

UNEDITED
WORKING DOCUMENT

SUMMARY PROJECT REPORT

WORKING DRAFT

November 17, 1969

TABLE OF CONTENTS

I. SUMMARY 1

 Project Selection 1

 Table 1: Project Description and Initiation Date 3

 A. Commonality of Solutions 6

 Table 2: Projects Categorized by Commonality of
 Solutions 7

 B. Innovative and Imaginative Solutions 10

 C. Institutional Changes 11

 D. Center City Transportation Solutions 11

 E. Center City Transportation Planning Principles 12

 F. Project Selection Criteria 15

 G. Relevance to Guidelines 20

II. TASKS TO BE PERFORMED IN EACH CITY 22

 A. Center City Planning Framework 22

 B. Transportation for Disadvantaged Groups 23

 C. New Institutions 23

III. THE TASK AHEAD 24

I. SUMMARY

This portfolio describes the projects which both UMTA and the five cities should initiate in Phase II of the Center City Transportation Project (CCTP). It identifies the purpose and significance of each project, and its relevance to both the city and the Urban Mass Transportation Administration. Thus, the portfolio provides a basis for agreement and actions on specific Center City transportation projects.

PROJECT SELECTION

The projects which have been selected build upon the insights, experiences, and rapport gained during Phase I. They reflect extensive reconnaissance and dialogue in each city, and the cooperative working relationships which have been established with local officials.

These projects have been identified by the cities as meeting their Center City transportation needs. Each project has been reviewed and endorsed by the top professional staffs of all four firms in the group - Arthur D. Little, Inc.; Skidmore, Owings and Merrill; Real Estate Research Corporation; and Wilbur Smith and Associates - and by each city's technical staff.

The projects were selected by the cities and CCTP through an extensive screening of the many candidate improvements identified in Phase I. They reflect both city needs and national program requirements. Projects selected represent:

- A. Commonality of Solutions - relevance and transferability of methods and results to National transportation problems.

- B. Innovative and Imaginative Solutions - breakthroughs in technological approaches to transportation problems.
- C. Institutional Changes - new institutions to establish ways of relating public and private resources to transportation programs and projects.
- D. Solutions to Center City Problems - solutions that solve specific Center City transportation problems within a regional framework.
- E. Reflection of Planning Goals - projects which are consistent with Center City transportation planning principles.
- F. Application of Project Selection Criteria - projects which reflect specific National and local criteria.
- G. Relevance to National Guidelines - useful examples for National policy statements.

The 17 projects selected for action in Phase II of the Center City Transportation Project are described in Table 1. Six quick-action projects are to be implemented prior to June of 1970; eleven will be in some stage of construction by 1972.

TABLE 1

PROJECT DESCRIPTION AND INITIATION DATE

	<u>Anticipated Initiation Date</u>
<u>Atlanta</u>	
1. <u>Project Intercept: Stage A.</u> Shuttle bus circulation between open parking facilities at the stadium and the Civic Center via a downtown route.	1970
2. <u>Bus Circulation Improvements.</u> Improvement of bus operations and arterial street circulation.	1970- 1972
3. <u>Transitway Experience.</u> Development of a center city component of a proposed rapid transit system.	1972
4. <u>Project Intercept: Stage B.</u> Expansion of Stage A to, first, new forms of bus technology, and second, a "people-mover" coordinated with joint development opportunities.	1972- 1975
<u>Dallas</u>	
1. <u>Transportation Terminals.</u> Development of new ways of achieving effective interchange among the various modes of travel-bus, car, pedestrian, and people-mover - with focus on the Union Station Terminal and Joint Development opportunities.	1971
2. <u>Center City Circulation System.</u> Development of the Main Street Busway, related street closings, and adaptations to bus service and pedestrian movement.	1971
3. <u>Goods Distribution Network.</u> Means of improving goods distribution will be identified, including construction of the first segment of a truck tunnel system.	1973

TABLE 1 (Continued)

Denver

1. Shuttle Bus Loop. Implementation of a system for connecting major activity centers in the Central Business District including new bus technology. 1970
2. Mile-High Stadium - Center City Bus Service. Implementation of shuttle bus circulation between open parking facilities at the stadium and the downtown area. 1970
3. Terminal and Distribution Facilities. Identification of suitable locations for the development of peripheral multi-level parking garages, and construction on one site. Planning of a downtown pedestrian circulation system and construction of selected segments. Identification of potential bus streets and lanes. 1972

Pittsburgh

1. Shuttle Bus: Stadium - CBD - Arena, Implementation of shuttle bus circulation between open parking facilities at the Stadium and the Arena, connecting major activity centers. 1970
2. Center City - Hill District - Oakland Bus Service. Implementation of a demonstration project connecting the institutional center, the highest concentration of disadvantaged persons, and the downtown core. 1970
3. Transit and Street Improvements. Development of an action program for transit, pedestrian, automobile and truck circulation downtown with primary attention given to proposed PATways bus routings and distribution, and to improved pedestrian connections to the Arena. 1972
4. Center City Distribution. Development of private right-of-way east-to-north Center City distribution system for movement between downtown and peripheral parking areas. Design and evaluation of potentials for existing and new people-mover technologies related to adjacent Joint Development opportunities. 1972-1975

TABLE 1 (Continued)

Seattle

- | | | |
|----|--|---------------|
| 1. | <u>Mini-Bus Service (Center City Bus Shuttle).</u>
New Center City bus services to provide more effective east-west and north-south circulation. New technology will be explored, including turbine-powered buses. | 1970 |
| 2. | <u>East-West People-Mover.</u> Identification of locations, technology, usage, and Joint Development impacts for people-movers - along the east-west corridors between the Alaskan Way Viaduct, the waterfront and Interstate 5, with construction of the first segment. | 1972-
1973 |
| 3. | <u>Parking Terminals.</u> Development of a parking strategy and construction of the first peripheral parking garage as a terminal for the people-mover. | 1972-
1973 |

A. Commonality of Solutions

The projects have many elements in common in their approaches to solving existing and emerging Center City transportation needs. These - identified in Table 2 - reflect the basic strategy of the CCTP program which favors, where possible, National market aggregation. They include both quick-action and longer-term, more innovative solutions. Quick-action programs are envisioned as first-stage solutions to the introduction of longer-range, new technologies. The particular combination of quick-action projects and longer-range demonstrations for a given city is tailored to that city's political and institutional structure. This strategy:

- Reflects the auto orientation of the Center City and the need for efficient public and private transport services.
- Indicates the demand for efficient transfer of people between car, bus and street.
- Recognizes parking as a key element in Center City transportation.
- Emphasizes the importance of the pedestrian in the Center City.
- Creates an evolutionary approach toward new system development.

TABLE 2

PROJECTS CATEGORIZED BY COMMONALITY OF SOLUTIONS

	Quick-Action Projects			Longer Term Projects			
	Parking Shuttle Bus	New Bus Technology; Design and Information Systems	Street and Expressway Adaptation	Terminals	People-Movers, Walkway Systems	Goods Movement	Center City Rapid Transit Distribution
Atlanta							
Project Intercept: Stage A	X	X					
Project Intercept: Stage B	X	X			X		X
Bus Circulation Improvements		X	X				
Transitway Experiment		X	X				
Dallas							
Transportation Terminals		X		X	X		
Goods Distribution Network						X	
Center City Circulation System		X	X	X	X		X
Denver							
Shuttle Bus Loop		X	X				
Mile-High Stadium - Center City Bus Service	X						
Terminal and Distribution Facilities				X	X		
Pittsburgh							
Shuttle Bus: Stadium - CBD - Arena	X	X					
Center City - Hill District - Oakland Bus Service		X					
Transit and Street Improvements		X	X				
Center City Distribution				X	X		X
Seattle							
Mini-Bus Service	X	X	X				
East-West People-Mover					X		X
Parking Terminals				X	X		X

Quick-action The quick-action solutions recognize that in all five cities rubber-tired technology (buses) will remain the dominant line-haul mode for the next decade. Consequently, the Center City street system must be readjusted to more effectively accommodate bus flows.

The quick-action projects - involving parking-shuttle bus systems, new bus technology, and street and expressway adaptation - are concerned with this adjustment.

- (a) Shuttle-bus services - The use of shuttle-bus operations to provide access from peripheral parking areas to the office-commercial core, to improve circulation within the core, and to provide linkages between major activity centers.
- (b) Circulation improvements - The re-evaluation of the Center City circulation system, to identify potential opportunities to improve the flows of buses, automobiles, pedestrians, and trucks; to separate the various types of traffic; to develop street specialization or closure programs; and to promote desirable developmental patterns.
- (c) Information systems - The development and application of new types of graphic displays to permit transit riders to determine where they are and how best to reach their destinations.

The quick-action projects will be implemented with full recognition of the need for the introduction of new technological solutions, involving other than automobile or bus technologies. The longer term projects are intended to serve this need.

Longer term solutions: These solutions include the introduction of modified or new technologies, the development of new institutional

structures, and the introduction of new planning and development strategies. Opportunities exist for the introduction of people-movers, modal transfer points, and fringe parking developments, integrated with Joint Development whenever practical. The impacts of such improvements could produce more efficient land use patterns and create an improved Center City environment. Accordingly, longer term solutions emphasize the commonality of:

Multi-modal Transportation Terminals - Terminals which create integrated

downtown transportation centers for transfer between bus, rapid transit, auto, and pedestrian movement systems. Terminals which also afford excellent Joint Development opportunities.

People-Movers -

New Center City-scaled systems which move people, relate transportation terminals to downtown land uses and provide Joint Development opportunities.

Rapid transit -

Rapid transit, when introduced, is to form an integral part of transportation terminals and people-movers.

B. Innovative and Imaginative Solutions

The potential for innovation in quick-action projects is severely limited by the time constraints. There is a greater opportunity and need for such innovation in the longer-range time period, where the improvements can be developed as an integral and functional part of new commercial-office complexes. Such facilities as people-movers, pedestrian walkways, specialized malls, Joint Developments, terminal areas, and wide variety of complementary activities must be considered if a new and improved Center City environment is to emerge.

The projects selected allow for innovation and imagination in the application of both new and existing technologies. They reflect the following types of innovation:

Improved Bus Technology

- Upgraded services through the use of exclusive lanes and streets and improved routings
- More attractive and functional vehicle design.
- Low pollutant propulsion systems for buses.
- New information systems, signing techniques (graphic displays) and bus stop designs.

Pedestrian and People-Mover
Technologies

- New climate controlled walkway systems which separate pedestrian and vehicle traffic
- New Center City scaled movement systems which serve intermediate volume ranges.

Terminal Technology

- New designs for parking systems in relation to expressways, bus service, and Joint Development.

The multi-modal transportation terminal offers an opportunity to unite all of these technologies in one place in the Center City. By designing these terminals for all modes and relating them to Joint Development, it becomes possible to create a "structure for mobility" which will help to free the downtown for the pedestrian.

C. Institutional Changes

Though commonality and new technology are essential, institutional changes are also required. Projects reflect the following categories of institutional changes:

1. New techniques for planning and programming Center City and regional transportation needs.
2. New techniques for administering and operating all modes of transportation in the Center City.
3. New techniques for administering Joint Development projects as related to transportation improvements.
4. New techniques for financing Center City transportation.

D. Center City Transportation Solutions

The projects described in this portfolio focus on the Center City. Each project is designed to complement regional transportation systems. Many important, highly visible line-haul and regional public transportation systems are being developed by local and regional planning groups. The CCTP projects are carefully coordinated with the officially adopted plans where they interact with Center City transportation. These locally generated plans include the following:

The Atlanta Rapid Transit Proposal (1969)

The Dallas Rapid Transit Proposal (1968)

The Denver Regional Bus System Development (In Progress)

The Pittsburgh "Early-Action Program" - a system of two exclusive busways and a 10-mile line of the Transit Expressway ("Skybus") technology

The Seattle Rapid Transit Proposal (1968)

E. Center City Transportation Planning Principles

Certain Center City transportation planning principles underlie project formulation. Public transportation improvements must be guided by a multi-disciplined planning process that is responsive to each city's needs.

1. All transportation improvements must be developed within a total Center City planning framework, which complements the regional transportation facilities providing line-haul access to the Center City. To justify capital improvements, projects must be part of a plan.

2. Center City transportation improvements must be multi-modal. It is essential to coordinate highways, public transport, pedestrian micro-systems, goods movement, and terminal facilities. Street and highway-related improvements are necessary to allow more effective and innovative use of public transportation to facilitate development of pedestrian ways, and to improve traffic flow.
3. Efficient radial or line-haul public transportation services play an important role in bringing people to the Center City, in attracting present automobile users, and in relieving street congestion. Consequently, line-haul transportation improvements provide an important framework for Center City circulation and distribution systems.
4. Transportation terminals which encourage the convenient transfer of people from line-haul transit facilities to Center City circulation systems are an increasingly important part of Center City transportation and development plans.
5. Pedestrian movement systems - including people-movers - should effectively link major activity centers. These linkages are essential for the economy and amenity of the Center City.
6. The multiple use of urban space at transportation terminals, and along Center City transport routes, can produce both urban amenity and economic advantage. Such Joint Developments have been successfully achieved in Montreal's subway stations and in Tokyo's joint highway and commercial facility.

7. The environmental improvement opportunities created by new transportation systems should be realized in both the new facilities themselves and the adjacent areas. Solutions should add to the amenity of the city in several ways:
- By creating such well-designed open spaces as malls, plazas, walkways, and gathering places.
 - By integrating transportation facilities with commercial and office developments.
 - By developing special-function streets, reducing or eliminating conflicts between pedestrian, vehicle and transit movements.
 - By increasing the accessibility for pedestrians to a variety of commercial and complementary opportunities.

All of these can combine to make the transit ride itself inviting to the passenger - an attractive vehicle providing the passenger with a pleasant visual sequence experience en route to a well-designed, person-oriented Center City.

F. Project Selection Criteria

The following broad criteria have been used as a basis for project selection. They reflect National policy requirements and local needs, as well as environmental, economic, social, and transportation considerations.

Individual projects are related to these criteria in Table 3. These evaluations have been made a priori to detailed feasibility studies. Consequently, some refinement of both criteria and evaluations is likely during the Phase II CCTP efforts.

1. Local Criteria

Need - The project serves a recognized Center City transportation need.

Support - The project has the endorsement of established local public and private leadership.

Commitment - the local public and/or private agencies have extended their endorsement of the project to include specific allocations of funds and/or personnel.

Implementability - The project can be initiated or placed into service with the designated time periods.

Consistency - The project is compatible with existing and committed regional transportation facilities, and with longer-range planning objectives.

2. Economic and Social Criteria

Increased Joint Development Opportunities - The project will provide opportunities for coordinated land-use and transportation developments.

Increased City Revenues - The project is expected to lead to increased city revenues through intensive economic activities and increases in land values, the real property tax base, and/or development of direct-revenue generating activities (such as lease holds).

Increased Employment Opportunities - The project is expected to provide increased employment opportunities or offset project employment declines primarily through improved accessibility between labor pools and employment concentrations and increased manpower requirements related to Joint Development projects.

Service for Economically Disadvantaged Groups - The project is expected to improve the mobility of people to whom automobile travel is not available, including low and lower-middle income families, the handicapped, the elderly and the young.

3. Environmental Criteria

New Urban Development Options - The project is expected to stimulate new public and private developments in the Center City and its environs.

Increased Attractiveness, Diversity and Variety - The project is expected to improve the quality of life in Center City areas by increasing the compatibility of the environment and the transportation system.

Reduced Pollution Levels - The project is expected to contribute to the reduction of Center City air and noise pollution.

Positive Impact on Buildings and Streets - New transportation structures should enhance, not detract from, the visual attractiveness of existing architectural landmarks and the natural urban settings.

4. Transportation Criteria

Improved Service Quality - The project should provide greater frequency of service, more extensive coverage, a more comfortable ride, and higher speeds than are available on existing services.

Increased Route or Corridor Capacity - The project should increase the passenger-carrying capacity in its travel corridor.

Reduced Street Congestion - The project should reduce street and sidewalk congestion by attracting motorists to public transport, by reducing or eliminating impedances to all types of movement, or by creating new movement channels.

Travel Time Savings - The project should reduce the time required for travel to, from, or within the Center City.

Improved Circulation - The project should enable pedestrians, buses, cars, and trucks to move freely and directly through and within the Center City.

Reduced Conflicts - The project should reduce interference between pedestrians, buses, autos, and trucks by planned street specialization, horizontal and vertical separation of movements, and traffic engineering measures.

Improved Center City Linkages - The project should promote movement and interaction between major Center Cityfoci.

Cost-Service Compatability - Expected project costs are compatible with anticipated usage, impacts, and other relevant project considerations.

5. National Criteria

Transferability (commonality) - The experiences gained in planning and implementing the transportation improvement can be applied in other Center Cities and will help identify potential national markets for particular technologies.

Innovational Character - The project includes the innovative use of existing technologies or the use of new technologies.

Institutional Change - The project involves adaptations of existing institutions and/or creation of new institutions by the private and /or public sectors to implement transportation improvements.

Timing - The project complies with UMTA's requirements for immediate action (1970) or intermediate-range (1972) improvements.

TABLE 3
RELATIONSHIP OF PROJECTS TO SELECTION CRITERIA

Project/ Criteria	LOCAL			ECONOMIC AND SOCIAL						ENVIRONMENTAL					TRANSPORTATION					NATIONAL					
	Need	Support	Commitment	Implementability	Consistency	Increased Joint Devel. Opportunities	Increased City Revenues	Increased Employment Opportunities	Service for Economically Disadvantaged groups	New Urban Development Options	Increased Attractiveness, Diversity, Variety	Reduced Pollution Levels	Enhance Visual Impact	Improved Service Quality	Increased Route or Corridor Capacity	Reduced Street Congestion	Travel time Savings	Improved Circulation	Reduced Conflicts	Improved Center City Linkages	Cost-Service Compatability	Transferability	Innovational	Institutional Change	Timing
<u>Atlanta</u>																									
Project Intercept: Stage A	X	X	X	X	X				X					X						X	X		X		X
Project Intercept: Stage B	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X(1)	X	X	X	X
Bus Circulation Improvements	X	X	X	X	X				X		X			X		X	X		X	X	X		X	X	X
Busway Experiment	X	X	X	X	X			X	X		X			X	X	X			X	X	X		X	X	X
<u>Dallas</u>																									
Transportation Terminals	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X		X	X	X		X	X	X
Goods Distribution Network	X	X	X	X	X	X					X	X	X	X					X	X	X		X	X	X
Center City Circulation System	X	X	X	X	X			X		X	X	X	X		X	X	X		X	X	X		X	X	X
<u>Denver</u>																									
Shuttle Bus Loop	X	X	X	X	X									X					X	X					X
Mile-High Stadium - Center City Bus Service	X	X	X	X	X									X					X	X	X		X	X	X
Terminal and Distribution Facilities	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X		X	X	X
<u>Pittsburgh</u>																									
Shuttle Bus: Stadium - CBD - Arena	X	X	X	X	X				X					X					X	X	X		X	X	X
Center City - Hill District - Oakland Bus Service	X	X	X	X	X			X	X				X	X					X	X	X		X	X	X
Transit and Street Improvements	X	X	X	X	X					X	X	X	X	X		X	X		X	X	X		X	X	X
Center City Distribution	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X(1)	X	X	X	X
<u>Seattle</u>																									
Mini-Bus Service	X	X	X	X	X				X					X					X	X	X		X	X	X
East-West People-Mover	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X(1)	X	X	X	X
Parking Terminals	X	X	X	X	X	X	X	X		X	X	X	X	X		X			X	X	X		X	X	X

(1) Depending on detailed feasibility studies

G. Relevance to Guidelines

Guideline studies are being prepared as a basis for UMTA's National policy formulation. Under examination are such Functional Areas as:

Financing Mass Transit

Consumer Demand Analysis

Planning, Programming and Budgeting Systems

Role of Private Sector

National Policy Synthesis

Bridging the Gap between Comprehensive and Short-Range Planning

Traffic Analysis

Transportation Concepts

Technological Innovations

Urban Design

Center City Regional Planning Coordination

Economic and Social Impact

Joint Development of Economic Uses

The relation of the selected projects to these guideline studies is shown in Table 4. These will be used as case studies to test and refine proposed National policies.

II. TASKS TO BE PERFORMED IN EACH CITY

Three types of tasks will be performed in each city. These are:

- (a) development of a Center City Transportation Planning framework;
- (b) evaluation of transportation services to disadvantaged groups; and
- (c) new institutional mechanisms for administering transportation improvements.

A. Center City Planning Framework

Each project in this portfolio will be developed within a Center City planning framework. This will assure that transportation improvements conform to, and stimulate, development opportunities, and that the parts fit together. It will allow systematic approaches to improve priorities within the broader context of overall capital improvement programs. It will identify additional transport improvements, options and opportunities.

The planning framework in each city will be developed cooperatively with local agencies and will be designed to meet specific Center City planning needs. These frameworks are further detailed elsewhere in this portfolio.

The CCTP planning effort in each city will take place concurrently with the specific projects. It will develop a "short-range" plan for each Center City which will:

- o Identify Joint Development and transportation opportunities.
- o Prepare a development strategy for transportation improvements which reflects:
 - o public and private programs
 - o funding capabilities
 - o development incentives
- o Establish an on-going working relationship with the local community in which the CCTP team serves as the "catalytic presence" in assisting the City to achieve its transportation goals and implement its transportation projects.

B. Transportation for Disadvantaged Groups

Evaluations will be made as to how public transport can more effectively serve lower income and other disadvantaged people living and/or working in the Center City. These evaluations will be directed at providing service or institutional changes which better serve the disadvantaged. They also will lead to National policy formulation.

C. New Institutions

In each city, institutional mechanisms will be recommended for new patterns of relating public and private resources. Without these new forms of administration, many of the projects recommended in this portfolio will be difficult to effectuate.

Institutional changes usually occur in response to specific urban needs. Consequently, many of these will take place as part of the planning and implementation of specific projects. Others will emerge through the on-going planning process.

III. The Task Ahead

This brief overview has summarized the projects to be undertaken in Phase II of the CCTP. Projects have been designed to improve Center City mobility through the use of existing and new technologies, and

The most urgent task immediately ahead is for UMTA and the cities to agree on the projects to be undertaken and establish the priorities for action.

Implementation of the projects is the first step toward developing a "new mobility" in the Nation's Center Cities.