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TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR INTERSTATE 494

FROM 24th AVE. IN BLOOMINGTON TO THE MISSISSIPPI RIVER BRIDGE IN SOUTH ST. PAUL

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PREPARED BY

DEPARTMENT OF TRANSPORTATION

STATE OF MINNESOTA

FHWA - MN - EIS - 77-03-D

Federal Highway Administration

Region 5

Minnesota Project I-494

State Projects 1985, 1986, 2785

Interstate Highway 494 in Hennepin and Dakota Counties, Minnesota

From 24th Ave. in Bloomington to the Mississippi River Bridge in South St. Paul

ADMINISTRATIVE ACTION

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

AND

PRELIMINARY 4 (f) DOCUMENT

U S DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Minnesota Department of Transportation

Division of Highways

Submitted pursuant to 42 USC 4332(2) (C),

23 USC 128(a), 49 USC 1653(f) and

Minnesota Statutes 116D.01 et seq

June 30, 1977
Date

Kermit K. McRae
Division Director of Transportation Services
Bureau of Policy and Planning
Minnesota Department of Transportation

7-1-77
Date

E. Dean Carlson
E. Dean Carlson
Division Administrator
Federal Highway Administration

Env. Impact Statement Information Hennepin Co.

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SUMMARY SHEET

(1) FEDERAL HIGHWAY ADMINISTRATION ACTION FOR:

(X) Draft ( ) Final

(X) Preliminary 4(f) Document

(2) ADDITIONAL INFORMATION ABOUT THIS PROPOSAL AND STATEMENT AVAILABLE FROM:

District Engineer
Mn DOT, Division of Highways — District 9
3485 Hadley Avenue North
P.O. Box 2050
North St. Paul, MN 55109

Division Administrator
Federal Highway Administration
Suite 490, Metro Square Building
St. Paul, MN 55101
612-725-7001

(3) DESCRIPTION OF PROPOSED ACTION:

The proposed action provides for the construction of the only uncompleted section of the I-494/694 beltline route that encircles the Twin Cities metropolitan area. This section would be approximately 11 miles long and would pass through the cities of Bloomington, Eagan, Mendota Heights, Inver Grove Heights, Sunfish Lake and South St Paul.

The proposed section of I-494 will be a 6-lane divided freeway. It will begin near 24th Ave. in Bloomington and extend eastward to the Mississippi River Bridge in South St. Paul. Existing sections of I-494 on each end of the project will be reconstructed to fit the new 6 lane proposal. These sections will either be constructed concurrent with this proposal or under a separate action.

Also proposed is reconstruction on some of the highways that will intersect with proposed I-494. These highways are as follows:

Existing TH 5 from I-494 to Post Road.

Existing TH 55 from about 0.5 mile north of I-494 to the south junction of TH 49.

Existing TH 49 from Mendota Heights Road to the south junction of TH 55.

Existing TH 110 from TH 52 to I-494.

Other miscellaneous adjacent or intersecting roads in the project area that are affected by the construction of I-494.

One of the alternates considered (Alt B1) also calls for the relocation of a section of TH 55 from 0.5 mile north of I-494 to a point near its intersection with Argenta Trail.

(Fig 5-2, p 57 shows the location and termini of the proposed actions).

SUMMARY SHEET (CONT)

(4) ACTIONS REQUIRED BY OTHER FEDERAL AGENCIES:

US Coast Guard Permit (for proposed bridge over the Minnesota River)

US Corp of Engineers (Section 404 Permits)

US Bureau of Outdoor Recreation (6(f) involvement, land transfer)

(5) PURPOSE AND NEED FOR THE PROPOSAL:

The proposed section of I-494 will complete the circumferential route of I-494, providing the final link in the portion which extends near the southern border of St. Paul and Minneapolis.

Included in the immediate project area are the third largest business district in the Metropolitan Area and other high activity centers such as the Minneapolis-St. Paul Airport and the South St. Paul Stockyards. Dakota County, the county in which most of the proposed work will fall, is the fastest growing county in the state. The proposed corridor will pass through a part of the county which has a heavy concentration of major industries. The highway improvements in this proposal will help provide more efficient transportation routes for the area.

(6) 4(F) INVOLVEMENT

Proposed I-494 will pass between two portions of Fort Snelling State Park. Although the proposed highway will be constructed on land which the Division of Highways (DH) owns, the drainage plan for the proposed highway requires the construction of a sedimentation pond on park land. This use will constitute 4(f) involvement. (See Discussion of 4(f) involvement, Preliminary 4(f) Document, p 129).

Fort Snelling State Park is the site of the Fort Snelling and Mendota Historic Districts. Proposed I-494 will have no involvement with the two districts, however. Also, the Minnesota Historic Society has analyzed the proposed I-494 corridor for historic, archaeological, architectural, and cultural sites which are on or eligible for inclusion on the National Register of Historic Places. The Society found no such sites along the corridor. (See letter from Historic Society in Section X, Coordination, p 113 .)

(7) THE PROPOSED ACTION WILL HAVE THE FOLLOWING ENVIRONMENTAL IMPACTS:

a. Provide a direct route through the project area for regional and interstate motorists and improve travel conditions for local motorists.

b. Divert traffic away from several congested highways, thereby reducing the accident potential and fuel consumption.

c. Help the local communities to reach their development goals.

d. Remove about 52 homes, 4 businesses and about 1594 acres of land (900 acres of this already acquired).

e. Change the landscape, and remove wetlands, vegetation, and wildlife habitat.

f. Introduce noise into a new corridor. Under Alt B1, 24 residential uses can't be attenuated; under Alt B2 and B3, 41.

g. Intrude visually on new areas.

SUMMARY SHEET (CONT)

(8) ALTERNATES:

This EIS considers the No-Build Alternate (Alt) and three design alternates in the Preferred Corridor — Alt B1, B2, and B3. It also discusses a historical alternate, Alt A.

Alt B1 includes I-494, a relocated section of TH 55, and improvements on existing TH's 5, 55, 49, and inplace I-494 in So. St. Paul.

Alt B2 is in essence a staging of Alt B1. Initially, under Alt B2, all the highway improvements of Alt B1, will be made, with the exception of the relocated section of TH 55. Provisions would be made for future construction of the relocated section of TH 55, as needed.

Alt B3 excludes the relocated section of TH 55 or any provision for its construction. It includes all the other improvements of Alt B1.

(9) STATE GOVERNMENT AND MULTI-STATE RESPONSIBILITIES:

a. The Federal controls associated with this action will not cause any impact on the State government.

b. This action will have no effect on adjacent states or on any multi-state responsibilities.

(10) MINNESOTA RIVER CORRIDOR CRITICAL AREA:

Two sections of proposed I-494 will fall within the Mississippi River Corridor Critical Area. The Division of Highways (DH) will coordinate this proposed action with the Minnesota Environmental Quality Council. The DH will ensure that the project is consistent with regulations governing the Critical Area.

(11) COMMENTS ON THIS STATEMENT HAVE BEEN REQUESTED FROM THE FOLLOWING AGENCIES AND PUBLIC GROUPS:

U.S. Department of Agriculture
U.S. Department of the Army
Corps of Engineers, St. Paul District
U.S. Department of Housing and Urban Development
U.S. Department of Commerce
U.S. Department of Health, Education and Welfare
U.S. Department of Interior
Fish and Wildlife Service
Bureau of Outdoor Recreation
U.S. Department of Transportation
Second Coast Guard District
Federal Railroad Administration
Federal Aviation Administration
Urban Mass Transportation Administration
Advisory Council on Historic Preservation
Council on Environmental Quality
Environmental Protection Agency
Federal Energy Administration
Minnesota Energy Agency
Minnesota Department of Economic Development
Minnesota Environmental Quality Board
Minnesota Historical Society
Minnesota Department of Natural Resources
Minnesota Pollution Control Agency
Minnesota State Planning Agency
Metropolitan Council (A-95) Clearinghouse
Metropolitan Transit Commission
Metropolitan Airport Commission
Metropolitan Waste Control Commission
Dakota County
Hennepin County
City of Bloomington
City of Eagan
City of Mendota Heights
City of Sunfish Lake
City of Inver Grove Heights
City of South St. Paul

INTRODUCTION

Need: Bases For The Proposed Action

History, Development, And Current Status

NEED: BASES FOR THE PROPOSED ACTION

Passage of the Interstate Highway Acts of 1944 and 1956 established a 41,000 mile system of new highways throughout the United States, connecting forty-two state capitals and 90% of all cities with more than 50,000 population. The routes of two of these Interstate highways, designated as Interstates 35 and 94, pass through the Minneapolis-St. Paul area (Fig 1-1).

Interstate 35 is a north-south route which originates in Laredo, Texas and terminates in the Duluth, Minnesota, area. Through the Minneapolis-St. Paul area, I-35 divides into two sub-routes. One, I-35W, passes through the Minneapolis area. The other, I-35E, passes through St. Paul.

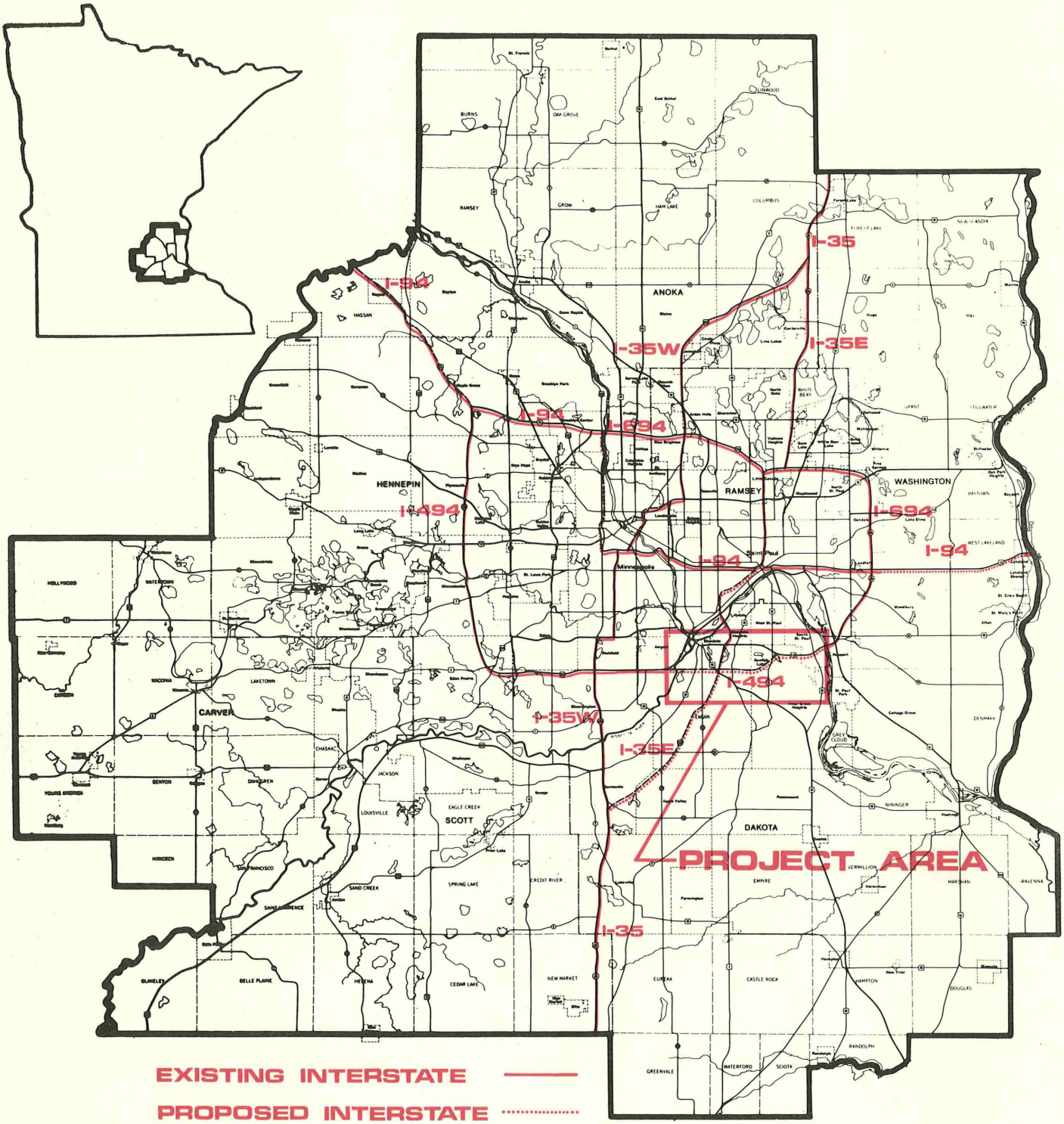
Beltline Route, I-694 & I-494

Interstate 94 begins in Billings, Montana at an intersection with I-90 and terminates just north of Detroit, Michigan. Within the Minneapolis-St Paul area, I-94 (going eastward) enters at the northwest corner and splits into three routes. Two of these routes form a circumferential route around the central cities — I-694 going north and I-494 south. Known as the beltline route, they eventually tie in again on the east side of the metropolitan area with I-94, which passes near the central business districts of Minneapolis and St. Paul.

The beltline route allows through traffic from I-94 and I-35 to skirt the two CBD's and the dense residential streets of the core metropolitan area. Also, the route carries traffic to the high activity centers and suburban residential areas along the periphery of the metropolitan area. The proposed section of I-494 will complete the beltline route providing the final link in the portion which extends through Hennepin and Dakota Counties, near the southern border of St. Paul and Minneapolis.

The corridor location shown in Fig 5-1 (see p 51) as the Preferred Corridor is the only location being considered for this final link of I-494. Earlier studies considered alternative locations but found them unacceptable to the local cities and ineffective in meeting the transportation needs of the area (see Alternates, Introduction, p 50). Subsequently, the cities and Dakota County developed their comprehensive plans, basing them on the Preferred Corridor. Also, the Metropolitan Council (MC)1 has included proposed I-494 in the transportation plan which it developed for the region, placing the highway in the same corridor as the preferred corridor (see Function Classification Plan, p 13). Another major factor in restricting the proposed route to the corridor in this proposal is the location of the termini of the completed sections of I-494 in Bloomington and So St Paul. Both are well defined and were built as part of the design that placed the proposed highway in the corridor shown as the proposed route.

[1] The MC is the designated planning coordinator, A-95 Clearinghouse, and 3C Planning Agency for the St Paul-Minneapolis Metro Region.



INTERSTATES THROUGH ST. PAUL-MPLS AREA

FIGURE 1-1

Relocated Section of TH 55

Two of the design alternates include a relocated section of TH 55. Inplace TH 55 connects Minneapolis and the farming and industrial areas in southeastern Minnesota. It passes through the major industrial areas of Eagan and Mendota Heights. (See Fig 1-2, Existing Highways, p 7).

Traffic forecasts indicate that TH 55 will become a high-volume corridor if development in the project area and farther south in Dakota County occurs at the magnitude planned (see existing and forecasted traffic volumes, in the Appendix . The inplace section of TH 55 through the project area, averaging 9.4 access points per mile, won't be able to handle the forecasted volumes without serious congestion and safety problems. The relocated section of TH 55 would provide access to major traffic generators in the project area and at the same time allow through traffic to pass through the area without incurring the frequent access points along the inplace highway.

(The relocated section of TH 55 doesn't appear as part of the MC's 1990 Functional Classification Plan. See Discussion in Section V, Alternates, p 56).

Transit Considerations

This EIS doesn't consider a separate alternate for transit. The (MC) and the Metropolitan Transit Commission (MTC)2, agencies that would decide on a transit alternate, consider proposed I-494 essential to any mode of transit in the proposed corridor. Transit plans (1990) for the region and project area include I-494. (See Transit Plans, p 12).

Following in this section is a discussion of the bases for the proposed action. These are as follows:

(1) The existing and proposed heavy trip generators in project area.
(2) The deficiencies on existing highways in the project area, particularly on the link between completed sections of I-494.
(3) The proposed highway's function in the regional transportation system.

2 The MTC owns and operates the metropolitan transit system and is responsible for developing and implementing the transit system for the region.

LOCAL GENERATORS

EXISTING

The concentration of industries and businesses in the project area combine to make it one of the major traffic generators in the State. Located here are a number of large employment centers (about 60,000 persons work in the project area and surrounding communities) plus a number of companies with large shipping and receiving operations. The So St Paul stockyards, for example, handled over 300,000 trucks in 1974, more than any other single location in Minnesota. Truck traffic from the remaining major industries in the project area (some 40 in the Eagandale Industrial Park alone) adds significantly to this total. Currently, the traffic entering or leaving the project area from the east and west must use the existing link between completed sections of I-494 — TH 110, the Mendota Bridge (TH 55), and TH 5.

PROPOSED

Development planned for the project area will mean a considerable increase in vehicular trips in the project area. An estimated 25,000 to 30,000 persons will work in the Eagandale Industrial Parks (near proposed I-494) after its full development. A major diversified center planned for Eagan (near the industrial parks) will contain office, shipping, residential, and possibly medical space. Having all these, it will also attract a large number of vehicular trips, from both outside and within the immediate project area. Thus, traffic to the industrial park and the diversified center will increase the need for a new bridge crossing and for highways with more capacity.[3]

Although new development in Bloomington won't be as extensive as in northern Dakota County, some development will occur. One area of undeveloped land is near 24th Ave. and proposed I-494. Construction of a multi-use complex is presently underway here. The complex will have residential units as well as office space and commercial facilities. Nearby, the Minneapolis-St. Paul International Airport (under the jurisdiction of the Metropolitan Airports Commission) plans major expansion. Currently, the 3,000-acre airport employs about 16,000. With this new development and the existing development farther west along I-494 — plus the Metropolitan Sports Complex — Bloomington and the surrounding area will continue to be one of the highest traffic generators in the Metropolitan region. As with northern Dakota County, the area is highly dependent on the I-494 beltline as an east-west transportation route.

[3] For additional discussion of future trip patterns in the project area, see the Transportation Planning Report for I-494, prepared by the Transportation Planning Unit, District 9 Resource Section, Mn DOT, Division of Highways.

Development plans and attendance projections for Fort Snelling State Park and the Minnesota Zoological Gardens (just south of Eagan) also increases the need for proposed I-494. According to officials of Fort Snelling State Park, about 754,000 people visited the park in 1974. Currently, the park is undergoing improvements, which include the development of an extensive trail system and the restoration of the Fort Snelling and Mendota Historic Districts. Park officials estimate that attendance in 1980 will be about 2 million. The Zoological Gardens, a 460-acre facility, scheduled for opening in 1978, will have about 1.3 million visitors annually (2.2 million by 2000). About 60% of these will come from the Minneapolis-St. Paul area. The main route for visitors coming to the park from the suburbs east, southeast, and northeast of St. Paul will be I-494. Zoo visitors coming from the same general area will use I-494 to reach I-35E, then continue south.

DEFICIENCIES ON PROJECT AREA HIGHWAYS[4]

EXISTING I-494 LINK

Three highways serve as the link between the completed sections of I-494 (see Fig 1-2): TH's 110 and 5 and the Mendota Bridge (TH 55). Trunk Highway 110 is a 4-lane expressway. Although theoretically functioning at level of service C[5] with a steady flow of traffic most of the time, TH 110 approaches undesirable levels of service during rush hours. Between TH 13 and 7th Av in So St Paul, it carries about 20,000 to 28,000 vehicles a day. With only partial access control, it averages 6.1 access points per mile and has five major crossroads with signal lights.

From 1972 to 1975, the 5.9 mile section of TH 110 from TH 55 in Mendota to I-494 in So. St. Paul had an average of 2.31 accidents per million vehicle miles (PMVM). This is about the average on similar 4-lane highways in District 9* and somewhat above the average of 1.69 PMVM on divided highways with controlled access (other than freeways) in rural areas throughout the nation. (The latter figure comes from a study by Solomon, titled, "Accidents on Main Rural Highways Related to Speed, Driver, and Vehicle," BPR, USSPC, July 1964).

[4] Information summarized in this section comes from the Transportation Planning Report for I-494 in Hennepin and Dakota Counties, Mn DOT, Division of Highways, Transportation Planning Unit, Oakdale, Mn, September 1976.

[5] The Level of Service concept is a way of evaluating traffic flows. Levels A and B are best (free flowing traffic), C is acceptable, D is unstable but still passing, E is very unstable (stopping can occur), and F is completely jammed. Generally, motorists began to sense congestion at D.

* District 9 of the Minnesota Department of Transportation, Division of Highways, encompasses the eastern part of the Twin Cities Metro Area. It includes Chisago, Dakota, Ramsey, and parts of Anoka and Goodhue Counties.

MENDOTA BRIDGE

40.5 - E
160.0 - F

49.7 - D
95.0 - F

19.7 - C
50.0 - F

T.H. 110

26.6 - C
56.0 - F

T.H. 110

INPLACE I-494

28.4 - D
85.0 - F

35.0 - C
72.0 - F

14.0 - E
5.0 - C

T.H. 55

17.4 - F
80.0 - F

T.H. 55

T.H. 49

4.5 - C
31.0 - F

10.9 - D
80.0 - F

0.8 - C
4.0 - C

T.H. 5

(UNDER CONSTRUCTION)

Minneapolis St. Paul International Airport

FORT SNELLING NATIONAL CEMETERY

METROPOLITAN SPORTS CENTER

METROPOLITAN STADIUM

U. S. VET. HOSP.

US FED. BLDG.

South Saint Paul Municipal Airport

INVER HILLS COMMUNITY COLLEGE

KEY

Average Daily Traffic
1974 (in 1000's) — Level of Service 1974
-000.0-X-
-000.0-X-
2000 (in 1000's) — 2000

LEVEL OF SERVICE

C - Acceptable Flow
D - Unstable, but Acceptable
E - Unstable, Some Possible Stopping
F - Jammed

EXISTING HIGHWAYS

N

0 4000 8000

INTERSTATE 494

FIGURE 1-2

Table 1-1 gives the accident rates for approach vehicles at main intersections along TH 110. The intersection at TH 55, 110, and 13 (the approach to the Mendota Bridge) has the highest rate (5.13). The accident rate at this intersection is consistently among the worst in District 9, the number of accidents ranking either first or second. A recent study of high-volume, signalized intersections in District Nine showed an average rate of 1.9 accidents per million approach vehicles.

TABLE 1-1

ACCIDENT RATES
AT MAIN TH 110 INTERSECTIONS

INTERSECTIONS Along TH 110	ACCIDENT RATE Per Million Approach Vehicles
TH 13-55	5.13
Lexington Ave. (CR 43)	1.46
Dodd Road (TH 49)	2.53
Delaware Ave. (CSAH 63)	1.23
TH 52/3	2.24
Babcock Trail (CSAH 73)	2.08

Mendota Bridge

The Mendota Bridge (TH 55) — 4 lanes, constructed in 1926 — is one of two bridges between northern Dakota County and Hennepin County.[6] Average daily traffic (ADT) on the bridge totals about 40,500 vehicles (1974). Level of service is E, which means traffic volumes on the bridge is at capacity and the flow is unstable with frequent delays.

TH 5

The section of TH 5 proposed for lane additions in this proposal has an ADT of about 49,700 vehicles with a level of service D. It has an average accident rate of 2.7 PMVM, somewhat higher than the average of 2.0 PMVM on other freeways in the Metropolitan Area.

[6] The Cedar Av Bridge, the second bridge, is about 5 miles south of the Mendota Bridge and 3 miles south of the proposed I-494 bridge. It serves a north-south movement; the Mendota Bridge serves northwest-southeast and east-west movements.

I-494

The section of inplace I-494 in So St Paul proposed for reconstruction in this proposal, designed in 1955 and built in 1960 (traffic design year of 1975), is one of the oldest stretches of interstate in the metropolitan region. Although capable of carrying present volumes, it does have some safety deficiencies. By present standards, the acceleration lanes are inadequate and weaving distances are to short (near the Concord Street interchange). Although the accident rate of 2.4 PMVM is only slightly higher than similar highways in the Metropolitan region, the high speed and virtually outmoded design may have been a factor in some of the serious accidents that have occurred along the section (166 injuries and 14 deaths over a ten-year period).

TH 55

Trunk Highway 55 is a 2-lane rural highway from TH 110 to TH 49 and a 4-lane expressway southeast of TH 49 (see Fig 1-2, p 7). It connects the rural and developing areas of Dakota County with Minneapolis and its southeastern suburbs. Initially, the highway permitted fairly high-speed movements and provided access to adjacent homes, farms, and fields without the two functions conflicting. As the years passed, however, more development occurred, increasing the local access function and creating a conflict in the local and through traffic movements. This trend is continuing in the project area, particularly in the industrial parks near the proposed I-494 corridor. Presently, the highway averages about 9.4 access points per mile through the project area.

FUTURE CONDITIONS

Although construction of proposed I-494 would mean an immediate alleviation to traffic congestion and an improvement in traffic safety on project area highways, projections indicate that it will be even more essential to good transportation in the area and region by the year 2000. With the exception of Sunfish Lake, the cities in the project area will remain high on the list of those experiencing marked growth. The closeness of the project area to St. Paul and Minneapolis, the convenience of the railroad line and trunk highways leading into it, the excellent suitability of the land for building, and the Metropolitan Council's (MC) designation of it as an urban service area [7] with a high development potential — all are points which will continue to attract developers to the area.

Projections indicate almost intolerable travel conditions on Project Area highways by 2000 if I-494 is not built. Desire Volumes[8] on the Mendota Bridge could be almost 3 times its capacity. Trunk Highway 110 will also have serious overloads with volumes ranging from 30,000 to 85,000 a day, or 20% to 100% above its capacity as a 4-lane expressway. Similar increases will occur on TH 5. Also, even if this proposal isn't implemented, the section of I-494 in So St Paul will require at least the addition of two lanes plus interchange revisions before the year 2000 to operate well during rush hours.

[7] An area that's either receiving or is designated to receive (by the Metropolitan Council) improvements necessary for urban development.

[8] Theoretical volumes of traffic that would want to use the highway.

FUNCTIONAL CLASSIFICATION AND TRANSIT PLAN

HIGHWAY SYSTEM

Proposed I-494 is part of the transportation system planned for the seven-county metropolitan region, called the Functional Classification Plan (FCP). (Figure 1-3 shows that part of the plan in the Project Area.) Interstate 494's role in the plan is that of a principal arterial, a high-speed highway with fully controlled access.

Other major highways in the Project Area included in the FCP are proposed I-35E[9] and TH's 36 and 3, both freeways. The plan also includes other county State Aid and Trunk Highway improvements in the Project Area. All the cities in the Project Area — with the exception of Sunfish Lake — consider the FCP important to their economic growth (indicated by their comprehensive plans). Dakota and Hennepin Counties also take this position. The counties and the municipalities have formulated their comprehensive plans on the basis that the highway improvements (including I-494) would be made.

The highway plan is the product of years of planning. Participants included the MC, DH, FHWA (Federal Highway Administration) and various counties and municipalities in the seven-county metropolitan region. A number of major studies figured in the planning, some exclusively transportation, others transportation and environmental.[10] None of the studies suggested changes in the locations proposed for the interstate highways. Rather, the studies which came later substantiated the conclusions of the earlier ones: The interstate highways and other freeways, located as proposed from the late 1950's and 1960's, would play a vital role in the regional transportation plan.

Interstate Study Committee

More recently, the State of Minnesota initiated another study of the Interstate system in the Metro area. During 1975, the State Legislature passed a bill which directed the Metropolitan Council, the Council's Transportation Advisory Board, and the city councils of the affected cities to review the unfinished sections of the Interstate System in the seven-county Metropolitan region. The legislature directed that a committee be formed to aid in the study.

[9] The Draft Environmental Impact Statement for I-35E was circulated for comment in June 1976.

[10] The following two studies are examples of the major studies that helped formulate the system: Wallace, McHarg, Roberts, and Todd. An Ecological Study of The Twin Cities Metropolitan Area. Philadelphia, PA 1969 and A Summary Report of Travel In The Twin Cities Metropolitan Area, Metropolitan Council, St. Paul, Mn 1974.

Following 26 weekly meetings, the committee, called the Interstate Study Committee, recommended completion of six of the seven unfinished Interstate links. Interstate 494 in this proposal was one of the segments recommended for completion. The resolution urged that I-494 be built along the currently proposed corridor. Following are some of the conditions which the Committee said should govern the construction:*

A) That I-494 in this area be a minimum 6-lane facility.
B) That there be complete, full interchange facilities between 494 and 35E.
C) That the direct interchange between TH 55 and the 494-35E facilities be de-emphasized with access provided by local minor arterial routes.
D) That Highway 55 be retained in its present alignment for a long-term basis, thereby eliminating the dual/dual interchange design.
E) That planning for a second Mississippi River Bridge at So St Paul be continued to accommodate future traffic needs.
F) That the basic design solution in the corridor be generally based on the first stage development proposal as presented by the Division of Highways during the course of these sessions,[11] with special emphasis on concerns of all communities.
G) That all construction shall be accomplished in a manner so as to provide maximum concern for the impact of noise, vibrations, air, and water pollution on contiguous properties throughout the corridor.

The MC and the Council's Transportation Advisory Board passed similar resolutions in support of building I-494.

TRANSIT PLANS

In addition to the highway plans, the MC has also developed a 1990 Transit System Plan for the region that includes I-494. The Plan shows express transit in mixed traffic for downtown service on Proposed I-494 from TH 61 to TH 3 (just east of the Mississippi River Bridge in Newport). It also shows transfer points at the junction of proposed Interstates 494 and 35E. The Metropolitan Transit Commission, the other agency responsible for transit planning in the region, has suggested the use of a metered freeway with exclusive ramps for buses.[12] Thus, it appears that buses in mixed traffic will most likely be the mode of transit used on I-494, at least in the near future.

* Taken from recommendations on the uncompleted interstate segments in the Twin Cities Metropolitan Area, Metropolitan Council, St Paul, Mn, Jan 1976, p 48.

11 This design was similar to Alternate B3.

12 Included in a letter from Doug Kelm, Chairman, Metropolitan Transit Commission to the Interstate Study Committee, September 5, 1975.

PROPOSED INTERSTATE 494

PROPOSED INTERSTATE 35E

PROPOSED HIGHWAY 3

PRINCIPAL ARTERIAL

INTERMEDIATE ARTERIAL

MINOR ARTERIAL

COLLECTOR

FUNCTIONAL CLASSIFICATION PLAN

N

0 2000 4000

INTERSTATE 494

Metropolitan Functional Classification Plan (map) Approved By The Transportation Advisory Board on 1-21-76

FIGURE 1-3

HISTORY, DEVELOPMENT, AND CURRENT STATUS

LOCATION HEARINGS

Public Hearings on December 13, 1956, August 12, 1958, November 4, 1963, and December 3, 1970, established basic roadway locations for this segment of I-494. On September 28, 1959, and December 18, 1963, the Bureau of Public Roads, now known as the Federal Highway Administration (FHWA), approved the location of the corridor.

JOINT PLANNING

After the earlier hearings, the Division of Highways (DH) and other state and local agencies began making decisions relating to the proposed highway. Back in the early 1960's, when the DH was considering acquiring land in the Minnesota River Valley for the proposed I-494 crossing, the Department of Conservation[13] (DOC) wanted additional land in the Minnesota River Valley in the vicinity of the proposed I-494 crossing for Fort Snelling State Park. Part of the property which the DOC wanted could only be obtained through condemnation proceedings. Lacking the power of eminent domain,[14] the DOC (along with the Minnesota Department of Administration) entered into an agreement with the DH to jointly acquire 465 acres, with the DH exercising its power of eminent domain.

Of the 465 acres acquired, the DH retained ownership of 16 acres, the amount needed for the I-494 crossing through the river valley. The DH transferred the remaining 449 acres to the DOC (with reimbursement from the DOC). This acreage is now part of Fort Snelling State Park.

During this period, the DH began acquiring right-of-way in Eagan, Mendota Heights, and Inver Grove Heights. About 412 acres were acquired at a cost of nearly 5 million dollars. When new federal environmental laws necessitated a delay in completing the acquisitions, the cities reserved the corridor through special zoning. Figure 6-2, p 73 , shows the R/W acquired for I-494 thus far plus other R/W under DH ownership through previous highway construction (west of the Minnesota River near the Airport and east in the project area in Inver Grove Heights and So St Paul).

[13] Now the Department of Natural Resources

[14] The right of a government to take, or to authorize the taking of, private property for public use, with just compensation being given to the owner.

PROBLEMS AND OBJECTIONS

On September 20, 1973, the Minnesota Public Interest Research Group (MPIRG), a quasi-public organization, announced that it was suing the Federal Highway Administration and the DH in an attempt to prevent construction of I-494. Joining MPIRG in the suit were the Dakota County Environmental Protective Association and the Convent and Academy of the Visitation (in Mendota Heights).

Basic points of contention in the suit were as follows —

— that all but one of the Contracts for I-494 through Hennepin and Dakota Counties have been awarded.

— that the DH was planning to let the one remaining contract.

— that, in general, the building of another highway in the Twin Cities was inappropriate.

The outcome of the suit was a court stipulation which stated that, with the exception of the two contracts in force west of Pilot Knob Road and the work necessary for the preparation of an EIS, the DH wouldn't engage in any activity which would further the development of construction of the project.[15]

CURRENT STATUS

The DH has completed some work on proposed I-494. The Federal Highway Administration (FHWA) had given location and design approval (and later approved an environmental assessment) on the section of I-494 from the Minnesota River to the Chicago, Milwaukee, St Paul, and Pacific Railroad (CMSTPP). In 1971, the DH awarded contracts for this section. Work included the placing of a sand blanket in the flood plain and the grading and preparation of a roadbed from the east bank of the Minnesota River to just west of the proposed I-494 and I-35E interchange. This work was completed in 1974. Contracts can't be awarded on the remainder of proposed I-494 until after the necessary additional hearings, reports, and approvals. Construction on I-494 and the other highways in the proposal could start in 1979. The work could be completed in 1983.

[15] The Division of Highways, acting in accord with federal regulations, was already fulfilling the requirements of this stipulation.

THE PROPOSED ACTION

Location

Description

LOCATION

The project area is south of St Paul and Minneapolis, in Dakota and Hennepin Counties. Between the termini in Bloomington and So St Paul, the proposed route passes through the Minnesota River Valley and the cities of Eagan, Mendota Heights, Sunfish Lake, and Inver Grove Heights.

Dakota and Hennepin Counties are part of the 7-county metropolitan (metro) region of St Paul and Minneapolis, Minnesota (See Fig 1-1, p 3) Ramsey and Hennepin Counties, the locations of St Paul and Minneapolis (Twin Cities), form the core of the 7-county metro region. Clustered around these are the five remaining counties — Anoka, Carver, Dakota, Scott, and Washington. The seven counties have a total land area of 1,899,520 acres. About 904,433 acres (47.2%) of this area is in urban use. Population of the 7-county metro region is 1,874,612.

DESCRIPTION

This proposal includes the following highway improvements:

New construction of about 10.2 miles of I-494

Reconstruction of 1.3 miles of Inplace I-494 in So St Paul

Possible relocation of a 4.5 mile section of TH 55 (Alt B1 and B2)

Reconstruction of 2.7 miles of TH 55, 3.5 miles of TH 49, and about 1.3 miles of TH 5

NEW CONSTRUCTION I-494

The section of I-494 proposed for new construction begins at 24th Av So in Bloomington and ends at 7th Av in So St Paul. It will be basically 6 lanes and will have a depressed median, rural design. Design speed will be 70 mph. The section of I-494 includes a 6-lane bridge over the Minnesota River, just under a mile long (4380 ft.), and major interchanges at proposed I-35E, TH's 5, 49, 110, 3 and Concord St.

The section of inplace I-494 in So St Paul proposed for reconstruction extends from 7th Av to the Mississippi River. This section of interstate highway has been in operation since 1962. Reconstruction here basically consist of widening the highway from the present 4 lanes to 6 lanes.

RECONSTRUCTION I-494 IN SO ST PAUL

South St Paul plans to construct a new road east of Concord St. Called the Industrial Penetrator Road, the road will provide a direct connection between I-494 and the stockyards and a proposed grain terminal. Plans are to remove the existing interchange at Farwell Av and I-494 and construct an interchange at the site of the Industrial Penetrator Road. If this construction occurs before the reconstruction of Inplace I-494 (in So St Paul), the interchange will include provisions for the additional lanes along I-494 and for the necessary ramp connections.

(See discussion of additional highway work in So St Paul under Other Highway Construction, p 19).

RELOCATED SECTION OF TH 55

The relocated section of TH 55 (under Alt B1 and B2 would begin about 0.7 miles north of the proposed I-35E and I-494 interchange (in Mendota Heights) and ends southeast of the junction of TH 49 and TH 55 (in Eagan).

EXISTING TH 55, TH'S 49 AND 5

Existing TH 55 and TH's 49 and 5 will also undergo widening. This reconstruction work will coordinate the TH's with the proposed link of I-494 and with the other highway and street improvements proposed for the project area. Termini for these highways are as follows:

TH 55 — from about .7 miles north of the proposed I-494 and I-35E interchange to about 1.9 miles southeast of the south junction of the TH's 49 and 55

TH 49 — from about Mendota Heights Rd. to the southeast junction of TH's 49 and 55

TH 5 — from proposed I-494 to about 1.3 miles north.

OTHER HIGHWAY CONSTRUCTION

The project area and nearby communities have been the focal point of a number of transportation studies and proposals for new and reconstructed highways. Aside from the construction proposed in this DEIS, highways under study or construction are as follows: The Mendota Bridge Intersection and TH 13, in Mendota Heights; TH 36 (Cedar Av), from Bloomington to Apple Valley (just south of Eagan); I-35E, in Eagan and Mendota Heights; and in So St Paul, Concord St (TH 56), an interchange at inplace I-494 at Concord St and Mississippi River Bridge. (See Fig 2-1).

Mendota Bridge Intersection and TH 13

The basic problem at the Mendota Bridge Intersection is that three high-volume highways — TH's 13, 110, and 55 all intersect in a relatively confined area on the same level. This intersection is at its theoretical capacity. The traffic flow is unstable and frequent stopping occurs. A signal light controls traffic at this intersection, and traffic back-ups are common during rush hours and periodically throughout the day.

The section of TH 13 south of the Mendota Bridge Intersection is also close to theoretical capacity. A 2-lane highway, it carries about 15,000 vehicles per day.

Currently, plans are to start reconstruction on the Mendota Bridge Intersection and TH 13 in 1980. The reconstruction will also include TH 55, from TH 110 to just north of the proposed I-35E and I-494 interchange. Although this work will have a definite relationship to proposed I-494 and must be correlated with it to an extent, it's a separate action, and all requirements will be met apart from this proposal.

I-35E

The Final EIS[1] for a section of I-35E from Burnsville (southwest of Eagan) to TH 110 in Mendota Heights will be circulated sometime in the summer of 1977. This section will have a major interchange with proposed I-494. Construction should start in late 1977. Plans are to have another section of I-35E extend north from TH 110 into St Paul. Location for this section hasn't been determined.

TH 36

Trunk Highway 36 runs north and south, basically through Bloomington, Eagan, Burnsville, and Apple Valley. It interchanges with inplace I-494 in Bloomington, just west of 24th Av . The reconstruction of TH 36 began in December 1976 and should be completed around 1980. The highway will be upgraded from 2 to 6 lanes. Construction will include a new bridge over the Minnesota River. The Final EIS[2] for TH 36 was circulated in 1976.

TH 3

Trunk Highway 3 is located in the eastern part of project area. It serves mainly as a connection between St Paul and Inver Grove Heights and the cities and farming communities in southeastern Minnesota (via TH 52). The section of TH 3 from St Paul to TH 110 was opened to traffic in 1976. Environmental studies are underway for the unconstructed section extending from TH 110 to TH 52 in the south.

Concord St, Interchange at Concord St and I-494, and Mississippi River Bridge

The City of South St Paul is currently reconstructing a section of Concord St (TH 56), upgrading it from 2 lanes to 4. This section of highway extends north and south of inplace I-494. It passes through So St Paul's Central Business District and part of it's industrial area.

The interchange at Concord St and I-494 will be reconstructed, also under a separate proposal. The interchange will be designed to accommodate the current widening along Concord St and the future reconstruction of I-494.

Construction of a new bridge over the Mississippi River in So St Paul is also being considered. Currently, a 4-lane bridge carries I-494 traffic across the Mississippi River. Because of the limited capacity of this bridge and the amount of traffic that the new development proposed for the project area (including highways) will generate, plans are to construct a new 6-lane bridge at the I-494 crossing.

Tentatively, the construction of the Concord St and I-494 interchange is scheduled for early 1979. Construction of the Mississippi River Bridge will occur somewhat later.

[1] Report Number: FHWA-MN-EIS-76-04-F.

[2] Report Number: FHWA-MN-EIS-74-4-F. Approval Date: 31 March 1976.

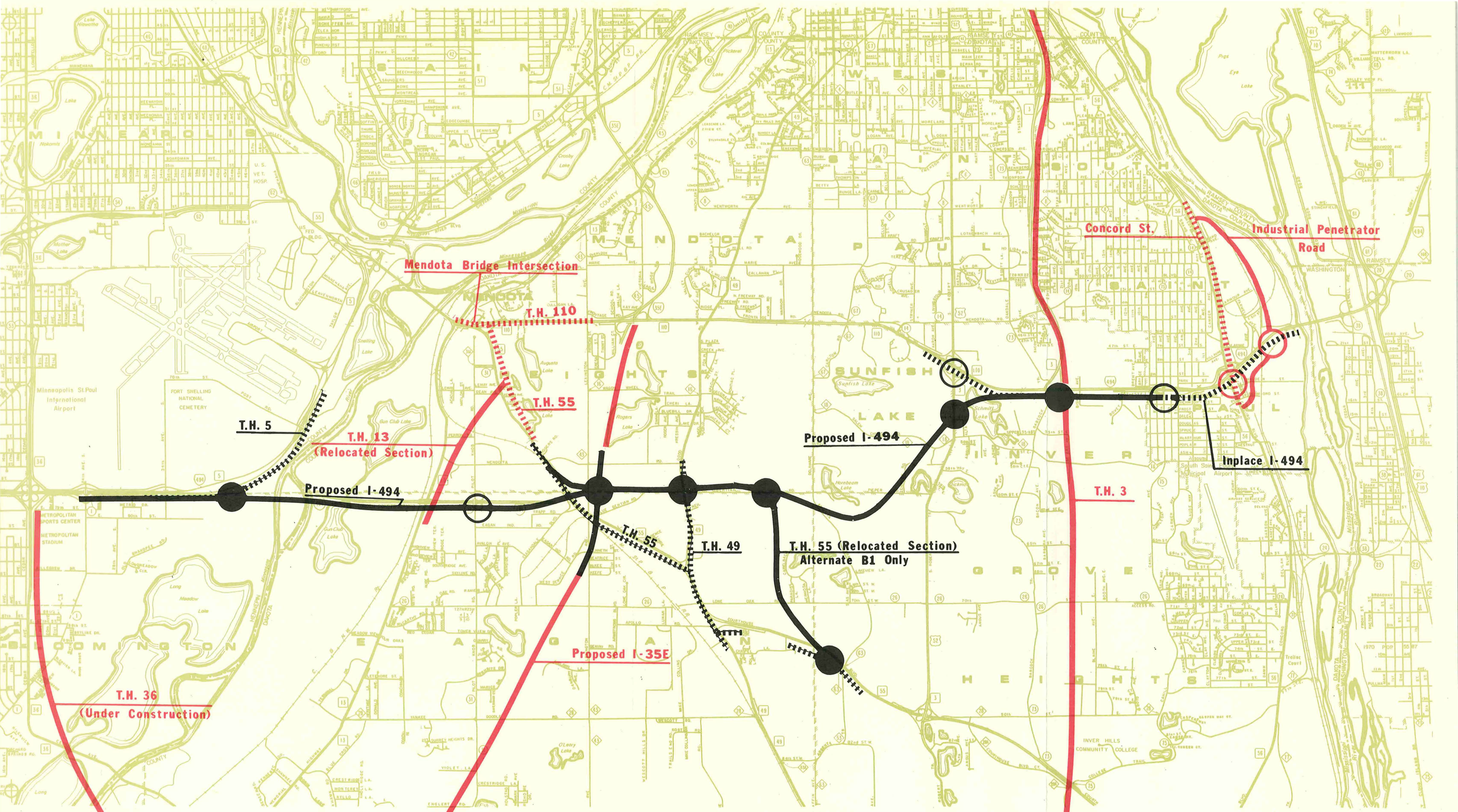

Mendota Bridge Intersection
T.H. 110
T.H. 55
T.H. 5
T.H. 13
(Relocated Section)
Proposed I-494
T.H. 55
T.H. 49
Proposed I-35E
T.H. 36
(Under Construction)
Proposed I-494
T.H. 55 (Relocated Section)
Alternate B1 Only
Concord St.
Industrial Penetrator
Road
Inplace I-494
T.H. 3
OTHER HIGHWAY CONSTRUCTION
NEW CONSTRUCTION
NEW INTERCHANGE
RECONSTRUCTION
RECONSTRUCTED INTERCHANGE
CONSTRUCTION RELATED TO PROPOSED I-494
PROPOSED HIGHWAY CONSTRUCTION
N
INTERSTATE
494

Figure 2-1

SOCIAL, ECONOMIC, AND ENVIRONMENTAL CONTEXT OF THE AREA

Natural Features

Social And Economic Setting

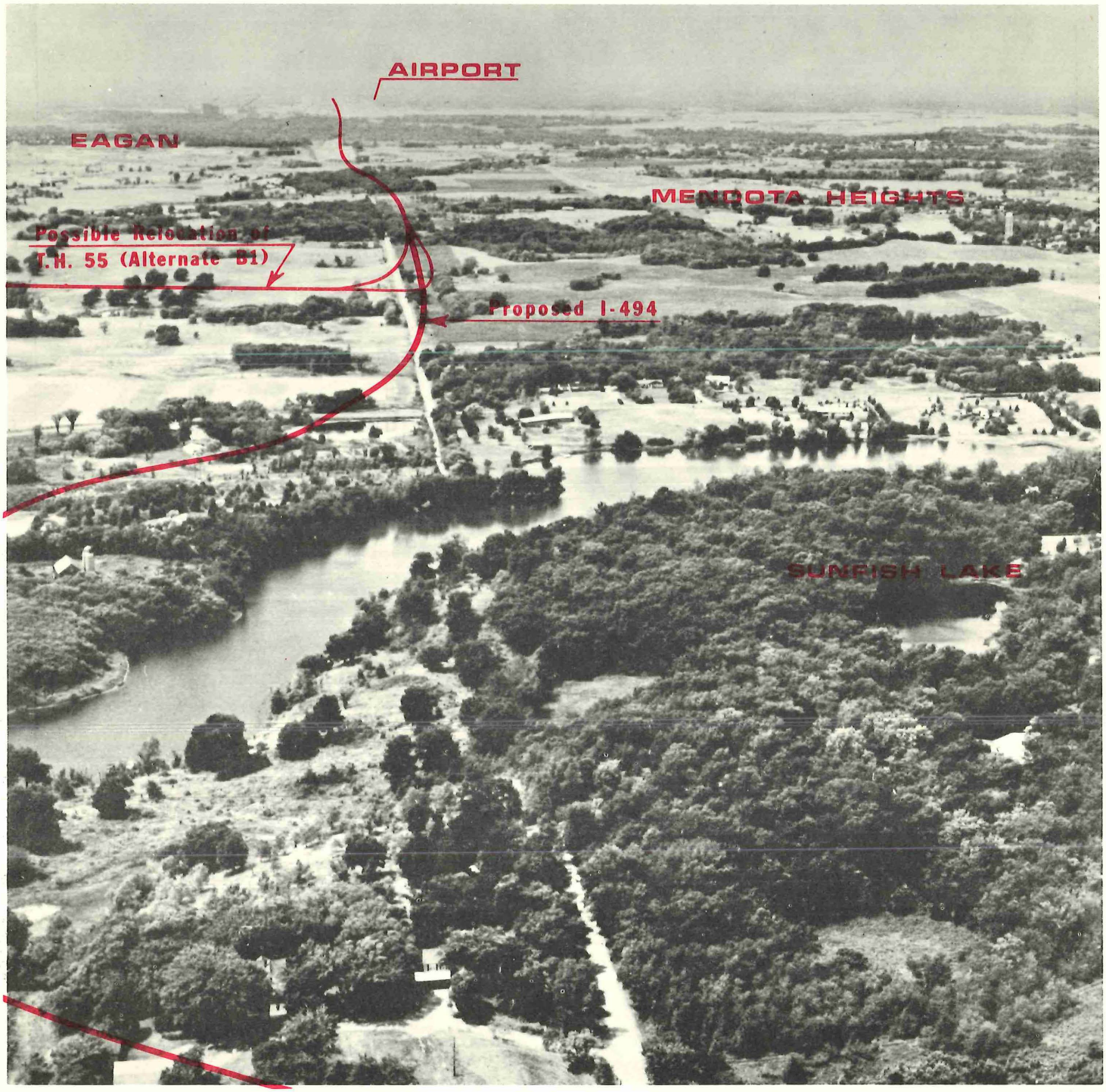


FIGURE 3-1 PORTION OF PROJECT AREA. Looking west from Hornbeam Lake in the city of Sunfish Lake. Line indicates approximate location of I-494

SECTION III THE SOCIAL, ECONOMIC AND ENVIRONMENTAL CONTEXT OF THE AREA

INTRODUCTION

The Project Area — lying entirely within the Metropolitan Urban Service Area — is undergoing rapid changes from rural to urban uses. With Bloomington and So St Paul, the change is largely history, having been accomplished for at least a decade or so. With the remaining project area cities and other cities in Dakota County, however, the change is still taking place. Thus far, the cities, although growing rapidly, have preserved the pleasing natural features of the area. Consequently, the interspersion of open space, modern residential areas, commercial centers, and industrial parks makes the project area unique.

Following in this section is a description of the project area. The divisions and sub-divisions are as follows:

NATURAL FEATURES

Climatological Data	Hydrology	Wildlife
Geology	Vegetation	Fish Resource

SOCIAL AND ECONOMIC SETTING

Population, Housing	Tax Base
Employment	Recreational, Cultural
Community Services	Aspects
	Land Use Planning

CLIMATOLOGICAL DATA

The US Weather Bureau at the Mpls-St Paul International Airport is the official station for recording climatological conditions in the project area. Compiled data shows that the coldest month is January, with mean daily maximum and minimum temperatures of 22.4 and 2.3 degrees (^{o}F). The warmest month is July, with mean daily maximum and minimum temperatures of 83.9 and 60.7 degrees.

The average annual precipitation in the project area is 24.78 inches. (Included in this figure is an average annual snowfall of 40.3 inches). June is the wettest month, with 4.00 inches of precipitation, and January the driest, with .70 inches. Nearly 64% of the average annual precipitation occurs from May to September.

GEOLOGY

TOPOGRAPHY
SOILS

The topography in the project area varies from gently rolling in the west in Bloomington (Hennepin Co) to rugged and more pronounced in the east in northern Dakota County. Situated between the eastern and western sections is the broad expanse of the Minnesota River Valley, which on the average is about 1.5 mile wide through the project area. West and east of the river valley soils are mainly sand and gravel, with some clayey and silty soils, covered by a veneer of sandy loam. In the river valley, some areas are exclusively peat; others are silt and a mixture of peaty and sandy loam.

The geologic profile (Fig. 3-2) depicts the general relationship of the proposed grade to the soil bedrock, and ground water. The profile begins at 24th Av in Bloomington and terminates at 7th Av in So St Paul.

UNUSUAL FEATURES

With the exception of a rock quarry and gravel pit, the project area has no unusual geologic features. The rock quarry, located east of the Minnesota River in the floodplain, about 2500 ft. north of the proposed I-494 alignment, is not being worked at present. Years ago, however, several homes in the area were built with rock from the quarry. The gravel pit, located in the northeastern section of Sunfish Lake, fairly close to the proposed alignment, isn't being worked either. Most of the desirable material has been removed from the pit.

ERODIBLE SLOPES

The project area has only a few small strips of erodible slopes. Two small strips are in the flood plain east of the Minnesota River, one north and one south of Proposed I-494. Several other strips are inland in scattered locations. None are in the path of Proposed I-494, however.

HYDROLOGY

GROUNDWATER

The project area has two distinct ground water conditions: The Jordan-Prairie du Chien Potentiometric Surface and the Near Surface Water Table. The Jordan acquifier, the major source of water for the metro region, is in the Jordan sandstone, about 600 ft down. The Near Surface Water Table is the level at which water would be encountered in a shallow drill hole or well. Springs, lakes, and swamps in the project area generally are the surface expression of the Near Surface Water Table. Some limited zones of perched water, held up or ponded by impermeable soil, may occasionally be found above the water table, however.

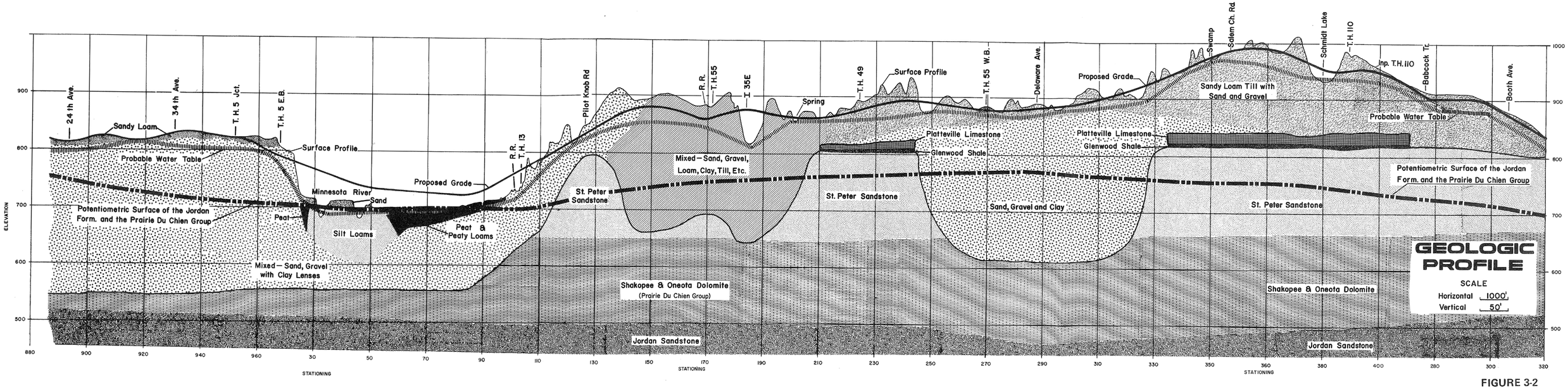

24 th Ave.
34 th Ave.
T. H. 5 Jct.
T. H. 5 E.B.
Pilot Knob Rd
R. R.
T. H. 55
I 35E
T. H. 49
T. H. 55 W.B.
Delaware Ave.
Swamp
Salem Ch. Rd
Schmidt Lake
T. H. 110
Inp. T.H. 110
Babcock Tr.
Booth Ave.
R. R.
T. H. 13
Spring
Surface Profile
Proposed Grade
Sandy Loam
Probable Water Table
Minnesota River
Sand
Peat
Silt Loams
Peat & Peaty Loams
Potentiometric Surface of the Jordan Form. and the Prairie Du Chien Group
Mixed — Sand, Gravel with Clay Lenses
St. Peter Sandstone
Mixed — Sand, Gravel, Loam, Clay, Till, Etc.
Platteville Limestone
Glenwood Shale
Sand, Gravel and Clay
Sandy Loam Till with Sand and Gravel
Shakopee & Oneota Dolomite
(Prairie Du Chien Group)
Jordan Sandstone
ELEVATION
STATIONING
GEOLOGIC PROFILE
SCALE
Horizontal 1000'
Vertical 50'

FIGURE 3-2

WATERCOURSES AND WATERBODIES

The project area has two major watercourses and a number of water bodies. The watercourses are the Minnesota River, located in the west near Bloomington and Eagan, and the Mississippi River, located along the perimeter of the project area in the east, near So St Paul and Inver Grove Heights. Principal waterbodies in the project area are Lemay, Rogers, Hornbeam, Horseshoe, and Schmidt Lakes. In addition to these, the project area has a number of wetlands. Because of the lay of the land, little of the runoff in the project area reaches the two watercourses through direct surface runoff. Most of it goes into the lakes, ponds, and marshes.

GROUNDWATER RECHARGE AREAS

Groundwater recharge areas are mainly in the southern portion of Eagan, Inver Grove Heights, and Bloomington. A small recharge area does extend up into Mendota Heights. The remaining recharge area is in the floodplain.

VEGETATION

The existing vegetation in the project area consists of wooded land, grass areas in open fields, and grassy marsh areas. Grass areas and open fields are the most common, much of the land having been grazed or farmed at one time. Now — the agricultural use abandoned — the land has reverted to meadow or brush. The project area has a substantial amount of wooded land, most of which is in the southern portions of Eagan, Inver Grove Heights, and Bloomington. The southern edge of Mendota Heights and the southern section of Sunfish Lake also have fairly extensive woodland areas, however. Most of the marsh land in the project area is in the flood plain. Several small marsh areas are located inland in northern Dakota County.

WILDLIFE

While it is uncommon to find wildlife in predominantly urban areas, portions of the study area are prime wildlife habitat. The sizable, well-vegetated open space and undeveloped land in the Minnesota River Valley and in areas of Eagan, Sunfish Lake, and Inver Grove Heights gives wildlife good protection from human activity. Within the immediate project area — the area contiguous to the corridor in the proposal — the Minnesota River Valley is the best wildlife habitat. In the river valley are deer and an abundance of small game, songbirds, and waterfowl. In the eastern portion of the study area — in northern Dakota County — urbanization has caused a shift in the wildlife population and only smaller animals, songbirds, and some waterfowl remain. No species of wildlife listed as threatened or endangered by the US Fish and Wildlife Service (Federal Register, October 1976) are known to reside within the project area.

TYPES OF HABITAT

A wide diversity of wildlife exists in the right-of-way due to the different types of vegetation and land uses traversed by the proposed highway. The distribution of vegetation is not uniform but forms a network of small blocks. Additional wildlife habitat is created by this interspersion of vegetation types (for example, forest land adjacent to cropland creates the edge effect, a transition in types of vegetation).

Within the proposed right-of-way, 33.9 acres (2.2%) are prime wildlife habitat, 30.2 acres (1.9%) are good habitat, 946.3 acres (59.3%) are fair habitat, and 578 acres (36.2%) are poor habitat. The poor habitat is characteristic of urban areas. Fair habitat includes upland hardwood forest, croplands, grasslands and conifer plantations. Good and prime habitat consists of lowland hardwood forest and wetlands.

INHABITANTS OF THE WETLANDS

The following list of amphibians and reptiles are probable inhabitants of the wetlands that are proposed to be filled. They have been found in similar habitats in Hennepin and Dakota Counties.

Of these, only one species is listed in the "Special Publication No. 104" on species in need of special consideration - the snapping turtle. The snapping turtle is listed in the publication as a Species of Special Interest.

Mammals which depend on the wetland habitat which is proposed to be filled:

1. Boreal red-backed vole
2. Meadow vole
3. Muskrat
4. Beaver
5. Masked shrew
6. Pygmy shrew
7. Short-tailed shrew
8. Cottontail rabbit
9. Red fox
10. Raccoon
11. Long-tailed weasel
12. Short-tailed weasel
13. Striped skunk
14. Spotted skunk

(Taken from Vegetation, Land Use and Wildlife Assessment, prepared by Office of Environmental Services, Division of Highways, June 1976).

Amphibians and reptiles which depend on the wetland habitat which is proposed to be filled:

1. Leopard frog
2. American toad
3. Swamp tree frog
4. Green frog
5. Fox snake
6. Plains garter snake
7. Common garter snake
8. Snapping turtle
9. Painted turtle
10. Smooth green snake
11. Milk snake
12. Spring soft-shelled turtle

(Taken from Reptiles and Amphibians of Minnesota by W. J. Breckenridge, 1970 3rd printing, The University of Minnesota Press, Minneapolis.)

The River Valley

The mixture of vegetative covers and types, along with limited human activity, makes the river valley an ideal habitat for deer. A herd of white-tail deer winters in Burnsville (south of Eagan). The herd is resident in the valley year-round, but during the late summer and fall, it leaves the valley to feed in the adjoining fields. Various estimates have set the number of deer in the herd at up to 500.

The Minnesota River Valley also ranks amont the best habitat in the state for small game. This is because of the great variety of vegetation in the valley, ranging from meadow grasses to oak mast. Consequently, most all small animals whose range extend into this region of the state can be found in the valley area.

The river valley also constitutes ideal habitat for migratory waterfowl. Scattered throughout the area are Type IV deep marshes which the DNR (Department of Natural Resources) states are preferable habitat areas for waterfowl. Type IV marshes contain open water with emergent vegetation either in scattered clumps or in a fringe along the water's edge. These marshes often have submerged aquatic vegetation, also a preferred constituent for the better waterfowl habitats. Such marshes provide the food and cover for not only the migratory flocks, but also for those which may breed in the Twin Cites area.

East of the River Valley

East of the Minnesota River Valley, the study area contains many tracts of vegetation dispersed between residential and urban development. These areas of vegetation are composed of woods, brush, meadow or wetland and range in size from a few acres to nearly 100 acres. Due to their relatively undistrubed condition many of these areas provide habitat for wildlife. Game species such as ringnecked pheasants, mallards, bluewinged teal and wood ducks are common. Only a few white-tailed deer occur because wooded areas have become too small and fragmented. The scattered patches of vegetation provide excellent habitat for many kinds of non-game birds and small mammals.

FISH RESOURCE

Despite the number of water bodies in the project area, the combined fish population is small. The ponds and lakes in northern Dakota County lack the depth to winter fish. The Minnesota River has 24 species of fish in the section of the river valley near the proposed I-494 crossing, most species are present in low numbers. Carp is the prevalent species, accounting for about 42% of the total fish population. Others include gizzard shad (37%), sheepshead (6%), white bass (3%), northern redhorse (2%). Carp-sucker, sauger, northern pike, crappie, catfish and short-nose gar make up the remaining percentage.

POPULATION, HOUSING, EMPLOYMENT

POPULATION

From 1960 to 1970, the population of the 7-county Metro Area increased by 349,315, going from 1,525,297 to 1,874,612 (See Table 3-1). More than half of this increase occurred in the suburban areas. During this period, the population of Dakota County almost doubled, going from 78,303 to 139,808. (This was about 18% of the total increase in the metro region.) By 1972, the county had more than doubled its 1960 population, reaching 166,683. This high percentage of growth made Dakota County the fastest growing county in the State. Mos of this growth occurred in the northern part of the county, in the project area and surrounding communities.

Projections indicate that this trend will continue (See Table 3-2). By the year 2000, Dakota County's population will be about 400,000, or around 13% of the Metro region total. The projections also indicate that, as in the past, the urban centers of the north will receive most of this growth. Again, this is because these cities have excellent land and are highly suitable for development, are close to St. Paul and Minneapolis, and are all within the area designated for growth.

Similarly, Bloomington (Hennepin Co.) has experienced rapid growth. From 1960 to 1970, Bloomington's population increased by 60%, going from about 50,000 to 80,000. Much of this growth can be attributed to the residential expansion that accompanied the build-up of industrial and commercial facilities along existing I-494, not only in Bloomington but in Edina, Richfield, at the Airport, and at Fort Snelling. Another reason for the growth is the proximity of Bloomington to Minneapolis. (Interstate 35W connects Bloomington to the central business district of Minneapolis.) Like the remaining cities in the project area, Bloomington should continue to experience rapid growth. Projections indicate that the city should reach a population of 92,500 by the year 2000.

TABLE 3-1

AREA POPULATION, EMPLOYMENT AND HOUSEHOLDS

LOCATION	POPULATION		EMPLOYMENT		HOUSEHOLDS	
	1960	1970	1960	1970	1960	1970
Bloomington	50,498	81,970	7,789	43,955	12,035	21,816
Airport		624	7,870**	14,888		105**
Eagan	3,331	10,398	94	5,915	832	2,607
Mendota Heights	5,028	6,165	281**	1,254	1,260**	1,553
Sunfish Lake	181	269	1**	50	51**	67
Inver Grove Heights	6,466	12,148	531**	2,083	1,583**	2,837
South St. Paul	22,032	25,016	11,343	8,364	6,268	7,515
Minneapolis	482,867	434,400	274,190	290,324	165,791	161,080
St. Paul	313,413	309,866	172,756	186,759	98,698	104,095
Metropolitan Area	1,525,297	1,874,612	628,800	853,137	475,505	573,771

* Airport projections are for dwelling units

** Estimates

Source: Metropolitan Council

TABLE 3-2

AREA POPULATION, EMPLOYMENT AND HOUSEHOLD PROJECTIONS

LOCATION	POPULATION PROJECTIONS			EMPLOYMENT PROJECTIONS			HOUSEHOLD PROJECTIONS		
	1980	1990	2000	1980	1990	2000	1980	1990	2000
Bloomington	89,200	93,000	92,500	57,200	65,800	76,800	26,450	30,250	32,350
Airport	838	884	939	22,265	12,351	15,554	106*	106*	106*
Eagan	28,900	52,200	75,200	15,800	25,800	32,500	8,400	17,350	25,300
Mendota Heights	9,700	14,500	21,100	4,300	6,800	9,800	2,730	4,800	7,500
Sunfish Lake	550	1,100	1,700	80	150	200	200	400	600
Inver Grove Heights	22,650	39,700	53,500	6,420	10,350	20,300	6,100	12,400	17,900
South St. Paul	24,900	24,000	23,350	10,350	12,050	13,000	8,200	8,600	8,600
Minneapolis	421,000	432,600	441,900	305,500	322,000	333,500	173,600	183,600	188,250
St. Paul	298,100	304,700	312,700	199,500	213,500	221,500	113,100	119,300	123,300
Metropolitan Area	2,195,000	2,560,000	2,888,000	1,086,000	1,322,000	1,586,000	731,500	904,500	1,050,000

* Airport projections are for dwelling units

Source: Metropolitan Council

Characteristics of Population

The median level of income and housing values is somewhat higher in the project area than in the rest of the region. Median income in the project area is $13,012 as compared to the metro region average of $11,682. The median value of homes in the project area is $24,247; the metro region average $21,500.

(The foregoing figures are from the 1970 Census of Population and Housing, US Dept of Commerce. A Metropolitan Council publication, title "State of the Region: The Twin Cities Metropolitan Area," published in Feb. 1977, indicates that in the metro region the median family income and the median value of single family homes increased substantially since the 1970 census. From 1970 to 1975, the median family income increased by about 34.8%, the median value of single family homes by 38.5%. Thus, as of 1975, the median family income in the project area would have been about $17,550, the median value of homes about $33,582. The metro region averages would've had similar increases.)

The project area has only a small percentage of minority and foreign born. These aren't concentrated in any one area.

Table A-1, in the appendix, depicts the overall characteristics of project area residents and compares to them to the remainder of the metro region (1970 figures.)

Figure A-1, in the appendix, shows the locations of the data zones.

HOUSING

Housing starts in the metro region, like the population growth, have been higher in the suburban areas than in the core cities, Minneapolis and St Paul. Again, the areas with the greatest increase have been the 2nd and 3rd ring suburbs, areas which start about 6 miles from the core of the metro region and extend for another 8 to 9 miles. The cities in the project area are among these. With the exception of Sunfish Lake, all the cities in the project area will have a substantial increase in dwelling units. Sunfish Lake's comparatively small land area and large lot subdivisions will restrict its increase.

EMPLOYMENT

Employment growth in the project area has been commensurate with the population and dwelling unit growth. Thus far, the highest numerical increases have occurred in Bloomington, which increased by about 26,000 jobs in the ten years from 1960 to 1970. Eagan had the highest percentage increase, however, going from 94 to 5,915. By 1973, Eagan's total had climbed past 10,000.[1] Another area of high increase has been the airport, which went from 7,460 to 14,888. Projections indicate that by the year 2000, the combined employment in the project area will be about 9% of the metro region total. (Similar increases have occurred in and are projected for the surrounding communities, areas that are also dependent on I-494 as a transportation route, at least in part.)

[1] Dakota County In Perspective, Dakota County Planning Department, Hastings, Mn.

TAX BASE

Table 3-3, p 35 , gives the assessor's estimated market value and assessed value of property in the different cities and school districts in the project area. (Proposed I-494 will affect these cities and districts in varying degrees. See discussion in Section VI, Direct Impacts, Right-of-Way, p 71).

TABLE 3-3

	SCHOOL DISTRICT*				
	6	196	197	199	271
ASSESSOR'S MARKET VALUE	$178,537,919	$310,417,509	$370,964,388	$130,066,855	$1,060,071,238
ASSESSED VALUATION	$62,704,182	$110,010,436	$138,580,569	$45,789,190	$397,769,266
% ASSESSED VALUATION IS OF ASSESSOR'S MARKET VALUE	35.12%	35.44%	37.36%	35.20%	37.52%
GOVERNMENT UNIT TAX RATE IN MILLS	72.51	AH 52.48 ANH 54.48 NA 64.48	AH 42.14 ANH 44.14 NA 54.14	AH 43.73 ANH 45.73 NA 55.73	54.014

	Bloomington	Eagan	Mendota Heights	Inver Grove Heights	Sunfish Lake	South St. Paul	Dakota County
ASSESSOR'S MARKET VALUE	$1,062,662,739	$217,190,930	$87,912,412	$144,952,899	$5,795,603	$179,628,549	$1,720,798,237
ASSESSED VALUATION	$404,379,612	$80,862,765	$32,000,467	$50,609,786	$2,170,859	$63,134,353	$618,383,873
% ASSESSED VALUATION IS OF ASSESSOR'S MARKET VALUE	38.05%	37.23%	36.40%	34.92%	37.46%	35.15%	35.94%
GOVERNMENT UNIT TAX RATE IN MILLS	14.418	196A** 86.75 196NA 96.75 197A 76.41 197NA 86.41 197A/WD 76.92 197NA/WD 86.92	197A 79.27 197NA 89.27 197A/WD 79.78 197NA/WD 89.78	196A 90.98 196NA 100.98 197A 80.64 197NA 90.64 197/196NA 89.92 199A 82.23 199NA 92.23	197A 72.73 197NA 82.73	199A 199NA 99.95 6 116.73 6/199 119.53	19.44

A - Agriculture
AH - Agricultural Homestead
ANH - Agricultural Non-Homestead
NA - Non-Agricultural
WD - Watershed District

REAL ESTATE TAX BASE
1975 (PAYABLE IN 1976)

* For location of School District, see Figure 3-3

COMMUNITY SERVICES

Figure 3-3, p 37 , shows the community services in the project area — police and fire departments, churches, schools, community centers, libraries, hospitals, and shopping centers (Bloomington's police department and city hall are outside the project area). Each city has its own police and fire department. Generally the city hall in each city functions as community centers. Only Bloomington and So St Paul have libraries. Residents of Mendota Heights, Eagan, Sunfish Lake and Inver Grove Heights either use the county's library in Burnsville (south of Eagan) or receive services from the county's mobile unit. So St Paul is the only city in the project area with hospital services. The remaining cities depend on Minneapolis, St Paul, Edina or So St Paul for hospital services. Eagan plans to have medical facilities sometime in the near future (See Section IV, Land Use Planning, page 44).

RECREATIONAL AND CULTURAL FACILITIES

EXISTING

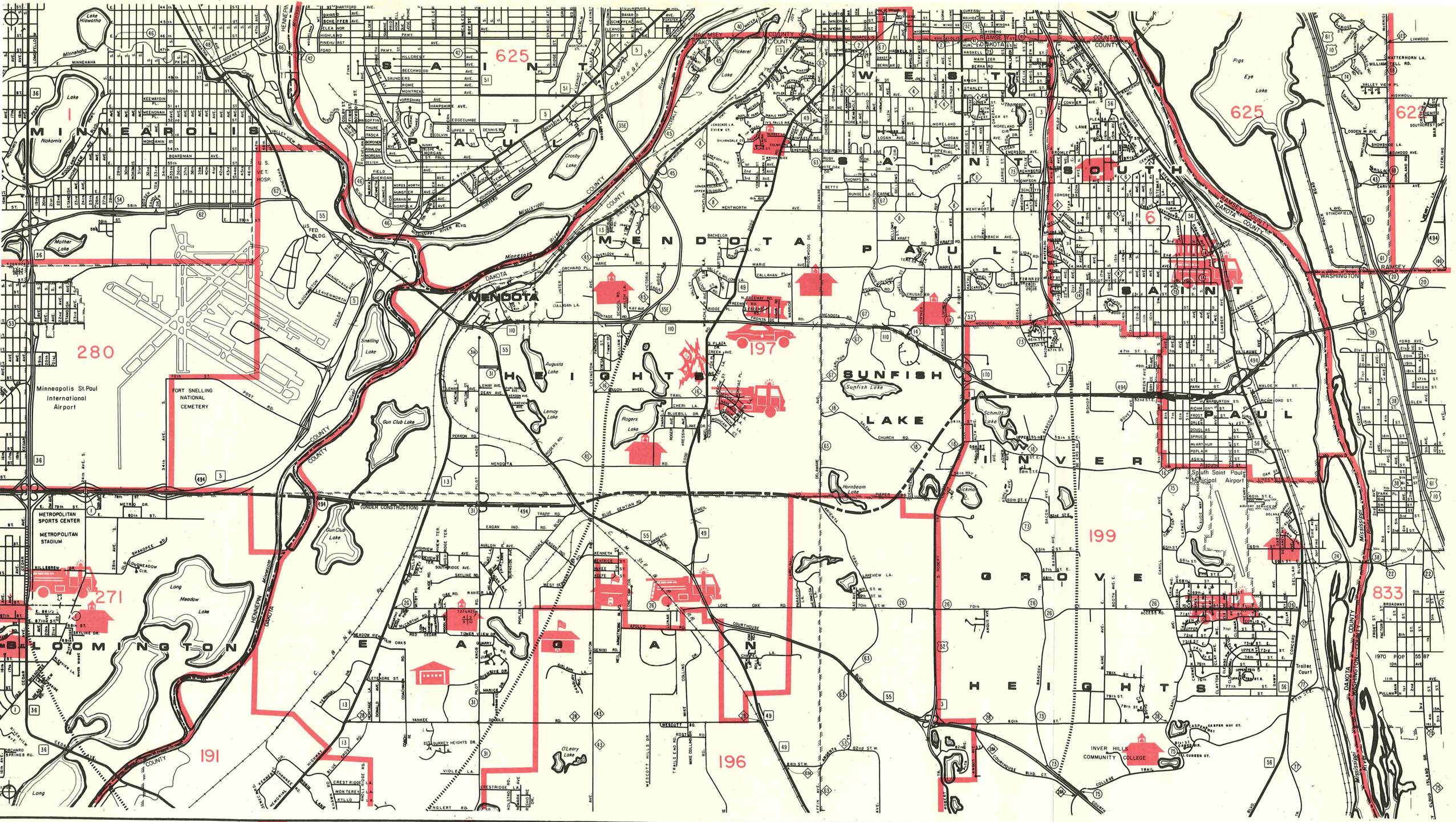
The project area contains two major recreational and cultural facilities — Fort Snelling State Park and the Metro Sports Complex. These are important not only to the immediate area but to the metro region, the State, and, to an extent, the nearby cities in adjacent states.

Fort Snelling State Park

Fort Snelling State Park encompasses about 2500 acres (Fig. 3-4 p40).It extends from the confluence of the Minnesota and Mississippi Rivers to about one mile south of the proposed I-494 bridge over the Minnesota River, an overall distance of about 4.7 miles. The park serves a number of conservational and recreational uses. Also, the major portions of the Fort Snelling and Mendota Historic Districts are within the park.

The parks location in the picturesque Minnesota River Valley enhances its conservational and recreational uses. The heavy vegetation, the marsh areas, and the several lakes make it an ideal wildlife habitat. Accordingly, the Minnesota Department of Natural Resources (DNR) has designated two areas within the park as wildlife sanctuaries. For recreational uses, the park contains an extensive trail system, a swimming area (Snelling Lake), and a large picnic area.

Both the Fort Snelling and Mendota Historic Districts have a number of sites important to Minnesota's History. Among the principal points of interest are old Fort Snelling and the Home of Henry Sibley, Minnesota's first governor (Mendota Historic District).



POLICE DEPARTMENT
HOSPITAL
POST OFFICE
CITY HALL
SCHOOL
CHURCH
FIRE STATION
PUBLIC WORKS
CITY GARAGE

COMMUNITY SERVICES AND SCHOOL DISTRICTS

N

0 2000 4000

INTERSTATE 494

FIGURE 3-3

Metro Sports Complex

The Metro Sports Complex is the scene of professional sporting events the year round. The complex consists of a stadium and an arena. Home of the Minnesota Vikings, Twins, Kicks and North Stars, the complex also hosts other events such as basketball, tennis, circus and ice shows. One of the most important highways leading to the complex is the I-494 beltline route. No other major east-west highways lead to the area.

PROPOSED

Two proposals — One, the proposed Minnesota Valley National Wildlife Refuge, and the second, the Minnesota Zoological Gardens, presently under construction — will be important to the region, state, and possibly the nearby cities in the surrounding states. The wildlife refuge could consist of about 6,600 acres, located in 4 units. The first unit would be just south of the proposed I-494 crossing through the river valley (The other three would be farther southwest). Preserved for its wildlife and aesthetic resources, the refuge would be for educational, recreational, and conservational purposes.

The Zoological Garden, located just south of Eagan will total about 460 acres. Designed for year-round use, the Zoo is scheduled to open in 1978. It will be the largest facility of its kind in the upper midwest. A 700-acre park will adjoin the zoo on the east.

MISSISSIPPI RIVER CORRIDOR CRITICAL AREA

In 1976, the Minnesota State Legislature designated the Mississippi River Corridor a Critical Area. Development within the corridor must take place in an environmentally sensitive manner and be consistent with certain predetermined uses. The Minnesota Environmental Quality Council (MEQC) is responsible for administering interim development regulations until the individual communities have approved the Mississippi River Corridor plans.

Two sections of proposed I-494 fall within the critical area: The section that extends through the flood plain adjoining the Minnesota River, and the section that extends from Concord St. to the Mississippi River Bridge in So St Paul The project appears to be consistent with the interim development regulations that pertain to an urban open space (near the Minnesota River) and urban diversified district (in So St Paul). The MEQC's Critical Area Staff will review the project to ensure that it conforms with the regulations.

FORT SNELLING HISTORIC DISTRICT
MISSISSIPPI
RIVER
Nature Center
PIKE ISLAND
Boat Ramp
FORT
MENDOTA HISTORIC DISTRICT
HIGHWAY 5
AIRPORT
Beach
SNELLING LAKE
Pioneer Camp
HIGHWAY 55
SNELLING
Boat Ramp
Wildlife Sanctuary
Park Entrance
STATE
Overlook
SLATER'S LAKE
PROPOSED I-494
PARK
GUN CLUB LAKE
MINNESOTA
RIVER
13
0
2000
N

FIGURE 3-4

LAND USE PLANNING

SECTION IV LAND USE PLANNING

INTRODUCTION

REGIONAL COMPREHENSIVE PLANNING

The Metropolitan Council (MC) of the Twin Cities is responsible for the control of growth on the metropolitan level. In an effort to guide the local units of government on decisions effecting metropolitan systems and regional development, the MC has prepared a development guide. Called the Metropolitan Council Development Guide, it deals with most all aspects of development and related problems — sewers, transportation, open space and parks, criminal studies, housing, development framework, and others.

DEVELOPMENT FRAMEWORK CHAPTER

The chapter on Development Framework defines the concept of Metropolitan Urban Service Area (MUSA). The MUSA line (Fig 6-1, p 69) outlines that portion of the Metropolitan Area in which government agencies should support urban development and/or redevelopment. The Metropolitan Council's long-range planning indicates that expansion of the Urban Service Limit should involve the following areas:

Existing Urban Service Area — this portion of the Metropolitan Area has metropolitan sewer service available, has good highway access, transit service, and most municipal services. Development and redevelopment in the well-serviced areas are of high priority.

Additions to the Urban Service Area, 1975-1980 — these areas are planned to receive metropolitan system improvements, particularly transportation and sewer service, during the latter half of the decade.

Additions to the Urban Service Area, 1980-1990 — these areas are contiguous to the built-up area and are the next logical place for urban development to take place. They will require investment in metropolitan sewer and transit service and highway facilities as well as substantial investments in municipal and school district facilities and services.

Freestanding Growth Centers — these are small cities that have been designated as growth centers so that metropolitan investments can be concentrated in a limited number of rural centers. These small cities can absorb urban growth and offer an alternative to living in large cities, suburbs, or scattered housing tracts in rural areas.

Proposed I-494

The I-494 project area lies well within the MUSA line. Of those areas close to the central business districts of Minneapolis and St. Paul, the project area is one of the least developed. Many developers cite the inadequate transportation system as a major reason for the slow growth. Proposed I-494 is one of several highway projects in the area designed to help improve the transportation system (see Other Highway Construction , p 19). The MC has endorsed the completion of I-494 as being consistent with comprehensive planning in the Metropolitan area.

Proposed I-494 is a feature of the land use plans of all the cities in the project area. One of the oldest plans — Mendota Height's — dates back to 1959. All the plans show I-494 in the same corridor as in this proposal. The cities indicate a definite correlation between their development plans and proposed I-494 (as well as the remainder of the highways in the Functional Classification System: see p 11). indicating varying degrees of dependence on the highway. Dakota County also shows proposed I-494 in both its comprehensive and thoroughfare plans.

RECENT LAND USE LEGISLATION

LAND PLANNING ACT OF 1974

In 1974, the Minnesota Legislature passed a land-planning act that gave the MC some new authority over development in the Metropolitan area. Called the Land Planning Act of 1974, it requires each municipality to comply with the MC's guideline for development, open space, parks, sewers, and transportation (including airports and highways). Under the terms of the law, the MC had until 1 July 1977 to prepare, adopt, and transmit the plans to the local units of government. These have until 1980 to update existing land use plans or prepare new ones.

The Land Planning Act requires each municipality in the seven-county area to designate in its land use plan the existing and proposed location, intensity and extent of use of land and water for agricultural, residential, commercial, and other public and private uses. In addition, there must be a housing element that contains standards, plans, and programs to meet existing and projected local and regional housing needs. The housing element must include official controls and planning to promote the availability of land for the development of low and moderate income housing. Some of the project area municipalities, such as Mendota Heights, are currently in the process of updating their comprehensive land use planning maps.

EXISTING AND PROPOSED LAND USE

EXISTING LAND USE

The predominant land use along the proposed interstate 494 route through the project area is industrial and to a lesser extent commercial (Fig 4-1). The exception to this is in Sunfish Lake, which is residential throughout. The largest industrial areas are in Bloomington, Eagan, and South St. Paul. By comparison, Mendota Heights and Inver Grove Heights have only a small amount of industrial development at present. The individual industries in Mendota Heights are farily large, however.

Bloomington Airport

East Bloomington is principally an industrial and business area, consisting of a number of office parks. The concentration of companies here makes this the third largest business district in the region, behind the CBD's of Minneapolis and St. Paul. In this area also is the Metropolitan Stadium and the Metropolitan Sport Center, hosts to professional teams from most all the major league sports. Surrounding the sports complex are numerous commercial establishments — hotels, motels, eating and drinking establishments. Just north and east of the complex, adjoining a section of proposed Interstate 494 and Trunk Highway 5, is the Minneapolis-St. Paul International Airport — Wold Chamberlain field — the largest airport in the upper midwest. The 3,000-acre airport employs about 16,000 people.

Eagan

Eagan has a large industrial park in the northern section of the city, near the proposed Interstate 494 and Interstate 35E interchange. This industrial park has about 47 major companies. Most of the park's growth occurred from 1966 to 1970, during which time it expanded from 460 acres to 1240. South in Eagan, near Trunk Highway 13 and Cedar Avenue is another industrial area. Most of Eagan's commercial facilities are in this area also.

South St Paul

Most of the industrial and commercial development in So St Paul is located along Concord Street, a north-south street that interchanges within the section of inplace Interstate 494 proposed for reconstruction just west of the river crossing. Several major industries are located here, including the stockyards, and its associated industries. The stockyards, largest in the upper midwest, is the terminal market point for 20 states, handling about 3,000,000 head of livestock annually.

PROPOSED LAND USE

Bloomington

Airport

Figure 4-2 is a composite of the proposed land use plans of the cities in the project area. Several of the cities show increased industrial and commercial development. Bloomington's eastern area, that portion of the city in the vicinity of proposed I-494, will experience only moderate growth. This will occur in an area of undeveloped land just south of proposed I-494 and east of the sports complex. Zoned industrial, the land is the planned site for Apple Tree Square, an office complex. Construction of the complex is presently underway. When complete, the complex will have office space, commercial facilities, and residential units.

The Metropolitan Airports Commission plans major expansion of their present handling capacity at the Minneapolis-St. Paul International Airport. An important element of the planned expansion is completion of area freeways including I-494 and its interchange with TH 5. Projections indicate that the expansion will result in about 100,000 cars at the airport daily. (In 1974, daily activities resulted in 29,080 cars daily.)*

Eagan

Eagan's proposed land use plan includes the major diversified center and the industrial park near the proposed I-494 and I-35E interchange. The diversified center will have a variety of stores and offices and medical, institutional and recreational facilities. Also, the center might have residential units. Eagan's proposed land-use plan also allows full development of the Eagandale industrial park, located in the vicinity of the proposed diversified center. Presently, 1240 of the 2700 acres are developed.

South St. Paul
Mendota Heights
Inver Grove Heights
Sunfish Lake

South St. Paul is a well established city and is near the saturation point in its development. It does plan significant changes in its commercial district along Concord Street a north-south street which interchanges with inplace I-494. Also, it plans extensive redevelopment in the industrial area near inplace I-494. Most of the development in Inver Grove Heights and Mendota Heights will continue to be residential although both cities plan limited industrial expansion. Most of Mendota Heights' industrial expansion will occur just north of proposed I-494 near County Road 31 (Pilot Knob Road). Sunfish Lakes' Land Use Plan calls for continued residential usage.

* From the Summary Report for Minneapolis-St Paul International Airport Master Plan Study, Minneapolis-St Paul Metropolitan Airports Commission, August 1976.

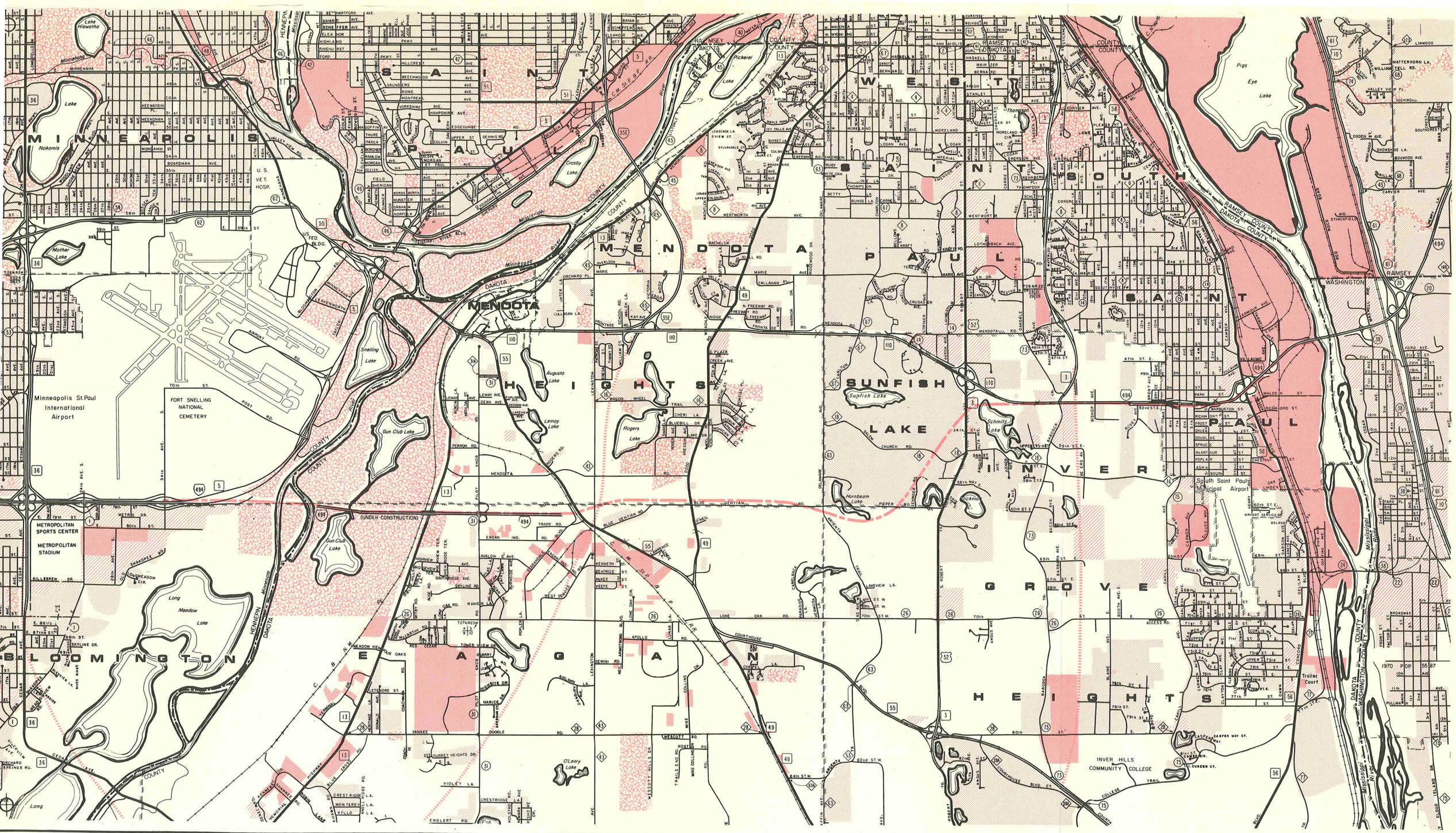
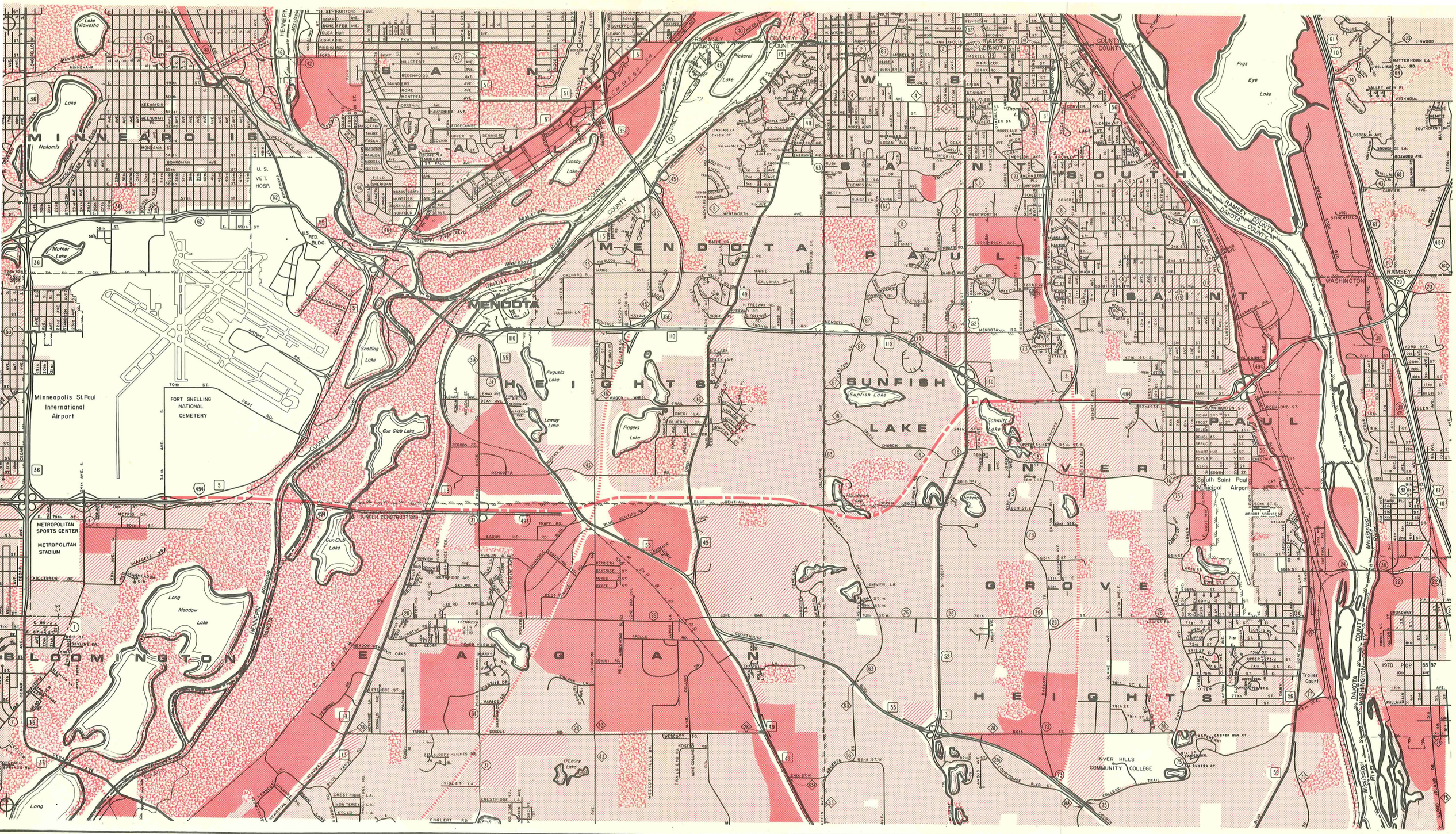

MINNEAPOLIS
SAINT PAUL
WEST SAINT PAUL
SOUTH SAINT PAUL
MENDOTA
MENDOTA HEIGHTS
EAGAN
SUNFISH LAKE
INVER GROVE HEIGHTS
BLOOMINGTON
Minneapolis St.Paul International Airport
FORT SNELLING NATIONAL CEMETERY
METROPOLITAN SPORTS CENTER
METROPOLITAN STADIUM
U. S. VET. HOSP.
U.S. FED. BLDG.
South Saint Paul Municipal Airport
INVER HILLS COMMUNITY COLLEGE
Troiler Court
1970 POP. 55 87
(UNDER CONSTRUCTION)
Minnesota River
Mississippi River
Lake Hiawatha
Lake Nokomis
Mother Lake
Snelling Lake
Gun Club Lake
Long Meadow Lake
Crosby Lake
Pickerel Lake
Augusta Lake
Lemay Lake
Rogers Lake
Hornbeam Lake
Schmitt Lake
Sunfish Lake
O'Leary Lake
Pigs Eye Lake
RESIDENTIAL
COMMERCIAL
INDUSTRIAL
OPEN SPACE
EXISTING LAND USE
N
0
2000
4000
INTERSTATE
494

FIGURE 4-1



RESIDENTIAL
COMMERCIAL
INDUSTRIAL
OPEN SPACE

PROPOSED LAND USE

N

0 2000 4000

INTERSTATE 494

FIGURE 4-2

ALTERNATES

Introduction

Alternate A
(Historical Alternate)

The Preferred Corridor
(Design Alternates B 1, B 2, And B 3)

The No Build

SECTION V ALTERNATES

INTRODUCTION

A proposed corridor location for I-494 was first documented in 1955 as part of an Interstate Study which the Bureau of Public Roads[1] conducted. The study, titled "General Locations of National System of Interstate Highways," suggested locations for the interstates. (The suggestions were not intended to be binding on the states and communities and were merely general concepts.) In this study, proposed I-494 through the project area followed the corridor shown as A in Fig 5-1. Shortly after this study, a study which a consultant firm conducted for the DH placed the corridor in the location shown as B in Fig 5-1.[2] The public hearing of December 12, 1956, reviewed the latter location.

The DH presented corridors A and B and another corridor, C, at a public hearing on August 12, 1958. Subsequently at the request of the local communities, the DH made additional corridor and design studies, continuing through two more public hearings — on November 3, 1963, and December 3, 1970. From these, the DH developed the corridor location shown as the Preferred Corridor in Fig 5-1.

The alignment for the Preferred Corridor ran close to that of B and C, with some changes. One change was a shift in the alignment to avoid Hornbeam Lake in the City of Sunfish Lake; another was a shift to reduce the encroachment on Schmidt Lake in Inver Grove Heights. Also, the Preferred Corridor followed the boundary line between Mendota Heights and Eagan. From 24th Av in Bloomington to the vicinity of TH 55, the location remained the same as in the earlier corrdor locations considered.

The communities and agencies involved were satisfied with these changes, and eventually all the communities approved the Preferred Corridor.[3] The DH proceeded to purchase R/W, and the communities developed their comprehensive plans based on this location for I-494.

Following in this section is a discussion of Alt A, the Historical Alternate, and the design alternates within the Preferred Corridor — Alt B1, B2, and B3. Included also is a discussion of the No-Build Alternate.

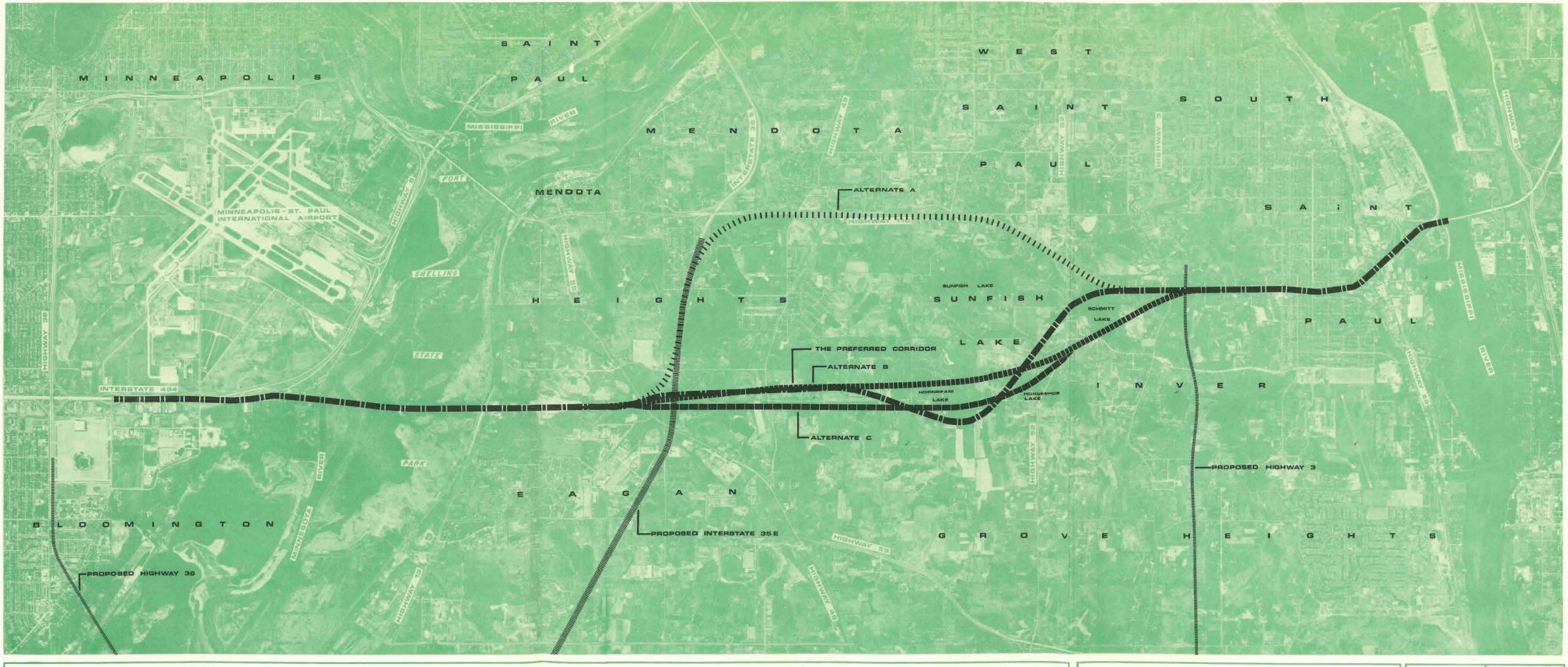
ALT A (HISTORICAL ALTERNATE)

Alternate A is presented here as a historical alternate because it was the first corridor location considered for I-494 and the possibility of locating I-494 along this corridor has been discussed in meetings occasionally through the years.

[1] Now Federal Highway Administration

[2] O. L. Kipp, "Interstate Route Location in St Paul and Minneapolis Metropolitan Area," (Consultant Report, 1956).

[3] Sunfish Lake, in a letter to the DH (September 29, 1972), withdrew its support of the Preferred Corridor, after having approved it at the December 3, 1970, public hearing.



CORRIDORS CONSIDERED

N

0 1000 2000

INTERSTATE 494

FIGURE 5-1

From 34th Av in Bloomington to TH 55 in Eagan, Alt. A follows the same corridor as the Preferred Corridor, (see Fig 5-1, p 51). Then, swinging north, it runs alongside proposed I-35E to TH 110. From the interchange of I-35E and TH 110, Alt A follows inplace TH 110 eastward to 7th Av in So St Paul, where reconstruction of inplace I-494 will begin.

The design for proposed I-494 within the Alt A corridor would include the bridge over the Minnesota River and interchanges at 34th Av, Th 5, CSAH[4] 31, proposed I-35E, and TH's 49, 52, 3, and 56 (Concord St.).

Alt A requires less total acres than the design alternates within the Preferred Corridor. Total acres under Alt A would be 700 as compared to 1594 under Alts B1 and B2 and 1340 under B3. This means that about 287 remaining acres would have to be acquired under Alt A[5]; under Alts B1 and B2, 694 remaining acres would have to be acquired; under Alt B3, about 440 acres.

ADVANTAGES OF ALT A

Placing proposed I-494 on the Alt A corridor would have the following advantages:

(1) Alt A would require less undeveloped land. The undeveloped land which the preferred corridor requires would be left in its natural state until some other form of development uses it. This would mean that the unused land would continue to provide vegetation, water and other resources for wildlife and human enjoyment. Also, with a large part of the Alt A corridor being on existing alignment (TH 110) the visual intrusion is not as great.

(2) Although Alt A takes 7 more commercial businesses and industries than the alternates in the preferred corridor, it takes 26 fewer residences and farmsteads.

[4] County State Aid Highway

[5] 412 acres have been acquired already. A large part of this is along the western part of the proposed route where Alts A, B1, B2 and B3 have a common location.

DISADVANTAGES OF ALT A

Alt A has the following disadvantages:

(1) Alt A would create several negative economic impacts in Mendota Heights. Running I-494 adjacent to I-35E and along TH 110 through Mendota Heights would remove a large amount of the City's residential and commercial properties. In addition, land from one developed and one undeveloped city park would be required as well as land and an estimated six greens from the Mendakota Country Club.

(2) The section of Alt A along TH 110 would be counter to the comprehensive plans of Mendota Heights, West St. Paul, and Sunfish Lake. TH 110 functions as a major thoroughfare for these communities, collecting local traffic from existing north-south routes. The local streets which Mendota Heights proposes will place an even heavier dependence on TH 110 as a local-access thoroughfare.

Upgrading TH 110 in Mendota Heights to freeway standards would force the city to change its pattern of development. For one thing, the city would have to make some major changes in its existing and proposed street system and create new access routes. Also, a freeway along TH 110 would mean that all through traffic would remain on this route in addition to local traffic. From 10 to 12 lanes would be needed to accommodate the projected volumes.

(3) Traffic associated impacts would be much greater if TH 110 were to carry I-494 traffic because of the different functions the two routes serve. TH 110 carries short trips and provides local access (now 6.1 access points per mile). Upgraded to a freeway for I-494, it would have one access per mile and would carry longer trips at higher speeds. This change in function would be contrary to the Functional Classification Plan the Metro Council has developed (see FCP, p 11).

(4) Alternate A would adversely affect the existing and proposed development in Eagan. This corridor wouldn't provide good access to the industrial parks of Eagan.

Because the disadvantages seem to outweigh the advantages, Alt A has been the least favored of the corridor locations considered through the years. Most all local and regional planning has centered around the preferred corridor.

Thus, because of the present development patterns, the planned land uses, and the strong historical commitment to the Preferred Corridor, Alternate A should be dismissed from further consideration.

THE PREFERRED CORRIDOR — ALTS B1, B2, AND B3

INTRODUCTION

This proposal considers three design alternates within the Preferred Corridor — Alts B1, B2, and B3. Figures 5-2 and 5-3, pages 57 and 59 show the designs for Alts B1 and B2. The Alt B3 design will be similar to that for Alt B2 except that it won't contain any provisions for a future relocation of TH 55 in the project area. All alternates—including the No-Build — will be given equal consideration and a selection won't be made until after the circulation of the DEIS and the Location-Design Public Hearing.

Similarities in the designs are as follows —

— Each Alternate has a basic 6-lane construction of I-494.

— Each proposes the same improvements on inplace TH 55, TH's 5 and 49, and inplace I-494 in So St Paul.

— Each has the same limits of construction on proposed I-494, TH's 55 (inplace), 5, 49, and inplace I-494 in So St Paul. (See Description of Project, p 18 , for the termini on these highways).

Basic differences between the alternates are as follows —

— Alt B1 includes a relocated section of TH 55. The inplace section of TH 55 would be improved for local access. It would, however, carry a different numerical designation and become a county or municipal road.

— Alt B2 is in essence a long term staging of Alt B1. Initially, I-494 would be constructed, along with the improvements on TH's 55 (inplace), 49, and 5, and inplace I-494 in So St Paul. The relocated section of TH 55 wouldn't be constructed initially, but the design of the I-35E and I-494 interchange would have provisions for its construction at a later date. Also, the right-of-way necessary for its construction would be purchased. By doing this, when the development planned for the project area materializes and relocated TH 55 is needed, it can be added without causing new social or economic disruptions. If for any reason full development doesn't materialize, and the relocated section of TH 55 isn't needed later, the unused land could be returned to the local municipalities or to private ownership.

— Alt B3 excludes relocated TH 55 and any provision for its future construction. As previously stated, the design for this alternate would be about the same as in Alternate B2, except that Alt B3 would take less right of way.

FUNCTIONAL ASPECTS

Interstates 494 and 35E will provide high levels of mobility through the project area to all parts of the metro area and beyond. They won't provide direct land access to the existing and planned industrial and commercial development in the project area, however. Trunk Highway 55 and a short stretch of TH 49 must provide the access to this development.

Alt B1

Under Alt B1, entry from the interstates into the industrial parks or to the proposed major diversified center, in the vicinity of the proposed I-494 and I-35E interchange, would be via relocated TH 55 to TH 49 or via relocated TH 55 to Lone Oak Road. Movement between the interstates and inplace TH 55 would also be via the relocated section of TH 55 and TH 49. Alternate B1 would also have the indirect access routes to the development and inplace TH 55 described in the discussion on Alts B2 and B3.

The relocated section of TH 55 departs from the Metropolitan Council (MC) 1990 Metropolitan Highway System Plan. The MC's plan doesn't consider any relocation of this section of TH 55; however, on the basis of the most recent traffic study for I-494,[6] the DH feels that the corridor TH 55 serves will eventually carry a high volume of traffic and that Relocated TH 55 will be needed to complement existing TH 55 when the area develops. Relocated TH 55 would provide access to the major traffic generators and provide a through traffic bypass around the congestion caused by local traffic and multiple direct access points on existing TH 55. (See Appendix, for year 2000 traffic estimates with and without the relocated section of TH 55).

The relocated section of TH 55 would be functionally classified as an intermediate arterial since it would be constructed as a freeway with grade separations, would provide access to major traffic generators, and would interchange with principal arterial highways. Existing TH 55, a minor arterial, would provide limited direct access to development.

Alt B2 and B3

Under Alts B2 (in its initial stages) and B3, traffic movements from the interstates to inplace TH 55 and access to the development near the proposed I-494 and I-35E interchange would be via three indirect routes. Access points for two of these routes would be at Pilot Knob Road (from I-494) and at Lone Oak Road (from I-35E). The third route would be via access points at TH 49, from I-494.

Alternates B2 (in its initial stages) and B3 are more consistent with the MC plans than Alternate B1, because they don't require relocating the section of TH 55.

6 System Planning and Analysis Report M-180 (Comprehensive Traffic Report), Mn DOT, Division of Highways, Metropolitan Planning Unit, Central Office, St Paul, Mn, 7 January 1977.

MINNEAPOLIS - ST. PAUL INTERNATIONAL AIRPORT
MISSISSIPPI RIVER
FORT SNELLING STATE PARK
MINNEHAHA CREEK
INTERSTATE 494
HIGHWAY 5
PROPOSED INTERSTATE 494
HIGHWAY 13
24th AVE.
34th AVE.
CEAH 31
LEXINGTON RD.
MENDOTA HEIGHTS RD
PROPOSED INTERSTATE 494
DELAWARE AVE.
BLUE GENTIAN RD
HIGHWAY 49
PROPOSED INTERSTATE 35E
HIGHWAY 55
PROPOSED HIGHWAY 55
LONE OAK ROAD
70th ST. W.
PILOT KNOB RD
YANKEE DOODLE RD.
ARGENTA
HIGHWAY 110
HIGHWAY 52
SALEM CHURCH RD.
OAKDALE AVE.
PROPOSED HIGHWAY 3
HIGHWAY 56
PROPOSED INTERSTATE 494
HIGHWAY 35
HIGHWAY 77
HIGHWAY 61
HIGHWAY 36
HIGHWAY 95
HIGHWAY 96
HIGHWAY 10
HIGHWAY 8
HIGHWAY 65
HIGHWAY 47
HIGHWAY 169
HIGHWAY 100
HIGHWAY 12
HIGHWAY 394
HIGHWAY 494
HIGHWAY 212
HIGHWAY 18
HIGHWAY 169

ALTERNATE B2

N

INTERSTATE 494

FIGURE 5-3

COMMENTS ON IMPACTS

Direct

The discussion on the probable impacts of the proposed improvements in Section VI is based primarily on Alts B1 and B2, since Alt B1 would have the greatest impact on the area and Alt B2 — when upgraded to include TH 55 — would eventually have the same impact as Alt B1. If Alt B2 is selected but the construction of TH 55 never occurs, then the impact on vegetation and wildlife will be less due to less highway construction.

Alternate B3 would have less of an impact on vegetation and wildlife and would require less right-of-way because no provisions would be made for relocating the section of TH 55.

Secondary

More development might occur in the vicinity of the proposed I-494 and I-35E interchange under Alt B1 than under Alts B2 (in its initial stage) and B3, mainly because of the additional traffic movements that Alt B1 would allow in this area. Alternates B2 and B3, because they allow less movement, might restrict development until means of accommodating additional traffic were developed.

4 (F) AND 6 (F) INVOLVEMENT

All of the build alternates for I-494 would require land for a pond and drainage ditch in Fort Snelling State Park, located in the Minnesota River Valley just south of St. Paul and Minneapolis, Mn. The proposed pond and drainage ditch will constitute a 4(f) and LAWCON 6(f) involvement. (A 4(f) involvement occurs when a project requires the use of any land from a historic site or publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance. A 6(f) involvement occurs when the impacted area has used Land and Water Conservation funds — LAWCON — in its development as is the case in Fort Snelling State Park).

Designed to serve as a sedimentation basin, the proposed pond is one of many that the DH's Hydraulic Section developed as part of a drainage plan for proposed I-494. (Ponds serving other drainage areas are located elsewhere along the proposed route). The Minnesota Department of Natural Resources (DNR), the jurisdictional agency for Fort Snelling State Park, may also use the pond for the runoff from the trail center and parking lot, which it plans to construct in the park, just south of proposed I-494 and east of the Minnesota River.

Proposed I-494 will pass between sections of the park on land which the DH acquired in 1966 in a joint acquisition with the Minnesota Department of Conservation[7] (see Section 1, Joint Planning, p15). Of the 465 acres acquired, the DH retained 16 acres — enough for the I-494 crossing. The DH didn't retain the land needed for the proposed pond and ditch because preliminary design plans weren't sufficiently developed at the time of the joint acquisitions. Thus, drainage and other detailed construction requirements weren't known.

An alignment change to avoid the park isn't feasible and prudent because the park stretches nearly 4.7 miles north to south and proposed I-494 will cross it at about the central section.

(See the Preliminary 4(f) Document accompanying this DEIS).

[7] Now the Minnesota Department of Natural Resources.

THE NO-BUILD ALTERNATE

Adopting the No-Build Alternate would mean not constructing the proposed section of I-494. This doesn't mean that other proposed highway improvements wouldn't be made in the vicinity. Also, minor safety and capacity improvements might be made to existing highways such as TH 110. These could include (but would not be limited to) the addition of turning lanes, traffic signals, frontage roads, new surfaces and improved shoulders.

Deficiencies on the area highways would still exist because these improvements would not satisfy the traffic demands of this corridor which indicate the need for a 6-lane freeway. (Section 1, Deficiencies on Project Area Highways, Future Conditions, discusses the probable future conditions of the No-Build Alternate.)

PROBABLE IMPACTS

Introduction

Impacts Of The Proposed Action

Impacts Of The No Build

SECTION VI PROBABLE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

INTRODUCTION

Prior to and during the preparation of this report, specialists from the DH gathered and evaluated data on the natural, cultural, and economic resources in the project area and in the Metropolitan region. These were specialists from soils, geology, hydraulics, landscape architecture, forestry, wildlife biology, economics, and transportation. The data which the specialists gathered has been compiled into a number of sub-reports (a list of reports used follows each section in the division titled "References"). These reports served as bases for the following discussion of the impacts which would most likely result from the No-Build Alternate and from the implementation of this proposal. The discussion appears in the following two sections:

Probable Impacts of the Proposed Improvements
Probable Impacts of the No-Build

PROBABLE IMPACTS OF THE PROPOSED IMPROVEMENTS

This section discusses the probable secondary and direct impacts of the proposed improvements on the project area (and the Metropolitan Area as a whole). Divisions and Sub-Divisions are as follows:

SECONDARY IMPACTS

Existing Development
Land Use
Resources
Traffic
Community Services
Residential Areas
Central Business Districts

DIRECT IMPACTS

Social and Economic
Air and Noise
Open Space and Natural Features
Impact on Flood Plain and Flood Hazard Evaluation
Water Quality (Wetland Impacts)
Construction Impacts

SECONDARY IMPACTS [1]

INTRODUCTION

Several considerations are important in assessing the secondary impacts of I-494:

(1) One is the importance the project area cities place on completing the Functional Classification Plan (FCP - See p 11). The cities in the project area consider the entire system important to development in the area, although one highway may mean more to a particular city than another.

(2) Another important consideration is the method which the Metropolitan Council (MC) and local municipalities used to make employment, population, and dwelling unit projections. These projections are predicated on the assumption that the FCP will be completed and that the industrial, commercial, and residential development will occur.

(3) A third consideration is the MUSA[2] designation which the MC has given the project area. This designation means that in its overall regional planning, the MC considers the project area suitable for urban growth and has designated the area to receive public facilities: Highway improvements, water, sewer, and other utilities. The cities in the project area either have these facilities or plan to construct them.

(4) The proposed highway improvements have been planned for since 1958. Most of the cities in the project area have made substantial expenditures of capital in anticipation of their completion, including street, sewer, and water improvements. Also, a number of major developers have built or bought land in the area under the assurance that the proposed highway improvements would be made. (See additional discussion in Impacts Of The No-Build, p 103).

INDUSTRIAL AND COMMERCIAL DEVELOPMENT

Proposed I-494 and the related highway improvements will mean increased industrial, commercial, and residential development for several of the cities in the project area. The principal areas of new development will be in Eagan. Mendota Heights and Inver Grove Heights will also experience a substantial amount of development.

Eagan plans full development of the Eagandale Industrial Park, located in the vicinity of the proposed I-494 and I-35E interchange. Overall, the park contains 2500 acres (1240 acres are developed) and will constitute about 70% of Eagan's industrial development on completion. Eagan also proposes a major diversified center for this area. The multi-use center will occupy about 100 acres. It will contain 1.6 million sq. ft. of shipping space, 2.0 million sq. ft. of other development (office and shopping space), an 800-bed hospital, and about 2,000 units of apartments.

[1] Page lists the reports that serve as basis for the discussion in this section.

[2] Metropolitan Urban Service Area

According to Eagan, proposed I-494 will generate about 33% of the development planned for this area.[3] It's very likely, however, that some of the development is dependent on the completion of I-35E, proposed to run north-south, through Dakota County. Either way, whether totally or partially dependent on I-494, this development is planned for and considered essential for the economy of the area and region.

Some industrial and commercial development will occur in Mendota Heights and Inver Grove Heights, although it will be much less than that in Eagan. Most of Mendota Heights industrially and commercially zoned land is near the proposed I-494 and I-35E interchange. Several companies are in the area already; most of the land (about 200 acres) is undeveloped, however. Inver Grove Heights has only a small amount of existing and proposed industrial and commercial facilities. This development, although somewhat dependent on proposed I-494, is more dependent on proposed TH 3 and existing TH 56 (Concord St).

INCREASED POPULATION, DWELLING UNITS

The industrial, commercial, and highway development in the project area will cause an increase in the population and in the number of dwelling units. Table 6-1 shows the past, current, and projected population, employment, and dwelling units within a five-mile radius of the Eagandale industrial and commercial area. Although not all the growth will be attributed to development in the Eagandale area, this development will undoubtedly be the major influence. A small percentage of the growth will probably occur through individuals and families migrating to the area from the central areas, independent of the industrial and commercial development.

TABLE 6-1

PAST, CURRENT AND PROJECTED GROWTH
WITHIN FIVE MILES OF EAGANDALE CENTER

YEAR	EMPLOYMENT	DWELLING UNITS	POPULATION
1960	51,107	58,685	203,310
1970	89,014	72,630	230,877
1980	119,754	84,534	268,219
1990	134,594	105,697	304,892
2000	158,429	116,472	352,731

3 From a December 1972, letter from the City of Eagan, on file at the DOT office, Oakdale, Mn.

MAJOR IMPACT ON RESOURCES

New development in the project area (including dwelling units) will mean a major impact on the regions' natural resources: energy, water, and undeveloped land. Energy and water consumption will increase, and new demands will be placed on the sewage disposal system. Because this growth has been planned for, this impact will be much less than in an area where scattered, unguided growth occurs, however. The area's energy needs have already been considered in the overall projected needs for the metro region in the coming decades; the metropolitan sewer system has been extended to the area; and the cities have carefully considered the need for ample open space in the future (for example, Eagan plans to increase its land devoted to open space and recreational use from 2400 to 4500 acres).

INCREASED TRAFFIC

The new development in the project area will mean increased traffic on some of the county highways and local streets. Again, the municipalities have planned for these increases. Mendota Heights has already made substantial street improvements, basing the changes on the expected development and on the proposed highway plan for the region; two Functional Classification Plan changes are underway in So St Paul; Eagan and Inver Grove Heights also propose street changes, also basing them on the proposed development. Dakota County also proposes major changes on a number of county highways in conjunction with the overall development in the project area.

The Mississippi River Bridge in So St Paul will also receive an increase in traffic as a result of new development in the project area (and region). Traffic projections indicate that only a relatively small increase will occur as a direct result of proposed I-494, however. Under either of the design alternates, traffic volumes in the year 2000 would be about 97,000 vehicles per day (see Appendix, Figures A2 and A3). Under the no-build, traffic volumes in the year 2000 would be about 94,000 vehicles per day.

Thus, under either the No-Build or Build alternates, traffic volumes will exceed the capacity of the present 4-lane bridge and construction of a bridge with a larger capacity will be necessary. The local municipalities and the DH are currently studying the possibilities of constructing a new bridge sometime in the 1980's.

IMPACT ON COMMUNITY SERVICES

The new development in the project area and the increased population growth will necessitate new and expanded community services: schools, fire and police departments, and possibly library services. Most all the cities indicate some provisions for these expanded services in their comprehensive plans. With the increased tax base that the new development will bring, such expansions should be accomplished without difficulty. The need for expanded services won't be for sometime yet, however — probably 5 to 10 years after completion of the highway improvements in the area.

One positive benefit of this proposal to community services will be improved access to hospitals for residents in northern Dakota County. Proposed I-494 will provide better access to hospitals in Edina, Minneapolis, and So St Paul.

IMPACT ON CENTRAL DISTRICTS

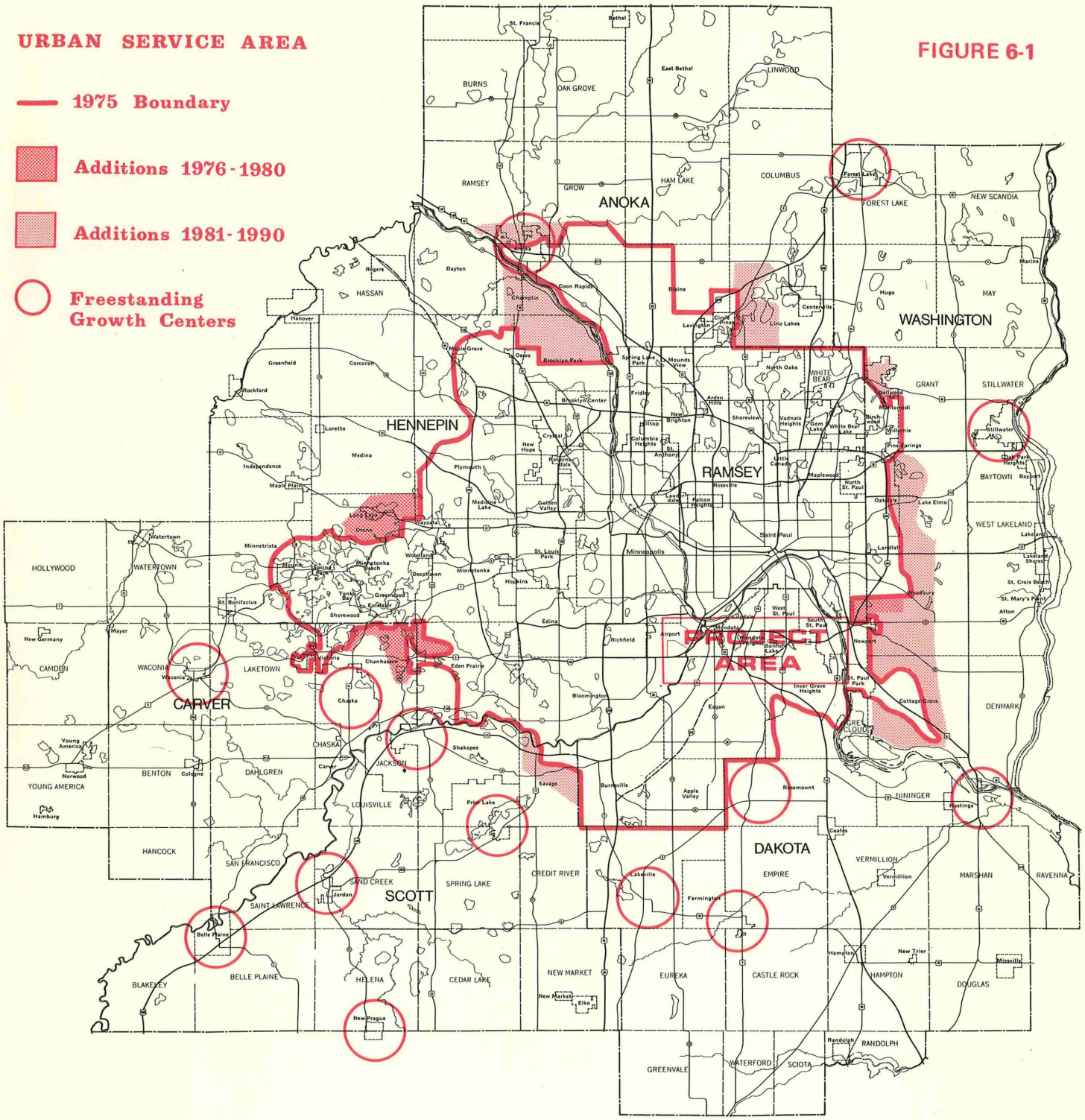
The proposed section of I-494 and the development which it will induce in the project area won't negatively effect the central business districts (CBD's) of downtown St. Paul and Minneapolis. Retail business in the CBD's declined in the 1960's and early 1970's and increased in the outlying areas, principally along the beltline route.[4] the CBD's have begun to reestablish themselves economically, however, this time as parent professional centers, serving as government, finance, insurance, and transportation headquarters, not only for the region but for the whole upper midwest. Also, a number of newly constructed high-density apartment buildings (with others proposed) have established the CBD's as important residential areas.

The planned I-494 route goes through an area which is rapidly becoming urbanized, but which is now partially rural. Thus, the urban sprawl and urban development issue are important to this project, because new major roadways can either be caused by or be a cause of urban sprawl. The concept of an urban service area and a rural service area has been advanced in the current Development Framework Chapter of the Metropolitan Development Guide in attempt to cope with the urban sprawl pattern.

The Metropolitan Council (MC) does have some control over a number of factors effecting development. The MC is using these tools in an attempt to contain growth within a Metropolitan Urban Services Area (MUSA). Figure 6-1 shows the current and future MUSA areas and boundaries.

The proposed section of I-494 is well within MUSA. The MC and the area communities are thus planning for growth to occur in this area. I-494, as a major area transportation facility, will serve the area as a necessary development tool, much as sewers and zoning do.

[4] This decline in the Twin Cities was similar to a nation-wide trend which occurred in the same decade. The decline was less in cities with beltways than in cities without beltways. For actual statistical comparisons, see page of the Northern Dakota County I-494 Economic Report, prepared by the Mn DOT, Division of Highways, Oakdale, Mn.


URBAN SERVICE AREA
1975 Boundary
Additions 1976-1980
Additions 1981-1990
Freestanding Growth Centers
FIGURE 6-1
ANOKA
HENNEPIN
RAMSEY
WASHINGTON
CARVER
SCOTT
DAKOTA
PROJECT AREA
BURNS
OAK GROVE
LINWOOD
RAMSEY
GROW
HAM LAKE
COLUMBUS
FOREST LAKE
NEW SCANDIA
HASSAN
MAY
GRANT
STILLWATER
BAYTOWN
WEST LAKELAND
HOLLYWOOD
WATERTOWN
CAMDEN
WACONIA
LAKETOWN
CHASKA
YOUNG AMERICA
BENTON
DAHLGREN
LOUISVILLE
HANCOCK
SAN FRANCISCO
SAND CREEK
SPRING LAKE
CREDIT RIVER
SAINT LAWRENCE
BELLE PLAINE
BLAKELEY
HELENA
CEDAR LAKE
NEW MARKET
EUREKA
CASTLE ROCK
HAMPTON
DOUGLAS
GREENVALE
WATERFORD
SCIOTA
RANDOLPH
EMPIRE
VERMILLION
MARSHAN
RAVENNA
NININGER
DENMARK
GREY CLOUD

REFERENCES

The Eastern Area Plan, (Bloomington Planning Commission, Bloomington, Mn, October 1972).

Land Use Development Guide, (Eagan Planning Commission, Eagan, Mn, January 1974).

Resource Section, Socio-Economic Unit, Northern Dakota County Socio-Economic Report, (Mn/DOT, Division of Highways, Oakdale, Mn, June 1976).

Resource Section, Transportation Planning Unit, Transportation Planning Report for I-494, (Mn/DOT, Division of Highways, Oakdale, Mn, September 1976).

Metropolitan Council of the Twin Cities Area, Metropolitan Development Guide, (St. Paul, Mn, September 1975).

Comprehensive Plan for Mendota Heights, (Village of Mendota Heights, Mn, October 1959).

Comprehensive Development Plan, (Village Planning Commission, Inver Grove Heights, Mn, 1967).

Sunfish Lake Comprehensive Plan (City of Sunfish Lake, Mn, September 1975).

DIRECT IMPACTS

This section discusses the significant direct (primary) impacts most likely to occur from the implementation of this proposal. The sub-reports used as bases for this discussion are listed on p . Impacts discussed are as fllows:

SOCIAL AND ECONOMIC	FLOOD HAZARD EVALUATION
AIR AND NOISE	WATER QUALITY (WETLAND IMPACTS)
OPEN SPACE AND NATURAL FEATURES	CONSTRUCTION

SOCIAL AND ECONOMIC

Social

Because the proposed highway improvements will be constructed on corridors reserved for the purpose, they will have a minimum of negative impacts on existing development in the project area. Some negative impacts will occur through right-of-way (R/W) acquisitions. Another negative impact may occur as a result of the visual intrusion of the highway. Basically, the primary positive impacts will be increased mobility, reduced distribution costs, and savings in fuel and travel time.

Right of Way

Table 6-2 gives the general tax information for the cities in the project area and I-494's impact on their tax revenue. Initially, the impact of I-494's R/W acquisitions will be negative because the proposed action will take land and buildings off of the cities' tax rolls. Alternates B1 and B2 would remove 1594 acres of land. Alternate B3 would remove approximately 250 acres of land less than Alternates B1 and B2 or approximately 1340 acres (see Table 6-3). All three alternates, B1, B2 and B3 would remove about 52 residences and 4 businesses. The largest losses (dollars) will occur in Eagan, Mendota Heights, and Bloomington. Eventually, new taxes from the planned development will more than compensate for the tax losses sustained through R/W acquisitions.

TABLE 6-2

IMPACTS ON AREA REAL ESTATE TAXES

	TAX BASE BY CITY					
	BLOOMINGTON	EAGAN	MENDOTA HEIGHTS	INVER GROVE HEIGHTS	SUNFISH LAKE	SOUTH ST. PAUL
ASSESSOR'S MARKET VALUE	1,062,662,739.	217,190,930.	87,921,412.	144,952,899.	5,795,603.	179,628,549.
ASSESSED VALUATION	404,379,612.	80,862,765.	32,000,467.	50,609,786.	2,170,859.	63,134,353.
ESTIMATED ASSESSED VALUATION OF RIGHT-OF-WAY	228,126.	560,443.	336,854.	263,636.	25,787.	29,002.
PERCENTAGE OF TOTAL TAX BASE AFFECTED BY RIGHT-OF-WAY	0.1%	0.7%	1.1%	0.5%	1.2%	0.1%

About 900 of the 1594 acres needed for I-494 have been acquired (see Fig 6-2, p 73). Table 6-4 shows the location and type of the remaining 679 acres. Of this total, 593 acres will come from Eagan, Mendota Heights, and Inver Grove Heights.

TABLE 6-3

ESTIMATED RIGHT-OF-WAY REQUIREMENTS FOR ALTERNATES B1 AND B2 (IN ACRES)**

USE	BLOOMINGTON	M.A.C. AND FORT SNELLING*	EAGAN	MENDOTA HEIGHTS	INVER GROVE HEIGHTS	SUNFISH LAKE	SOUTH ST. PAUL	TOTAL	PERCENT OF TOTAL
NEW RIGHT-OF-WAY TO BE PURCHASED	18.41	10.44	257.09	197.16	138.98	49.63	7.38	679.09	42.62
PREVIOUSLY ACQUIRED RIGHT-OF-WAY			164.48	174.95	51.87	20.41		411.71	25.83
PUBLIC ROADS AND STREETS			20.27	13.92	26.51	5.68	1.64	68.02	4.27
PRESENT HIGHWAY RIGHT-OF-WAY	22.75	129.29	22.35	36.72	100.99	16.78	105.81	434.69	27.28
TOTAL	41.16	139.73	464.19	422.75	318.35	92.50	114.83	1593.51	100.00

* Indicates the Airport and Fort Snelling Business District

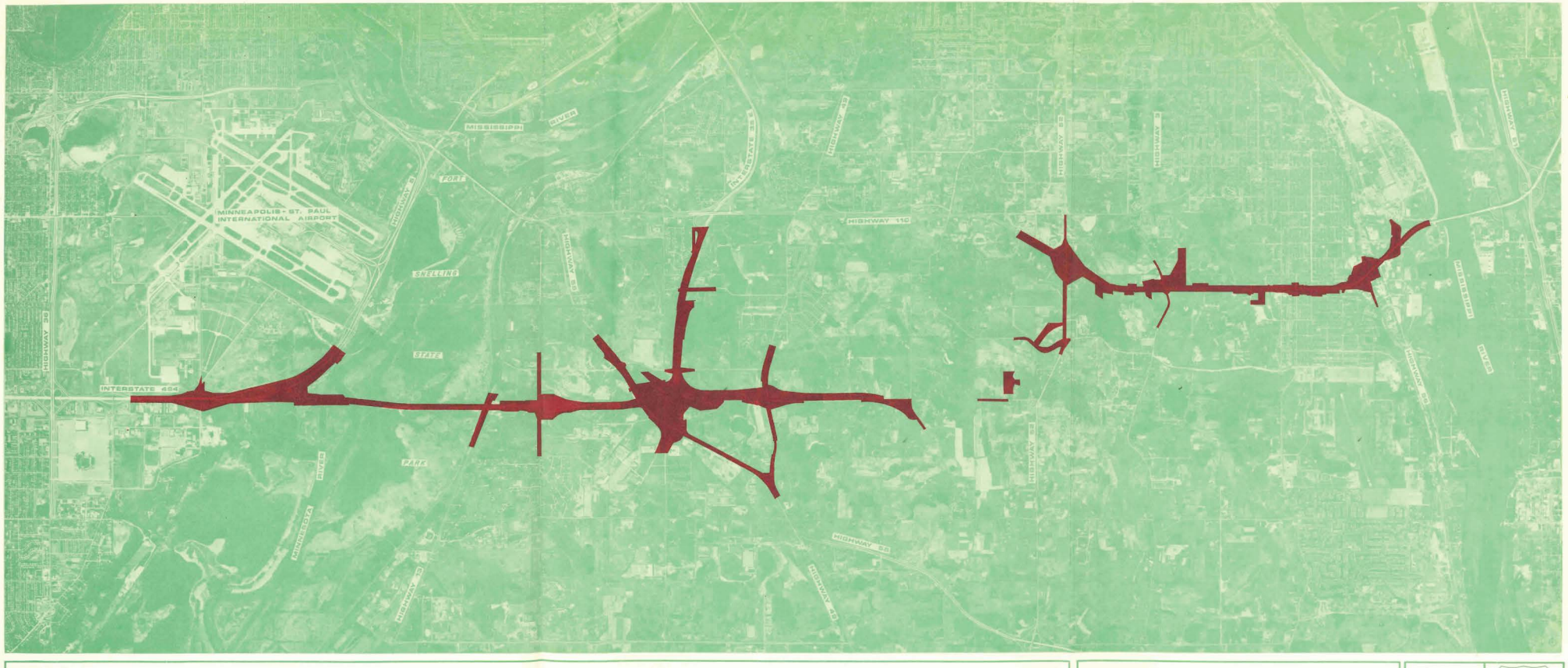
TABLE 6-4

PRESENT LAND USE OF REQUIRED RIGHT-OF-WAY FOR ALTERNATES B1 AND B2 (IN ACRES)**

PRESENT LAND USE	BLOOMINGTON	*M.A.C. AND FORT SNELLING	EAGAN	MENDOTA HEIGHTS	INVER GROVE HEIGHTS	SUNFISH LAKE	SOUTH ST. PAUL	TOTAL	PERCENT OF TOTAL
AGRICULTURE			169.94	123.43	94.09	40.75		428.21	63.06
INDUSTRIAL			44.54	17.15	0.90		5.14	67.73	9.97
COMMERCIAL	7.16		1.37		5.48		0.60	14.61	2.15
RESIDENTIAL	11.25		39.55	30.00	38.36	3.98	1.50	124.64	18.35
TAX EXEMPT		10.44	1.69	26.58	0.15	4.90	0.14	43.90	6.47
TOTAL	18.41	10.44	257.09	197.16	138.98	49.63	7.38	679.09	100.00

* Indicates the Airport and Fort Snelling Business District

** Approximately 250 acres less would be needed for Alternate B3 (120 acres less in Eagan and 130 acres less in Mendota Heights).



STATE OWNED RIGHT-OF-WAY

N

INTERSTATE 494

FIGURE 6-2

Relocation

Because of the availability of homes, rental units, and undeveloped land in the project area, relocation of families and businesses should not be a problem. Table 6-5, lists the homes offered for sale in the project area in April 1976. For comparison, table 6-6 lists the price range of the homes that still must be acquired. This list is representative of available homes during recent years and, in all probability, is indicative of the future market, barring an extreme local or nation-wide cutback in construction.

The DH's (Division of Highway's) District 9 Relocation Office, located at 3485 Hadley Av No, No St Paul, MN, will be responsible for providing the relocation services for this project. Personnel from the Relocation Office will assist the displacees as long as necessary to reestablish them in homes. Relocation benefits will include replacement-housing differential, moving costs, closing costs, interest differential, and appraisers fees, if any.

TABLE 6-5

AVAILABLE HOUSING

PRICE RANGE IN THOUSANDS OF DOLLARS	LOCATION OF AVAILABLE HOUSING					TOTAL
	MENDOTA & DAKOTA CO.	MENDOTA HTS. AND EAGAN	SOUTH ST. PAUL	INVER GROVE HEIGHTS	BLOOMINGTON EAST	
0 to 10	1			1	1	.3
11 to 20			11		1	12
21 to 30			15	10	10	35
31 to 40	9	10	22	9	41	91
41 to 50	24	5	6	7	33	75
51 to 60	14	7	5	2	5	33
61 to 70	9	7	2	1	3	22
71 to 80	5		1	1		7
81 to 90	6	2	1		3	12
91 to 100	4	1		1	1	7
Over 100	7	3	1	1	4	16
TOTAL	79	35	64	33	102	313

* Multiple Listing Service (Data from Dakota County and Minneapolis Board of Realtors)

TABLE 6-6

PRICE RANGE OF HOUSES
TO BE ACQUIRED

PRICE RANGE IN THOUSANDS OF DOLLARS	LOCATION OF HOMES TO BE ACQUIRED						TOTAL
	BLOOMINGTON	EAGAN	MENDOTA HEIGHTS	INVER GROVE HEIGHTS	SUNFISH LAKE	SOUTH ST. PAUL	
0 to 15				1		3	1
15 to 19						3	3
20 to 24		1	2	1	1		8
25 to 29		3	3	3			9
30 to 34			2	4			6
35 to 39		3	2	1			6
40 to 44		4	1				5
45 to 49		4		2			6
50 and above	1	2	4	1			8
TOTALS	1	17	14	13	1	6	52

The Relocation Office will ensure that all persons will be relocated into decent, safe, and sanitary housing within their financial means, without regard to race, color, or national origin. (The proposed action doesn't impact any residential areas of minority or ethnic groups). Listed below are some of the DH's methods of securing housing information:

a. Newspapers
b. Personal contacts with realtors
c. Visual inspection of neighborhoods for privately listed homes
d. Completed city-wide MLS listings
e. Listings of Veteran Administrations and Federal Housing Administration
f. Personal contact with apartment complex managers
g. The Apartment Guide of the Twin Cities

Community Cohesion

None of the construction in this proposal will affect community cohesion. The highway construction will either occur on existing alignment or close to community boundary lines. Thus, the construction won't divide major residential areas, interrupt walk patterns, or separate community service facilities from residential area. Also, most all local street systems will be maintained, although some impedance to travel will occur during the actual construction. Alternate travel routes will be developed, however.

Residential Areas

Most of the residential units along or near the proposed I-494 route are in scattered locations, in small groups. This is because the residential areas weren't built around ethnic groups, shared behavioral patterns, or activity centers such as nearby commercial -business strips. Rather, they were built around physical amenities such as large lots, open space, and greenery.

Generally, this pattern of residential development continues throughout most of Eagan, Mendota Heights, Sunfish Lake, and Inver Grove Heights. Each city has only a limited amount of dense residential development. Bloomington and So. St. Paul have the most dense residential areas of all the project area cities. Only one small area in So. St. Paul will receive any significant impact from I-494, however. This area would still have a noise impact after construction if noise barriers weren't used.

Economic Loss

It's unlikely that homeowners in the project area will suffer economic loss because of the proposed highway improvements, for two reasons. First, the highway improvements occur in largely undeveloped areas. As pointed out in the previous discussion, the only large concentration of homes along any of the routes proposed for improvement is in So. St. Paul, south of inplace I-494. Because the reconstruction here will be along existing alignment with a minimal increase in right-of-way, the proposed improvement should have little or no impact on the value of homes in the area. Elsewhere, the nearest any of the highway improvements come to a group of homes is I-494 near Horseshoe Lake in Sunfish Lake.

The second reason that homeowners in the project area should experience little or no economic loss is the overall attractiveness of the area and the convenience of the location to the rest of the metropolitan region. The open space, greenery, and large lots should continue to keep the property values high. For the most part, the proposed highway improvements will not detract significantly from these natural features. Rather, because they will improve transportation locally and to the rest of the region, the improvements should be an enhancement. (Sunfish Lake makes a similar observation on page 14 of its Comprehensive Plan. It speaks of the boundaries — after the construction of proposed I-494 — as generally being major thoroughfares, giving residents "isolation as well as accessibility...").

Psychological Reactions

Psychological reactions to highways generally occur when strong feelings against the construction of a highway exists in a particular area. The anticipated visual intrusion of the highway or the threat of displacement might bring about psychological reactions. Such reactions may have developed in some residents in the immediate project area as planning for the improvements has progressed.

Proposed I-494 will displace several homes with large properties in Mendota Heights. This displacement occurs in a scenic area, this particular one spanning about a mile. In Sunfish Lake, proposed I-494 passes close to a small group of homes (near Horseshoe Lake). Here, and elsewhere in the general area, residents could possibly be sensitive to the construction of the highway and consider it a definite intrusion.

Little can be done to mitigate the effects of this kind of reaction. Homeowners displaced will receive relocation benefits and fair-market prices for their property. Also, the proposed highway will have noise walls and landscaping where necessary. In all probability, however, these measures will do little to ease some residents' feeling of loss. Residents place a high value on the aesthetic appeal of the area, and some will consider the highway an unwanted intrusion no matter what measures the DH uses to mitigate harm. For residents displaced, the one consolation might be the availability of land in other scenic areas in the immediate project area and throughout much of Dakota County.

Economic Impacts

The imrpovements in this proposal will be beneficial to existing development in the project area. The proposed segment of I-494 will complete the beltline route, eliminating the circuitous route of the TH 5-Mendota Bridge-TH 110 link. This will result in reduced distribution costs to companies in the project area with large shipping and receiving operations. Also, it will mean savings in travel time and fuel for those motorists commuting to work daily along the present route.

About 47% of the respondents to a survey which the DH conducted in the project area * indicated that the completion of I-494 would mean an increase in business for them, mainly because they would be able to save the extra mileage and travel time required to travel the present route. Similarly, the President of the Livestock Market Institute of So St Paul, in an appearance before the Interstate Study Committee, said that the completion of I-494 and I-35E would mean a 30% increase in business for the stockyards (a 550 million dollar a year business).

Motorists commuting to work along the present circuitous route have to spend considerable time in stop and go movements during rush hours and periodically through the day. The eastern approach to the Mendota Bridge where TH's 13, 55, and 110 intersect, is a recurrent problem area. Back-ups at time range from 1 to 2 miles. About 23,500 of the 35,000 daily eastbound vehicular trips across the bridge are motorists traveling from Bloomington and the nearby cities to northern Dakota County. With I-494 complete, these motorists will save considerable money, fuel, and time by taking the proposed I-494 bridge into northern Dakota County.

AIR AND NOISE

Air Analysis

The analysis of the air quality in the project area followed the US Environmental Protection Agency's "Guidelines for Air Quality Maintenance Planning and Analysis, Volume 9: Evaluating Indirect Sources." The only pollutant considered in detail in the analysis is carbon monoxide, mainly because CO is the primary transportation related pollutant in the Minneapolis and St. Paul Air Quality Control Region. Estimated amounts of carbon monoxide (CO) used in the analysis are the totals of the ambient concentrations and the emissions from generated traffic (amounts computed based on the forecasted ADT).

* Resource Section, Socio-Economic Unit, Northern Dakota County Economic Report, (Mn DOT, Division of Highways, Oakdale, Mn, June 1976).

Weather factors in the air analysis were as follows:

a) Wind speed 1 meter per second
b) Wind direction of 10^{o} (angle) to the roadway at each receptor site
c) 8 hour persistence factor of 0.6
d) Stability D

The analysis determined that the maximum CO concentrations at the four receptor sites will be within both the Federal and Minnesota Ambient Air Quality Standards (See Table 6-7 and Fig. 6-3, p 80). Federal Standards allow a maximum of 35 ppm of CO for a one-hour period and 9 ppm for an eight-hour period. State Standards allow 30 ppm for a one-hour period and 9 ppm for an eight-hour period.

TABLE 6-7

CARBON MONOXIDE CONCENTRATIONS
FOR PEAR HOUR AND 8-HOUR PERIOD
(For Alternate B1)**

RECEPTOR	ALTERNATE	1975 & 1976		1980		1985		2000	
		1 hr.	8 hr.	1 hr.	8 hr.	1 hr.	8 hr.	1 hr.	8 hr.
1	Build			3.1	1.4	2.3	1.1	1.9	0.8
	No-Build								
2	Build							1.7	0.6
	No-Build	8.3	3.0	5.0	1.7	4.8	1.4	4.2	1.4
3	Build			3.3	1.4			4.8	0.7
	No-Build	7.4	3.2	3.5	1.3			4.1	0.9
4	Build			6.3	1.6			5.4	1.0
	No-Build								

Note: Interim year air quality predictions aren't provided due to the low levels obtained for the design year (2000) and the need for additional traffic information.

Numbers inside table are PPM.

The DH computations show that the highest CO concentrations will occur at Receptor No. 4, located at 5th Ave. in So. St. Paul. In a one-hour period, the highest concentration will be 6.3 parts per million (ppm); in an eight-hour period, 2.0 ppm. These computed levels depict the concentrations under the worst traffic and weather conditions.

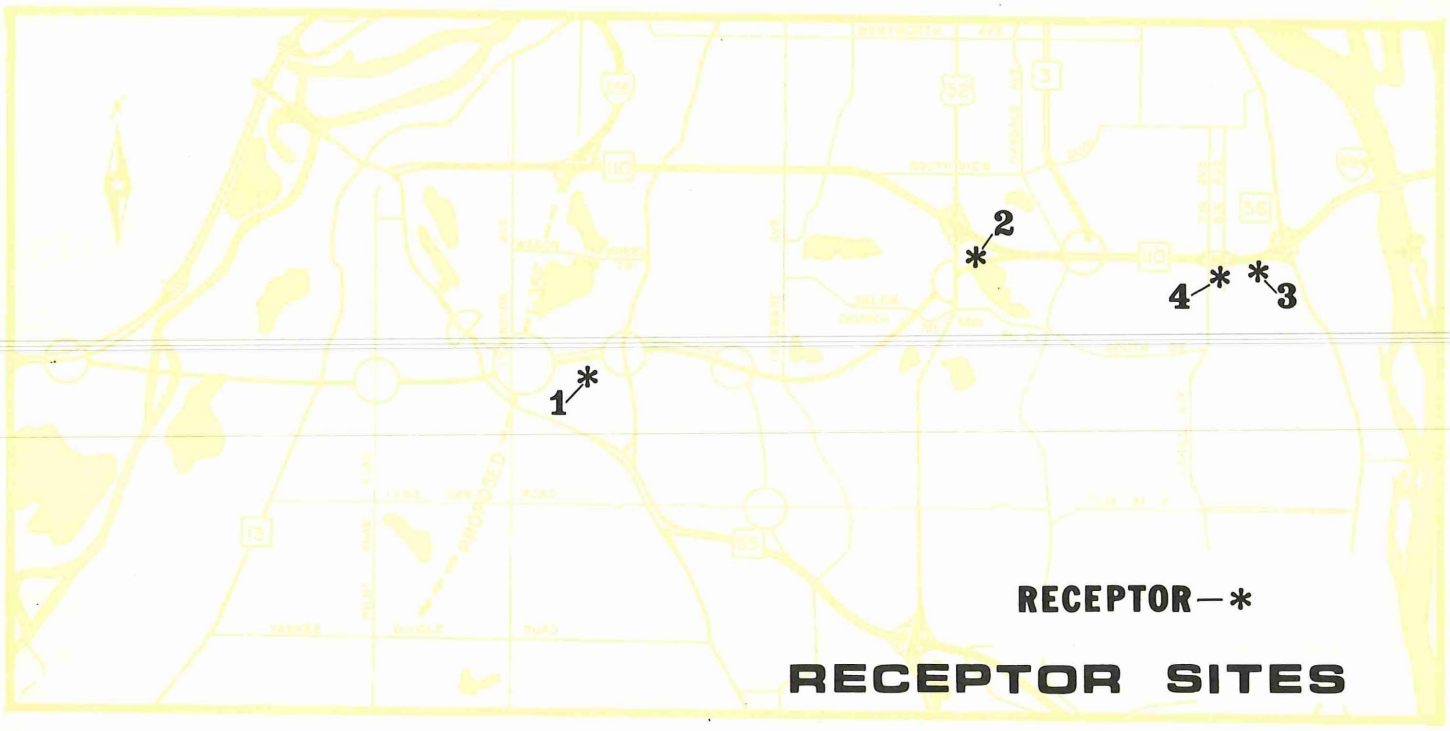
** Alternates B2 and B3 will be less

State Implementation Plan

The proposed action complies with the FHWA Air Quality Guidelines for transportation system planning, both at the state and metropolitan levels. On September 27, 1976, the FHWA approved the Air Quality Report for I-494. On the basis of the air quality study, both the FHWA and the DH considers the proposed action consistent with the State Transportation Plan for air quality.

Locally, the proposed action is part of the overall metropolitan transportation plan as developed by the Metropolitan Council. The FHWA and the Urban Mass Transportation Administration, after consultation with the Minnesota Pollution Control Agency and the Environmental Protection Agency, has certified the planning process for the transportation plan.

FIGURE 6-3



Noise Analysis

Table 6-8, p 81 , summarizes the existing and predicted noise levels at receptor sites along the Preferred Corridor and the other highways proposed for improvement. Fig 6-4, p 82 , shows the land use and location of the sites.

Method Used

Analysts from the DH used field measurements to determine existing noise levels. For future noise levels, they used the year 2000 estimated traffic volumes and the method given for computing noise levels in the National Cooperative Highway Research Program, Reports 117 and 144. Computed noise levels are for the peak traffic hour, 4 to 5 PM — the noisiest traffic hour of the day.

Airport Influence

The Metropolitan Airport Commission's publication "Master Plan for the Minneapolis-St. Paul International Airport" contains present and future noise impacts (from aircraft) on land uses adjacent to portions of the proposed I-494 corridor. The year 1982 is the target date for improved noise conditions resulting from aircraft improvements and changes in approach angles.

One residential area containing three homes is currently impacted by aircraft noise and would be impacted by proposed I-494 (see p 82, Fig 6-4, Noise Impact, Noise Measurement Site 11). Either the Airport Commission or the DH should consider acquiring these properties. Other adjacent land tracts are zoned light industry, which is a compatible land use.

TABLE 6-8

NOISE IMPACTS ON RESIDENCES
BEFORE AND AFTER ABATEMENT

SITE NUMBER	EXISTING NOISE LEVELS	ALTERNATE B1				ALTERNATES B2 & B3			
		PREDICTED NOISE LEVEL WITHOUT ABATEMENT (YEAR 2000)	NUMBER OF RESIDENCES AFFECTED BEFORE ABATEMENT	ABATEMENT POSSIBLE TO OR BELOW L_{10} 70 dBA*	RESIDENCES IMPACTED AFTER ABATEMENT BY A LEVEL GREATER THAN L_{10} 70 dBA	PREDICTED NOISE LEVEL WITHOUT ABATEMENT (YEAR 2000)	NUMBER OF RESIDENCES AFFECTED BEFORE ABATEMENT	ABATEMENT POSSIBLE TO OR BELOW L_{10} 70 dBA*	RESIDENCES IMPACTED AFTER ABATEMENT BY A LEVEL GREATER THAN L_{10} 70 dBA
1	73	76	32	Yes	None	76	32	Yes	0
2	73	76	42	Yes	None	76	42	Yes	0
3	74	77	12	Yes	None	77	12	Yes	0
4	50	73	4	(A)	4 Possible	70	4	(A)	4 Possible
5	65	73	3	(B)	3	73	3	(B)	3
6	50	70	7	(A)	7 Possible	70	7	(A)	7 Possible
7	71	68	0	Not Needed	0	74	9	(B)	9
8	71	71	4	(B)	4	74	4	(B)	4
9	50	74	12	Yes	0	71	12	Yes	0
10	70	73	3	(B)	3	73	11	(B)	11
11	67	73	3	(A) (C)	3	73	3	(A) (C)	3
12	70	73	4	Yes	0	73	4	Yes	0
13	74	77	1	Yes	0	77	1	Yes	0
Totals			127		24		144		41

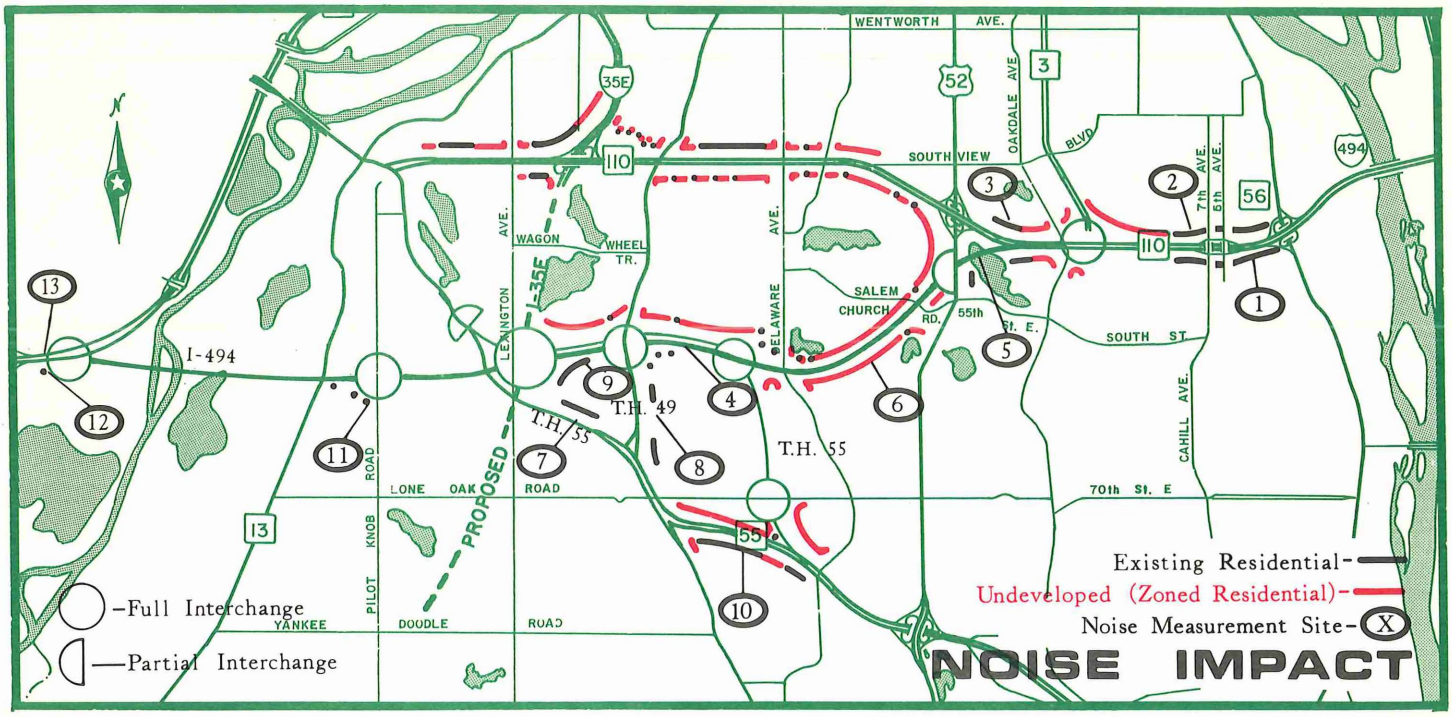
* State Standards: L_{10} 65 dBA

(A) Abatement may be feasible but necessary information is not yet available.

(B) Abatement is not feasible due to uncontrolled access.

(C) Abatement is not feasible due to Airport Noise.

FIGURE 6-4



Noise Impacts

Based on forecasted traffic volumes for the year 2000. future noise levels will exceed the federal guidelines of an L_{10} 70 dBA[5] to 350 feet from the proposed highways median centerline. Under Alt B1, 127 residential uses[6] would be subjected to a noise impact; under Alt B2, 144. Adequate attenuation, to or below the L_{10} 70 dBA noise level, is possible and will be provided at all but 13 residential units under Alt B1 and about 30 under Alt B2 and B3 (See Table 6-8, p 81).

Atl B1 would effect less residential uses than Alt B2 and B3 because inplace TH 55 would have less traffic under Alt B1 (with the relocated section of TH 55) than under Alts B2 and B3 (without the relocated section). This increase in traffic under Alts B2 and B3 would create a noise impact at Noise Measurement Site 13. See Fig 6-4.

Table 6-8 indicates 4 residences at Site 4 and 7 at Site 6 that might possibly have a noise impact. Sites 4 and 6 extend over a 1.5 mile section of I-494 (see Fig 6-4). The residences along this stretch are in scattered locations. The feasibility of providing noise abatement for these isolated locations requires additional detailed study. During this detailed study, consideration will be given to providing

[5] Noise is most commonly measured in a unit called decibels and weighted on the A scale. L_{10} 70 dBA means that the 70 decibel noise level can only be exceeded 10% of the time.

[6] Residential uses include picnic areas, recreation areas, playgrounds, active sports area, certain types of parks, residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.

attenuation through the use of mounding. Noise walls will be added if mounding is determined to be infeasible. Our overall design will attempt to reduce traffic noise levels to an L_{10} 65 dBA. This represents the State daytime standard for residential land use. In some areas it may be necessary to request an exception to Federal or State standards,or both (see Table 6-8).

The DH's Noise Unit is presently preparing overall abatement plans. When complete, these will be presented to local officials and affected residents. Included with the plans will be an assessment for undeveloped lands adjacent to the proposed highway improvements, with recommendations when appropriate. The assessment will include maps depicting future noise levels, for the local officials use in their land-use planning. Coordination with local officials will continue throughout the development of the project. In addition to this measure, project area cities — like all cities, counties, and regional development commissions in Minnesota — have received copies of "The Audible Landscape," a Federal Highway Administration Publication. This handbook provides guidance for land-use planning, plat layout, and building design for compatible development near traffic noise.

Noise from construction activity isn't expected to be a problem. Although some unique receptors (Visitation Academy and Convent and St. Mark's School, for example) are in the immediate project area, none are close enough to be affected by construction noises. The DH will require the contractor to comply with applicable local and State laws and ordinances during construction.

The Environmental Protection Agency (EPA) and the Minnesota Pollution Control Agency (MPCA) were asked to review both Noise and Air Quality Reports for I-494. The EPA responded to both reports,stating that "Based on these two reports, we do not anticipate any adverse environmental impacts regarding air quality and noise." The MPCA responded only to the Air Quality Report stating that "this project is not inconsistent with the State Implementation Plan."

OPEN SPACE AND NATURAL FEATURES

Positive Impacts

The proposed highway project will have a positive impact on Open Space and a negative impact on natural features in the project area. The positive impact will be the improved access to Fort Snelling State Park and to the proposed Minnesota Zoological Garden. Negative impacts will occur in the Minnesota River Valley flood plain and east in Dakota County, and on Schmidt Lake.

Proposed I-494 will be beneficial to both Fort Snelling State Park and the Minnesota Zoological Garden. When complete, it will provide a direct route to the park for a large number of residents in the Metro Region. According to park officials about 754,000 people visited the park in 1974. Park Officials estimate that attendance at the park in 1980 will be about 2,000,000.

The main route for the visitors from the suburbs east, southeast, and northeast of St. Paul will be the I-494 and I-694 beltline. Without the proposed link of I-494, this traffic will have to take the existing route along TH 110, the Mendota Bridge, and TH 5. Avoiding this route will not only benefit these motorists through savings in time and fuel, but it will also help to lessen traffic congestion along the route.

The Minnesota Zoological Garden, scheduled for opening in 1978, will also benefit from proposed I-494. About 60% of the projected annual visitors to the Zoo will come from the Minneapolis-St. Paul Area. The majority of the visitors from St. Paul will get to the Zoo via proposed I-35E through Eagan. Again, as with the visitors to Fort Snelling State Park, visitors from the suburbs east, southeast, and northeast of St. Paul will use I-494 to reach I-35E.

Negative Impacts

Removal of Vegetation

I-494 and the related improvements will remove several large wooded lots — one west of the Minnesota River near TH 5, one at the site of the proposed interchange of I-494 and I-35E, and one just east of TH 49. Elsewhere, the proposed improvements pass through mostly grass land, removing only scattered clumps of trees. Table 6-9 indicates the total acres and types that are within the highway right-of-way. Not all of this will be removed, however. Classifications for the wetland types (Types 1 through 7) follows the definitions in the US Fish and Wildlife Service's Circular 39 (Shaw and Fredine 1971).

Minimization of Harm

The DH will develop a conceptual landscape plan in an effort to restore some of the vegetation that will be lost as a result of the removal of trees and underbrush during construction. The landscape plan will help provide a visually pleasing driving experience and minimize the visual impact of the proposed highway for nearby residents. Landscape work in the vicinity of Schmidt Lake will be more involved than elsewhere along the route. In addition to plantings here, the landscape plan will include a walkway and bike trail (See Discussion on Schmidt Lake, p 97).

Effects of Salt on Vegetation

Another problem associated with highway construction is the introduction of salt into the environment through highway drainage. During the winter, the DH will use salts for ice control on the highways in this proposal. Information available indicates that salt can have a detrimental effect on soil and vegetation in near roadside areas.

The effects of salt on vegetation is generally insignificant beyond 30 feet from the edge of the pavement, as most salt remains in the snow along the roadway shoulders. Within this 30 feet, heavy salt concentrations can occur, mainly because the water volume is usually small and only limited flushing occurs.

Heavy salt concentrations are more of a danger to plant species than to animals, as plants can't readily expel excess salt. Grassy plants adjust more readily to higher salt concentrations than do woody plants and, therefore, are more tolerant of de-icing salts. Injury to woody plants occurs either by the plants direct contact with salt sprays or by the plants absorbing the salt into its root system.

(See Impact on Water Quality, Steps to Minimize Harm, p 94, for a discussion of the minimization of harm from salt).

Wildlife

Removal of the trees and underbrush in north Dakota County will mean a loss of cover to some small animals and pheasants. This impact should be minimal, however. According to the DNR, the population of the small game and waterfowl is not high. The DNR estimates that the pheasant population here in the northern area is about 7 to 10 per square mile, about one-third the county average of 22 to 30 per square mile (1972 figures).

TABLE 6-9
AREAS OF VEGETATION

GENERAL LAND CLASSIFICATIONS	ACRES	PERCENT OF RIGHT-OF-WAY	VEGETATION AND LAND USE TYPE	ACRES	PERCENT OF RIGHT-OF-WAY
Lakes and Rivers	12	0.8	Rivers	5	0.3
			Lakes (Type 5 Wetland)	7	0.5
Wetlands	40	2.5	Type 1, Overflow Basins	3	0.2
			Type 2, Fresh Meadows	11	0.7
			Type 3, Shallow Marsh	8	0.5
			Type 4, Deep Marsh	12	0.8
			Type 6, Shrub Swamp	4	0.2
			Type 7, Wooded Swamp	2	0.1
Lowland Hardwood Forest	12	0.8	Lowland Hardwood Forest	12	0.8
Upland Hardwood Forest	155	9.7	Low Density Hardwoods	43	2.7
			High Density Hardwoods	108	6.8
			Conifer Plantings	4	0.2
Grassland	681	42.7	Grasslands, Roadsides, and Pasture	681	42.7
Croplands	110	6.9	Croplands	110	6.9
Gravel Pit	6	0.4	Gravel Pit	6	0.4
Urban	578	36.2	Urban	578	36.2
Total	1594	100.0		1594	100.0

The filling of the marsh areas and several ponds inland in Dakota County will have a fairly significant impact on waterfowl. A Forester and Wildlife Biologist from the DH observed numerous pairs of mallards, blue-winged teal, and pheasants around these areas. The remaining construction in the river valley will have only a minimal impact on habitat areas.

According to the manager of Fort Snelling State Park (interview, April 1975), the inplace roadway embankment and sand blanket blanket placed in 1972 has not obstructed animal movement. The herd of deer which winters in the park has always moved along the more stable ground near the river channel. In the several years since the roadway embankment and sand blanket has been in place, the deer have continued to winter in the park. Also, no noticeable change has occurred in the diversity and number of smaller animals that inhabit or migrate to the wildlife refuge north of proposed I-494.

The park manager doesn't feel that the proposed bridge and roadway in the flood plain will hinder animal movement. The new bridge will span the deer-movement area and will allow the deer continued freedom of the flood plain just as the Mendota Bridge has.

The occurrence of some deer-car collisions must be expected after construction of the highway, especially along forested areas and in the Minnesota River Valley. Studies have shown that deer frequently jump right of way fences to cross highways even though safe passages are available. The frequency of highway-wildlife mortality is usually highest for a few years following construction and then declines somewhat as wildlife populations adjust to the traffic.

Steps to Minimize Harm

The groundcover and shrubbery which the DH will plant within the highway right-of-way after construction will restore some of the wildlife cover lost during construction. In keeping with its policy of roadside maintenance, the DH will not mow the grass until after the breeding and nesting season. The new ponds which the DH will construct as part of its proposed drainage plan (p 95) will restore some of the habitat areas lost to waterfowl.

Effects of Fertilizers and Pesticides

The DH uses granular fertilizers to re-establish ground cover disturbed during construction. Fertilizers promote a dense, vigorous turf in a short time, minimizing erosion and conserving moisture for plant use. The fertilizers used are mixtures of nitrogen, phosphorous, and potassium. The exact kind and rate of application depends on the deficiencies of the soil and the food requirements of the ground cover.

Some damage to the environment from fertilizers could occur when the fertilizer leaches out of the topsoil under conditions of heavy moisture. Theoretically, the fertilizers, with the aid of surface drainages, can work its way into the ground water. The leaching only occurs, however, when more fertilizer is present than what the soil and plant life can use.

The DH uses herbicides, fungicides, and pesticides on turf, plants, and trees within the highway right of way. Herbicides used are 2 and 4-D, and 2, 4, and 5-T — all formulated into an anti-drift emulsion. The Department also uses a soil sterilant called urex to eliminate plant growth in areas that can't be easily mowed such as around guardrails.

Steps to Minimize Harm

As nearly as possible, the DH uses only the amount of fertilizers that the topsoil and ground cover requires. Thus, only a small amount of leaching occurs. For the leaching that does occur, a covering of mulch applied after the fertilizer confines it to local areas.

In using herbicides, the Department sprays only problem areas. Use of invert sprayers helps eliminate wind drift. Not spraying on days of high wind velocity and using invert sprayers also helps eliminate drifting. Because the herbicide urex can be a potential hazard to plants beyond the treated area, it is mixed and sprayed with MC-250, a medium curing cutback asphalt. The stickiness of the MC-250 keeps the urex from spreading in the drainage runoff. Also, the MC-250 prevents erosion of the soil after the plant growth dies in the treated area.

IMPACT ON FLOOD PLAIN AND FLOOD HAZARD EVALUATION

The low level areas adjoining a river is known as a flood plain. A flood plain is subject to flooding during periods of peak water flows. In the vicinity of the proposed I-494 bridge over the Minnesota River, the flood plain is about 1.5 miles wide.

Impact

Proposed I-494's impact on the flood plain should be minimal. Some work has been done in the flood plain under contracts awarded prior to the EIS requirement. The Department has placed sand blankets east and west of the river and a roadway embankment east of the river to TH 13, completing the work in 1973. (See History, Development, and Current Status, p 15).

The sand blanket, which will serve as a support for construction equipment, is about 174 feet wide throughout, with an average depth of 10 feet. Placing the sand blanket didn't require any excavation, as it was placed on the marshy surface soil and allowed to work down to stable sub-soil.

The roadway embankment is about 0.7 miles long. Unlike the sand blanket, placing the embankment required extensive peat and swamp excavation, to a depth of 30 feet in some places. All excavated material was used later as slope dressing along the roadway embankment.

A representative of the Minnesota Department of Natural Resources (DNR) inspected the site frequently during construction and periodically afterwards. According to the manager of Fort Snelling State Park (which extends the breadth of the flood plain) the construction has caused little if any environmental harm. Little or no siltation has occurred from the sand blanket of roadway embankment.

According to the park manager (interview, April, 1975), the most significant negative impact of the proposed construction on the flood plain will be a visual one. The presence of the bridge and highway will detract from the natural appearance of the flood plain. Park users most directly effected by the view of the bridge and highway will be those using the trail centers which the DNR proposes for both sides of the river south of proposed I-494. Both centers will be several hundred feet from proposed I-494, but the trails will pass under the bridges.

Minimization of Harm

Although little can be done to minimize the visual impact of the bridge and highway on the flood plain (Fig 6-5), certain aspects of the park's development plans and the bridge design will help compensate for their presence. For one thing, proposed development plans for the park places areas of most intense use closer to the north end of the park. Thus, most visitors to the park will have only a long range view of the bridge and highway. Another favorable aspect is the way in which the bridge allows the trail system to pass underneath. Figure 6-6 is an artist's concept of the trail under the eastern end of the bridge.

FLOOD HAZARD EVALUATION

The US Geological Survey has established the elevation of a 100-year flood in the vicinity of the proposed I-494 crossing at 715.5 and the flood-protection elevation at 716.2.

Calculations indicate that the proposed I-494 bridge across the Minnesota River will create a swellhead[10] of .06 foot. This is within the 0.10 foot limit which the controlling agencies have established.

The I-494 bridge across the Minnesota River will require permits from the following:

1. US Coast Guard
2. US Corp of Engineers
3. Minnesota Department of Natural Resources
4. Lower Minnesota Watershed District
5. The City of Bloomington
6. The City of Eagan

All permit requirements will be complied with prior to construction.

IMPACT ON WATER QUALITY

This section discusses the impacts that proposed I-494 will have on the water quality in the project area. The most significant impacts will occur on the Minnesota River and Schmidt Lake — on the Minnesota River because of the construction of the bridge and the large quantity of runoff that will eventually reach the river, on Schmidt Lake because of I-494's passage through the lake. For the remaining lakes and most of the remaining ponds, the impact will be minimal. The proposed drainage plan won't divert any additional drainage areas into Hornbeam or Horseshoe Lake or the Mississippi River in So St Paul. Proposed I-494 won't impact any private or public wells. The geologic study for I-494 indicated that no shallow wells are within 200 feet of the alignment. Also, the study showed that no minicipal water supply sites are close to proposed I-494.

[10] A damming effect on the water that the bridge and fills would have it the time of flooding. Its measured in ft of elevation.

FIGURE 6-5

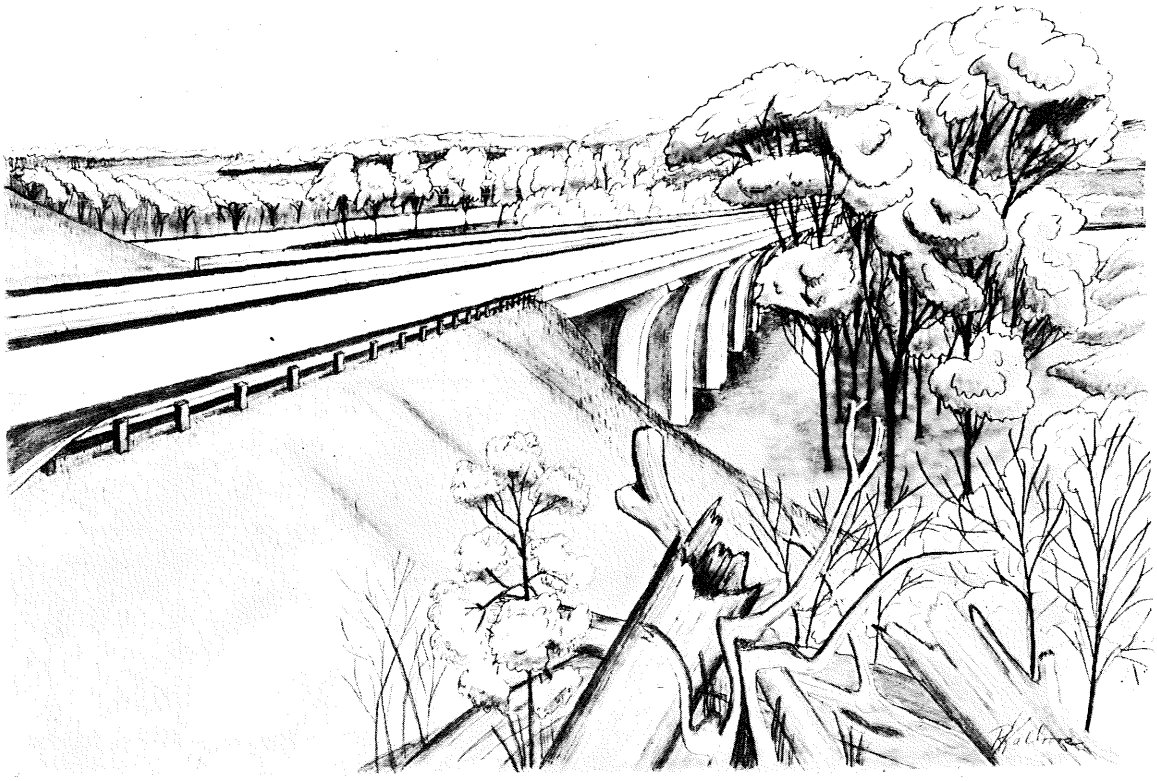


FIGURE 6-6

The chart below gives the existing water quality in the Minnesota and Mississippi Rivers and in several of the lakes in the project area. The remaining lakes aren't listed here because data on them hasn't been compiled. The chart lists only turbidity and chloride levels because these are most commonly associated with highway drainage. (For a more complete chemical analyses, see the water quality report for I-494, listed in the references on page 102).

	Mississippi River at St. Paul, Minnesota	Minnesota River at Fort Snelling State Park, St. Paul, Minnesota	Hornbeam Lake	Horseshoe Lake	Schmidt Lake
Turbidity In Jackson Units	4 to 30	3 to 100	3 to 13	2 to 5	0 to 6
Concentrations of Chloride in parts per Million	9.1 to 16	14 to 50	3.6 to 5.6	16 to 24	47 to 87

Table 6-10 gives the analysis of chloride concentrations entering the lakes after the construction of proposed I-494. With present methods of predicting the amount of salt in highway runoff that reaches water bodies, these figures can only be considered estimates. More precise figures will be available through the water monitoring program recently instituted in the project area. The section on Minimization of Harm, under Impacts on the Minnesota River, p 94 , discusses the water-monitoring program.

The Minnesota Polution Control Agency (MPCA) has established standards for permissible concentrations of effluents that disposal systems can discharge into rivers and lakes. These disposal systems are called "point sources." For the rivers and lakes in the project area, permissible concentrations from point sources are as follows:

Turbidity	25
Dissolved Salts	700 ppm
Total Salinity	1,000 ppm
Sodium	60% of total cations

(The MPCA standards lists other chemicals not shown here. See MPCA rules and regulations for water pollutuion control).

Storm water runoff is not considered a point source of pollution unless the Environmental Protection Agency, the MPCA, or an Interstate Agency identifies the runoff as a significant contributor of pollution.

- prime
- good
- improvable wetlands
- improvable ponding areas
- snag trees
- 1-7 (refer to Table 6-9)
- right of way
- study area

WETLAND TYPES AND WILDLIFE HABITAT

N

INTERSTATE 494

FIGURE 6-7

TABLE 6-10

ESTIMATED SALT CONCENTRATIONS
OF AREA LAKES AFTER CONSTRUCTION

POND	DRAINAGE AREA (Square Miles)	LANE MILES	SALT CONCENTRATIONS (Parts Per Million)	
			SEASONAL	YEARLY
Gun Club Lake	1.43	1.89	111	37
Slaters Lake	1.17	11.93	853	284
Rogers Lake	0.92	4.67	340	113
Hornbeam Lake	0.08	1.51	1580	527
Horseshoe Lake	0.12	1.62	1130	377
Schmidt Lake	1.40	18.62	1113	371

The MPCA has also established the criteria for the classification of intrastate waters. Some of the waterbodies and watercourses—including those in the project area—haven't been categorized as yet. For those not yet specifically categorized, one or more of the following classifications apply:

2B (Fisheries & cool or warm water sports, commercial fisheries)
2C (Rough fish, aquatic recreation)
3B (General industrial purposes with a moderate degree of treatment, except food processing)
3C (Industrial cooling or materials transport)
4A (Irrigation, without adverse effects on crops)
4B (Livestock and wildlife, without injurious effects)
5 (Navigation and waste disposal)
6 (Others)

The proposed action won't cause any classification changes of the waterbodies and watercourses in the project area.

Lakes, Wetlands

Although salt distribution and movement through the environment is presently little understood, and the exact percentage reaching water bodies is unknown, some potential for salt impacts to vegetation and wildlife exists from salt that enters wetlands, streams, and lakes via highway drainage. Chlorides from road salt in concentrations greater than 10,000 ppm are harmful to most freshwater invertebrates, fish and aquatic plants. Many species are affected at much lower concentrations. Drinking water becomes toxic to most wildlife at concentrations greater than 1500 ppm. Several aquatic plant species found in the metro-area are intolerant of concentrations greater than 30 ppm and only a few species tolerate levels greater than 1000 ppm. Studies have shown that metro-lakes located adjacent to main highways usually have chloride levels greater than 20 ppm because of road salts.

Thus, the potential for impacts to salt intolerant aquatic plants are substantial. Most other aquatic and terrestrial plants and most animals can tolerate relatively high (100-500 ppm) chloride concentrations and should not be directly impacted. However, the impacts of sustained low concentrations, especially upon invertebrates, is little known by science. Furthermore, rapid fluctuations in chloride concentrations, typical of highway drainage, may be just as harmful as high concentrations.

Steps to Minimize Harm

Until less harmful de-icers are developed, limiting the amount of salt applied to the highways will be the most effective means of minimizing the possible impacts of salt on lakes and wetlands. The Division of Highways has instituted a program under which it has attempted to cutback on the amount of salt used on highways in the State without sacrificing the safety of motorists. Since 1970, this program has resulted in a 42% decrease (5-year average) in the amount of salt used on highways in the St. Paul-Minneapolis area. In keeping with this program, the DH will apply salt on I-494 at the minimum amount that safety will allow.

The drainage system proposed for I-494 (Fig. 6-8) will be another way of minimizing the effects of salt on the water quality in the project area. The ditches and storm sewers (along with lift pumps* where necessary) will keep water moving through the drainage system. This will provide a flushing action and prevent a build-up of salt in the ponds.

In the flood plain, the natural springs and periodic floods will give some additional protection against the build-up of salt concentrations. High-water data obtained over a 20-year period, from 1951 to 1971, indicates that the Minnesota River and adjacent lakes flooded over 16 times. Therefore, during this time, floodwaters flushed lakes in the flood plain an average of 3 out of every 4 years.

THE MINNESOTA RIVER

This proposal could have three possible impacts on the Minnesota River — introduce sediment and salt through drainage, introduce chemicals and oils through spills, and introduce sediment and erosion during construction. (See Construction Impacts, page 100, for discussion of the latter).

Minimization of Harm

The distribution of ponds in the drainage system will allow most sediments to settle out of the runoff prior to its discharge into the two rivers. The design of Sedimentation Basins 1 and 2 will allow longer periods of retention and permit additional settling out of sediments and periodic clean-up. To help insure that the water leaving these ponds meets local, state, and federal standards, the water in these ponds will be monitored on a continual basis. The ponds will be constructed with moderate side slopes so that they will be conducive to the growth of aquatic vegetation, and, thus, be good habitat for waterfowl.

A water-monitoring program recently started in the metro region should make possible a close watch on the chloride levels in the two rivers. The United States Geological Survey (USGS), in cooperation with other agencies (including the DH), has started a program of monitoring the water quality in the rivers and in selected lakes and ponds in the project area. The USGS has monitoring stations on the Minnesota River in Fort Snelling, and on the

DRAINAGE

INTERSTATE 494

FIGURE 6-8

Mississippi River in Inver Grove Heights. Thus far, the amount of chloride in the rivers at both locations and in the lakes has been below 100 ppm. De-icing chemicals from the highways in this proposal should raise the chloride level very little, if any at all. Actual effects can't be determined, however, until after the USGA compares post- and pre-construction readings.

Sedimentation Basins 1 and 2 (See Fig 6-8, p. 95) will also serve as containment areas should an oil spill occur. Drainage from the proposed bridge over the Minnesota River and flood plain won't be contained in these basins, however. Instead, the runoff will be carried into downspouts that are connected to the bridge piers. The downspouts will discharge the runoff onto splash blocks at ground level. From there, it will follow the natural drainage of the area under the bridge.

A major chemical or oil spill isn't likely to occur on the bridge over the river and flood plain because of the relatively flat horizontal and vertical curvature proposed for the bridge. If a spill should occur, it would be reported immediately to the Minnesota Pollution Control Agency, the Environmental Protection Agency and the US Coast Guard. In all likelihood, such a spill would be contained in the Marsh Area. If a spill were to occur in an area where natural containment isn't possible, an inflatable boom could be dispatched to the scene and used to surround and contain the spilled material. After containment, the material could be removed by a skimmer, pump, poly mop or by using specifically designed absorption pads.

Schmidt Lake

Schmidt Lake is a 62.9 acre lake, located near the intersection of Robert Street (TH 52) and TH 110. Proposed I-494 passes through the northwest corner of the lake, filling in 4.75 acres. Roadbed embankment construction requires 4.25 acres of water surface. The slopes extend an additional 0.5 acres in the lake below water level. In addition, the roadbed severs 1.0 acres from the lake. After the roadbed construction and the 1.0 acres severance it will measure 58.15 acres. (The lake is 7 ft. at its deepest point).

Proposed I-494's passage through Schmidt Lake won't increase significantly the lake's potential for flooding. Normal elevation of the lake is 937.5. A recent study determined that in times of heavy runoff, intermittent water retention up to elevation 940 could be tolerated for short periods without causing appreciable damage to surrounding property.

Adding the fill for the section of highway will reduce the acre-feet of storage capacity in the lake only minimally. Should a major storm cause flooding, an overflow ditch will carry the overflow from the lake to a pond to the east near TH 3 (see Fig. 6-8 , Drainage Map, p 95). From there, the overflow would go to the Mississippi River.

History and Characteristics

The lake dates from the turn of the century when local farmers formed it by filling a drainage ditch leading from a large low-area.

An eight hundred acre watershed is the main source of water for the lake. Water enters from direct runoff and through a high water table in the surrounding land. In the early years, the watershed was cultivated farmland. Now, however, various developments have replaced most of the farmland. Although some open land is still in the area, only one farm remains.

Recreational use of the lake is limited. Because of the poor quality of the water (turbid-unpleasant odor), the lake has never been used for swimming. It sees some use, however, for canoeing and ice skating. Although some minnows and bullheads are present, the shallowness of the lake results in winter freeze-out, not permitting the build-up of game fish.

Aside from serving as a watershed basin, Schmidt Lake's importance is in the aesthetic value to area residents. Construction of apartment buildings near the lake has not changed the basic land features. The land around the lake is still gently rolling with some tree growth.

Development around the lake follows an urban pattern. Twenty-nine acres on the west side of the lake have been developed into a semi-luxury multi-family housing project, totaling 320 units. Construction is underway on 528 units — eventually to span about 30 acres on the east side of the lake. An additional 9 acres on the west side (near the north end) is zoned commercial. (Street construction in the developed area aligns with the off-ramp of proposed I-494 at Robert St.)

Public Hearing

Minnesota State Law requires a permit from the Commissioner of the Department of Natural Resources (DNR) before any change can be made in the cross-section of any public waters in the State. On July 27, 1971 the DH applied for a permit to route proposed I-494 through Schmidt Lake. Because of the magnitude of the overall job and the degree of public interest, the Commissioner ordered a public hearing on the application. Date and location of the hearing was November 4, 1971, in the Council Chambers, Village of Inver Grove Heights, Minnesota.

On March 7, 1972, the Commissioner of DNR granted the permit. Bases for the final decision were the testimonies and evidence presented in the nearing, and the DNR's own analysis of the project. From these, the DNR concluded that highway safety and transportation needs would be substantially sacrificed if the proposed route were changed. Also, it concluded that the land use and comprehensive plans of most of the surrounding communities would be upended — at a high cost to the communities.

Requirements of Permit

The permit carried several requirements. The Division of Highways (DH) had to take deep soil borings to determine if the lake was suitable for dredging. This requirement was set aside.

Another requirement was that the DH landscape the highway embankment nearest the lake. The landscaped embankment would allow the public limited use of the space as a walkway or bike trail. The third requirement was that the DH exercise strict control over the construction to ensure optimum protection against damage to the environment. The DH will comply with these requirements.

Additional Permits Required

Prior to the construction of I-494 through Schmidt Lakes, a Section 404 permit will be required from the US Corp of Engineers.

Impact on Schmidt Lake

The major impact of I-494 on Schmidt Lake will be in the placing of the fill for the roadbed. Filling operations will destroy the aquatic vegetation in the fill area and will suspend sediment in the water, possibly eliminating or inhibiting some plant and algae growth in other areas of the lake for a short time. Eventually, the sediment will settle out and the turbidity level will return to normal (the lake has a high turbidity). In time — because of the shallowness of the lake and the penetration of sunlight to the lake bottom — plant and algae growth outside the actual fill area should also return to normal.

One possible means of keeping these impacts localized would be to keep the construction area separate from the rest of the lake by means of a Curtain. This would be an actual curtain of special material suspended on the top with flotation gear and anchored to the lake bottom. The curtain would be left in place until the fill operations are completed.

Penetration to Recharge Areas

The impact of the runoff from proposed I-494 on the plant and algae life in the lake will be minimal, primarily because runoff from the nearby highways and developed areas already enters the lake. Thus, the plant and algae life have adjusted to the pollutants in highway runoff. A second reason that the impact will be minimal is the comparatively small amount of new runoff that will drain from I-494 into Schmidt Lake. Other than the approximately 560 ft. section of the highway that will pass through the lake, the drainage plan for proposed I-494 won't divert any additional watershed area into the lake.

IMPACT ON GROUND WATER

Since most of alignment is underlain by plastic (clayey) soils rather than granular, most precipitation will have a tendency to runoff rather than penetrate into the underlying water tables (see Discussion on Soils, p 26). Therefore, very little water is actually added to the ground water storage through direct penetration. The lakes and wetlands are the major areas of recharge to these underlying water tables.

The soils underlying the alignment immediately outside the Minnesota River Valley (on both sides) are predominantly granular and will accept water and transmit it to underlying water tables. However, because of the proximity of this portion of the alignment to the river, the near-surface water table gradient is steeply sloped towards the river on both sides of the valley (see Geologic Profile, p). Therefore, even though this portion of the aligment is technically over recharge areas, in reality very little water is actually added to storage, as most of it moves underground towards the valley and then into the river.

Since most of the soils beneath the alignment are somewhat clayey, zones of reduced permeability may be encountered. These more impermeable zones could cause some localized perched ground water; however, drainage of these pockets will be rapid and won't adversely effect the overall ground water pattern.

On Flows to Lakes, Wetlands, and Wells

Principal lakes in the project area are Gun Club, Lemay, Rogers, Hornbeam, Horseshoe, and Schmidt Lakes. Gun Club Lake, a spring fed lake, is located in the flood plain near the Minnesota River, just south of where proposed I-494 will cross. The roadway fill and embankment for the section of highway through the flood plain has been in place since 1973. This construction hasn't had any impact on the level of the lake.

Lakes

The sections of alignment adjacent to Lemay, Hornbeam, and Horseshoe Lakes are above the lake levels and the water table. Therefore, proposed I-494 won't effect the flow of ground water to these lakes. A portion of the proposed I-494 and I-35E interchange will be about 500 feet away from Rogers Lake and will be below the level of the lake. A detailed study of Rogers Lake and the surrounding water table concluded that the interchange will neither drain the lake nor interfere with ground water recharge to it.

Wetlands

Some wetlands (swamps, etc.) will be lost to the project as a result of filling for the roadways. In such areas, dewatering may be necessary to excavate and backfill undesirable soil. Since dewatering would only be temporary, ground water conditions would soon return to normal. Also, with the proposed drainage plan maintaining drainage patterns, water conditions in adjacent wetland areas won't change.

The highway construction won't effect the underground supply of water to wells. Wells in the project area bottom at a much greater depth than the highway excavation. (No wells are within 200 ft. of the alignment.)

CONSTRUCTION IMPACTS

A number of impacts might occur during the actual construction of I-494 and the other highways in this proposal (aside from direct impacts on vegetation, wildlife, and land). These might be pollution of the air and water, erosion, and disruption to local traffic. This section discusses how these impacts might occur and the measures that would be taken to minimize harm.

Construction In The Flood Plain

A substantial amount of the work in the flood plain has been done already, under contracts let prior to the determination of the need for an EIS (see History, Development, Current Status, p 15 , and Negative Impact, The Flood Plain, p 87). The bridge across the Minnesota River is the remaining major construction in the flood plain.

A sand blanket, for supporting the equipment during the bridge construction, has already been placed. Also, the roadway embankment — extending for .7 miles, from about just east of the Minnesota River to TH 13 — is already inplace. Placing the sand blanket and roadway embankment resulted in little or no negative impacts (see discussion on p 87).

Because of the high water table in the flood plain, construction of the piers for the bridge could mean contamination of groundwater through sedimentation and erosion. Coffer dams will be constructed, however, and de-watering techniques used to minimize any harm.

During construction, potentially harmful materials such as gasoline and oil will be kept in confined areas outside the floodway* to prevent any spillage from entering the water bodies.

(For additional Discussion of Schmidt Lake, See Schmidt Lake, p 97).

* An elevation the the Minnesota Watershed District has established as 1 ft. above the 100-year flood level.

Borrow Pit Treatment

Although excavated material will be used right on the project whenever possible, sites outside of the construction limits may be needed for fill material. Upon completion of the project, these sites will be left neat and as near a natural condition as possible. Restoration will include cleaning, shaping, replacement of topsoil, and establishment of vegetative cover on all areas disturbed by construction operations.

CONSTRUCTION PLANTS

If a hot mix paving plant or similar operation is required for this project, local air pollution requirements will be adhered to. Water containing sediment from aggregate wash operations will be treated to the extent that the final sediment content will be no more than that of the stream in which it will enter. Wash water or wastes from concrete mixing operations will not be allowed to enter live streams. All applicable regulations of pollution control and fish and wildlife agencies relating to prevention and abatement of pollution shall be complied with in the performance of the contract work.

POLLUTION CONTROL DURING CONSTRUCTION

Precautionary measures will be utilized during the construction of this project to prevent air and water pollution. Controls over contractor's construction operations will be provided by the Minnesota Division of Highways "Standard Specifications for Highway Construction" and other regulations in effect at the time of construction. Additional controls relating to the prevention of air and water pollution will be included in the contract.

The contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time. Temporary pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent erosion control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with the permanent control features on the project. Some examples of temporary control devices are mulches, slope drains, dikes, sediment basins, and turf establishment. Temporary grasses will be quick growing species suitable to the area, that will provide temporary cover but will not later compete with the grasses sown for permanent cover.

Where erosion is likely to be a problem, clearing and grubbing operations will be so scheduled and performed that grading operations and permanent erosion control features can follow immediately thereafter if the project conditions permit; otherwise, temporary erosion control measures may be required between successive construction stages.

The engineer will limit the area of excavation, borrow and embankment operations in progress commensurate with the contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent erosion control measures current in accordance with the accepted schedules. Should seasonal limitations make such coordination unrealistic, temporary erosion control measures will be taken immediately to the extent feasible and justified. For example, if river bridging work is stopped for the winter, the exposed cuts or fills for approaches will be riprapped to protect against erosion during spring runoff and resulting high water.

The engineer may increase or decrease the amount of surface area of erodible earth material that may be exposed at one time by clearing and grubbing, excavation, borrow, and embankment operations, as determined by his analysis of project conditions. For example, two separate areas could be opened simultaneously if two fleets of equipment were available.

Disruptions to Traffic

Construction work will probably cause some disruptions to local traffic patterns. Since the project will extend over a long area (from 24th Av to the Mississippi River, about 11.5 miles), the actual construction will probably be done under several separate contracts. The construction will be scheduled in such a manner that alternate routes around construction areas can be developed.

REFERENCES

Central Office, Office of Materials, Geology and Groundwater Data for I-494, (Mn DOT, Division of Highways, St. Paul, MN, September 1974).

District 9 Hydraulics Section, I-494 Water Quality Report, (Mn DOT, Division of Highways, Oakdale, MN, August 1976).

Central Office Hydraulics Section, Drainage Report for I-494, (Mn DOT, Division of Highways, St. Paul, MN, April 1974).

District 9 Right of Way Section, Right of Way Study for I-494, (Mn DOT, Division of Highways, Oakdale, MN, August 1976).

District 9 Resource Unit, Noise Analysis Report for I-494, (Mn DOT, Division of Highways, Oakdale, MN, July 1976).

District 9 Resource Unit, Air Analysis Report for I-494, (Mn DOT, Division of Highways, Oakdale, MN, August 1976).

Office of Environmental Services, Vegetation Land Use Wildlife Assessment for I-494, (Mn DOT, Division of Highways, St. Paul, MN, June 1976).

IMPACTS OF THE NO-BUILD ALTERNATE

The No-Build Alternate would have a number of impacts upon the project area and region. It would affect (1) the local and regional transportation system; (2) industrial and commercial development; (3) residential development; (4) the tax revenues in several of the municipalities; and (5) joint DH and municipal planning.

ON TRANSPORTATION SYSTEM

The No-Build Alternate would increase the highway improvement and maintenance costs for the counties and local municipalities. In many cases, county highways and local municipal streets would have to be up-graded to accommodate the traffic from the companies already in the study area. The proposed county highway and local street systems, designed to complement the proposed interstates, would have to be revamped. This would result in a considerable upending to several of the municipalities' street plans.

The No-Build Alternate would be contrary to the region's planned transportation system. In northern Dakota County, the completed and proposed sections of I-494 and I-35E and TH's 110, 55, 49, 52, 3 and 56 form part of the proposed transportation system. The system has as its basis the principle of well-spaced arterials sharing the traffic load. Incomplete links on one segment of the system means traffic complications on completed portions elsewhere. Complications already exist on the study area roads which combine to serve as the links between the completed portions of I-494 (see Deficiencies on Existing Highways, p 6).

With the No-Build Alternate, congestion on study area roads will increase. As the suburbs northeast and east in the metropolitan area become more industralized and heavily populated, the number of workers commuting through the beltline corridor will increase proportionately. (Plans are already underway for industrial parks and regional centers in these areas). Additional residential areas in the northeastern and eastern suburbs will also mean an increase in travel to the high activity centers — the sports complex, the Fort Snelling State Park, and the Airport — across the Minnesota River near Bloomington.

ON INDUSTRIAL AND COMMERCIAL DEVELOPMENT

Of the No-Build's negative impacts on the planned development in the project area, that on industrial and commercial development would be greatest. An adequate transportation system is a primary prerequisite for the establishment of an industrial park or a major diversified center. For example, Eagan has planned their industrial parks to be serviced from all directions by major highways, including proposed Interstates 494 and 35E. Eagan estimates that as much as 1/3 of its planned industrial development would not occur if the interstates are not built.

This reduction would mean a substantial financial loss for Eagan. Eagan has installed its water and sewer system in the proposed industrial park areas, basing the capacity of the system on the existing and proposed land use levels. A large drop in the eventual number of connectors to the system would mean a considerable drop in user revenue. This drop would impair the city's ability to meet yearly bond service charges. The city and county would also sustain a substantial tax-revenue loss.

ON RESIDENTIAL DEVELOPMENT

In Mendota Heights and Inver Grove Heights, the effects of the No-Build Alternate will be somewhat different. Both cities have zoned a large amount of land residential and only a small amount industrial and commercial, considerably less than Eagan. The excellent topography and location of both cities makes them highly desirable for residential development. Thus far, however, only a small amount of the available residential land in both cities has been developed.

The No-Build alternate would have a negative effect on proposed residential development in both cities. Although most residents in the region are aware of the excellent quality of life that northern Dakota County offers, they are also aware of the complicated traffic problems on the highways in this section of the county. The traffic tieups and accidents on the Mendota Bridge, TH 55, and TH 110 are common, as are the high number of fatalities on I-494 near the Mississippi River. These conditions will be deterrents to residential expansion, should the No-Build alternate be adopted.

OTHER CONSIDERATIONS

Maintaining Semi-Rural Atmosphere

Adapting the no-build would mean limiting the amount and rate of development in northern Dakota County. Little future development in Eagan, Mendota Heights, and Inver Grove Heights would mean the preservation of the semi-rural atmosphere.

Lower Land Values

The no-build alternate would mean lower land values in Northern Dakota County, mainly in the industrial parks of Eagan, Mendota Heights, and Inver Grove Heights. The demand for land would be less. This in turn would mean slower land appreciation rates.

No Immediate Tax Loss

On a short term basis, the no-build would be beneficial to local tax rolls. Existing property would continue as sources of tax revenue.

No Visual Intrusion

The no-build alternate would mean the absence of the visual intrusion that would result from the new highway.

No Noise & Air Pollution

The no-build would mean the absence of noise and air pollution along the preferred corridor. It's important to note, however, that some of these impacts would merely transfer to existing highways, mainly TH's 55, 5, and 110. Under the no-build condition on these existing highways, noise levels are predicted to increase by from 3 to 5 dBA over the existing levels. Approximately 155 existing residential units would be affected by this increase. Air quality would generally improve on existing highways in the project area due to changing emission standards for road vehicles. (See Table 6-7, p 79).

THE PROBABLE ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

SECTION VII THE PROBABLE ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This section reiterates the probable adverse impacts which can't be mitigated to acceptable levels. (Section VI, Probable Impacts discusses these impacts in more detail).

Significant impacts to waterbodies and wetlands will occur through the filling of three ponds and the removal of 167 acres of woodlands, and 110 acres of agricultural land. The smaller of the three ponds will be replaced by a new pond close to the site of the original one. The two remaining ponds, and the wetland which the proposal removes won't be replaced, however. Thus, their aesthetic value to area residents and habitat value for wildlife will be lost.

Additional unavoidable adverse effects of the proposal will be the impact on 40 acres of wetland and 681 acres of grasslands.[1] A companion loss will be the reduction of wildlife habitat.

Another unavoidable adverse effect of the proposal will be the residences that can't be attenuated with noise abatement measures (24 under alt B1; 41 under alts B2 and B3 . See Noise Analysis, p 81).

[1] The acreage falls within the highway right of way; it's difficult, however, to compute in the preliminary planning stages how much of this will actually be lost through construction — perhaps a little more than half.

THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Short Term Effects

Long Term Effects

SECTION VIII SHORT TERM USES VS LONG TERM PRODUCTIVITY

PART A SHORT TERM EFFECTS

Short term effects of the proposed action would include the displacement of homes and businesses and the disruption of established access patterns for drivers. The proposed action will alter topography and remove some vegetation and wildlife habitat. A short term loss in the tax base of the communities involved will occur as a result of right-of-way acquisitions.

PART B LONG TERM EFFECTS

Long term effects of the action would include a decrease in traffic congestion and improved accessibility for the area. This, in turn, will encourage residential, commercial and industrial growth and provide people with a wider array of cultural, social, economic and employment opportunities.

New tax base created by the expected growth will more than offset the short term losses due to right of way acquisition. This will be a long term benefit to the communities involved, especially Eagan and Mendota Heights.

Completed I-494 will help eliminate the traffic tieups at the approach to the Mendota Bridge and also remove some of the traffic from TH's 110 and 5. The improved transportation route will be economically beneficial to both the local and Metropolitan Area.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Land Commitment

Surface Resources

Manpower And Materials

SECTION IX IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

LAND COMMITMENT

Highway facilities commit land to a use that is difficult to change or reverse. The land that will be used for this project will be considered permanently committed to a transportation corridor.

SURFACE RESOURCES

Surface resources such as trees, forage, animal habitat, developed and undeveloped land etc. will generally be irreversibly committed to the project.

MANPOWER AND MATERIALS

The manpower, money, fuel and construction materials used in the design, construction and maintenance of the facility, will be irretrievable.

COORDINATION

SECTION X COORDINATION

The Division of Highways (DH) prepared the Alternate B1 and B2 design in 1971. Since then the DH has shown the design at frequent meetings with the public and private sectors of the communities involved, both at the DH Office in Oakdale, Mn, and locally in some of the communities in the project area. Some of the formal showings of the alternates were as follows:

Information Meeting, 12 March 1974, Eagan City Hall (21 attending)
Informational Meeting with Northern Dakota County Chamber of Commerce, 29 October 1974
Information Meeting and Public Hearing for Proposed I-35E, Metcalf Jr. High, City of Eagan, 22 July 1976 (about 500 attending)

Coordination on the metropolitan level has included meetings with representatives of the Metropolitan Council (MC), the area's A-95 Clearinghouse and 3C Planning Agency, and the Interstate Study Committee, formed in 1975 to review and study unfinished sections of the Interstate System in the Metro region. Other coordination includes the following:

Meetings and field walks with the Minnesota Department of Natural Resources (numerous meetings, from inception of highway planning to 1977) Contact with Minnesota Historical Society and the Minnesota Pollution Control Agency (see Letters in Fig 10-1). Meetings with the US Department of Fish and Wildlife Service (several meetings, 1976-1977) Contact with US Bureau of Outdoor Recreation, US Dept of Housing and Urban Development, US Department of Agriculture, US Corp of Engineers, US Coast Guards and US Environmental Protection Agency

During the early coordination, the US Corp of Engineers and the US Coast Guard (USCG) reviewed the preliminary draft Environmental Impact Statement (OEIS) for I-494. Both agencies suggested that certain information be added to the OEIS. Comments from both agencies have been considered in the revision of the preliminary draft.

The USCG indicated in their comments that naviagation span piers for the bridge over the Minnesota River should be located out of the water. Details of the pier locations will be worked out through additional coordination with the involved agencies, including the USCG. All navigational requirements will be met.

MINNESOTA HISTORICAL SOCIETY

690 Cedar Street, St. Paul, Minnesota 55101 • 612-296-2747

13 February 1976

Mr. C. P. Kachelmyer
Preliminary Design Engineer
612E Highway Building
St. Paul, Minnesota 55155

Dear Mr. Kachelmyer:

RE: S.P. 1985, 1986, 2285 (T.H. 494)
From 24th Ave. So. In Bloomington
To Mississippi River at South
St. Paul. In Bloomington,
Eagan, Mendota Heights, Sunfish
Lake, Inver Grove Heights and
South St. Paul

Both the Survey and Planning section and the Highway Archaeology section of the Minnesota Historical Society have reviewed the project described above pursuant to the State Historic Preservation Officer's responsibilities under the National Historic Preservation Act of 1966, Executive Order 11593, and Advisory Council Procedures 36 CFR 800.

This review analyzed the project area for the existence of historic, archaeological, architectural, and cultural sites which are on or are eligible for inclusion on the National Register of Historic Places. Neither sites on nor sites eligible for inclusion on the Register have been found in the area. Therefore, no sites within the jurisdiction of any of the laws and regulations mentioned above will be affected by the proposed project.

So as to avoid any later questions I am anxious particularly to point out that neither the Mendota Historic District nor the Fort Snelling Historic District will be affected by the highway described above.

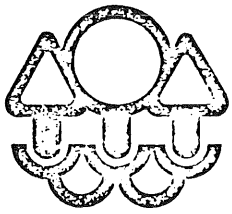
Thank you for your continued attention to historic preservation values in your planning process.

Sincerely,

Russell W. Fridley

Russell W. Fridley
State Historic Preservation Officer

RWF/fr



Minnesota Pollution Control Agency

November 12, 1976

Mr. Jim Harrington
Commissioner
Department of Transportation
Highway Building, Room 411
St. Paul, Minnesota

Dear Mr. Harrington:

The staff of the Division of Air Quality has reviewed the Air Quality Report for I-494 from 24th Avenue South to the Mississippi River. Within the scope of this analysis, this project is not inconsistent with the State Implementation Plan.

Thank you for the opportunity to review this Report. If you have any questions, please contact Brad Beckham (296-7358).

Sincerely,

Peter L. Gove
Executive Director

PLG:es

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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

NOV 22 1976

Mr. L. V. Pearson
Acting Road Design Engineer
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

Dear Mr. Pearson:

We have completed our review of the Air Quality and Noise Reports for I-494 from 24th Avenue in the City of Bloomington to the Mississippi River in the City of South St. Paul, Hennepin and Dakota Counties, Minnesota. Your letters of October 6, 1976, requested our views and comments on the adequacy of these documents and the environmental impact of the proposed project.

Both the air quality and noise report contain sufficient information to assess the environmental impact of the project. Based on these two reports, we do not anticipate any adverse environmental impacts regarding air quality and noise. The construction of the proposed highway segment should improve the air quality in the metropolition area by providing a bypass around the Twin Cities central business district. In regard to the noise impacts, we suggest the communities through which this highway segment passes zone land adjacent to the highway for noise tolerant uses. Land use planning should be done in anticipation of the highway's construction in order to preclude adverse impacts upon residential development. The consideration of noise barriers for areas where development has occurred is encouraged and supported by this Agency.

We appreciate the opportunity to review these two documents. If you have any questions in regard to our comments, please contact Mr. Bill Franz at 312-353-2307.

Sincerely yours,

Gary A. Williams

Gary A. Williams
Chief,
Environmental Review Section

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
1135 U. S. POST OFFICE & CUSTOM HOUSE
ST. PAUL, MINNESOTA 55101

REPLY TO
ATTENTION OF:
NCSCO-S(SF 77-196)

2 May 1977

Mr. Fred Behrens
Federal Highway Administration
Suite 490, Metro Square Building
St. Paul, Minnesota 55101

Dear Mr. Behrens:

The following comments are in reply to your letter dated 14 April 1977 with attached pre-draft environmental impact statement (EIS) for proposed construction of Interstate Highway 494 in Hennepin County and reconstruction of a portion of Trunk Highway 55 in Dakota County.

1. Section 10 and 404 permits will be required for the proposed project.

2. We concur that the Federal Highway Administration serve as the lead agency for the development of the EIS.

3. As a result of our review of the pre-draft EIS, we recommend:

Impacts of the Proposed Action

a. The discussion should identify species of wildlife other than waterfowl and gamebirds (e.g., amphibians, reptiles, and mammals) which depend on the wetland habitat which is proposed to be filled.

b. Do the affected wetlands and uplands provide habitat for any of the species, especially reptiles and amphibians, listed in the Minnesota Department of Natural Resources "Special Publication No. 104" on species in need of special consideration?

c. The discussion of Schmidt Lake should be expanded to include impacts on its hydrological characteristics and present and potential uses.

Alternatives to the Proposed Action

a. In the draft EIS, the aerial photographs for all alternatives should locate all fills in wetlands and lakes, and for bridge crossings of waterways.

b. The reader's understanding of the factors involved in selecting the preferred alternative would be aided by a summary table comparing the acreages, land use types, and wildlife habitat affected by each alternative.

We look forward to receiving the draft EIS for review.

Sincerely,

Wm. L. Goetz

WM. L. GOETZ
Chief, Construction-Operations
Division

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
(obr)
COMMANDER
SECOND COAST GUARD DISTRICT
FEDERAL BLDG
1520 MARKET ST
ST LOUIS MO 63103
Tel. 314-425-4607
FTS 279-4607

16590/3.9 MinnR
23 May 1977

Mr. E. Dean Carlson
Division Administrator
U. S. Department of Transportation
Federal Highway Administration, Region V
Suite 490, Metro Square Building
St. Paul, MN 55101

Re: S.P. 2785-116, Bridge No. 9217, Federal Project No. 494-4(24)241, I-494 over the Minnesota River, Mile 3.9, near Fort Snelling, Minnesota

Dear Mr. Carlson:

This is in reply to your letter of 22 April 1977 forwarding copies of the preliminary Draft Environmental Impact/Section 4(f) Statement for the referenced project.

As you know, the Minnesota Highway Department application for an extension of time is being held in abeyance pending receipt of the Final Environmental Impact/Section 4(f) Statement. This Statement must be submitted with the application for an extension of the time for starting and completing this project. This is the only Coast Guard Permit action required.

Our review of the preliminary Draft Statement indicates that more information is needed concerning the environmental impact of constructing the proposed bridge. The probable impact of procedures for constructing cofferdams, sand islands, haul roads, falsework bents and similar temporary structures should be discussed.

Since the plans for the bridge were approved several years ago by the Corps of Engineers, navigation on the Minnesota River has increased significantly. Therefore, we believe that the navigation span piers should be located out of the water at moderate to high river stages.

We would point out that in the interest of marine safety, the probability of a tow colliding with a bridge pier cannot be overemphasized since the consequence of such accident could result in loss of life, fire or pollution. Further, we believe that bridges should be constructed so as to present the least possible hazard to navigation.

We would be pleased to accept the Federal Highway Administration as lead agency for this project.

The opportunity to comment on the proposed project is appreciated.

Sincerely,

S. W. THOROUGHMAN
Chief, Bridge Branch
Second Coast Guard District
By direction of the District Commander

Copy to:
COMDT(G-WEP)
Office of Environmental Affairs (TES)
Office of Secretary of Transportation
DOT Secretarial Representative, Region VII
CEQ

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SUBJECT: LIM - Prime and Unique Agricultural Lands DATE: May 11, 1977

TO: Mr. Richard E. Luhrsen
Project Manager
Minnesota Department of Transportation
District 9
3485 Hadley Avenue North, Box 2050
North St. Paul, Minnesota 55109

I have reviewed the information sent to me in regard to the land classification on project 319 S.P.1985 I-494 4 (f) and 6 (f) involvement Fort Snelling State Park and find that there is no Prime or Unique Agricultural land in the project area. The area is all in wildlife land and is part of the Minnesota River Flood Plain.

Sincerely,

Jerome E. Schwarz

Jerome E. Schwarz
District Conservationist
U,S, Soil Conservation Service
Townsedge Shopping Center
Farmington, Minn. 55024

APPENDICES

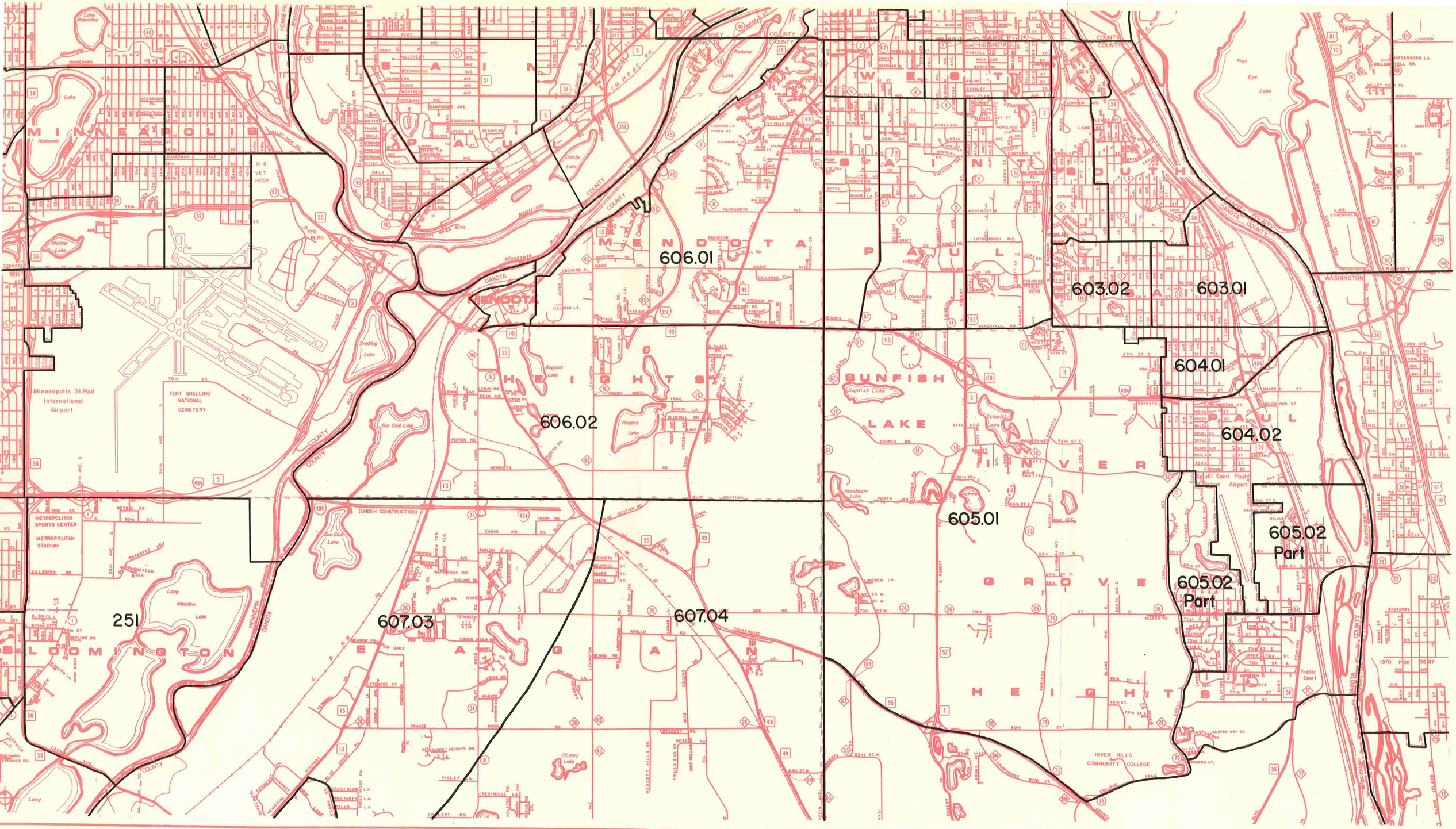
Census Tract Data And Map

Traffic Data

Table A-1

1970 CENSUS TRACTS DATA

CATEGORY	BLOOMINGTON	MENDOTA HEIGHTS		EAGAN		INVER GROVE HEIGHTS AND SUNFISH LAKE		SOUTH ST. PAUL				AVERAGE OF ALL DISTRICTS	DAKOTA COUNTY	HENNEPIN COUNTY	FIVE COUNTY AREA
	251	606.01	606.02	607.03	607.04	605.01	605.02	603.02	603.02	604.01	604.02				
AGE															
% People, Age 65 And Over	3.8	5.2	3.6	3.3	4.0	6.4	1.6	13.5	4.2	6.9	5.6	4.4	9.7	5.2	8.7
% People, Age 5 to 14	16.5	30.3	32.7	28.8	28.3	32.4	42.5	22.6	29.5	23.9	30.9	28.5	19.6	25.8	21.3
RACE															
% Negro	0.2	0.0	0.0	0.4	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.1	2.1	0.1	1.8
NATIVITY															
% Foreign Stock	13.4	16.2	15.1	15.4	11.1	12.0	6.8	24.6	14.4	21.6	11.8	13.8	19.4	12.8	17.7
EDUCATION															
Median Years of School Completed	12.7	12.8	12.7	12.7	12.5	12.4	12.5	10.9	12.4	12.0	12.1	12.4	12.5	12.5	12.4
% of Persons, Age 25 and Over, Who Are High School Graduates	75.3	79.6	75.0	75.7	69.9	64.0	71.4	42.8	67.0	49.8	54.5	69.7	67.9	68.0	66.1
RESIDENCE															
% of Persons, Age 5 And Over, Living in the Same House for the Last 5 Years	31.0	70.6	67.5	55.8	53.4	60.5	63.7	54.3	65.3	67.3	63.8	57.3	51.0	51.4	52.5
TRANSPORTATION															
% of Workers Using Private Automobiles	88.4	90.0	80.1	85.7	88.4	90.6	86.1	75.5	82.5	80.6	86.3	87.5	78.2	86.4	80.5
% of Workers Using Bus	0.7	6.6	5.2	1.2	0.7	0.4	7.0	8.9	10.2	10.7	7.0	4.2	10.6	3.5	8.9
% of Workers Using Other Means of Transportation	11.0	3.4	14.5	13.0	10.9	8.8	6.9	15.5	7.1	8.6	6.6	8.2	11.2	10.1	10.7
AUTO AVAILABILITY															
% of Households With No Automobile Available	2.1	1.6	1.1	2.9	1.6	5.8	1.4	24.1	6.5	13.1	6.5	4.6	16.9	6.0	14.2
% of Households With 2 or More Automobiles Available	52.4	64.8	64.7	66.5	65.7	51.8	39.1	24.2	41.7	37.0	36.4	53.0	37.8	48.6	38.7
OCCUPATION															
% White Collar Workers	61.2	67.7	64.2	66.5	49.8	51.7	49.8	39.7	58.7	41.6	44.1	55.5	59.2	54.8	56.7
% Blue Collar Workers	38.9	32.3	35.7	33.3	50.2	48.3	50.2	60.2	41.2	58.3	55.9	45.5	40.8	45.2	43.3
INCOME															
Median Family Income	$13,082.	$17,865.	$14,285.	$14,109.	$11,810.	$12,519.	$11,985.	$9.349.	$13,036.	$10,901.	$11.034.	$13,012.	$11,805.	$12,120.	$11,682.
% of Families With Income Less Than $4,000 A Year	5.8	2.1	3.7	3.6	4.3	5.9	4.8	13.4	6.7	7.2	8.4	5.1	8.5	5.5	8.0
% of Families With Income More Than $15,000 A Year	39.4	58.7	44.6	44.4	33.1	28.8	27.0	14.8	33.9	24.4	21.5	36.2	29.7	30.4	28.6
OWNER OCCUPIED HOUSING															
Median No. of Persons Per Dwelling Unit	2.4	3.8	4.0	3.8	3.9	3.8	4.4	2.8	3.8	3.2	3.8	3.7	2.5	3.5	2.8
% Owner Occupied	33.9	93.4	91.3	68.4	85.2	86.4	75.2	50.0	79.9	75.2	73.3	73.5	59.8	74.4	63.2
Median Value of All Specified Owner Units	$28,900.	$32,100.	$25,900.	$30,500.	$24,100.	$24,900.	$21,800.	$16,100.	$22,300.	$17,700.	$19,400.	$24,247.	$21,900.	$23,500.	$21,500.
% Over $25,000 In Value of All Specified Owner Units	64.8	70.2	53.6	68.0	44.7	49.7	20.2	6.5	34.4	6.0	11.5	40.4	35.6	42.8	32.8
RENTER OCCUPIED HOUSING															
Median Rent	$190.	$300.	$118.	$175.	$113.	$122.	$126.	$81.	$133.	$107.	$133.	$152.	$175.	$132.	$121.
AGE OF HOUSING UNIT															
% of Structures Built Since 1950	92.1	72.8	74.2	90.5	75.2	73.2	85.3	19.3	73.9	38.2	73.6	76.0	48.1	70.4	51.0
YEAR MOVED INTO UNIT															
% Moved into Unit Prior to 1950	2.7	11.7	9.4	0.0	0.0	11.6	5.1	21.3	9.7	23.5	11.1	7.8	11.9	10.4	12.2



CENSUS TRACT MAP

FIGURE A-1

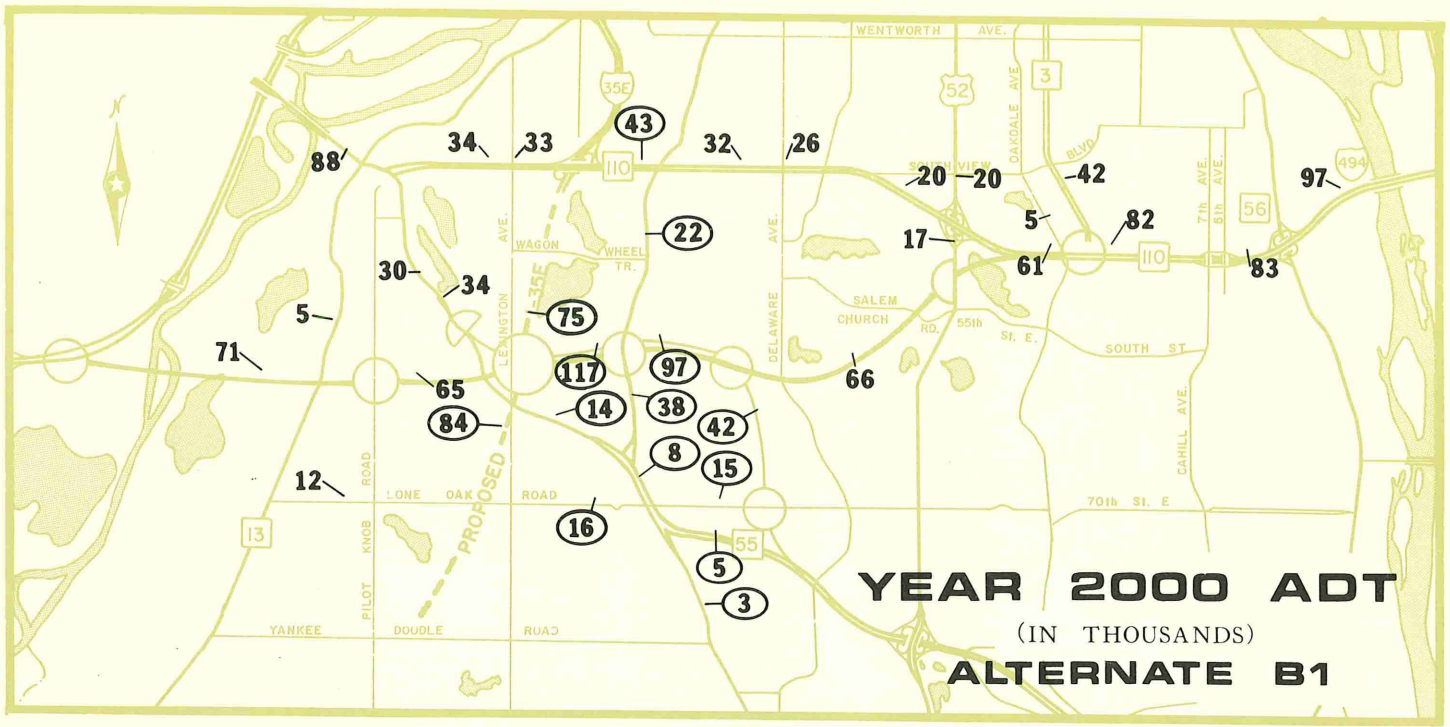
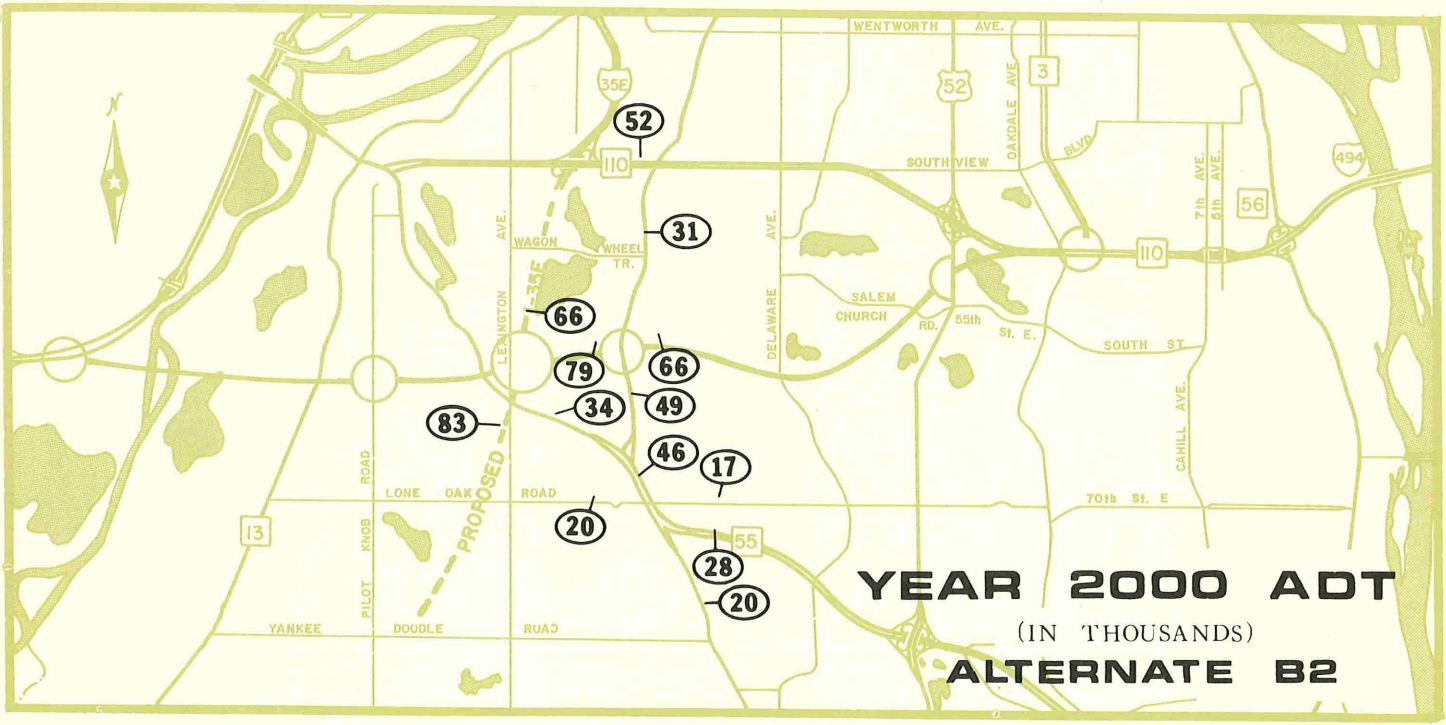


FIGURE A-2



(00) indicates areas where Alternate B2 volumes are different from Alternate B1 volumes. Other volumes (indicated by numbers only on Alternate B1) are the same for both alternates.

FIGURE A-3

PRELIMINARY 4 (f) DOCUMENT

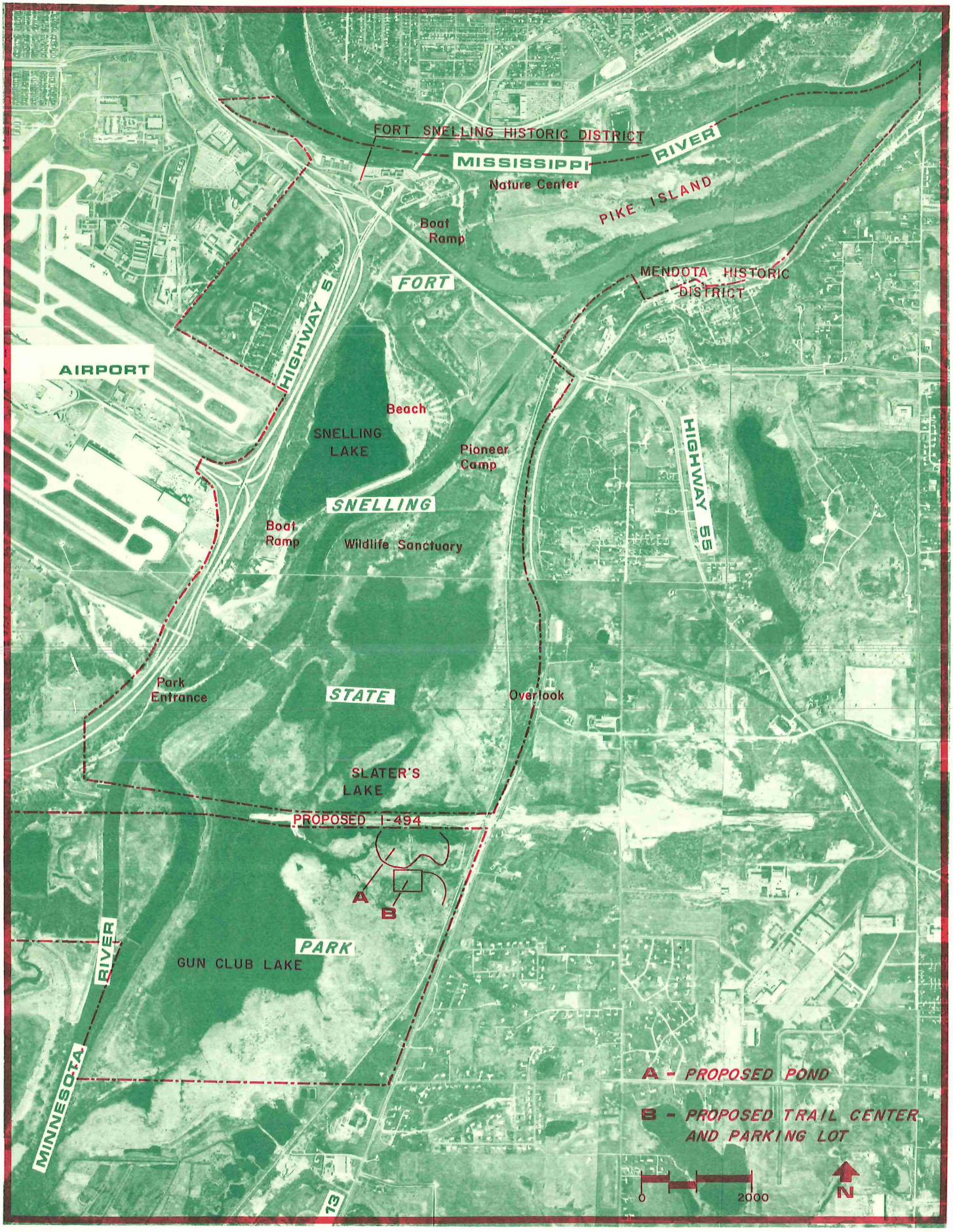

FORT SNELLING HISTORIC DISTRICT
MISSISSIPPI RIVER
Nature Center
PIKE ISLAND
Boat Ramp
FORT
MENDOTA HISTORIC DISTRICT
HIGHWAY 5
AIRPORT
Beach
SNELLING LAKE
Pioneer Camp
HIGHWAY 55
SNELLING
Boat Ramp
Wildlife Sanctuary
Park Entrance
STATE
Overlook
SLATER'S LAKE
PROPOSED I-494
A
B
PARK
GUN CLUB LAKE
MINNESOTA RIVER
13
A - PROPOSED POND
B - PROPOSED TRAIL CENTER AND PARKING LOT
0
2000
N

FIGURE 1

INTRODUCTION

THE PROPOSED HIGHWAY IMPROVEMENT

The Federal Highway Administration and the Minnesota Department of Transportation, Division of Highways (DH) proposes the construction of a 10.2 mile section of Interstate (I) 494. The proposed section of highway will complete the I-494 and I-694 beltline route that extends around the metropolitan area of St. Paul and Minneapolis. A 6-lane highway, it will be located near the southern border of St. Paul and Minneapolis and will pass through the cities of Bloomington, Eagan, Mendota Heights, Sunfish Lake, and So St Paul. Termini for the proposed highway will be 24th Av in Bloomington and the Mississippi River Bridge in So St Paul.

The proposal for I-494 considers 3 design alternates—Alternates B1, B2, and B3. Each design alternate includes construction on Trunk Highways 5, 55, 49 and inplace I-494 in So St Paul, constructed in 1962. This construction will coordinate the highways with proposed I-494. Construction should start about 1979 and end about 1983.

NEED: BASES FOR THE PROPOSED ACTION

In addition to providing mobility for regional, state and inter-state traffic, the proposed highway will serve a number of existing and planned major facilities in the project area. Some of the important local development which the proposed highway will serve are as follows:

The Minneapolis-St. Paul International Airport
The Metropolitan Sports Complex
The Fort Snelling State Park
Large Industrial Parks in Bloomington, Eagan, and Mendota Heights
The So St Paul Stockyards (terminal market point for 20 states)

The Metropolitan Council* has endorsed the completion of I-494 as being consistent with comprehensive planning in the metropolitan area. Proposed I-494 is also a feature of the land use plans of all the cities in the project area. The cities indicate a definite correlation between their development plans and proposed I-494, indicating varying degrees of dependence on the highway.

4 (F) AND 6 (F) INVOLVEMENT

PROPOSED POND

All of the design alternates for I-494 will require land for a pond and drainage ditch in Fort Snelling State Park, located in the Minnesota River Valley just south of St Paul and Minneapolis, Mn (Fig. 1). The proposed pond and drainage ditch will constitute a 4(f) and 6(f) involvement. (A 4(f) involvement occurs when a project requires the use of any land from a historic site or publicly owned land from a park, recreation area, or wildlife and waterfowl refuge of national, state or local significance. A 6(f) involvement occurs when the impacted area has used Land and Water Conservation Funds — LAWCON — in its development as is the case in Fort Snelling State Park.)

* The designated planning coordinator, A-95 Clearinghouse, and 3C Planning Agency for the St Paul-Minneapolis metropolitan region.

Designed to serve as a sedimentation basin, the proposed pond is one of many that the DH's Hydraulic Section developed as part of a drainage plan for proposed I-494. (Ponds serving other drainage areas are located elsewhere along the proposed route). The Minnesota Department of Natural Resources (DNR), the jurisdictional agency for Fort Snelling State Park, may also use the pond for the runoff from a trail center and parking lot, which it plans to construct in the park, just south of proposed I-494 and east of the Minnesota River.

Proposed I-494 will pass through the park on land which the DH acquired in 1966 in a joint acquisition with the Minnesota Department of Conservation[1] (see the DEIS. Section 1, Joint Planning, p 15). Of the 465 acres acquired, the DH retained 16 acres — enough for the I-494 crossing. The DH didn't retain the land needed for the proposed pond and ditch because preliminary design plans weren't sufficiently developed at the time of the joint acquisitions. Thus, drainage and other detailed construction requirements weren't known.

Character and Uses of Park

Fort Snelling State Park encompasses about 2500 acres, extending from the confluence of the Minnesota River to about one mile south of the proposed I-494 crossing. Located within the park are several lakes and ponds and extensive areas of marshes and bogs. The Minnesota River also passes through the park. Some 220 species of birds, mammals, reptiles, and amphibians reside in the park or nearby areas. The Minnesota DNR has designated two areas within the park as wildlife habitat (both north of the proposed I-494 crossing).

The park also serves cultural and recreational uses. The major portions of the Fort Snelling and Mendota Historic Districts are within the park. Both Historic Districts have a number of sites important to Minnesota's History. For recreational uses, the park contains a swimming and picnic area (at Snelling Lake) and an extensive trail system.

The swimming and picnic area is about 1.5 miles north of the proposed I-494 crossing. Activities in the vicinity of I-494 crossing will be restricted to those that the trail system will allow. (The DNR and Division of Highways coordinated planning for the proposed I-494 crossing and that portion of the trail in the vicinity. Alignment of the trail will allow it to pass under the proposed I-494 river bridge).

Attendance

In 1975, attendance at the park totaled about 600,000. Park officials estimate that by 1980 attendance will be nearly 2 million annually. (The DEIS for proposed I-494 points out the importance of the proposed highway as an access route for a substantial percentage of the park users. See discussion in DEIS under Direct Impacts, Socio-Economic, p 71).

[1] Now the Minnesota Department of Natural Resources.

Development in the Park

Almost all of Fort Snelling State Park falls in the flood plain. Because of the high water table, the poor drainage and frequency of flooding,[2] and the extensive marsh areas and bogs in the flood plain, development in the park is severely restricted.

Description of Pond

Interstate 494's 4(f) involvement with the park — the settling pond and drainage pipes and ditch — will require between 20 and 30 acres. At present, plans are to have an open ditch carry the runoff to the pond. A concrete weir will control the outflow, trapping debris and any oil and allowing for periodic maintenance. The runoff will flow from the weir through a buried pipe and open ditch to Gun Club Lake. From Gun Club Lake, the runoff will move through a natural channel to the Minnesota River. (The final 4(f) statement will contain more details for the pond, drainage pipes, ditches, and related structures).

Neither the pond nor the buried pipe will interfere with any existing or proposed facilities in the park. The developed part of the park — the Fort Snelling and Mendota Historic Districts and a swimming and picnic area — is about 1.5 miles north of the proposed ponding area. A trail leading to the trail center will cross the ditch that leads to the pond. Any disruption to the trail will be only temporary, however.

The proposed pond and drainage ditch won't interfere with any of the entrances to the park, proposed or existing. Currently, the park has one entrance located about three-fourths of a mile north of proposed I-494 on TH 5. The trail center (and park) will have an entrance from TH 13, just south of proposed I-494.

SPECIAL CONSIDERATIONS

The DNR may share the proposed settling pond, using it as a ponding area for a trail center and parking lot which they plan to construct (Fig 1, B). The trail center will serve as a shelter and rest area for park users in this section of the park. In addition to being used as a settling pond, the pond should be valuable as habitat area for waterfowl, once the new vegetation around its perimeter becomes established (see Mitigation Measures, p 132).

The proposed pond will also serve as the sedimentation basin for the runoff from the nearby industrial area in Eagan. Currently, plans are to have the runoff from this area flow into the highway drainage system and into the proposed pond. If the pond isn't constructed, most of this runoff from the industrial area would flow into the park without ponding.

ALTERNATIVES TO MISS 4 (F) LANDS

Direct River Outlet

The DH considered an alternative plan for outletting the drainage into the flood plain. This plan would carry the drainage along proposed I-494 within the highway right of way and outlet it directly into the Minnesota River.

[2] From 1951 to 1971, the Minnesota River and adjacent lakes flooded over 16 times.

This alternate plan is undesirable for three reasons: First, placing the pipe would mean disrupting about 4,000 ft of roadway embankment. The embankment, placed in 1972, has become completely stabilized and naturalized. Much of the habitat area lost to small wildlife when the roadway embankment was first placed has been restored. Re-excavation would mean disturbing the vegetation and fill and possibly introducing silt into the flood plain. Secondly, this method of getting the runoff to the river wouldn't have the advantage of allowing a final ponding of the runoff prior to discharging it into the Minnesota River. The proposed settling pond would allow a periodic skimming for debris and oil prior to the runoff moving into the Minnesota River. The Minnesota DNR considers this pond a necessity and may not issue construction permits without its inclusion.

The third reason this alternate is undesirable is the duplication of effort it would require. If this alternate is chosen, a pond will still be needed in the vicinity of the trail center. The DNR will have to build a pond for the runoff from the center and parking lot, although a somewhat smaller one. Thus, two investments of public funds would have to be made, one for the ponding area for the trail center and parking lot and one for the additional cost of installing the pipe along the roadbed for the highway runoff. In addition, provisions would have to be made for ponding the runoff from the industrial area in Eagan.

DO-NOTHING

The Do-Nothing alternate is a choice only if I-494 isn't constructed and the commercial-industrial development planned for the nearby areas in Eagan doesn't materialize. A sedimentation basin would be needed in this area for the runoff from this development in Eagan even if one wasn't needed for proposed I-494.

CONCLUSION

On the basis of the Drainage and related studies for proposed I-494, it's the opinion of the Federal Highway Administration and the DH that there is no feasible and prudent alternative to using the parkland for a ponding area. The proposed pond will allow additional retention of the highway runoff, permitting periodic maintenance and cleanup. Also, it will allow containment of the highway runoff in the event of an oil or chemical spill.

An alignment change to avoid passing through the park is not feasible or prudent because the park stretches nearly 4.7 miles north to south and proposed I-494 will cross it near the central section.

MITIGATION MEASURES

LANDSCAPE PLAN

The DH will develop a landscape plan for a portion or all of the perimeter of the pond. Emphasis on landscaping will be on the north side, the side nearest proposed I-494 (at the DNR's request). Other areas may be allowed to revegetate naturally, so that the ponding area will blend in with the rest of the flood plain.

PRELIM 4 (F) DOCU (CONT)

REPLACEMENT LANDS

Providing replacement lands will be another mitigation measure that the DH will take (a requirement when LAWCON funds have been used in the development of the impacted area). The flood plain has available land — some under DH and some under private ownership — in areas adjoining Fort Snelling State Park. The DH has discussed possible replacement sites with the DNR and US Fish and Wildlife Service, and both felt that finding suitable replacement lands shouldn't be a problem. Coordination with the Minnesota Department of Natural Resources, US Departments of Fish and Wildlife Service, Agriculture, and Housing and Urban Development, and the Bureau of Outdoor Recreation will continue and specific replacement lands will be agreed on before publication of the Final 4(f) statement.

DURING CONSTRUCTION

The DNR and the DH have discussed the construction of the proposed pond in several meetings and have determined that it shouldn't result in any significant impact on the flood plain.

Moving construction equipment to the site of the proposed pond shouldn't be a problem. An existing road leads from TH 13 into the area of the park where the proposed pond will be located. The DNR has used this road as a haul road in the past, and the DH will probably use it during the construction of the pond. The ground near the proposed pond is fairly stable and shouldn't require any fill to support construction equipment. Should it develop that some areas will require fill for stability, the fill would be removed or allowed to remain in place, whichever the DNR prefers.

The construction of the ponding area shouldn't cause a significant increase in noise or air pollution. Noise from construction equipment will only be temporary and shouldn't affect most park users, since the main activity center is about 1.5 miles north of proposed I-494. With the limited amount of construction equipment that will be used in the construction of the pond, the increase in air pollutants in the area will be minimal.

To avoid any impact on the water quality through erosion, excavated material will be contained in protected areas or removed from the floodway.* As a precautionary measure against contamination through spills, gasoline or oil won't be stored in the floodway.

COORDINATION

Coordination of the planning for the ponding area includes meetings with the DNR and US Fish and Wildlife Service, telephone and letter communications with the Bureau of Outdoor Recreation (Ann Arbor, MI) and letters to the US Dept. of Agriculture and US Dept. of Housing and Urban Development. Plans for the proposed ponding area are generally acceptable thus far. The DNR, jurisdictional agency for Fort Snelling State Park, did request that special consideration be given to landscaping the north side of the pond (see Mitigation Measures above). Coordination will continue until plans for the ponding area are in the final stage.

CONCLUSION

The foregoing discussion demonstrates that all possible planning to minimize harm has been included in this highway proposal.

* An elevation that the Minnesota Watershed District has established as 1 ft above the 100-year flood level.