described in the plan was to organize urban development for "easy and economic access" by public services, among which transportation was cited as the most important. This plan was adopted by the MNCPPC in 1964 and by Montgomery County Council in 1969. (Prince George's County never did adopt the Wedges and Corridors Plan, preferring instead to pursue a course of individual area master

FIGUARE 9

BETHESDA CBD Land Use Plan



Source: Sector Plan for the Bethesda Central Business District, Montgomery County, Maryland, M-NCPPC, June 1976.

planning and policies consistent with a dispersed pattern of development.)

Metro planning, meanwhile, was approaching in 1969-71 a critical point of convergence with planning and policy developments in Montgomery County. During this period the planning function was restructured. MNCPPC planning staff were shifted from bi-county planning functions to increase the complement of personnel assigned to work for each of the two separate counties and accountability of the appointed Planning Boards to the legislative bodies of their respective jurisdictions was strengthened.

As the environmental, consumer protection, growth management and citizen participation movements came into full flower, MNCPPC scheduled a series of public forums on the direction of local development policy in Montgomery County. An airing of opinion over how this community of half a million people was going to accommodate an additional 400,000 predicted by 1990 resulted in reaffirmation of the basic ideas of the general plan. Public support was consolidated behind the impending rapid transit system and its anticipated role in relieving traffic congestion. At the same time, it became very clear that citizen groups throughout the County were demanding a great deal more accountability on the part of their local government for development in accordance with the plans they were accepting, and for control of adverse impacts on their neighborhoods.

This was the background against which the County approved Metro's routes and station locations in 1969-70. The master plan for the broad

Bethesda-Chevy Chase area (begun in 1967 by consultants very familiar with WMATA's route alignment planning) was approved by the Planning Board and adopted by County Council in 1970-71. These actions opened a new phase of planning dominated by issues of implementation.

Growth Pressures and Community Reaction. Pressures were steadily increasing for rezoning of properties in and around Bethesda, (as indeed, they were in all the County's business districts and other growth areas to be served by Metro). A 1967 market study commissioned by the MNCPPC estimated Bethesda would absorb about 2.3 million square feet of office space by 1990, over 1,000 hotel rooms, 1.4 million square feet of retail space and 3,400 dwelling units in multifamily buildings. Office construction in the Bethesda-Chevy Chase area as a whole was averaging 350,000 square feet a year and some analysts expected the pace to pick up by as much as 15 per cent through the mid-1980s.

The master plan for Bethesda and Chevy Chase included recommendations for Metro station site planning and access roads and for reducing the size of the Bethesda CBD. It did not, however, propose land use and zoning changes for the area within the CBD boundary. In accordance with citizen demands, a great deal of attention was given to transitions and buffers at the edges of the business district to protect the surrounding residential neighborhoods from encroachment of commercial development, increased traffic and other changes the community opposed. The atmosphere was highly charged. Distrust of government ran strong. The citizens were articulate, well-informed and ready to litigate over points of frustration.

County government took very seriously the need to resolve some potentially conflicting objectives, i.e. how to accommodate the growth and development needed to sustain the local economic base and to guide the transition from a fairly low density pattern of commercial activities to a much more intensive one without disruption to ongoing business, and without sacrificing the community lifestyle that adjoining neighborhoods were determined to preserve. To address these issues, the Council appointed a "Blue Ribbon" Citizens' Advisory Committee representing interest of the developer community and civic associations countywide. Their charge was to focus on zoning techniques that would provide incentive for CBD and transit station area development of a nature and quality compatible with County plans, in the places -- and only in the places -- those plans directed.

The Question of Assembling the Station Area Site. WMATA's station area planning schedule presented the County with yet another challenge, and quite a pressing one, given the target date of Winter 1977 for beginning Metrorail service at Bethesda.

When general plans for the Bethesda station area were presented at public hearing in 1971, Montgomery County economic development staff indicated the County's desire to have more land acquired than WMATA needed for the proposed Metro station area facilities. They envisioned a "transit development area" totalling a little over eight acres, excluding area in streets, on both sides of Wisconsin Avenue south of the intersection with Old Georgetown Road/East-West Highway. WMATA's position was that its development interests were restricted to subway-building. Any joint development to be undertaken would have to be

initiated and financed by private enterprise or other public agencies. Metro required about three acres for its bus waiting area, circulation and 38 kiss and ride parking spaces. If Montgomery County wanted joint development and was willing to assemble the land, Metro would lease from the County the ground and subsurface rights it needed for transit-related purposes. Otherwise WMATA would take the valuable property it wanted and build its Metro facilities right in the core of the Bethesda CBD at grade or below grade and exposed.

About two-thirds of the County-designated "transit development area" was developed in a wide variety of low and medium intensity uses and about one-third was in public and private parking lots. The land selected by WMATA for its facilities and the block immediately to the south, which would logically be part of an integrated development, amounted to somewhat over five and a half acres, about 15 per cent of it owned by the County. The remainder was comprised of 23 parcels, averaging around 6,500 square feet in size, and held by 18 different private parties. East side of Wisconsin Avenue, the County owned about a third of the two to three acres slated for transit development area. The rest was comprised of ten parcels averaging 8,300 square feet that belonged to five separate private owners.

Newer multifamily residential construction extended to the east, fronting on East-West Highway. Most of the newer office buildings in the Bethesda CBD had been built to the south and east of the station site, amidst a mixture of low density commercial and industrial uses. To the north across Old Georgetown Road, extended a low to medium density commercial district, and to the west and northwest lay a resi-

dential area of substantial single family homes. This neighborhood was the source of the most strenuous resistance to CBD redevelopment. Residents have since been among the most active participants in the planning and zoning process and most stringent monitors of plan implementation.

Zoning of the "transit development area" land was C2, the most permissive commercial category in effect at the time. Theoretically, the maximum FAR under this zone (i.e. floor area ratio, the ratio of square feet of space within the building to site area) was 14. In actuality, by the time parking and other requirements were met, the effective ceiling was an FAR between 5 and 6. On the basis of location within a CBD, this area could qualify for density bonuses offered under the C2 zone; but eligibility for the optional method of development required a minimum site size considerably larger than any assemblage then in evidence and, in addition, the submission of detailed site plans for approval by the Planning Board.

In combination with the risks inherent in the zoning issues, parking requirements, traffic constraints and political climate of the Bethesda community, assembling a parcel of substantial size out of the fragmented and diverse pattern of land ownership around the transit station loomed as a very difficult and costly business for any private developer. Recognizing that this situation would likely be a critical deterrent to achieving an integrated transit area development scheme, the County turned to explore alternative approaches.

One avenue involved the County Revenue Authority, an agency empowered to exercise eminent domain in acquiring land for projects

authorized by County Council "to improve economic good or general welfare" of the County. The Revenue Authority had more than a dozen years' experience in building and operating revenue-earning facilities such as the local airpark, golf course, parking garages, housing for the elderly, etc. and had access to the favorable terms of revenue bond financing. Preliminary analysis persuaded the Authority of the feasibility of a mixed-use project in Bethesda on ten acres including air rights over the Metro station. Their scheme called for a $90 million investment in 600,000 square feet each office and retail space plus 1,800 apartments, all housed in seven, 25-30 story towers. They proposed to develop and manage the complex through contract with a private operation, and to arrange for Metro access through leasing or dedication of ground rights. The Revenue Authority proceeded to organize a tentative consortium of small property owners in the vicinity of the Metro station site for the purpose of assembling enough land to support development of this large scale, and they asked County Council for a $50,000 appropriation to do detailed planning and feasibility studies during 1972.

Although the government was in favor of budgeting funds to pursue further study, there were considerable reservations about the Revenue Authority's proposal. It involved densities that would almost certainly mean radical road improvements as well as severe citizen opposition. There were also questions about whether the Authority could own commercial property and whether it was, after all, an appropriate instrumentality for this kind of development.

The "Blue Ribbon" Committee report was completed in February 1972.

Among its recommendations was that the County create public development corporations or "special development districts" to acquire, replan and dispose of land in the CBDs, to enter into joint development with private enterprise and generally to oversee CBD development. The idea was that these corporations would retain ownership of public areas but not the office or apartment buildings that would be built. County Council endorsed this scheme and the Montgomery County Delegation to the Maryland General Assembly set into motion the process for securing the requisite State enabling legislation. The County Executive engaged the services of a market consultant to examine the potential for various land uses and to work out design concepts that could help the County determine exactly which properties would have to be involved if an integrated Metro Center development were to be realized.

The General Assembly needed a constitutional amendment empowering it to enact specific enabling legislation for Montgomery County to create the CBD development corporations. Since a constitutional amendment had to be approved through statewide referendum, a bill was submitted in the General Assembly to put this item on the ballot in November 1972. The bill was enacted in the Assembly but Maryland voters defeated it at the polls in November 1972.

During this period, Montgomery County was also trying to interest developers experienced with successful large-scale mixed-use projects, in redeveloping the Bethesda Metro Center. At least one nationally recognized developer thus courted went so far as to make a preliminary feasibility analysis but concluded that the balance of factors did not favor going any farther.

County Council took other action in this period that reinforced its policy of encouraging concentrated development, generally, and CBD development, in particular. They passed an adequate public facilities ordinance that made approval of any subdivision conditional on determination by the Planning Board that public facilities to support and service the area of the proposed subdivision would be adequate. Available capacities of road and public transportation facilities, sewerage and water had to be specifically considered, as well as the complement of community services from schools to fire stations to health and police. Following through on a series of regulatory changes recommended by the "Blue Ribbon" Committee, Council also enacted a series of ordinances creating CBD and Transit Impact Area zones. In effect, the new CBD zones provided for a density bonus of up to 100 per cent under an optional method of development, to be granted only in locations specifically designated by the County in detailed Sector Plans and only in proportion to public amenities provided by the developer.

MNCPPC embarked on the preparation of a series of detailed Sector Plans to provide a six to ten year framework for County policy in guiding development in the CBD's and other transit impact areas. In order to carry out the added responsibilities and increasingly specialized tasks demanded under this new planning program as well as the host of new environmental protection regulations, the MNCPPC added about 25 people to its planning staff, bringing the total to 100.

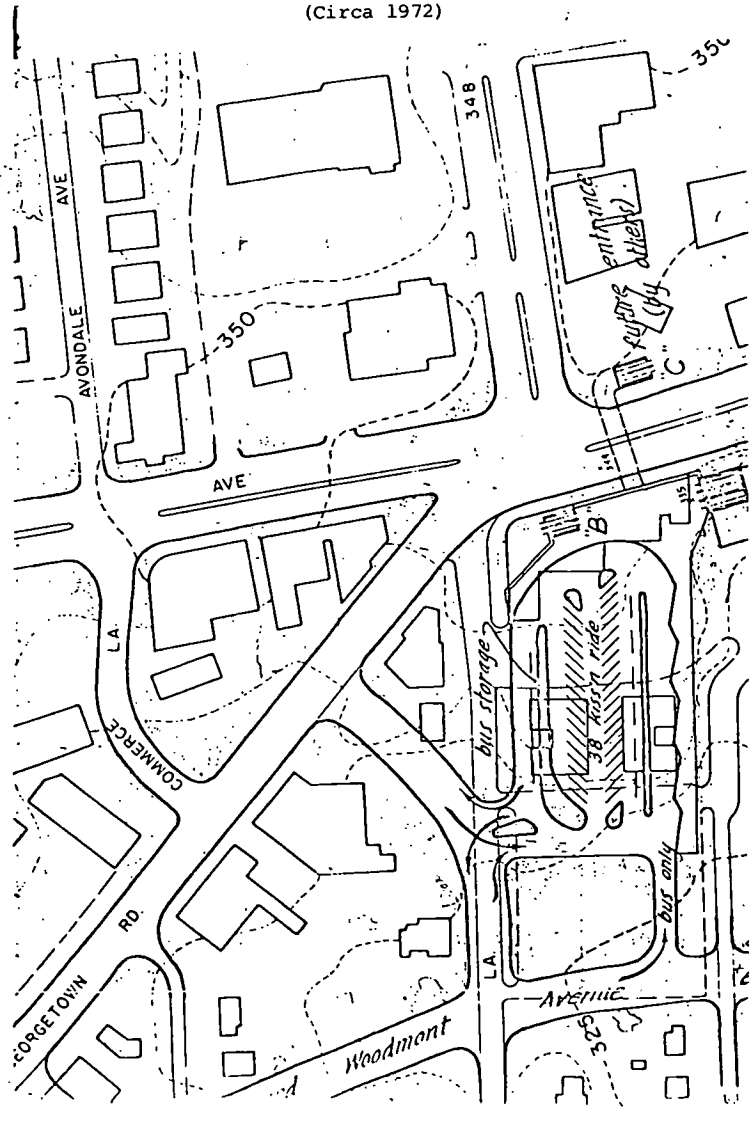
Metro was moving forward too. WMATA's Board approved the general plans for the Bethesda station in late 1972. Within a year, detailed planning reached the stage when letters were sent out to owners of

FIGURE 10

METRO SITE DESIGN PROPOSAL

BETHESDA CBD

(Circa 1972)



Source: Maryland-National Capital Park and Planning Commission

property in the area delineated for acquisition and by 1974 the first contracts were let for construction in the underground part of the station.

A Sector Plan Emphasizing Infrastructure Capacity and Staging. Late in 1974 the Planning Board held a public hearing on the Preliminary Sector Plan for Bethesda. A final plan, drafted after consideration of the extensive testimony and conclusion of a number of public work sessions, was formally adopted by the Planning Board and County Council in June 1976. In addition to the usual elements of a comprehensive plan this one included a fiscal impact analysis for the entire sector planning area, an implementation staging strategy, capital improvements program and provisions for continuous monitoring to maintain the proper mesh between the County's timing in servicing the area's changing land uses and its regulatory processes in modulating the pace and impacts of development.

The Sector Plan was quite definitive about what the County intended to happen where. The Implementation Program called for County Council to enact a comprehensive rezoning amendment which would tie the recommended zones to specific parts of the CBD. Some of the categories were "floating" zones, however -- i.e. zones the County would grant only on application initiated by the landowner and under conditions of meeting certain standards such as minimum lot size. TS-R (a high density transit station area residential zone intended to increase Metro walk-on patronage), for example, required at least an acre site and a process of detailed site plan approval by the Planning Board. Transitional zones such as the moderate density office (O-M) zone and the commercial tran-

sition (C-T) zone had special eligibility and review requirements as well.

The general zoning scheme echoed the land use plan, showing the highest intensity CBD zone exclusively on the Metro Center superblock, the "point of greatest accessibility". Development density dropped with distance from this focal point -- quite rapidly to the east and west and more gradually to north and south. Over all the scale of the zoning "envelope" proposed was about six million square feet of new construction, nearly double the capacity of Bethesda's CBD. Rationale for this was to allow market forces some flexibility, but the Plan was precise about staging priorities and conditions on which the regulatory system would allow development to occur.

Annual evaluation by the Planning Board and review by an appointed citizens' liaison committee would be the basis for considering modifications in the plan. Zone boundaries or total zoning envelope would be altered, especially if substantial commitments for new development contributing "significantly" to revitalizing the CBD did not occur within a few years. More development might be approved or further limitations might be imposed, depending on improvements achieved in air quality, shifts in travel patterns from auto to transit, and stabilization of land uses at the sector boundaries.

Sewer service was not generally available in the County at that time due to limited sewage treatment capacity. The Plan directed that any interim service becoming available be restricted to the Stage I development area. This included Metro Center and about twenty contiguous core

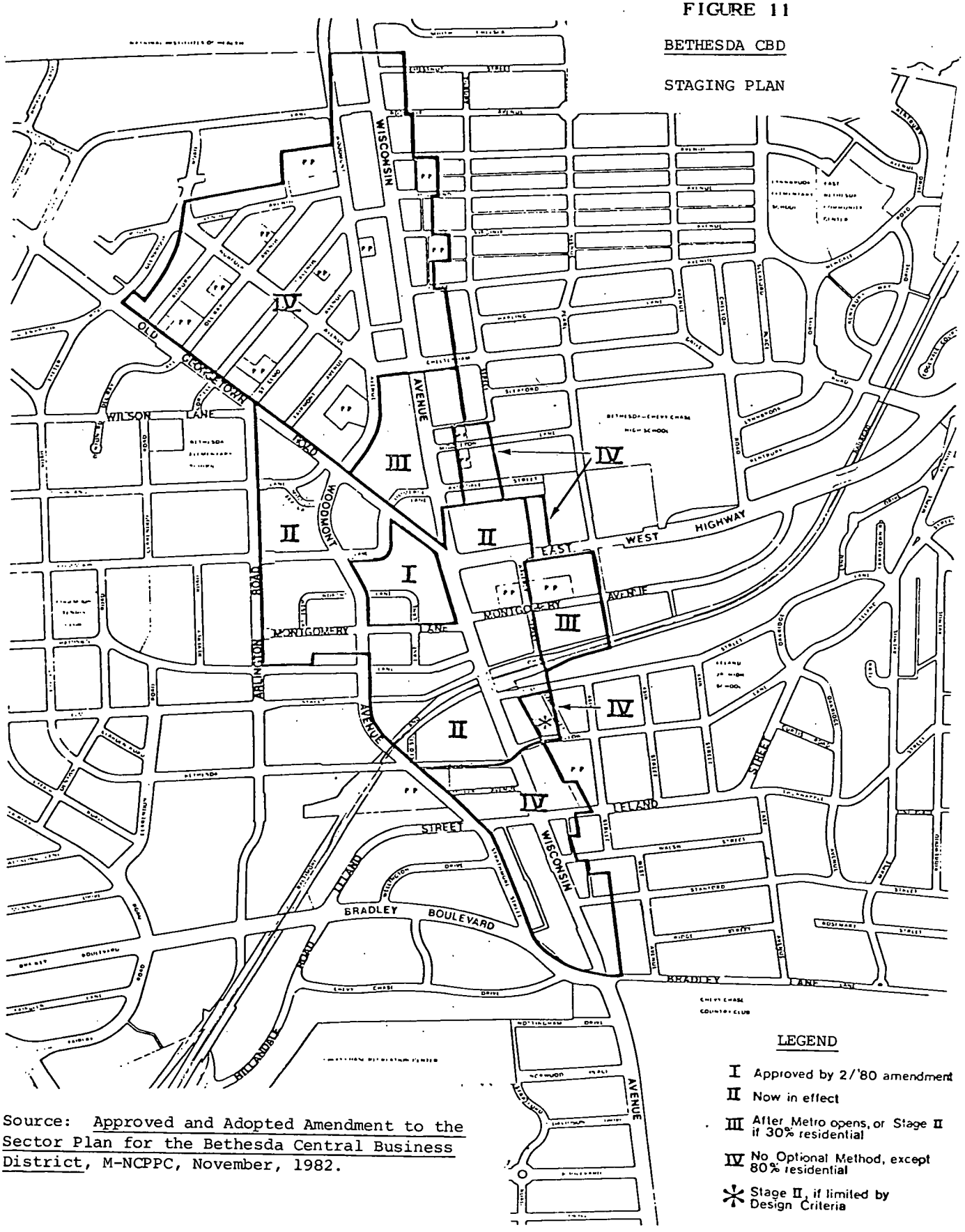
blocks around it which were designated for early approval under the optional method of development. When net new construction of one million square feet had been completed or one and a half million square feet of development had been granted either building permits or optional method approvals (which become void if construction is not completed within 18 months), the Planning Board was to conduct a major review and a public hearing to determine whether modifications in the plan or corrective actions by the County were necessary. Metro service, then scheduled to reach Bethesda by 1980, was expected to be well established by that time and most public facilities recommended in the Sector Plan would be in place or under construction. Although the Plan called for road improvements such as creation of paired one-way streets and feeder street upgrading, transportation was seen to be the critical limiting factor in the staging of the CBD's development capacity. No optional method development was to be approved in the area designated for Stage II until the previous stage development envelope had been filled. A smaller Stage III area at the eastern edge of the CBD would be eligible for optional method development under the more intensive zones when commitments for net new development in the first and second priority staging areas combined reached a total of 2.5 million square feet.

Specific Community Objectives for the Metro Station Area. On Metro Center itself the Sector Plan identified the "coordinated, intensive development of that strategic space with public or private uses in any combination" to be one of the major objectives of County Council. Speaking for County Government as a whole, the Plan indicated willingness to cooperate in an effort to secure land (adjacent to that

FIGURE 11

BETHESDA CBD

STAGING PLAN



Source: Approved and Adopted Amendment to the Sector Plan for the Bethesda Central Business District, M-NCPPC, November, 1982.

which WMATA was by then committed to acquire) for "an attractive and profitable development for that area". The illustrative urban design scheme for Metro Center called for an over all development density within the superblock of FAR 4 including streets, open space (55 per cent of the site area) and public facilities. Particular stress was placed on the County's desires to have public gathering spaces, outdoor amenities, and mixture of daytime and nighttime uses at the Metro Center.

The Crucial Initiative and Assembly of the Station Site. By 1977, WMATA's detailed engineering design and land acquisition work were approaching a point of no return -- or at least a point of costly return -- with respect to joint development. Although a 1980 opening for Metro in Bethesda was no longer a realistic prospect, WMATA planners felt that any joint development would have to be initiated fairly quickly.

The County Executive's development office secured budget for a Metro Center study and also hired an architect. A proposal for a County "Development District" to implement joint development in Bethesda was worked up. When once more a device by which the County could acquire land for redevelopment failed to win approval, the County abandoned the study.

Late in 1978 the pulse of activity quickened. Several events came to a head within a short period of months. The first private proposal for development of land in the Metro Center was submitted for Planning Commission review. The developer sought an FAR of 8, double the average density specified in the Sector Plan for the entire transit station area development. A parking garage project committed in the County's capital

improvement program to serve the Bethesda CBD had reached the planning stage in which the County and Planning Commission had to decide between alternative sites they were weighing.

Then, early in 1979, a representative of WMATA's real estate division met with County planning officials to discuss the transit agency's plans for marketing air rights over the Metro station. They agreed on behalf of their respective agencies that the Planning Commission would prepare a master plan for Metro Center which, subject to WMATA review and approval, would become the basis for WMATA's prospectus seeking bids from potential joint developers. The developer proposing to build at the north end of Metro Center agreed to a delay in processing his application pending preparation of this over all site design plan and he moved to secure a larger financial base for his project. By June a four-person team had been assembled under MNCPPC's chief of urban design to embark on an intensive, six-month planning effort. They included an economist detailed from the MNCPPC research division, a planner from the transportation division, and another urban designer. The man in charge of Bethesda CBD matters for the County Executive's office, who was the main liaison with the citizens advisory committee, joined the team later. Under a charge to consider character of the development, physical massing of building and open space, transportation and economic factors and space use, the team produced a conceptual scheme of desired public amenities and an illustrative plan for staff level presentations in the Planning Commission, WMATA and County Executive's Office in August.

The illustrative plan was refined and its economic feasibility,

determined, through the following three months. Presented to the Planning Board, business community and citizens in October, the plan was well received. County Council expressed their general approval the next month and WMATA staff approved it before the end of the year.

Meanwhile, the 1978 and 1979 annual monitoring reports on Bethesda CBD development were showing that the 1.5 million square feet threshhold for Stage I was being approached and then exceeded.

1980 - A Turning Point in Development Controls and Station Design. Progress on Metro Center gained even greater momentum in 1980 and 1981. In order to ensure sufficient development capacity for the high priority Metro Center, the Planning Board redrew the first stage implementation area boundary to include only the Metro Center (CBD III) superblock and they advanced a million square feet from the Stage II development to the first stage "envelope". Within short order, they approved the design plan for transmittal to WMATA and refined procedural rules for public hearings on CBD optional method of development. They also granted optional method development approval for the major private project application that had been pending. Terms of this approval included negotiated commitments that the developer would provide amenities and change ground floor design in accordance with recommendations of the urban design study. The Planning Board approved modifications in the conceptual layout and design of WMATA's bus transfer level and WMATA approved the Metro Center Urban design study for inclusion in its marketing prospectus.

County Council amended the Bethesda CBD staging plan, reallocating some of the Stage II building volume to the Stage I area, so construction of the Metro Center could begin immediately. They also held public hearings and work sessions on ordinances proposed to sharpen enforcement tools for projects involving project plan and site plan review approvals. The Planning Board approved a site for Parking Garage #49 in the block west of the first Metro Center building, just within the CBD boundary.

WMATA released its Prospectus for Development in June, asking for responses by the end of September. Three proposals were submitted and, during the review period in October, WMATA consulted MNCPPC on their respective planning merits. A developer, whose scheme conformed very closely with the Planning Commission's urban design concepts, was selected by WMATA in November. In July 1981, the joint development project plan for WMATA's portion of Metro Center passed the review procedure, and five months later the site plan was approved.

The last piece of the Metro Center scheme, the large building in the southwest portion of the superblock, was taking longer to move into place. Two individuals owned parts of the property. Although neither controlled enough land to accomplish development in accordance with the urban design plan, both wanted to hold on. If they were unable to reach agreement on some sort of joint venture for development, the apparent alternative was for one to sell out to the other. Eventually, one of the owners was persuaded that to sell his property to his neighbor. This permitted design work and development approval process to begin.

Sharpening the Implementation Staging Tools for Priority # 1. In the interim consideration construction under conventional zoning was completed outside the Stage I Metro Center area, both in the Bethesda CBD core and on its fringe. This brought Bethesda to the development checkpoint of 2.5 million square feet net new building construction and commitments by Spring 1982. As mandated by the Sector Plan the Planning Board held its second public hearing. Anticipated delays in delivery of new Metrorail cars had, by then, set the date for transit service in Bethesda back to December 1983, and then to December 1984. Following several public worksessions after the hearing, the Planning Board recommended that Council amend the Sector Plan again, and enacted under administrative rule a moratorium on any optional method applications outside Metro Center pending Council action.

The Bethesda Metro building permit was released in October 1982. Construction was scheduled to begin before the end of the year and to be completed in December 1984 when Metro opened its doors.

Despite the postponement of Metro service extensions, detailed analysis of traffic patterns convinced the Planning Commission's transportation division that actual 1980 trip generation rates for office and residential land uses were lower than the projection figures used in the 1976 plan, that transit's share of the "modal split" was proving to be higher (as shown by patronage at the already-opened Silver Spring station) than estimates made in the mid-1970s, and that experience with Ride-Sharing programs in the County was proving to be successful. In light of these findings, the planners concluded that traffic capacity would safely permit approval of more development in a mixture of uses

and amount that would generate 1,600-2,100 additional peak hour outbound trips. Given the volume of apparent pent-up developer interest, the planners worked out a scheme of public priorities as basis for allocating the additional capacity. Projects including residential units, for example, and development immediately adjacent to, and linking with, the pedestrian walkways of Metro Center Phase I were to merit special priority. The planners also devised a procedure to permit equitable treatment of development proposals while allowing developers to compete for trip capacity on the basis of their contributions to realizing the County's urban design/land use objectives. These priorities and procedures as well as the analytic methodology employed in the transportation calculations were embodied in the Sector Plan amendment, adopted by County Council in November 1982.

The Next Phase. The project allocation/selection procedure that followed came to be referred to in the press as the "Bethesda Beauty Contest." By Summer 1984, nine of the ten projects submitted had received project plan review approval and site plan approval. Respective developers have until the end of 1985 to begin construction or they will lose their approvals and their assigned "trip generation" capacity will be available for reassignment to other projects. Some of the amended Phase II projects that cleared the approval process earliest are already under construction. One of the first-approved, however, has encountered problems in finalizing property acquisition. The development east of Wisconsin Avenue, designed to connect with Metro Center via tunnel and have the third Metro portal has been delayed by issues related to buying out an existing tenant's lease. As a result, the

County has not yet been able to negotiate details of its tunnel management, maintenance, security, etc. with the interface developer and WMATA as of this writing.

The delay, in turn has produced additional complications. The cut-and-cover tunnel project -- already rescheduled once -- has been targeted for construction between December 1984 and December 1985 and engineering designs are ready to go out for bid. All the necessary easements have been obtained from the state for the necessary work on and under Wisconsin Avenue. Nevertheless, the State Highway program includes funding for turning lane improvements and resurfacing on Wisconsin Avenue, likely scheduled in conjunction with earlier expectations concerning the timing of Metro's operation. State rules proscribe cutting into the road for any purpose within three years of the sort of resurfacing work that had been programmed. To avoid rescheduling the tunnel project yet again, the County has achieved a compromise with the State Highway Department worthy of King Solomon. The State will proceed to improve the pavement of Wisconsin Avenue in 1984 as planned, but will lay a one-inch thick surface coating (instead of the three-inch job originally intended). In this manner, the three-year moratorium on cuts can be circumvented.

The construction schedule for Garage #49, next to Metro Center, has also been revised. When it became evident that the use-mix of projects proposed for Stage II was not showing the hoped-for volumes of residential units, a suggestion was put before the County that some leverage might be gained from the garage. The facility could be built with the parking decks, at least partially, below grade and residential structures with related open space and recreational facilities above. Since the County's acquisition of the land was already justified and accounted for in the capital improvements program, the opportunity to do a multi-family residential project without the trouble and costs of assembling a site might be an attractive incentive to a developer. The County commissioned a study of design-traffic-market feasibility and, on receiving the favorable findings, has prepared specifications ready to go out for bid in late summer or early fall 1984. There is general agreement that the end result is likely to be well worth the delay in the garage, but the growing pressure of need for the garage has not taken a recess in the interim.

As for WMATA, other details of Bethesda Metro Center remained to be resolved when Metrorail actually began service in late August 1984. Although the developer had been informed early in the year when WMATA decided to move up the opening date by four months, some of the construction details, permanent pedestrian and auto paving, lights and signs were not yet installed. Interface agreements with the developer adjoining WMATA's property to the north were not yet concluded either.

For Montgomery County planners, the development monitoring process and the work scheduled in its capital improvements program are continuing. Longer range issues of subsurface pedestrian tunnels connecting Metro Center with the CBD blocks north of Old Georgetown Road and the eastern portion of the transit development area with the north side of East-West Highway will need to be addressed. The State Highway Administration has asked for a study outlining the potential for development

below its highway rights-of-way so they can consider their own policy implications and plan accordingly in advance. MNCPPC is also concerned with coordinating details of more immediate nature and smaller, yet crucial, magnitude such as street furniture (to be provided by all developers in their public areas in accordance with designs and standards set by the County) and securing commitments to responsibility in maintaining these areas as well as planting features in the public right-of-way.

Operational Details to the Center Stage. For operational details, however, the focus shifts to the Task Force on Metro Readiness, a trouble-shooting, coordinating group established by the County Executive to "integrate Metro into the community infrastructure". Headed by an Administrative Services Coordinator in the Montgomery County Department of Transportation (DOT), the Task Force is comprised of a planner from the County DOT, a planner from the MNCPPC, a "working level" staff member from the County Office of Management and Budget, another from the Traffic Management Division and a former member of the County Council who has a "superb institutional memory", according to the Task Force director.

This is the group dealing with the Wisconsin Avenue resurfacing matter. They are also studying the feasibility of advancing the construction date of another parking garage in the capital improvements program by a few years to relieve some of the pressures exacerbated by the delay in Garage #49. Encouraging the public to use Metro is another of their responsibilities. They have done a public information campaign

about the local "Ride-On" feeder bus service and have been working to persuade businessmen in areas not yet served by Metro to run shuttle buses from the terminal stops "so their patrons will become accustomed to using transit".

As for residential neighbors, amidst some grumbling over the relocation or closing of favorite businesses and loss of the familiar single-story shops to high rise buildings, there is a generally tolerant attitude of watchful waiting and some excitement about the prospect of new shopping and window-shopping opportunities and neighborhood ice skating. Confidence in County government has improved with the visible evidence of reliability in meeting its commitments and some signs the monitoring process is working. Public opinion of Metro is high, as new transit commuters compare the dramatic savings in their travel time to work and think of additional trip purposes for which they and other members of their families will be able to use the system.

Lessons Learned from Bethesda Metro Center

Transit Agency Organization/Relationships with Other Actors. In one view, the Bethesda Metro Center joint development project might be seen as the product of seven years' work, commencing when WMATA's real estate division representative came to Montgomery County with the ultimatum on joint development and culminating when the development "deal" for WMATA's land was concluded or construction actually began. Unquestionably, the initiative as well as the imagination and flexibility of WMATA

officials at both staff and policy levels is greatly to be credited with the outcome of this project.

Left at this, the case is like an unset gemstone. However beautiful, genuine and valuable, it is unwearable. WMATA's Bethesda Metro Center project does not really stand by itself; and the lessons to be learned from its setting are as important as the project itself.

It is significant that WMATA's is a new transit system, being developed not in a stagnant or slow-growth area, but very deliberately routed through corridors in the path of urban development and redevelopment. Bethesda is a place where change and redevelopment would have occurred to some extent anyway. Metro afforded an opportunity to organize the redevelopment in a particular way. Conversely, the opportunity to accomplish WMATA's joint development was the result of many years of preparatory groundwork -- in policy, planning and market-shaping interventions -- by local government and citizens.

Local Government/Community/Private Sector Participation. Although Metro's Bethesda station is located where the development stakes are high, it is doubtful that the transit joint development project alone would have elicited the investment of time, political energy and supporting capital works that Montgomery County devoted to the Bethesda CBD redevelopment. Metro Center enjoyed this support because it was pivotal in a much larger scheme.

Before WMATA came in with its project, Montgomery County had created the requisite zoning context and had negotiated community acceptance,

working through resolutions to the very demanding conditions set by resisting citizens. WMATA was spared the costs and delays of zoning battles and the opposition of private land developers, competitively seeking to develop their own (different) sites. The latter had assurance that their zoning and time would come. By successive interventions in the planning and staging process, however, the County created a short-term land shortage in the Bethesda CBD, thus "ripening" the Metro Center properties for development. Montgomery County also had committed the funds for CBD circulation improvements as well as the community facilities planned as buffers between the CBD and adjacent residential neighborhoods. In the County's cost-benefit calculations, these substantial expenditures were well justified by anticipated returns from redevelopment on the scale of three million square feet. While many of these improvements, such as access streets, were necessary to enable Metro to work, their price was higher than WMATA's part of the Metro Center project, by itself, could balance.

Long-term leadership was another significant local government contribution to the Metro Center development. In part, this is due to remarkable continuity of staff and officials going back to the early days of County planning. When Montgomery County hired a planning director in 1969, it was no coincidence that they chose a man from Toronto who came, familiar with the unfolding process of that city's rapid transit system and station area developments. Although transit-related planning has by no means been his sole preoccupation through the years since, there is no question that he and the County, both, entered into the process with realistic ideas of what a long-term business would be involved.

The vision of Metro, always an integral part of the community's plans and policies, grew sharper and more focused with time. The sector planning program was an effort by the County to play an active role in shaping the areas where Metro service would come, but the County did not leave the process to fate as that phase closed (about 1978). Observing that anticipated development was slow to materialize in Silver Spring, the first-opened transit station, thoughts turned in more than one County office to further interventions that would be necessary to bring the vision into reality. Repeated efforts to secure enabling legislation so the County could help developers overcome the obstacles of land assembly represented an unusual degree of persistence on the part of government.

Nor did County officials shrink from reaching out into the development community to try to persuade private entrepreneurs to rise to the challenge of station area development; and all the while they were steadily moving into place the supporting pieces that would make it profitable to conform with the official plans. As the end of the pre-implementation work for Bethesda drew closer, it was no coincidence that the man assigned to direct the coordination of design through the final phases of development was someone whose experience was well-grounded in large-scale work for one of nation's prominent private organizations and also in one of the cities that has been most successful in collaborative public-private development.

Entrepreneurial work of the sort that station area joint development entails requires an entrepreneurial outlook on the part of personnel who

must do it. WMATA and County staff alike exhibited this quality. Their working relationships have been characterized by an openness to suggestion and a willingness to be flexible in searching out mutually acceptable ways of accomplishing their shared objectives.

There was also some very constructive leadership among the citizens and business interests involved in Bethesda. Much credit is due those people of long institutional memory and distant future perspective, too, for keeping the issues in public debate from being polarized. Citizens entering the arena of Bethesda CBD issues had to address questions of resolving multiple and complex relationships and the full ramifications of one choice or another. It was not a win-lose, yes-no, pro- or anti-project sort of debate.

Design. Montgomery County placed great weight on urban design in the Bethesda Metro Center, from early general conceptual stages through final details of light posts and street furniture. The MNCPPC planners devoted much thought to just what public amenities they would negotiate for with prospective developers as condition of the optional method development approvals. Through sketch planning exercise and community-designer "pow-wow's" they developed a schedule which has served, not only to guide their own review and decision-making processes but also to inform developers, in advance, of the sorts of features they would be seeking in reviewing project proposals.

The "Beauty Contest" received much media coverage and there is no question that the availability of numerous photographs and models of the Stages I and II projects have helped the community visualize what is to

come. This may contribute to public acceptance of the construction-period disruption.

Design foresight on the part of WMATA can be credited with some savings. When designing the underground portion of the Bethesda station, WMATA had their architects make a feasibility study of the Wisconsin Avenue tunnel that the County called for in its plans. They concluded that a knockout panel could be put in the mezzanine-level wall without additional cost. Engineering designs called for an expansion joint in the Metro tunnel wall at that point anyway. In other details, the fact that design and construction of the subway tunnel pre-dated knowledge of the surface development plans has necessitated some after-the-fact adjustments. For example, when excavating for the Metro Center hotel, contractors uncovered volumes of concrete occupying space where the ballroom was intended to be. Overpour in the subway tunnel construction would probably have made no difference at all, had Metro built its bus bays on the surface. Another adjustment called for once the joint development plans were finalized, was redesign of the below-grade ventilating system so that outside vents would not interfere with pedestrian circulation patterns.

Legal/Institutional. The Bethesda Metro Center case study highlights a variety of innovations in Montgomery County's development regulations and regulatory processes. Other institutional changes were proposed, such as the development districts and the public development corporations, but failed passage. It should be noted that none of these changes was made for exclusive application in Bethesda. Rather, they

applied to a number of similar situations throughout the County where Metro development posed similar issues. It is unlikely that so many or so far-reaching devices would have been created for application in a single area and for a single project, or indeed, transit joint development alone.

Another aspect of this study is delineation of the respective roles of various actors. The special purpose agency (WMATA) had the central mission of building the subway. WMATA could exercise eminent domain, enabling them to take a critical action at a critical point in the Bethesda case. General purpose government in its various offices encompassed responsibilities that include comprehensive planning, providing a full range of public infrastructure and community facilities, maintaining a public forum for democratic debate and decisions on issues of importance to the community, weighing and balancing the plural interests of the community and administering its regulatory authority through effective and equitable procedures. Montgomery County could offer the community commitments to build the facilities they desired, and to modify the impacts of intensive development as trade-offs for their acceptance of the redevelopment plan. The private development community stuck to its role of building what, in their judgment, presented acceptable risks in terms of projected returns. They participated throughout the public planning and decision process, then entered to initiate development when the combination of supportive factors appeared to meet their own economic criteria.

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_____, "Summary Report of Pow-Wow", MEMORANDUM from Chief of the Urban Design Division to Pow-Wow participants (August 31, 1983) 34 pp.

_____, "Information Packet for the Bethesda CBD Optional Method Projects" (February 1984) 3 pp. plus appendices.

_____, "Final Recommendations for the Core District", Bethesda Streetscape Plan (April 1984) 18 pp. plus appendices.

_____, "Amended Recommendations for the Core District", Bethesda Streetscape Plan (July 1984) 5 pp. plus attachments.

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Metropolitan Washington Council of Governments, National Capital Region Transportation Planning Board, Metrorail Area Planning, Metrorail Before-and-After Study, (August 1983), 161 pp.

Urban Mass Transportation Administration, Office of Planning Assistance, Joint Development - A Handbook for Local Government Officials, Final Report, Prepared by Public Technology, Inc., (September 1983), 111 pp.

U.S. Congress, 96th, 1st Session, Subcommittee on the City, Committee on Banking, Finance, and Urban Affairs, Metrorail Impacts on Washington Area Land Values, Preliminary Staff Study, (January 2, 1981), Washington, D.C., U.S. Govt. Printing Office (1981), 58 pp.

Upshaw, Wayne, and Green, John, "The Washington Metropolitan Area Transit Authority Joint Development Program: An Illustrative Cost-Benefit Analysis of Two Projects," WMATA Office of Planning and Development, (September 1981), 40 pp.

Washington Metropolitan Area Transit Authority, Metro Station Development Plan -- New Carrollton, Prepared for WMATA by Perkins & Will (Land Use and Design), Greenhorne & O'Mara (Transportation), and Rivkin Associates (Fiscal, Market, and Financial), no date (1983), 34 pp.

EXHIBIT A Cooperative Agreement Between Prince George's County, MD, and WMATA

COOPERATIVE AGREEMENT

THIS AGREEMENT entered into this 12th day of June, 1981, by and between PRINCE GEORGE'S COUNTY, MARYLAND, hereinafter called "the COUNTY", and the WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY, a body corporate and politic, hereinafter called "WMATA".

W I T N E S S E T H :

WHEREAS, the COUNTY will be the local governmental sponsor of an AMTRAK Parking Garage to be built in the vicinity of the New Carrollton Metro Station to serve AMTRAK patrons, and

WHEREAS, the COUNTY desires that said AMTRAK Parking Garage be constructed on and operated from land owned by WMATA at the New Carrollton Metro Station Site, and

WHEREAS, WMATA desires to exercise its right to develop its land and air rights at the New Carrollton Metro Station Site, and

WHEREAS, both the COUNTY and WMATA support implementation of the concept of intermodal integration at the New Carrollton Metro Station Site, and

WHEREAS, both the COUNTY and WMATA support implementation of the concept of joint development for its fiscal, financial and service benefits to the public at the New Carrollton Metro Station Site.

NOW, THEREFORE WITNESSETH, in consideration of $10.00 and other good and valuable consideration mutually exchanged, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed by and between the parties as follows:

1. WMATA agrees to lease to the COUNTY or its agent a parcel of land containing 2 acres, more or less, for the purpose of construction and operation of an AMTRAK Parking Garage by County within the area described as follows:

> Part of the tract of land known as the New Carrollton Metro Station Site, containing 15 acres, more or less, of which 2 acres, more or less, shall be designated for Parking Garage purposes. Said garage area is outlined on the sketch attached as Exhibit 1.

Prior to actual use by County of the area allocated for construction and operation of the Garage, a separate agreement of lease satisfactory to WMATA shall be executed by the parties. Said Lease shall provide for liability and maintenance by County or its designated agent and address the issue of fair rental value which will be based on the residual cash flow from parking operations.

2. The COUNTY agrees to submit both preliminary design and final construction plans for the AMTRAK Parking Garage to WMATA for its prior review and approval. The plans will be subject to WMATA's review and approval in order to minimize disruption of the existing METRO operating facilities during construction and to promote harmonious integration of the AMTRAK parking facility once in operation with METRO facilities and joint development plans.

3. The COUNTY agrees to examine the matter of replacement parking for METRO patrons necessitated by the construction and operation of the AMTRAK Parking Garage and to include in its plans and specifications for the garage provision for replacement of METRO parking spaces on both a temporary and permanent basis.

4. WMATA agrees to retain the services of a consultant to prepare a "Master Plan" for joint development at that portion of its total New Carrollton Station Site which is shown on the attached sketch as Exhibit II. The Master Plan will examine and address the site's vehicular and pedestrian circulation, its parking, and its general physical design. The Master Plan would serve as a principal element in the rezoning and development of the site. The COUNTY agrees to cooperate with WMATA in the development of the Master Plan.

5. After the Master Plan is prepared, it is agreed that the Office of the County Executive and the Department of Program Planning and Economic Development in Prince George's County will recommend and support the rezoning of WMATA's site in order to permit high-quality joint development of the site. It is recognized by the parties hereto that such development would benefit WMATA, the County, and the general public in a number of ways, but it is also recognized that the final decision regarding use of the subject site rests by law with the County Council of Prince George's County, sitting as the District Council.

6. The COUNTY agrees that it will examine the ratios of parking spaces required per units of floor area under current zoning regulations to see if said requirements should be lessened in areas of close proximity to Metrorail Stations.

7. The COUNTY and WMATA agree that local, state and Federal proposals to increase the traffic capacity to the Ardmore Triangle, which encompasses the proposed AMTRAK Parking Garage and the proposed WMATA joint development sites, should be supported. Both parties will make every good faith effort to support these proposals.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be properly executed the day and year of first above written.

PRINCE GEORGE'S COUNTY

ATTEST: _____ BY: _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

ATTEST: _____ BY: _____
GENERAL MANAGER

EXHIBIT B
Summary of Approach

WMATA Cost/Benefit Analysis

Factors to Consider:

- Determine the scope of the study. Identify (1) relevant actors (e.g. WMATA and the local jurisdiction where joint development will take place) and (2) parameters (e.g. project time horizons).
- Identify all significant incremental benefits/costs accruing to WMATA and the local jurisdiction.

Typical Benefits:

WMATA	Local Jurisdiction
leasing income	improved air quality
ridership revenue	reduced traffic congestion
systems savings (also called "capital cost avoidance")	expanded property tax base
	hotel surcharge revenue
	employment increments
	sales/income tax revenue

Possible Costs:

WMATA	Local Jurisdiction
front-end administration	capital improvement projects
ongoing administration	front-end administration
development accommodation	ongoing administration

- When precision is impossible, convenience assumptions should have a tendency to underestimate benefits and overestimate costs.
- The use of data from previous joint development projects of similar scale can assist in deriving approximate escalation rates for estimating future benefit and cost streams.
- The discount factor chosen should equal the opportunity rate for reinvestment of pre-terminal date benefits. It is common practice to use the interest yield on long term U.S. Treasury notes. For example, consider a project that has the following benefit stream:

Source: WMATA Office of Planning and Development, John Green and Wayne Upshaw, "The Washington Metropolitan Area Transit Authority Joint Development Program: An Illustrative Cost-Benefit Analysis of Two Projects," September, 1981, Appendices A&B.

T_0	T_2	T_3
$100	$100	$100

The $100 benefit of year T_0, the initial year of the project, can be either consumed or reinvested for the remaining 2 years (T_2 and T_3). The same possibility exists for the benefit occurring in the second year, T_2, since it can be reinvested after one year. Suppose that because of restrictions on investment options, that the best alternative use of the benefit income is the purchase of government securities yielding 10% interest. The appropriate discount rate for finding the present value of the future benefit is 10%.

Rules of thumb for evaluating employment increments:

office space	4.0/1,000 square feet
retail space	2.5/1,000 square feet
hotel space	.9/room

The general formula for finding the present value of an income stream is:

$$PV = \frac{P_1}{(1+r)^1} + \frac{P_2}{(1+r)^2} + \frac{P_3}{(1+r)^3} + \ldots + \frac{P_n}{(1+r)^n}$$

when benefits are received at the end of the period.

If benefits are received at the beginning of the period, then:

$$PV = P_1 + \frac{P_2}{(1+r)^1} + \frac{P_3}{(1+r)^2} + \ldots + \frac{P_n}{(1+r)^n}$$

where PV is the present value of the income stream, P_1 represents income payable in the first year, P_2 income payable in the second year, P_3 income payable in the third year, P_n income payable in the nth year, r represents the discount rate and n represents the time span in question.

Pro Forma Cost/Benefit Analysis

for a Proposed

Joint Development Project (SPDV)

I. Project _____

A. Estimated Development Value of Project $_____

B. Project Mix: Office _____ Hotel _____ Retail _____

Residential _____

II. WMATA

A. Benefits		B. Costs	
1. Leasing Revenue	_____	1. Ongoing Admin.	_____
2. Incremental Farebox Revenue	_____	2. Front-end Admin.	_____
3. System Savings	_____	3. Capital Replacement	_____
4. Other	_____	4. Other	_____
Totals	_____	Totals	_____

Benefits-Costs / Costs

III. Local Jurisdiction (_____)

A. Benefits		B. Costs	
1. Real Estate Taxes	_____	1. Ongoing Admin.	_____
2. Income Taxes	_____	2. Front-end Admin.	_____
3. Sales Taxes	_____	3. CIP Items	_____
4. Hotel Surcharge	_____	4. Other	_____
5. Other Taxes	_____		
Totals	_____	Totals	_____

Benefit-Costs / Costs

IV. Total Pecuniary Benefits to WMATA and Local Jurisdiction _____

Total Pecuniary Costs to WMATA and Local Jurisdiction _____

Net Benefits (or Costs)

Source:
WMATA, Office of Planning and Development
September, 1981

EXHIBIT C

COMPARATIVE ANALYSIS OF

A HYPOTHETICAL SYSTEM INTERFACE PROJECT

Hypothetical Case: Let us assume that a developer acquires the purchasing rights to a piece of land in close proximity to a Metrorail station. Usually, before actually purchasing the land, the developer will draw up plans for the building, obtain necessary zoning and site plan approvals from local jurisdictions, conduct marketing studies, and secure financing commitments from lenders. For purposes of this illustrative example, let us assume the developer decides the project will be best served if a direct walkway connection is made to the Metrorail system.

For one thing, the project management has learned that the local jurisdiction wants the connection because on-street pedestrian traffic will be minimized. Furthermore, the developer is aware that the direct connection will allow the incorporation of retail shops on floors which would otherwise be used for lower-paying storage and parking areas. At the urging of the local jurisdiction, as well as his own lenders who are interested in maximizing the safety of their investment by enhancing its income, the developer decides to change the use and approaches WMATA with a request for a system interface. In its turn, WMATA reviews his plans, participates with local staff in its review of the method and location of connection, and arranges for the accommodation of improvements. (No arrangement is made by WMATA without final coordination and endorsement of local officials, who must review the project from the standpoint of its impacts on circulation patterns, visual amenities, utilities services, etc.)

Assuming the acceptance of the developer's plans for the project and its system interface, the developer now analyzes the financial impact of undertaking the system interface to decide the undertaking is worthwhile. The expenses and rewards of making the connection are compared with those without the connection. A hypothetical and simplified comparison follows:

1. Project summary without System Interface

No. of Square feet - parking	= 600
No. of Square feet - storage	= 57,600
No. of Square feet - offices	= 45,000
Total No. of Square feet	= 103,200
Unit Value of parking	= $ 4.50/sq. ft.
Unit Value of storage	= $10.00/sq. ft.
Unit Value of offices	= $30.00/sq. ft.
Total Value of parking	= $ 2,700
Total Value of storage	= $ 576,000
Total Value of offices	= $1,350,000
Total Value without System Interface	= $1,928,700

Source: WMATA Memorandum to Chairman and Members of the Board, March 4, 1983, Attachment 3, pages 1 - 6.

2. Project summary with System Interface

Lowest floor Shopping area	= 600 sq. ft.
Middle floor Shopping area	= 57,600 sq. ft.
Upper floor Office area	= 45,000 sq. ft.
Unit Value of lowest floor	= $35.00/sq. ft.
Unit Value of middle floor	= $31.50/sq. ft.
Unit Value of upper floor	= $31.00/sq. ft.
Total Value of lowest floor	= $ 21,000
Total Value of middle floor	= $1,814,400
Total Value of upper floor	= $1,395,000
	$3,230,400
Less: Costs of connection	500,000
Less: Value Without System Interface	1,928,700
Net Benefit to project with System Interface	$ 801,700

3. Sharing project benefit with WMATA.

Our hypothetical case now proceeds with the assumption that the resultant development will realize enhanced income over time and WMATA negotiates on the basis of sharing this enhancement. If we say WMATA has negotiated to share in approximately 50% of the net benefit on the basis of a 20-year access agreement, and that the access fee is subject to a 2% per year escalator, an annual payment in excess of $20,000 would be obtained in the first year, $24,300 in the tenth, and over $29,700 in the the twentieth.

The Attachment portrays, on a more complete basis, the computerized program printouts which assist WMATA in negotiating agreement terms. Also attached is an outline of the development and negotiation process.

4. Benefits for the local jurisdiction.

Besides the amenities and improvements required through exercise of land use and zoning contracts, the local jurisdiction would derive the tax yield benefits from the interface enhanced project. Assuming a tax rate levy of $2.00/$100 at 100% valuation, the annual real estate property tax attributable to the interface above would initially amount to over $26,000. Sales taxes, business licenses, permits, etc., would all combine to increase this figure.

SYSTEM INTERFACE DEVELOPMENT PROCESS

- SITE LOCATED
- DEVELOPER ACCOMPLISHES ACQUISITION VIA CONTRACT, SUBJECT TO OBTAINING REZONING OR PLAN APPROVAL FROM LOCAL GOVERNMENT
- SYSTEM INTERFACE POTENTIAL IDENTIFIED VIA COORDINATION WITH WMATA AND LOCAL JURISDICTION
- DESIGN CONCEPTS COORDINATED WITH LOCAL JURISDICTION, COMMUNITY AND WMATA
- RE-ZONING, IF NECESSARY, OBTAINED
- PROJECT AND/OR SITE PLAN APPROVALS OBTAINED. AT DEVELOPER'S OPTION, PUBLIC AMENITIES GUARANTEED IN EXCHANGE FOR ADDITIONAL DENSITY AND REDUCED REQUIREMENTS
- ACTUAL DEVELOPMENT TIMED TO COINCIDE WITH CLEARLY ESTABLISHED ECONOMIC FEASIBILITY
- DEVELOPER SECURES SYSTEM INTERFACE AGREEMENT WITH WMATA
- FINANCING PERMITS CONSTRUCTION OF PROJECT, INCLUDING SYSTEM INTERFACE

NEGOTIATION OF SYSTEM INTERFACE AGREEMENT

MAIN CONSIDERATIONS:

- DESIGN AND CONSTRUCTION OF ACCESS COMPATIBLE WITH WMATA CONSTRUCTION AND OPERATIONS CRITERIA
- COSTS OF ACCESS CONSTRUCTION BORNE BY DEVELOPER AND ARE EXCEEDED BY BENEFITS TO PROJECT
- COMPENSATION DETERMINED ON BASIS OF SHARING BENEFITS

PROCESS:

- DETAIL FINANCIAL FEASIBILITY STUDY PREPARED
- STUDY CONCLUSION PRESENTED TO DEVELOPER
- DEVELOPER'S RESPONSE REVIEWED
- NEGOTIATIONS PROCEED TO REACH FINAL ACCORD
- SYSTEM INTERFACE AGREEMENT DRAFTED AND FINALIZED

WMATA SYSTEM INTERFACE CASE STUDY WITHOUT SYSTEM INTERFACE
(IN CURRENT DOLLARS)

I. NET OPERATING INCOME	Amount Per Net Rentable Sq. Foot	Total Net Rentable Sq. Foot	Total Amount (000's)	Percentage of Total Gross Income
A. Annual Gross Income: (1)				
Parking, Second lower (B2)	4.50	600	3	0.01
Retail, First lower (B1)	30.00	57600	1728	6.58
Retail, First floor	50.00	45000	2250	8.56
Retail, Second floor	40.00	17500	700	2.56
Office Component	36.00	600000	21600	82.19
Weighted total:	36.47	720700	26281	100.00
B. Less Vacancy & Collection: (2)	1.09	720700	788	3.00
C. Less Operating Costs (3)	6.00	720700	4324	16.45
D. Net Operating Income (4)	29.37	720700	21168	80.55
E. Supportable Dev't Costs:	195.81	720700	141121	536.97
II. ESTIMATED IMPROVEMENT COSTS				
A. Construction Costs (5)	60.00	720700	43242	164.34
B. Special Improvement Costs (6)	0.00	720700	0	0.00
SUBTOTAL "Hard Costs":	60.00	720700	43242	164.34
C. Non-Construction Costs (7)	6.00	720700	4324	16.45
D. Interim Financing Costs (8)	14.52	720700	10465	39.32
SUBTOTAL "Soft Costs":	20.52	720700	14789	56.27
E. TOTAL EST. IMPROVEMENT COSTS	80.52	720700	58031	220.81
III. RESIDUAL VALUE				
A. Supportable Development Costs	195.81	720700	141121	536.97
B. Less Est. Improvement Costs	-80.52	720700	-58031	-220.81
C. Residual Value	115.29	720700	83090	316.16

ASSUMPTIONS

(1) Assumes rents are in current dollars. Assumes change in use to retail on B2 level with system interface project. Assumes entire B1 level to have retail use, although some secondary office space may be leased on this level. Retail rents assumed are base rents, not including utilities, other expenses, or overages. Office rents are full service (i.e., gross of expenses).
(2) Assumes three percent per year.
(3) Assumes operating costs are $6.00 per net square foot.
(4) Assumes capitalization rate of 0.15
(5) Assumes current "hard costs" for office construction are $60.00 per net square foot (or $54.00 per gross square foot at 90 percent building efficiency ratio), including $5.00 per square foot for tenant finish allowance.
(6) These represent the property owner's hard costs for the system interface construction.
(7) Assumes 10 percent of IIA and IIB. Includes A & E fees at 4 percent of IIA and IIB; taxes, insurance, leasing expenses as a percent of IIA and IIB.
(8) Assumes interim financing for IIA-C at 30 percent average outstanding balance and 20 percent interest rate compounded for two years.

WMATA SYSTEM INTERFACE CASE STUDY WITH SYSTEM INTERFACE
(IN CURRENT DOLLARS)

I. NET OPERATING INCOME	Amount Per Net Rentable Sq. Foot	Total Net Rentable Sq. Foot	Total Amount (000's)	Percentage of Total Gross Income
A. Annual Gross Income: (1)				
Retail, Second lower (B2)	35.00	600	21	0.08
Retail, First lower (B1)	31.50	57600	1814	6.84
Retail, First floor	51.00	45000	2295	8.65
Retail, Second floor	40.40	17500	707	2.66
Office Component	36.18	600000	21708	81.73
Weighted total:	36.83	720700	26545	100.00
B. Less Vacancy & Collection: (2)	1.10	720700	796	3.00
C. Less Operating Costs (3)	6.00	720700	4324	16.29
D. Net Operating Income (4)	29.73	720700	21425	80.71
E. Supportable Dev't Costs:	198.19	720700	142832	538.07
II. ESTIMATED IMPROVEMENT COSTS				
A. Construction Costs (5)	60.00	720700	43242	162.90
B. Special Improvement Costs (6)	0.00	720700	0	0.00
SUBTOTAL "Hard Costs":	60.00	720700	43242	162.90
C. Non-Construction Costs (7)	6.00	720700	4324	16.29
D. Interim Financing Costs (8)	14.52	720700	10465	39.42
SUBTOTAL "Soft Costs":	20.52	720700	14789	55.71
E. TOTAL EST. IMPROVEMENT COSTS	80.52	720700	58031	218.61
III. RESIDUAL VALUE				
A. Supportable Development Costs	198.19	720700	142832	538.07
B. Less Est. Improvement Costs	-80.52	720700	-58031	-218.61
C. Residual Value	117.67	720700	84801	319.46
IV. DIFFERENCE IN RESIDUAL VALUE				
A. With System Interface	117.67	720700	84801	
B. Without System Interface	115.29	720700	83090	
C. Difference	2.38		1711	

SYSTEM INTERFACE IMPACTS

	Rents/Sq. Ft With S.I.	Rents/Sq. Ft W/O S.I.	-- S.I. Premium -- Amount	Percent
Retail, Second lower (B2)	35.00	4.50	30.50	677.78
Retail, First lower (B1)	31.50	30.00	1.50	5.00
Retail, First floor	51.00	50.00	1.00	2.00
Retail, Second floor	40.40	40.00	0.40	1.00
Office component	36.18	36.00	0.18	0.50

ASSUMPTIONS

(1) Assumes rents are in current dollars. Assumes change in use to retail on B2 level with system interface project. Assumes entire B1 level to have retail use, although some secondary office space may be leased on this level. Retail rents assumed are base rents, not including utilities, other expenses, or overages. Office rents are full service (i.e., gross of expenses).
(2) Assumes three percent per year.
(3) Assumes operating costs are $6.00 per net square foot.
(4) Assumes capitalization rate of 0.15
(5) Assumes current "hard costs" for office construction are $60.00 per net square foot (or $54.00 per gross square foot at 90 percent building efficiency ratio), including $5.00 per square foot for tenant finish allowance.
(6) These represent the property owner's hard costs for the system interface construction.
(7) Assumes 10 percent of IIA and IIB. Includes A & E fees at 4 percent of IIA and IIB; taxes, insurance, leasing expenses as a percent of IIA and IIB.
(8) Assumes interim financing for IIA-C at 30 percent average outstanding balance and 20 percent interest rate compounded for two years.

EXHIBIT D

WMATA
"PROTOTYPE AGREEMENT"

ACCESS RIGHTS AGREEMENT
_____ STATION

AGREEMENT made and entered into this _____day of _____, _____, by and between _____, corporation (herewith referred to as "_____", and the WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY, a body corporate and politic (hereinafter referred to as "WMATA").

WITNESSETH:

WHEREAS, _____ is the owner of a certain parcel of land located at _____, upon which parcel is being developed _____ known and hereinafter referred to as _____(PROJECT NAME)_____; and

WHEREAS, WMATA is presently operating (modify as appropriate if not in operation) as part of its rapid transit system for the National Capital Region a Metrorail station at _____ presently called and hereinafter referred to as the "_____ Metro Station"; and

WHEREAS, the parties hereto desire to provide for a direct access (amplify as necessary) to and through the _____ from the _____ Metro Station __(describe location of connection),__ and desire to agree concerning the design, construction and operation of said direct access connection; and

WHEREAS, the parties hereto desire to agree to those rights and considerations respecting the construction, operation, maintenance, repair, replacement and use of said direct access.

NOW, THEREFORE, for and in consideration of the sum of TEN DOLLARS ($10.00), and in consideration of the covenants and conditions contained herein, the receipt and sufficiency of which are hereby acknowledged, WMATA hereby grants unto _____ the rights of direct access to the _____ _____ Metro Station _____, as more fully described herein.

Design and Construction of the Direct Access Connection. _____ shall prepare at its sole cost and expense all design and construction plans and specifications necessary for the construction and operation of the direct access connection in conformance with the general conceptual plans attached hereto as Exhibit "A" and made a part hereof, and shall submit all such plans and specifications to WMATA for its approval, which approval shall not be unreasonably withheld. Include in the plans a delineation of the limits of the construction work areas and access thereto with emphasis made on minimizing the affect on Metro operations. _____ shall submit a construction staging and timetable and advance notice shall be made in writing to WMATA at least 10 days in advance of any construction activity. WMATA reserves the right to inspect the construction of the direct access. Upon approval of the plans and specifications by WMATA, _____ shall, at its own cost and expense, commence and pursue diligently to completion the construction of the direct access connection in accordance with the approved plans and specifications.

Use of Direct Access Connections. _____ agrees that use of said direct access connection and adjacent areas shall not impair or restrict the use and enjoyment of WMATA's Metro Station mezzanine and entrance facility

(modify as appropriate) as may result from (a) such concentration of people in the access area as would obstruct access to and from the station facility, (b) loud, sustained or unpleasant noises, (c) noxious odors, (d) accumulation of trash, dirt or debris, (e) harsh lighting and/or lighting fixtures or signs, posters or billboards not compatible with reasonable Metro graphic requirements. The use of said direct access connections shall at all times be consistent with the days and hours of WMATA's Metro operations and WMATA shall have the rights to close or caused to be closed the direct access whenever it closes its _____ Metro Station and/or _____ mezzanine and entrance facility (modify as appropriate).

Maintenance of Direct Access Connection(s). _____ shall, at its sole cost and expense, maintain the direct access on the WMATA property, as designated on Exhibit "A", in good, safe and sanitary order, condition and repair. If _____ fails or neglects to maintain or repair said direct access, WMATA may give written notice to _____ specifying any such failure or neglect and directing _____ to perform such specified maintenance or repair within ten (10) days (or an additional agreed period if such maintenance or repair work cannot be performed within said ten (10) day period), WMATA may, in its sole discretion: (i) itself perform such work, and _____ shall promptly pay WMATA the cost thereof upon receipt of billing therefor, or; (ii) discontinue access through said direct access connection to the station until such work is performed by _____ In the event WMATA discontinues access to the station due to the failure of _____ to perform such maintenance and/or repair pursuant to this paragraph, WMATA shall promptly restore such access upon completion of such

maintenance and/or repair. After completion of construction of the direct access, _____ shall not reconstruct or modify said direct access without the express prior written consent of WMATA. It is also agreed that the direct access and the areas surrounding same shall at all times be maintained and operated in full compliance with all applicable laws, codes and ordinances and in a manner not to interfere with WMATA's operation of its rapid transit system.

Signage. _____ may locate a single sign above the direct access connection indicating the name "_____ Metro Plaza". Such sign shall conform to WMATA's requirements as to size, type and graphics and shall be designed, fabricated and installed by _____ subject to WMATA's prior approval.

Indemnification of WMATA. _____ shall defend, protect, indemnify and hold harmless WMATA, its officers, agents, employees and contractors, from and against any and all claims, liability, damage, cost and expense, direct or indirect, incurred by reason of any act, or failure to act, of _____, its officers, agents, employees, contractors and suppliers, or any of them, under or in connection with this Agreement. This duty of _____ to defend WMATA shall include the duty to provide legal representation for WMATA at _____ own cost and expense, in actions, suits and other legal proceedings against WMATA, arising from any such act, or failure to act, of _____ in connection with this Agreement.

Insurance. _____ shall maintain personal liability coverage against accidents amounting to $500,000 per individual and $1,000,000 in the aggregate.

Payment to WMATA. In consideration of WMATA's granting the right of direct access to _____ required to establish the herein described direct access from the _____ Metro Station to the (Project Name)_____, _____ shall pay rental to WMATA as follows:-

---

Replacement and/or Modification of (Project Name). No change or alteration of the (Project Name) structure shall affect the rights of the parties hereunder so long as any such change or alteration does not alter, in a manner inconsistent with this Agreement, the direct access or otherwise affect the parties' performance of and compliance with this Agreement. In the event the present (Project Name) structure is destroyed, altered or modified in such a way as to affect said direct access or the parties' performance with this Agreement, _____ shall continue to have the right, but not the obligation, to construct and/or maintain, in a manner consistent with this Agreement, the direct access provided, however, that any construction, redesign, relocation or other work necessary to the construction of such entrance way shall be subject to the approval of WMATA, such approval not to be unreasonably withheld.

All terms and conditions with respect to this Agreement are expressly contained herein and the parties agree that no representative or agent of any party has made any representation or promise with respect to this Agreement not expressly contained herein.

The provisions hereof shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, legal representatives successors and assigns.

IN WITNESS WHEREOF, _____, General Partner, and _____, a _____, General Partner, by _____, General Partner, have affixed their hands and seals on behalf of _____: and the Washington Metropolitan Area Transit Authority has caused its corporate name to be hereto subscribed and does hereby appoint ----------, its Assistant General Manager, as attorney-in-fact by and on its behalf to acknowledge and deliver said Agreement, and has caused its corporate seal to be here affixed and attested by Delmer Ison, its Secretary, this _____ day of _____, 1982.

_____ _____
WITNESS

_____ _____
WITNESS

STATE OF MARYLAND (modify as appropriate)
MONTGOMERY COUNTY, ss:

I, _____, a Notary Public in and for the aforesaid jurisdiction_____, do hereby certify that _____ and _____Partners, trading as the _____, parties to a certain Agreement and Contract for Access Rights bearing date of the _____day of _____, 1982, and hereto annexed, personally

THE TRANSPORTATION RESEARCH BOARD is a unit of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. The Board's purpose is to stimulate research concerning the nature and performance of transportation systems, to disseminate information that the research produces, and to encourage the application of appropriate research findings. The Board's program is carried out by more than 200 committees, task forces, and panels composed of more than 3,300 administrators, engineers, social scientists, attorneys, educators, and others concerned with transportation; they serve without compensation. The program is supported by state transportation and highway departments, the modal administrations of the U.S. Department of Transportation, the Association of American Railroads, the National Highway Traffic Safety Administration, and other organizations and individuals interested in the development of transportation.

The National Research Council was established by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and of advising the federal government. The Council operates in accordance with general policies determined by the Academy under the authority of its congressional charter of 1863, which establishes the Academy as a private, nonprofit, self-governing membership corporation. The Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in the conduct of their services to the government, the public, and the scientific and engineering communities. It is administered jointly by both Academies and the Institute of Medicine.

The National Academy of Sciences was established in 1863 by Act of Congress as a private, nonprofit, self-governing membership corporation for the furtherance of science and technology, required to advise the federal government upon request within its fields of competence. Under its corporate charter the Academy established the National Research Council in 1916, the National Academy of Engineering in 1964, and the Institute of Medicine in 1970.

TRANSPORTATION RESEARCH BOARD
National Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

ADDRESS CORRECTION REQUESTED