

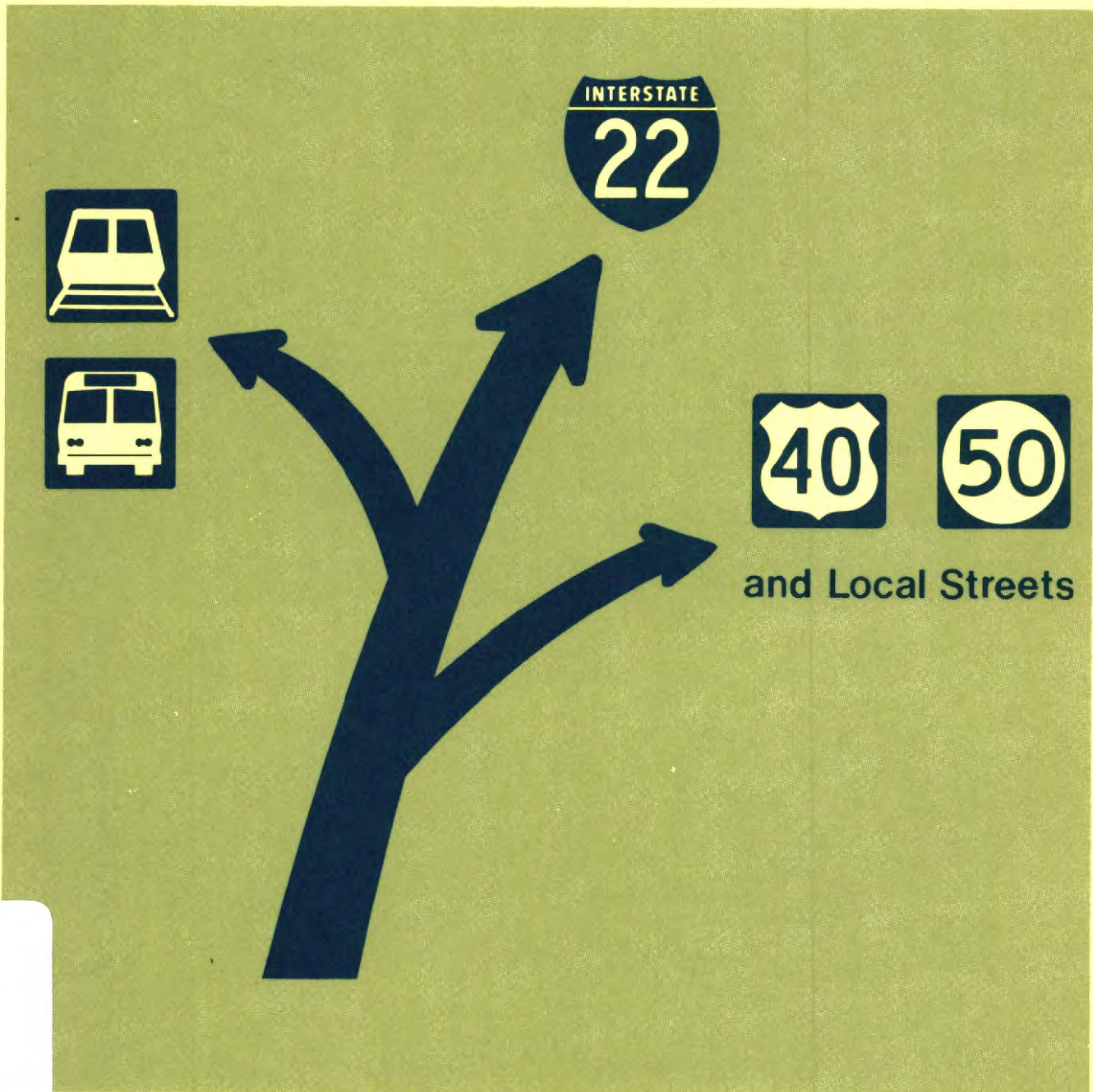


U.S. Department of
Transportation

The Interstate Highway Trade-In Process

December 1982

Volume 2: Synopsis of Trade-Ins



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**The Interstate Highway
Trade-In Program
Volume 2: Synopsis of
Trade-Ins**

Final Report
December 1982

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CHAPTER I
INTRODUCTION

Introduction to Trade-in*

Since 1973, the Interstate Highway trade-in provision has been part of the federal legislation which governs the Federal-Aid Highway program. Known by such other names as Interstate transfer, turn-back, withdrawal-substitution and dedesignation, the trade-in provision gives urban areas the option not to build an Interstate segment, but instead to use the construction funds toward transit and other highway projects.

In its current form, trade-ins can be enacted for proposed Interstate segments both within urbanized areas and connecting separate urbanized areas in the same state. The authorized value of the withdrawn segment is the most recent construction cost estimate plus (or minus) the effects of inflation (deflation) on the highway construction industry. In addition, the unobligated balance of an authorized trade-in continues to be adjusted quarterly for the same inflationary impacts. Obligations are made for a wide range of projects, including the types of transit capital projects which are eligible under UMTA Section 3, and highway capital projects normally funded from one of many Federal-aid highway funding systems (i.e., Interstate, Primary, Secondary and Urban). The trade-in funds pay 85 percent of any substitute project, with 15 percent required from the state or local sources. This compares favorably against UMTA Section 3 projects (80 percent) and Federal-aid to Primary, Secondary and Urban systems projects (75 percent). Finally, withdrawals can still be made until September 30, 1983, and substitute projects must be under contract by September, 1986.

When an urban area and state agree to trade in an Interstate Highway, a formal procedure is followed, as briefly delineated below.

1. The first step is for the Governor and the local governments (including the MPO) to submit to FHWA and UMTA (through FHWA) a request to withdraw a particular Interstate segment. The request must show that the segment is eligible to be withdrawn.

2. After receiving the request, FHWA and UMTA would consider it and decide whether it meets the criteria for withdrawals. The Federal decision to approve a withdrawal request must ordinarily come before September 30, 1983.

3. The Governor and the local governments, typically after receiving approval of the withdrawal request, would submit "concept programs" to FHWA and UMTA spelling out, in a general way, how they propose to utilize the trade-in funds. Once again, Federal approval of the concept programs must ordinarily come before September 30, 1983.

* A more thorough discussion of the history, requirements and extent of the trade-in program is found in Volume I.

4. The state and local officials then develop the substitute projects in greater detail, and decide which projects to submit to the Federal government for funding. The project applications are submitted by the Governor or a designee -- to UMTA, in the case of transit projects, and to FHWA, in the case of highway projects. The projects must also go through the TIP process, environmental impact statements must be prepared where necessary and whatever other similar approvals are required must be obtained.

5. The detailed project applications are approved by UMTA and the field offices of FHWA, as the case may be. The applications will only be approved if sufficient Federal funds are available to pay for them.

6. Construction of the substitute projects must be begun or at least contracted for by September 30, 1986, if funds are available for them.

This volume presents a synopsis of trade-in experiences in 24 urban areas. These 24 areas have enacted all the 36 trade-ins that have occurred from the inception of the program in 1973 through August, 1982.* The synopsis emphasizes the three main aspects of trade-in actions: (1) what conditions led up to a decision to enact a trade-in, (2) what did the trade-in formally entail, in terms of the segment withdrawn, monetary value received, necessary adjustments to the highway network, etc., and (3) what substitute projects have been planned and implemented.

* Since August, one additional withdrawal has been approved (I-895 in Fall River, Massachusetts) and another is still under review (I-895 in Providence, Rhode Island) as of November 1, 1982. These are not discussed in this report.

CHAPTER II

SYNOPSIS OF INTERSTATE TRADE-INS IN 24 URBAN AREAS

This chapter presents a synopsis of Interstate trade-ins that have occurred in 24 urban areas. All relevant events and factors are summarized into separate urban area reports. Each summary contains a brief listing of important urban characteristics. This is followed by a review of the events which led to and resulted in withdrawal and substitution actions. All trade-in actions made through August, 1982 are included here. The synopsis is presented alphabetically by the name of the central city contained within each urban area.

1. Albany, New York

Basic Characteristics

The Albany SMSA had a population of 794,300 in 1980, of which 13 percent resided in the central city.¹ Over 381,000 persons were employed in the SMSA in 1982.²

The Albany urbanized area has over 2140 miles of street network.³ Interstate highways represent 3.6 percent of that total, while other principal arterials comprise 7.2 percent of the network. Over 8.6 million daily vehicle miles were recorded in 1975 -- 27 percent on the Interstate system and 40.5 percent on other principal arterials.

The regional bus transit system provides service throughout the metropolitan area, with a peak requirement of 194 vehicles.⁴ In 1977, 6 percent of work trips were made via public transportation.⁵

Withdrawal Background⁶

The Interstate segment withdrawn was I-687 (see Figure II.1). It was to serve as a local access facility, connecting the area's major east-west (I-90) and north-south (I-87) freeways. Originally offered as part of the City of Albany's areawide highway plan in the early 1950s, this link gained approval as an Interstate highway by 1960.

Withdrawal Process

In July, 1978 the withdrawal of the 3.6 mile I-687 segment was approved by US DOT. The amount authorized for trade-in projects was \$51 million.

In the early 1970s, the State had been proceeding toward construction of I-687. At the same time the predecessor to the MPO, the Capital District Transportation Study, was formulating a regional transportation plan. The State held a public hearing in 1973, at which residents of the Town of Colonie (through which almost all of the segment was to traverse) voiced much opposition. The State re-evaluated their posi-

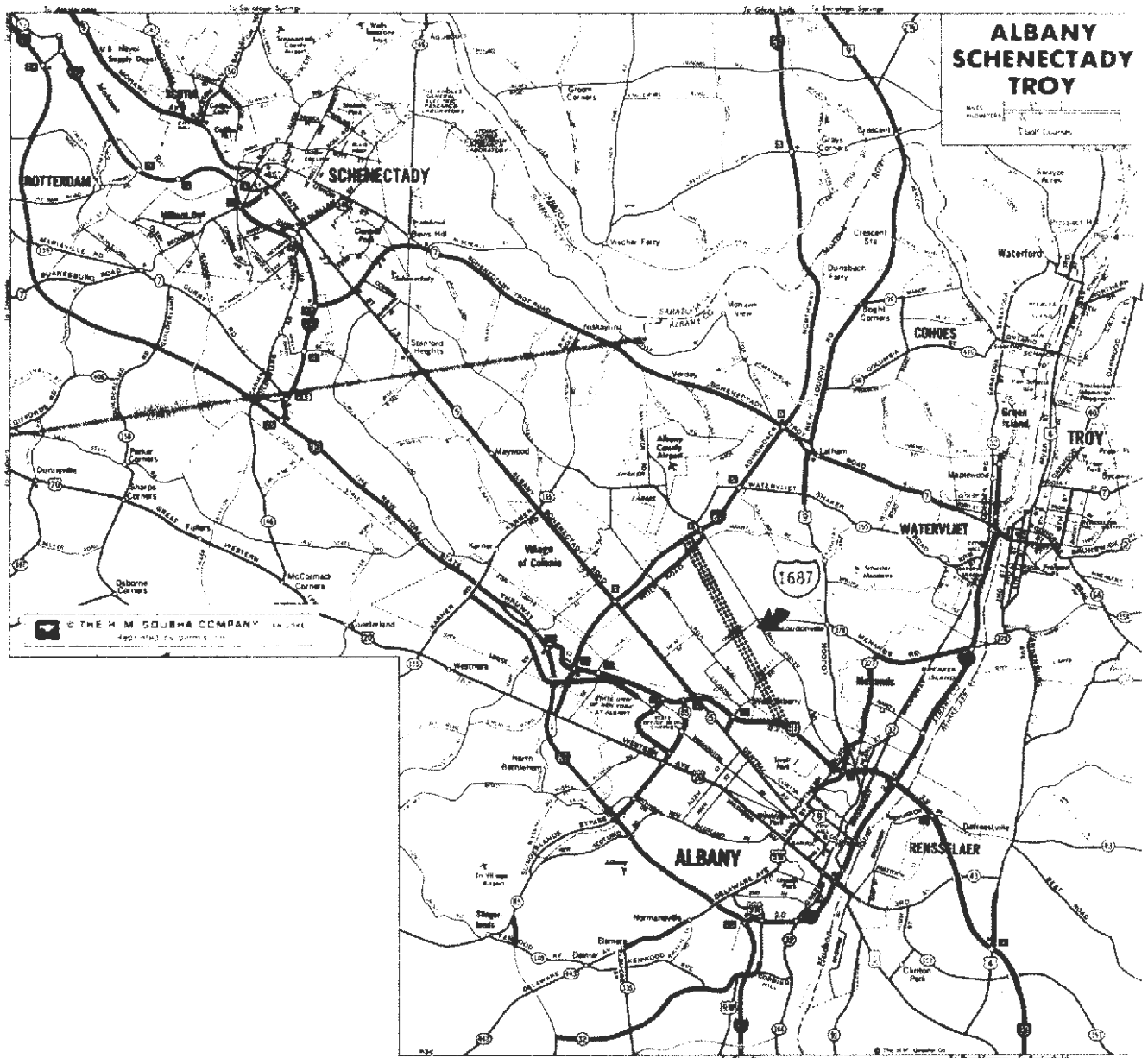


FIGURE II.1

THE ALBANY URBAN AREA AND THE I-687 SEGMENT WITHDRAWN

tion, and the eventual regional plan dropped I-687 as a possible route. The MPO had drafted a report in 1971 proposing to trade in I-687 for transit projects [and other Interstate segments under Section 103 (e) (2)], but the relevant local communities (i.e., City of Albany and Town of Colonie) rejected the plan. Following the 1976 amendments which allow highway substitute projects, the MPO pursued the withdrawal action again. It was not until mid-1978, however, that a formal withdrawal request was actually made. According to the MPO's, director the delay was due to the obscurity of Federal rules and requirements concerning trade-ins.

Substitute Projects

Prior to the withdrawal, the MPO took the lead in developing a list of possible substitute projects. Projects were not to be limited to the particular corridor of the I-687 segment in question. Project proposals were solicited from the member committees, while at the same time a general allocation of 80 percent of the funds for highway projects, 15 percent for transit and 5 percent other purposes (i.e., bikeways, para-transit) was agreed upon. Approximately 26 projects were eventually selected via an evaluative process.

As of June 30, 1982, \$5.2 million has been obligated for transit projects, \$10.7 million for highway projects. The largest funded project -- a \$3.2 million (in Federal funds) bus garage for the City of Troy did not appear on the originally proposed list of substitute projects. Over \$39 million in unobligated funds remain. The latest TIP suggests an 82 percent highway and 18 percent transit split for those funds.

2. Baltimore, Maryland

Basic Characteristics

The Baltimore SMSA had a population of 2.17 million in 1980, with 787,000 residing in the central city. Nearly 1.1 million persons were employed in the SMSA in 1982.

The urbanized area has 4925 miles of street network, of which 2 percent are Interstates and 8.7 percent are other principal arterials. More than 24.3 million daily VMT were recorded in 1975, of which 19.1 percent occurred on Interstates and 45.6 percent on other principal arterials.

Public transportation services require over 880 buses during the peak periods, carrying 11 percent of the area's work trips in 1980.

Withdrawal Background⁷

I-70, an east-west Interstate virtually bisecting the nation, originates in Utah and terminates at the Baltimore city limits, just within the I-695 beltway (see Figure II.2). As part of a regional highway plan

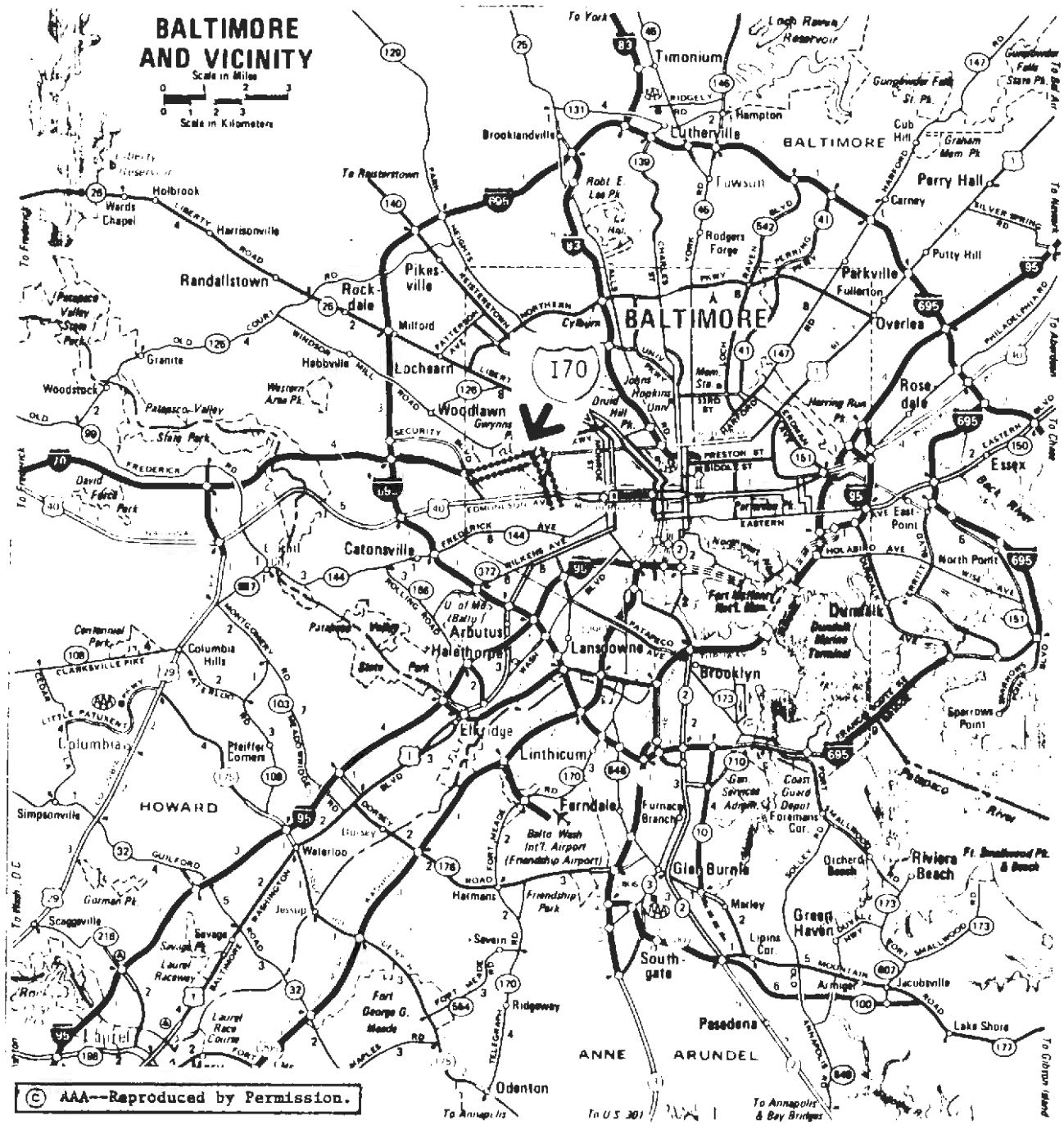


FIGURE II.2
 THE BALTIMORE URBAN AREA AND THE I-70 SEGMENT WITHDRAWN

first formally proposed in 1959 and finally agreed upon in 1968, I-70 was to provide a western spur into the city, stopping short of the CBD but connecting with other Interstates (i.e., proposed I-170 and completed I-95) which would provide access to downtown.

Withdrawal Process

The 3.3 mile segment of I-70, stretching between the city limits and the intersection with proposed I-170, was withdrawn in September 1981. At the time, \$203.7 million was made available for substitute projects.

The I-70 section withdrawn had been under judicial injunction prohibiting its construction since 1971. In a suit brought by the Sierra Club, environmentalists were concerned about the effect of the highway on Leakin Park, one of the city's major parks through which I-70 was to traverse. In 1972, a U.S. District court judge ruled that no new construction could proceed without a new public hearing. In 1979, the State decided to undertake a new EIS (and eventually hold a new public meeting). But it was not completed, as opposition to the highway still existed and since the City of Baltimore began to view other highway and transit needs as more essential. A withdrawal request was made in July, 1981 and approved two months later.

At the time of the withdrawal request, the State recommended that I-70 terminate at the I-695 beltway. The completed I-70 portion beyond I-695 was proposed to be redesignated as a spur to I-70 and given a proper terminus at the Baltimore border. The remaining proposed section of I-70 (from the interchange with proposed I-170 to completed I-95) was recommended for construction but as an Interstate facility.

Substitute Projects

A concept plan was submitted simultaneously with the withdrawal request. The plan is overprogrammed (i.e., it calls for \$333 million in Federal funds while the authorized trade-in amount was only \$200 million), and calls for a 53/47 percent split between transit and highway projects. The bulk of the transit funds are to be spent in two areas: construction of a 5.5 mile extension of the new rapid transit line currently being built (this extension would be outside the City of Baltimore), and construction of a transit mall. As of June 30, 1982, \$7.6 million has been obligated, primarily for rapid transit construction. A number of highway projects are proposed, with approximately two-thirds of the funds used within the City of Baltimore and one-third elsewhere in the urbanized area. The largest projects are in the suburbs, including construction of four very short expressway/arterial facilities. In Baltimore, most projects are of the reconstruction and rehabilitation type, including 31 separate bridge projects.

The transit line extension will receive its matching share from the state, as will the highway projects located outside of Baltimore. All others will be matched by the City of Baltimore.

3. Boston, Massachusetts

Basic Characteristics

The Boston SMSA had a 1980 population of over 2.7 million. The central city had only 563,000 persons. In 1982 employment in the SMSA exceeded 1.4 million.

The Boston urbanized area street network consists of nearly 8460 miles, with Interstates representing 1.4 percent and other principal arterials representing 9.6 percent. Daily VMT in 1975 was over 34.2 million, with 20.7 percent occurring on Interstates and 39 percent on other principal arterials.

The public transportation system consists of many modes, having a peak requirement of 964 buses, 32 trackless trolleys, 145 light rail cars, 192 heavy rail cars and 159 commuter rail cars. Public transportation carried 16 percent of all work trips in 1980.

Withdrawal Background⁸

Urban highway planning in the Boston area began with various studies undertaken in the late 1920s, but no formal areawide plan was produced until 1948. Dubbed the Master Highway Plan, it included proposals for an inner belt and a radial expressway system. (The well-known Route 128 Outer Beltway had already been built.) Various segments were built in the 1950s as a result of this plan, while others were repackaged (and some modified) in a new study in 1957 designed to gain Interstate designation for much of the remaining proposed system. Among those which were proposed (and approved by the federal government) were the following (see Figure II.3):

1. Inner Belt (I-695) - This route was to have been a ring around central Boston, passing through various densely populated sections of the city as well as Cambridge and Somerville. At least one estimate showed that approximately 3800 dwelling units would be required for removal in order to build this highway.
2. Southwest Expressway (I-95) - This proposed route was expanded from 4 to 8 lanes between the 1948 and 1957 reports, and was to traverse various Boston neighborhoods between its termini in Northern Roxbury (Boston) and Route 128 near the Dedham-Milton border. This route was approved for construction in 1964, and between that date and 1970 over 150 acres of land and 775 dwelling units were taken for right-of-way.
3. North Shore Expressway (I-95) - This route was to connect central Boston to the Route 128 Outer Beltway to the north, near the city of Lynn. Various alignments were proposed, necessitating either relocation of commercial establishments or traversing an ecologically

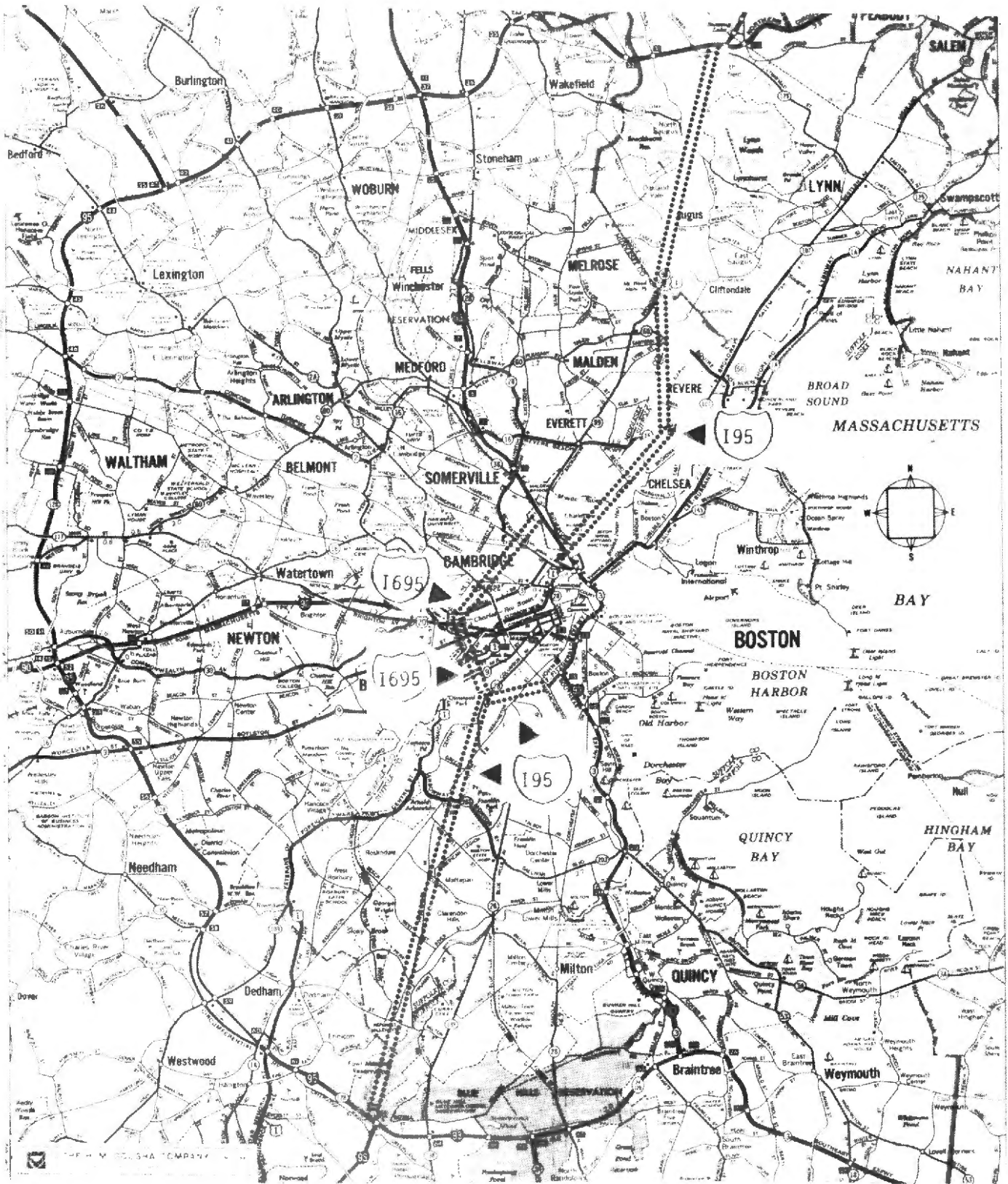


FIGURE II.3

1957 PROPOSED ROUTING OF WITHDRAWN ROUTES

sensitive reserve and the taking of various households. In fact, the State did preliminary construction supporting the latter option.

Community opposition to these latter three proposed highway segments arose from the experience of earlier construction in the 1950s and early 1960s. In particular, the extension of the Massachusetts Turnpike into the CBD (completed in 1963) caused considerable resentment and resistance due both to the number of residential units taken and the relatively remote and autocratic position assumed by the Turnpike Authority. In 1966, citizen groups supported by technical advisors voiced strong opposition to the Inner Belt. This was followed by demonstrations and other forms of activism over the next 3 years. While opposition was strongest in Cambridge, various community groups in the Southwest Expressway corridor also voiced opposition and began to organize.

By 1969, one areawide group, the Greater Boston Coalition, was formed, consisting of anti-highway groups from all over the urban area. Their protests extended beyond the Inner Belt and the Southwest Expressway (although most efforts and attention were focused there) to the North Shore (I-95) route, a proposed third Boston Harbor crossing, and other routes. It should be noted that there were pro-highway spokesmen also, especially among outer suburban communities and various business interests.

The first unit of government to respond demonstrably to this mounting highway opposition was neither a local nor state agency, but was the Federal Highway Administration (FHWA). In 1968, FHWA conceded to restudy alternative alignments to the I-695 Inner Belt in Cambridge. In May of 1969, the Massachusetts Governor appointed a task force to examine statewide transportation planning. That task force recommended a moratorium on most highway construction, and in February 1970, the Governor announced such a halt on all highway construction within the Route 128 Beltway. This was followed by the creation of the Boston Transportation Planning Review (BTPR), which was to restudy the various highway corridors as well as transit extensions too. Recommendations of the BTPR were released between mid-1972 and early 1973 in the form of separate corridor reports. For the relevant corridors, the following was recommended:

1. Inner Belt - The Governor deleted this corridor from the BTPR study. However, recommendations were made calling for transit extensions and a truck route arterial.
2. Southwest Corridor - While there was particular support for a combined expressway - rapid transit facility in the corridor (especially from Alan Altshuler, then the State's Secretary for Transportation and Construction), the eventual recommendation was for rapid transit and commuter rail facilities.

3. North Shore Corridor - As in the case of the Southwest Corridor, initial support for a scaled-down expressway facility eventually diminished, and was replaced here by a recommended package of TOPICS-type improvements on existing corridor highways.

Withdrawal Process

All of I-95 (the Southwest and North Shore Expressways) and I-695 (the Inner Belt), a total of 25.9 miles, were formally withdrawn in May, 1974. Of the nearly 26 miles traded-in however, 2.6 miles were withdrawn under the older Howard-Cramer, 103(e)(2) regulations. At that time, \$603.2 million was made available for transit substitute projects under 103(e)(4) and \$68.3 million was made available for other Interstate construction under 103(e)(2).

The recommendations of the BTPR effort resulted in a strong lobbying effort among Massachusetts State officials and congressional representatives to create the 103(e)(4) trade-in amendments. Successful in this endeavor, due particularly to the support of the Governor and Congressman Tip O'Neal, Boston became the first urban area to enact a trade-in less than a year after the 103(3)(4) amendment was added via the 1973 Federal-Aid Highway Act.

Various other changes accompanied these withdrawals, as pictured in Figure II.4. The gap in I-95 was filled by designating that portion of Route 128 which connects the northern and southern legs of that route at I-95. Two other existing highway segments, the Southeast expressway and Route 128 between the Southeast Expressway and the I-95 South leg, were newly designated as I-93. Furthermore, the Massachusetts Turnpike extension into the CBD was designated I-90.

Simultaneously, new Interstate construction was approved. I-90 was to be extended from its CBD terminus to Logan Airport via a new Boston Harbor tunnel (using Interstate funds). I-495, a beltway located some 15 miles beyond the Route 128 beltway, was to be extended in a southeasterly direction for over 32 miles. Finally, the Southeast Expressway (I-93) was to undergo substantial reconstruction. The latter two projects were to be funded primarily from the 103(e)(2) Cramer-Howard trade-in, although Section 139 funds supplemented I-495 construction.

Substitute Projects

Over \$1.2 billion has been obligated for substitute projects as of June 30, 1982. Only transit-related projects have been funded. (Although at the time of the Boston withdrawal in May 1974 only transit substitute projects were eligible, since 1976 unobligated funds were allowed to be used for either transit or highway projects.) Two large rapid transit projects have utilized virtually all of the trade-in funds: extension of the Red Line beyond its northern Harvard Square terminus, and relocation of the elevated Southwest Boston Orange Line into a new depressed and partially enclosed right-of-way.

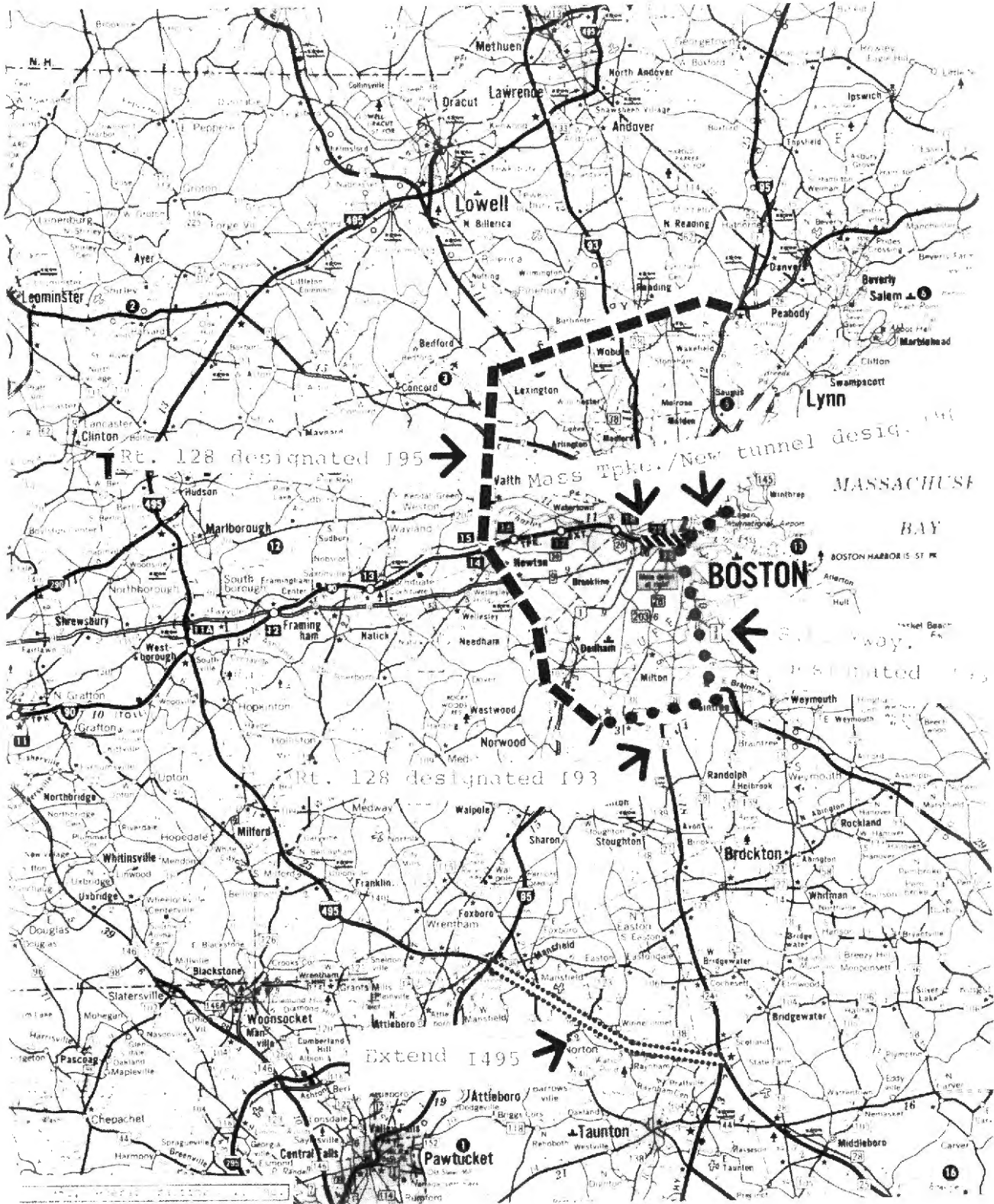


FIGURE II.4

ADDITIONAL CHANGES TO THE INTERSTATE SYSTEM IN THE BOSTON URBAN AREA FOLLOWING WITHDRAWAL ACTION

At the time of the withdrawal, local and State officials agreed that trade-in funds must be used in a direct transit for highway exchange in the three relevant corridors (i.e., Southwest, Inner Belt, and North Shore). Transit construction projects in two of these corridors (i.e., Southwest and Inner Belt) had been proposed in a 1966 document, Program for Mass Transportation, prepared for the Massachusetts Bay Transportation Authority (MBTA). A third project, extension of the Blue rapid transit line from Revere northward along the North Shore, had been proposed in 1971 as part of a joint development with the construction of I-95. The BTPR effort of 1970 and 1972 revived interest and support for all these projects, although a North Shore project was not seriously reviewed.

Following the withdrawal in May 1974, planning was directed toward

1. extending the Red Line northwest from Harvard for 3.7 miles (adding 3 stations), and possibly as far as the Route 128/I-95 Beltway;
2. packaging a transit relocation/commuter rail upgrade/street construction/community redevelopment project for the Southwest corridor; and
3. studying transit extension/improvement options for the North Shore.

One substitute project to be funded was the Red Line extension (see Figure II.5). Scheduled for completion in 1984, the 3 station, 3.7 mile extension will be funded entirely from trade-in funds (and matching funds provided by MBTA bonds). Included in this project is the upgrading of the Red Line rolling stock.

Another project funded is the Orange Line relocation (see Figure II.5). Planned as part of a Southwest Corridor Development Plan, the project is scheduled to combine over \$600 million in trade-in and other federal transportation funds (and their respective local matches), along with over \$500 million in other federal, state and private sources for various development and recreational projects. The project is currently 15 percent completed, with an anticipated completion date of 1986. Included in the project are

- demolition of existing elevated Washington Street Orange Line facility;
- relocation of Orange Line to Penn Central right-of-way, along with the creation of eight new subway stations;
- replacement of Orange Line rolling stock;
- upgrading commuter rail right-of-way and rolling stock;

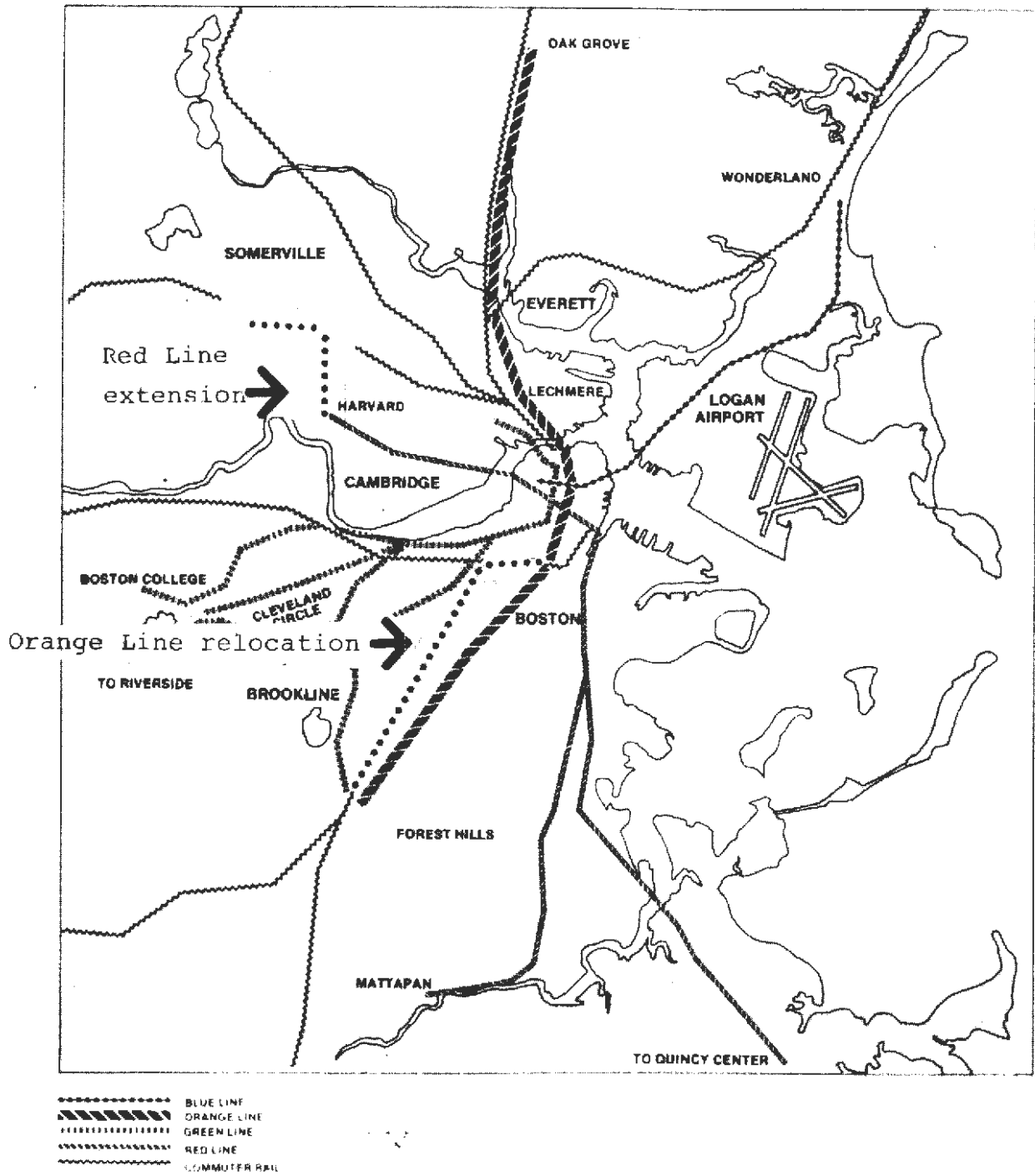


FIGURE II.5

SUBSTITUTE PROJECTS: RED LINE EXTENSION AND ORANGE LINE RELOCATION

- creation of new arterial streets; and
- various development (e.g., industrial park, educational facilities, housing) and recreational (i.e., 85 acre corridor parkland) improvements.

As of June 30, 1982, \$165 million remains in unobligated trade-in funds. These funds will be used to complete the Red Line extension; partially implement the Orange Line - Southwest Corridor Project; and to relocate a portion of the Green light rail transit line in the Boston CBD. No funds are currently planned to be used in the North Shore Corridor.

4. Chicago Illinois

Basic Characteristics

The Chicago SMSA had a population of slightly over 7 million in 1980. Central city population was nearly 3 million. Employment in the SMSA exceeded 3.5 million in 1982.

The street network in the urbanized area consists of over 16,250 miles, of which 1.8 percent are Interstates and 6.7 percent are other principal arterials. Daily VMT in 1975 was nearly 84.2 million, with 22 percent occurring on Interstates and 23.5 percent on other principal arterials.

The peak transit requirement is over 2700 buses, nearly 890 rapid transit cars and 900 commuter rail cars. In 1980, transit modes carried 18 percent of all work trips.

Withdrawal Background⁹

I-494, known as the Crosstown Expressway, was to be an inner circumferential loop (I-294 being the outer loop) that would connect the 4 major radial Interstates which converge near the CBD (see Figure II.6). The highway was approved as an Interstate link in 1968.

Withdrawal Process

I-494 was withdrawn completely, but in two separate stages. The northern leg, 6.3 miles between I-90 (JFK Expressway) and I-290 (Eisenhower Expressway), was formally withdrawn in September 1977. The amount made available for substitute projects was \$480.3 million. The remaining 13.6 miles were withdrawn in October 1979. Over \$1.7 billion was made available for substitute projects as a result of this second withdrawal.

The State issued a draft EIS on I-494 in 1971, but with a subsequent change in state administrations, the Governor (Walker) withdrew his support for the highway. Vocal community opposition in the highway corridor, especially in the northernmost leg, was an important factor in the Governor's decision. The City of Chicago, under Mayor

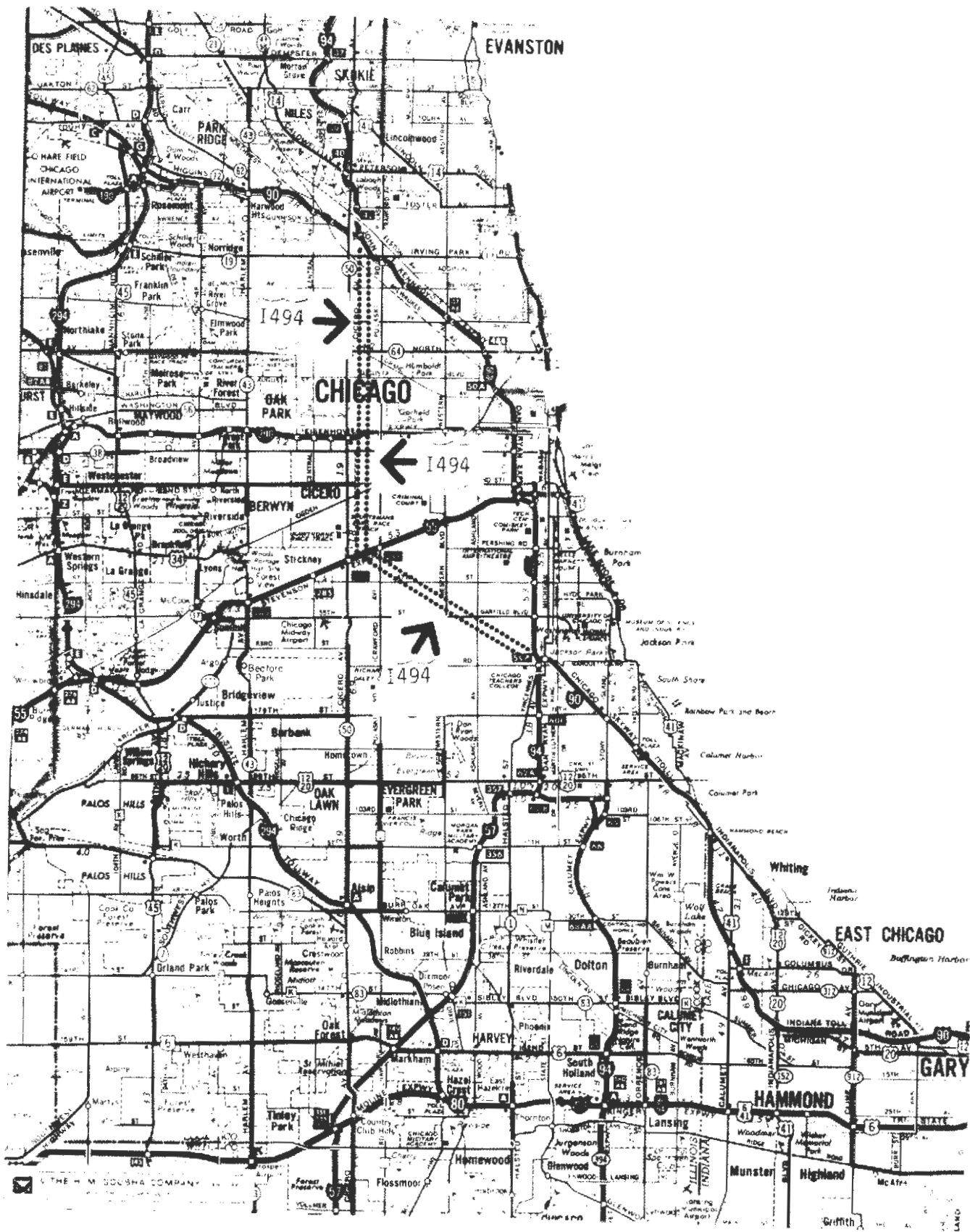


FIGURE II.6

THE CHICAGO URBAN AREA AND THE I-194 SEGMENTS WITHDRAWN

Daley, still supported the highway and rejected proposals for various alternatives (e.g., widening of existing corridor arterials, scaled-down highway design, certain transit improvements, etc.). However, by late 1977, there being a new Governor (Thompson) and Mayor (Bilandic), an agreement was made to withdraw the northernmost leg of I-494. The actual letter to U.S. DOT requesting withdrawal states the desire to complete the remaining portion of I-494. As local opposition to this remaining leg was still apparent, FHWA ruled that a new public hearing and public involvement program would have to be undertaken. Prior to actual commencement of such a program, a mayoral election produced yet a third new local leader (Byrne), whose commitment to I-494 was far less than her two predecessors. Shortly after assuming office, I-494 was completely withdrawn.

Substitute Projects

The first withdrawal produced an agreement between the State of Illinois and Chicago whereby the City of Chicago was to receive the bulk of the trade-in funds (between 66 and 75 percent) for construction of large scale transit projects. The one considered most likely was the Franklin Street Subway, part of an ambitious plan to replace the downtown elevated loop with underground facilities. The disagreement over this project nearly equalled that over I-494, and no such transit project has been built. Meanwhile, the remaining funds were allocated to the State for street network improvements in Chicago and the suburbs. All of those funds have been obligated.

The 1979 withdrawal produced the following agreement: half to be spent in Chicago, half to be spent in the suburbs. The latest TIP, considered by the MPO as the model for any future concept plan, indicates that the combined trade-in funds should be split on a 50/50 modal basis between transit and highway. As of June 30, 1982, however, of over \$567 million that has been obligated since 1977, 86 percent has been for highway projects (e.g., suburban street improvements, Chicago bridge and street reconstruction, etc.) and 14 percent for transit (e.g., modernization and winterization of facilities, various planning studies and preliminary engineering projects). One major transit project is currently being evaluated, with a likely alternative being a \$415 million extension of the rapid rail system into southwest Chicago.

The State is providing the matching share for all substitute projects.

5. Cleveland, Ohio

Basic Characteristics

The population of the Cleveland SMSA in 1980 was 1.9 million, 30 percent of which resided in the central city. Over 950,000 persons were employed within the SMSA in 1982.

The Cleveland urbanized area has over 5900 miles of street network. Interstate highways comprise 2.7 percent of that total, while other principal arterials represent 7 percent of the total network. Over 27 million daily vehicle miles of travel were recorded in 1975, with 23 percent on Interstate segments and 23 percent on other principal arterials.

The transit system is multi-modal, with a peak requirement of 79 heavy rail cars, 49 light rail cars, and 830 buses. In 1980, 11 percent of work trips were made via public transportation.

Withdrawal Background¹⁰

I-490 was first proposed in 1963 as part of the 20 year areawide transportation plan for the Cleveland urban area. It was intended to provide an east-west radial spur into central Cleveland (but outside the CBD) from I-271, the Outerbelt East Freeway (see Figure II.7). As originally planned, I-490 (also known as the Cleveland Clark Freeway), was to bisect the suburban city of Shaker Heights. It was there that significant local opposition developed throughout the 1960s, resulting in an eventual shift of the I-490 corridor northward (see Figure II.7). Within this new corridor, it was anticipated that I-490 could still serve one of its basic functions: to divert traffic from and therefore relieve congestion on I-90 to the north (on the shore of Lake Erie) as well as from I-480 and I-77 further south. However, opposition emerged from the various towns and cities in this new corridor. At the same time, the city of Cleveland did not indicate any significant support for I-490. Indeed, I-490's construction was strongly supported by virtually only one source, the Cuyahoga County Engineer. By the early 1970's a third and final corridor was chosen for I-490, following a southeast path to I-480 (the Outerbelt South Freeway), bisecting the city of Garfield Heights (see Figure II.7). This corridor was formally approved by FHWA shortly thereafter.

Withdrawal Process

The complete 7.9 mile segment of I-490 was formally withdrawn in November 1979. At the time, \$255.9 million was authorized for substitute projects.

In 1974, the Cleveland MPO, the Northeast Ohio Areawide Coordinating Agency (NOACA), became the forum for most discussion and dealings concerning the future of I-490. Recognizing the lack of support for its construction in the two rejected corridors, as well as recognizing that the third corridor chosen was a poor substitute (i.e., no longer a true east-west spur, its potential for relieving I-90's traffic was nil while it would provide only minimal time savings to I-480/I-77 users), NOACA began to explore the trade-in option. However, NOACA's preliminary assessment found that the transit-for-highway substitute was considered unacceptable to all the parties, so no formal withdrawal action was taken.

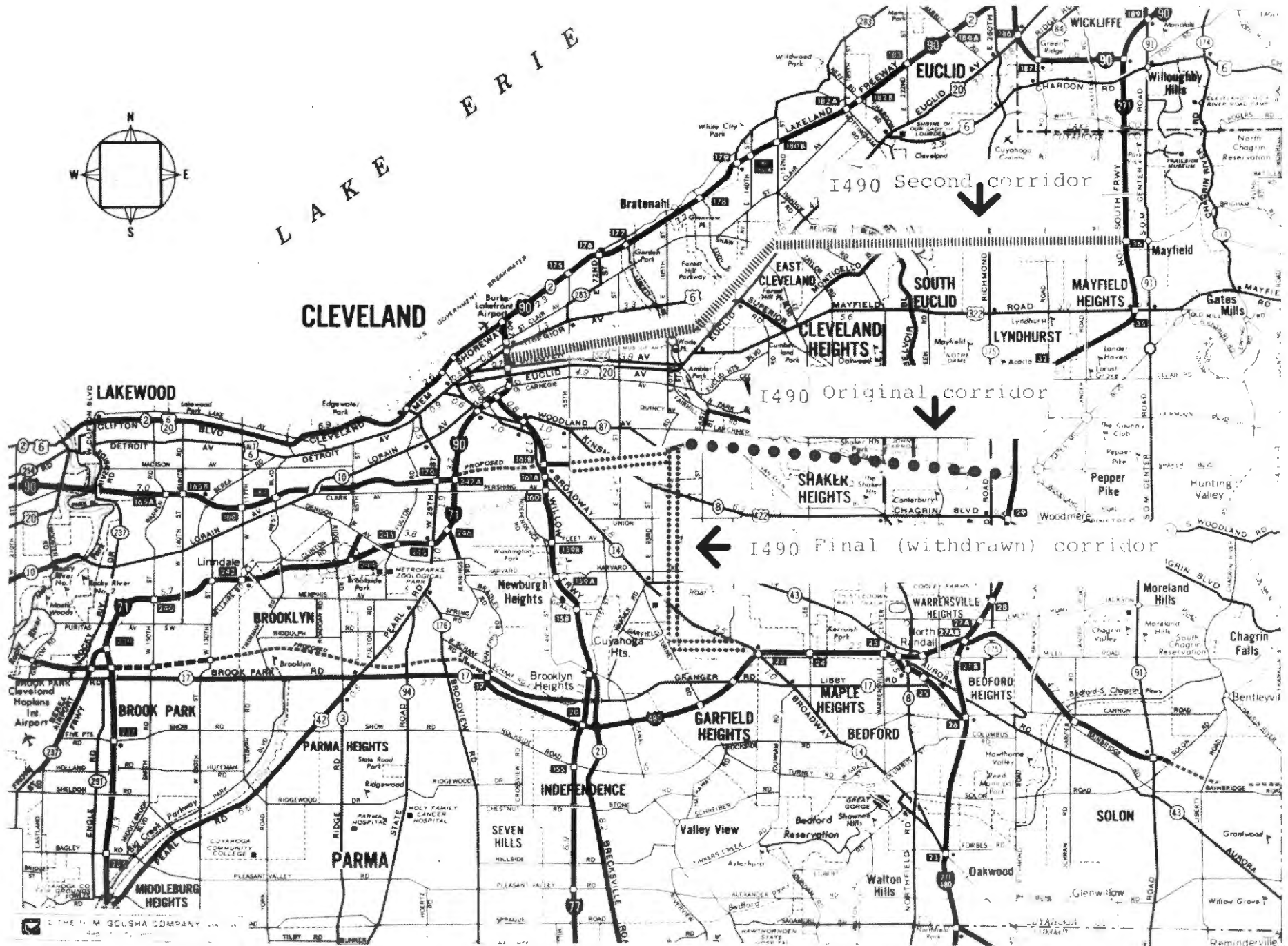


FIGURE II.7 THREE PROPOSED ROUTINGS OF I-490

Soon afterwards, NOACA moved ahead on two fronts. At the request of the State DOT and FHWA, NOACA initiated an EIS on I-490. Although tailored to determine whether the highway should be built or not, there was little chance that the EIS would recommend construction (indeed, it eventually recommended against construction). At the same time, NOACA joined forces with others (notably Mayor Neil Goldshmidt of Portland, Oregon) to convince Congress to allow highway as well as transit projects to be eligible trade-in substitutes. That effort achieved success in 1976.

Under Cleveland's Mayor Kucinich, a withdrawal request was initiated in 1978, but did not progress through the channels of approval, primarily due to his insistence that Cleveland be the beneficiary of all trade-in funds. His successor, Mayor Voinovich, was successful in promoting the trade-in option and achieving agreement among all necessary parties in 1979 (i.e., besides Cleveland, approval was necessary from Garfield Heights, the State and NOACA), largely due to his willingness to share trade-in funds with the various government entities in the Cleveland area.

Substitute Projects

Following the decision to withdraw I-490, the process of generating an acceptable list of substitute projects was a protracted one, involving discussion among many parties, generally using NOACA as a forum for negotiation. The city of Cleveland produced its priority list of projects, following discussions with the Cuyahoga County Engineer, the city of Garfield Heights and the Greater Cleveland Regional Transit Authority (GCRTA). However, NOACA, which is made up of five member counties, pressed for a wider dispersal of substitute funds. Eventually, in late 1980, an approved concept program was produced, calling for a dispersal of funds as depicted in Table II.1. However, U.S. DOT has not acted on the concept program because it lacks all required information.

Projects for the concept program were selected by the individual government entities. NOACA established one rule, however: no projects previously approved for PAUS funding (yet not under current contract) could be offered as substitute projects. Of the 115 listed by all but GCRTA, 111 are highway related (three are for park-and-ride facilities for bus and/or ridesharing users, and another is for improvements to the Union Terminal transit center in the Cleveland CBD). Of these, bridge rehabilitation projects represent 27 percent, while street widening projects represent 8 percent. The remaining two-thirds are various street and highway improvements, primarily resurfacing and reconstruction but also including signalization projects.

GCRTA has committed ten percent of its allotment to reconstruction of a highway bridge which it happens to own. The remaining funds have not been committed, but a likely use would be to initiate construction on the relocation of the Red Line rapid transit service between the CBD and the University Circle Station to the east (see Figure II.8). This project, considered a top rail priority for 20 years, would replace

TABLE II.1
 PROPOSED DISTRIBUTION OF I-490 SUBSTITUTE FUNDS
 (AS OF SEPTEMBER 1980)

<u>Government Entity</u>	<u>Amount Federal Trade-in \$</u>	<u>% Federal Trade-in \$</u>	<u>No. of Projects</u>
City of Cleveland	\$ 36 million	16	24
City of Garfield Heights	19 million	8	9
Cuyahoga County*	86 million	38	39
GCRTA**	50 million	22	NA
Lake County	25 million	11	15
Geauga County	4 million	2	20
Medina County	4 million	2	4
Lorain County	<u>2.6 million</u>	<u>1</u>	<u>4</u>
TOTAL	\$227 million	100%	115

*Cuyahoga County includes \$31 million and 6 projects for Cleveland, and \$2.2 million and 2 projects for Garfield Heights.

**GCRTA projects cover only Cuyahoga County.

NA = not available

Source: NOACA, Concept Plan for Transportation Improvement Projects Utilizing I-490 Transfer Funds, 1980.

circuitous and underutilized routing between these two stations (and eliminate four intermediate current stations) with a direct routing over a railroad right-of-way. The proposed corridor is the site of potential future housing and health-services development. Trade-in funds would fund only a portion of the as yet undetermined construction cost. The project is now being reviewed in the Alternatives Analysis phase.

At the end of June, 1982, \$27.2 million had been obligated to the Cleveland area for substitute projects. Virtually all of this has gone for one project: the rehabilitation of the Lorain-Carnegie Bridge in the Cleveland CBD. As fiscal year 1982 began, Cleveland and NOACA officials estimated that they had nearly \$50 million in substitute projects ready to be funded (i.e., matching share secured, initial planning performed). Unfortunately, Congress did not earmark any funds to the Cleveland area for FY'82. If and when funds are allocated to Cleveland, matching shares are to be provided by the relevant city or county, and in the case of the GCRTA, through state-approved bonds issued by the transit authority.

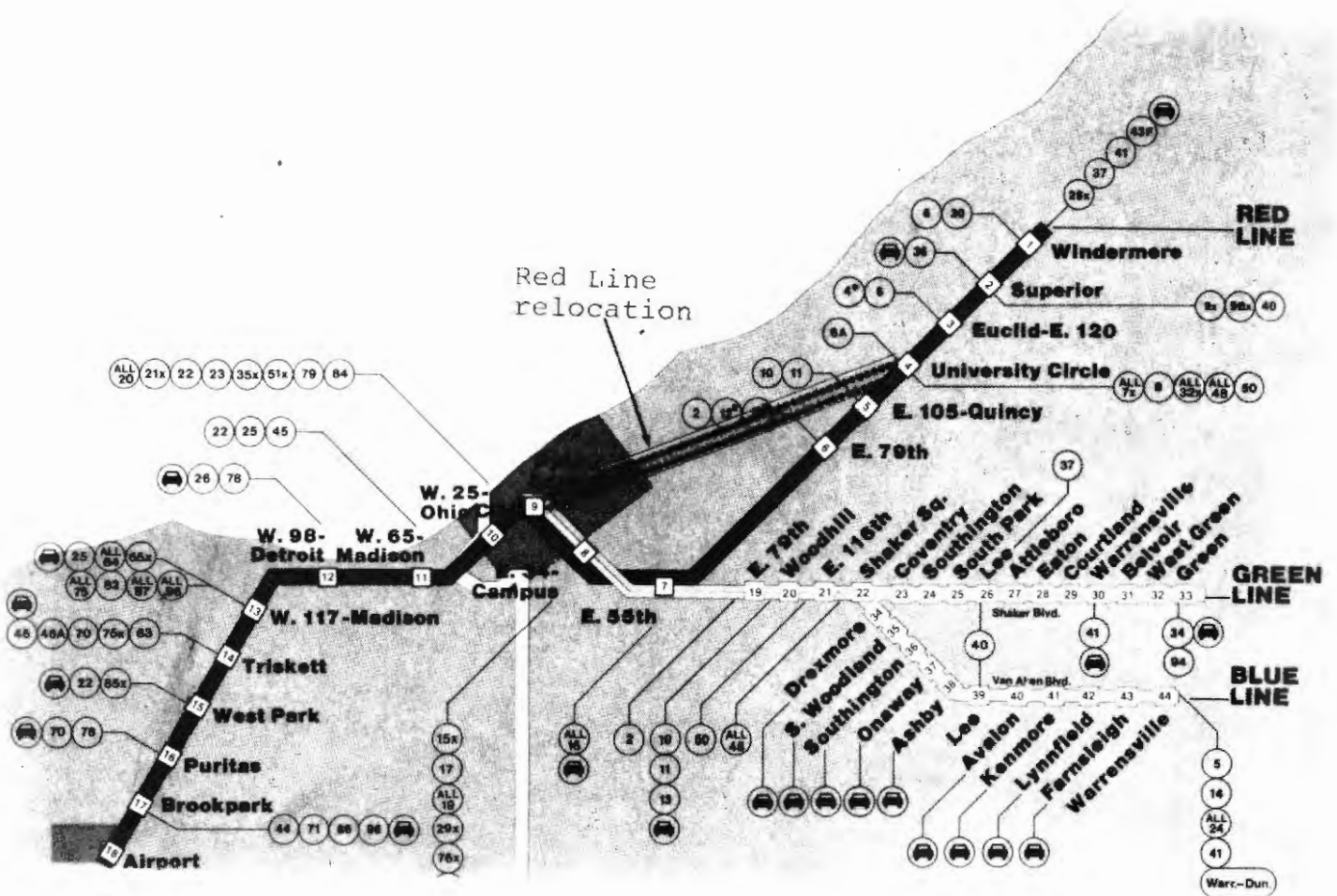


FIGURE II.8
 SUBSTITUTE PROJECT: RED LINE RELOCATION

6. Denver, Colorado

Basic Characteristics

The Denver SMSA had a population of over 1.6 million in 1980, of whom over 30 percent resided in the central city. There were 941,000 persons employed in the SMSA in 1982.

The urbanized area contains 4743 miles of street network. Interstate highways comprise 1.7 percent of that total, while other principal arterials represent 6.1 percent of the street network. Daily VMT in 1975 exceeded 15 million, with 22 percent occurring on Interstates and another 36 percent on other principal arterials.

The Denver Regional Transit Authority has a peak vehicle requirement of over 460 buses. In 1980, 7 percent of SMSA work trips were made by transit.

Withdrawal Background¹¹

I-470 was to provide a circumferential bypass highway for southwest Denver, connecting the north-south I-25 and the east-west I-70 (see Figure II.9). The highway was approved as an Interstate link shortly after the 1968 Federal-Aid Highway amendments allowed additional mileage to be added to the Interstate system.

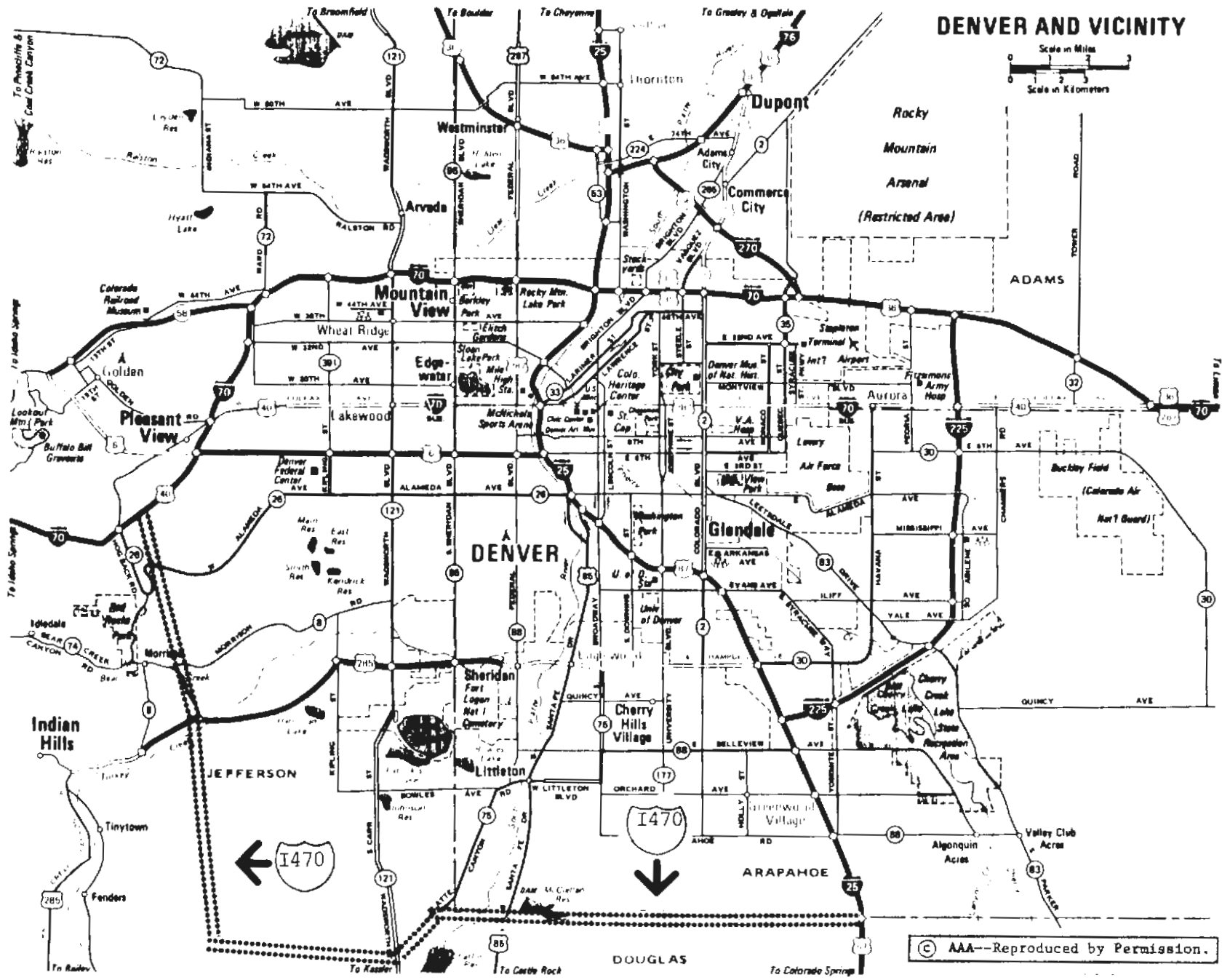
Withdrawal Process

The 26.3 mile I-470 segment was formally approved for withdrawal by US DOT in September 1977. The Federal amount authorized for substitute projects was \$162.4 million.

I-470 was adopted as part of the areawide transportation study in 1969. An EIS prepared for this highway in 1971-72 was found to be deficient by FHWA and EPA in its treatment of air quality impacts, modal alternatives, alignment alternatives and land use effects. By 1975 a newly elected Governor announced his opposition to I-470 and appointed a commission to study (a) transportation needs in the corridor; (b) highway vs. other alternatives; and (c) whether I-470 was socially and environmentally acceptable. In 1976 the report by the commission found that some form of circumferential route was needed and that such actions were more environmentally sound than a "no action" alternative. However, many of the alternatives to I-470, including upgrading a commuter rail line and the existing street network also showed promise. As a result it recommended that a withdrawal be enacted but with the first priority being to build a scaled-down, less expensive circumferential highway route.

Substitute Projects

At the time that the I-470 withdrawal was requested, a list of substitute projects was proposed. These included a 4-lane circumferential parkway in roughly the same right-of-way as I-470 (Federal cost of



11.22

FIGURE 11.9

THE DENVER URBAN AREA AND THE I-470 SEGMENT WITHDRAWN

\$59.3 million), highway and rail improvements in a commuter rail corridor (Federal cost of \$27.5 million), reconstruction of an important arterial within Denver (Federal cost of \$9.6 million), and other unidentified projects (Federal cost of \$61.2 million).

By the end of June, 1982, over \$72 million had been obligated for substitute projects, 75 percent for highway and 25 percent for transit. More than \$166 million remains.

7. Duluth, Minnesota

Basic Characteristics

The Duluth Superior SMSA had a population of nearly 267,000 in 1980, with nearly 93,000 residing in the City of Duluth. Employment in the SMSA was over 113,000 in 1982.

The urbanized area has 794 miles of street network, of which 1.4 percent are Interstates and 7.8 percent other principal arterials. Daily VMT in 1975 exceeded 2.6 million, with 16.1 percent occurring on Interstates and 34.8 percent on other principal arterials.

The Duluth Transit Authority serves the urbanized area (and contracts to the City of Superior) with 87 buses. Public transportation is currently estimated to carry 5 percent of all trips in the urbanized area, and between 10 and 15 percent of all work trips.

Withdrawal Background¹²

I-35 is a major north-south Interstate with termini in Laredo, Texas and Duluth, Minnesota. In its original plan, I-35 was to terminate just south of the Duluth CBD. In 1958, the State requested that I-35's terminus be extended up to 68th Ave. E. (see Figure II.10). The request was denied, but shortly thereafter an extension through the CBD was approved. In 1969, the full extension up through 68th Ave. E. was approved, following the legislated expansion of the Interstate system by 1500 miles in 1968.

Withdrawal Process

The 4.1 mile segment of I-35 was formally withdrawn in March 1981. The amount authorized for substitute projects was \$71.5 million.

I-35 to Mesaba Ave. was completed in the early 1970's (see Figure II.10). An EIS on the CBD section up through 10th Ave. E. proposed significant design and construction alterations and joint development of recreational facilities so as to minimize disruption and even enhance the CBD environment. That section is nearing initial construction. By 1980 however, there was significant controversy over whether the section beyond 10th Ave. E. should be built. Most opposition existed with regards to the section between 26th Ave. E. and 68th Ave. E. Community groups opposed on the basis of neighborhood disruption, while others were concerned that the plan to construct this section in an active railroad right-of-way would severely restrict freight rail

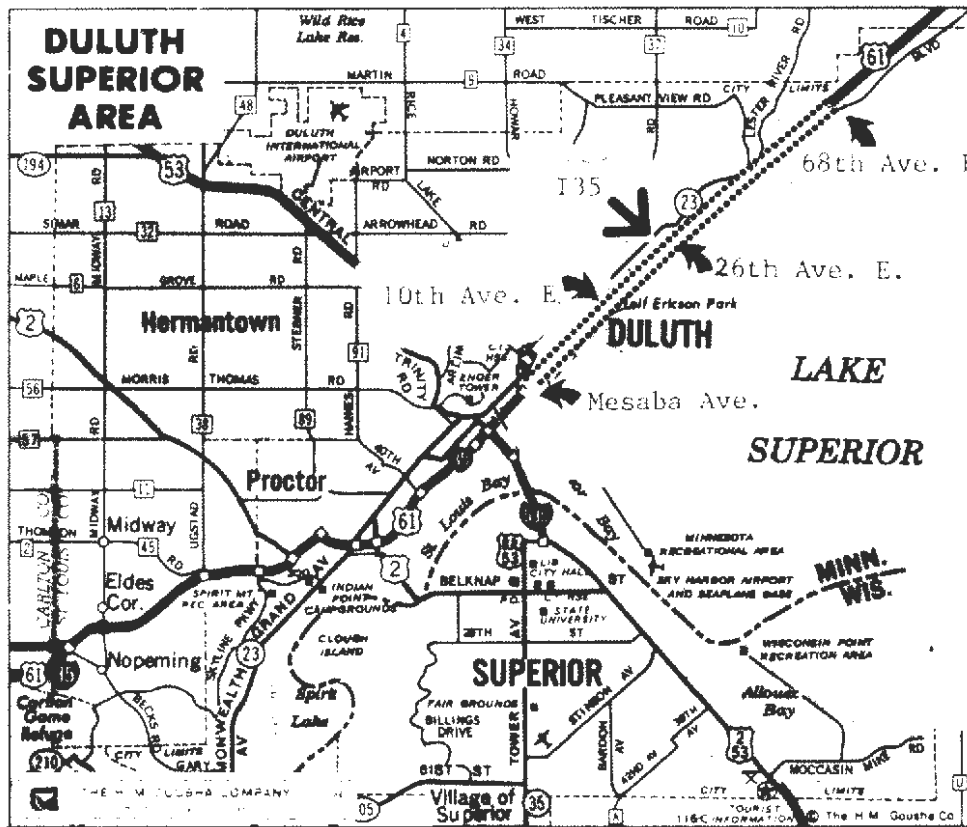


FIGURE II.10

THE DULUTH URBAN AREA AND THE I-35 SEGMENT WITHDRAWN

service to the Duluth area. In April 1980, the Mayor appointed a citizen advisory committee to recommend the status of I-35 beyond the CBD. Later that year it recommended construction of the segment adjacent to the CBD and withdrawal of the section between 26th and 68th Avenues E. A local referendum supported that decision, resulting in a withdrawal request in January 1981 and actual withdrawal in March 1981.

Substitute Projects

A concept plan was put together by the MPO and submitted to U.S. DOT in April 1981. The plan is an overprogrammed (i.e., total cost of \$120 million vs. \$66 million trade-in funds available in June, 1982) collection of the most important highway and transit projects as perceived by Duluth, other localities in the urbanized area, the State and the Duluth Transit Authority. (Superior, Wisconsin, although part of the SMSA, is excluded.) About the only projects weeded out from the concept plan by the MPO, which viewed the trade-in as the last major source of federal capital funds for the 1980s, were ineligible projects (e.g., those not on Federal-aid systems). Eventually, as funds become available, the list will be pared down. Approximately 70 percent of funds are proposed for highway purposes, including new construction, rehabilitation, reconstruction and TSM projects. The rest is for transit, including buses, fare boxes and communication equipment. Matching shares for locally sponsored highway projects (i.e., not on State highway system) will come from local governments, although the State's municipal aid program is likely to be tapped for these purposes. Responsibility for the transit matching shares are uncertain, but some form of state assistance is anticipated.

As of the end of June, 1982, no funds were obligated in Duluth.

8. Hartford, Connecticut

Basic Characteristics

The Hartford SMSA had a population of nearly 725,000 in 1980, with 19 percent residing in the central city. In 1982, over 390,000 persons were employed in the SMSA.

The urbanized area has over 2070 miles of street network, with 2.8 percent being Interstates and 12 percent other principal arterials. In 1975, daily VMT exceeded 9.5 million, with 38.6 percent occurring on Interstates and 33.1 percent occurring on other principal arterials.

The urbanized area's peak transit requirement is some 240 buses, transporting 7 percent of the work trips in 1975.

Withdrawal Background¹³

As part of the Hartford highway planning effort in the mid-1950s, an outer beltway was planned and later approved for Interstate Highway designation. Three-fourths of the beltway was to be I-291, while the

remaining eastern leg was to be I-86. Bisecting the beltway and serving the Hartford CBD were to be I-91 (a north-south route) and I-84 (southeast-western route). Both have been built. The I-86 leg was to originate at the Connecticut River in East Hartford (connecting a proposed river crossing) and continue beyond the beltway northeasterly into Massachusetts.

Withdrawal Process

Two segments of the beltway were traded-in in December 1975: 11.5 miles of I-291 (the northwest portion between I-84 and I-91) and the entire 5.9 mile I-86 leg (see Figure II.11). Actually of this total, only 13.5 miles were traded-in under 103(e)(4); the remaining 3.9 miles were withdrawn under 103(e)(2), the Howard-Cramer amendment. The amount made available for substitute projects under 103(e) (4) at the time of withdrawal was \$189.4 million.

Local opposition to both the I-291 and I-86 legs grew in the late 1960s and early 1970s for different reasons. I-291 was to be situated near the city of West Hartford but in an area distinctively rural in character. A grass roots movement to preserve the area's unsettled nature, maintain its recreational uses and protect its many water reservoirs from highway and development-related pollution was successful in gaining the support of nearby localities. In 1973 the Governor directed the State DOT to study the traffic effects of not building I-291. At the same time, DOT also studied the effect of not building the I-86 leg, which was being opposed by East Hartford community groups because of the considerable residential disruption it would cause. DOT found that both segments could be eliminated, and a withdrawal action was later undertaken. (The rest of I-86 was built, terminating prior to its original beltway segment.)

The funds made available from 3.9 miles of I-291 and I-86 withdrawn under Howard-Cramer are to be used for construction of two new Interstate Links: I-294 and I-691. The former is currently under EIS review and faces stiff community opposition, while the latter is soon to be constructed.

The 8.2 mile segment of I-491 was formally withdrawn in August 1980. At the time, \$132.6 million was authorized for substitute projects.

Following the above-reported withdrawals in 1975, the southwestern leg of I-291 was renumbered I-491. (I-491 was to serve the urbanized area of New Britain as well as Hartford). Construction began on portions of the segment, but was halted by a court injunction brought about by opposing citizen groups. These groups noted that the State planned to construct a non-Interstate route which would branch off I-491 and parallel it some 10 miles further south. The result, in their opinion, would have been a duplication of facilities. Local opposition mounted and a withdrawal eventually resulted, with the understanding that a considerable portion of trade-in funds would be used for construction of the more southern route (dubbed the Central Connecticut Expressway).

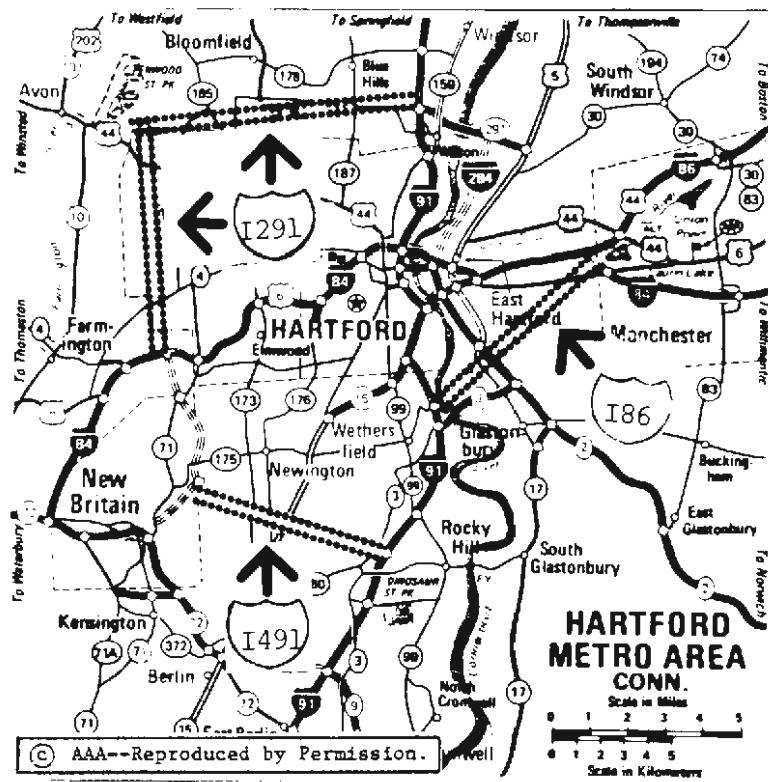


FIGURE II.11
 THE HARTFORD URBAN AREA AND THE I-291, I-86 AND I-491
 SEGMENTS WITHDRAWN

Substitute Projects

Over \$394 million has been made available to the Hartford urbanized area as a result of the initial 1975 trade-in. However, only \$44 million, or 8 percent, has been expended, as of June 30, 1982. Highway projects (mostly route reconstruction or street widening) have received approximately 80 percent of the funds. Substitute project implementation was delayed by a multi-year study of possible light rail transit options for various Hartford area corridors. The study fundings eventually did not support rapid transit as a viable substitute project. Other transit projects, however, have been funded (e.g., bus and van purchases, initial renovation of CBD railroad station) and others will be funded (e.g., continued renovation of railroad station into inter-modal transportation center, construction of a bus maintenance and storage facility, additional vehicle purchases). But the overwhelming majority of funds will be expended on highway projects, including supplementing the \$120 million available from the I-491 trade-in to build the Central Connecticut Expressway. (As of June 30, 1982, only \$3 million has been obligated from the latter trade-in funds for the Expressway's construction.)

9. Indianapolis, Indiana

Basic Characteristics

The Indianapolis SMSA had a population of 1.2 million in 1980, with 700,000 residing in the central city. Employment in the SMSA in 1982 exceeded 600,000.

The urbanized area has almost 3400 miles of street network, of which 2.6 percent are Interstates and 7.1 percent other principal arterials. Over 16 million VMT were recorded daily in 1975, with 22.4 percent occurring on Interstates and 28.2 percent on other principal arterials.

Public transportation services are provided by 200 buses during the peak period, carrying only 3 percent of all work trips in 1980.

Withdrawal Background¹⁴

As Figure II.12 shows, Indianapolis is served by a classic highway structure: a beltway and four radial spurs which meet at or near the CBD. I-165 was to have been the fifth radial spur, linking the CBD with northeastern communities. It was planned along with the other routes back in the 1950s, and while those routes were being built, provision was made at relevant interchanges to eventually accommodate I-165 (i.e., I-165's northern terminus was to be the interchange of I-69 and I-465 while its southern terminus was the interchange of I-65 and I-70). However, the portion of I-165 between the CBD and 38th Street was not approved as an Interstate link until 1978. That approval also called for the eventual extension of I-165 up to the beltway, probably utilizing existing State Route 37 (currently a divided highway with at-grade intersections and signals), upgraded to Interstate status.

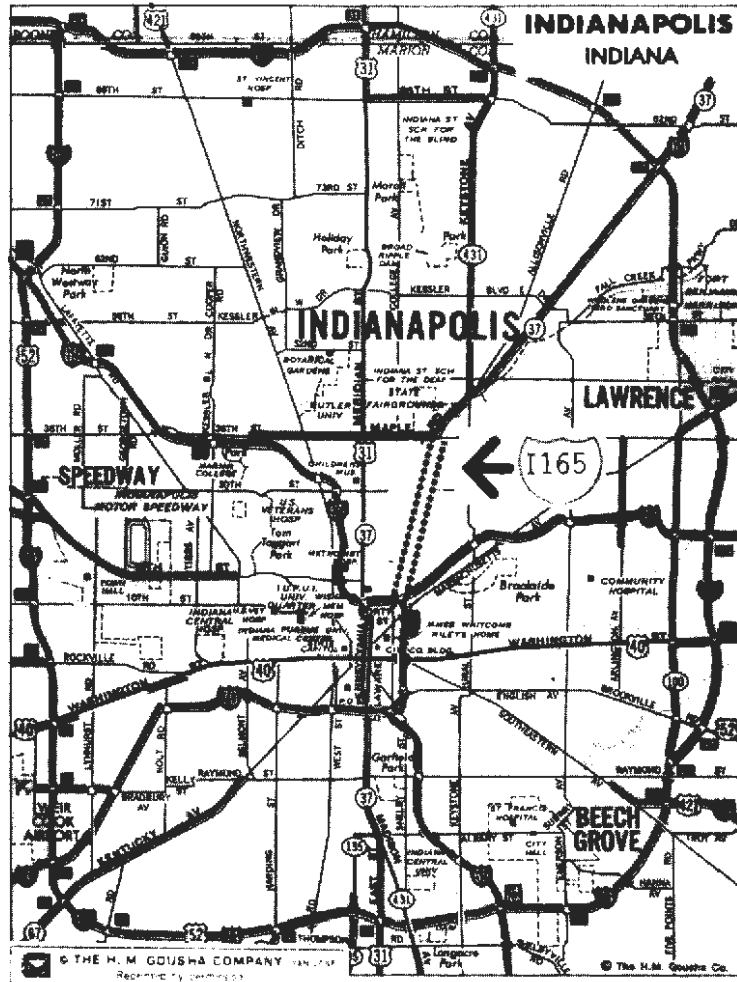


FIGURE II.12

THE INDIANAPOLIS URBAN AREA
AND THE I-165 SEGMENT WITHDRAWN

Withdrawal Process

The 2.7 mile segment of I-165, stretching between its proposed terminus at the I-65/I-70 interchange and 38th Street, was formally withdrawn in July 1981. (Following this withdrawal, plans to extend I-165 to the beltway were dropped.) The amount authorized for substitute projects was \$82.7 million.

Planning for I-165's construction began in late 1978 with the development of various alternative site locations and designs. Simultaneously, considerable opposition was raised by community groups and local business interests in the affected corridor. An EIS was initiated but never completed, when a public hearing revealed that considerable opposition to I-165 was not counterbalanced by any significant support within the city or its northeastern environs. By the summer of 1980, the Mayor and Governor agreed that withdrawal was the best alternative. It should be noted that I-165's 1978 approval was made contingent upon its not being withdrawn under Section 103(e)(2) or Section 103(e)(4). However, during the summer of 1980, when withdrawal was being explored, the DOT Secretary rescinded that condition.

Substitute Projects

A concept plan was submitted at the time of the withdrawal request. (It has not gained federal approval, however.) An agreement was reached to split the funds equally between the City of Indianapolis and the State. The bulk of the State's money is to be used for improvements to existing I-70 (e.g., lane additions), which bisects the City in a northeast to southwest corridor. (Much of the traffic expected to utilize I-165 would be expected to remain on or divert to I-70.) Other projects will be funded with the State's share, particularly reconstruction and other improvements to selected State routes in the urbanized area. The matching share will be provided by the State.

The City's share will be split between transit and highway projects on a 20/80 basis. The transit portion will primarily be used for acquisition of new buses, construction of a transit mall, a garage facility and park and ride facilities. Highway funds will be primarily for street and arterial capacity expansion projects. Among these is the upgrading of a 4 lane, undivided CBD arterial (West Street) to form a 6 lane, limited access facility, serving as the final link of an inner-city expressway loop (currently consisting of I-70, I-65/70 and I-65 in a reversed "C" formation). The matching share for some transit and all highway projects will be provided by the City of Indianapolis. The transit operating authority will provide the match for bus purchases and its garage facility. At the end of June, 1982, \$1.5 million has been obligated for highway purposes.

10. Memphis, Tennessee

Basic Characteristics

The Memphis SMSA had over 810,000 persons residing in it in 1980,

with nearly 645,000 living in the central city. In 1982, SMSA employment exceeded 230,000.

The urbanized area contains over 2000 miles of street network, with 2.4 percent Interstates and another 8.6 percent being other principal arterials. In 1975, over 8.9 million daily VMT were recorded, with 24.6 percent occurring on Interstates and 35.5 percent on other principal arterials.

The public transportation system has a peak requirement of 250 buses, carrying 4.5 percent of the work trips in 1977.

Withdrawal Background¹⁵

I-40 has been part of the approved Interstate system since the mid-1950s. As Figure II.13 shows, completed portions of the Interstate provide an eastern and western spur into central Memphis. The final link was to connect these spurs, running through residential neighborhoods and Overton Park, one of the city's major recreational areas.

Withdrawal Process

The 3.8 mile uncompleted segment of I-40 was formally withdrawn in January 1981. The amount authorized for substitute projects was \$274.6 million.

By the 1970s, the City of Memphis opposed construction of the final I-40 link, as did a number of interest groups, especially those concerned with the preservation of Overton Park. However, the State, which favored construction, undertook an EIS which recommended in 1976 that the highway be built as a partially depressed highway, especially through such sensitive areas as Overton Park. However, local parties brought litigation on the grounds that Federal law requires feasible or prudent alternatives to be considered when a highway is to traverse park land. The U.S. Supreme Court placed it into US DOT's hands, which held that a tunnel through the park was a feasible alternative which the State should consider. Shortly thereafter in 1980, the city initiated the withdrawal process, gaining the State's cooperation a number of months later.

At the time of withdrawal, adjustments to the remaining highway system were made. The existing 4.3 miles of I-40 within the I-240 beltway were deleted from the Interstate system. Furthermore, the northern portion of I-240 between its two intersections with I-40 was re-designated as I-40.

Substitute Projects

A concept plan has not been submitted, nor is one anticipated in the near future. The September 30, 1983 deadline for concept plan approval is not applicable in this case, because of the judicial proceedings that were ongoing during enactment of the 1978 Surface Transportation Assistance Act.

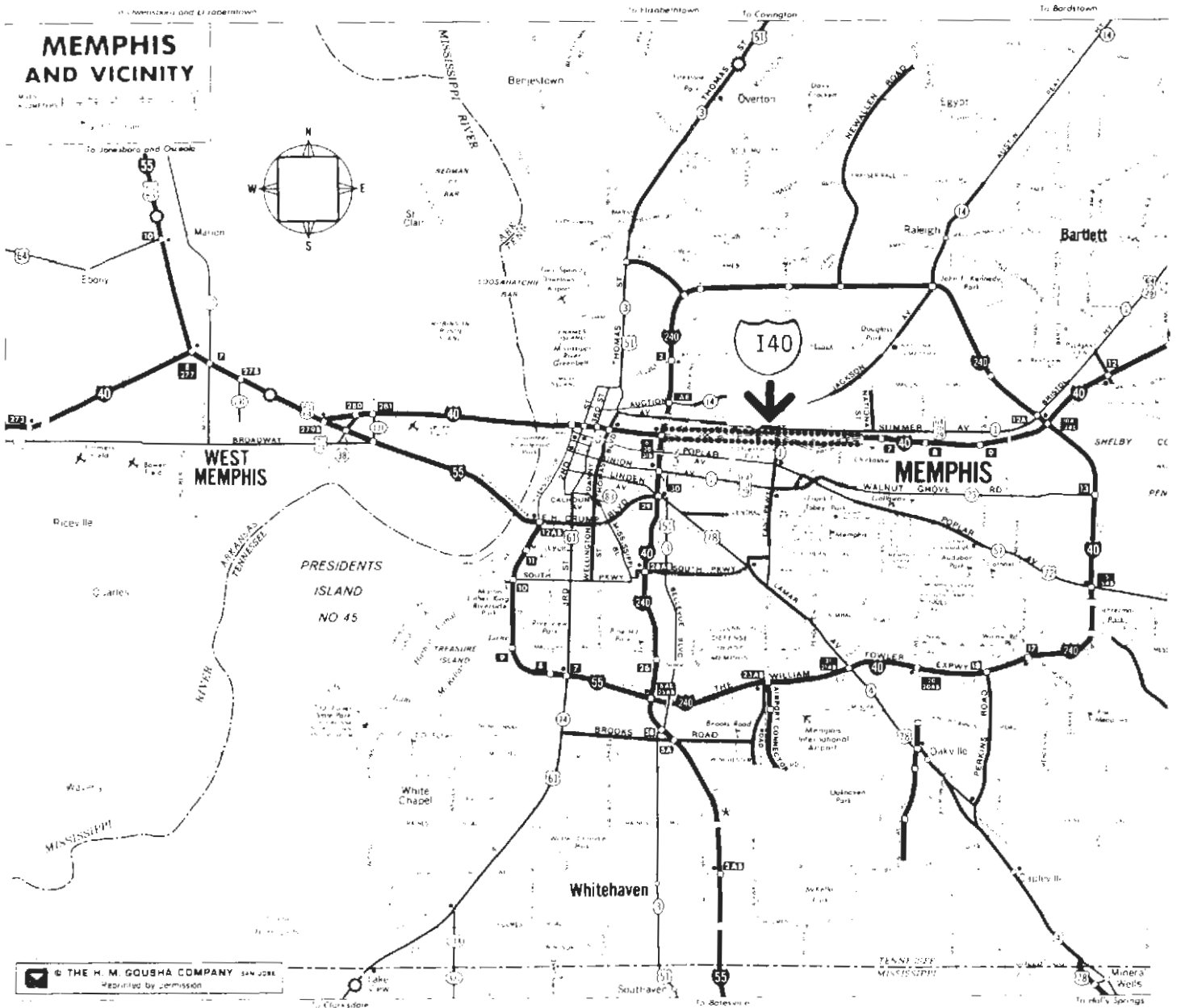


FIGURE II.13

THE MEMPHIS URBAN AREA AND THE I-40 SEGMENT WITHDRAWN

However, the latest installment of the TIP does list potential projects to be funded out of the trade-in source. The list is clearly overprogrammed, however, since it calls for over \$340 million in current Federal funds, or 37 percent over the June, 1982 value of trade-in funds. Eventually, the list will be pared down. Twelve percent of Federal trade-in funds are for mass transit projects, primarily bus purchases (for replacement and expansion of the current fleet). In addition, construction of park and ride lots, bus transfer facilities and installation of signal preemption systems on major corridors are also planned. The matching share is to be split almost equally between local and state sources.

Among 17 highway projects proposed, three are of significant size, and are expected to cost a total of over \$200 million in Federal funds. These include construction of two freeway facilities and the widening of a portion of the I-240 beltway. A number of arterial lane widening projects are also proposed, as well as new bridge construction and ramp and interchange construction for the two central Memphis highway spurs which the withdrawn I-40 segment was to connect. All projects are confined to the Memphis city limits. The matching share is to be split between state and local sources in an as yet undetermined manner.

As of June 20, 1982, \$2.9 million has been obligated, 90 percent for transit projects.

11. Minneapolis, Minnesota

Basic Characteristics

The population of the Minneapolis-St. Paul SMSA was slightly over 2.1 million in 1980, with 18 percent residing within the central city. Over 1.1 million persons were employed in the SMSA in 1982.

There are 7500 miles of streets in the Minneapolis urbanized area, with existing Interstate and principal arterial routes representing 2 percent and 3.4 percent of the total, respectively. Daily VMT exceeded 24.3 million in 1975, with 24 percent occurring on Interstate segments and only 18 percent on other principal arterials.

The Minneapolis-St. Paul transit system has a peak vehicle requirement of nearly 900 buses. Eight percent of the area's work trips were served by transit in 1980.

Withdrawal Background¹⁶

I-235, referred to as the North Ring Route, was to form the northern link between I-94 and I-35W in an inner loop beltway around the Minneapolis CBD (see Figure II.14). Although not part of the original metropolitan freeway plan, it was proposed as early as 1957, and approved by the City and State by 1963. Its design evolved considerably over the years, from a mostly elevated structure to a largely depressed facility.

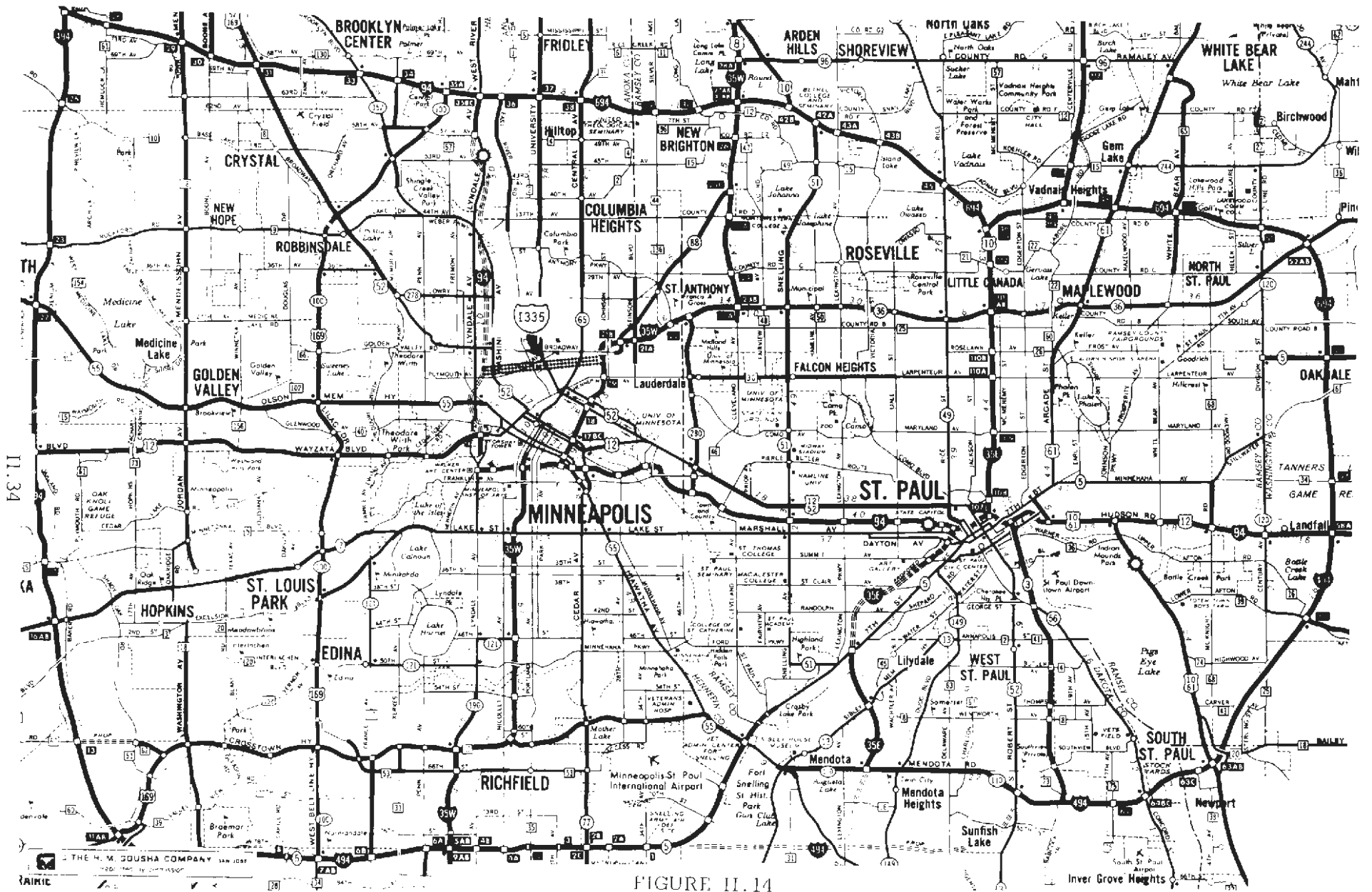


FIGURE 11.14

THE MINNEAPOLIS-ST. PAUL URBAN AREA
AND THE I-335 SEGMENT WITHDRAWN

Withdrawal Process

The 2.7 mile segment of I-335 was approved for withdrawal by US DOT in July 1978. The amount authorized for funding substitute projects was \$103.2 million.

The I-335 plan received its first significant public opposition in 1970, when the Mayor of Minneapolis vetoed a resolution approving a mostly elevated design for the facility. Although the veto was overturned, a considerable amount of opposition by various citizen groups remained. In 1973, although a new, largely depressed design was offered by the State, the City Council rescinded its approval for I-335. In 1975, it reiterated its position, but this time calling on the city and State to take advantage of the trade-in procedure to raise mass transit funds. In the same year, the State called on the MPO to study all uncompleted Interstate links within its 7 county domain. It determined in 1976 that the City of Minneapolis should decide if constructing I-335 was in the city's best interest, and if it found it not to be, that it should formulate, along with the MPO and other governments, a substitute program which would include both transit and highway projects. This led to I-335's eventual withdrawal.

Substitute Projects

The City of Minneapolis prepared a list of substitute projects in 1977 and submitted these to the MPO. The MPO then formed a task force made up of county, city and state government representatives to formulate a final list of projects. The task force considered a variety of highway and transit proposals throughout the urbanized area including 11 projects suggested by Minneapolis for the I-335 corridor itself. After several revisions the following split was eventually proposed in 1980: 33 percent for I-335 corridor projects (mostly bridge repair and some street reconstruction), 18 percent for areawide transit projects (a diverse set, including a CBD transit mall, bus purchases, a regional transfer station, HOVL construction and park and ride lots), and 49 percent for areawide highway projects (includes construction and reconstruction of freeways, arterials and intersections).

At the end of June, 1982, \$24.6 million had been obligated for substitute projects, leaving \$85 million still available. The distribution of obligated funds is skewed more towards highway projects than the original proposal indicated: 8 percent areawide transit and 92 percent highway.

12. New Jersey

Basic Characteristics

Two separate urban areas are considered here: those areas of New Jersey contained within the New York City and Philadelphia urban areas. In 1980, the population of the new Jersey portion of the Philadelphia SMSA was slightly over one million. The New Jersey portion of the New York City urban area is contained within six SMSAs, and had

a 1980 population exceeding 4.9 million. Employment in New Jersey was 340,000 in the Philadelphia SMSA area, and 2.2 million in the New York City area (both in 1977).

The street network (excluding local, non-collector streets) in the New Jersey portion of both urbanized areas is as follows: 4173 miles in the New York City area and 833 miles in the Philadelphia area. Interstates comprise 21 percent in both areas, while other principal arterials are 25 percent and 28 percent of the total, in the New York City and Philadelphia areas, respectively. Daily VMT (again excluding the local system) in 1975 was 72.5 million in the New Jersey portion of the New York City area, and 13 million in the Philadelphia area. All principal arterials, including Interstates, carried 61 and 75 percent of the total VMT in the New York City and Philadelphia areas, respectively (an Interstate breakdown was not available).

The peak public transportation requirement in both areas is as follows: for the New York City area, the New Jersey total is nearly 2500 buses, 250 heavy rail cars, 590 commuter rail cars and 16 light rail vehicles; for the Philadelphia area, the New Jersey total is 160 buses and 100 heavy rail cars. Of those persons who lived in these areas in 1970, approximately 17 percent used public transportation to travel to work in the New York City area, as opposed to 9 percent in the Philadelphia area.

Withdrawal Background¹⁷

Three separate Interstate segment withdrawals are discussed: I-95 (Spur), I-495 and I-895. The first, I-95, is part of the Maine-to-Florida Interstate Highway planned as part of the original system in the 1950s. Within New Jersey, I-95 was to begin near Trenton and continue northeast to the George Washington Bridge, where it continued on into New York State. As originally planned and tentatively approved in 1957 (by the federal government), I-95 was to be a new facility situated between U.S.1 and the New Jersey Turnpike. But as negotiations developed with Pennsylvania over a proper Delaware River crossing for I-95, a crossing was agreed upon in 1960 which was not conveniently aligned with the proposed corridor. Although the federal government initially disapproved of this crossing, New Jersey conducted an analysis which showed that (a) the original I-95 corridor would duplicate the New Jersey Turnpike's function, (b) that a corridor further west was more appropriate because of its anticipated population growth and current lack of freeway capacity, and (c) that such a corridor could join easily with the proposed river crossing, via an Interstate beltway surrounding Trenton. In 1964, the federal government approved the following routing for I-95 (see Figure II.15):

1. a Delaware River Crossing northwest of Trenton;
2. continue northeast as part of a beltway around Trenton;
3. breaking off from the beltway northward until proposed I-287, near Metuchen;

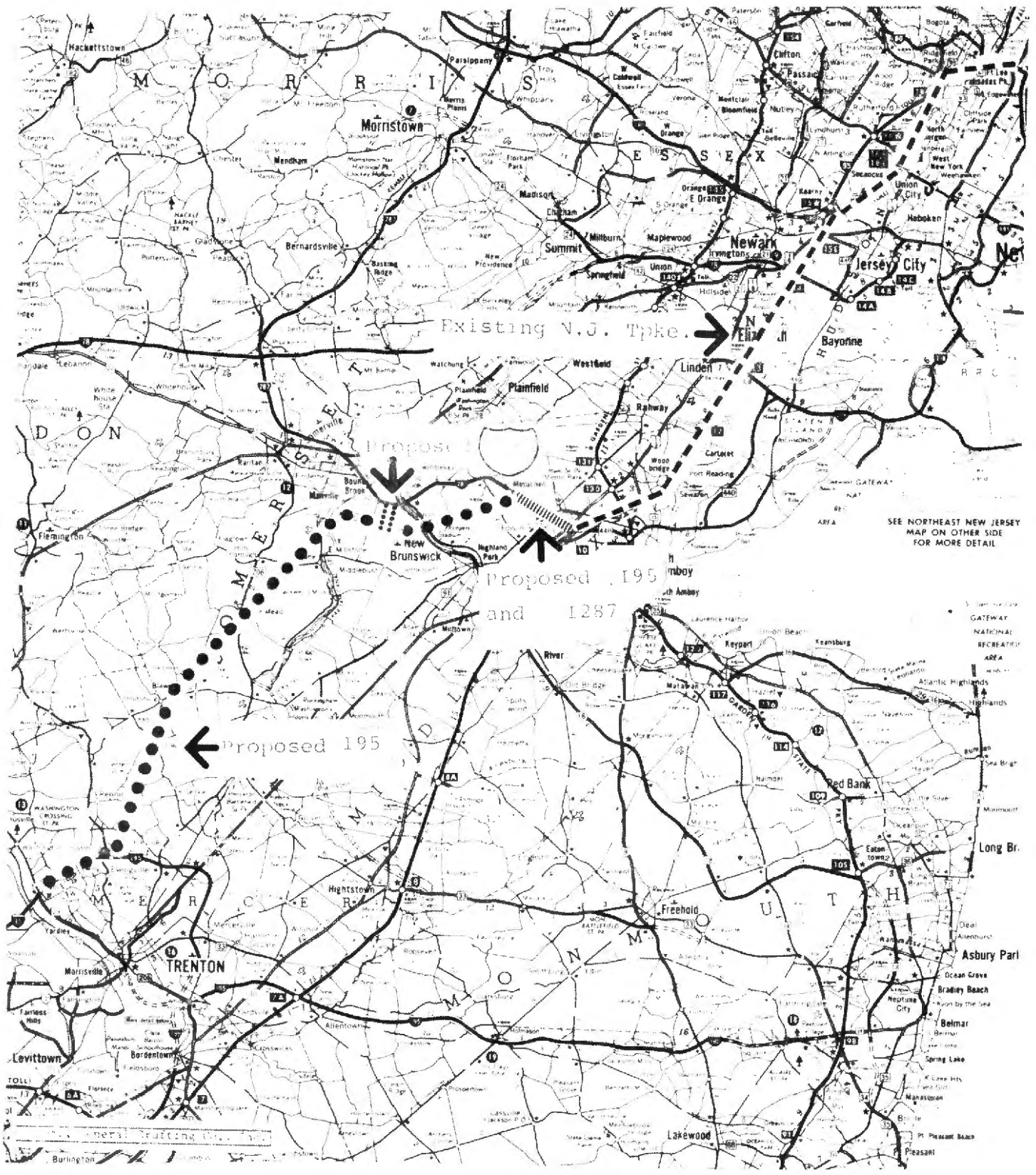


FIGURE II.15
 1964 PROPOSED ROUTING OF I-95

4. merge with I-287 onto the New Jersey Turnpike;
5. designate the existing portion of the New Jersey Turnpike between its intersection with proposed I-287 and the George Washington Bridge as I-95.

Later on, a short segment was added to provide more direct access to I-287 and this was designated as I-695 (see Figure II.15). Actual alignments were planned in the late 1960s.

I-495 is an open-to-the-public highway providing access to the Lincoln Tunnel (a Hudson River crossing connecting New Jersey to New York City, also designated as I-495), from the New Jersey Turnpike (I-95) and other routes (see Figure II.16). Like its counterpart in New York City (see the next case study for the discussion of the Long Island Expressway, also designated I-495), this segment was originally built as a non-Interstate facility. In the late 1960s, it was designated an Interstate route, with the intention to upgrade it from a six to eight lane facility, as well as make other changes to bring it up to Interstate standards.

I-895 is also discussed in the Philadelphia synopsis in Volume 2. In the late 1960s, the states of New Jersey and Pennsylvania proposed that a new river crossing be built between Burlington, New Jersey and Bristol, Pennsylvania (within the Philadelphia urbanized area) to replace an existing bridge. That bridge would link up with I-95 in Pennsylvania and I-295 in New Jersey, and the total segment was designated I-895 (see Figure II.17). The total length of the segment was 6.4 miles, of which 4.3 miles were in New Jersey. I-895 was approved as an Interstate link in 1969.

Withdrawal Process

New Jersey trade-ins occurred between September 1979 and January 1981, in the following manner:

1. The 2.1 mile segment of I-495 was formally withdrawn in September, 1979. At the time, \$57.5 million was authorized for substitute projects.
2. The 4.3 mile segment of I-895 was formally withdrawn in September, 1980. At the time, \$116.3 million was authorized for substitute projects.
3. The 9.7 mile segment of I-95 was formally withdrawn in January, 1981. The segment withdrawn was generally referred to as the I-95 Spur, stretching between the cutoff at I-695 and the I-287 merge (see Figure II.15). At the time, \$116.5 million was authorized for substitute projects.

In the late 1970s, when Louis Gambaccini became the Commissioner of the State Department of Transportation (NJDOT), a major effort was

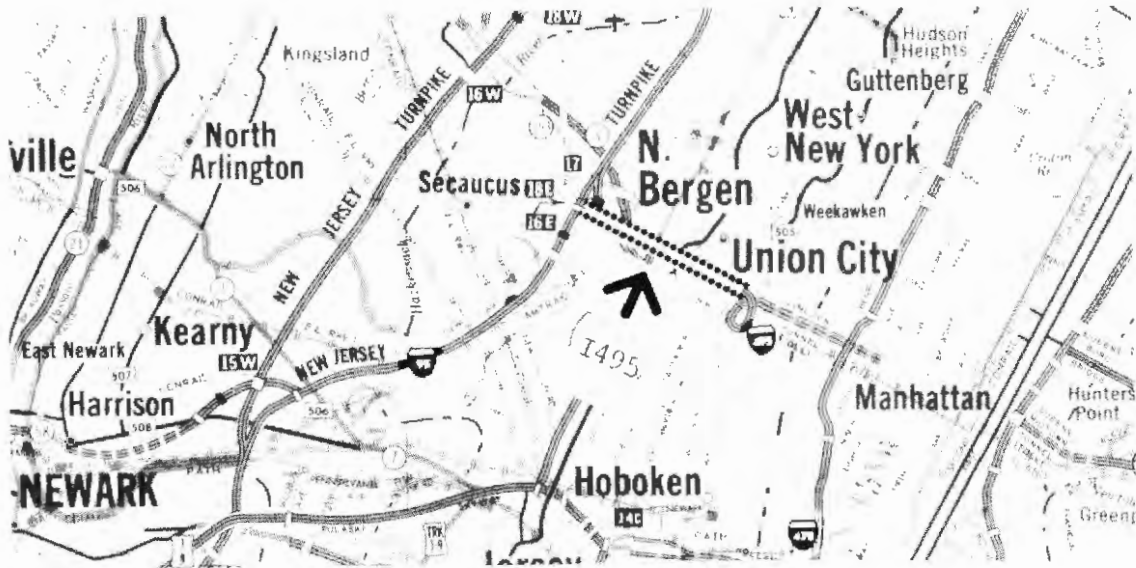


FIGURE II.16

THE OPEN-TO-THE-PUBLIC I-495 FACILITY

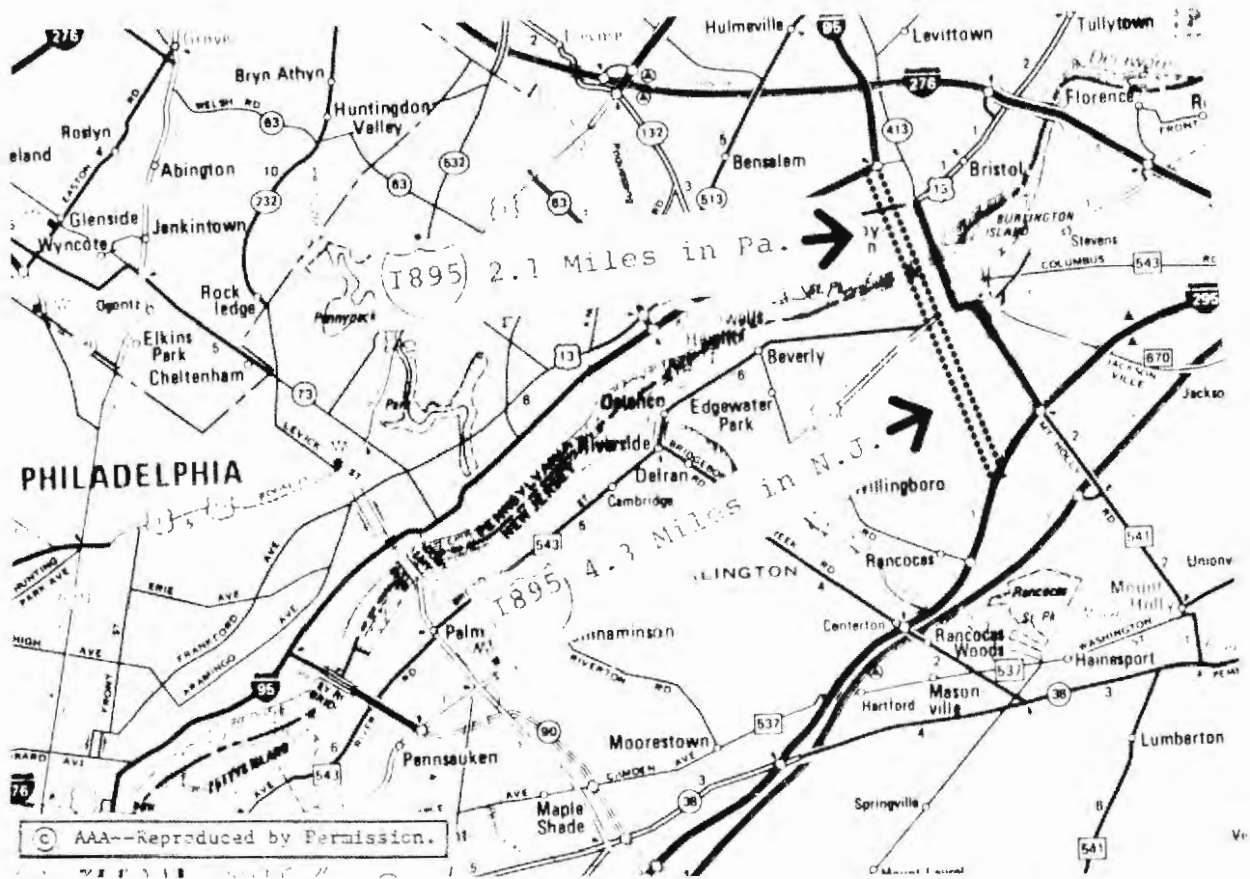


FIGURE II.17

THE PROPOSED I-895 IN THE PHILADELPHIA AREA

undertaken to evaluate whether New Jersey's many uncompleted Interstate links should be built or traded-in. A number of routes were approved for eventual construction (i.e., various missing links of I-78, I-278, I-195 and I-295). In other cases, NJDOT recommended trade-in as the best option. First to be withdrawn was the reconstruction of I-495. In its analysis NJDOT found that while upgrading would improve safety conditions, the land widening would not appreciably ease congestion. In fact, the prolonged reconstruction period would cause significant traffic delays. The withdrawal was approved September 14, 1979. This was the second Interstate route withdrawn that was already open-to-the-public, following by less than three months the I-495 Long Island Expressway withdrawal. It was also the last withdrawal of this nature. Just two weeks after its withdrawal, Congress prohibited the future withdrawal of open-to-the-public segments.

Second to be withdrawn was I-895, in the Philadelphia urban environs. Trade-in of this route was initiated by the Pennsylvania Transportation Department, largely due to a lack of support for the highway-bridge project and an opportunity to advance projects elsewhere in the urban area. NJDOT officials concurred with this position. Still, it took more than a year to get the agreement of all parties, with an eventual simultaneous withdrawal approval in September 1980.

Last to be withdrawn was the I-95 Spur. From 1976 through 1979, NJDOT conducted an EIS review for the entire I-95/I-695 segment (a total of 32.5 miles). In its review, NJDOT concluded that the development which had already occurred along the I-95 Spur corridor would necessitate considerable residential displacement as well as the taking of some parkland. It therefore recommended against construction of the spur, and was joined in this conclusion by the MPO (Tri-State Regional Planning Commission) and the local communities.

In addition to these routes, NJDOT has also tried to withdraw the remaining 22.8 mile segment of I-95/I-695. An EIS review concluded that I-95 was an unnecessary highway that would not relieve corridor congestion but which would induce unwanted development in the corridor. In its place NJDOT recommended that I-95 be rerouted in Pennsylvania to cross the Delaware River south of Trenton (via the Pennsylvania Turnpike) and join up with the New Jersey Turnpike, which would be designated as I-95 all the way to the George Washington Bridge (see Figure II.18). Withdrawal of this link required approval of both the Philadelphia-area and New York City area MPOs, since I-95 linked these two urban areas. Both MPOs approved, as did three of five local communities in the corridor. In January 1982, a withdrawal request for I-95 was submitted to the federal government. However that request was denied in March, 1982. New Jersey has appealed the decision, which is still under review as of September, 1982.

Substitute Projects

As of June 30, 1982, substitute projects have been funded only as a result of the I-495 and I-95 Spur trade-ins. Over \$65 million has already been obligated, 96 percent for transit projects. These have

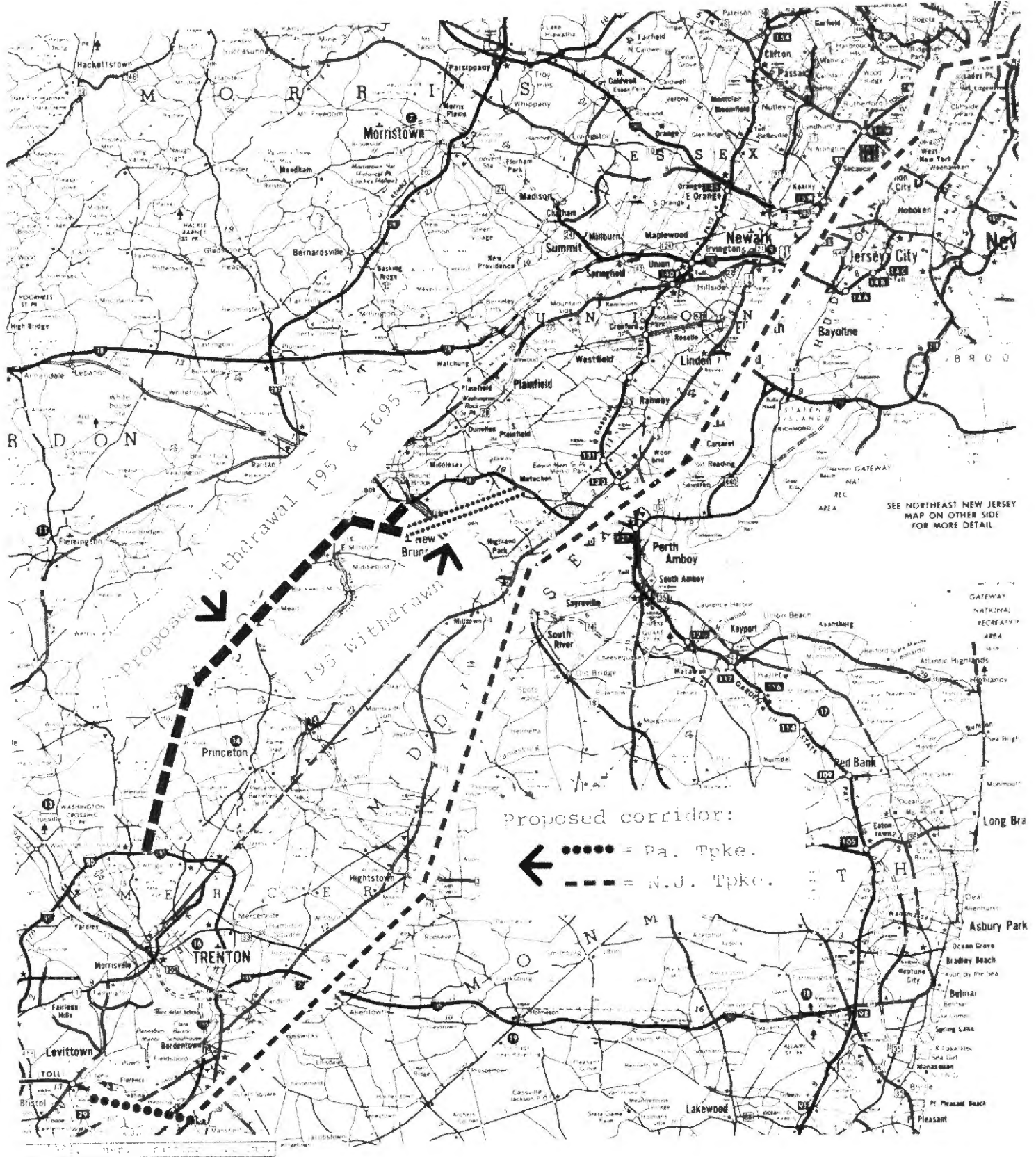


FIGURE II.18

1982 PROPOSED ROUTING OF I-95

included commuter rail improvements (e.g., track rehabilitation, vehicle purchases, station rehabilitation, etc.) and improvement to the City of Newark light rail subway. Highway purposes received 4 percent of trade-in funds and were used primarily for bridge rehabilitation projects. Most projects have been either (a) confined to the vicinity of I-495 although not the actual corridor itself, or (b) utilized to upgrade facilities used primarily for commuting between New Jersey and New York City (as is the main purpose of I-495).

Tentative concept programs have been generated by NJDOT (in consultation with local communities) for both the I-895 and I-95 Spur withdrawals. Over 70 percent of funds available from I-895 are proposed to be spent for transit projects, most notably a four mile extension of the Lindenwold commuter rail line from its current terminus in Lindenwold to Berlin. Other transit projects include bus maintenance and transfer facilities and bus purchases, to be implemented throughout the area. Highway projects (e.g., construction, right-of-way purchases, etc.) are also to be spread throughout the New Jersey area contiguous to Philadelphia.

The I-95 Spur Concept Plan includes the following:

1. 43 percent of funds directed to the I-95 Spur corridor, for State highway projects and highway and transit projects proposed by two counties;
2. 21 percent directed toward the reconstruction of commuter rail rolling stock used in the region;
3. 10 percent directed to ten counties in the New Jersey portion of the New York City urban area to make up for a loss of FAUS funding; and
4. 26 percent distributed to the State (for highway and transit purposes) and ten counties to help offset inflation of costs on other projects.

Matching shares will be provided by the state, either through NJDOT funds or through the New Jersey Transit Corporation.

13. New York City, New York

Basic Characteristics

The New York City SMSA had over 9 million persons residing in it in 1980. The central city contained slightly more than 7 million persons. In 1982, employment in the SMSA exceeded 3.7 million.

The urbanized area contains slightly over 32,000 miles of street network, with 1.1 percent being Interstates and 7.9 percent other principal arterials. Over 162 million VMT were recorded daily in 1975, with 14.7 percent occurring on Interstates and 47.9 percent on other principal arterials.

The urbanized area has a peak transit requirement of over 7800 buses, 5300 rapid transit cars and 2000 commuter rail cars. In 1980, over 43 percent of work trips in the urbanized area were carried by public transportation.

Withdrawal Background¹⁸

I-495 is that portion of the 70 mile Long Island Expressway confined to the boroughs of Brooklyn and Queens (beyond Queens, the highway continues well into Suffolk County and carries the designation of New York State 495). The particular segment of relevance lies between the Brooklyn-Queens Expressway (I-278) and the Van Wyck Expressway (I-678) (see Figure II.19). It has been part of the completed, open to the public Interstate System since 1955, utilizing non-Interstate funds for its initial construction. Plans for expansion of this facility were conceived in the early 1960s, and the Federal Government approved the use of Interstate funds for that purpose in 1963.

Withdrawal Process

The 4.7 mile segment of I-495 was formally withdrawn in June, 1979. The amount originally authorized for trade-in projects was \$257 million, but this was cut back to \$230 million by Federal legislation that reduced the base cost estimate.

Designs for the expanded I-495 segment evolved from an elevated dual expressway (2 lanes in each direction), first proposed in 1968, to an elevated 2-lane roadway along the median, developed as an EIS option in 1975 and selected as the main alternative in 1977. The roadway was to be used by high-occupancy vehicles during peak periods. FHWA's New York division office disapproved of the latest design in 1977, but since no alternative was suggested, the Washington office approved the concept and related costs (\$177 million). However, in 1979, the New York FHWA division again recommended against the proposed expansion (citing cost, environmental and implementation feasibility concerns), suggesting in its place a program of safety improvements (i.e., ramp modifications, service road continuity) estimated to cost \$70 million. When it became apparent that this recommendation might be approved, lowering the amount of these federal Interstate funds to the State from an estimated \$205 million to \$70 million, both the City and State began to pursue the withdrawal option so as to retain the flow of funds at the former level.

Shortly after the withdrawal was approved, Congress indicated its basic disapproval of the I-495 trade-in in 1979 Act. The Act lowered the base cost estimate of the original I-495 expansion by a third, from \$177 million to \$118 million. This, in effect, lowered the amount available for substitute projects. From a national standpoint, however, those amendments included a more crucial restriction: No longer would any route or portion of a route that was already open to the public be eligible to be withdrawn.

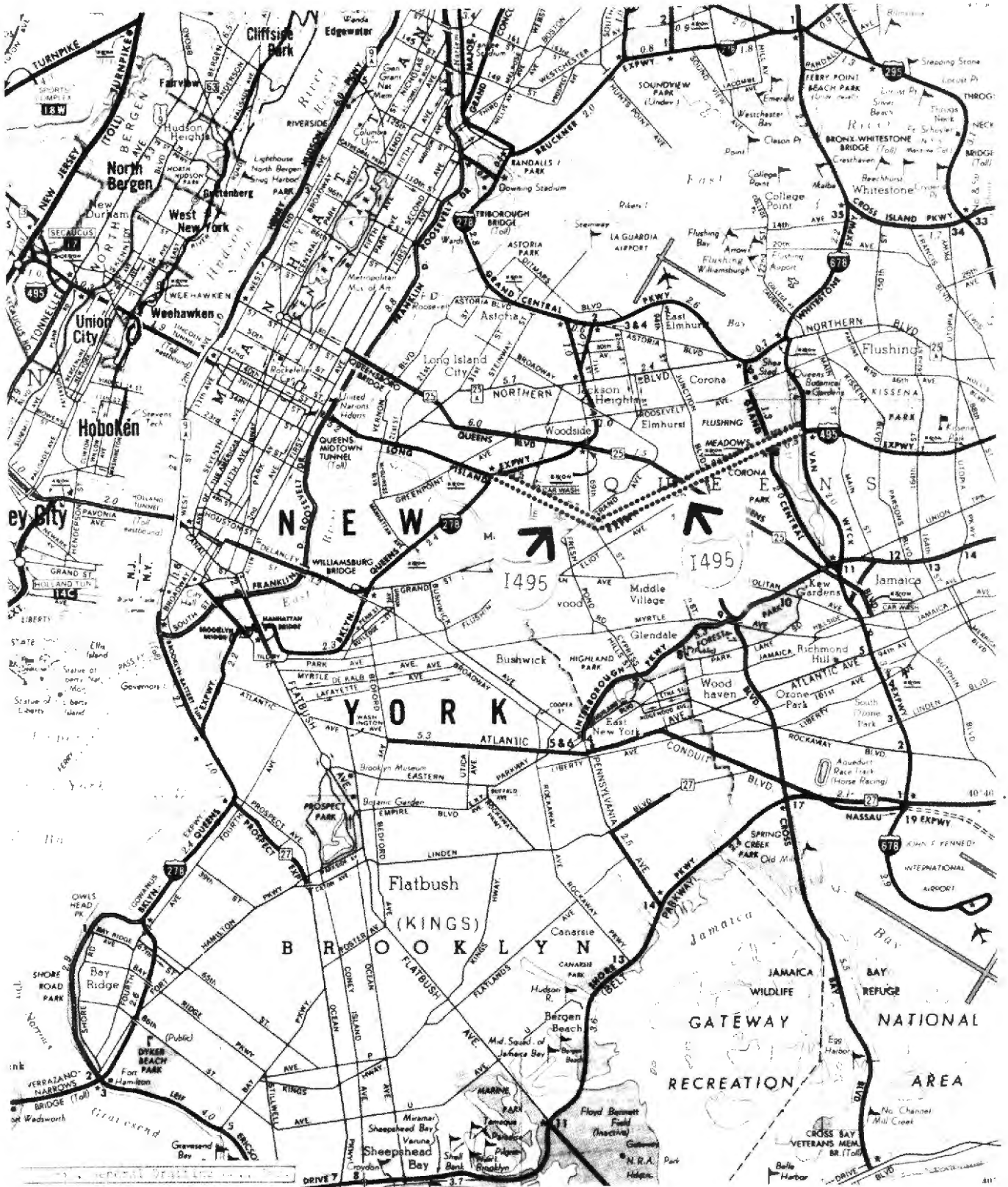


FIGURE II.19

THE NEW YORK URBAN AREA AND THE I-495 SEGMENT WITHDRAWN

Substitute Projects

At the time of the withdrawal, it was anticipated that trade-in funds would be used in three areas in a roughly equal distribution. One third would be utilized for city-wide transit projects. As of June 30, 1982, nearly \$66 million has been obligated for this purpose, largely for modernization of facilities (e.g., subway platform renovation, Staten Island Ferry access improvements at terminals and subway stations). Another third would be utilized for city-wide highway safety and bridge rehabilitation projects. Through June, 1982, over \$51 million has been obligated for this purpose, primarily for improving Manhattan highways as well as rehabilitation of some minor bridges in Queens. The final third would be for improvements to that section of I-495 from which the proposed expansion was removed. Major elements of the project are similar to FHWA's 1979 recommendations: service road continuity and ramp modifications (e.g., lengthening, relocation and redesigning). The project, estimated to utilize \$90 million of trade-in funds, is nearing final approval and eventual commencement.

14. Omaha, Nebraska

Basic Characteristics

The Omaha SMSA had a population of 483,000 in 1980, of which 62 percent resided in the central city. More than 282,000 persons were employed in the SMSA in 1981.

The street network in the Omaha urbanized area includes nearly 1900 miles of facilities, of which Interstates comprise 2 percent and other principal arterials represent 7 percent of the total. Daily VMT in 1975 amounted to roughly 7.4 million, with 18 percent occurring on Interstates and 27 percent on other principal arterials.

The area's transit system has a peak requirement of 160 buses. In 1976, the system carried 5 percent of work trips.

Withdrawal Background¹⁹

I-580 was initially planned to serve as a radial spur connector between the northern residential area (and possibly as far as the I-680 outer belt) and an inner freeway belt which surrounds the Omaha CBD. (see Figure II.20). It was originally proposed in 1957 as part of the areawide transportation plan. During the 1960s, a non-Interstate 1.3 mile segment was built from I-480 northward, using Federal Aid-Primary funds. This leg was eventually designated as I-580 in the mid-70s at the same time that the proposed extension received approval as I-580. Right-of-way acquisition for this additional link began in 1976.

Withdrawal Process

In its entirety, I-580 consisted of 1.3 miles of completed highway and a 1.9 mile unconstructed but approved segment. The entire highway was removed from the Interstate System in December 1979. The

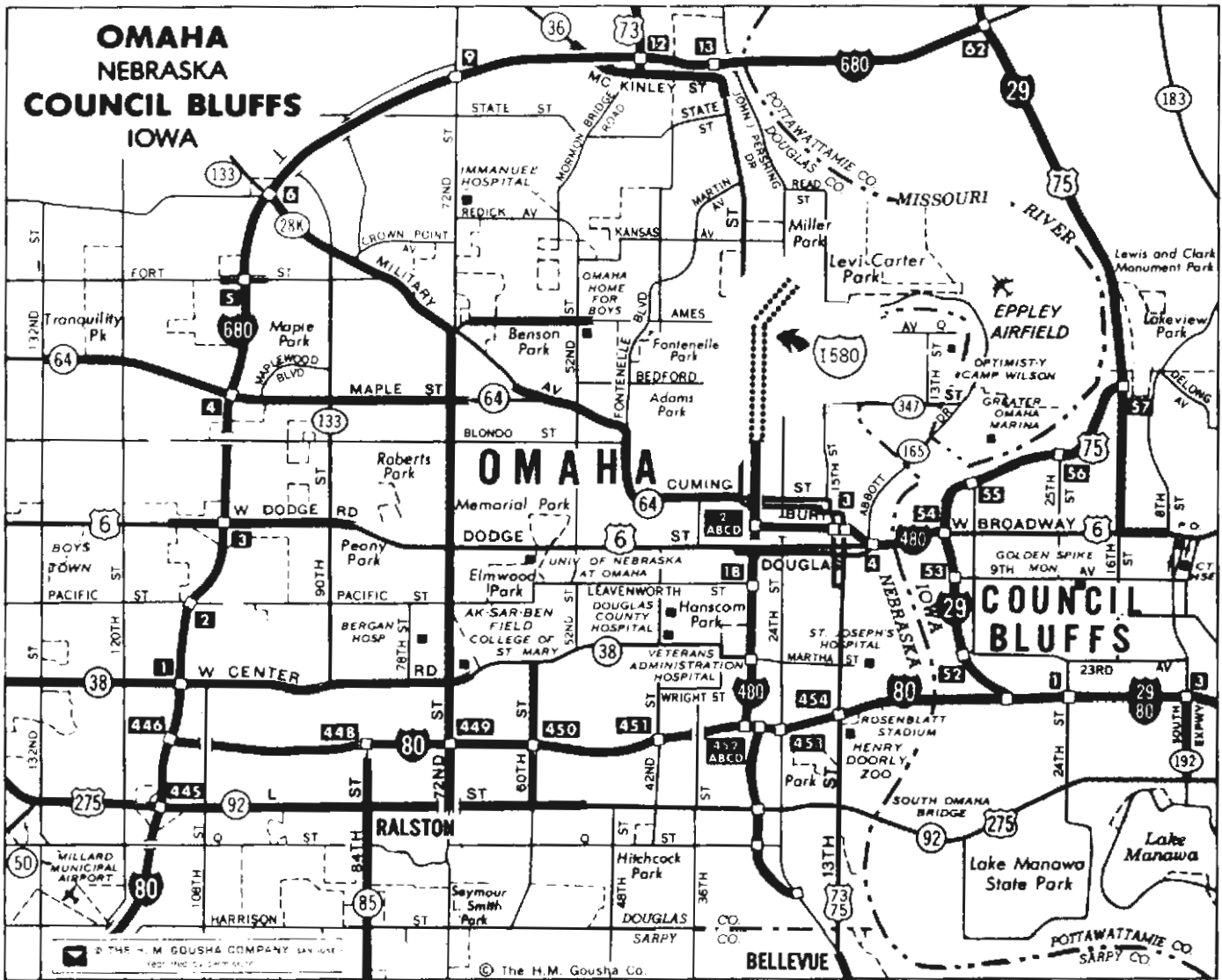


FIGURE II.20
 THE OMAHA-COUNCIL BLUFFS URBAN AREA
 AND THE I-580 SEGMENT WITHDRAWN

1.9 mile unconstructed segment was traded-in under Section 103(e)(4), with \$76.4 million authorized for substitute project use. The 1.3 mile segment was deleted from the Interstate System under another provision.

According to the Nebraska DOT, the withdrawal of I-580 was first considered only after the 1976 Amendments which allowed highway substitute projects. The originally approved 1.9 mile segment of I-580 was to include an interchange at its northern terminus -- a requirement under Interstate design standards that was considered unnecessary by State and City officials. The trade-in procedure was therefore viewed as a way to retain the desired highway, but without the unnecessary interchange, and generate the excess funds to help fund other necessary highway projects (including a freeway spur from the northern terminus to the airport).

Substitute Projects

The concept program of substitute projects was put together by the State Department of Roads, and has been approved by U.S. DOT. Although it considers recommendations made by the City of Omaha and the MPO, the State has so far rejected the MPO's plan to spread substitute projects throughout the metropolitan area such that the neighboring city of Council Bluffs, Iowa would receive trade-in funds. Nearly \$25 million has been obligated through June, 1982, with 60 percent used for construction of the North Expressway (in the I-580 right-of-way) and its northern airport spur. The remaining funds have been used to reconstruct 2 arterials, an intersection within the City of Omaha and transit projects. Nearly \$47 million remains to be obligated as of June, 1982.

15. Philadelphia, Pennsylvania

Basic Characteristics

The Philadelphia SMSA had a 1980 population which exceeded 4.7 million, with 36 percent living in the central city. Employment in the SMSA was nearly 2.2 million in 1982.

The urbanized area has over 9800 miles of street network, of which 1.5 percent are Interstates and 9.6 percent are other principal arterials. Daily VMT exceeded 52.2 million in 1975, with 16.3 percent occurring on Interstates and 38.6 percent on other principal arterials.

The public transportation system has a peak requirement of 1300 buses, 346 rapid transit vehicles, 257 light rail vehicles and trolley coaches and 338 commuter rail cars. Public transportation carried 14 percent of all work trips in 1980.

Withdrawal Background²⁰

I-695, or the Cobbs Creek Expressway, was an original component of the Philadelphia freeway plan of the 1950s. It was to provide access along the southwest border of the city of Philadelphia, joining I-95 (near the Airport) to I-76 (the Schuylkill Expressway) (see Figure II.21).

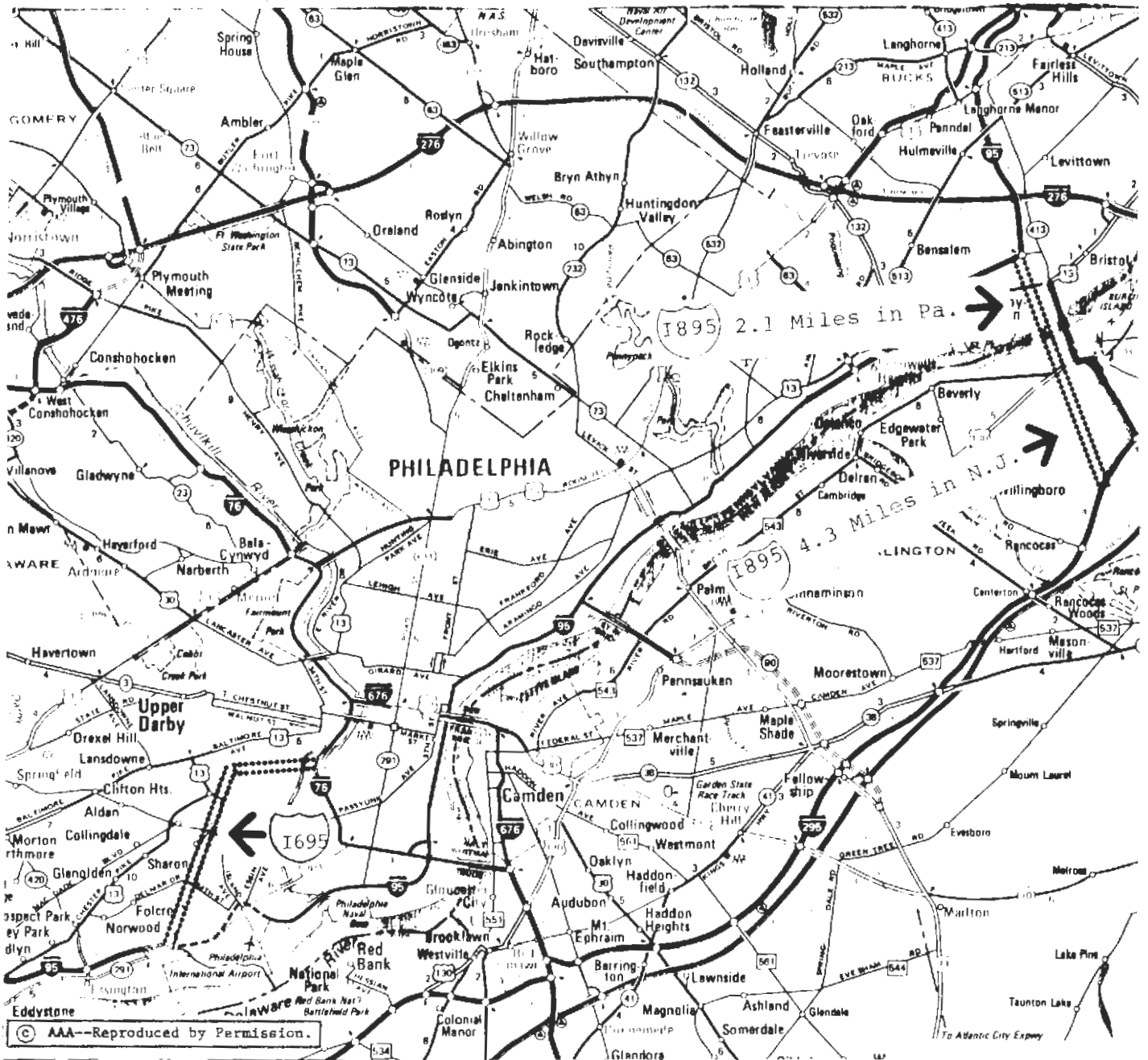


FIGURE II.21
 THE PHILADELPHIA URBAN AREA
 AND THE I-695 AND I-895 SEGMENTS WITHDRAWN

A proposed replacement facility for the Burlington-Bristol Toll Bridge (northeast of the city of Philadelphia, as seen in Figure II.21) formed the basis of I-895, which was also to include access links from I-95 in Pennsylvania and I-295 in New Jersey. This segment was added to the Interstate system in 1969.

Withdrawal Process

The 7.8 mile segment of I-695 was formally withdrawn in June 1974, one month after the first 103(e)(4) withdrawal in Boston. At the time, \$148.2 million was authorized for substitute projects.

The construction of I-695 would have necessitated considerable residential displacement, and opposition to its construction grew in the late 1960s/early 1970s. Furthermore, its usefulness to the regional transportation plan depended upon the construction of two nearby non-Interstate expressways, both of which garnered at least as much opposition as I-695 (and which were never built). Following passage of trade-in legislation, it became apparent to State and City officials that it was a good option to choose, even if it only funded transit projects at the time, since there was little chance that the Interstate segment would ever be built.

The 2.1 mile segment of I-895 was formally withdrawn in September, 1980 (simultaneously, 4.3 miles of I-895 were withdrawn in New Jersey). The amount authorized for substitute projects was \$133.6 million.

As with I-695, the I-895 segment generated community opposition (primarily in Pennsylvania and not in New Jersey). While not of the same magnitude as expressed over I-695, the level of opposition, combined with a lack of outright support, led state officials to consider what projects elsewhere in the urbanized area were of a greater priority, and could benefit from an infusion of trade-in funds. Negotiations concerning withdrawal took over a year, due in part to the need for achieving a mutual withdrawal agreement in New Jersey.

Substitute Projects

At the end of June, 1982, \$380 million had been obligated to the Philadelphia urbanized area as a result of both trade-ins. However, in the division of funds between modes and settings, the funds available from each withdrawal are treated separately. Some \$338 million has been obligated since 1974 from the I-695 trade-in. The funds have been spread throughout the urbanized area, but used exclusively for transit. A multitude of projects have been funded (except any new line construction), including vehicle purchase (rapid transit, light rail, commuter rail and buses), vehicle rehabilitation, station modernization (commuter rail and subway), right of way rehabilitation, depot and repair shop construction, etc. Only \$1 million is left to be obligated (it will be fully utilized in FY '82), and it will be used for garage and repair shop construction.

At the time that I-895 was withdrawn it was expected that I-676 within the Philadelphia CBD might also be withdrawn (a task force later called for its construction). It was agreed that if withdrawn, some of the funds from I-676 would be used for transit projects within the city of Philadelphia, while funds from I-895 would be used for highway projects in the surrounding counties (Bucks, Chester, Montgomery and Delaware). Although I-676 was not withdrawn, the proposed distribution of funds from I-895's trade-in was retained. As of June 30, 1982, \$42 million has been expended, primarily to construct gaps in the Pottstown Expressway, located in suburban Montgomery County. Other proposed projects include new road construction and relocation, and highway reconstruction. In addition, to take advantage of a FY '82 Congressional appropriation earmarking \$9 million for transit trade-in projects in the Philadelphia area, commuter rail-related projects in the four counties will be enacted. Matching share will be provided by the state for all highway projects, and by the state and local entities for transit projects.

16. Pittsburgh, Pennsylvania

Basic Characteristics

The Pittsburgh SMSA has a population of over 2.2 million, with 424,000 residing in the central city. In 1982, slightly over one million persons were employed in the SMSA.

There are over 7400 miles of street network in the Pittsburgh urbanized area, with 1.7 percent being Interstates and 8.3 percent other principal arterials. In 1975, there were over 24 million daily vehicle miles traveled, with 14.5 percent occurring on Interstates and 34.3 percent on other principal arterials.

During the peak periods, some 813 buses, 73 light rail vehicles and 13 commuter railcars provide public transportation services (there is also a small vertical-incline cable car service). In 1980, 12 percent of worktrips were carried by public transportation.

Withdrawal Background²¹

I-579 was intended to bisect the city of Pittsburgh not far from the apex of its well-known triangle in a basic north-south direction (see Figure II.22). It was a link in an Interstate chain developed as part of the regional transportation plan which would connect the central city to the northern and eastern suburbs. During the 1960s, Crosstown Boulevard was built in a portion of the I-579 proposed right-of-way.

Withdrawal Process

A 0.4 mile portion of I-579 was withdrawn in December 1979. The amount authorized for trade-in projects was \$64.2 million.

The 0.4 mile segment withdrawn comprised the interchange between what is now the southern terminus of Crosstown Boulevard and I-376,

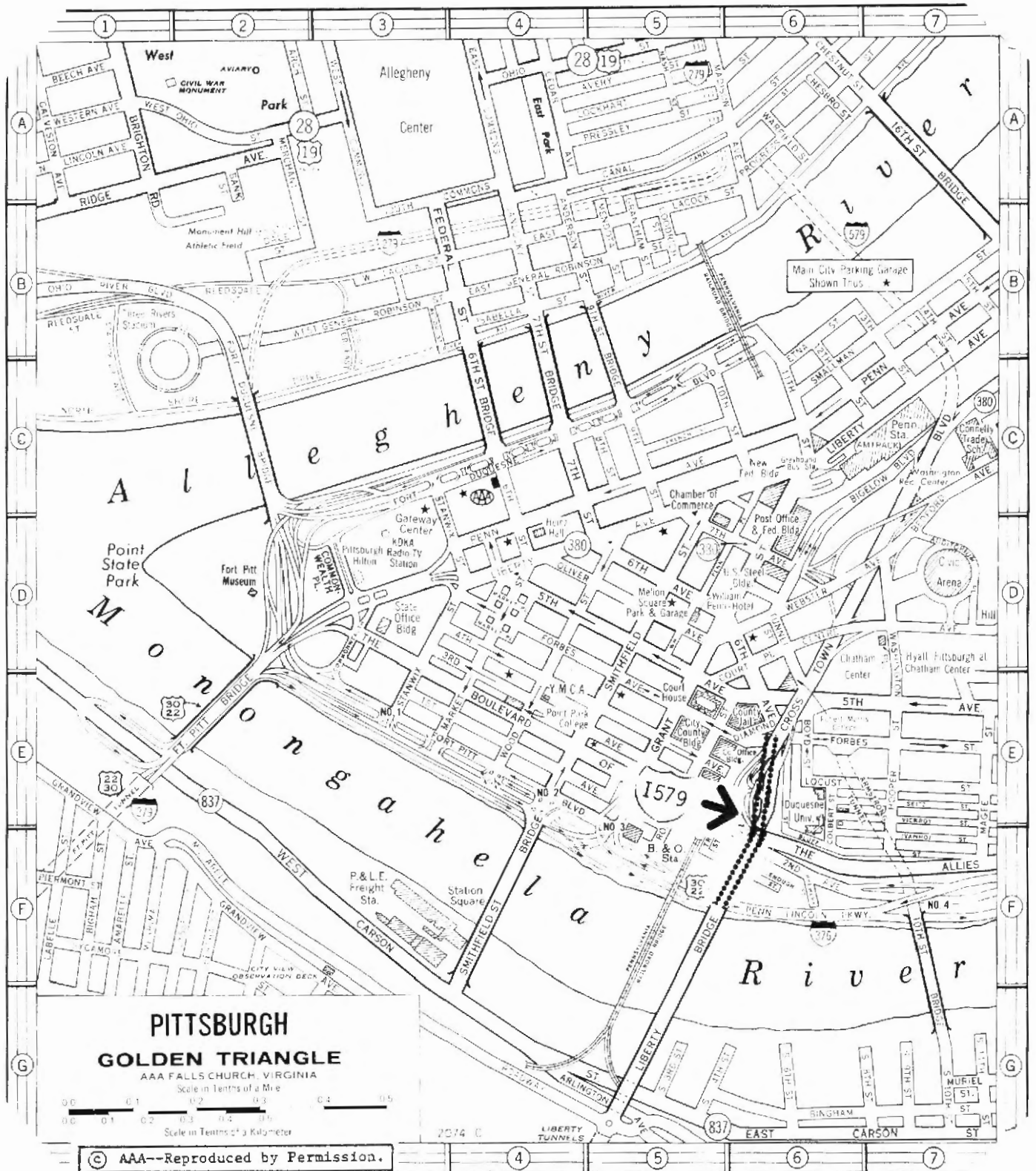


FIGURE II.22
 THE PITTSBURGH URBAN AREA
 AND THE I-579 SEGMENT WITHDRAWN

an east-west route that for many miles runs along the banks of the Monongahela River. The remaining I-579 (1.3 miles of existing and proposed roadway) is still intended to be built (or rebuilt), up to its northern terminus at the Allegheny River (where it will link up with a still unbuilt I-279 river crossing). The area around the withdrawn portion is densely developed, and would have necessitated considerable right-of-way clearance as well as met with less than desirable geometric conditions. More importantly however, City officials felt that proposed highway links elsewhere were of higher priority, and that they could utilize the trade-in funds for their construction instead.

Substitute Projects

Two likely highway projects were proposed as substitutes and submitted along with the withdrawal request. One is a one mile relocation of Ohio River Boulevard within the City of Pittsburgh, and its expansion into a 6-lane facility. According to estimates, the cost of this project would be approximately \$60 million and be paid for completely out of trade-in funds. As of June 30, 1982, \$425,000 has been obligated for an EIS on this project. The other highway is the Beaver Valley Expressway, a 3.4 mile facility located outside the central city, nearer the airport. Currently, Interstate trade-in funds are proposed only for a preliminary engineering study of this route; indeed, local officials admit that this latter facility will probably not be built using trade-in funds. In addition to these projects, some portion of trade-in funds will be used to build adequate ramp facilities between the local streets and the southern terminus of the future I-579 (which will replace the current Crosstown Boulevard facility).

17. Portland, Oregon

Basic Characteristics

The Portland SMSA contained slightly over 1 million persons in 1980, with 365,000 residing in the central city. In 1982, over 655,000 persons were employed in the SMSA.

There are nearly 4270 miles of street network in the urbanized area, with Interstates representing 1.4 percent and other principal arterials representing 4.7 percent of that total. Over 12.5 million VMT were registered daily in 1975, with 21.6 percent occurring on Interstates and 33 percent on other principal arterials.

The peak requirement for mass transit services is 475 buses, which carried 8 percent of all work trips in 1980.

Withdrawal Background²²

Over the years, Portland has made two separate Interstate Highway segment withdrawals. The first involved I-80N or the Mount Hood Freeway. Originally it was proposed as a direct extension of existing I-80N (now, as Figure II.23 indicates, renumbered as I-84) via the U.S. 30 corridor into downtown Portland. However, the expense of

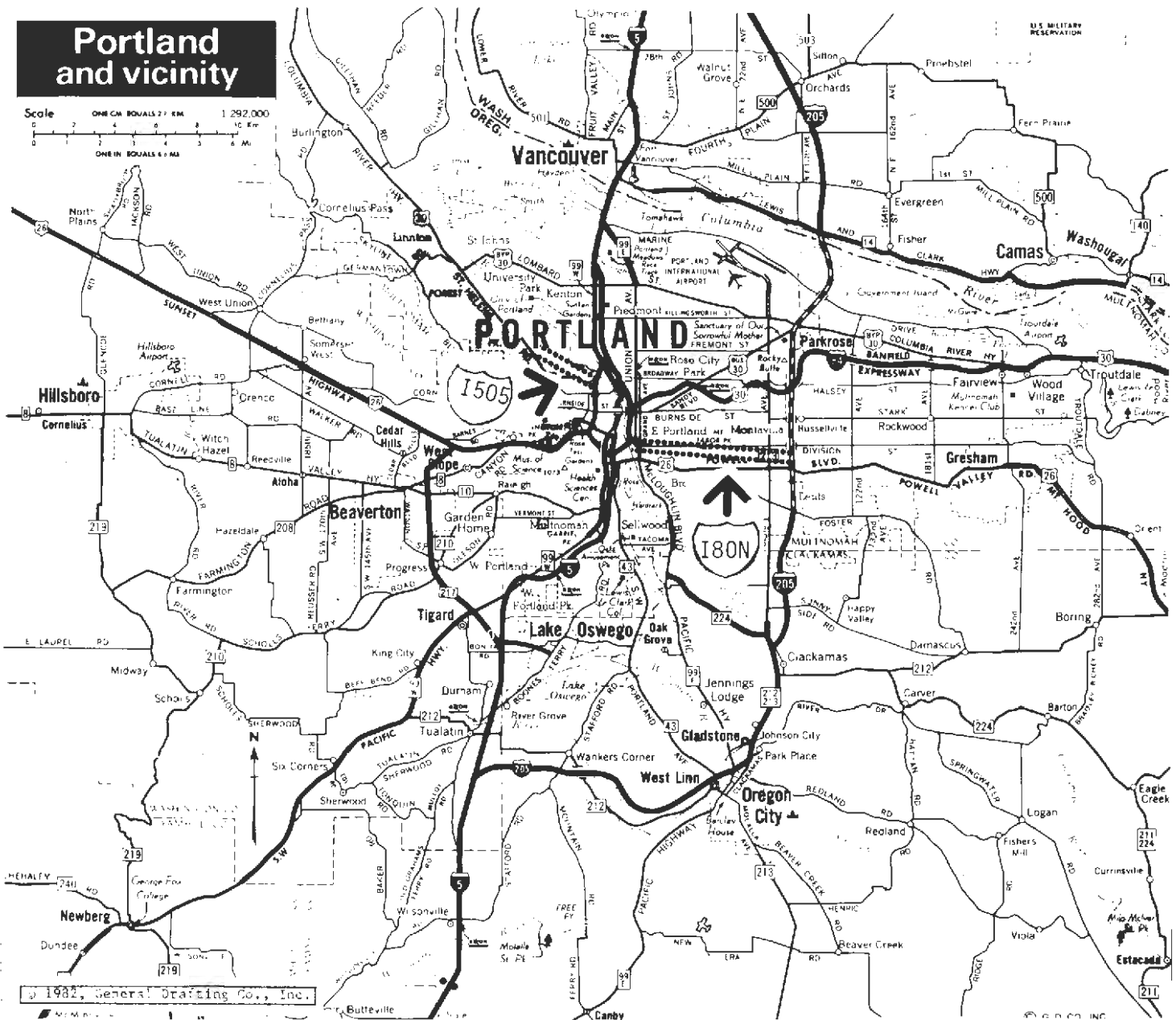


FIGURE 11.23
 THE PORTLAND URBAN AREA
 AND THE I-80N AND I-505 SEGMENTS WITHDRAWN

upgrading that highway to Interstate standards was considered too high by local officials. Between 1965 and 1970, local officials lobbied to shift the designated I-80N segment south from this so-called Banfield corridor to the Division-Powell Streets corridor. Congressional approval was gained in 1970 for the shift, calling for a highway to stretch between I-5 (connecting to the Portland CBD) and I-205, then only a planned highway (now under construction).

Also in 1970, Congress approved another Interstate segment for Portland), namely I-505. It was to serve Portland's industrial northwest section (west of the Willamette River) as a spur off the tight inner-ring around the CBD formed by I-5 and I-405 (see Figures II.23 and 24). Its purpose was to relieve heavy truck congestion experienced on arterials in the area. The specific highway length and corridor was not approved until 1975.

Withdrawal Process

The 5.1 mile segment of I-80N was formally withdrawn in May 1976. The amount authorized for substitute projects was \$145.5 million.

Community opposition to the relocated I-80N, or Mt. Hood Freeway, grew quickly and culminated in a lawsuit and 1973 judicial order forcing the State to hold new public hearings in the affected corridor. At the same time, the head of the county government within which Portland is situated came out against I-80N's construction. The Governor then set up a Transportation Task Force (chaired by Portland Mayor Neil Goldschmidt) to explore highway construction alternatives. In 1974, both the city and county governments voted for withdrawal, and were later joined by a new pro-transit Governor in 1975. Although a formal withdrawal request was made in July 1975, various meetings and actions on all government levels caused formal approval to be delayed until May 1976, following passage of Federal highway legislation allowing inflation adjustments and highway/transit substitute project choices.

The 3.2 mile segment of I-505 was formally withdrawn in December, 1979. The amount authorized for substitute projects was \$160.2 million.

Following the withdrawal actions on I-80N, a consensus emerged among Portland and nearby communities that felt that major new highway projects were less vital concerns than improvements to existing arterials and streets, other TSM improvements and a commitment to a transit corridor in eastern Portland and its suburbs. The withdrawal of I-505 was viewed as a means of augmenting the response to these concerns that I-80N's withdrawal had begun. Otherwise, I-505 had no major community opposition because of the industrial nature of the area it traversed. But on the other hand, there was no significant support for its construction. The State's EIS for I-505 produced an alternative, at the request of the local governments, that would serve the area's traffic needs adequately. The option was acceptable to all parties, and a withdrawal request came about shortly thereafter.

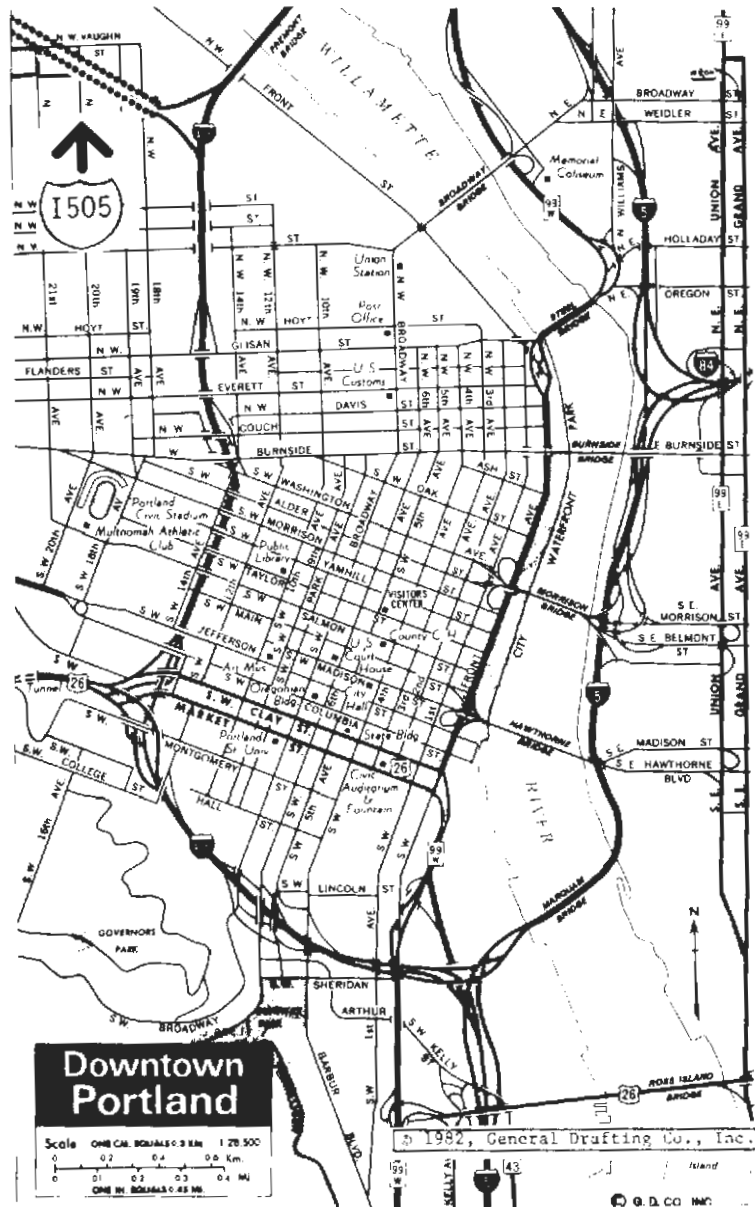


FIGURE II.24
 THE PORTLAND CBD AND THE I-505 SEGMENT WITHDRAWN

Substitute Projects

Of \$191 million obligated as of June 30, 1982 from both withdrawals (most from the I-80N withdrawal), nearly 60 percent has been spent on highway projects. These include arterial, bridge and street reconstruction or rehabilitation projects as well as freeway interchanges and traffic signal projects. However, a significant light rail transit line has been planned that is estimated to cost over \$100 million (over \$76 million has been spent as of June 30, 1982, on planning, engineering, right-of-way acquisition and some construction). It will run 14.4 miles from suburban Gresham (east of Portland) to the CBD along a corridor closer to the original vs. the relocated I-80N segment. Twenty-five stations are planned along a route that includes existing railroad alignments, arterial medians and reserved lanes.

An alternative analyses study has been funded out of the I-505 substitute funds which has recommended specific features of the non-interstate option for that corridor: extended ramps from I-405 and arterial and collector street network improvements.

Further projects, including the light rail construction, will be spread throughout the urban area and is anticipated to be divided in a 55/41 split between highway and transit (almost all the light rail line) according to the latest TIP (with 4 percent set aside for cost overruns). Required matching shares will be supplied by individual localities for most highway projects. The State is providing the bulk of the matching share for the light rail system. This situation (i.e., the State pays the transit match while localities pay the highway match) is the opposite of what is often experienced across the country. It came about as a result of an innovative deal. Portland and other nearby communities gave up the use of their entitled Federal-Aid Urban System (FAUS) funds for 8 years, allowing the State to distribute these funds elsewhere for FAUS or Federal-Aid Primary (FAP) or Secondary (FAS) projects. In return, the state has committed itself to financially support the light rail line.

18. Sacramento, California

Basic Characteristics

The Sacramento SMSA contained slightly over one million inhabitants in 1980, with less than 275,000 residing in the central city. In 1982, 507,000 persons were employed in the SMSA.

The urbanized area has over 2240 miles of street network, with 2.3 percent designated as Interstates and 11.5 percent as other principal arterials. Over 8.8 million miles of travel were recorded daily in 1975, with 21.3 percent occurring on Interstates and 51.7 percent on other principal arterials.

Sacramento's peak period transit requirements are some 190 motor buses. In 1980, public transportation carried 4 percent of all work trips.

Withdrawal Background²³

Most road maps appear to show a completed I-80 segment traversing Sacramento in a north-south direction between the northern terminus of I-880 and the southern terminus at the Intersection of I-80, U.S. 50 and State route 99 (see Figure II.25). However, that segment was built in the 1960s as a non-Interstate route, only gaining temporary Interstate designation some years afterwards. It does not measure up to Interstate design standards and as such was initially planned to be reconstructed and expanded from a 4 to a 6-lane facility. But it soon became apparent that geometric constraints would not permit full roadway expansion and upgrading. A new parallel corridor (utilizing industrial and railroad rite of way) was designated and approved around 1970 as the eventual I-80 site.

Withdrawal Process

The I-80 segment measuring 5.1 miles in length was formally withdrawn in May 1980. The amount authorized for trade-in projects was \$97.1 million.

By the late 1970s, it was clear that the strong highway opposition forces throughout Sacramento and within the government itself would not support the new I-80 construction. Thus in mid-1979, rather than undertake an EIS, the State initiated a multimodal review for the corridor which considered the following options: highway with HOV lanes, busway, light rail transit and no-build. Although not favoring any one option as the best, the study did conclude that the highway option was the least desirable. By December 1979, the City had decided on a trade-in, with the State and MPO approving some 6 months later.

The withdrawal necessitated other changes, chief among them that the I-880 bypass (see Figure II.24) is now designated as I-80. Those sections of completed highway formerly designated as I-80 within Sacramento will be resigned as Business I-80.

Substitute Projects

Coincident with the withdrawal request, an UMTA-funded alternatives analysis was initiated for the former I-80 corridor. The preferred alternative that resulted was a 19 mile light rail transit (LRT) system, serving the CBD from northeastern and eastern spurs. The initial implementation phase of this LRT system is to consist of primarily single track lines, a limited number of transit vehicles, and a reorientation of the present bus system to serve as a feeder to LRT stations. It is estimated to cost approximately \$145 million. All trade-in funds are scheduled to be spent on this project, with the remaining matching share and additional funds to come from the State. As of June 30, 1982, \$0.5 million in trade-in funds have been approved by U.S. DOT for a study to resolve design problems of the LRT system and to perform some preliminary engineering.



FIGURE II.25

THE SACRAMENTO URBAN AREA AND THE I-80 SEGMENT WITHDRAWN

19. Salem, Oregon

Basic Characteristics

The Salem SMSA had a 1980 population of nearly 250,000, of which 36 percent resided in the central city. In 1982, employment in the SMSA exceeded 126,000.

The Salem urbanized area has a street network of 611 miles, of which 2 percent are Interstates and 16.7 percent are other principal arterials. In 1975, daily VMT was nearly 1.3 million, with 23.1 percent occurring on Interstates and 57.7 percent on other principal arterials.

The peak requirement for public transportation is 31 buses. These carry 2 percent of all trips.

Withdrawal Background²⁴

I-305 was first proposed in 1963 as part of an overall transportation plan for the Salem area. It was proposed to provide access from the northeastern portion of the City (originating there as a spur off of I-5, which only serves the eastern periphery of Salem) into the CBD, continue over the Willamette River via a new bridge and terminate in western Salem (see Figure 11.26). However, the federal government accepted a termination point only as far as the CBD. The route gained formal approval as an Interstate segment in 1968, and the State began right-of-way acquisition in 1971.

Withdrawal Process

The 3.3 mile segment of I-305 was formally withdrawn in September 1977. At the time, \$34.5 million was authorized for substitute projects. Proposed connecting ramps for the I-305/I-5 interchange were retained in order to provide access to I-5 from local streets.

Opposition to I-305 existed in the late 1960s and continued after most of the right-of-way was acquired in 1972. The area through which I-305 was to traverse was relatively undeveloped, and various groups were concerned that the highway would produce industrial and residential growth in the area at a rate that was undesirable. As opposition mounted, the city government (primarily the Mayor himself) looked less favorably on the project, and eventually saw its trade-in as a preferable option following the Portland trade-in of I-80N in May 1976. A withdrawal action was eventually undertaken, following an agreement, at the request of Marion County Officials, to utilize a portion of substitution funds for some type of replacement facility in the corridor.

Substitute Projects

In 1978, a lengthy EIS was initiated for a proposed replacement facility for I-305. The eventual facility chosen, dubbed the Salem Parkway, will be a 4-lane, signalized arterial with limited at-grade

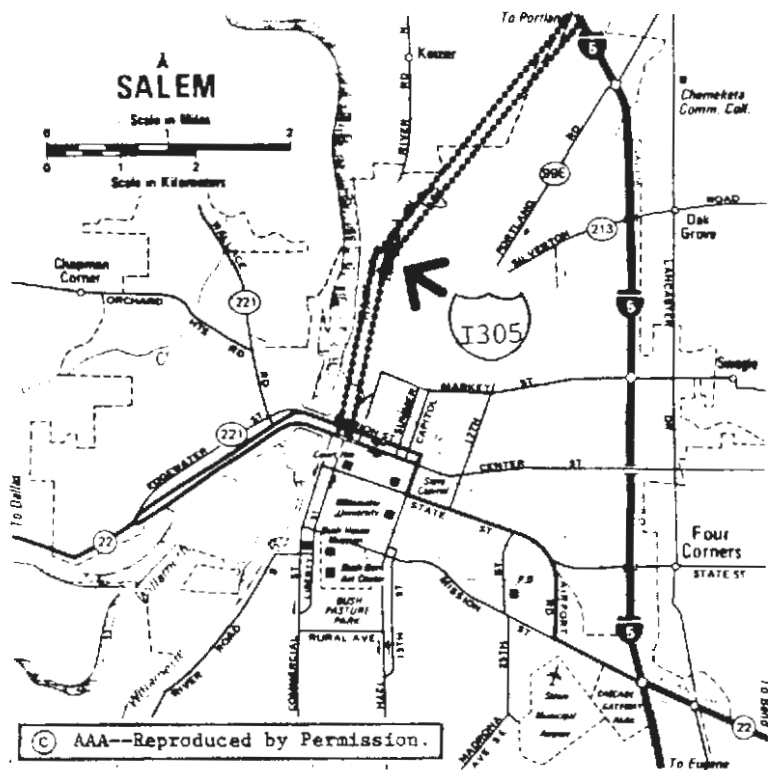


FIGURE II.26
 THE SALEM URBAN AREA AND THE I-305 SEGMENT WITHDRAWN

intersections. Construction of this facility will begin in the summer of 1982. The remaining list of substitute projects are highway only, including street widening, bridge repair, etc. Although spread throughout the urbanized area, many projects will support the Salem Parkway corridor.

As of June 30, 1982, \$23.6 million has been obligated for substitute projects, including additional right-of-way acquisition, preliminary engineering and construction of the Salem Parkway, and other highway projects. Matching shares have and will continue to be met primarily by the city (via a 1977 bond issue), as well as by the county (and for one project, the State has provided some funding).

20. San Francisco, California

Basic Characteristics

The population of the San Francisco-Oakland SMSA was over 3.2 million in 1980, with only 674,000 residing in the City of San Francisco. Employment exceeded 1.7 million persons throughout the SMSA in 1982.

The urbanized area of San Francisco has nearly 6900 miles of street network, of which 1.7 percent are Interstates and 10.4 percent are other principal arterials. Daily vehicle-miles traveled in 1975 was 41.7 million, with 19.2 percent occurring on Interstates and 47.5 percent on other principal arterials.

During the peak period, over 1700 buses are required to serve the urbanized area along with 300 heavy rail cars (BART), 320 light rail and trackless trolley vehicles and 59 commuter rail cars (as well as 26 cable cars, largely a tourist attraction). In 1980, public transportation carried 17 percent of all work trips.

Withdrawal Background²⁵

I-280 was built between San Jose and its current terminus in downtown San Francisco during the late 1960s/early 1970s. It was intended to relieve congestion on parallel routes (Bayshore Freeway, El Camino Real) which connect the burgeoning suburban and urban developments of the southwestern bay area to San Francisco and on to Oakland via the Bay Bridge (see Figure II.27). As such, I-280 was planned to provide direct access to the San Francisco-Oakland Bay Bridge. Currently, however, I-280 ends nearly 2 miles from the Bridge entrance (see Figure II.28).

Withdrawal Process

The 1.9 mile uncompleted segment of I-280 was formally withdrawn in January 1981. The amount authorized for trade-in projects was \$86.7 million.

Planning for the final link of I-280 began in 1973 with the initiation of an EIS. Support for this link was minimal however, growing out

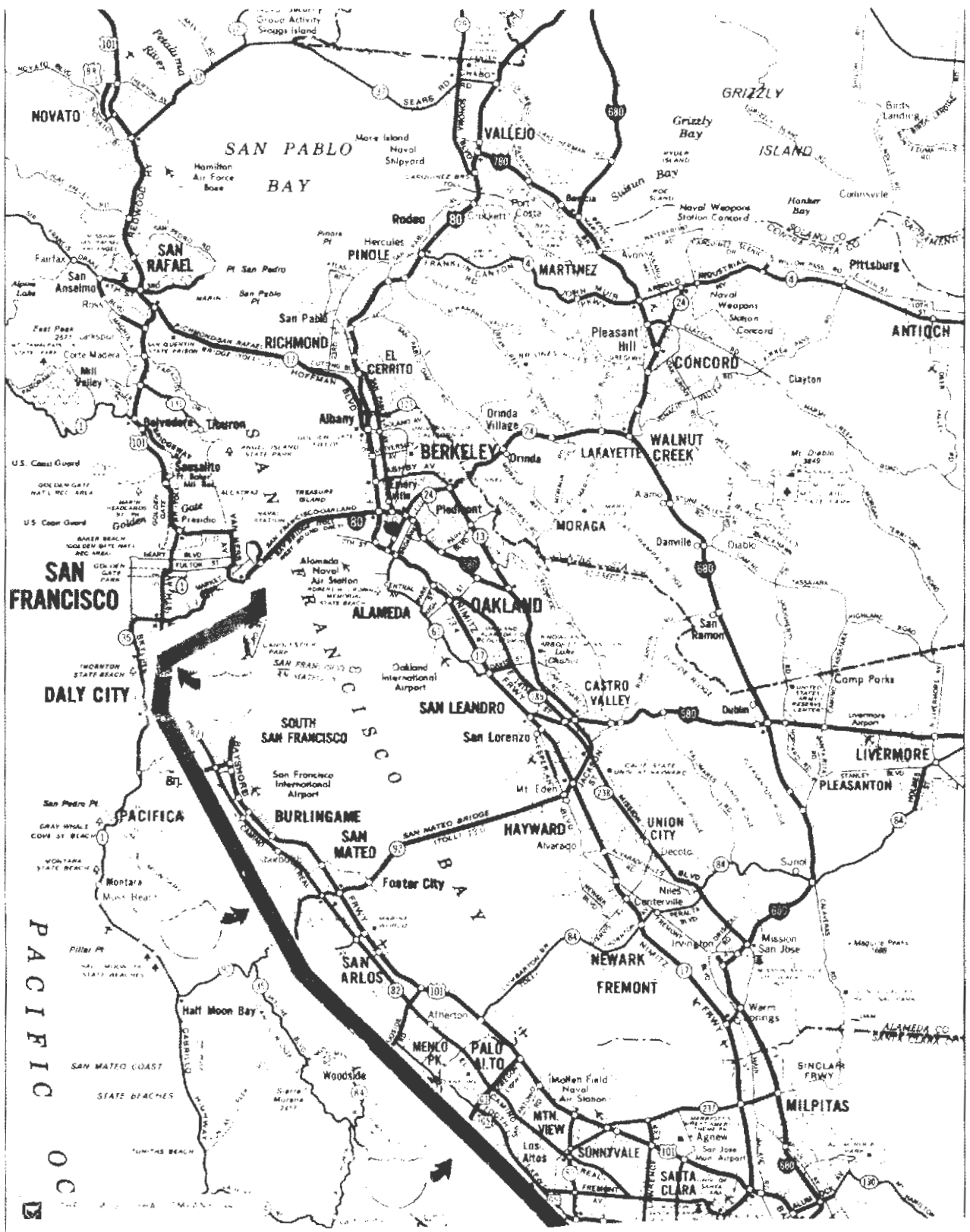
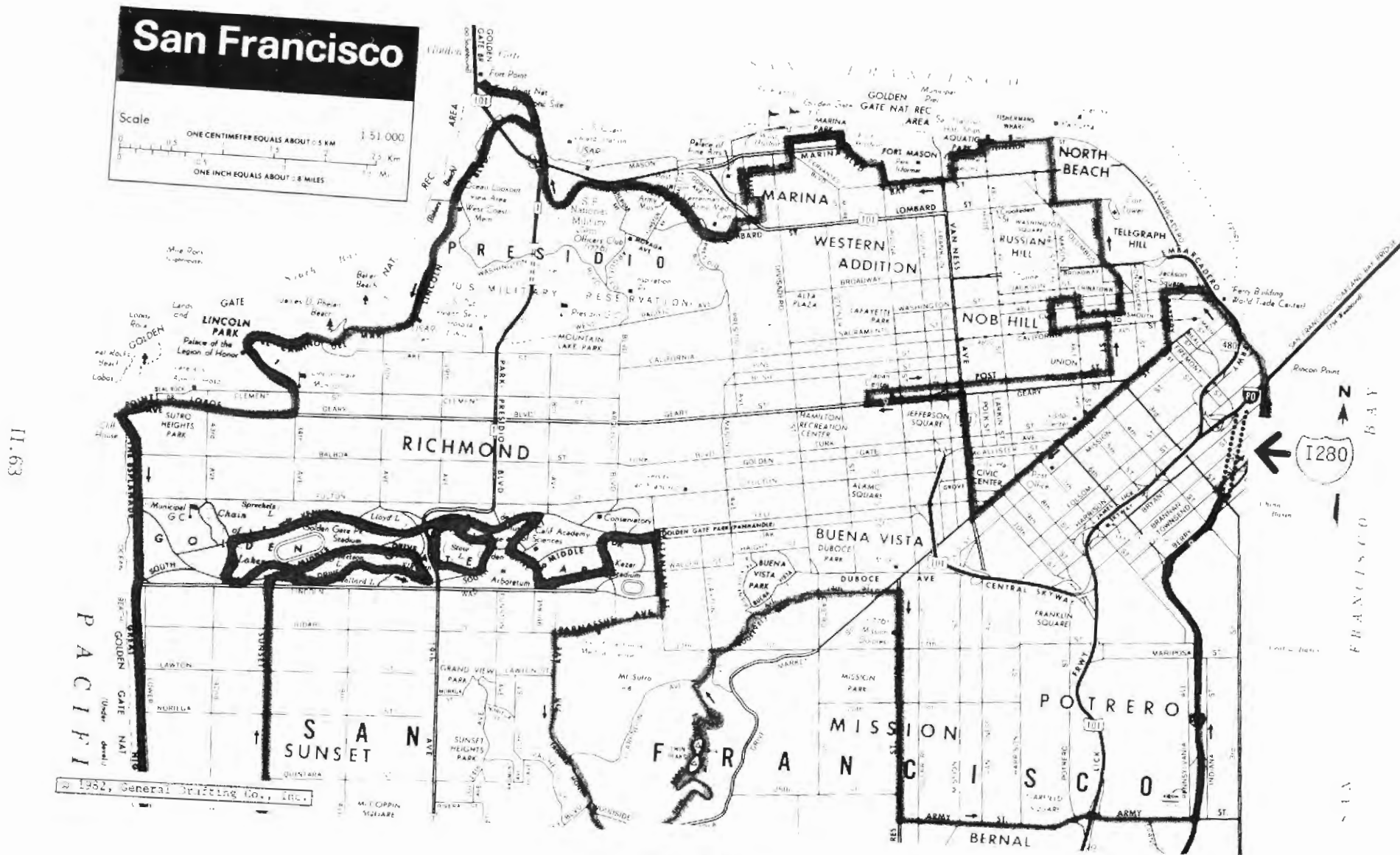


FIGURE II.27

THE SAN FRANCISCO URBAN AREA



11.63

FIGURE 11.28
THE CITY OF SAN FRANCISCO AND THE I-280 SEGMENT WITHDRAWN

of a late 1960s fight among community groups, the City and the State which resulted in the elimination of two major highway projects. Eventually, the EIS process ended prior to completion. A gap ensued between this point and serious consideration of the trade-in option, which only began in the Spring of 1980. Joint discussions, planning and bargaining among City, MPO, transit system operator (i.e., the Public Utility Commission) and State officials brought about a December 1980 withdrawal request, which was approved the following month.

Substitute Projects

A preliminary concept plan was generated and submitted simultaneously with the withdrawal request. It specifies that 74 percent of the federal trade-in funds be utilized for transit projects and 26 percent for highway projects. The transit projects include two light rail transit construction and vehicle purchase projects, an intermodal transfer terminal, commuter rail improvements and preliminary engineering studies for other projects. The light rail and terminal projects would be located in the vicinity of the withdrawn link, while the commuter rail line virtually parallels I-280 down into San Jose. It is expected, however, that Federal trade-in funds and 15 percent matching share will pay for only 31 percent of the cost of these projects, with remaining funds raised from other sources. (The priorities are skewed however; trade-in funding sources will pay for 8 percent of commuter rail improvements, 30 percent of the terminal, 78 percent of one light rail project and 100 percent of another.)

The main highway project planned is the removal of the elevated Embarcadero Freeway from downtown San Francisco, and replacement by a smaller scale surface roadway. Other projects include integrating the current I-280 terminus into the Embarcadero replacement roadway via ramps, park and ride facilities and TSM improvements. All projects would be in the vicinity of the withdrawn highway link. Unlike the situation with transit projects, total trade-in funds (from Federal and 15 percent matching sources) will pay for 100 percent of the costs of these projects.

As of June 30, 1982, \$750,000 has been obligated for planning studies for specific transit and highway projects.

21. Tucson, Arizona

Basic Characteristics

The Tucson SMSA had over 530,000 persons residing in it in 1980, with some 331,500 living in the central city itself. In 1982, SMSA employment exceeded 241,000.

The urbanized area contains 1320 miles of street network, with 1.7 percent Interstates and 6.9 percent other principal arterials. In 1975, daily VMT was over 5 million, with 10.8 percent occurring on Interstates and 44.2 percent on other principal arterials.

Public transportation exposure is low, with a peak bus requirement of 104 in the urbanized area, and a modal share for all trips of only 2.5 percent in 1980.

Withdrawal Background²⁶

I-710 was planned as one of three freeways included in the Tucson Regional Transportation Plan of the late 1960s. Essentially a spur off of existing I-10, it was to serve the CBD from the south (see Figure II.29), while another freeway was to provide an easterly approach to the CBD and a third to provide a central city bypass roughly parallel to I-10. The other freeways were not designated Interstate links, however, a distinction granted I-710 in the early 1970s.

Withdrawal Process

The I-710 highway, measuring 3.2 miles in length, was formally withdrawn in May 1977. The amount authorized for trade-in projects was \$41.2 million.

Local opposition to all three highway proposals of the Regional Transportation Plan was strong, with the result that the two non-Interstate links were quickly dropped from consideration. As early as 1974, the City of Tucson considered trade-in as a possible option for I-710, but there was reluctance on the part of all relevant parties to substitute transit projects for the highway. Following the 1976 legislation which allowed highway substitute projects, the trade-in process quickly commenced, culminating in a March, 1977 request for withdrawal which was then approved two months later.

Substitute Projects

Various categories of substitute projects were generated and agreed upon by local, regional and state officials in 1978, with only around 2 percent intended for transit purchases (bus purchases for Tucson). The rest is to be spent on arterial improvements in two corridors of the urban area (accounting for nearly 80 percent of federal trade-in funds), improvements to two Interstate highways (11 percent of trade-in funds) and street and arterial improvements in the Tucson Central Business District (7 percent). Total federal and matching share funds will pay approximately 80 percent of the costs of these projects, with remaining funds expected from other federal, state and local sources.

As of June 30, 1982, \$8 million has been expended on substitute projects, primarily for the addition of lanes to I-10, as well as for bus purchases and CBD street improvements.

22. Washington, D.C. (including nearby Maryland and Virginia)

Basic Characteristics

The Washington SMSA had slightly over 3 million persons in 1980, with nearly 638,000 residing in the central city. SMSA employment in 1982 exceeded 1.7 million.

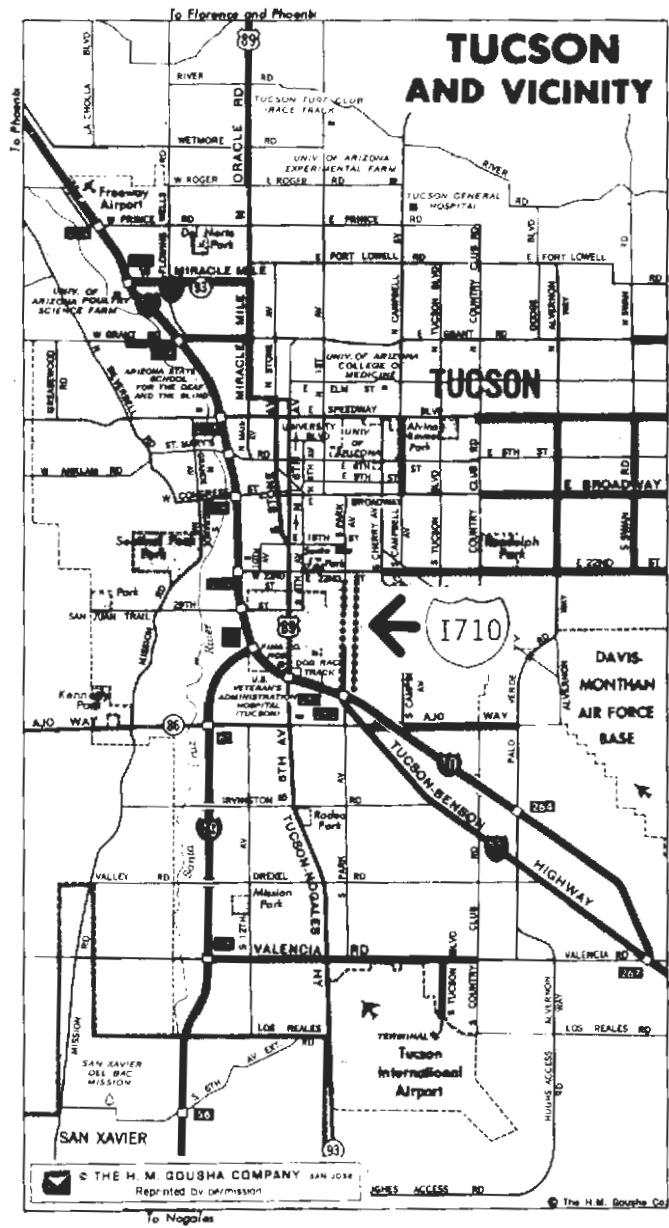


FIGURE II.29

THE TUCSON URBAN AREA AND THE I-710 SEGMENT WITHDRAWN

The urbanized area has over 6500 miles of street network, with 2.2 percent being Interstates and 8.6 percent being other principal arterials. Daily VMT was nearly 46.2 million in 1975, with 21.5 percent occurring on Interstates and 36.2 percent on other principal arterials.

The transit system has a peak requirement of 1,810 buses, 250 rapid transit cars and 47 commuter rail cars. Public transportation carried 16 percent of all work trips in 1980.

Withdrawal Background²⁷

The freeway system for the Washington, D.C. area had its origins in planning undertaken in the mid 1940s, but no formally proposed plan emerged until 1959. That plan, produced by a Congressionally-created local planning agency, proposed nearly 330 miles of freeways, including two beltways, an inner loop, several radial spurs and other links geared to provide internal circulation within the central city. A later plan in 1962 reduced the amount of proposed highway by nearly 25 percent, but that plan was not accepted by Congress. What emerged by the early 1970s, in terms of an Interstate-designed system, was a single beltway, several radial spurs, various connector links and a tight inner loop within Washington, D.C. Within the District of Columbia itself, nearly 30 miles of Interstate Highway were to be built.

Withdrawal Process

Eleven separate Interstate Highway segments have been withdrawn in the Washington, D.C. urbanized area since 1975. All have been located within the Capital Beltway, and mostly within the District of Columbia itself (see Figure II.30). Of the 30 miles of Interstate Highway planned for the District, nearly half have been withdrawn. Table II.2 lists pertinent information concerning the eleven segments withdrawn in eight separate actions.

TABLE II.2
INTERSTATE HIGHWAY WITHDRAWALS
IN THE WASHINGTON, D.C. URBANIZED AREA

<u>Withdrawal Date</u>	<u>Area</u>	<u>Highway</u>	<u>Miles</u>	<u>\$ Authorized for Substitute Projects</u>
July, 1975	MD	I-70S	1.8	\$103.2 million
Oct., 1975	DC	I-70S }	5.4	406.9 million
Oct., 1975	DC	I-95 }		
April, 1977	DC	I-66 }	2.5	423.8 million
April, 1977	DC	I-266 }		
Aug., 1978	VA	I-266	0.4	51.6 million
Sept., 1978	DC	I-295 }	4.7	585.0 million
Sept., 1978	DC	I-395 }		
Aug., 1980	DC	I-695	1.7	375.8 million
June, 1982	DC	I-266	0.6	113.4 million
Aug., 1982	VA	I-595	0.8	23.4 million
TOTAL			17.9	\$ 2.08 billion

Maryland portion withdrawn: 1.6 mi. under 103(e)(2); 1.8 under 103(e)(4)

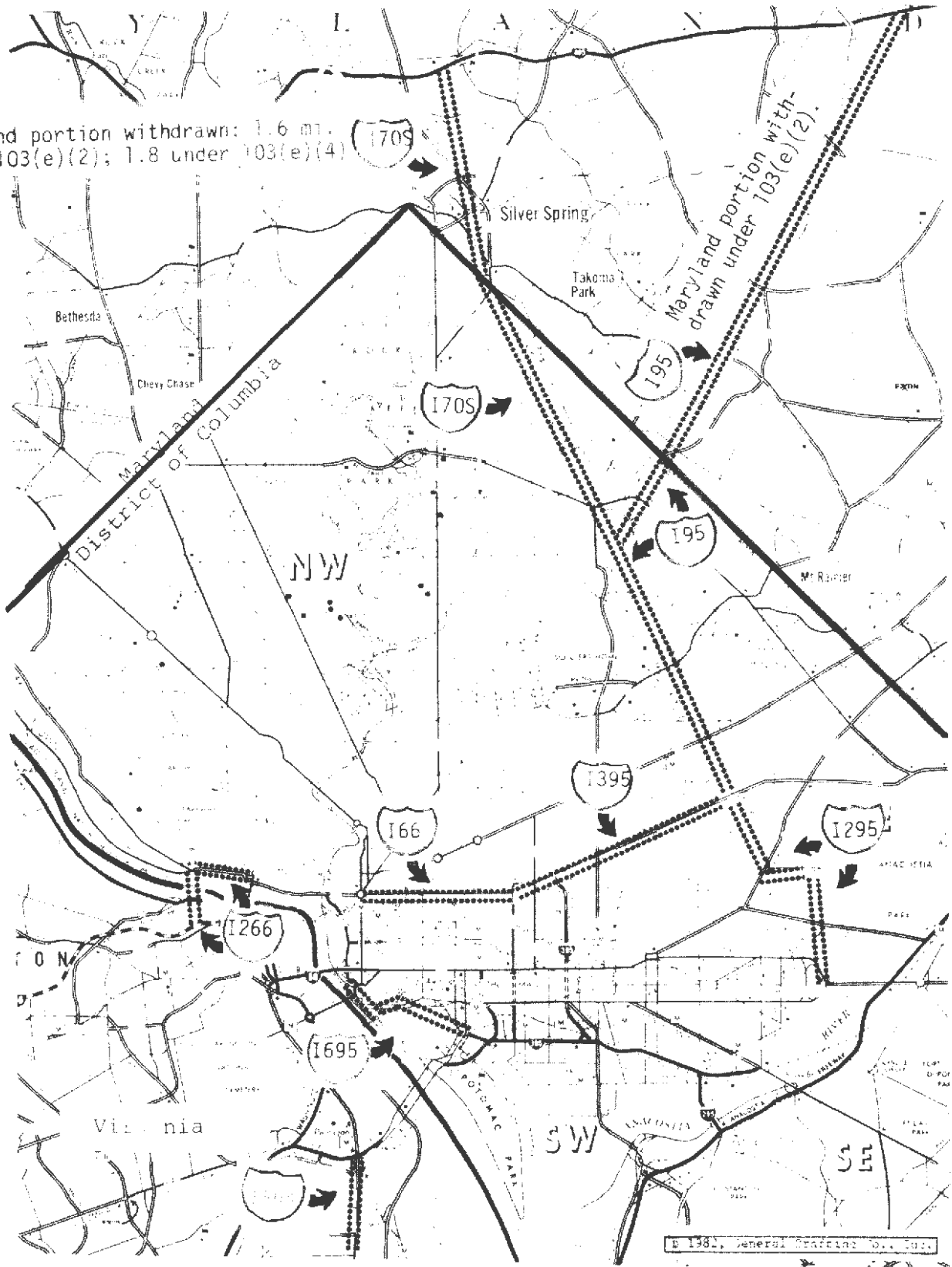


FIGURE II.30

THE WASHINGTON, D.C. URBAN AREA
AND THE VARIOUS SEGMENTS WITHDRAWN

Local community opposition was one important factor leading to withdrawal of these various highway links. This was especially true in the Georgetown section of Washington and with regards to the I-266 Three Sisters Bridge link in particular. However, another significant factor was the initiation of the construction of the Metro rail system in the early 1970s. The system's anticipated construction costs rose from \$2.5 billion in 1969 to nearly \$7 billion by 1979. The necessity to find additional funds to build the planned 101 mile system became apparent not only to the District of Columbia but to neighboring Maryland and Virginia. It became particularly incumbent upon the urbanized area to affect these trade-ins as the Federal government became less willing by the late 1970s to make special appropriations for Metro construction.

The 1975 trade-in actions required some basic Interstate renumbering. I-95, scheduled to bisect the District of Columbia, had certain segments completed within the Capital Beltway, specifically in Virginia and the District. But with the withdrawal of a segment from the District and another in Maryland [the latter withdrawn under Section 103(e)(2) -- Howard/Cramer -- coincidentally with the July 1975 103(e)(4) trade-in of I-70S], those completed portions of I-95 were renumbered as I-395. Furthermore, in order to maintain a continuous Interstate numbering system (i.e., I-95, the nation's eastern-most north-south Interstate connecting Maine to Miami, intersects the Capital Beltway at a northern and southern terminus), the eastern portion of the Capital Beltway was renumbered I-95 (with the western portion remaining I-495). Later in 1978, the last remaining uncompleted portion of I-395, the former I-95, was withdrawn.

Substitute Projects

Through June 30, 1982, nearly \$2 billion had been obligated to the Washington urbanized area as a result of the nine segment withdrawals. Nearly 99 percent of this has been spent toward the completion of the Metro subway system (see Figure II.31). Most of this has gone for construction purposes, while approximately 10 percent has been spent on rail car purchases. The remaining amount obligated, some \$25 million, has been used for highway purposes, namely street and bridge reconstruction and rehabilitation within the District of Columbia.

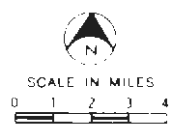
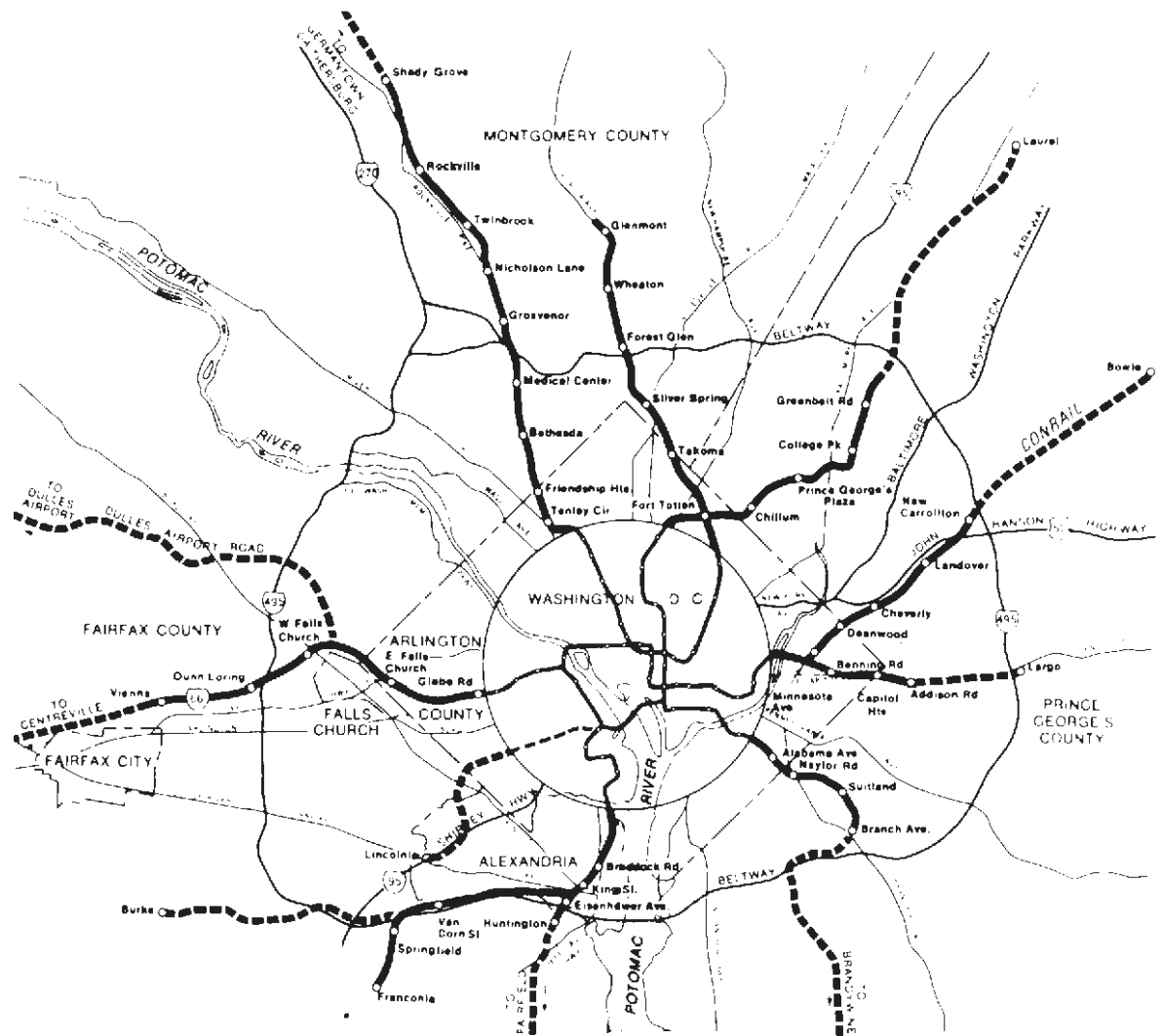
Approximately \$324 million remains unobligated as of June 30, 1982.* Although most will be channeled into Metro's completion, a larger portion than before (between 10 and 20 percent) is anticipated to be used for various street and bridge projects in the District.

23. Waterloo, Iowa

Basic Characteristics

The Waterloo-Cedar Falls SMSA had a 1980 population of nearly 138,000, with 55 percent residing in the central city of Waterloo. Employment in the SMSA was 69,000 in 1982.

* An additional \$23.3 million was made available in August, 1982 via a new withdrawal.



Washington Metropolitan Area Transit Authority

ROUTE & STATION
FUTURE EXTENSION

FIGURE II.31
THE WASHINGTON D.C. METRO
SUBWAY SYSTEM

The urbanized area has over 680 miles of street network, with no Interstates and 11.3 percent being principal arterials. Daily VMT in 1975 was 1.95 million, with 41.4 percent occurring on principal arterials.

The transit system has a peak requirement of 22 buses, carrying less than 0.75 percent of the area's total trips.

Withdrawal Background²⁸

I-380 is an Interstate link added to the system after 1968, linking Iowa City to Waterloo. Portions of it are currently open to the public; others are under construction or soon to be built. When originally proposed by the state as an Interstate link, I-380 was to extend into the city of Waterloo, joining up with U.S. 20 near the Cedar Falls border (see Figure II.32). This extension was originally rejected by FHWA, but later accepted in 1973. A major EIS was completed for this segment in 1977, and it was then listed in the state's 5-year construction program. No appreciable opposition to the segment's construction was registered.

Withdrawal Process

The 7.3 mile segment of I-380 within the Waterloo urbanized area was formally withdrawn in November 1981. The amount authorized for substitute projects was \$296.7 million.

The idea to trade in the I-380 segment grew out of meetings between City, State and MPO officials in March, 1981. Concerned with the decline in Interstate and Federal-Aid Systems apportionments, City and State officials directed the MPO to reassess the basic metropolitan transportation plan for the year 2000 to see whether appropriate substitute projects could be generated. By September, various options were proposed which would utilize trade-in funds, and on the basis of this revised plan a withdrawal request was made. It was generally accepted among local officials that trade-in funds could be obtained quicker and be utilized for more purposes than Interstate funds for I-380.

Substitute Projects

No formal concept plan has been submitted, although an initial \$20 million project list for various highway projects was submitted in 1981 in the event that any fiscal year 1982 trade-in funds would be made available for the Waterloo area. (They were not.) The year 2000 plan produced various alternative packages of substitute projects, one of which likely will be chosen in spring 1982. A likely selection of substitute projects would include mostly highway projects and be spread throughout the urbanized area. However, the I-380 corridor is still of major concern, so that any alternative chosen will probably call for a scaled-down expressway in the corridor, as well as complementary highway projects. Transit projects may be funded also (possible candidates are an intercity bus terminal and bus vehicle purchases), although no formal division of funds has been specified.

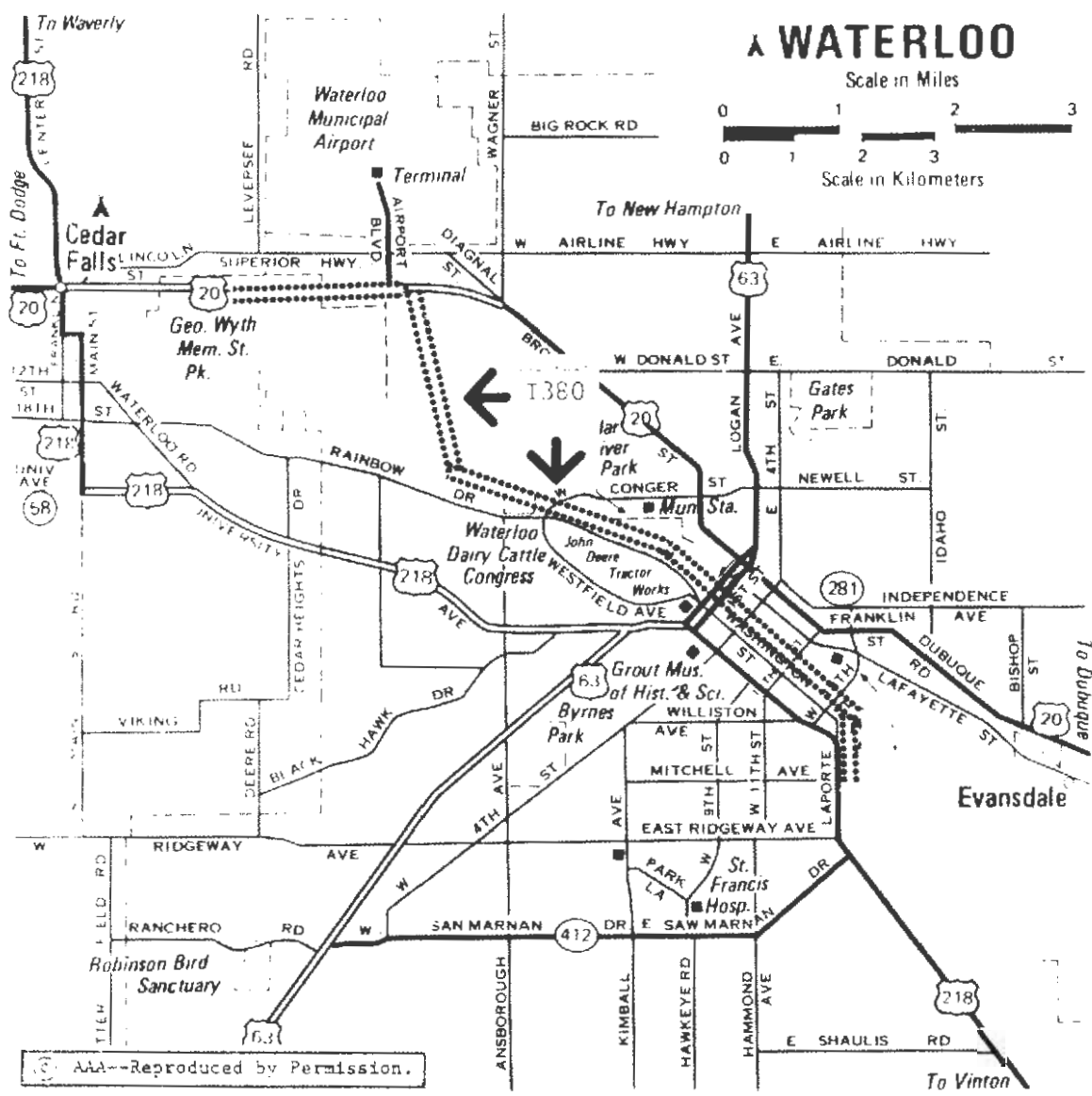


FIGURE II.32

THE WATERLOO URBAN AREA AND THE I-380 SEGMENT WITHDRAWN

Notes for Chapter II

1. Population for Albany and all other urban areas are 1980 final Census counts.
2. Employment for Albany and most other urban areas are 1981 or 1982 Census estimates, depending upon availability. New Jersey employment is for 1977 as estimated by relevant MPOs (i.e., Delaware Valley Regional Planning Commission and Tri-State Regional Planning Commission).
3. Street mileage and VMT levels for Albany and most other urban areas are for the year 1975 and were taken from U.S. Department of Transportation, National Functional System Mileage and Travel Summary, Washington, D.C., June, 1977. New Jersey information was taken from above source and also from U.S. Department of Transportation, National Highway Inventory and Performance Summary, Washington, D.C., December, 1977.
4. Transit peak requirements for Albany and all other urban areas are for the year 1980 and were taken from U.S. Department of Transportation, A Directory of Regularly Scheduled, Fixed Route, Local Public Transportation Service in Urbanized Areas Over 50,000 Population, Washington, D.C., August, 1980.
5. Work trip mode splits are from many sources. For 14 urban areas, 1980 U.S. Census Journey-to-Work data are available. For four others, data are for the years 1975, 1976 or 1977 and taken from U.S. Bureau of the Census, Selected Characteristics of Travel to Work in 20 Metropolitan Areas, Current Population Records, Special Studies, Series P-23, Washington, D.C.:
 - a. No. 68, February, 1978 (Hartford).
 - b. No. 72, September, 1978 (Omaha).
 - c. No. 105, January, 1981 (Albany, Memphis).

New Jersey information is from 1970 Census Journey-to-Work data. Work trip mode split data for Duluth, Salem, Tucson and Waterloo are estimates made by the relevant metropolitan planning organization.

6. Information about Albany trade-in from phone conversations with and documents obtained from Earle Hershenhorn, Capital District Transportation Committee and Mr. Morreli, Federal Highway Administration (New York Division).
7. Information about Baltimore trade-in from phone conversations with and documents obtained from Elizabeth Moser, Maryland Department of Transportation.
8. Information about Boston trade-in obtained from following sources:

- a. Personal interviews with George Joseph, Massachusetts Department of Public Works; Vincent Losinno, Massachusetts Executive Office of Transportation and Construction; and Rockwell Mancini and Donald Kidston, Massachusetts Bay Transportation Authority, November 10, 1981.
 - b. Martha Wagner Weinberg, Managing the State, MIT Press, Cambridge, 1977.
 - c. Ralph Gakenheimer, Transportation Planning as Response to Controversy: The Boston Case, MIT Press, Cambridge, 1976.
 - d. Massachusetts Office of Transportation and Construction, 1978 Revised Program for Mass Transportation, Boston, November 27, 1977.
9. Information about Chicago trade-in from phone conversations with and documents obtained from Andrew Plummer, Chicago Area Transportation Study, Ralph Wehner, Illinois Department of Transportation and Mr. Diedrich, Federal Highway Administration (Illinois Division). Also Robert Burco, The Evolution of Interstate Highway Withdrawals and Substitutions as Urban Transportation Policy Options, Federal Highway Administration, July, 1980.
 10. Information about Cleveland trade-in obtained from following sources:
 - a. Personal interviews from Frederick Pizzedaz and Virginia Robertson, Northeast Ohio Areawide Coordinating Agency (NOACA); David Goss, Greater Cleveland Regional Transit Authority; and Don Plaskett, Office of Cleveland Mayor Voinovich on December 17, 1981.
 - b. Telephone conversations with John McBee, FHWA (Ohio Division); Robert Werner, NOACA; and Pat Kelly, Office of Cleveland Mayor Voinovich during January, 1981.
 - c. Northeast Ohio Areawide Coordinating Agency, Concept Plan for Transportation Improvement Projects Utilizing I-490 Transfer Funds, 1980.
 11. Information about Denver trade-in from phone conversations with and documents obtained from George Scheuernstuhl, Denver Regional Council of Governments and J. Siccardi, Federal Highway Administration (Colorado Division).
 12. Information about Duluth trade-in from phone conversations with and documents obtained from Kris Liljeblad, Duluth-Superior Metropolitan Interstate Committee, Mark Flaherty, City of Duluth and William Lake and Ron Lacy, Federal Highway Administration (Wisconsin). Also U.S. Conference of Mayors, Interstate Crossroads, Volume 2, Number 2, Washington, D.C., September, 1981.

13. Information about Hartford trade-in from phone conversations with and documents obtained from William Lazarik, Connecticut Department of Transportation.
14. Information about Indianapolis trade-in from phone conversations with and documents obtained from Mr. Walters, Indiana Department of Highways and Mr. Culp, Federal Highway Administration (Indiana Division).
15. Information about Memphis trade-in from phone conversations with and documents obtained from John Gregor, Memphis Planning Commission and Edward Oakley, Federal Highway Administration (Tennessee Division).
16. Information about Minneapolis trade-in from conversations with and documents obtained from Lawrence Dallam, Metropolitan Council and John Bowers, Federal Highway Administration (Minnesota Division).
17. Information about New Jersey trade-ins from personal interview with and documents obtained from Dennis Keck, New Jersey Department of Transportation, Trenton, on January 22, 1982.
18. Information about New York City trade-in from phone conversations with and documents obtained from Elliot Vanacour, New York City Department of Transportation and Victor Taylor, Federal Highway Administration (New York Division).
19. Information about Omaha trade-in from phone conversations with and documents obtained from Joe Berenis, Omaha Department of Public Works, Charles Nutter, Nebraska Department of Roads and Ray Hogrefe, Federal Highway Administration (Nebraska Division).
20. Information about Philadelphia trade-in from phone conversations with and documents obtained from Jerry Fritz, Pennsylvania Department of Transportation and Ernie Birzell, Delaware Valley Regional Planning Commission.
21. Information about Pittsburgh trade-in from phone conversations with and documents obtained from Ed McGhee, Pittsburgh Department of Public Works and George Catselis, Federal Highway Administration (Pennsylvania Division).
22. Information about Portland trade-in from phone conversations with and documents obtained from Tom Vanderzanden, Clackamas County Department of Public Works. Also Robert Burco, The Evolution of Interstate Highway Withdrawals and Substitutions as Urban Transportation Policy Options, Federal Highway Administration, July, 1980.
23. Information about Sacramento trade-in from phone conversations with and documents obtained from Bert Brockett, California Department of Transportation, John Schuman, Sacramento Area Council of Governments and Dave Eyres, Federal Highway Administration (California Division).

24. Information about Salem trade-in from phone conversations with and documents obtained from Richard Santer, Mid-Willamette Valley COG and Mr. Wilken, Federal Highway Administration (Oregon Division). Also Robert Burco, The Evolution of Interstate Highway Withdrawals and Substitutions as Urban Transportation Policy Options, Federal Highway Administration, July, 1980.
25. Information about San Francisco trade-in from phone conversations with and documents obtained from Bob Jahrling, California Department of Transportation and Dave Eyres, Federal Highway Administration (California Division).
26. Information about Tucson trade-in from phone conversations with and documents obtained from Hurvie Davis, Tucson Department of Transportation. Also Robert Burco, The Evolution of Interstate Highway Withdrawals and Substitutions as Urban Transportation Policy Options, Federal Highway Administration, July, 1980.
27. Information about Washington, D.C. trade-in from phone conversations with and documents obtained from Tom Downs, District of Columbia Department of Transportation and Hal Kassoff, Maryland Department of Transportation.
28. Information about Waterloo trade-in from phone conversations with and documents obtained from Ron Larson, Iowa Northland Regional COG and Hubert Willard, Federal Highway Administration (Iowa Division).

CHAPTER III

SUMMARY

These 24 urban areas have withdrawn a total of 41 Interstate segments in 36 separate trade-in actions through August, 1982. Nearly 200 miles of Interstate segments were involved, worth over \$8 billion in authorized trade-in funds.

Slightly over \$4.7 billion has been obligated to 21 of these 24 urban areas as of June 30, 1982. However, Boston and Washington, D.C. have received two thirds of this amount. Transit substitute projects have been allocated 81 percent of the obligations. Nearly all the urban areas have funded transit projects, but three areas, Boston, Washington, D.C. and Philadelphia, have received over 90 percent of the transit obligations. Highway projects have been allocated 19 percent of obligations, with over half that amount received by Chicago.

As of July 1, 1982, over \$5 billion was authorized for future appropriations. These urban areas estimate that 60 percent of future obligations will be for highway projects and 40 percent for transit projects.

Table III.1 summarizes authorizations, obligations and expected obligation patterns for the 24 urban areas.

Reasons for Withdrawal

Significant opposition to highway construction led to eventual trade-in in a number of urban areas. In Boston, it was the strong anti-highway movement which actually contributed to the creation of the trade-in option. But as early as the first Washington, D.C. withdrawal in 1975, some urban areas envisioned trade-in as a means of supporting new transportation priorities over earlier established expressway objectives. Such new priorities included creation of rail transit service (Portland, Sacramento, San Francisco and Washington, D.C.), upgrade existing transit services (New York City and Philadelphia) and rehabilitation or reconstruction of existing bridge and highway facilities (Albany, Portland and Tucson). Other areas still considered expressway objectives as most important, and enacted trade-ins as a means of completing expressway projects which were either more important or less controversial than the withdrawn Interstate facility (Baltimore, Hartford, Philadelphia and Pittsburgh). Finally, a few urban areas still supported the need for a highway facility within the Interstate corridor, but enacted a trade-in as a means of constructing a scaled-down facility in place of the withdrawn segment and also having funds available for other highway and/or transit projects (Denver, Omaha, Salem and Waterloo).

Transit vs. Highway Substitute Projects

Except for Boston, Philadelphia and Washington, D.C., urban areas have overwhelmingly preferred to fund highway over transit substitute

TABLE III.1
SUMMARY OF TRADE-IN STATISTICS FOR 24 URBAN AREAS

	Authorized Trade-in \$ (\$ millions)	Obligations as of 7/1/82 (\$ millions)	% Obligations Used for:		Amount to be Obligated, as of 7/1/82 (\$ millions)	Estimated Future % Obligations to be Used for:	
			Transit	Highway		Transit	Highway
Albany	\$ 51	\$ 16	34	66	\$ 39	15	80
Baltimore	204	8	91	9	183	53	47
Boston	603	1,221	100	0	165	100	0
Chicago	2,280	568	14	86	1,718	50	50
Cleveland	256	27	0	100	205	20	80
Denver	162	72	25	75	166	<50	>50
Duluth	72	0	-	-	65	30	70
Hartford	222	47	15	85	456	<50	>50
Indianapolis	83	2	0	100	76	10	90
Memphis	275	3	90	10	249	12	88
Minneapolis	103	25	8	92	85	18	82
New Jersey	290	65	96	4	206	55	45
New York City	230	117	56	44	139	20	80
Omaha	77	25	8	92	47	0	100
Philadelphia	282	380	89	11	80	10	90
Pittsburgh	64	0.4	0	100	58	0	100
Portland	304	191	40	60	261	41	55
Sacramento	97	0.5	100	0	84	100	0
Salem	35	24	0	100	28	0	100
San Francisco	87	0.8	100	0	79	74	26
Tucson	41	8	14	86	53	2	98
Washington, D.C.	2,083	1,983	99	1	324	85	15
Waterloo	297	0	-	-	277	<50	>50
TOTAL	\$8,032	\$4,783	81%	19%	\$5,043	40%	60%

projects (i.e., of the nearly \$1.2 billion obligated to all areas other than Boston, Philadelphia and Washington, D.C., 71 percent was for highway projects). This trend is expected to continue in the future, as even Philadelphia and Washington, D.C. hope to allocate greater amounts to highways than they have in the past.

Corridor vs. Areawide Distribution of Substitute Projects

In Boston, it was politically impossible to use trade-in funds outside the vicinity of the withdrawn highway right-of-ways. However, in no other area were substitute projects confined solely to the corridor (or even the vicinity of the corridor) of the withdrawn Interstate segment. In nearly half the areas, in fact, no special consideration was given to the particular corridor in the distribution of implemented or planned projects.

Matching Share

In some cases, the state is still providing the complete matching share, whether for highway or transit purposes (e.g., Boston, Chicago, Indianapolis and New Jersey). Various arrangements have been worked out in other areas, such as in Baltimore (State pays all transit share and highway share outside City limits; City of Baltimore picks up the share on its own municipal highway substitute projects), Duluth (where the localities will assume the share, but will also receive some renumeration support from the State), Memphis (transit funded 50 percent each by State and City), and Portland (where the State will pay transit share in return for Portland giving up FAUS funding). The MPOs in some areas have helped bring about firm matching share commitments from relevant municipalities and counties (e.g., Albany, Cleveland and Minneapolis).

