

TRANSPORTATION NEEDS SUMMARY

September 1976

Prepared by

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Secretariat
to the

URBAN CONSORTIUM FOR TECHNOLOGY INITIATIVES

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PREFACE

This is the first report of the Transportation Task Force of the Urban Consortium for Technology Initiatives. It describes the 58 most urgent needs and problems in transportation as perceived by the member jurisdictions of the Urban Consortium, the Nation's 28 largest cities and 6 major urban counties.

These 58 transportation needs were identified in an extensive need identification and screening process conducted by the cities and counties themselves. This needs identification process also provided the basis for the formation of the nine Task Forces of the Urban Consortium.

The purpose of this report is twofold: 1) to describe the unique needs identification and priority process used by the Urban Consortium for Technology Initiatives; and 2) to provide the "Need Statement Abstracts" for each of the 58 transportation needs identified.

This report, Transportation Needs Summary, is the first in a series of reports by the Transportation Task Force of the Urban Consortium. It will be followed by eight "Information Bulletins" developed on 8 of the 58 Transportation needs which were identified by the Task Force as being of the greatest concern at this time.

Action is also being taken on two of the highest priority needs-- "Preferential and Exclusive Lanes" and "Accelerated Implementation Procedures." The "Preferential and Exclusive Lanes" need is being addressed in the Manual for Planning and Implementing Priority Techniques for High Occupancy Vehicles: Executive Summary; Management Report; Technical Guide currently being prepared by the staff of Public Technology, Inc. A User Design Committee composed of representatives from Consortium jurisdictions is guiding the preparation of this Manual. The Consortium's Steering Committee is considering the policy-oriented issues (such as streamlined grant applications) involved in "Accelerated Implementation Procedures," in consort with similar needs which have surfaced in other Consortium Task Forces. Members of the Transportation Task Force are also working with the Urban Mass Transportation Administration in ensuring that Task Force concerns are addressed in the on-going revisions to UMTA's External Operating Manual.

The series of reports by the Transportation Task Force of the Urban Consortium for Technology Initiatives is listed below:

- Transportation Needs Summary
- Asphalt Improvements
- Institutional Framework for Integrated Transportation Planning
- Integration of Para-Transit with Conventional Transit Systems
- New Standard Bus Equipment
- Traffic Signalization Systems
- Transit System Productivity
- Transportation for Elderly and Handicapped Persons
- Transportation Planning and Impact Forecasting Tools

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TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
● General Process of Needs Identification	1
● Transportation Needs Selection Process	2
● The Next Step	6
II. NEED STATEMENTS ABSTRACTS	7
● Index to Need Statement Abstracts	7
● Need Statement Abstracts	10

LIST OF FIGURES

1. Generalized Needs Identification Process of the Transportation Task Force	5
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Chapter I

INTRODUCTION

This report contains the results of the extensive needs identification and screening process conducted by the member cities and counties of the Urban Consortium for Technology Initiatives. Chapter I provides an overview of this unique needs identification process used by the Consortium.

While the needs selection process provided the basis for forming the Task Forces for all nine need areas, this report focuses on the work of the Transportation Task Force. The process by which the Transportation Task Force screened the original 94 transportation needs identified by the Consortium members to its top 10 priority needs is described. Chapter I also contains a status report on Consortium work in four of the top priority need areas.

Chapter II contains the "Need Statement Abstracts" which describe the 58 most important research and development needs in transportation as perceived by the nation's largest urban areas at this time. These 58 needs were derived from the original 94 by consolidation of duplicative need statements. The "Need Statement Abstracts" provided one of the important mechanisms used by the Transportation Task Force in narrowing the needs list from 58 to the top 10 priority needs.

GENERAL PROCESS OF NEEDS IDENTIFICATION

One of the major promises of the Urban Consortium lies in its unique process of needs identification. Local governmental officials are working cooperatively to identify and then focus on the priority needs of their jurisdictions. In this way, the Consortium assures that resultant research and development efforts are directly responsive to existing or potential local governmental problems. Local participation also helps assure that successful solutions will be applied and used.

The major work of the Urban Consortium is carried out by its nine Task Forces (Community and Economic Development; Criminal Justice; Energy; Environmental Services; Health; Human Resources; Management, Finance and Personnel; Public Works and Public Utilities; and Transportation). These Task Forces were organized as a result of the following generalized needs identification process:

- Between November 1974 and February 1975, 1131 needs were identified by the members of the Urban Consortium in response to an open-ended "Needs Identification Package". Each jurisdiction identified its needs in

different ways--some held public meetings, some circulated the package to department heads, some depended upon key individuals in the chief executive's office, as well as in other ways unique to each particular locality.

- The staff of Public Technology, Inc. organized these original 1131 "Needs Statements" into major categories. This organized list was sent back to all jurisdictions. Each representative was asked for a "yes/no" response as to whether each need was of concern in his or her jurisdiction. An indication of the top 3 priorities in each category was also requested. The chief executive officer of each jurisdiction then certified those priorities.
- The Steering Committee of the Urban Consortium established a Needs Committee to oversee the further development and use of the needs which had been identified. In the Spring of 1975, Task Forces were established for the major categories of needs. The Task Force members were selected according to expressed interest by the jurisdictions. PTI staff specialists in each subject provided a rigorous review of the "Needs Statements" and assisted in the process of establishing priorities within each category.
- The nine Task Forces follow similar procedures in selecting the few high priority needs which should be addressed immediately. The basic features of this process--the background information provided and the evaluation criteria--are discussed in the next section. While that section will focus on work of the Transportation Task Force--the "Need Statement Abstracts", "Information Bulletins" and evaluation criteria are common to the work of all nine Task Forces.

TRANSPORTATION NEEDS SELECTION PROCESS

The Transportation Task Force of the Urban Consortium for Technology Initiatives was formally organized in August 1975. The Task Force is comprised of 12 representatives appointed by the Steering Committee of the Urban Consortium. Public Technology, Inc. (PTI) provided the necessary staff support to organize and develop a functioning Transportation Task Force. The following process was used:

- Of the 1131 needs which were initially identified by the members of the Urban Consortium, 94 related to transportation. The 94 needs were reduced to 58 by PTI through consolidation of duplicative "Needs Statements." These 58 were then grouped into four

major categories--Highways, Transportation Systems Management, Mass Transit, and Aviation.

- "Need Statement Abstracts", based on the original needs identification packages, were then developed on each of the 58 needs by the PTI staff. These "Need Statement Abstracts" provided the Task Force members with a one-page, basic definition and overall perspective of the problem. (See Chapter II of this report).
- At a meeting in February 1976, the Transportation Task Force met to determine priorities among the 58 needs. The following four common Task Force criteria were used:
 - + Commonality - the extent to which a need exists in many jurisdictions.
 - + Magnitude - the importance, scope and urgency of the need.
 - + Community Impact - the extent to which solutions to the need will affect the citizens and community as a whole.
 - + Financial Impact - the monetary effect (costs, savings and revenues) which a solution to the need will have on a city or county.
- Through an iterative evaluation process using the criteria listed above and a rating scheme, the 58 needs were rank ordered. The following top 10 needs, listed in alphabetical order, were selected for further attention:
 - Accelerated Implementation Procedures
 - Asphalt Improvements
 - Institutional Framework for Integrated Transportation Planning
 - Integration of Para-Transit with Conventional Transit Systems
 - New Standard Bus Equipment
 - Preferential and Exclusive Lanes
 - Traffic Signalization Systems
 - Transit System Productivity
 - Transportation for Elderly and Handicapped Persons
 - Transportation Planning and Impact Forecasting Tools
- Two of the top priorities, "Preferential and Exclusive Lanes" and "Accelerated Implementation Procedures," received immediate action by the Transportation Task Force. The Manual for Planning and Implementing

Priority Techniques for High Occupancy Vehicles: Executive Summary; Management Report; Technical Guide is currently being developed by the PTI staff through a specific task under U.S. Department of Transportation funding. An User Design Committee composed of representatives from Consortium jurisdictions is guiding the preparation of this Manual. The Consortium's Steering Committee is considering the policy-oriented issues (such as streamlined grant applications) involved in "Accelerated Implementation Procedures", in consort with similar needs which have surfaced in other Consortium Task Forces. Members of the Transportation Task Force are also working with the Urban Mass Transportation Administration in ensuring that Task Force concerns are addressed in the on-going revisions to UMTA's External Operating Manual.

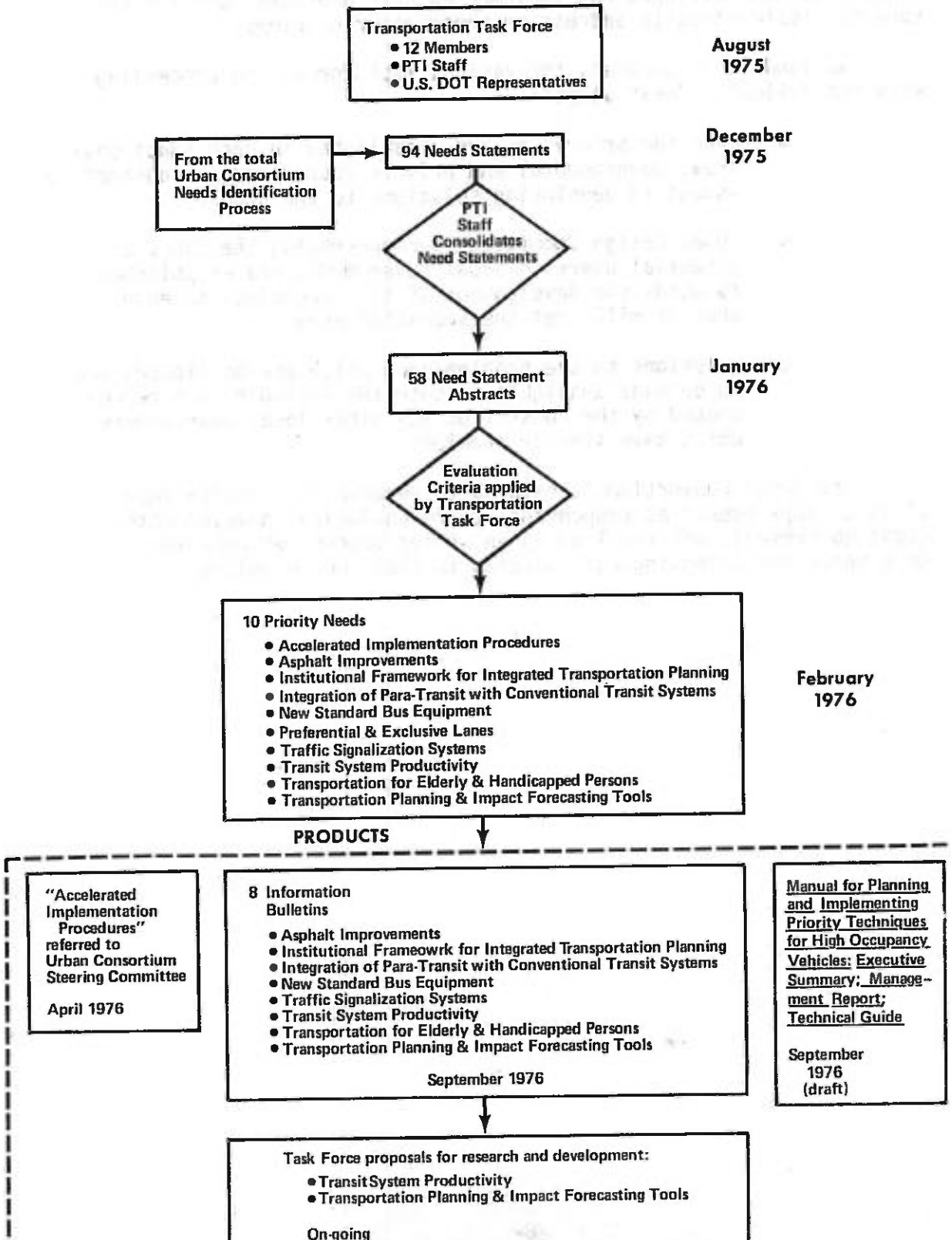
- Information Bulletins were then developed by PTI staff on the 8 other priority needs. The "Information Bulletins", ranging from 10-20 pages, provided more detailed information on each need. These Bulletins provided the information base from which the Transportation Task Force selected other needs for future actions. Localities can also use these "Information Bulletins" to begin to develop solutions. As stated in the Preface, the eight "Information Bulletins" developed for the Transportation Task Force will be published as a continuing series to this first report.
- At its second meeting in June 1976, the Transportation Task Force voted to concentrate its next efforts on "Transit System Productivity" and "Transportation Impact Forecasting." The Task Force is in the process of encouraging federal and private support for further research and development in these two areas.

The Task Force emphasized the importance of the other six priority needs and will pursue solutions as resources become available. The "Information Bulletins" will continue to provide the basis for decision-making on such efforts.

The work of the Transportation Task Force to date is graphically displayed in Figure 1. The general process reflected in Figure 1 is common to all nine Consortium Task Forces. Each Task Force is proceeding on its own schedule in this process. The Transportation Task Force along with the other Task Forces will continue their work as described below.

FIGURE 1

GENERALIZED NEEDS IDENTIFICATION PROCESS OF THE TRANSPORTATION TASK FORCE



THE NEXT STEP

The Urban Consortium for Technology Initiatives has begun to identify what the nation's largest cities and counties perceive as their most urgent research and development needs and problems. The Consortium has developed and implemented both a process and a structure for systematically addressing these major problems.

As funding is secured, the various Task Forces are proceeding with the following "next steps":

- Once the priorities are established in each functional area, governmental and private sources are encouraged to invest in developing solutions to the problem.
- "User Design Committees", representing the range of potential users in local government, are established to guide the development of the technology to ensure that it will meet the specified need.
- Solutions to the problem/need which are developed, are to be made available to both the jurisdictions represented by the Consortium and other local governments which have similar problems.

The Urban Consortium is helping to reverse the passive role of local governments as respondents to technological developments. Local governments are involved in an active process whereby they help shape the technological solution to their own problems.

Chapter II

NEED STATEMENT ABSTRACTS

As described in Chapter I, the "Need Statement Abstracts" were used to provide the Transportation Task Force members with a brief definition and overall perspective of the needs which had been identified by member jurisdictions of the Urban Consortium. The "Need Statement Abstracts" used by the Transportation Task Force are summarized in this chapter and indexed below.

It should be noted that the numbering system in the list below relates to the overall needs selection process of the Urban Consortium and does not represent a priority listing. The numbers are repeated here for reference purposes.

INDEX TO NEED STATEMENT ABSTRACTS		<u>Page</u>
810	HIGHWAYS	
811	Finance and Administration	10
	811-1 Vehicle License Transactions	10
812	Design	10
	812-1 Utility Clearance Requirements	10
	812-2 Location of Sidewalks	10
813	Materials and Construction	11
	813-1 Asphalt Improvements	11
	813-2 Asphalt Removal	11
	813-3 Asphalt and Concrete Repair	12
	813-4 Concrete Removal	12
	813-5 Concrete Strength Measurement	12
	813-6 Anti-Skid Paving Material	13
	813-7 Soil Stabilizers	13
	813-8 Soil Compaction Techniques	13
	813-9 Non-Corroding Bridge Materials	14
814	Maintenance	14
	814-1 Alternatives to Present Paints	14
	814-2 Increased Lane Line Reflectivity	14
	814-3 Traffic Paint Removal	15
	814-4 Plant Growth Retardant	15
	814-5 Curb, Gutter, and Sidewalk Repair	15
	814-6 Street Light Maintenance	16
	814-7 Street Facilities Inventory	16

820	TRANSPORTATION SYSTEMS MANAGEMENT	<u>Page</u>
821	Traffic Operations	17
	821-1 Vehicle Detection Devices	17
	821-2 Traffic Signalization Systems	17
	821-3 Traffic Flow Monitoring Devices	18
	821-4 Variable Message Signs	18
	821-5 Street Lighting	18
	821-6 Temporary Barricades	19
	821-7 Resilient Sign Posts	19
	821-8 Speed Limit Sign Impact Studies	19
	821-9 Turn-Lane Spacing	20
822	Intermodal Integration	20
	822-1 Computerized Traffic Volume Data	20
	822-2 Computerized Traffic Accident Data	20
	822-3 Institutional Framework for Integrated Transportation Planning	21
	822-4 Accelerated Implementation Procedures	21
	822-5 Transit Patronage Predictors	21
	822-6 Transportation Planning and Impact Forecasting Tools	22
	822-7 Traffic Performance Measurement	22
823	Priority Treatment for High Occupancy Vehicles	22
	823-1 Preferential and Exclusive Lanes	22
	823-2 Ramp Treatments	23
	823-3 Signal Pre-emption	23
	823-4 Fringe Parking and Express Buses	23
824	Automobile Disincentives	24
	824-1 Auto Use Restrictions	24
825	Special Facilities	24
	825-1 Parking	24
	825-2 Bikeways and Walkways	24
830	MASS TRANSIT	
831	Planning and Marketing	25
	831-1 Coordination of City-Suburban Transit	25
	831-2 Public Information Services	25
	831-3 Collection-Distribution Systems	25
832	Operations and Maintenance	26
	832-1 Fleet and Driver Scheduling	26
	832-2 Transit System Productivity	26
	832-3 Revenue Processing and Accounting	27
	832-4 Personnel Issues	27
	832-5 Equipment Management	27
	832-6 Portable, Computer-Linked Route Indicator	28
	832-7 New Standard Bus Equipment	28

	<u>Page</u>	
833	Monitoring and Evaluation	28
	833-1 Establishing a Management Information System for Transit Operations	28
834	Elderly and Handicapped	29
	834-1 Transportation for Elderly and Handicapped Persons	29
835	Para-Transit	29
	835-1 Integration of Para-Transit with Conventional Transit Systems	29
836	Transit Miscellaneous	30
	836-1 Book Vending Machines on Buses	30
	836-2 Mass Transit System for Evacuation	30
840	AVIATION	
841	Ground Transportation	31
	841-1 Access	31
	841-2 Intra-terminal	31
842	Air Traffic Control	31
	842-1 Aircraft Monitoring	31
	842-2 Electronic Signs for Taxiing Aircraft	32
843	Goods Movement	32
	843-1 Baggage Handling System	32

NEED STATEMENT ABSTRACTS

Each "Need Statement Abstract" has a title and identification number. A "problem statement" and "solution considerations" are given for each. The problem statement provides a specific definition for each need. The solution considerations reflect possible solutions as proposed by member jurisdictions.

811 HIGHWAYS-FINANCE AND ADMINISTRATION

No. 811-1
VEHICLE LICENSE TRANSACTIONS

Problem Statement: Present practices for handling state license applications on the local level are cumbersome, requiring much manual processing with a considerable time lag before computer print-outs of license information are ready.

Solution Considerations:

1. A procedure should be developed to immediately record the transaction in a central data bank.
2. The system should be able to handle specially coded renewal cards and have typing capability for new and revised transactions.

812 HIGHWAYS-DESIGN

No. 812-1
UTILITY CLEARANCE REQUIREMENTS

Problem Statement: The Federal Highway Administration requires a thirty foot width of clear area from the edge of pavement to utility poles or other structures or facilities. This results in acquisition of large amounts of land for rights-of-way, which is often very costly. In many cases, the land is simply unavailable.

Solution Considerations: A study of utility clearance requirements should be done and revised guidelines established.

No. 812-2
LOCATION OF SIDEWALKS

Problem Statement: Revised guidelines for location and design of sidewalks are needed.

Solution Considerations: Guidelines should consider the type of street, location and type of parking, location of activity centers and travel speeds.

No. 813-1
ASPHALT IMPROVEMENTS

Problem Statement: Because of rising oil prices, the cost of asphalt paving and patching has increased significantly. This has resulted in lower maintenance levels due to budget constraints. However, tons of asphalt are removed from road surfaces each year with no presently available techniques for recycling.

Solution Considerations:

1. A review of the state-of-the-art and state-of-the-practice with regard to asphalt paving, patching, removal and recycling is needed.
2. An anti-skid paving material is needed.
3. Air and noise pollution regulations regarding heater-planers and pneumatic drills should be investigated.

No. 813-2
ASPHALT REMOVAL

Problem Statement: Air pollution requirements have eliminated the use of asphalt surface heaters for street repaving. There is a need, then, for an economical, efficient, clean method to remove the top asphalt layer preparatory to street resurfacing.

Solution Considerations:

1. The cost should not exceed present (1/23/75) cost of 8¢/square foot for removal and \$32,000 for equipment.
2. The efficiency should be comparable to present heater hoods which are 8'x12' and move 3 to 10 feet/minute.
3. The method should conform to air quality and Occupational Safety and Health Administration standards
4. A new paving material that could be chemically removed could be developed.