5843

RANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

LEGISLATIVE REFERENCE LIBRARY
TE24.M6 A8
- Administrative action final enviro
3 0307 00047 0354

ONMENTAL
STATEMENT

FOR

TRUNK HIGHWAY 36 (CEDAR AVENUE)

IN HENNEPIN AND DAKOTA COUNTIES MINNESOTA;
FROM: THE PROPOSED JUNCTION OF I-35E; TO: I-494

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA
TE
24
.M6
A8

ST. PAUL
MINNEAPOLIS

PREPARED BY:
MINNESOTA DEPARTMENT OF HIGHWAYS
MINNESOTA PROJECTS M-5405 & M-5409
STATE PROJECTS 1925 & 2758

REPORT NUMBER F.H.W.A.-MN.-E.I.S.-74-4-F

Trunk Highway 36 (Cedar Avenue) in Dakota and Hennepin Counties, Minnesota

Minnesota Projects M5405 ( ) and M5409 ( )
State Projects 1925 and 2758

From Interstate 35E in Eagan
To Interstate 494 in Bloomington

ADMINISTRATIVE ACTION
FINAL
ENVIRONMENTAL IMPACT STATEMENT
U.S. DEPARTMENT OF TRANSPORTATION

Federal Highway Administration
and
STATE OF MINNESOTA
Department of Highways

Submitted pursuant to 42 U.S.C. 4332(2)(C) and Minnesota Statutes, Section 116D.01 et seq.

1-13-76
Date

/s/ WILLIAM C. MERRITT
for Frank D. Marzitelli
Commissioner,
Minnesota Highway Department

MAR 3 1 1976
Date

/s/ W. G. EMRICH
Director
Office of Environment and Design
FHWA Region V

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

E53.7
2104

TABLE OF CONTENTS

Page No.

TITLE PAGE i

TABLE OF CONTENTS iii

LIST OF FIGURES AND TABLES ..... iv-v

SUMMARY SHEET vi

SECTION I — The Existing Facility 1
- Part A. Description and Deficiencies 2
- Part B. Accident Data 3

SECTION II — Description and Purpose of Proposed Improvement 5
- Part A. Location 6
- Part B. Type of Facility, Access Control, Estimated Traffic and Basic Right-of-Way 6
- Part C. History, Status and Construction Schedule 9
- Part D. Transportation Systems Considerations.. 9

SECTION III — Project Alternatives 11
- Introduction 13
- Part A. Alternate 'A' — Existing Cedar Avenue 15
- Part B. Alternate 'B' — 34th Avenue 19
- Part C. Alternate 'C' — Central Corridor 21
- Part D. Alternate 'D' — Do Nothing 24

SECTION IV — Probable Impact of the Proposed Improvement 25
- Part A. Introduction 26
- Part B. Environmental Inventory and Impacts of Proposed Improvement..... 28
  1. Geology 28
  2. Land Resources 35
  3. Water Resources 39
  4. Biological Resources 45
  5. Amenity Resources 55
  6. Atmospheric Quality 66
- Part C. Socio-Economic Inventory and Impacts of Proposed Improvement 71
  1. Introduction 71
  2. General Land Use 75
  3. Industrial and Commercial Facilities 79
  4. Residential Areas 81
  5. Community Services 87
  6. Right-of-Way Acquisition 90
  7. Relocation Analysis 95
- Part D. Socio-Economic Impacts of the Do Nothing Alternate 99
  1. General Development 99
  2. Special Development 99
  3. Land Use 100
  4. Economic Considerations 100
  5. Social Considerations 101

SECTION V — Probable Unavoidable Adverse Environmental Effects and Steps Taken to Minimize Harm 103
- Part A. Natural and Man Made Resources..... 104
  1. Drainage Control 104
  2. Erosion Control 107
  3. Noise Abatement 107
  4. Biological Resources 107
  5. Land Resources 108
  6. Amenity Resources 109
  7. Aesthetics and Other Values 110
- Part B. Other Design Features and Construction Methods 117
  1. Bridge and Fill Construction in the Floodplain 117
  2. Borrow Pit Treatment 117
  3. Construction Plants 117
  4. Pollution Control During Construction..... 117
- Part C. De-icing Chemicals 118
  1. Potential Harm 118
  2. Actions to Minimize Harm 118
- Part D. Fertilizers and Pesticides 119
- Part E. Relocation Assistance for Displaced Families 120

SECTION VI — The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity 121
- Part A. Short-Term Effects 122
- Part B. Long-Term Benefits 122

SECTION VII — Irreversible and Irretrievable Commitments of Resources 123
- Part A. Land Commitment 124
- Part B. Surface Resources 124
- Part C. Manpower and Materials 124

SECTION VIII — Appendix 125
- Part A. Agency Comments on Environmental Considerations Prior to D.E.I.S. Circulation 126
- Part B. Approval Letters 128-129

SECTION IX — Comments Received on the Draft E.I.S. and Public Hearing 131
Index 132

LIST OF FIGURES AND TABLES

Figure No.		Page No.
1.	Aerial View of the Cedar Avenue Bridge over the Minnesota River Looking Northeast	2
2.	Accident Rates on Cedar Avenue (By Segment and Year)	3
3.	Proposed Route	7
4.	Alternates 'A', 'B' and 'C'	12
5.	Alternate 'A'	14
6.	The Intersection of Old Shakopee Road Looking North on Cedar Avenue	15
7.	Sketch of View South along Alternate 'A' in Bloomington	16
8.	Aerial View Showing Cedar Avenue crossing the Minnesota River Valley	17
9.	Alternate 'B'	18
10.	Alternate 'C'	20
11.	Sketch of Bridge crossing Minnesota River	22
12.	Study Area Location	26
13.	Geologic Profile along Proposed T.H. 36	28-29
14.	Former Major Glacial Lakes and Rivers	30
15.	Sketch of Water Cycle in the Twin Cities Basin	31
16.	Foundation Soils	32
17.	Steep Slopes	34
18.	Erodible Soils	36
19.	Water Systems	38
20.	Aerial View of the Minnesota River looking Northeast	40
21.	Aerial View of Long Meadow Lake looking Northwest	41
22.	Slaters Lake	41
23.	Floodplain	42
24.	Vegetation	44
25.	View to Southwest of Long Meadow Lake and River Bottom Vegetation	45
26.	Typical View of Minnesota River and Floodplain Vegetation	46
27.	Cross Section Sketch of Bridges Low Point Showing Anticipated Shadow Areas	48
28.	Cross Section Sketch of Bridges High Point Showing Anticipated Shadow Areas	48
29.	Wildlife	50
30.	Open Space	54
31.	Sketch of Proposed Bloomington Bluff Trail	55
32.	Sketch of Proposed Minnesota River Valley Recreation Trail Crossing	56
33.	View of River Valley from Bloomington	57
34.	Special Features	58
35.	Aesthetic Resources	60
36.	Sketch of Landscape Character	62
37.	View from Road	64
38.	View Looking Southwest at Proposed Old Shakopee Road Interchange Depicting Noise Attenuation Walls and Mounds	66
39.	Proposed Route Noise Levels (New Alignment)	67
40.	Sketch of Air Analysis Segments	70
41.	Predicted Carbon Monoxide Concentrations — 1995	70
42.	Data Collection Districts and Zones	73
43.	Land Use (Existing)	74
44.	Land Use (Proposed)	76
45.	Major Industrial Parks, Shopping Centers and Office Parks	78
46.	Census Tracts	81
47.	Community Services	86
48.	School Districts and Walking Boundaries	89
49.	Typical Buildings Required for Right-of-Way	91
50.	Typical Buildings Required for Right-of-Way	91
51.	Marina Required for Right-of-Way	92
52.	Modular Home Sales Yard Required for Right-of-Way	92
53.	Vegetable Stand Required for Right-of-Way	92
54.	Sauna, Real Estate Office and Day Care Center	93
55.	Drainage	105
56.	Impact of Single Bridge	108
57.	Impact of Twin Bridges	108
58.	Proposed Bloomington Bluff Trail	109
59.	Separated Bridge Crossing of Minnesota River, Alt. C-1	111

LIST OF FIGURES AND TABLES

Figure No. — Page No.

60. Single Cedar Avenue Bridge Crossing of Minnesota River, Alt. C-2 111
61. View Looking North in Bloomington 112
62. Minimization of Visual Impact 113
63. View of T.H. 36 — I 35E Interchange, Looking North 113
64. Landscaping Plan 115

Table No. — Page No.

1. Alternate 'A' Right-of-Way Requirements 15
2. Inventory of Criteria or Data Evaluated 27
3. Environmental Assessment Report, Aesthetic Criteria 61
4. Population Growth 71
5. District Level (Regional) Projections of Population, Employment and Dwelling Units 72
6. Data Assignments to Area within Five Mile Radius of Each Shopping Center 80
7. 1970 Census Tract Data 83
8. Right-of-Way Required 90
9. Market Values of Houses Required for Right-of-Way 90
10. Local Tax Revenue Impact with Transit Facility 94
11. Local Tax Revenue Impact without Transit Facility 94
12. Single Family Homes Needed for Right-of-Way and Homes Available for Purchase in the Study Area 95

SUMMARY SHEET — FHWA-Mn-EIS-74-4-F

State Project 1925 and 2758, Minnesota Project M5405 ( ) and M5409 ( )

(1) **Federal Highway Administration Administrative Action for:**

(X) Final Environmental Statement

( ) Combination Environmental/Section 4(f) Statement

(2) **Additional information about this proposal and statement can be obtained from:**

District Engineer, Minnesota Highway Department
3485 Hadley Avenue North
North St. Paul, Minnesota 55109 612-770-2311
or
FHWA Division Administrator
Suite 490 Metro Square Bldg.
St. Paul, Minnesota 55101 612-725-7001

(3) **Description**

The proposed improvement is located in east central Minnesota, in Dakota and Hennepin Counties. It provides for 5.8 miles of 4-lane and 6-lane freeway on Minnesota Trunk Highway (T.H.) 36 (Cedar Avenue) from the junction of proposed Interstate 35E in the City of Eagan to the junction of Interstate 494 in Bloomington. The proposed improvement lies within three Minneapolis-St. Paul south suburban communities: Eagan, Burnsville and Bloomington. Also necessitated by the proposed improvement is the reconstruction of several crossroads including 1.3 miles of T.H. 13 in Eagan.

(4) **Summary of Environmental Impacts**

The proposed improvement would:

a. provide a more safe, efficient transportation facility than that which presently exists, including replacement of a hazardous, obsolete river bridge.

b. help in the implementation of goals expressed in the comprehensive plans of all communities directly involved.

c. encourage the planned development in the area, especially northwestern Dakota County.

d. displace existing homes, commercial buildings and undeveloped land.

e. produce changes in the landscape, surface drainage, vegetation and wildlife habitat.

(5) **Alternatives**

Three alternative routes and the do-nothing alternate are considered by this E.I.S. They include two alternates east of existing T.H. 36 and upgrading the existing T.H. 36 and County State Aid Highway (C.S.A.H.) 23. The selected Alternate "C-1" includes a wide median space for possible future transportation needs.

(6) **State Government and Multi-State Responsibilities**

a. There is no impact on state government as a result of any federal controls associated with this action.

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

(7) **Comments on this statement have been requested from the following agencies:**

Council on Enviromental Quality
* Enviromental Protection Agency
* Department of Agriculture
* Department of Transportation (TES)
*Department of the Interior
Department of Housing and Urban Development
* Department of Health, Education and Welfare
* Department of Commerce
Federal Aviation Agency
* U. S. Coast Guard, 2nd District
* Corps of Engineers, St. Paul District
Minnesota Pollution Control Agency
* Minnesota Department of Natural Resources
State Planning Agency (A-95 Clearinghouse)
Minnesota Water Resources Board
* Metropolitan Council (A-95 Clearinghouse)
Metropolitan Airport Commission
* Metropolitan Transit Commission
* State Zoological Board
* Lower Minnesota Watershed District
* Dakota County Board of Commissioners
Dakota County Engineer
Dakota County Soil and Water Conservation District
Dakota County Housing and Redevelopment Authority
Dakota County Planning Commission
Hennepin County Board of Commissioners
* Hennepin County Director of Public Works
* Bloomington City Council
* Bloomington City Engineer
* Bloomington City Planning Commission
* Bloomington Natural Resource Commission
* Concerned Citizens of East Bloomington
Burnsville City Council
Burnsville City Engineer
Burnsville City Planning Commission
* Burnsville Environmental Advisory Council
* Eagan City Council
* Eagan City Engineer
* Apple Valley City Council
Urban Council on Mobility

(8) The Draft Environmental Statement for this proposed project was mailed to the Council on Environmental Quality on October 17, 1974.

*Agencies responding to D.E.I.S.

SECTION I

THE EXISTING FACILITY

Part A. Description and Deficiencies

The existing Cedar Avenue, also designated as **Trunk Highway (T.H.) 36** north of T.H. 13 and **County State Aid Highway (C.S.A.H.) 23** south of T.H. 13, presently serves several Minneapolis-St. Paul south suburban communities including Bloomington, Eagan, Burnsville and Apple Valley. Facilities such as the Metropolitan Stadium, Sports Center and the Twin Cities Metropolitan Airport are also served by this route.

Cedar Avenue is a two lane highway with a basic 66 foot right of way width. It has very substandard alignment and numerous local access roads, driveways and at-grade intersections throughout its length in both Eagan and Bloomington.

At present, the facility carries an average daily volume of 12,500 vehicles (two-way traffic) across the Minnesota River. This is considered to be above the theoretical capacity of the roadway.

Other existing river crossings in the area that are also operating at or beyond their theoretical capacities include the Interstate 35W and T.H. 55 (Mendota) bridges.

These two bridges are the closest crossing points to Cedar Avenue, but they are 3.5 miles west and 5 miles east, respectively. This makes crossing the river at these locations very circuitous for people living or working near Cedar Avenue.

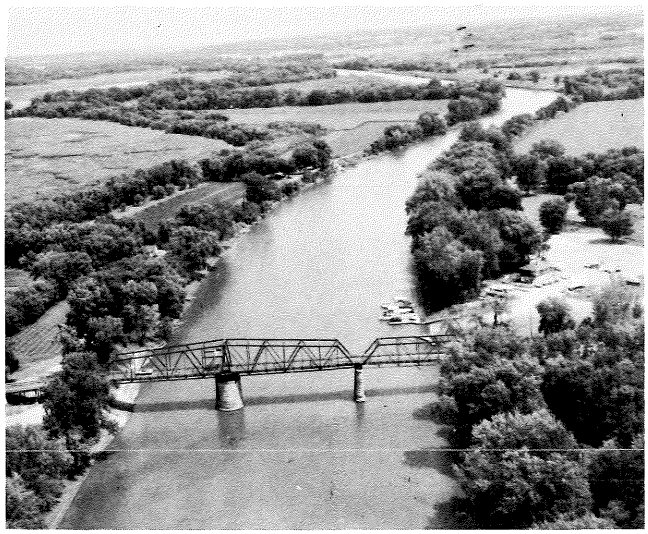
Traffic that crosses the river via Cedar Avenue must travel over a bridge that was built in 1890. The bridge is an overhead truss type structure with a vertical clearance of 10 feet 4 inches. It has a wood plank decking, 18 feet wide from curb to curb, and is restricted to a 7 ton weight limit per vehicle. The bridge span over the main river channel opens by rotating on a supporting pier. This allows larger boats to pass through on the river. This bridge span has been opened for river traffic as many as 200 times per year, each time resulting in extensive traffic delays.

In addition to the inadequate vertical clearance for large boats, the bridge poses a problem for barges navigating the river channel. A narrow width of 105 feet between piers has contributed to many barge accidents. In 1971, for instance, barges struck the piers 4 times. (Each time the bridge had to be closed to traffic for inspection and repairs.) Shipping companies operating barges on the river have complained of this condition and want the bridge removed as soon as possible.

The remaining life of the bridge is estimated at approximately ten years. Because of the deterioration of the structure, it cannot be maintained with any degree of safety beyond this point and it will have to be torn down. Unless it is replaced by a new structure, traffic will be forced to the already over-crowded Interstate 35W and T.H. 55 (Mendota) bridges.

A comprehensive analysis has been made to determine the operating characteristics of the present Cedar Avenue and to show how they compare with those predicted characteristics of the proposed improvement. The study was prepared by the **Resource Unit** of District 9, Minnesota Highway Department and is available on request. This study includes the following information:

Figure 1



An aerial view of the Cedar Avenue Bridge over the Minnesota River looking northeast.

1. Operating deficiencies of the present facility;
2. Traffic growth rates and the present and future traffic volumes;
3. "Level of service" (or the quality of traffic service) calculations present and future;
4. Travel speed runs, travel times and delays on the present facility;
5. Possible alternate or diversion routes for Cedar Avenue from Interstate 35E to Hennepin County Highway 62. This study was made using existing and possible future roads and includes a tabulation of the travel time and mileage for each.

Part B. Accident Data

Background

Traffic accidents are usually caused by the complex interactions of a number of factors. Some of the factors that may contribute to an accident are: congested operating conditions, poor road alignment, adverse weather conditions, vehicle malfunctions and driver errors. The interaction of these factors and perhaps others, makes it nearly impossible to assign one specific factor as the cause of any one accident. Therefore, no attempt has been made to tabulate specific causes of accidents on Cedar Avenue. However, other criteria such as accident rates, their locations and severity have been determined.

Accident Rates

Cedar Avenue, through the study area, has been subdivided into five segments with each segments' termini being at the intersection of a crossroad. The segments were chosen so that they had similar characteristics between their termini. (Example: two-lane, non-divided, rural roadway with no access control.)

Figure 2, "Accident Rates on Cedar Avenue," shows the accident rates for each of the five study area segments for the four years 1969, 1970, 1971 and 1972[1]. The numerical rates and bar lengths indicate the accidents per million vehicle miles traveled per year on each segment. Also shown is a segment immediately north of the project from Interstate Highway 494 to Hennepin County Highway 62 (crosstown) which helps compare the existing Cedar Avenue segments with a freeway type facility. The horizontal lines across the segments indicate the Federal Highway Administrations data on average number of accidents per million vehicle miles for the same basic type of roadway shown in that segment[2]. These lines then help compare Cedar Avenue accidents with broader research findings. Cedar Avenue rates are generally much higher.

From this Figure one can also see that in general, accident rates have been increasing all along Cedar Avenue except in the segment between 90th and 86th Streets.

During the years 1969 through 1972 the average annual accident rate increase was 6.5%. However, the number of accidents that occurred between 1971 and 1972 increased by about 60%. The following is a list of the actual number of accidents that occurred along Cedar Avenue between 123rd St. in Eagan to 86th St. in Bloomington during the respective calendar years:

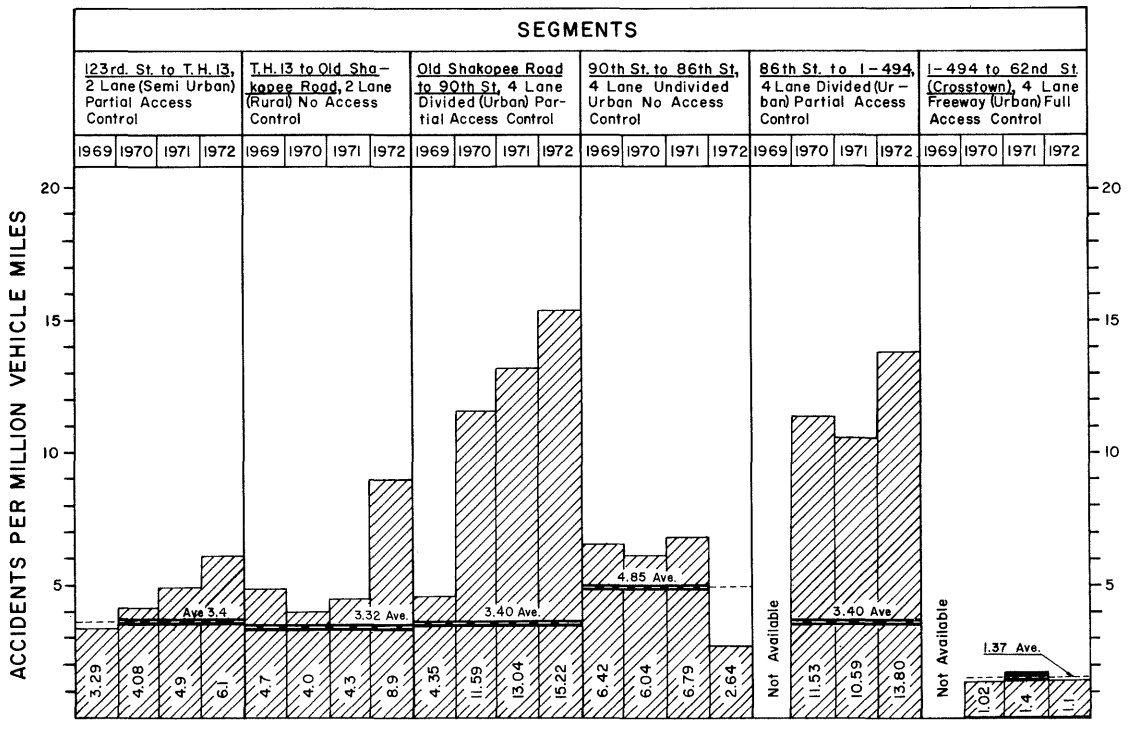
1969 97
1970 103
1971 114
1972 181

[1]Information obtained from "Minnesota Department of Public Safety Records"

[2]R. Winfrey, **Economic Analysis for Highways**, (Scranton, Pa.: International Textbook Co., 1969)

Figure 2

ACCIDENT RATES ON CEDAR AVENUE (by Segment and Year)



Note: Horizontal line indicates the F.H.W.A. average number of accidents per million vehicle miles for the same type of roadway shown in that segment.

Likely Future Trends

It can be expected that traffic volumes will continue to grow through lengthening of rush periods and greater off peak travel as the area grows and develops. Numbers of accidents are also likely to increase although hopefully not as rapidly as they have during the four-year period 1969-1972.

The average accident rate for T.H. 36 between Interstate Highway 494 and Hennepin County Highway 62 (a segment with freeway standards), was 1.17 accidents per million vehicle miles. This segment, adjacent to but outside the project limits, was included in Figure 2, as an example of what future Cedar Avenue accident rates might be if a freeway alternate is chosen. The Federal Highway Administrations rate for urban freeways is 1.37 accidents per million vehicle miles. These figures indicate that one could expect a very marked reduction in accident rates.

A more comprehensive and detailed accident report which also includes accident numbers, severities and specific locations was prepared by the **Resources Unit** of District 9, Minnesota Highway Department. This report is available on request.

SECTION II

DESCRIPTION AND PURPOSE OF PROPOSED IMPROVEMENT

Part A. Location

The 5.8 mile section of T.H. 36 proposed for improvement is located south of the Minneapolis-St. Paul Metropolitan area and lies within three Minneapolis-St. Paul south suburban communities. The communities are the Cities of Eagan, Burnsville, and Bloomington. The improvement begins near the proposed junction of Interstate 35E (I-35E) and existing Cedar Avenue in the City of Eagan, proceeds north and west across the Minnesota River Valley and terminates at the junction of existing T.H. 36 and Interstate 494 (I-494) in the City of Bloomington. Also included in this improvement is a 1.3 mile segment of T.H. 13 and a 0.5 mile segment of Old Shakopee Road which would be reconstructed to coincide with the geometrics of T.H. 36. T.H. 13 in this area lies parallel to and south of the Minnesota River. Old Shakopee Road lies parallel to and north of the Minnesota River. (See Figure 3, Proposed Route.)

Part B. Type of Facility, Access Control, Estimated Traffic, and Basic Right of Way

From the junction of I-35E to the junction of T.H. 13, T.H. 36 would provide for two-lanes of traffic in each direction (northbound and southbound). From the junction of T.H. 13 to I-494 three lanes of traffic in each direction would be provided. The centerline distance between the Northbound and southbound lanes would vary from 75 feet to 124 feet. The roadways would be separated by either a raised, curbed median (with safety barrier) or a depressed grass covered median.

Access would be fully controlled and vehicles would enter or leave T.H. 36 from the adjacent areas only at interchange locations. The interchanges which would provide for traffic to leave or enter T.H. 36 would be located at:

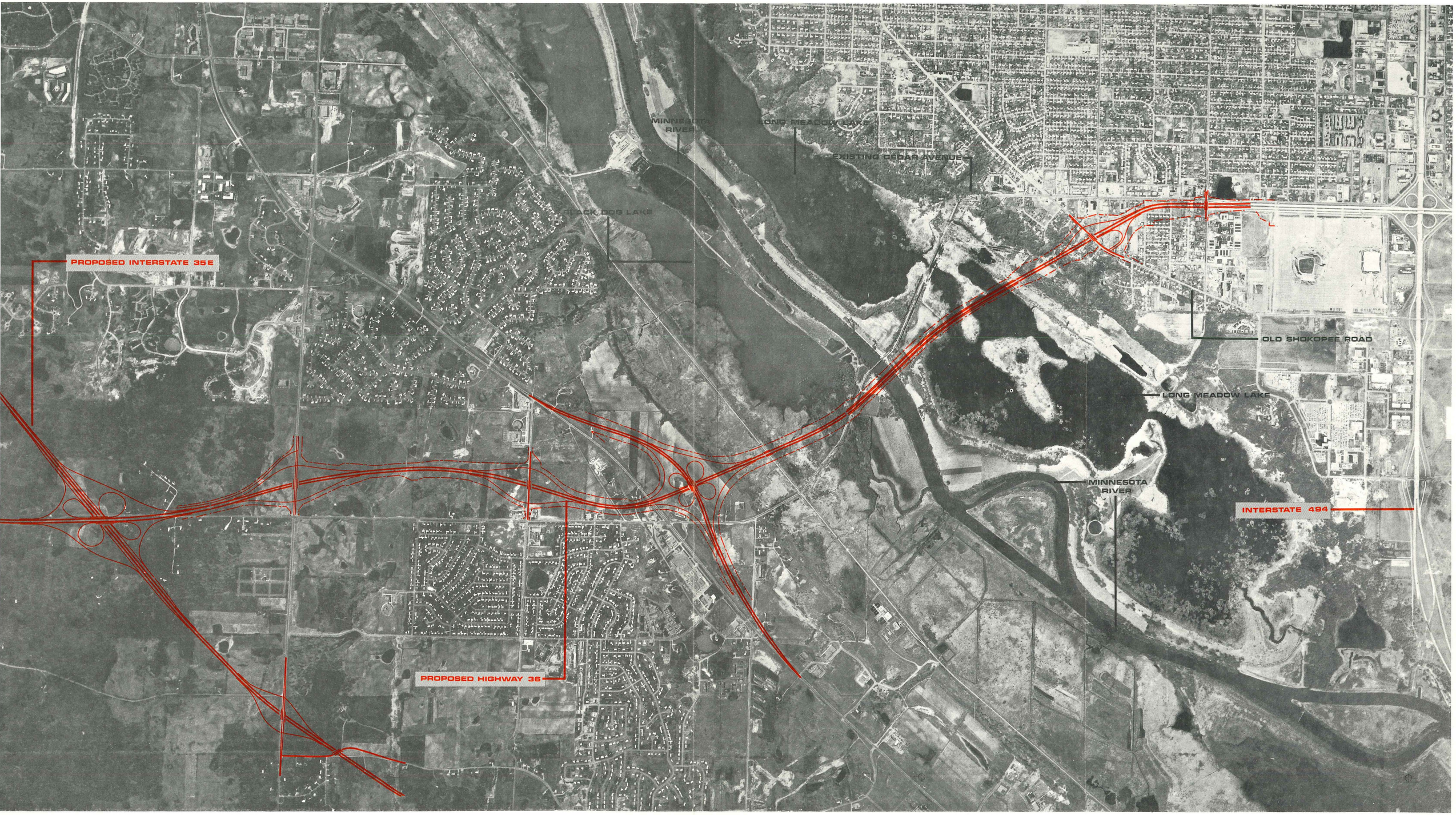
- County Road 32 (Cliff Road)
- County State Aid Highway (C.S.A.H.) 30
- Trunk Highway (T.H.) 13
- C.S.A.H. 1 (Old Shakopee Road)

Bridge structures would be provided for crossing the Chicago and Northwestern Railway, existing Cedar Avenue, the Minnesota River and 86th Street in Bloomington.

The estimated average two way traffic volumes are shown below for the following years:

1980 — 29,900 vehicles
1990 — 37,600 "
1995 — 43,300 " — (design year)

Basic right-of-way widths needed for the improvement would vary from 275 feet to 480 feet.



PROPOSED ROUTE

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

N

0 500 1000

Figure 3

Part C. History, Status and Construction Schedule

The total length of Minnesota T.H. 36 is approximately 35 miles. The present south terminus is at the junction of T.H. 13 in Eagan and the northern terminus is at the junction of T.H. 212 near Stillwater.

Prior to 1957, all of existing Cedar Avenue located within the study area for this project had been under county jurisdiction. In 1957, that portion of Cedar Avenue north of T.H. 13 was redesignated to Minnesota T.H. 36 by State legislative action, thereby transferring responsibility for maintenance and improvement of the facility to the Minnesota Highway Department. The portion of Cedar Avenue south of T.H. 13 remained and still is under county jurisdiction. In 1967, by legislative action, T.H. 36 was extended southerly from its junction with T.H. 13 to the proposed junction of Interstate 35E.

During the late 1950's and early 1960's corridor studies and preliminary design studies were made for a proposed relocation of T.H. 36. A location public hearing was held in June, 1962 for the consideration of new T.H. 36 corridors. In July, 1962 the Federal Highway Administration (F.H.W.A.) granted location approval for T.H. 36 from the junction of T.H. 13 in Eagan to 86th Street in Bloomington. Then, in January, 1964 the F.H.W.A. gave location approval for the segment of T.H. 36 from the junction of T.H. 13 to the proposed junction of I-35E.

By resolution and/or other formal actions, the cities of Bloomington and Burnsville and the Dakota County Board of Commissioners have approved the corridor location of T.H. 36 referred to as Alternate 'C' in this statement. Resolutions have also been received from these communities urging the construction of T.H. 36 (Alternate 'C') at the earliest possible date. The comprehensive development-plans of these communities have provided for and are based on the proposed construction of T.H. 36 in the corridor designated as Alternate 'C'. A combined Location-Design public hearing for the proposed improvement was held in December 1974.

The first phase of construction on the project is proposed for late in 1976. The new highway is scheduled for opening to traffic in 1979 or 1980. However, funding limitations may necessitate stage construction resulting in only a partial opening by that time.

Funding for the proposed T.H. 36 project may be available from two federal sources as well as the Minnesota Trunk Highway Fund. The river crossing bridge may qualify for special federal bridge replacement funds as provided by the bridge replacement section of the Federal Aid Highway Act of 1969. Also, since the proposed T.H. 36 is on the "Federal Aid Urban System" of roads it is eligible for funds allocated to that system. However, funding under this system is currently limited to 8.5 million dollars annually for the entire Twin City Metropolitan Area. Since this project will cost over 50 million dollars to construct (1975 prices), some form of construction staging will be necessary. Usable segments of the project will be built as funding becomes available. Priority will be given to completing the new river crossing.

Part D. Transportation Systems Considerations

T.H. 36 is part of a system of existing and proposed roads which extends over the 7-County Metropolitan Region. The system is the product of years of studies which the M.C. (Metropolitan Council)[1] and the M.H.D. (Minnesota Highway Department) made in conjunction with county and municipal governments and many other agencies within the region.

T.H. 36 functions in the system as one of three river crossings connecting Dakota and Hennepin Counties. Its importance as a transportation corridor has increased in the last decade, mainly because of the rapid growth in the western half of Dakota County and the resultant large number of commuters to Minneapolis and its suburbs.

1. The Metropolitan Council is the Metropolitan area's 3C agency and A95 clearinghouse. It is also the agency responsible for land use and transportation planning and has published a development guide for the area.

A recent MC report lists T.H. 36 among those regional highways in need of upgrading, placing it high on the priority list. Of the three river crossings (the other two are I-35W in Burnsville and T.H. 55 over the Mendota Bridge), the crossing on T.H. 36 has the most serious traffic problems. Built in 1890 and rebuilt in 1911, the narrow highway and bridge are in every sense of the word major bottlenecks.

Because T.H. 36 is a part of the metropolitan system, the proposed improvements are imperative. The MC, in its' current Development Guide, proposes express buses in mixed traffic on T.H. 36 from I-494 southward to I-35E. Presently, transit in this area is provided by bus; future transit proposals also utilize buses. Since this project will accommodate buses, it is therefore compatible with both present and future transit plans.

Presently, the 5-ton load limit on the inplace Cedar Avenue Bridge prohibits any bus travel. Also, congestion from present traffic volumes reduces the highway's usefulness as a route for the daily commuting workforce. During peak movement hours, traffic back-ups often extend as far as two miles, particularly in the vicinity of the Cedar Avenue Bridge.

The need for upgrading T.H. 36 will increase with time. The extensive industrial and commercial development proposed for Eagan will attract many shoppers and workers from the nearby Minneapolis suburbs. It will also generate considerable heavy commercial traffic between the two districts. New residential development in Dakota County will mean more workers commuting over the route during peak movement hours. A newly approved year-round Zoo, the Minnesota Zoological Gardens, opening in 1977 on a 460-acre site in Apple Valley, will attract about one million visitors annually from Minneapolis and its suburbs. A large amount of the traffic will use T.H. 36.

Failure to improve T.H. 36 will leave this part of Dakota and Hennepin Counties without any high-type connection. Given the expected life of the inplace Cedar Avenue Bridge (about 10 years), after 1984 there will be no river crossing at all in this area. Not only would a lack of highway facilities — or a lack of adequate facilities — be contrary to the Metropolitan Principal Arterial Plan, but it would be contrary to the plans of the local cities (Bloomington, Burnsville, Eagan and Apple Valley). In particular, the absence of a suitable highway in the T.H. 36 corridor could abort development in Eagan, Apple Valley and other southern communities.[1]

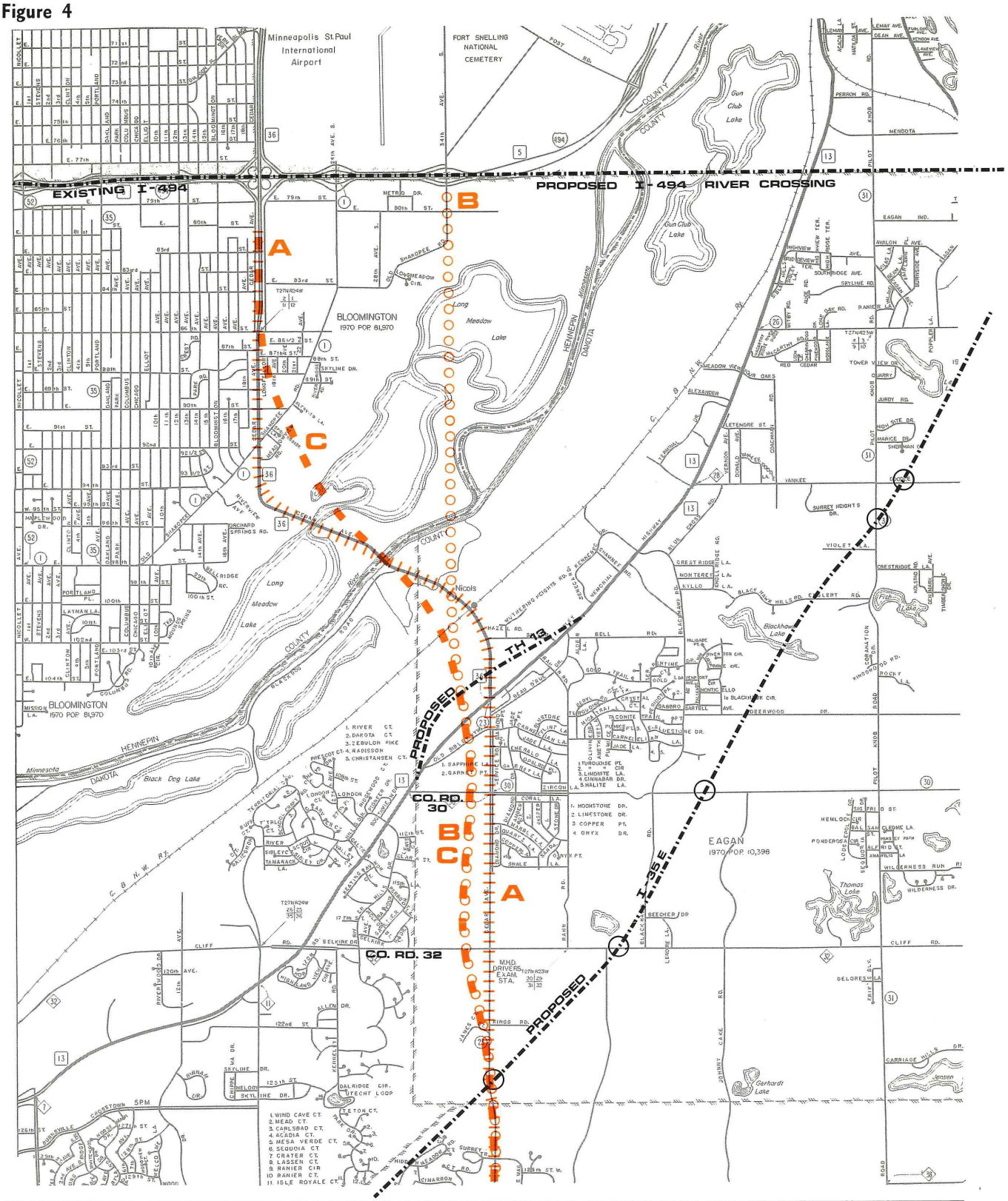
A more comprehensive and detailed "Transportation Systems" analysis was prepared by the Resources Unit of District 9, Minnesota Highway Department. This report is available on request.

[1]Basic data in this section was obtained from the Metropolitan Council, **Metropolitan Development Guide, Transportation Chapter,** (March, 1973)

SECTION III

PROJECT ALTERNATIVES

Figure 4



ALT A	UPGRADE EXISTING CEDAR AVE	
ALT B	34th AVE	
ALT C 1&2	CENTRAL CORRIDOR	
PROPOSED HIGHWAYS		
PROPOSED INTERCHANGES		

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

N

0 1000 4000

INTRODUCTION

Soon after taking over the responsibility for maintaining and upgrading Cedar Ave. in 1957, the Minnesota Highway Department (MHD) began studying ways to improve this highway. As with other major highway improvement projects, this one had to be designed and built to meet both present and future transportation needs.

Studies conducted to determine these needs showed that the project area is the fastest growing in the entire Minneapolis-St. Paul Metropolitan region and that future development plans were very ambitious. It was evident that, to provide for the rapidly increasing traffic and projected traffic volumes, it was necessary to design the proposed highway to freeway[1] standards. This type of design was the only one that would carry the anticipated vehicles safely and without traffic breakdowns and extensive delays.

Another important consideration was the Metropolitan Council's designation of the proposed highway as an intermediate arterial. This designation implies a controlled access highway to allow for free flowing traffic and to permit the addition of other modes of transportation in the future. (An example of another mode would be the preferential treatment of mass transit buses with a resultant reduction of travel time and improved capacity and safety.)

ALTERNATE SELECTION

Primarily, the improved highway will function as a connection between northwestern Dakota County and a section of Trunk Highway 36 north of Interstate 494 which was previously constructed to freeway standards.

Several corridors were studied as possible locations for the proposed project. From these, three basic corridors emerged for serious consideration. The Draft Environmental Statement (DEIS), circulated in October 1974, discussed these three alternate corridors plus the do-nothing alternate. The alternates were given the letter designations A through D as follows:

Alternate A: This alternate proposed the construction of a freeway on the existing highway (Cedar Ave.).

Alternate B. This alternate proposes the construction of a freeway on all new alignment. It is known also as the 34th Ave. corridor.

Alternate C: This alternate proposed the construction of a freeway on all new alignment. Known as the Central Corridor, it has two possible designs—Alternates C1 and C2. Alternate C1 has provision for future transit in the median space between opposing lanes of traffic; C2 does not.

Alternate D: This is the do-nothing alternate, meaning that no action would be taken to build a new highway.

Following the circulation of the T.H. 36 DEIS, the general public, local municipalities, and appropriate agencies and organizations had opportunity to review and comment on the DEIS and, at the same time, indicate preference of Alternates. These opportunities included open house meetings in Bloomington (October 29, 1974) and Eagan (November 7, 1974) and a public hearing in Burnsville and Bloomington on December 3 and December 5, 1974.

Comments on the DEIS were received from 25 groups. Of those commenting, 12 indicated a preference for one of the project alternates. These were as follows:

2 Agencies for Alternate **A**
0 Agencies for Alternate **B**
10 Agencies for Alternate **C**
0 Agencies for Alternate **D**
12 total

Testimony at the Public Hearing also contained preferences for certain project alternates. Here 97 people gave oral or written testimony and 54 indicated a specific alternate choice as follows:

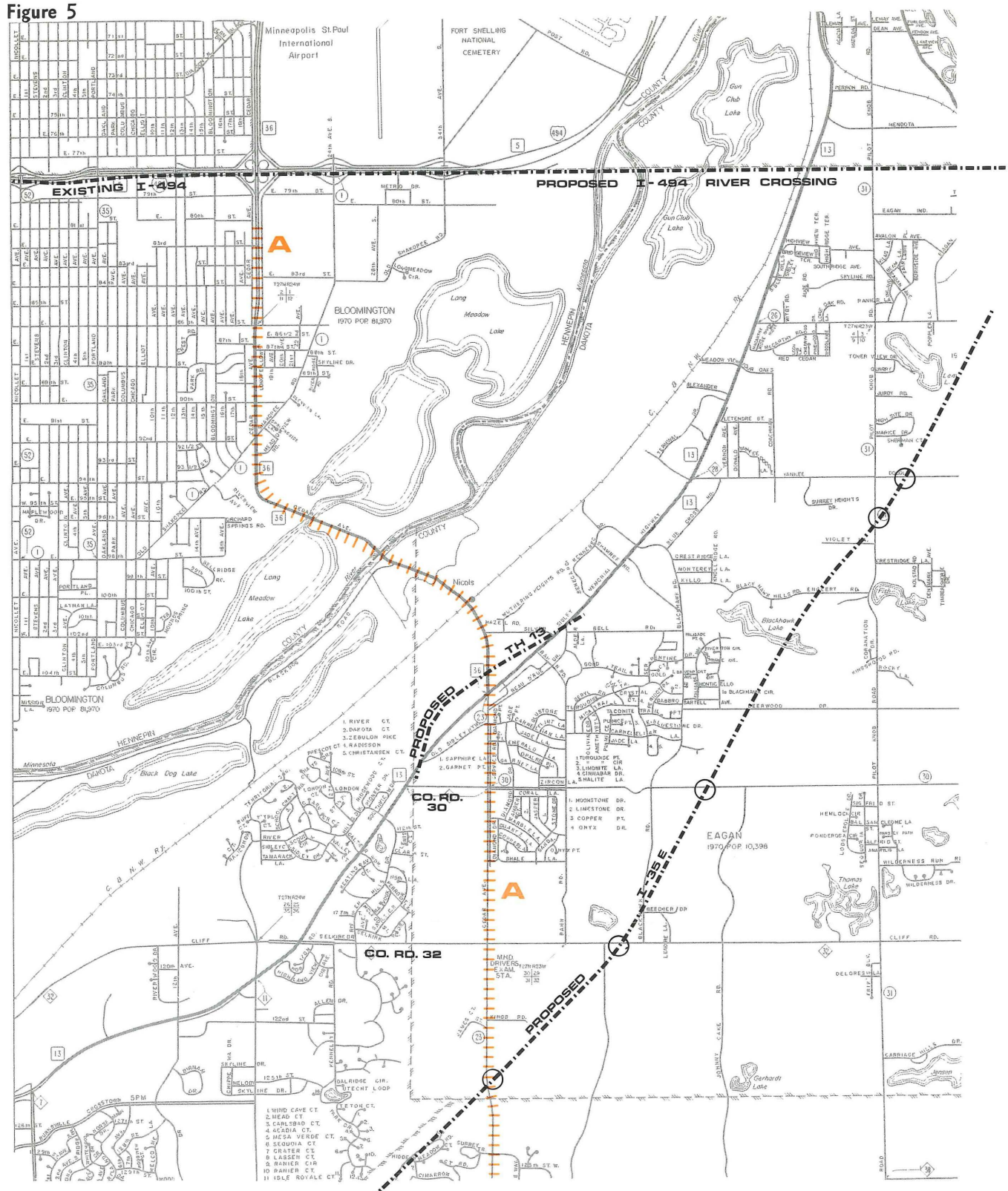
3 People for Alternate **A**
1 Person for Alternate **B**
47 People for Alternate **C**
3 People for Alternate **D**
54 total

These comments, both from the DEIS and Public Hearing, indicate a strong preference for Alternate C which is now the selected alternate. Only details of design remain to be decided.

Following in this section is a discussion of the alternates presented in the DEIS—**Alternate C**, the selected corridor, and the three remaining alternates A, B, and D (Do-Nothing).

[1]Freeway—A divided highway for through traffic with full control of access and grade separations (bridges) at intersections.

Figure 5



ALT A UPGRADE EXISTING CEDAR AVE

PROPOSED HIGHWAYS

PROPOSED INTERCHANGES

cedar ave. s.

trunk highway 36

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 1000 4000

N

Part A. Alternate "A" Existing Cedar Ave.

ALTERNATE 'A'

(West on Present Cedar Avenue Corridor) See Map Figure 5

A new facility built on this corridor would use the present or existing right of way along Cedar Avenue. It would include the right of way currently designated for County State Aid Highway (C.S.A.H.) 23 from proposed I-35E to T.H. 13 in Eagan and also the right of way for the existing T.H. 36 portion from T.H. 13 to I-494 in Bloomington.

Present Cedar Avenue, through the majority of its length, is a two-lane roadway with a total right of way width of 66 feet. If a freeway, as proposed, were to be built along this corridor, an additional 250 to 450 feet of right of way would have to be purchased all on one side or on both sides of the existing right of way.

Building the new highway along Alternate A would have the following advantages (in the floodplain): of the four alternates, it would be (1) less disturbing to the vegetation and wildlife habitat, particularly in the Long Meadow Lake area; (2) less of a visual intrusion, because new construction would basically follow inplace alignment; and (3) less disruptive to construct, since the existing road could serve as an access route and platform for construction equipment.

Figure 6

The intersection of Old Shakopee Road and Cedar Avenue is shown in this aerial looking north on Cedar Avenue. The Metropolitan Sports Complex can be seen in the right background.

[1]Alternate B effects much less of the developed areas than either Alternate A, C1, or C2.

Although these advantages are important considerations, the disadvantages outweigh them. For one thing, implementing Alternate A would disrupt traffic on the existing road for two or three years. Motorists who normally use Cedar Avenue would have to take an alternate river crossing (See Transportation System Considerations, P. 9).

Another disadvantage of this Alternate is that its socio-economic costs are much higher than those of Alternates B, C1, and C2. At the June, 1962, Public Hearing, the MHD stated that Alternate A would cost $570,000 more than Alternate C. This difference was mostly because Alternate A required more homes, apartment buildings, and commercial and industrial buildings than Alternate C.[1] Since 1962, much more development has occurred along Cedar Avenue. Consequently, the socio-economic costs and the total costs of right-of-way acquisitions along this alignment would be even higher now. (1975).

It is estimated that if a freeway were built along existing Cedar Avenue, 400 families would be displaced. Of these families, 50 occupy single family homes and 350 are in multiple family units.

Table 1 shows the number of buildings and other properties that would have to be removed to build Alternate 'A'. The cost of these properties is estimated at $12,895,000.

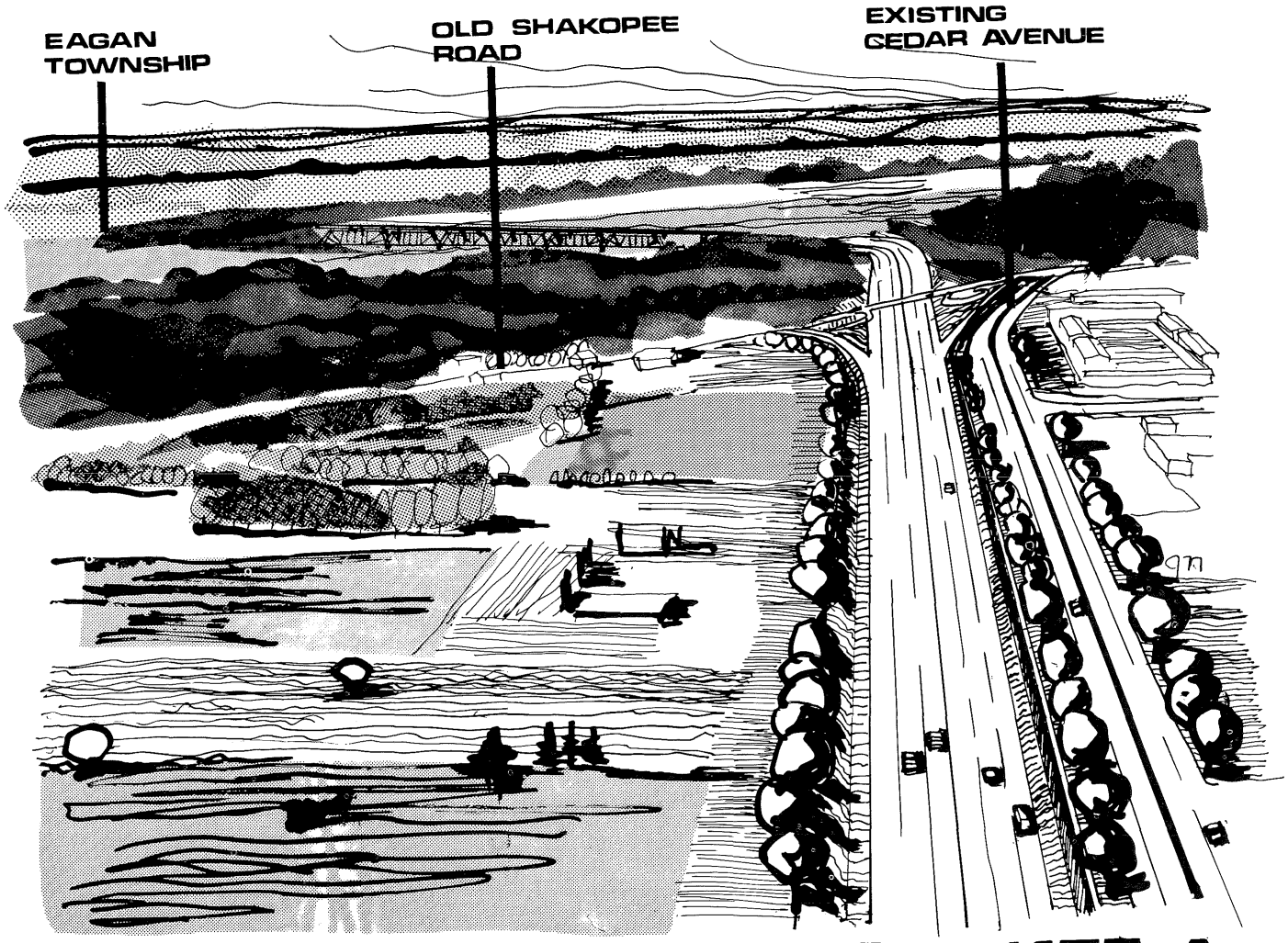
For comparison, Alternate 'C-2' would displace 34 families occupying single family homes, one commercial building and 405 undeveloped acres at a total estimated cost of $3,987,500.

With freeway construction along Cedar Avenue, access to the developed areas that remain would be severed requiring extensive frontage road construction. If Cedar Avenue could remain intact, as it would with Alternate 'B' or 'C', it could continue to serve the adjacent properties with their existing and future development.

"ALT. A" RIGHT OF WAY REQUIREMENTS

Table 1

Item	Number
Single Family Residences	50
Multiple Family Residences	13 Bldgs. — 350 Units
Commercial and Industrial Buildings	26
Child Care Center	1
Elementary School	1
Sewer Lift Station	1
Unimproved Acreage	239 Acres
Total Estimated Cost = $12,895,000	



VIEW SOUTH ALONG ALTERNATE A IN BLOOMINGTON

Figure 7

Throughout the Alternate 'A' corridor it would be difficult if not impossible to provide noise shielding to meet the L10, 70 dBA noise level requirement established by federal guidelines.[1] There would be no chance to provide a spacial buffer zone as there is with Alternates 'B' and 'C'. One impossible area to shield would be the residential buildings lying west of Cedar Avenue and south of Old Shakopee Road. Here homes are immediately adjacent to the proposed right-of-way and are as much as 40 feet above the elevation of Cedar Avenue. There is no feasible way to protect this area from an estimated 79 dBA noise level. (This is nearly twice as loud as the 70 dBA design noise level in F.H.P.M. 7-7-3).[2]

Another important consideration is that this alternate is not consistent with the land use and development plans of the communities involved. Eagan, Burnsville and Bloomington have all made and to some degree executed development plans based on the Alternate 'C' corridor. Most right-of-way has been left undeveloped and rezoning has taken place for highway compatibility along the Alternate 'C' corridor.

Taking into account the many difficulties involved in constructing this alternate, the displacement of residents and businesses and the planning that has already been done by all communities, this alternative was dismissed from further consideration.

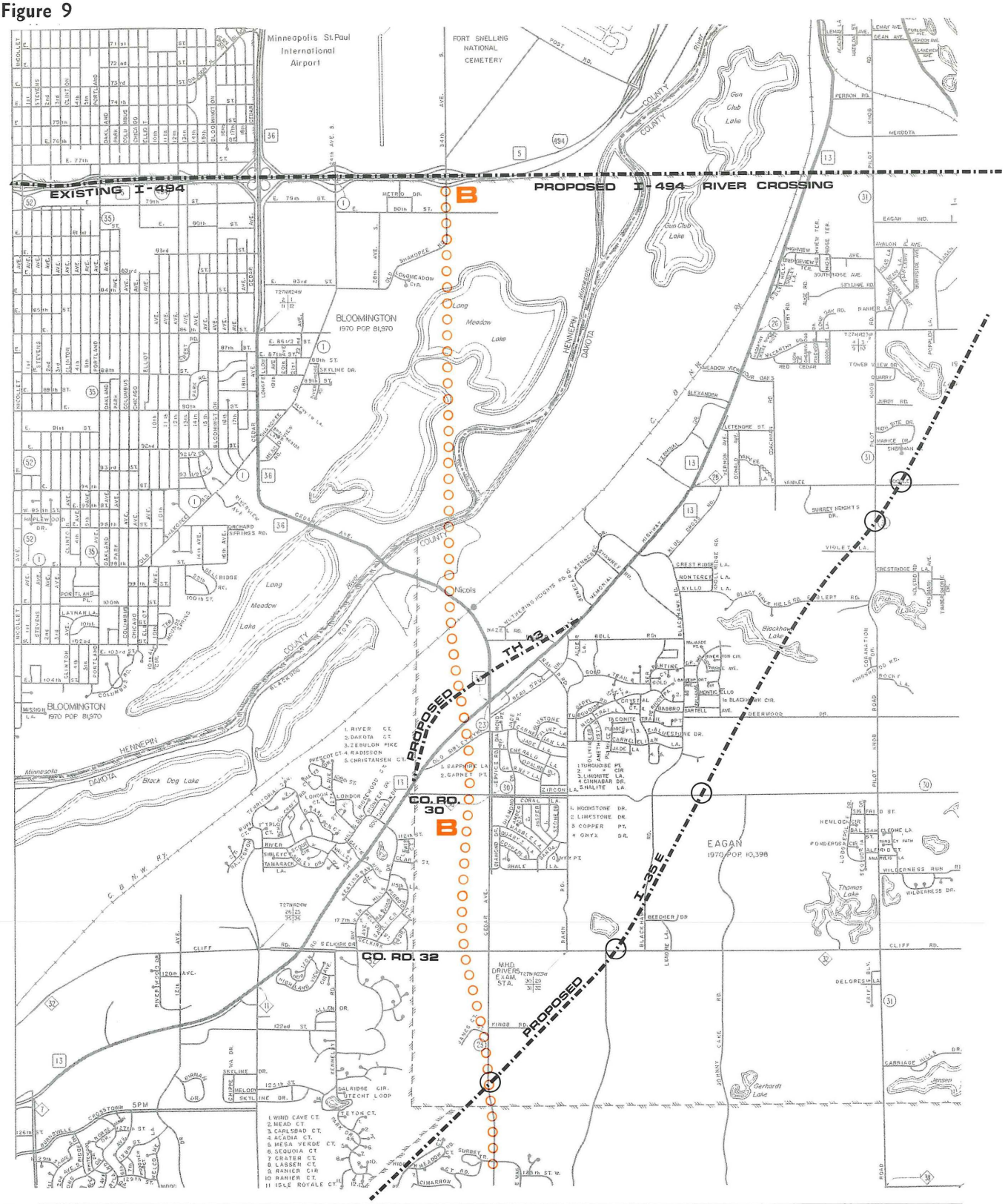
[1]An L_{10}, 70 dBA noise level means that the 70 decibel noise level, as measured on the A scale, is exceeded 10 percent of the time. A 70 decibel level is about like the noise from the average room air conditioner at 10 feet.

[2]F.H.P.M. 7-7-3 (PPM 90-2) is the Federal Highway Program Manual written to interpret and implement the provisions of Title 23 Sec. 109(h) and (1) U. S. Code relative to noise standards and procedures.

This aerial view, looking northwest, shows Cedar Avenue crossing the Minnesota River Valley. The City of Bloomington is in the background.

Figure 8

Figure 9



ALT B 34th AVE

PROPOSED HIGHWAYS

PROPOSED INTERCHANGES

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

Part B. Alternate "B" 34th Avenue

ALTERNATE 'B'
(East or 34th Avenue Corridor)

See Map Figure 9

This alternate corridor would place the proposed new facility in Eagan, approximately ⅛ to ¼ of a mile west of existing Cedar Avenue from the proposed junction of Interstate Highway I-35E to the proposed junction of T.H. 13 in Eagan. From there it would proceed northerly passing over the existing Cedar Avenue just north of the Chicago and Northwestern Railway track. It would then continue due north across the Minnesota River and floodplain to connect with the existing 34th Avenue in Bloomington. From that point it would follow along existing 34th Avenue to I-494, where it would turn west on existing I-494 before joining the existing T.H. 36 at Cedar Avenue.

Alternate B has some advantages over Alternates A, C1, and C2. Principally, it would have less negative socio-economic impacts on the project area, particularly in Bloomington. Alternate B would: (1) allow traffic going to the industrial complex near I-494 to avoid Bloomington's residential area; (2) relieve traffic congestion on Cedar Avenue & Old Shakopee Rd.; (3) remove fewer residences and businesses (it doesn't remove any in Bloomington); (4) leave existing Cedar Avenue to serve adjacent property; and (5) provide a natural buffer zone for noise in Bloomington.

Despite these advantages, adopting the Alternate B proposal would create a number of major problems. These are as follows:

1. To accommodate the T.H. 36 traffic along I-494 to the west, additional lanes would have to be constructed from 34th Avenue. The interchanges of I-494 with 34th Avenue, 24th Avenue and Cedar Avenue would have to be rebuilt. Proposed T.H. 36 would not be able to continue directly north beyond I-494 because 34th Avenue becomes a city street at this point, terminating about one mile north where it is blocked by the Twin Cities International Airport. Thus, this corridor cannot be extended beyond I-494.

A possible route for the Alternate B alignment beyond I-494 would be to turn traffic easterly onto I-494 and T.H. 5. However, this would create intolerable operational problems within the weaving and mixing[1] section between 34th Avenue and the proposed I-494 T.H. 5 interchange. In addition to this, T.H. 5 would have to be rebuilt from I-494 T.H. 55. Included in this segment are three interchanges that would need major revision: the Post Road, Airport, and Fort Snelling interchanges. Assuming that the major part of the T.H. 36 traffic would turn north at the Fort Snelling interchange, T.H. 55 from that point to the 62nd Street Hennepin County freeway would also have to be reconstructed. All of these changes would make this route for T.H. 36 socially, economically, and environmentally imprudent.

2. To provide adequate capacity for T.H. 36 traffic, 34th Avenue would have to be rebuilt to freeway standards. Upgrading 34th Avenue to freeway standards would sever access to the existing and planned commercial and industrial buildings along the route.

3. The approximately 2,000 foot distance on 34th Avenue between Old Shakopee Road and I-494 is too short to provide a safe weaving and mixing area between exit and entrance points that might be built. This would prohibit any reasonable access to the local street system between I-494 frontage roads and the Minnesota River.

4. This alternate is contrary to the "Eastern Area Plan" of Bloomington which is the city's comprehensive plan. The street and highway system in this plan is dependent on the Alternate 'C' corridor.

5. The Bloomington Planning Commission has stated that 34th Avenue from Old Shakopee Road to I-494 will need to accommodate 18,000 to 25,000 vehicles a day by 1985 and that it is important to retain this street as an arterial to serve as direct access to residential and commercial development. This would not be possible if it were reconstructed to freeway standards to provide for T.H. 36 traffic.

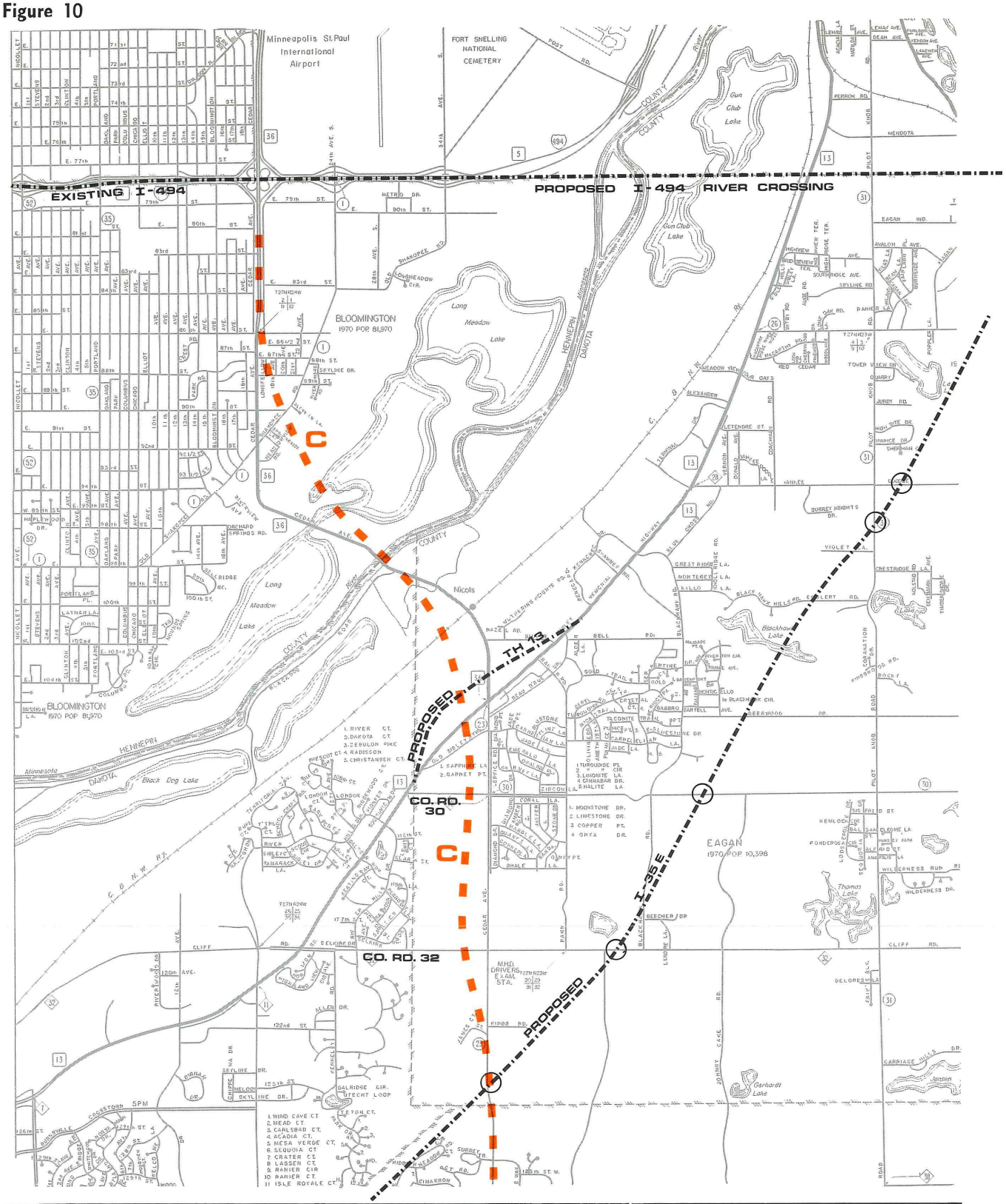
6. If T.H. 36 were built on the Alternate 'B' corridor, it would cross the Minnesota River floodplain at a flat angle in an area where it would be about twice as long as the Alternate 'A' and 'C' crossings. This would make this crossing over two miles long compared to about one mile for the others. It would seem reasonable to expect that any adverse environmental effects created by building a highway across the floodplain and Long Meadow Lake would be greatly increased by this longer crossing. (See Figure 23, Section IV)

7. This corridor location would not permit the full utilization of the inplace expressway and freeway portions of T.H. 36 between 86th Street and the 62nd Street (X-Town) Hennepin County freeway. This represents a failure to make full use of the resources, i.e., funds, space, etc.; already invested in T.H. 36.

For the above reasons Alternate 'B' was not considered feasible or prudent and therefore was dismissed from further consideration.

[1]Weaving and mixing is the converging and crossing of traffic streams in a segment of highway where at one end two one-way roadways merge and at the other end they separate.

Figure 10



ALT C 1&2 CENTRAL CORRIDOR------

PROPOSED HIGHWAYS ----------

PROPOSED INTERCHANGES ----------

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 1000 4000

N

trunk highway 36

Part C. Alternate "C" Central Corridor (The Selected Alternate)

ALTERNATE 'C'
(Central Corridor)
See Map Figure 10

The Alternate 'C' corridor would position the proposed new facility within Eagan, approximately ⅛ to ¼ of a mile west of existing Cedar Avenue from proposed Interstate Highway 35E (I-35E) to proposed T.H. 13. This alignment is the same as that of Alternate 'B' through this segment.

From T.H. 13, the alignment would turn northwesterly to cross the Chicago and Northwestern Railway track about 1,000 feet west of the inplace Cedar Avenue. It would then continue northwesterly crossing over the existing Cedar Avenue about 900 feet south of the Minnesota River in the northeasternmost corner of Burnsville.

Continuing in a northwesterly direction, Alternate 'C' would place the new river bridge over the Minnesota River channel, approximately 300 feet east or downstream from the inplace Cedar Avenue bridge. It would then proceed across the river floodplain and after reaching the northern bluff of the valley, pass under County Road 1 (Old Shakopee Road) about 1,500 feet northeast of existing Cedar Avenue in Bloomington. From this point it would continue northwesterly before turning due north where it joins the inplace T.H. 36 at 86th Street.

Between this point and Interstate Highway 494 to the north, there is a 3,000 foot inplace highway segment that was previously upgraded to a four lane divided expressway. This segment will adequately serve the T.H. 36 traffic until it will be again upgraded to freeway standards sometime during the 1980's.

The portion of the alternate that lies north of proposed Interstate Highway 35E and south of the Minnesota River is largely an undeveloped corridor that has been kept that way by the City of Eagan to accommodate the proposed T.H. 36.

In Bloomington, north of the river, the corridor passes through some undeveloped land but a portion of it would go through residential land that was developed prior to this proposed project.

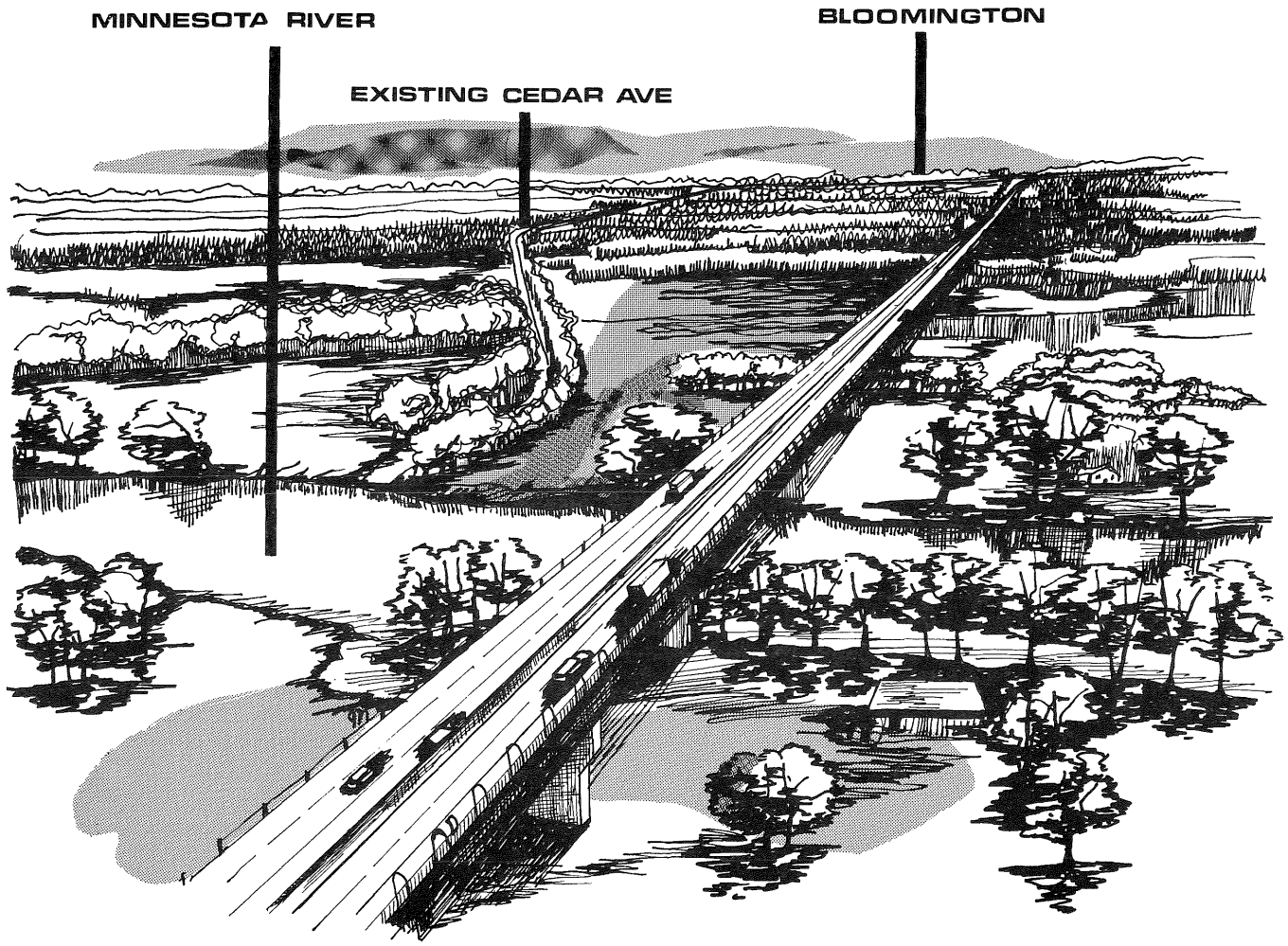
Within the Alternate 'C' corridor, two design alternates, C-1 and C-2 were considered. Alternate C-1 differs from C-2 only in that it would have a greater space in the median between opposing traffic lanes for future transportation options. Extra right-of-way needed for this is about the same as the extra space needed in the median. This space provided by Alternate C-1 is from 10 to 50 feet depending upon the type of design proposed for T.H. 36. For example, in the Eagan area, where a more rural design is proposed, not much more space is needed for Alternate C-1 in the already wide median; however, across the floodplain and in Bloomington where a more urban design would be contemplated with a narrow median, more space is needed to accommodate the possible future transportation needs as proposed by Alternate C-1.

At this point in time, no specific type of transit vehicle has been identified, which makes it difficult to speculate on what design features may be needed. Alternate C-1 then, is only meant to reserve a space for some type of future transportation alternates in the proposed highway corridor.

A preliminary layout showing the Alternate 'C' roadways with bus lanes in the median was prepared by the Minnesota Highway Department. This was done to exemplify how an exclusive mass transit facility might fit into the proposed highway median. A bus facility was chosen only because it would require the greatest width of all known transit vehicles and because it is the mode that is most likely to be chosen to serve the area.

The Metropolitan Council and Metropolitan Transit Commission have proposed using express buses in mixed traffic along proposed T.H. 36[2]. Alternate 'C-1' goes be-

[2]Metropolitan Council, **Metropolitan Development Guide, Transportation Chapter,** (March, 1973)
Metropolitan Transit Commission, **The Transit Development Program: Summary of Action, 1973 - 1990,** (February, 1973)



CEDAR AVE. BRIDGE CROSSING OF MINNESOTA RIVER ALT C_2

Figure 11

yond these proposals by providing greater flexibility in choosing a future transit system.

It would be difficult if not impossible to predict, at this time, what the building of an exclusive mass transit facility in the highway median might do to the environmental concerns in the project area. The difficulty lies with the inability to predict the type of facility and if or when it might be built. Without knowing this, one can only consider the effects that the alternate would have at the time of highway construction.

The effects on air quality and noise levels would of course depend on the type of vehicle used, its power source, whether it will run along a rail or on a paved surface, etc.

The "Socio-Economic Inventory" section of this report indicates that the overriding consideration or impact of Alternate 'C-1' is the additional right of way that would need to be acquired. Tables 8 and 9, Section IV, show that an additional three families, two commercial buildings and 23 acres of undeveloped land would be needed. These added properties would make right of way acquisition for Alternate 'C-1' an estimated $206,000 more than that for Alternate 'C-2'

Preliminary cost estimates have been prepared for Alternates 'C-1' (with mass transit space in the median) and 'C-2' (without mass transit space in the median). These costs include the right-of-way, grading, paving, bridges and engineering costs.

Alternate C-1 $42,006,800
Alternate C-2 $41,269,200

It can be concluded from these estimates that the cost for providing additional median space for a mass transit facility would be $737,600.

Another design alternate for the Alternate 'C' corridor that has been considered but rejected is one which would involve a 1,900 foot roadway fill through the Long Meadow Lake area. This was investigated as an option to building a bridge over the lake as is currently proposed.

A permanent fill, approximately 30 feet above the normal lake level, would be possible to construct since only a 30 to 40 foot depth of peat would be encountered in the Long Meadow Lake area. This amount of peat could be successfully removed and replaced with appropriate fill material. In the area adjacent to and south of the lake where the peat depth is 60 to 70 feet, total peat removal would not be possible. Therefore, a bridge or a fill with counterbalances would be needed.

It is estimated that a permanent fill through Long Meadow Lake would cost 3.5 to 4 million dollars less than a bridge over the same area. The, savings derived from building a fill, however seem to be outweighed by the other considerations:

1. The fill would be an impenetrable barrier for most wildlife in the lake area.

2. The fill would create a 0.30 foot swellhead near proposed T.H. 36 during a 100 year flood.[3] A maximum of 0.10 foot swellhead has been established by the controlling agencies.[4]

3. The construction activities involved in dredging and filling would cause far more turbidity, water discoloration and sedimentation than bridge construction activities.

For these reasons, this fill alternate has been rejected by the Minnesota Highway Department and the Department of Natural Resources.

As mentioned in the "Project History and Status" section, the City of Bloomington officially accepted the Alternate 'C' corridor for T.H. 36 in April, 1963. Bloomington also has included this alternate's alignment in its "Eastern Area Comprehensive Plan" and its future land use and thoroughfare plans.

The City of Eagan, though not giving formal approval to this location, has made an informal commitment to this alternate. Eagan has included this alignment in its comprehensive plan and has reserved this corridor by holding back development in the area. Many utilities have been planned and built dependent on Alternate 'C' and the future land use along this corridor has been established by Eagan, Burnsville and Bloomington so as to be compatible with a freeway.

As indicated previously in this section, the Alternate 'C' corridor was selected and, in addition, the C-1 design alternate (with median space for future transportation needs) has been chosen. This choice was made only after much deliberation and thorough consideration of the advantages and disadvantages of each alternate. The following lists present a few of the considerations:

Alternate C-2

1. This alternate would require less right of way and fewer people would be disrupted (see p. 22&90).
2. Bridges separating local roads over the proposed highway could be shorter, thus saving costs, materials, and labor.
3. Total costs would be approximately $737,600 less than Alternate C-1 (1973 prices).
4. This alternate could carry buses in mixed traffic if this type of transit is all that is ever needed in this corridor. However, if an exclusive bus lane or another mode of transit is needed, it would be difficult to accommodate.
5. This alternate conforms more closely with Bloomington requests to confine the width of the project and thereby minimize right of way takings.

Alternate C-1

1. This alternate has the majority of public and governmental agencies support.
2. Few north-south river crossings exist throughout the southern metropolitan region and no others are contemplated. T.H. 36 (Cedar Avenue) is the only river crossing where it is possible to provide for future transit options. The I-35W, T.H. 55, and I-35E bridges offer no possibility for any exclusive transit in the future without major right of way acquisition and reconstruction.
3. This alternate provides better design continuity when considering all of T.H. 36 from the 62nd St. Hennepin County (X-Town) freeway to the proposed Zoo Road south of I-35E. That is, it would provide a depressed grass median throughout, so that a motorist would not be facing a changing design.
4. The wider depressed median can also provide the following:

   a. a safety clear zone for a motorist accidentally leaving the roadway.
   b. a snow storage area, thus saving the costs and energy needs associated with hauling.
   c. better drainage and erosion control.
   d. a possible confinement of an oil or chemical spill prior to it entering the remaining drainage system.

[3]Computed by the United States Department of the Interior, Geological Survey.
[4]U.S. Corps of Engineers, Minnesota Dept. of Natural Resources and the Lower Minnesota River Watershed District.

Part D. Alternate "D" Do Nothing

The do nothing alternate would mean that no action would be taken to improve the existing highway facility. If this decision is reached, one could assume that safety improvements such as turn lanes, channelization, shoulder repairs, traffic signals, etc., would eventually be made to the inplace roadway. This would make it somewhat safer but would in no way provide for the estimated 43,300 vehicles per day in 1995.

There are serious deficiencies in the existing roadway such as surface width, shoulders, vertical clearances and passing opportunities all of which restrict the basic capacity. These all contribute to the inability of the present roadway to handle the daily traffic demands and to the hazards that people continually face while driving on it.

The existing bridge over the main channel of the Minnesota River poses serious hazards for boat and barge traffic on the river. The bridge has been closed many times in recent years for inspection and repairs after being struck by barges trying to navigate through the narrow opening (105 feet) between piers. It is conceivable that if struck hard enough, this 84 year old structure would collapse with a resulting tragedy.

It is expected that this river bridge can only be maintained for another 10 years because of its poor condition and mounting maintenance costs. At that time the bridge will have to be torn down thus forcing traffic to other existing routes that are already overcrowded during peak times. The socio-economic ramifications of this action are explored in the "Probable Impact" section.

SECTION IV

PROBABLE IMPACT OF THE PROPOSED IMPROVEMENT

Figure 12

Part A. Introduction

Proposed Trunk Highway (T.H.) 36 will pass through portions of the cities of Bloomington, Burnsville and Eagan. As in most urban areas today, development in these cities includes industrial and commercial complexes, multi-family units, and the conventional single-family units. But the three cities have an additional — somewhat unique — feature: All are part of an area which is plentiful in open space, vegetation and wildlife.

Thousands of years ago, melted glacial waters formed the Minnesota River Valley. Near St. Paul, where the Minnesota River flows into the Mississippi River, the valley widens to encompass acres of woods and marshland.

Cedar Avenue crosses the Minnesota River about 6 miles upstream from St. Paul at a point where the valley is over one mile wide. The northern side in Bloomington is relatively untouched and serves as a refuge for wildlife. On the southern side in Eagan and Burnsville, some industrialization has taken place. The broad, open vistas, however, remain the dominant feature of the valley area.

This section of the Environmental Impact Statement presents an inventory of the criteria that make up the natural and man made environment of this very diverse area and shows how they might be affected by the proposed improvement. This criteria was studied and evaluated by a team comprised of specialists from many different fields (Forestry, Agronomy, Landscape Architecture, Geology, Biology, Sociology, Economics and others). The team gathered and analyzed all available data on the natural and cultural resources. Local citizens and municipalities gave many helpful suggestions and supplied much useful information during the study.

In addition to a discussion of the criteria, this section contains a number of maps, sketches, tables and graphs designed to complement the text and aid in the impact evaluation. Table 2 lists the data evaluated.

Table 2 INVENTORY OF CRITERIA OR DATA EVALUATED

I. FOUNDATION SOILS
1. Well drained (Sand and Gravel)
2. Poor drained (Clay)
3. Very poor drainage (Peat and Muck)

II. ERODIBLE SOILS
1. Nonerodible soils
2. Soils with existing or potential erodibility

III. STEEP SLOPES
1. Slopes less than 12%
2. Slopes greater than 12%

IV. WATER SYSTEMS
1. Confined Drainage
2. Intermittent Streams
3. Marshes
4. Open Water

V. FLOOD PLAIN
1. Below 720 ft. Elevation — 100 yr. Flood Plain (established by U.S. Corps of Engineers)

VI. VEGETATION
1. Grassland
2. Sedge — Willow
3. Mixed Hardwoods of light, moderate and heavy densities

VII. WILDLIFE
1. No Habitat
2. Small game — Low level habitat
3. Small game — High level habitat
4. Water fowl habitat
5. Small and possible big game, water fowl habitat

VIII. OPEN SPACE
1. Proposed Trail System
2. Proposed recreational Open Space or Open Space Covenant
3. Existing recreational Open Space

IX. SPECIAL FEATURES
1. Vista
2. 19th Century Sandstone Quarry
3. Indian Village
4. Indian Burial Mounds
5. Interesting Topography
6. Water in Motion
7. Wetlands
8. Water birds
9. Wildlife
10. Recreation Trail
11. State Park
12. Proposed City Park

X. LANDSCAPE CHARACTER AND AESTHETIC RESOURCES
1. Urban
2. Openings
3. Upland Hardwoods
4. Bluff
5. Wooded Slopes
6. Lowland Hardwoods
7. Water
8. Marsh and Wetlands

XI. VIEW FROM ROAD
1. Dominant Landform
2. Enclosures
3. Existing Features
4. Potential Features
5. Direction of View
6. Panoramic View
7. Unlimited View

XII. EXISTING LAND USE
1. Residential Single Dwelling
2. Multiple Dwelling
3. Commercial
4. Industrial
5. Public Facilities
6. Unique Development
7. Recreational — 4(f), 6(f) and Sec. 106 lands

XIII. PROPOSED LAND USE
1. Residential Single Dwelling
2. Multiple Dwelling
3. Commercial
4. Industrial
5. Public Facilities
6. Unique Development
7. Recreational — 4(f), 6(f) and Sec. 106 lands

XIV. POPULATION
1. Population Density
2. Population Characteristics
3. Neighborhoods

XV. COMMUNITY SERVICES
1. Schools
2. Public Safety
3. Churches
4. Hospitals
5. Recreational Facilities
6. Accessibility (transit, Roads)
7. Public Utilities

XVI. LAND VALUE AND TAX STRUCTURE

Part B. Environmental Inventory and Impacts of Proposed Improvement

Reviewing how the study area was formed thousands of years ago provides one with a basis for an understanding of the comprehensive planning process. Geology gives this basis.

1. GEOLOGY

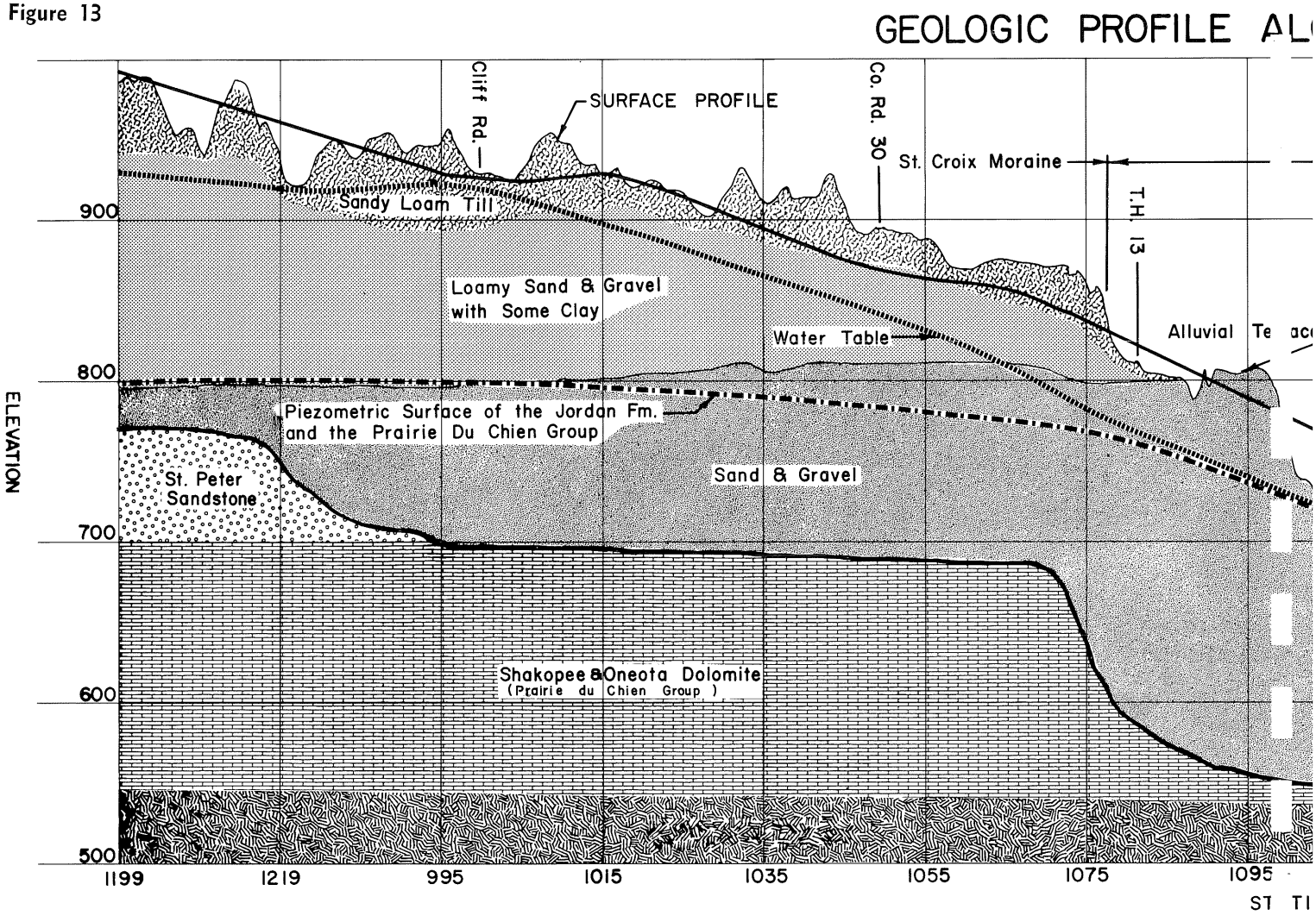
Geology deals with the physical nature and history of the earth, its structure and development, the composition of its interior and individual rock types. For this report, geology has been broadly divided into three parts: First is a discussion of the soils and bedrock; the second part deals with the ground water associated with these soils and rocks, and the third portion relates to the engineering characteristic of the soil and bedrock.

SOILS AND BEDROCK

The study area lies within a structured bedrock basin, the center or low point of which lies near the University of Minnesota. This saucer-shaped depression is referred to as the Twin City basin. All of the bedrock underlying the T.H. 36 project will be of sedimentary type (dolomite and sandstone). As can be seen on the geologic profile, bedrock, at its closest point, will lie about 160 feet below the proposed grade and therefore none will be intercepted.

The geology expressed in this study area is a combination of glacial (ice formed) and alluvial (river formed) features. Figure 13 is a profile view along the alignment and depicts the general relationships of the proposed grade to the soil, bedrock, and ground water. Prior to

Figure 13



glaciation, the bedrock was carved and lowered by erosional forces, but this surface was later covered by a number of ice flows which further eroded the bedrock and also deposited a complex series of glacial sediments. Generally, the alignment can be divided into three geologic segments:

1. **South terminus from proposed I 35E to inplace T.H. 13.** (This rather rugged and scenic topography is part of the St. Croix terminal moraine and the soils here are primarily sandy loam tills, although some limited areas of sand or gravel may be encountered.)

2. **North river bluff to the north terminus at I 494.** (This land form is relatively flat, being formed as an outwash or valley train-type deposit by melting glacial streams. Soils here are mainly sands and fine gravel, but clayey lenses are also known to be present.)

3. **The Minnesota River Valley.** (This broad valley, in which the present river flows as an underfit stream, was incised into the first two topographic forms by the tremendously large historic Glacial River Warren. River Warren drained Glacial Lake Agassiz, which at one time covered most of the northwestern part of the state.)

As the volume of glacial melt water decreased, the wide valley was backfilled to its present shape; the fill

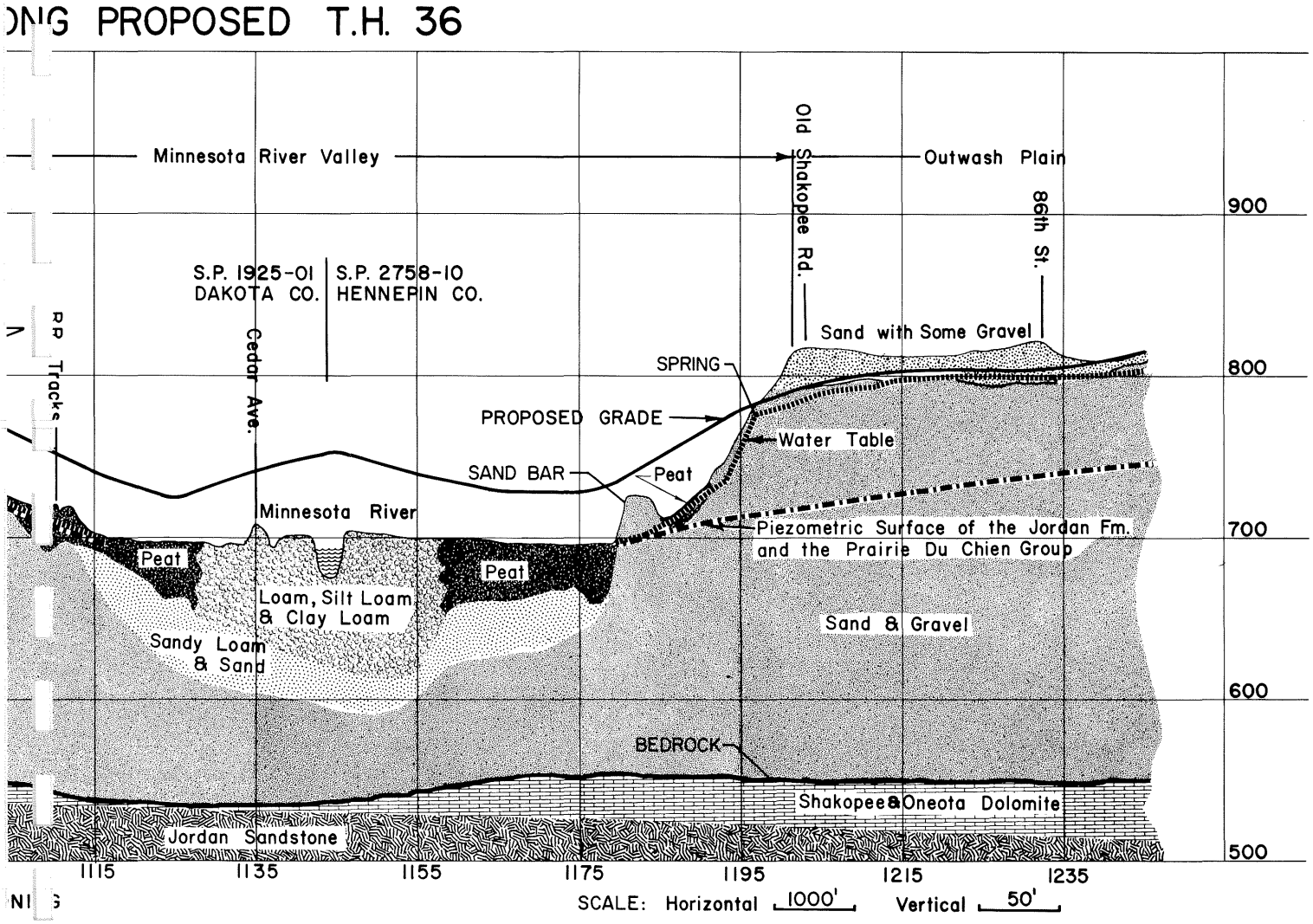


Figure 14

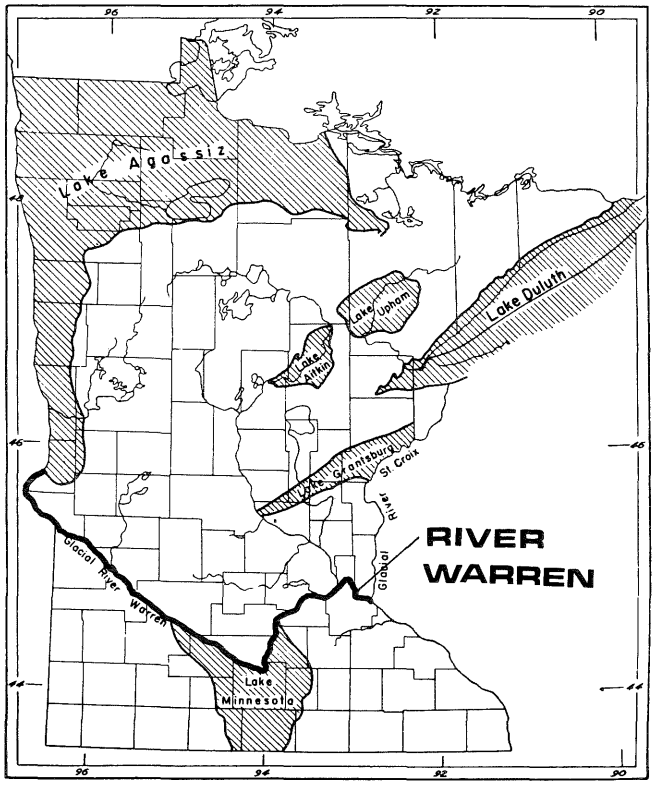


Figure 14. Map of former major glacial lakes and rivers. The volume of water available to Glacial River Warren from Lake Agassiz can be easily appreciated. From Minn. Geological Survey, Bulletin 37.

materials include peat, silty and clayey soils and some sand or sandy loam. A granular bar on the north edge of the old valley and granular terrace on the south margin are evidence of the once great magnitude of River Warren. (See Figure 14)

SOILS AND BEDROCK IMPACTS

The cut between T.H. 13 and the railroad tracks (Figure 13) will be through an alluvial terrace, which is believed to contain some sand and gravel. Material from this cut should definitely be utilized for specific purposes on the project and consideration could be given to the possibility of over-cutting this area and then back-filling up to grade with less desirable material. These aggregate materials could thus be used constructively rather than burying them under the highway.

Bedrock would obviously not be encountered during the excavation phase of highway construction. The piling required for bridge construction may be driven to refusal at bedrock, however, only if adequate bearing cannot be obtained in the overlying granular soils.

GROUNDWATER HYDROLOGY

Two ground water conditions can be recognized in the area:

1. Jordan-Prairie du Chien piezometric surface (See Figure 13). This is the level at which water will stand in a well pipe that has been drilled into the Oneota dolomite and Jordan sandstone. This "pressure" surface represents the upper extent of influence from the primary ground water aquifer in the metropolitan area.

2. A near surface water table, which is the level at which water would be encountered in a shallow drill hole or well. (Some limited zones of perched water may occasionally be found above the water table.)

The exact relationship of the two ground water systems is not well known. Under the uplands, north and south of the river, they are likely quite distinct, but in the valley itself the two systems converge into one.

Except in the river valley, the near surface water table lies considerably above the piezometric surface. Although this water table has not been exactly located south of the river, the proposed grade will most closely approach the water table in the vicinity of Cliff Road. The soils underlying the south section of the alignment are primarily sandy loams and sandy loam tills, but seams of clay would not be uncommon. Because clayey seams may create zones of reduced permeability within the drift, some localized perched water might be encountered.

Groundwater hydrology as used in this document, deals with that water which lies below the land surface. It does not generally include surface runoff or lakes, although a few thoughts are presented regarding potential impacts on lakes.

GROUNDWATER HYDROLOGY IMPACTS

Potential ground water impacts will be more prevalent and certainly more difficult to accurately assess, than soil or bedrock impacts.

River Valley

As can be seen from the geologic profile, the proposed grade does not intersect the piezometric surface. It can also be noted that this surface coincides with or may even be slightly above the flood plain in the river valley. This means that the valley is an area of discharge from this major aquifer and not a recharge area. Therefore, the physical presence of the highway should not change the quality of the water in this aquifer either in the valley or in any other part of the Twin City artesian basin. Since this is a pressure surface, the possibility exists that springs could develop adjacent to piles driven for the bridge structure. Such discharge could reduce the bearing potential for specific piles and may also increase slightly the discharge of ground water into the valley.

South Section

Here, the near surface water table lies considerably above the piezometric surface. Although this water table has not been exactly located, it seems certain that it will not be intercepted by the proposed grade. Possible drainage of a few perched water pockets should not adversely effect the overall ground water pattern. All of the area outside of the river valley (both north and south of the river) could technically be considered a recharge area for the groundwater system. However, since the highway occupies only a small portion of whatever might be considered the "recharge area", the long-term effect of the highway on the groundwater table should be negligible.

Based on information from the U.S. Geological Survey and observations, it is felt that most of the lakes along the south part of the alignment are part of and reflect the water table. For this reason, small additions or deletions in the quantity of surface water available to the lakes should not materially effect the long term lake levels. If it is foreseen that large volume changes would be made to lakes in developed areas, it would be wise to install one or more piezometers to measure water levels and establish more clearly whether the lakes are actually part of the water table. Along with the possibility of volume changes, any potential contamination of the lakes or the flood plain area from highway runoff will be minimized as much as possible.

North Section

North of the river valley, the water table is relatively high and has been verified by numerous borings. Springs are evident on the north bluff at about elevation 775±. The proposed highway grade will be close to this groundwater table, however, it will be kept about five feet higher to prevent frost heaving and any possible effect on wells in the area. There are two wells in the vicinity that are used for total domestic service. All remaining domestic service is provided by Bloomington's municipal water system.

If any ground water is "captured" by the proposed highway (including any springs within the right-of-way) it would not be a loss to the valley environment, but would be rerouted into the flood plain.

Where the proposed alignment passes Wrights Lake (just north of 86th Street in Bloomington) the water table was measured at elevation 800. The normal elevation of the lake is reported as 805±. This differential suggests that the lake is at least partially perched above the adjacent water table, although lowering of the ground water table in this area could adversely affect the level of Wrights Lake. Such a lowering of this table is not anticipated.

Figure 15

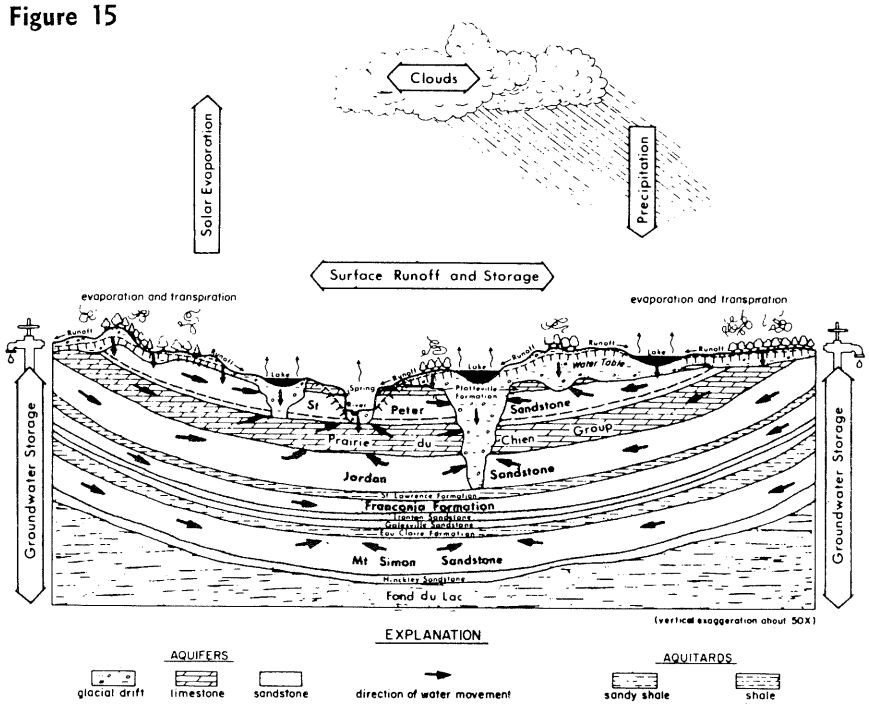
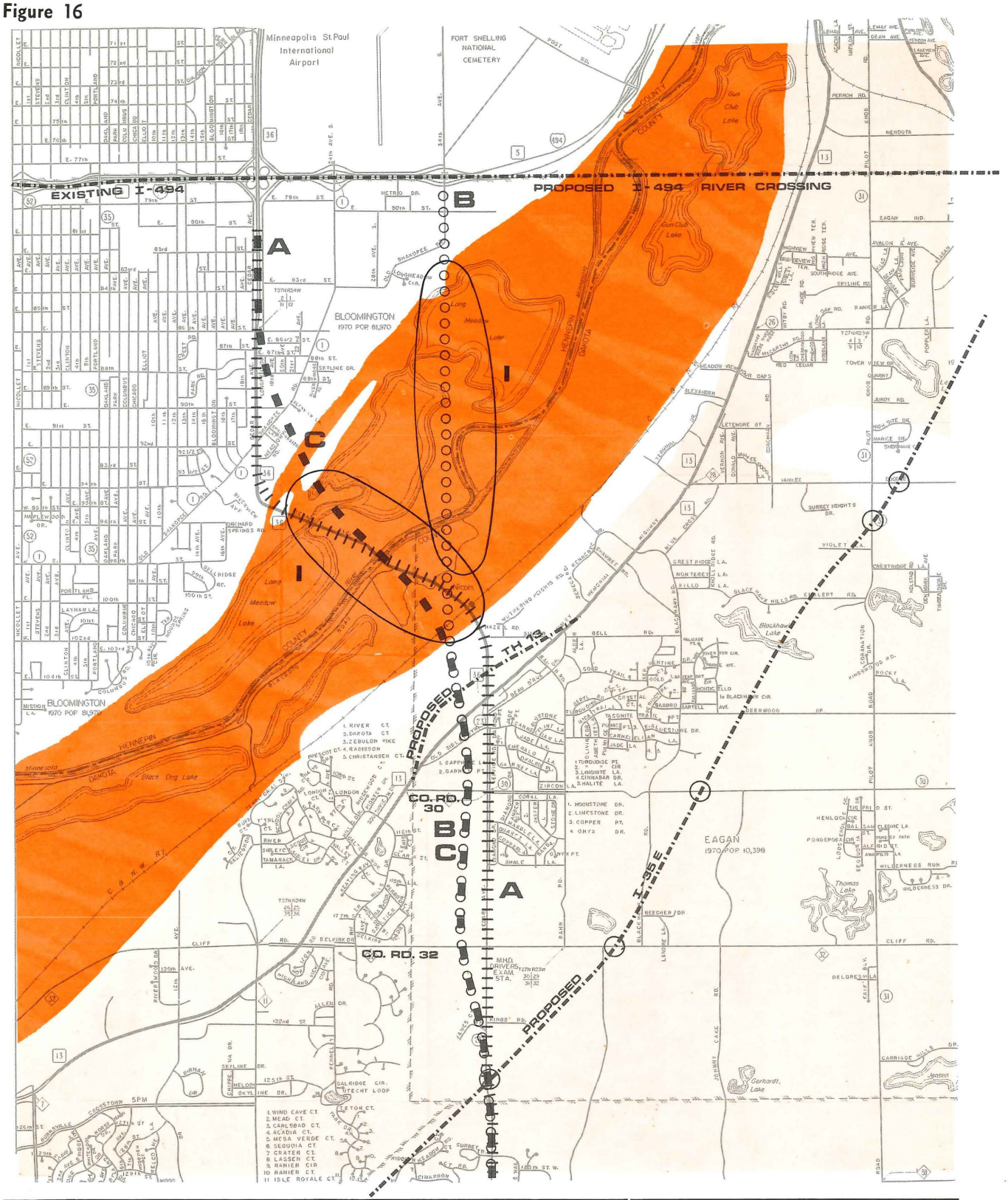


Figure 15. Water cycle in the Twin Cities Basin. Note general movement of groundwater toward and into the drift-filled channels.

From Minn. Geological Survey, Educational Series 5

Figure 16



FOUNDATION SOILS

SAND & GRAVEL - WELL DRAINED
CLAY & LOAM - POORLY DRAINED
PEAT & MUCK - VERY POOR DRAINED

1 PEATY AND SILTY SOILS WILL REQUIRE REMOVAL FOR CONSTRUCTION.

cedar ave. s.

trunk highway 36

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 1000 4000

N

FOUNDATION SOILS

The foundation soils shown on Figure 16 are depicted by tonal patterns. The soil types have been divided into three groups for this study according to their suitability for construction. The tonal patterns vary from light (most bearing capacity) to the darkest tone (least bearing capacity).

The soil of the **first group** is represented by medium to course texture sand and gravel. This group is illustrated by a white pattern on the map. Its composition is considered good to excellent for structural bearing capacity and ease of construction. The slopes vary from 0 to slightly greater than 12%.

The **second grouping** (shown by a medium tone) includes poorly sorted medium to fine grained clay and loam. Slopes in this group are generally less than 12%. Poor drainage and frost heaving are characteristic of these soils. They are therefore considered less favorable for highway construction than the first group of soils.

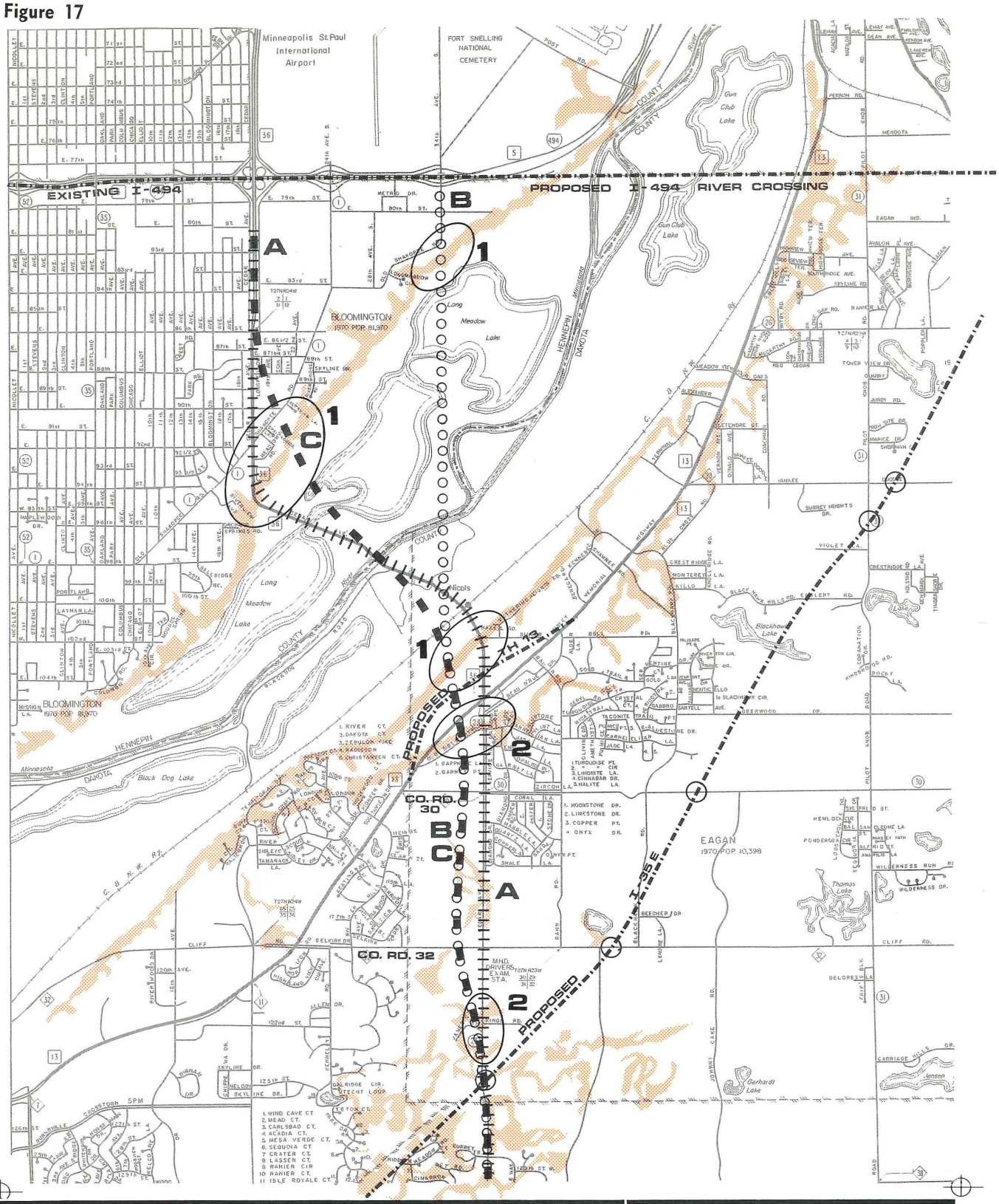
The darkest tone depicts the **third group** which is highly undesirable for development. The soil composition is made up of poorly drained clay, silt, peat and muck and water areas such as lakes, rivers, marshes and bogs. The characteristics of this group are unstable for foundations, therefore increasing construction costs.

FOUNDATION SOILS IMPACTS

Neither the sandy loam tills south of the river, nor the sands and gravels on the north end, should present any particular problems to highway construction. However, the flood plains on both sides of the river could pose considerable construction problems. These flood plains include extensive deposits of peat and soft silty soils, the maximum thickness of which will be about 85 feet.

Where bridged, potential problems are minimal, but fills placed through peat areas would require complete excavation of the peat and fills over the silty soils would require counterbalances for stability and would be subject to high settlement. Because of soft soils, it may be necessary in some areas to lay a temporary sand blanket to facilitate pier construction.

Figure 17



STEEP SLOPES

SLOPES LESS THAN 12%
SLOPES GREATER THAN 12%

1 HIGHWAY CONSTRUCTION ALTERS AESTHETIC QUALITY OF VALLEY BLUFFS.
2 HILLY TERRAIN WILL BE INTERRUPTED.

cedar ave. S.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

2. LAND RESOURCES

— Slopes and Terrain
— Soils

This discussion along with the Water Resources helps to illustrate the broadscale physiography of the study area.

STEEP SLOPES

Slopes, or the surface of an area, are a definite consideration for highway location. Specifically, the topography, as shown by steep slopes, is difficult to build on because it requires cuts and fills. This, therefore, increases the construction time, cost, and difficulty in revegetating the steep slopes.

Generally, a 12%[1] slope or greater encourages erosion possibilities, while moderate slopes of approximately 5% are considered ideal. The greater the degree of slope, the greater the erosion due to increased velocity of water flow. Theoretically, a doubling of the velocity enables water to move particles sixty-four times larger, allows it to carry thirty-two times more material in suspension and makes the erosive power in total four times greater. Also, the steeper the slope, the fewer the depressions which might hold sediment temporarily. The steep slopes are identified on the adjacent map by the tones, with the darker tones being the steeper slopes.

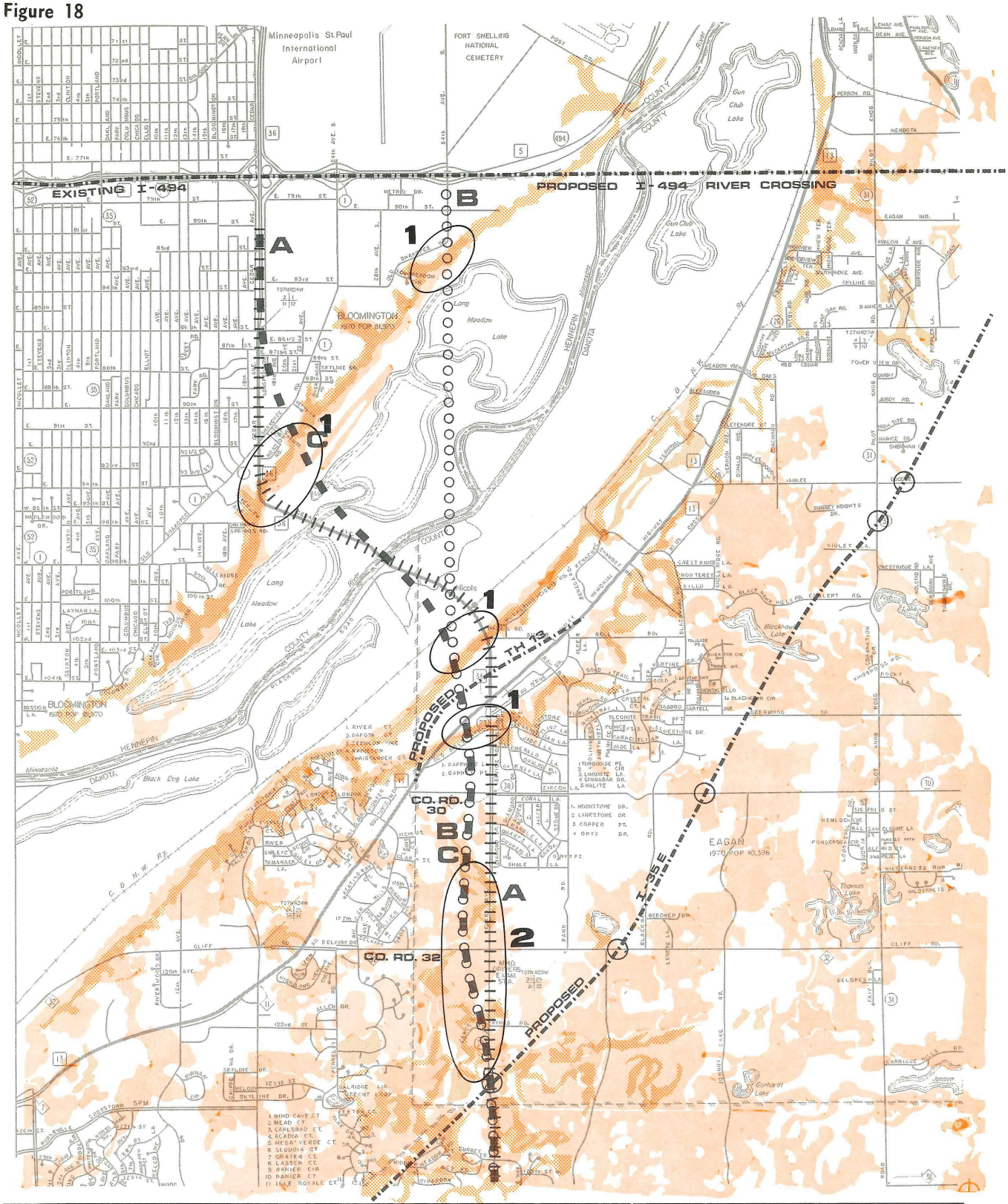
STEEP SLOPES IMPACTS

In two areas, the roadway will impact the valley bluffs. The least impact on the slopes (least area disturbance) will occur by locating the roadway perpendicular to the slopes as opposed to running the roadway parallel to the slope.

On those slopes disturbed, placing cohesive topsoils and quick revegetation will be beneficial.

[1]A 12% slope is one where the ground changes 12 feet in elevation for every 100 feet of horizontal distance.

Figure 18



ERODIBLE SOILS

NON ERODIBLE SOILS (PEAT, MUCK)----
SOILS WITH EXISTING OR POTENTIAL ERODIBILITY----
SEVERE EROSION POTENTIAL (ERODIBLE SOILS ON SLOPES GREATER THAN 12%)----

1 SEVERE EROSION POTENTIAL BECAUSE OF HIGHLY ERODIBLE SOILS ON STEEP SLOPES.
2 MODERATE EROSION POTENTIAL BECAUSE OF ERODIBLE SOILS ON FLATTER SLOPES.

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000 N

ERODIBLE SOILS

In defining an erodible soil, one must realize that any soil has potential erodibility if special consideration isn't given to necessary upkeep. Erosion will vary with different soil types, but the main factor is the degree of slope.

Due to the flatness of the river valley floor and terrace soils, no serious erosion should occur in these areas. However, near the bluffs in the upland rolling terrain and particularly on the river valley bluffs, erosion may be a problem.

Erosion not only affects the land area, but also causes siltation of the rivers and creeks in the low land and excess deposition in the flood plain. Therefore, the evaluation of erodible soils also includes land adjacent to the steep slope area.

Those areas shown in darker tones on the map are more susceptible to erosion. These areas are a combination of sandy soils of non-cohesive nature which are found in 12% slope or greater.

In determining slope characteristics and values, considerations in addition to erodibility, include maintenance factors. Wooded slopes are easier to maintain than grasses. Also, wooded areas provide better habitat to wildlife and especially for big game. Wooded slopes are not only beautiful, but offer protection from wind, snow and sun. Points where the roadway intersects the steep slopes are indicated on the adjacent map as follows:

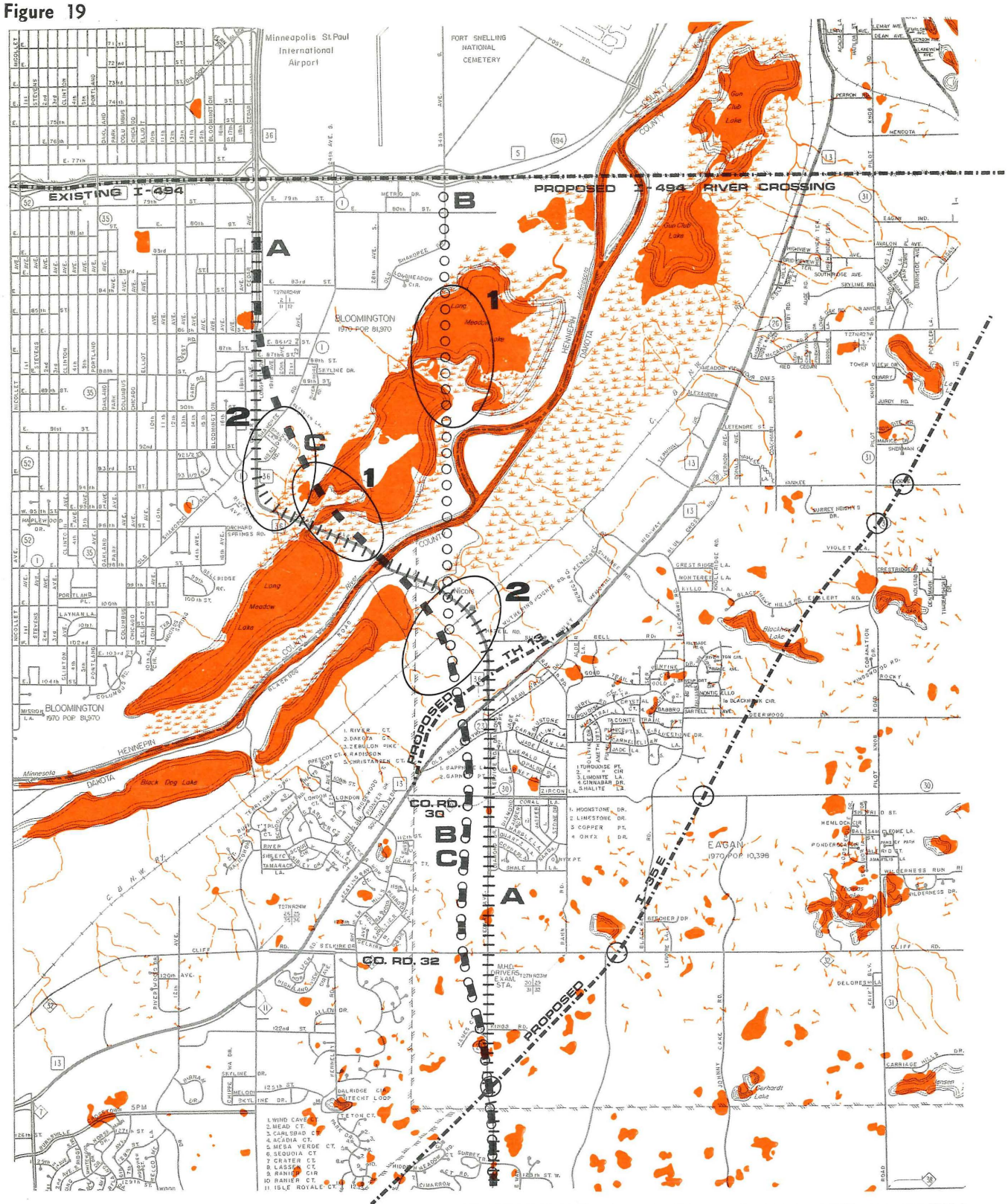
1. Steep slopes unvegetated
2. Steep slopes wooded.

ERODIBLE SOILS IMPACTS

Erosion will occur during highway construction as a result of steep slope areas being disturbed and exposed to the elements. This will be a moderate problem requiring quick stabilization of the critical areas. No long term erosion problems are anticipated.

Another important consideration is the visual impact that the proposed project will have on steep slopes encountered. Special attention must be given to revegetation and landscaping of the steep slope areas. Other impacts related to soils and erosion are discussed in the following parts of this section. (See also Section V — Erosion Control.)

Figure 19



WATER SYSTEMS

CONFINED DRAINAGE
INTERMITTENT STREAMS
MARSHES
OPEN WATER

1 DISTURBANCE TO LONG MEADOW LAKE DURING BRIDGE CONSTRUCTION.
2 DISTURBANCE OF INTERMITTANT STREAMS BY HIGHWAY CONSTRUCTION.

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

3. WATER RESOURCES

Having reviewed the historic geology, soils and slopes, a description of the water systems follows and includes information on:

— underground water

— surface water

— flood prone areas

SURFACE WATER SYSTEMS

The confined drainage of ponds, intermittent and continual flowing streams, marshes and open water or lakes make up an important natural resource. These waters provide food and shelter not only to wildlife and nature but every human activity as well.

The need to protect and preserve these bodies of water for their visual and recreational value is universally accepted. If not handled carefully, the building of roads, homes and other structures in the immediate area can create serious erosion, pollution, and drainage problems.

The Lower Minnesota River Watershed District has identified nine tributary streams which flow through Bloomington's bluff area and into the Minnesota River.

These tributary streams are important to the flooding characteristics and quality of the river. If erosion occurred, these streams would carry an increased amount of sediment to the Minnesota River. This in turn would create deposition in the channel, reducing the capacity of the channel and thereby increasing the severity of flooding. Sediment increases turbidity of the water which may harm aquatic life and generally pollute the river.

Since the water table on the top of the bluff is higher than in the valley, there is a tendency for ground water to seep toward the river valley floor. This seepage emerges in the form of natural springs to feed tributary streams, lakes and marshes.

SURFACE WATER SYSTEMS IMPACT

The proposed project will have an effect on the surface water systems of the area. The excavation of marsh areas and the construction embankments at both ends of the river valley bridge will interrupt the seepage from natural springs.

None of the nine tributary streams identified by the Lower Minnesota River Watershed District will be impacted, however, the crossing of Black Dog Creek will require a minor channel change.

The drainage from the highway will carry sediment during and after construction, and can contain a concentration of salts in the Spring and chemicals from unusual accidents. The construction of special ponding areas will minimize these impacts.

A combined drainage system for Bloomington, Eagan and the highway improvement is proposed which will utilize eight ponding areas. There are three proposed ponds "A", "B" and "C" that will be a part of the system. "A" and "B" will be built south of the Minnesota River in Eagan and pond "C" north of the river in Bloomington. The other five ponds are all existing ponds in Eagan and are scattered along the proposed corridor between proposed I-35E and T.H. 13 (See Figure 55.)

Of the existing ponds, all but two are intermittent containing water only during the spring season or during periods of heavy rain. The remaining two, AP9 and Slater's Lake, both lying west of and adjacent to the existing Cedar Avenue, are permanent ponds. Slater's Lake is surrounded by low vegetation and cointains significant amounts of semi-aquatic plants. This pond, at present, has a minor pollution problem caused by seepage from several nearby septic systems.

It is anticipated that during construction of the proposed project, siltation could enter and damage these ponds, therefore, special temporary sediment basins and ditch checks will be built to prohibit this. (See Section V for further discussions on drainage, erosion, pollution and de-icing chemical control.)

An alternate drainage plan recently proposed by the City of Eagan south of T.H. 13 is being considered. This plan would place an underground storm sewer adjacent to the proposed roadway. This would make the use of existing ponds unnecessary for highway drainage, however, the proposed ponds A and B south of the river would still be built as a part of the drainage system. This alternate will be thoroughly studied during the detail design for the project.

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

Figure 20 AERIAL VIEW OF THE MINNESOTA RIVER LOOKING NORTHEAST.

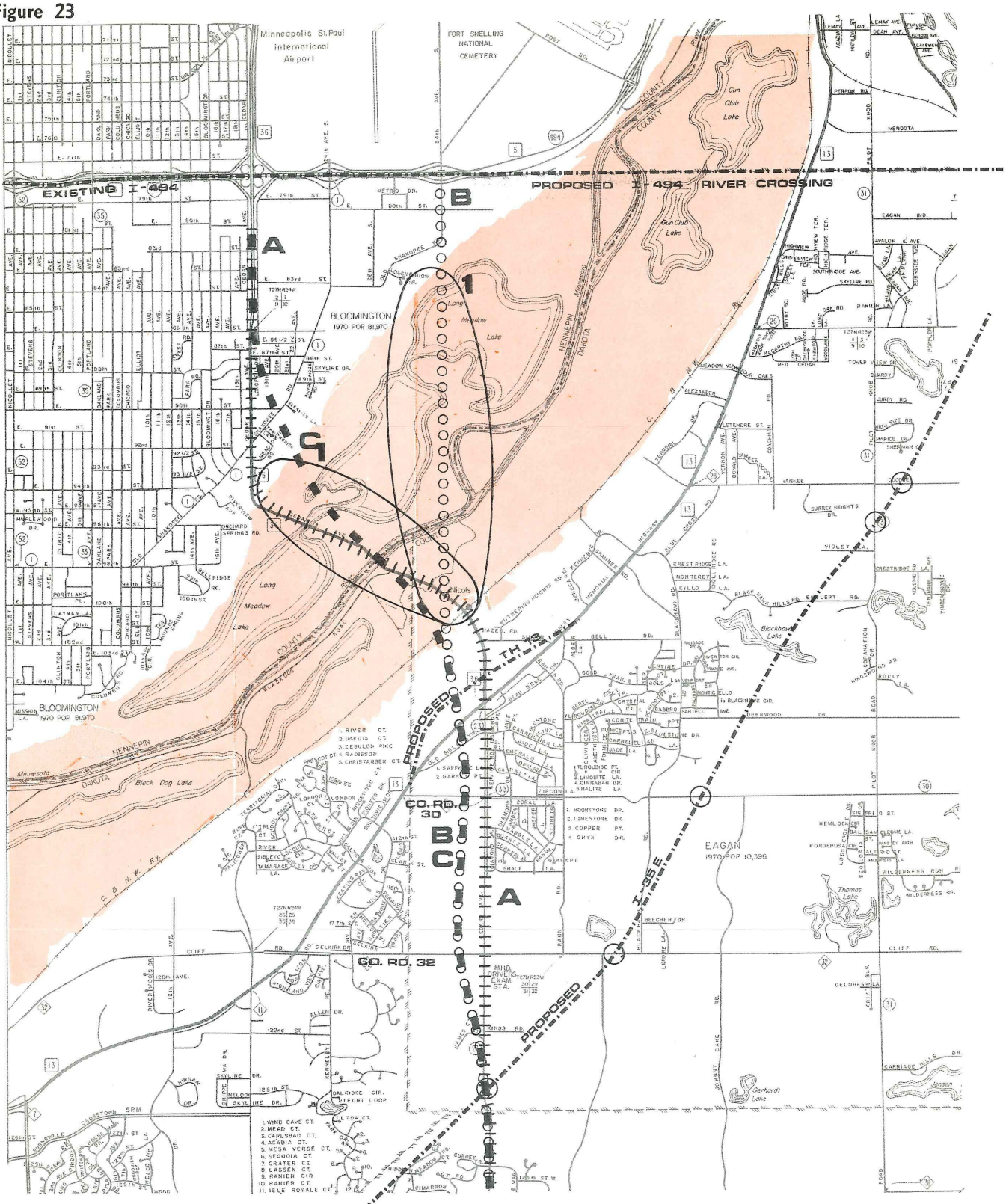
Aerial view of Long Meadow Lake looking northwest. The truss bridge seen in the upper left of the photograph carries Cedar Avenue over this marsh area.

Figure 21

Slater's Lake is centered in this aerial view looking southeast. Cedar Avenue is in the left center of the photo and travels in a north-south direction through this area. The road in the foreground is St. James Court.

Figure 22

Figure 23



FLOOD PLAIN

BELOW 720 FT. ELEV. - 100 YEAR FLOOD PLAIN

1 HIGHWAY FILLS IN FLOOD PLAIN COULD INCREASE THE FLOOD POTENTIAL.

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

FLOOD PLAIN

Low level areas adjoining rivers, lakes and streams are subject to flooding during periods of peak water flow. These are areas known as "flood plains." They act as safety valves for drainage systems.

The U.S. Geological Survey has established the flood profile for the regional flood of the Minnesota River to be at elevation 715.5 upstream and elevation 715.4 downstream of the T.H. 36 crossing. The flood protection elevation at this location has been established at 716.7.

In addition to the 716.7 elevation, the U.S. Corps of Engineers has determined the 100-year flood plain elevation in Bloomington to be generally along the 720-foot contour line. This flood prone area is illustrated by the grey tone and it represents all areas under the 720 elevation.

Spring thaws and resulting runoff from melting snow, along with intense summer rain storms, can cause major flooding. Due to this major flood potential, no structure shall be placed or alteration, repair or improvements of any existing structure by made in the floodplain zone without permits being granted by the:

1. U.S. Coast Guard
2. U.S. Corps of Engineers
3. Minnesota Department of Natural Resources
4. Lower Minnesota Watershed District
5. City of Bloomington
6. City of Burnsville

All permit requirements will be complied with prior to construction.

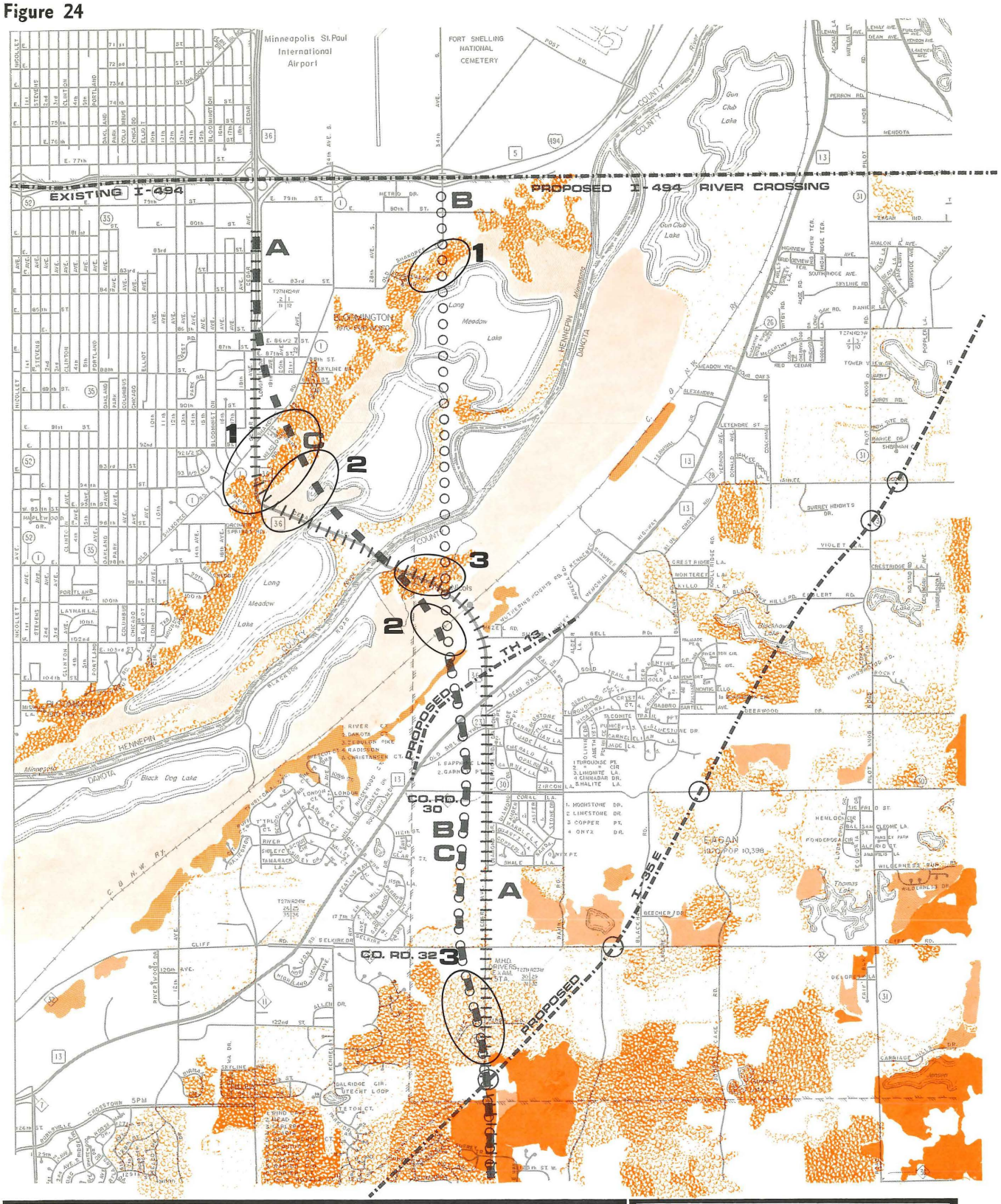
FLOOD PLAIN IMPACT

The approximately one mile long bridge proposed for this improvement will span much of the flood prone area. One of the effects that the bridge and adjacent fills will have on the floodplain would be to raise the swellhead[2] in the area. It is estimated that the swellhead caused by the inplace T.H. 36 and the new T.H. 36 combined will total 0.11 foot for a 100 year flood.

This compares to a swellhead of 0.07 foot passing through the inplace T.H. 36 crossing. Thus an increase in swellhead of 0.04 foot for a 100 year flood is expected with the new construction. This is within the 0.10 foot limit established by the controling agencies.

[2]A swellhead is the damming effect on the water that the bridge and fills would have at the time of flooding. It is measured in feet of elevation.

Figure 24



VEGETATION

- SEDGE WILLOW
- GRASSLAND
- MIXED HARDWOODS - LIGHT DENSITY
- MIXED HARDWOODS - DENSE
- MIXED OAK - LIGHT DENSITY
- MIXED OAK - DENSE

1 HIGHWAY CONSTRUCTION WILL REQUIRE REMOVAL OF WOODED BLUFFS.
2 DISTURBANCE OF WETLAND VEGETATION.
3 MIXED HARDWOOD TREES WILL BE REMOVED.

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

4. BIOLOGICAL RESOURCES

The biological resources include those living organisms that are found in the study area:

— Vegetation

— Fish

— Wildlife

VEGETATION

The Minnesota River Valley, as well as the entire Twin Cities Metropolitan Area, contains remnants of the original Central hardwood forest of southeastern Minnesota. Agricultural activities and, more recently, suburban development has reduced the forest to scattered areas of woodland surrounded by partially reclaimed farmland, residential developments and some stretches of cultivated fields. Wooded areas are more common in the extreme southern portions of the Cedar Avenue study area. The largest contiguous area is the Minnesota River Valley itself.

There are two major types of arboreal vegetation in the study area. The first is a mixed oak type made up predominantly of burr, red and white oak. This type has quaking aspen as a common associate on the sunnier, open sides of the stand. The oaks of Central Minnesota are found on moist, well-drained soils.

The second type consists of a wide variety of hardwood species and is the major type of the central hardwood forest. Typical overstory[3] members include elm, green ash, box elder, cottonwood and the soft maples. Members of the oak genus are also common occurrences in the mixed hardwood stands. This type occurs on a variety of sites, ranging from poorly drained loams to dry, sandy sites. The composition of the stand changes according to the site: elms, cottonwoods and soft maples predominate on the wetter sites, while box elder and ash, along with the oaks, are dominant on the dry sites.

Both types support basically the same understory.[4]

[3]Overstory is the larger trees in a wooded area.

[4]Understory is the smaller trees, shrubs and brush.

Figure 25 View to Southwest of Long Meadow Lake & river bottom vegetation

Besides some reproduction of the members of the overstory, several other tree species occur in the understory. Choke cherry and American Hazel are fairly common in all stands, while alder occurs on wet sites. Sumac, with some northern prickly ash, occurs on dry or open sites. Virginia Creeper, wild grape and blackberry are the most common ground covers.

A third vegetative association, (sedge-willow) exists in the study area, but is basically non-arboreal. The sedge grass forms a mat-like layer which covers the lower floodplain, except along the natural levees of the river channel. The willow are usually clumped around the seep springs which originate on the bluffs, or near the edges of open water. The occasional dry spots in the floodplain support small amounts of choke cheery and redosier dogwood. There are also a great number of cottonwood seedlings dotting the floodplain, but the site is not sufficient for these to mature past the seedling stage. It would seem that these seedlings will always be found in this area.

Figure 26 Typical View of Minnesota River and Floodplain Vegetation

VEGETATION IMPACTS

Two east-west bands of vegetation cross the Cedar Avenue area, one through the Minnesota River Valley, and the other across the southern end of the area. The direct impacts which would arise, stem from construction activities and from shifts in drainage patterns. The losses due to construction operations would consist mostly of the vegetation within the highway right-of-way. This is unavoidable, given the crossing bands of vegetation. (Those that cross the entire study area.) Much of the benefits of the vegetation can be retained through the use of certain rehabilitation measures, such as seeding and landscaping. These measures will work to soften the abrupt shift from rural roadside to road, and would act to stabilize areas which might otherwise have been deprived of vegetative cover by the construction activities.

Shifts in species composition of wooded areas adjoining the roadway may be experienced in a short-term period following construction. This will result from possible changes, especially in soil moisture and drainage, which will make certain species of vegetation better able to thrive than others in the present stands. Such an impact will be subtle and, in most circumstances, insignificant. The only areas where such an impact could be major are those stands comprised of a single major species. Should the roadway severely alter the capacity of the species to survive on the site, there would be little else remaining to sustain the viability of the stand.

Another area of vegetation impact will exist directly beneath the bridge structure, should areas of permanent or prolonged shadow develop .(See Figures 27 and 28) The proposed bridge moves from the northwest to the southeast across the valley, with heights ranging from near ground level to 55 feet. The angle of sunlight in the area will vary up to about 75° (noon) in the summer and about 35° (noon) in winter. The height of the bridge and the sun's angles will determine the location of the bridge shadow. At the lower bridge heights there will be an area of permanent shadow. This strip will decrease in width as the height increases. At some point along the bridge the permanent shadow will disappear into an area of reduced sunlight. This area will be in shade for portions of the day during certain times of the year. The amount of lost sunlight slowly decreases to zero at the edge of the summer shadow. The area of permanent shadow and deep or prolonged shadow will experience a change in vegetative regrowth composition. Much of the floodplain and southerly bluffs support what is called "shade intolerant" vegetation. These species cannot survive in the shade. Because of the reduced sunlight, certain species will disappear from the proximity of the bridge. Arboreal species which are intolerant, and would most likely be effected, include the red oak family, green ash, cottonwood, and aspen.

Tolerant trees, which will survive in the shade, include sugar maple, hackberry, ironwood, the white oak family, basswood and American elm.

Other tree species which might occur in the area of the bridge are of moderate tolerance; and severe light

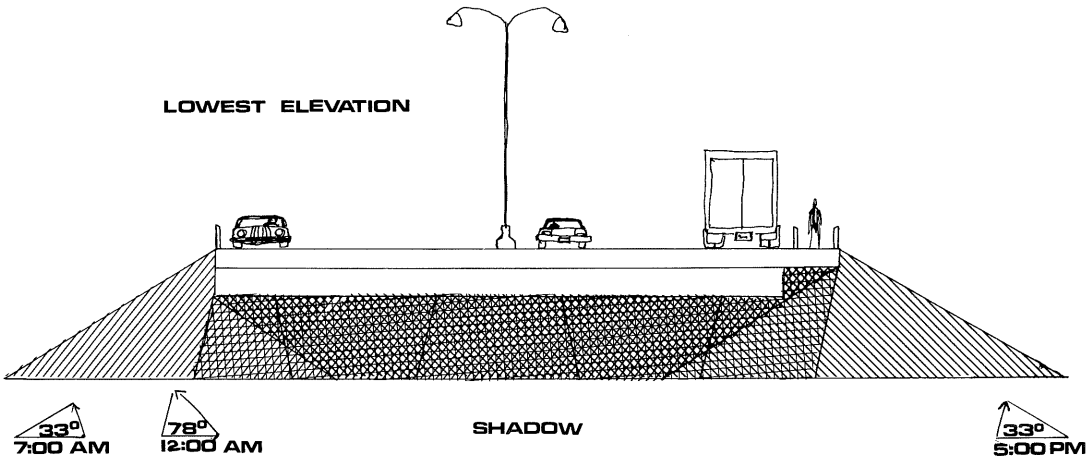


Figure 27 Cross section of the bridge's low point over Long Meadow Lake showing anticipated shadow areas.

reductions would be necessary to prevent the survivial on the site. Choke cherry and redosier dogwood, principal shrubbery vegetation on the flood plain, are both intolerant.

An additional effect under the bridge would be a reduction in soil moisture content. The loss of direct rainfall will be insignificant, since vegetation absorbs most of its needed water from the soil and not through the leaf stomata. Moisture will enter the dry area under the bridge because of the moisture gradient as gravitational water movement occurs down the slope. This movement will depend on the steepness of the slope and the type and depth of soil. In viewing the Minnesota River Valley with regard to the gradient, the situation is optimal because of the presence of a loamy soil. Clay and sandy soils would result in minimal gradient transfer into the dry area.

In general, what would occur beneath the bridge is a dark, dry area at each end where the bridge leaves the fill. The degree of darkness and dryness would then dissipate as the distance from the abutment increases. Vegetation will be severely handicapped under the bridge at the ends, but will gradually return to the present composition as it progresses away from these points. Since the changes in sun exposure and moisture are continuous, the change in vegetation would also be subtle, except for the dark, dry spot.

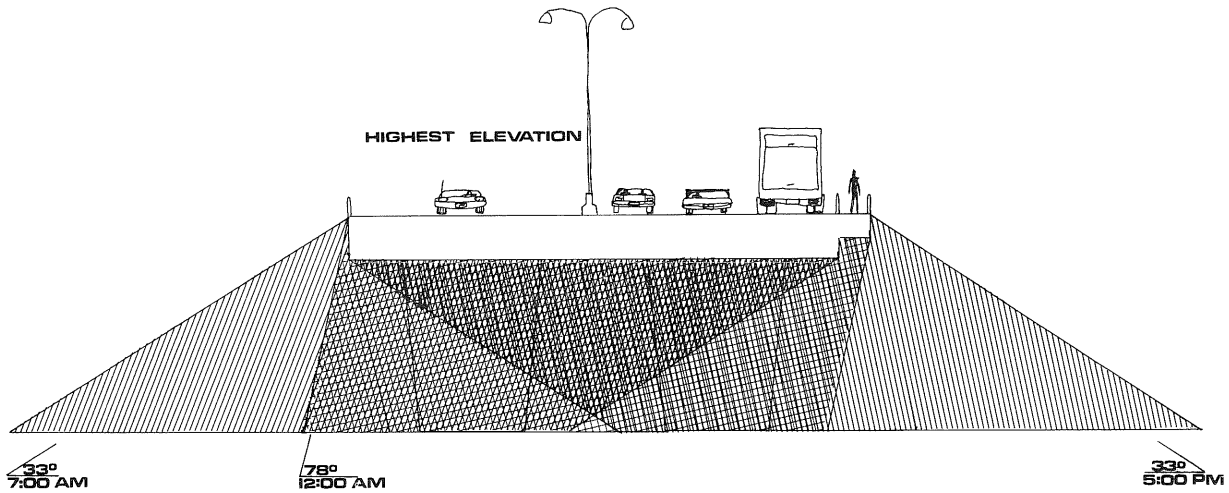


Figure 28 Cross section of bridge's high point over the Minnesota River showing anticipated shadow areas.

The vegetation in the Cedar Avenue area serves two purposes: 1) it provides a rural atmosphere in close proximity to a major urban area, and 2) serves as habitats for the wildlife which are common in the area. The former is the area most likely to be severely altered by the T.H. 36 project since land development will be hastened by improved access.

This area in northern Dakota County has experienced light development, considering its proximity to the Twin Cities. This is due to the relative inaccessibility between the suburban area and the city, because of the constricting influence of the old Cedar Avenue bridge.

This constraint will be removed with completion of the Cedar Avenue project (and I-35E), thus opening the door for increased development on the land now occupied by many of the vegetative stands which gives Eagan its rural setting.

FISH RESOURCE

In this segment of the Minnesota River Valley, the river is characterized as being a moderately slow, turbid stream which meanders throughout the valley. It is generally considered poor fish habitat, although this portion of the river appears to be one vast pool. The fact that the river is subject to such extreme flows during spring to mid-summer which brings about shifting sand bottoms, turbid waters, pollution, warm water temperatures and very little aquatic vegetation, are perhaps the greatest limiting factors to fish production and populations in the valley.

About 24 species of fish are found in the section of the river valley crossed by the proposed highway right of way, but many species are present in low numbers. The most common species occurring is carp, occupying about 42% of the total fish population. Others include gizzard shad 37%, sheepshead 6%, white bass 3%, northern redhorse 2%. Others such as Carpsucker, sauger, northern pike, crappie and shortnose gar, each occupy 1% of the population.

Spawning conditions for game fish in the river are believed to be poor. Tributary streams also do not appear to possess adequate conditions. Some spawning takes place in the shallow backwaters of the river valley. Northern pike and the crappie species are of most importance in that they are the most abundant game fish present which would use the area for spawning.

Several small tributary streams have trout management capabilities. Millpond Creek, Purgatory Creek, Eagle Creek and Nine Mile Creek are most important. Their mean temperatures are most suitable to trout. These streams are above the impacted area and out of the project area.

Pollution in the river ranges from sewer pollutants to thermal pollution caused by large volumes of hot water which is discharged by Northern States Power's Black Dog Plant in their cooling operation. This hot water influences river temperatures considerably which in turn influences aquatic life and vegetation. This power plant is located just upstream from the project area.

FISH IMPACTS

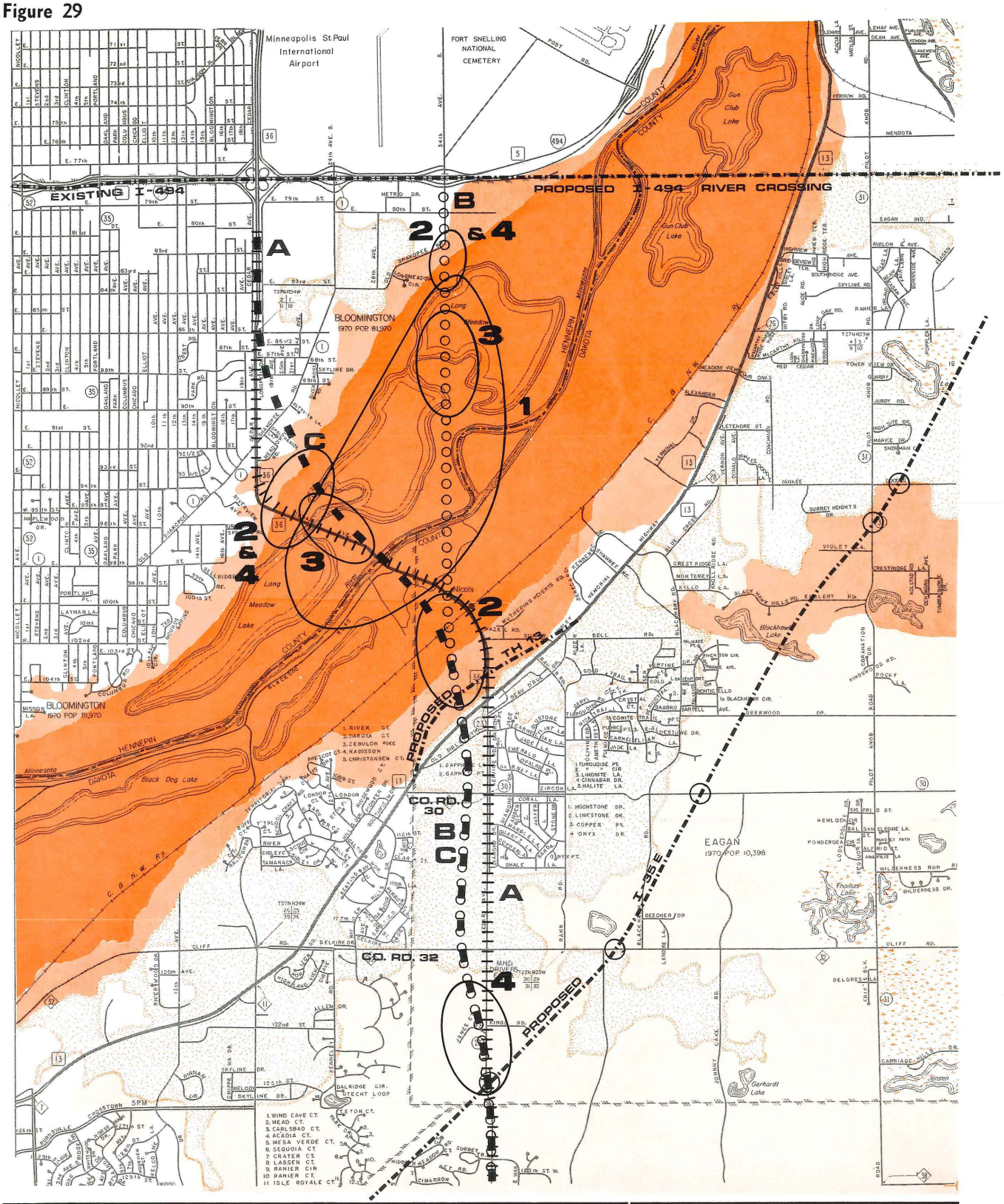
The proposed highway's greatest impact on aquatic life will occur in the Long Meadow Lake backwater ecosystem located in the river valley. This lake is shallow, and as such is more vulnerable to pollution. However, because the lake is fed by springs and small streams, it is flushed continuously. (See Section V, Part C2.)

During construction of the proposed bridge over Long Meadow Lake, two methods for supporting bridge construction equipment are being considered:

1. Temporary sand fill
2. Temporary wood trestle

Both methods will temporarily increase turbidity, sedi-

Figure 29



WILDLIFE

NO HABITAT
SMALL GAME - LOW LEVEL HABITAT
SMALL GAME - HIGH LEVEL HABITAT
WATER FOWL HABITAT
SMALL & POSSIBLE BIG GAME, WATER FOWL HABITAT
EXCEPTIONAL HABITAT

1 FREEDOM OF WILDLIFE MOVEMENT PROVIDED FOR ALONG RIVER BOTTOM BENEATH BRIDGE.
2 WILDLIFE MOVEMENT DISTURBED BY HIGHWAY FILLS ON RIVER TERRACE.
3 WATERFOWL HABITAT MAY BE LOST BY BRIDGE CONSTRUCTION.
4 UPLAND GAME HABITAT AREAS WILL BE LOST IN AREAS OF HIGHWAY CONSTRUCTION.

cedar ave. s.

trunk highway 36

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 1000 4000

N

ment and cause discoloration of the water near the proposed construction. These conditions will affect the quantity and quality of aquatic life in the lake. The sand fill or wooden pile will also temporarily reduce the area of aquatic habitat.

Some runoff water from the proposed roadway will also drain into the lake and river which could lead to higher concentrations of chloride ions as well as other pollutants. This will be minimized, however, by the proposed sedimentation ponds.

WILDLIFE

The area through which Cedar Avenue passes, provides the necessary requirements (food, water and shelter) for sustaining a great variety of wildlife. These requirements and the types of land which provide them are presented in the following discussions. In order to provide an adequate picture of the capacities of the area, four wildlife groups will be considered: big game, waterfowl, small upland animals and song birds.

BIG GAME

The Minnesota River Valley, between Shakopee and Fort Snelling, serves as a wintering area for more than 500 deer. Less than half winter in the Burnsville area and below. The herd is a year-round resident of the valley, but during the late summer and fall, it leaves the valley to feed in the adjoining open fields. This movement is, partly, to obtain the nutritional requirements for breeding and proper development of the fawns. Generally, the deer prefer supple, low-growing vegetation, herbs and mast.

The thick brush of the river valley also affords adequate cover and protection for the herd during daylight hours.

The mix of vegetative covers and types, along with the prevalent absence of human activities, makes the river valley an ideal habitat for this resident herd. In addition to the white-tail deer, the river valley is also home for an occasional mule deer which has managed a migration from its normal range in the Dakotas. This, like the reports of coyotes and wolves in the valley, however, is extremely rare. Normally, the white-tail deer are the only big game animal present in the valley.

WATERFOWL

In reality, the river valley, and nearly all the Cedar Avenue study area constitutes habitat for migratory waterfowl. Scattered throughout the area are the Type IV deep marshes which the Department of Natural Resources states are the preferable habitat areas for waterfowl. These marshes contain open water with the emergent vegetation either in scattered clumps or in a fringe along the water's edge. Submerged aquatic vegetation, although not always present, would also be 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 Cities area.

The Minnesota River Valley not only contains large areas of this quality marsh, but also has some areas which remain open through the winter. These areas include, beside the river itself, Black Dog Lake, which remains open due to a thermal gradient resulting from the NSP plant at Black Dog.

In addition to the quality of the marsh itself, the proximity of breeding cover and alternate food supplies are needed for a better habitat area. On this basis, those ponds near low brush or cultivated fields would constitute the better waterfowl areas.

SMALL ANIMALS

It has been said of the Minnesota River Valley that it provides probably the best wildlife habitat in the state.

With regard to the small animals, this type of statement would translate to "if its range extends into this part of Minnesota, you will find it in the valley, somewhere". This is possible because of the great variety of vegetations in the valley, ranging from meadow grasses for the microtus family to oak mast for the several varieties of squirrel.

Most of the members of this group are limited in their movement. Several members, however, such as the skunk, raccoon and oppossum range up to 10 miles or more in search of food. It would be quite common, therefore, to observe certain of the valley animals in the areas above (adjoining) the valley.

Most of the resident small animals outside the river valley prefer areas of woody or brushy vegetation. The major exceptions are the meadow rodent and insect eater groups (field mice, moles, shrews, etc.) and the aquatic fur-bearers (river otter, mink, greater weasel, etc.). The best general habitat for the small animals would include open areas interspersed among the arboreal vegetation. These areas, providing the best probable habitat, are indicated on the map.

SONG BIRDS

The most common species in the area are the tree sparrow, house sparrow, downy woodpecker, and black-capped chickadee. Killdeer, white-breasted nuthatch, mourning dove, cedar waxwing, blue jay, hairy and pileated woodpecker, cardinal, meadowlark, owls, hawks and a variety of sparrows are also present. The primary foods of the songbirds — insects, seeds and fruit — are abundant in the spring and summer months. The harsh winter reduces the supply of cover and feed, but non-migratory birds are able to find sufficient food.

The entire Cedar Avenue study area serves as a good song bird habitat. The floodplain, woods, and fields supply a variety of cover, nesting and feeding areas. The small urban environment present lowers the accepted population distribution (three (3) birds per acre), but has little effect on the number of species present.

WILDLIFE IMPACTS

An impact on the area of wildlife will occurr as a result of this long-term development. The Minnesota Highway Department Wildlife Biologists have inventoried all lands that may be affected directly by Alternate C for the proposed project. The inventory was made to determine the wildlife habitat types and their relative values. The exact degree to which the proposed project would impact the various habitats could not be assessed at this time since the exact construction procedures and limits will not be determined until the detail design process. This project does not require the taking of habitat from any threatened or endangered species.

The following list summarizes the types of habitat and gives the approximate number of acres that could be directly affected by the project. The source of this information is the Wildlife Habitat Impact Assessment of Cedar Avenue T.H. 36 Corridor by M.H.D. Wildlife Biologists.

Habitat Types	Acres Affected By the Proposed River Bridge	Acres Affected By All Other Construction	Total Acres
AQUATIC			
Open Lakes and Rivers	9	2	11
Marshes	1	2	3
Cattails, Marsh Border	6	0	6
BRUSH			
Lowland Brush	3	11	14
Upland Brush	0	16	16
WOODED			
Bottomland	6	8	14
Oak-Elm Upland	0	37	37
Pioneer growth saplings	1	38	39
Pioneer growth mature	0	5	5
Mixed conifer-hardwood	0	1	1
GRASSLAND			
Wet Grassy Meadows	2	14	16
Dry Uplands	1	56	57
Roadsides	0	26	26
URBAN			
Residential	0	30	30
Commercial	0	10	10
AGRICULTURAL			
Fallow	1	2	3
Cultivated	9	133	142
ROADS	3	38	41
GRAVEL PITS	0	9	9
Totals	42	438	480

The following list indicates the relative values of affected wildlife habitats by acres:

Habitat Value	Acres Affected by All Construction
Very High	23
High	57
Medium	45
Low	188
Very Low	167
Total	480

Subsequent development will also restrict the wildlife potential of the area. Besides the direct taking of what is now habitat for urban purposes, the proximity and intensity of human activities will result in reduced levels of wildlife in adjacent areas.

The amount of wildlife habitat in the study area will also suffer a direct loss through the land needed for the project. This will be offset to some degree, however, by the increase in edge vegetation adjacent to the roadway. This type vegetation is usually desirable as a food and cover source for smaller animals. Reductions in wildlife populations by the project itself would be limited to resident, non-migratory small animals. Reductions in the size of home territory for some of the animals will result

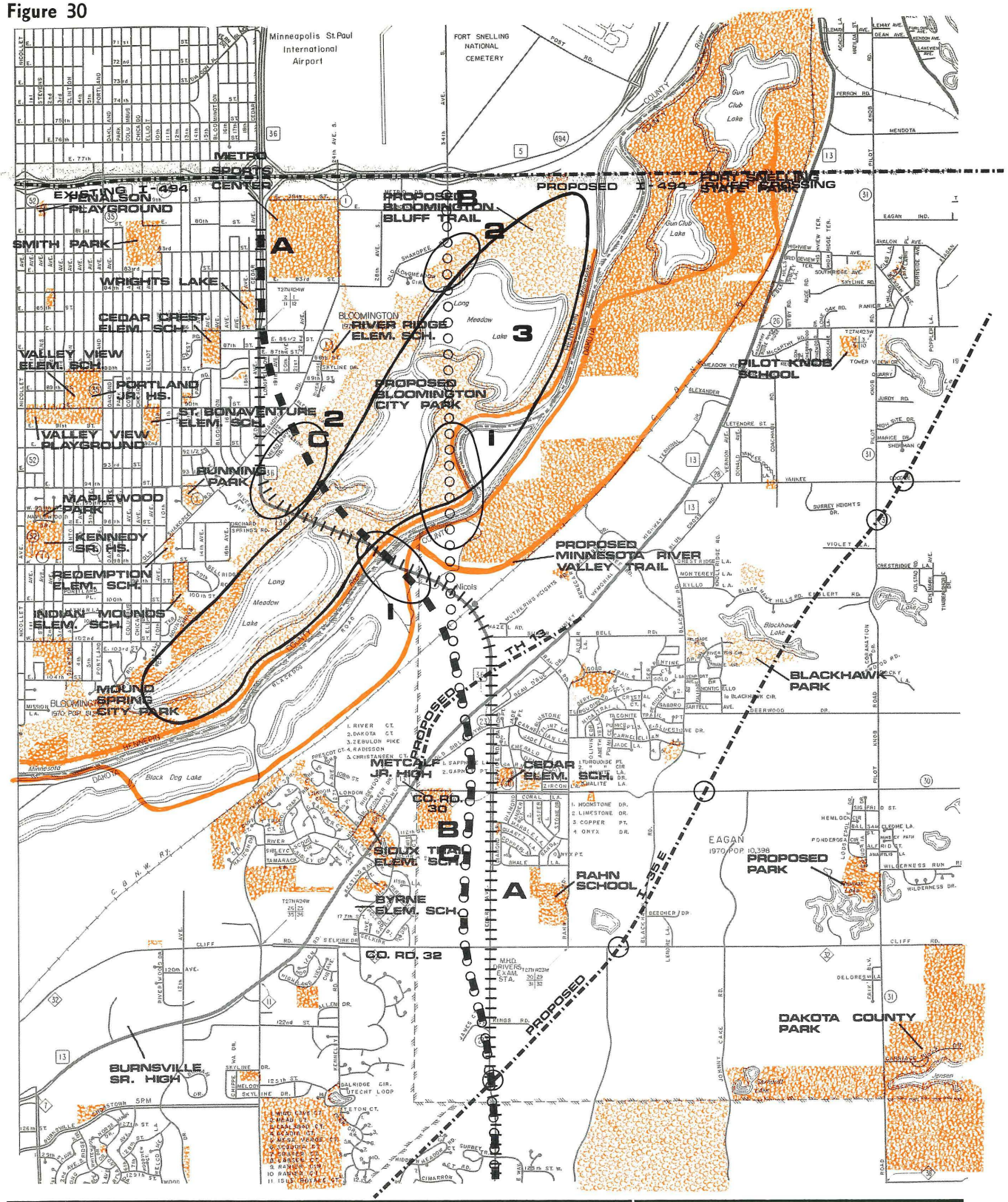
in an eventual thinning of the population to a level near that adequate for survival of the optimal population level.

The primary impact with regard to the ranging animals stems from the fact that portions of the roadway will be an effective barrier to animal movement.

Generally, the effect is less severe in relation to deer movement, although it could result in a higher probability of deer-auto accidents, especially in the cut areas near the river valley. For the smaller animals, however, their slowness and shyness will turn the roadway into a nearly impenetrable barrier.

This problem could be somewhat more severe in the river valley, depending on the method used for the crossing. The valley is a major pathway of animal movement, and any action which impedes this movement would be detrimental to the wildlife communities of the valley. If the crossing were to use a shorter bridge length with accompanying fill for the approach, the roadway would cut the valley in two fairly distinct parts as far as the wildlife is concerned. However, the one mile long bridge that is proposed will minimize the impediment to wildlife movement.

Figure 30



OPEN SPACE

PROPOSED TRAIL SYSTEM ----------
PROPOSED RECREATIONAL OPEN SPACE --
OR OPEN SPACE COVENANT ---------
EXISTING RECREATIONAL OPEN SPACE ---

1 PROPOSED MINNESOTA RECREATIONAL TRAIL CROSSING OF MINNESOTA RIVER PROVIDED FOR ON PROPOSED BRIDGE.

2 PROPOSED BLOOMINGTON RECREATIONAL BLUFF TRAIL CROSSING PROVIDED UNDER PROPOSED BRIDGE.

3 PROPOSED MINNESOTA VALLEY NATIONAL WILDLIFE REFUGE.

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

5. AMENITY RESOURCES

Amenity resources include those areas which have some inherent scenic or recreational quality. These include areas such as views from the road or panoramic vistas. These resources are:

- Open Space (park and recreation and undeveloped lands)
- Special features (historical, archeological areas and outstanding natural features)
- Aesthetics (unique views of and from the road)

OPEN SPACE AND RECREATION

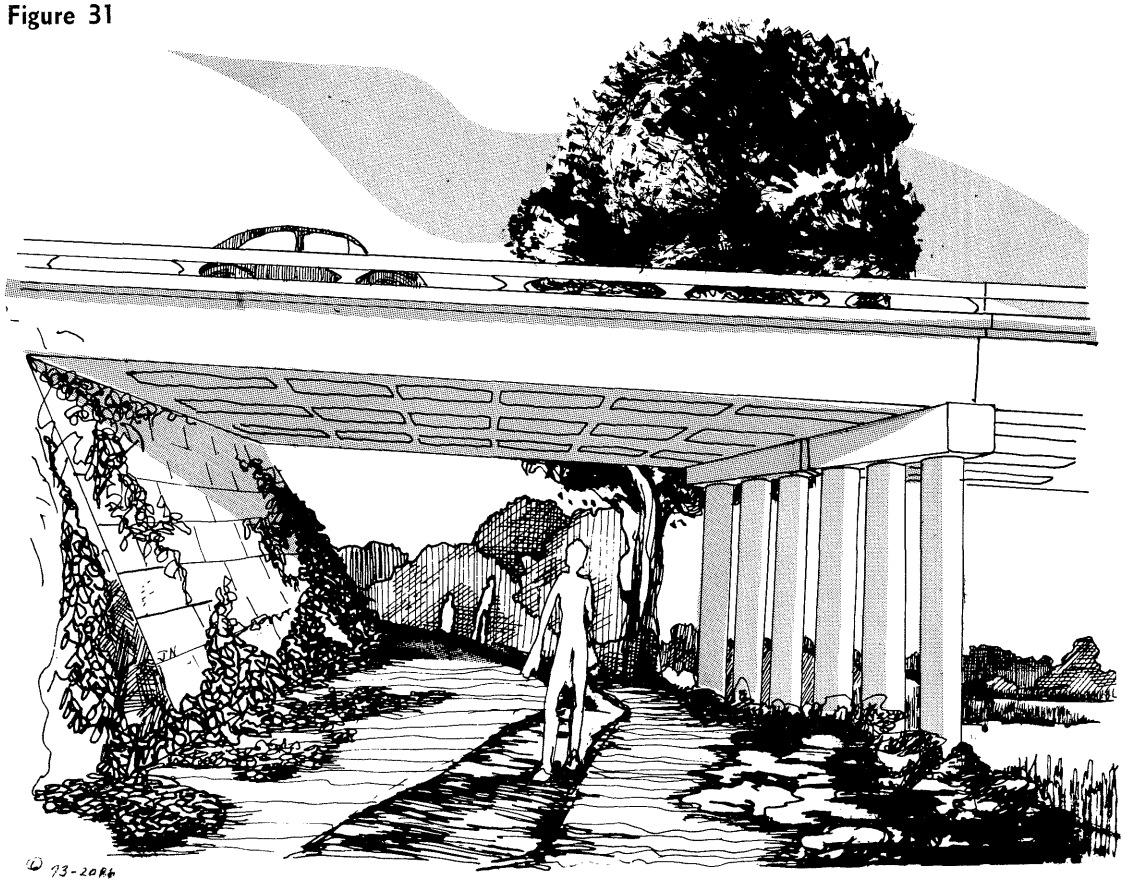
Open space is defined as any area characterized by 1) great natural scenic beauty or 2) whose existing openness, natural condition or present state of use, if retained would enhance the present value of surrounding urban development or would maintain or enhance the conservation of natural or scenic resource. The Metropolitan Council has established two categories of Open Space — 1) Protection and 2) Recreation.

The protection of certain natural areas are major concerns for Open Space. These vital natural areas include: water bodies and water concourses, wetlands, ground water recharge areas, flood plains, erodible slopes, forests, woodlands and production lands.

Recreation Open Space in the study area varies from those facilities and services which satisfy regional needs to those which meet local needs. The components of the recreation system range from mini-parks, neighborhood playgrounds and community playfields to multi-purpose parks, park reserves, linear parks (trails and parkways), historic parks and special use parks.

Planned recreational development of the area includes a Minnesota River Valley Trail system proposed by the Department of Natural Resources and a bluff-top trail system proposed by the City of Bloomington. Since circulating of the D.E.I.S. a Minnesota Valley National Wildlife Refuge has been proposed in the Long Meadow Lake area north of the main river channel. This refuge, as proposed, would cross the entire study area for this project. It would provide both educational and recreational opportunities for the people in the Twin Cities metropolitan area. The Minnesota River Valley Trail system would accommodate hikers, and, in selected areas: horses, bikes and snowmobiles. Extensions of this trail will be located on both sides of the river. At the present time all land needed for the trail systems and the highway project is privately owned. The Minnesota Highway Department is working with other planning agencies to provide for the proposed recreational facilities through the area of the proposed highway.

Figure 31



PROPOSED BLOOMINGTON BLUFF TRAIL CROSSING

While the primary use of the Minnesota River near this proposed project is commercial, recreational craft pass under the highway bridge from time to time. The large vertical and horizontal clearances proposed for the new river bridge over the navigational channel should enhance both recreational and commercial usage.

OPEN SPACE IMPACTS

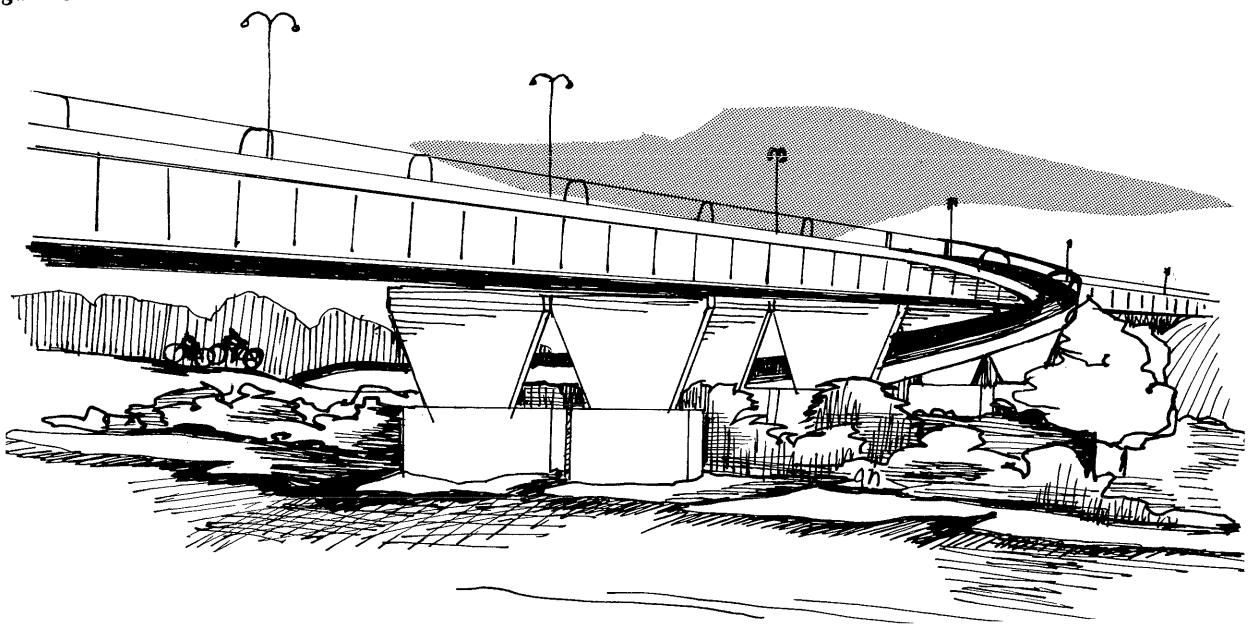
This project will not require the use of any land from any publicly owned park, recreation area, wildlife or waterfowl refuge or historic site having national, state or local significance wherein 4(f) land is involved. Therefore it does not require a Department of Transportation Section 4(f) determination.

In early discussions with proponents of the National Wildlife Refuge and employees of the U.S. Fish and Wildlife Service it was determined that the wildlife proposal can be coordinated with this highway project. The proposed highway will help provide access to the refuge should it receive the necessary Congressional approvals and funding.

The proposed Bloomington Trail system on the north side of the river will be accommodated by a flat area under the proposed river bridge as illustrated in Figure 31.

The Minnesota River Valley Trail is proposed to extend across the river valley at the T.H. 36 crossing and will be attached to the river bridge. (See Figure 32.) Providing a river crossing for this trail should be a positive impact. (See pages 52 and 53 for other impacts.)

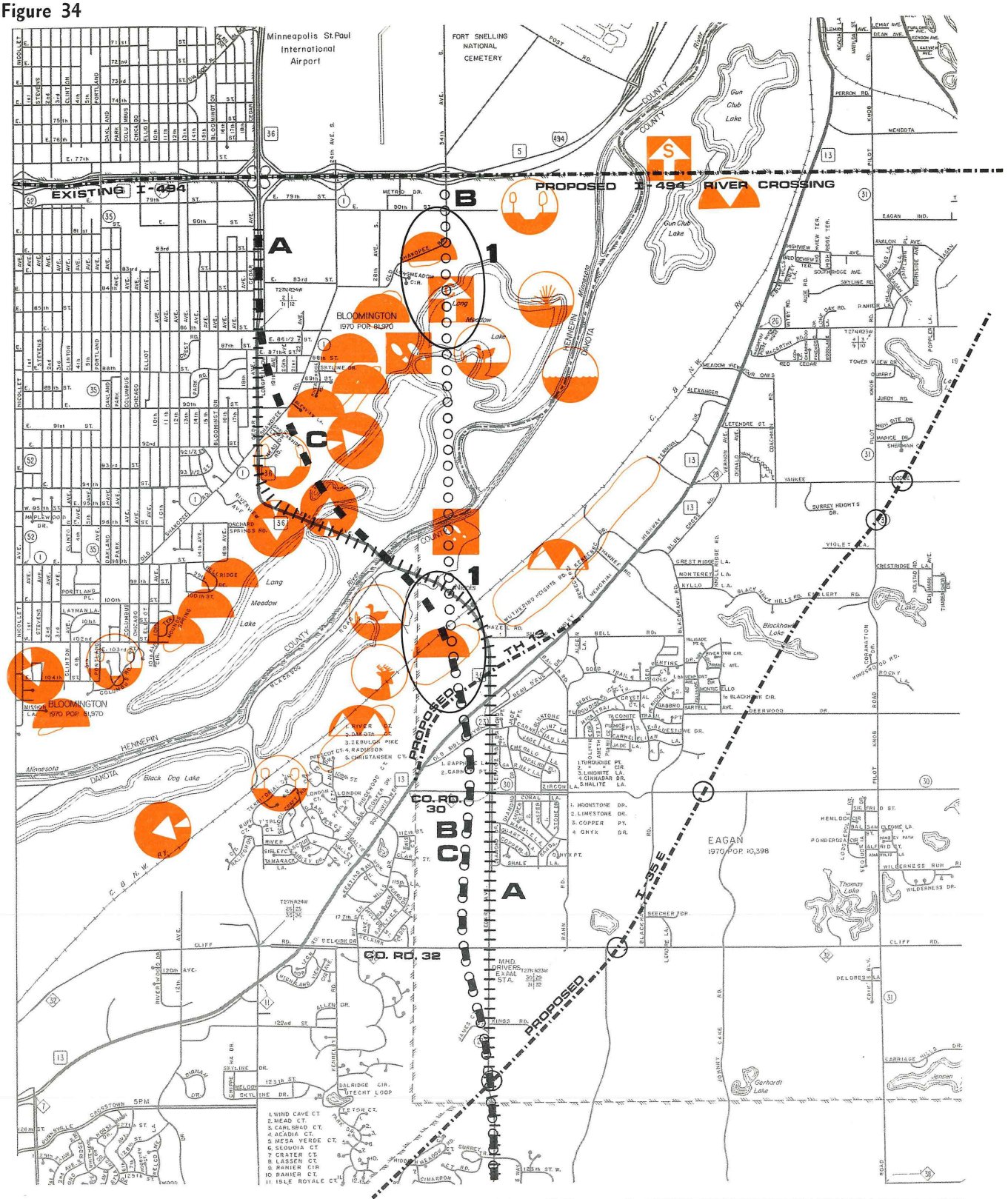
Figure 32



PROPOSED MINNESOTA RIVER VALLEY RECREATION TRAIL CROSSING

Figure 33 View of river valley from Bloomington.

Figure 34



SPECIAL FEATURES

- VISTA
- 19TH CENTURY SANDSTONE QUARRY
- INDIAN VILLAGE
- INDIAN BURIAL MOUNDS
- INTERESTING TOPOGRAPHY
- WATER IN MOTION
- WETLANDS
- WATER BIRDS
- WILDLIFE
- RECREATION TRAIL
- STATE PARK
- PROPOSED CITY PARK

1 INDIAN BURIAL MOUNDS ARE SUSPECTED TO EXIST ALONG THE SLOPES OF THE MINNESOTA RIVER VALLEY.

cedar ave. S.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

SPECIAL FEATURES

Special features are elements of outstanding natural and cultural significance. The natural patterns include water bodies, wetlands, flood plains, steep slopes, interesting topography, as well as specific resource items as vistas, wildlife and special vegetative species.

Presently the most expansive vistas in the area are seen looking to the bluffs from inside the floodplain. If vegetation on the bluffs were selectively thinned at strategic points, vistas from the bluff to the floodplain could be created.

The man-made or cultural features are historical or archeological structures or sites. Historical sites in the study area include Indian Mounds, 2 Indian Villages and a 19th Century sandstone quarry. The Indian mounds and villages of this general area have been largely disturbed by development and souvenir hunters.

Only the 36 Indian mounds in the westerly portion of the study area are well preserved. These mounds will not be affected by the construction of any of the alternates considered for this improvement. The sandstone quarry is the only historical site in the area not related to Indian life. Stones for the Sibley mansion in Mendota were cut at this quarry in the early 19th century. The quarry is about two miles from the nearest point of any alternate and will not be affected.

The State Historic Preservation Officer has been consulted and a determination has been made that there are no Historic sites on the National Register or eligible for nomination to the National Register in the project area.

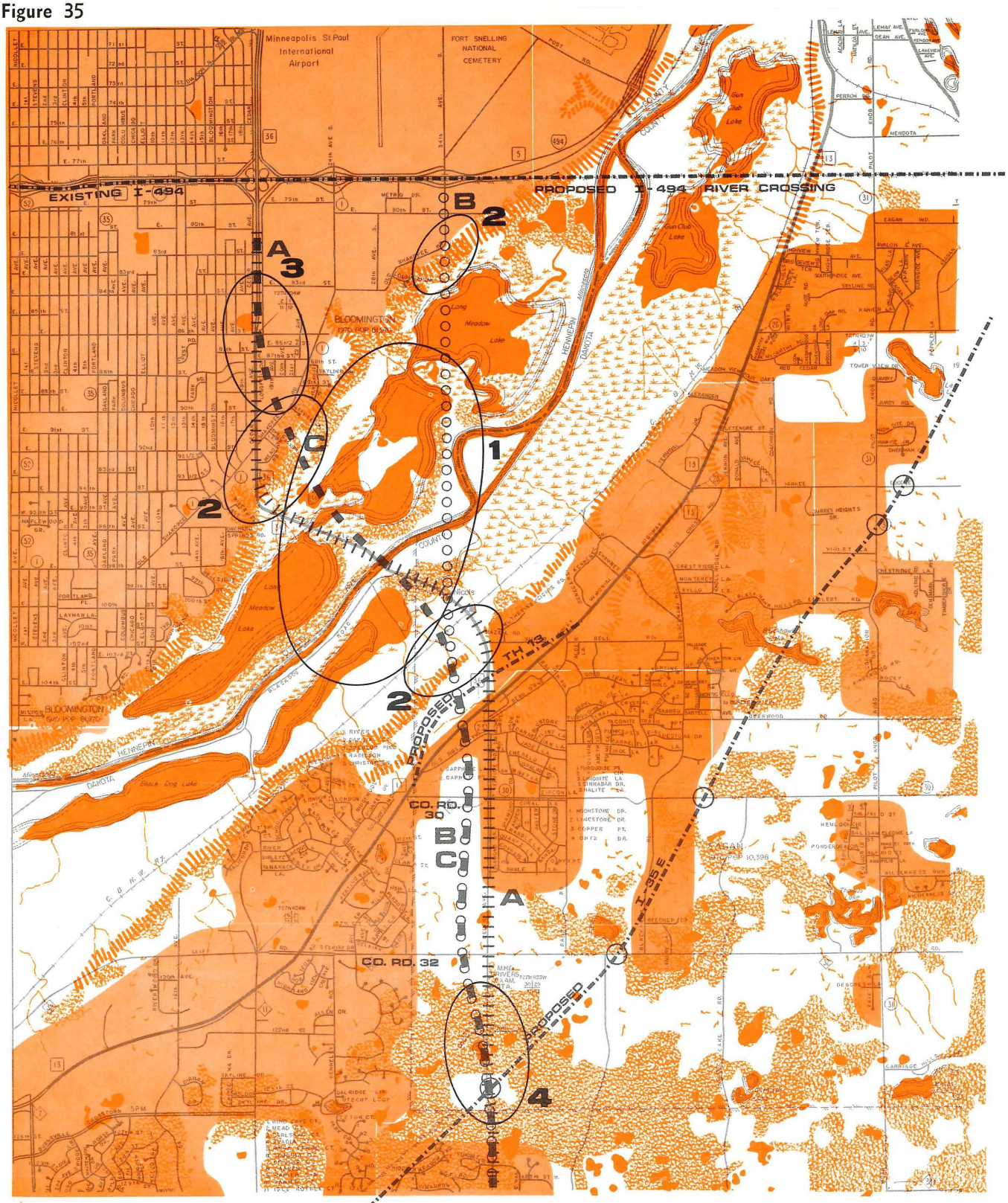
SPECIAL FEATURES IMPACTS

Highway development will cross an area suspected to contain Indian burial sites. These sites have apparently already been disturbed and there are no visible remains on the surface. (See State Archeologist's letter in the Appendix.)

This area has already been reviewed by representatives of the Minnesota Historical Society and the Indian Community. It has been agreed that there is no visible, significant site affected by the proposed improvement. Should remains be uncovered during construction, operations will be delayed to allow for proper reburial.

Construction of the highway would create expansive valley vistas for highway travelers. However, the bridge structure will be seen from the bluff as a manmade element bisecting the green marsh. The bridge will increase viewing opportunities for highway travelers, but may reduce the natural vista from the bluff.

Figure 35



AESTHETIC RESOURCES

URBAN
OPENINGS
UPLAND HARDWOODS
BLUFF
WOODED SLOPES
LOWLAND HARDWOODS
WATER
MARSH & WETLANDS

1 HIGHWAY CROSSING VISIBLE IN SCENIC VALLEY.
2 LINE OF WOODED BLUFFS INTERRUPTED BY HIGHWAY CONSTRUCTION.
3 RESIDENTIAL AREAS VISUALLY DIVIDED BY HIGHWAY.
4 SCENIC UPLAND WOODS LOST IN CONSTRUCTION AREA.

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 1000 4000

N

trunk highway 36

AESTHETIC RESOURCES AND LANDSCAPE CHARACTER

The aesthetic composite map shown (Figure 35.) applies the criteria in Table 3 to the Minnesota River Valley. This illustrates that virtually all of the landscape types are present in the Valley. In fact, the Minnesota River Valley is unique within the Metropolitan Area. This assessment is supported by the Bloomington Natural Resources Commission and the Burnsville Environmental Council, as well as several studies. These include McHarg's[5] Study, the Department of Natural Resources Minnesota River Trail Study and Metro Rivers Study.

Table 3

ENVIRONMENTAL ASSESSMENT REPORT AESTHETIC CRITERIA

Variables	Rating Criteria	Low	Moderate	High
Landscape Types	absorb disturb.	Urban upland woods lowland woods	upland woods openings	Bluff, wooded slopes, water, marsh
Landscape Attractiveness	diversity	monotone	diverse	most diverse
Unique Features	sighting of feature	no feature		feature
View From Road	vistas & features	no view	directed view of feature	unlimited view of features
Wildlife	sighting of wildlife	no wildlife		
Open Space	view of parks & open space	no open space	open space	parks

The physiography of the river valley is characterized by a regular bluff on the North bank, a broad valley floor and a terrace with two stepped bluffs on the south bank.

Considerable development has occurred on the south sloped terrace. Ready access from railroad, highways, navigation and sewer service have contributed to its urbanization.

The North slopes have remained undeveloped. The proximity of the bluffs to the flood plain has left little area for construction. Also it does not have the services and accessibility that are necessary for development.

All types of landscapes whether wild, agricultural or urban have scenic value. The components that form the landscape character are identified on the accompanying map. This provides criteria for an evaluation of the aesthetic resources of the study area and a measurement of the limits the resource can tolerate before it is aesthetically damaged.

Preserving the aesthetic quality of the river valley is important.

[5]Wallace, McHarg, Roberts and Todd, **An Ecological Study of the Twin Cities Metropolitan Area** (Philadelphia, Penn.: June, 1969)

LANDSCAPE CHARACTER

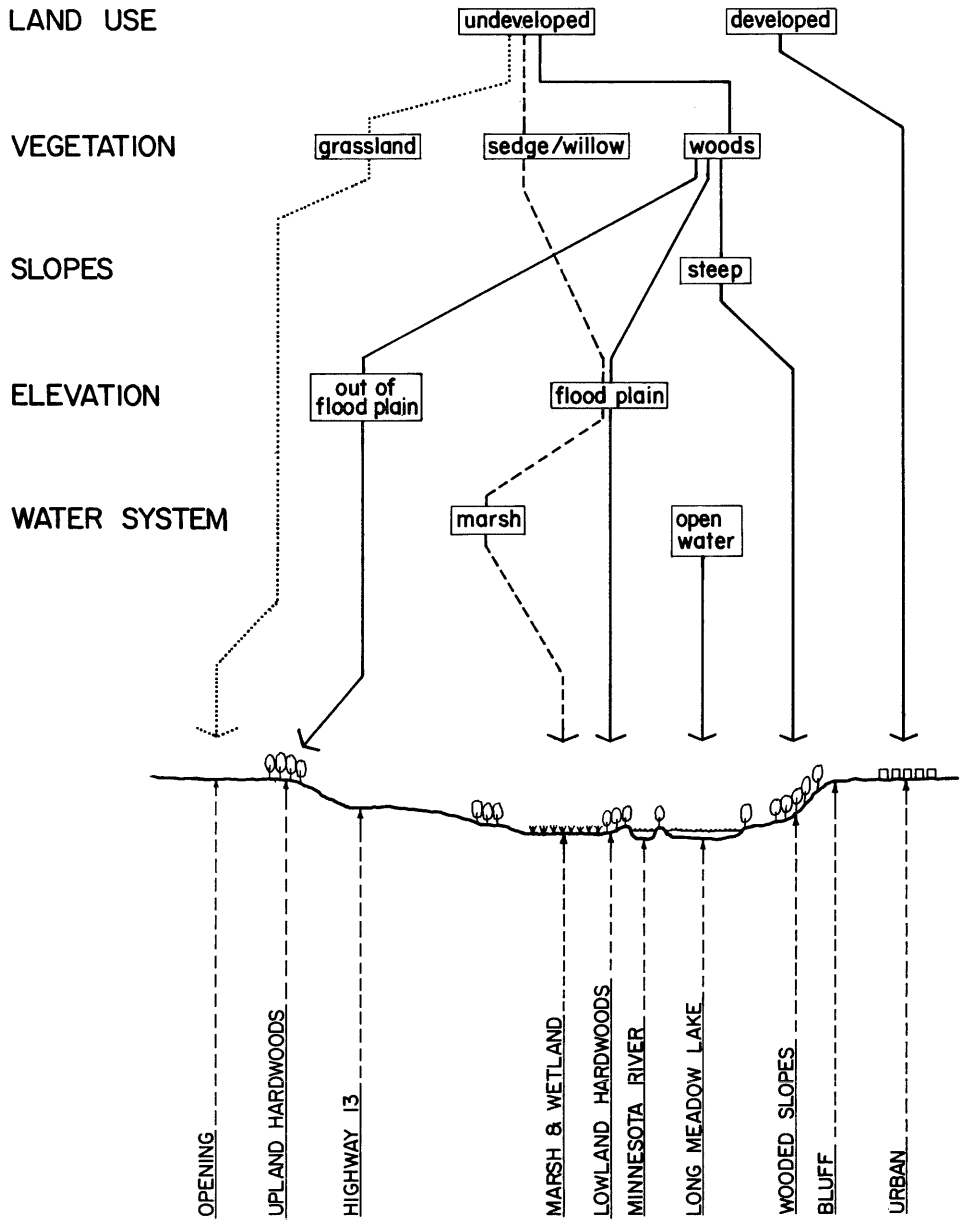


Figure 36

Specifically, this includes the wooded bluffs, the marsh lands and the river itself. The dramatic and unscarred wooded bluffs of the river valley define the limits of the valley. Bloomington's city council has recognized these values by designating them as restricted covenant areas not to be disturbed.

The edges of these types are the most sensitive to disturbance.

These form transition zones in biological terms (an econtone) between two different landscape types. The greater the difference between the types the more the contrast. This diversity highlights the visual attractiveness of the landscape, but it also limits the amount of disturbance the landscape can absorb before the visual attractiveness is disturbed.

AESTHETIC IMPACTS

View of Road

The impacts on the aesthetic resources are reviewed both in positive and negative effects. These include the view from the road and the view of the road.

Any new highway crossing the Minnesota River Valley will disturb its natural river setting to some extent. The bridge will add a man-made element to the valley that could be in conflict with its scenic beauty.

The location and elevation of a river valley crossing can have a great impact on the pattern of development. One aspect is the access provided. If access to land is allowed only on the bluffs on either side of the valley, development will be concentrated there reducing pressure for unsound development of the valley floor.

Another aspect of crossing is its effect as a physical or visual barrier. There are two ways to cross a river valley. One, from bluff to bluff, (High Crossing) staying at bluff elevation; or two, dropping close to the valley floor (Low Crossing).

High Crossing

The high crossing gives both a spatial definition to the valley and a visual obstruction to its continuity. Views of the corridor from the bridge are dramatic panoramas if provided for in the design.

An example is the Mendota Bridge, a high crossing appears to have caused little disturbance to the valley while its striking form has added to the beauty of the Minnesota River Valley. This is because the steep bluffs and narrow valley are compatible with a high bridge.

Low Crossing

In contrast, where the valley is wide like the Cedar Avenue area a low crossing is more compatible because it does not alter the profile or visual continuity of the valley. The only hazard however, is that it could provide an obstruction to movement on the valley floor.

The inplace Cedar Avenue bridge crossing of the Minnesota River Valley and the overflow structure crossing Long Meadow Lake are low bridges.

Present plans are to build a low bridge which will span the Minnesota River and Long Meadow Lake. This will lessen the obstruction to the Valley floor movements. However, earthen fills planned on both ends of the bridge could interrupt the visual continuity of the valley.

The proposed fills could also conflict with the character of the bluffs and could infringe on the valley floor as shown in the sketch. These could interrupt the valley movements. The exact disturbance is discussed in the open space and wildlife sections.

Also, in order to accomplish a low crossing of the valley the highway must descend into the valley. This will impact the steep wooded slopes that line the valley as shown on the aesthetic composite. Building the highway on the inplace alignment has little impact on the North Bluffs.

On the new alignment, the potential impact on the Bloomington bluffs will be more severe because it is more abrupt, wooded and undeveloped.

Whether or not the construction of a Cedar Avenue bridge crossing does impact the valley to a point that significantly destroys the character of the valley is debatable. However, whichever alternate is selected as the approved route, revegetation and careful grading of the highway slopes will be necessary to minimize the visual impact of the highway on the Minnesota River Valley.

AESTHETIC IMPACTS:

View From Road

In planning a new highway, the scenic resources of the area are an asset. The scenic resources of the corridor of the Cedar Avenue crossing of the Minnesota River Valley were appraised and displayed on the aesthetic map. These provide a positive impact for the motorist.

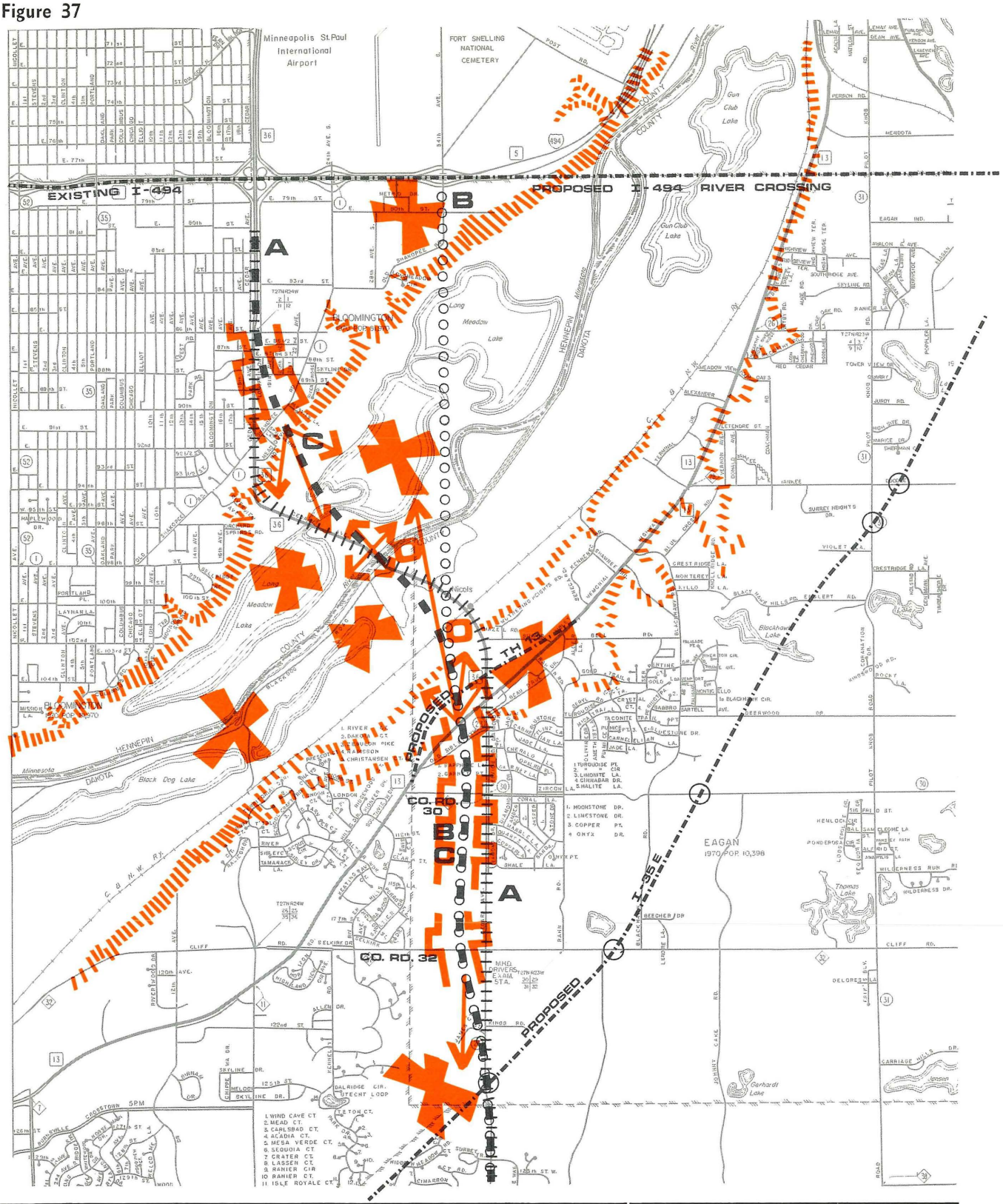
Individual assessments of scenic resources vary considerably depending on the observers' physiological, educational and cultural background. But the probability of visual appeal for the motorist is greater when the road crosses landscapes rich in variety as opposed to undifferentiated monotone landscapes! As described in the preceding section, the Minnesota River Valley has a wide variety of scenic resources which is unique to an urban area.

Diverse landscapes are visually more stimulating and therefore more desirable. These effects result in passing from an urbanized scene of home clusters and commercial-industrial complexes to the natural, undeveloped landscape of the valley.

In evaluating the view from the road, the first determination is visibility. Three aspects influence the view motorists see:

1. Speed
2. Geometric Design
3. The elevation of the road in relation to the surrounding forms.

Figure 37



VIEW FROM ROAD

- DOMINANT LANDFORM
- ENCLOSURES
- EXISTING FEATURES
- POTENTIAL FEATURES
- DIRECTION OF VIEW
- PANORAMIC VIEW
- UNLIMITED VIEW

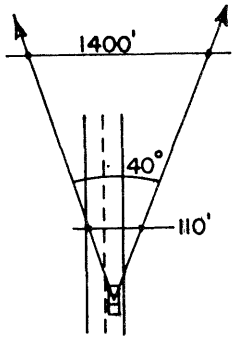
cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

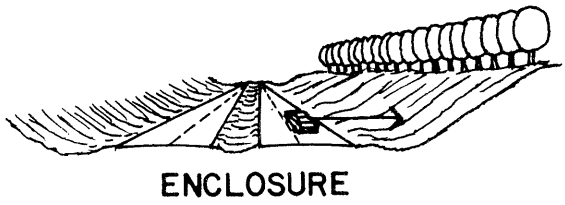
trunk highway 36

0 1000 4000

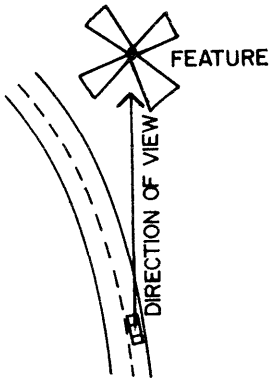
N



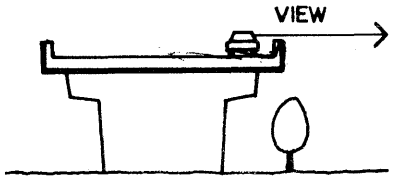
Design Speed



Elevation of Roadway



Geometric Design



As speed increases, foreground details fade rapidly, moving objects cannot be perceived separately and the driver does not see clearly except in the distance.

Only within an angle of 40 degrees and at a distance between 110 and 1,400 feet is vision adequate at a speed of 60 miles an hour — an interval that is traveled in less than 15 seconds.

The horizontal and vertical alignment of the roadway greatly determines the direction of the view for the motorist. While passengers have a generally wide sweep of vision, the driver must operate within a narrow cone of vision centered on the roadway ahead.

Design of the roadway, whether depressed or elevated in relation to its surroundings has a direct effect on the view open to motorists.

An enclosed view results when the roadway is depressed. Foreground details on backslopes are most apparent to the motorist. This also focuses attention to the roadway ahead as the walls or backslopes seem to converge in the distance. To relieve the monotony of this setting, careful delineation of the enclosure must be considered.

A panoramic view is possible from elevated roadways. The foreground objects do not block viewing of distance and there is no sense of boundary restrictions. Bridge structures can provide an opportunity for outstanding vistas.

Features

Scenic Drive

The combination of all these factors determine what is visible from the roadway. The motorist's attention is focused on the features which stand out from their surroundings. These could be perceived either positively or negatively by the motorist.

The visual impact of a feature or an area may be evaluated by its uniqueness, size, scale of its details and boldness of form. Also related is the distance of the feature from the viewer and the length of time it is in view.

The pleasure of driving and the feeling of safety depends somewhat on how well the road blends into the landscape. As previously described, a variety of landscapes exist in the Minnesota River Valley. Careful attention to the transition between the different landscapes during design and construction would increase the scenic quality of the road and provide a sequential viewing experience for the motorist.

6. ATMOSPHERIC QUALITY

NOISE

The noise analysis for this project was made to determine present and predicted noise levels for both existing Cedar Avenue and the proposed improvement. Extensive field measuring was conducted along Cedar Avenue to determine where problem areas are located on the existing facility. This measuring has indicated that present noise levels exceed the design guidelines that require an L_{10} 70dBA[6] for land use category "B" [7] This level is presently exceeded at the following locations:

1. Between 83rd street and a point south of Meadow View Road (both sides) in Bloomington,
2. Between T.H. 13 and Shale Lane (east side) in Eagan,
3. Between Cliff Road and Kings Road (east side) in Eagan.

Do Nothing — Alternate "D"

The initial noise levels on this alternate would be essentially the same as those that exist on the inplace facility. Therefore, if a do-nothing decision is reached for this project, some form of noise attenuation or reduction would need to be considered in the three areas mentioned above.

To provide the abatement or attenuation necessary to bring the noise levels below 70dBA would require a continuous barrier between Cedar Avenue and the areas affected. Access to the inplace facility is unlimited with many existing driveways and intersecting roads. Noise barriers would have to be built in short sections, between the access openings, making them relatively ineffective. Therefore, noise reduction for the do-nothing or "D" Alternate is not feasible.

Alternate "C"

Field measurements were taken at a number of locations along the Alternate C corridor to establish present ambient noise and to help predict future noise levels. These predictions were made using the Transportation Systems Center (T.S.C.) nomograph method developed by the U.S. Department of Transportation. The results of these predictions were used to establish the noise contours and barrier needs as shown on map figure 39. The study indicates that the design noise level, 70dBA, will be exceeded at the following developed locations:

1. Between 83rd Street and the edge of development south of Old Shakopee Road (both sides) in Bloomington,
2. Between Old Sibley Highway and County Road 30 (east side) in Eagan,
3. Vicinity of Kings Road and James Court (both sides) in Eagan.

Noise barriers will be necessary at these locations to reduce the predicted noise levels to less than 70dBA. This will be accomplished by using earth mounds, barrier walls or a combination of the two. See sketch figure 38 for an example of how these barriers might look.

No special attempt will be made to protect undeveloped lands along the proposed corridor[8]. In Eagan where bordering areas are mostly undeveloped, it is recommended that local officials make future land use zoning compatible with the proposed highway facility. Many of these areas are already zoned for commercial and industrial use; no problems are anticipated in these areas unless zoning is changed to some other land use category.

In summary, the noise impact on category "B" land will be less with Alternate "C" than Alternate "D". The reason for this is that noise abatement techniques can be built into the future corridor but can not be effectively used along present Cedar Avenue.

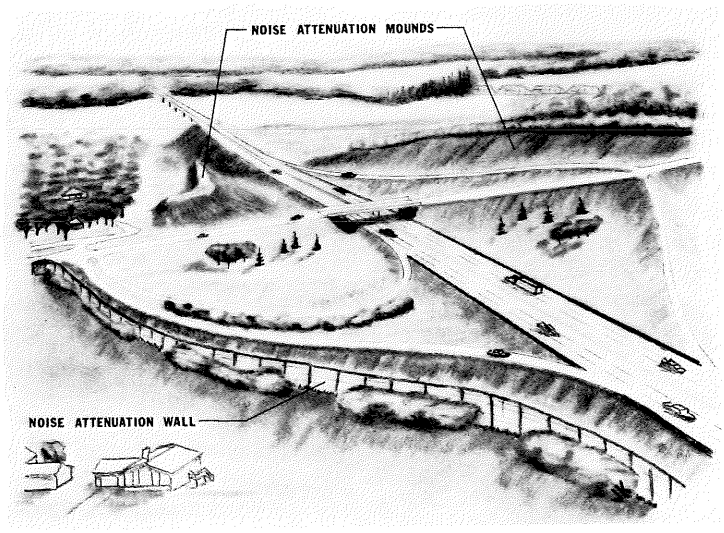
A complete noise analysis report for this project is available on request.

[6] L_{10} 70dBA means that the 70 decibel noise level is exceeded 10 percent of the time. The dBA scale is used because it provides a system which approximates the manner in which the human ear perceives or rates sounds.

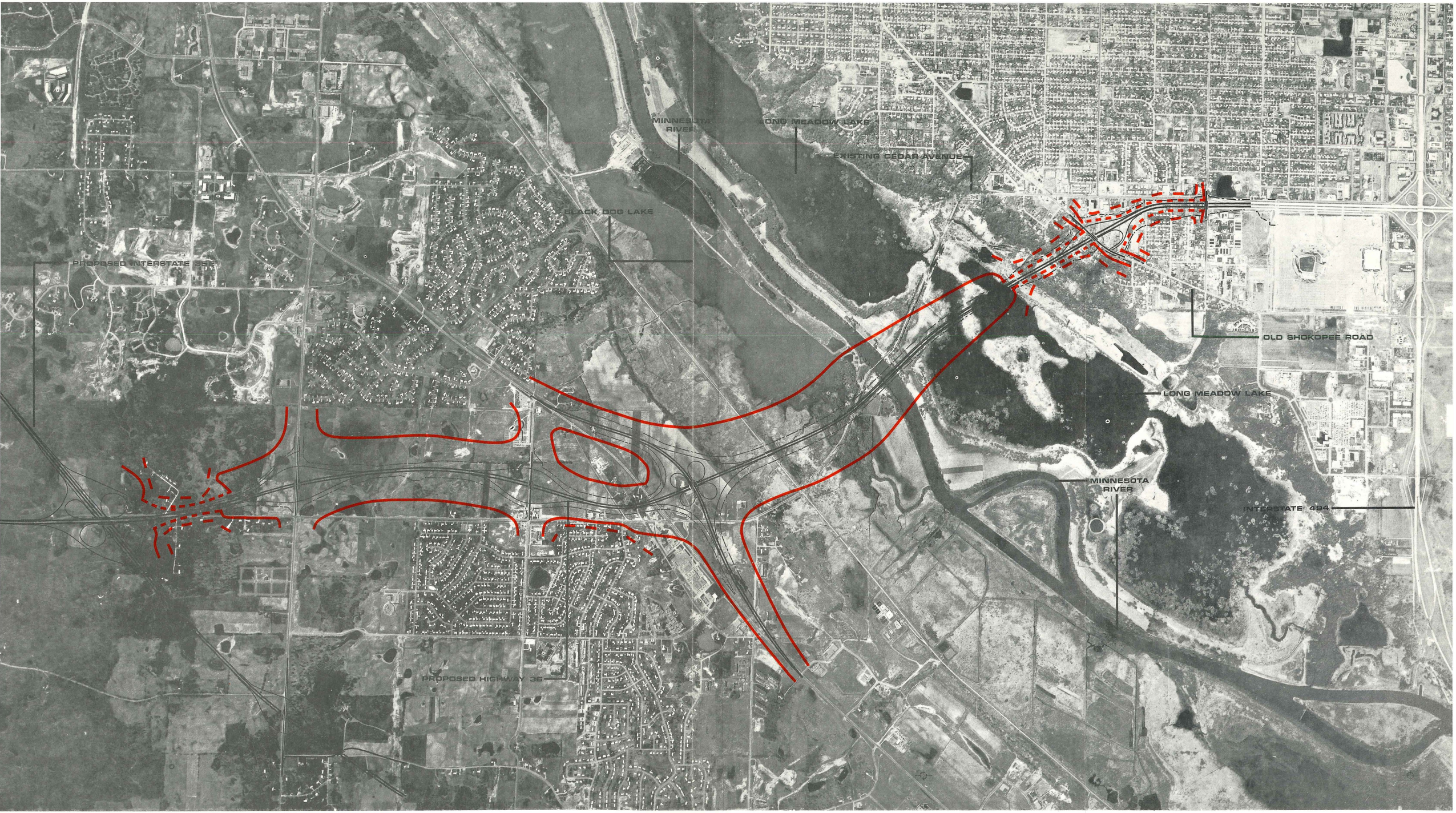
[7] Category "B" land use includes the following where the exterior design noise level of 70 dBA should not be exceeded: residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, recreation areas and parks.

[8] Undeveloped lands (Category "D" land use) usually require no noise attenuation measures. There are, however, certain circumstances where attenuation may still be warranted. (See Federal Highway Administration. Policy and Procedure Memorandum 7-7-3 for further land use categories and noise requirements.)

Figure 38



VIEW LOOKING SOUTHWEST AT PROPOSED OLD SHAKOPEE RD. INTERCHANGE DEPICTING NOISE ATTENUATION WALLS AND MOUNDS.



70 dBA NOISE LEVEL

65 dBA NOISE LEVEL

NOISE ABATMENT WALLS & MOUNDS

PROPOSED ROUTE

NOISE LEVELS NEW ALIGNMENT

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

N

0 500 1000

Figure 39

APPLICATION OF FHWA AIR QUALITY GUIDELINES

The D.E.I.S. was submitted to FHWA prior to the effective date of the FHWA air quality guidelines (FHPM 7-7-9 which became effective December 26, 1974). In accordance with Paragraph 7b of FHPM 7-7-9, the MHD, in consultation with the FHWA division administrator, has reviewed available material on the development of the highway section, including the following analysis which appeared in the draft statement, and determined that the consideration of air quality is adequate. This D.E.I.S. is being processed based (in part) upon that determination which also concluded that the proposed improvement is consistent with the approved State implementation plan.

AIR ANALYSIS FOR THE CEDAR AVENUE PROJECT

In the Cedar Avenue proposal, estimated amounts of pollutants are the combined totals of the ambient concentrations and the emissions from generated traffic. (Pollutants are carbon monoxide, CO ; nitrogen oxides, NO_x; and hydrocarbons, HC). A Metropolitan Council publication, "Mobile Air Pollutant Emissions Inventory and Forecasts Based on The Cities Metropolitan Area Network," supplied the figures for ambient concentrations. Analysts used the Minnesota Highway Department forecasted traffic volumes for 1974 and 1995 to determine the concentrations from auto emissions.

Alternates

For computational purposes, analysts divided the Cedar Avenue corridor into 5 segments (See Fig. 40). This division allowed adjustments in the computations for varying wind conditions and traffic volumes.

The graph in fig. 41 depicts the predicted volumes of CO under two conditions, the Most Probable and the Worst Case. The Most Probable is that weather condition most likely to occur 72% of the time during a 5 year period (weather-observation period). Under this condition, air movement and emission dispersion is moderate. The Worst Case is that weather condition which is most likely to occur 12% of the observation period. This condition has a stable atmosphere and poor emission dispersion. As the graph shows, the most severe of the Worst Case (segment 5, 2.74 parts per million) falls far below the allowable maximum of 30 parts per million.

A report titled "Air Quality Report, Cedar Avenue So. (T.H. 36), S.P. 2758-10 & 1925-01" is on file at the M.H.D. District 9 headquarters in Oakdale, Minnesota. This report discusses more extensively the air analysis for this proposal. A table in the report shows the concentrations of NO_x and HC. As with the CO, the concentrations of NO_x and HC will be far below the allowable maximums. The Minnesota Pollution Control Agency (MPCA) has not raised any issues regarding air quality.[9]

The Do Nothing Alternate

A prime consideration in the air analysis for the Do Nothing Alternate is the 10-year projected life span of the Cedar Avenue bridge. On removal of the bridge, T.H. 36 would become a local access route. As such it would generate less traffic than it would as an improved facility. At first glance, because of less pollutant emission, this appears good. Two other considerations are important, however.

First, as the development along T.H. 36 in Eagan increases, the volume of local traffic would become greater. With frequent stop-and-go movements causing higher emission rates, the resultant pollutant concentration would be higher than the present levels.

The diverted traffic is another consideration. If T.H. 36 should become a local access road, the traffic which would normally use it as a thoroughfare will be diverted to the other two river crossings. Thus, although reductions in the amount of pollutants would occur on T.H. 36, corresponding increases would occur on the remaining two river crossings and on the highways leading to them.

[9]See Pollution Control Agency letter in Section VIII. (P. 128)

AIR ANALYSIS SEGMENTS

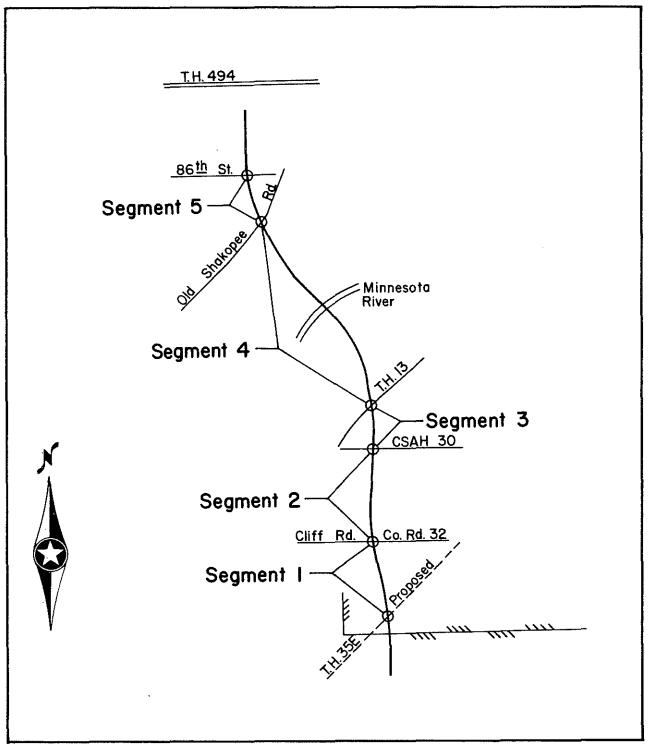
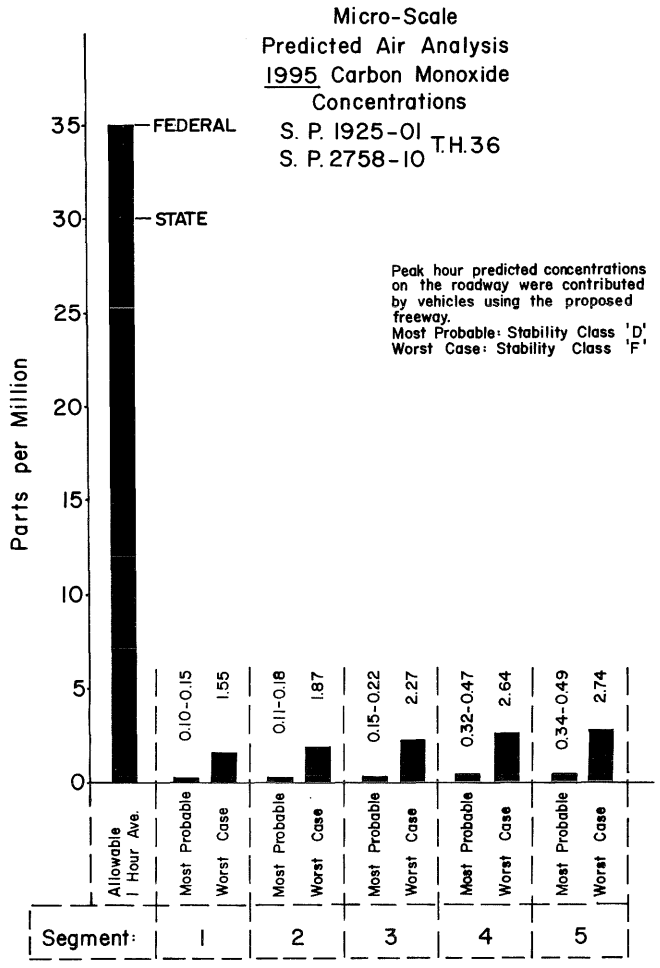


Figure 40

Figure 41



Part C. Socio – Economic Inventory and Impacts of Proposed Improvement

1. INTRODUCTION

From 1950 to 1970 most of the residential, industrial, and commercial growth in the 7-county metropolitan area took place in the suburbs of Minneapolis and St. Paul. The most rapid growth occurred in the second and third ring suburbs, areas which begin about 6 miles from the core of the metropolitan region and extend for another 8 to 9 miles. The closeness of the areas to the central business districts of St. Paul and Minneapolis is one of the main reasons for their accelerated growth. Another reason is the excellent quality of most of the land: the terrain lends itself equally well to all of the three categoreis of development (residential, industrial, and commercial).

The study area falls within the second and third ring suburban areas. Aggregately, the four municipalities which comprise the study area (Bloomington, Burnsville, Eagan, and Apple Valley) have the highest rate of expansion in the metropolitan region. Table 4 gives the population growth in Dakota and Hennepin Counties and in the four municipalities. With the exception of East Bloomington, which is near the saturation point in its development, the cities will continue to experience rapid growth over the next two decades. This is indicated in the population employment and dwelling unit projections determined by the Metropolitan Council. Figure 42 shows some regional and local level areas for which these projections have been developed. The District Level (Regional) Projections have been completed for the years 1980, 1990 and 2000 and are shown along with 1960 and 1970 data in Table 5.

Table 4

POPULATION GROWTH

Community	1940	1950	1960	1970
Hennepin Co.	568,890	676,579	842,854	960,080
Dakota Co.	39,660	49,019	78,303	139,808
Apple Valley	—	—	5,143	8,502
Eagan	—	—	3,381	10,398
Burnsville	495	583	2,716	19,940
Bloomington	3,647	9,902	50,498	81,970

Table 5

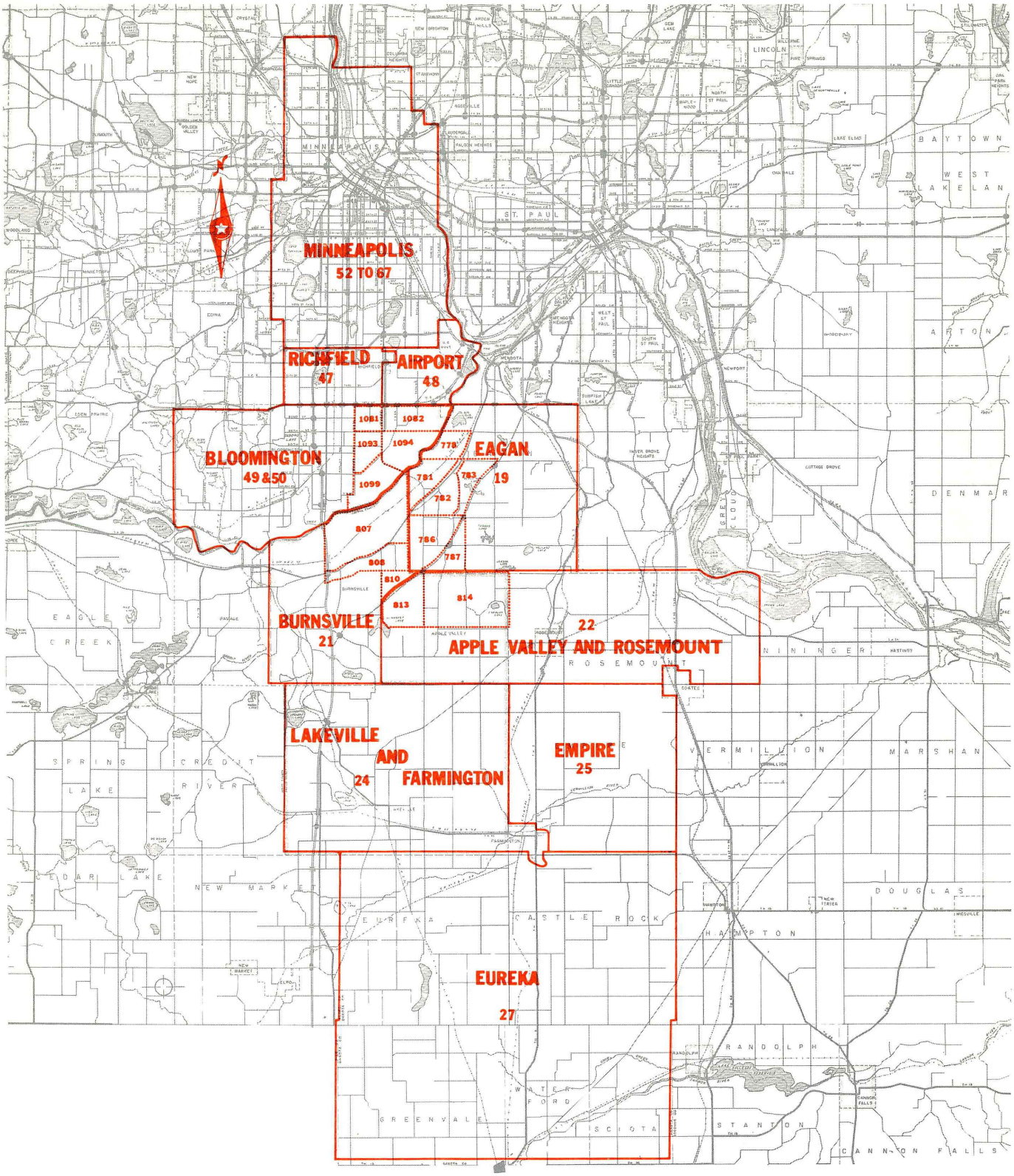
DISTRICT LEVEL (REGIONAL) PROJECTIONS
of Population, Employment and Dwelling Units

Districts	LOCATION	1960			1970			1980			1990			2000		
		Population	Employment	Dwelling Units	Population	Employment	Dwelling Units	Population	Employment	Dwelling Units	Population	Employment	Dwelling Units	Population	Employment	Dwelling Units
52-69	Minneapolis	482,867	274,189	165,791	434,319	290,324	161,080	441,581	307,066	164,455	467,510	313,438	168,061	446,281	312,467	152,279
47	Richfield	42,523	5,554	10,893	47,228	10,328	14,797	44,960	11,547	15,200	38,736	12,525	15,103	45,554	16,027	17,761
48	Airport	898	7,460	150	624	14,888	105	838	22,265	106	884	12,351	106	939	15,554	106
49 & 50	Bloomington	50,498	7,978	12,035	81,961	33,955	21,816	93,555	46,209	28,648	118,424	53,165	37,679	131,655	60,951	45,773
19	Eagan	3,381	94	832	10,398	5,915	2,607	28,042	12,978	8,000	53,291	24,654	16,718	70,594	34,723	23,354
21	Burnsville	2,717	284	664	19,940	2,808	4,876	50,630	11,770	15,000	70,380	18,277	22,380	91,794	24,807	29,726
22	Apple Valley and Rosemount	2,596	1,295	634	12,536	2,834	3,056	19,802	5,563	5,197	34,393	13,246	10,612	52,518	22,225	17,082
24	Lakeville and Farmington	5,346	832	1,503	10.660	1,823	2,937	15,093	4,341	4,500	21,378	7,091	6,500	40,708	12,272	12,781
25	Empire Township	717	203	171	1,136	44	271	4,340	468	963	5,641	18,739	1,248	8,657	23,134	2,395
27	Eureka Township	2,924	4	708	3,453	84	865	6,082	300	1,588	10,464	600	2,882	16,735	1,956	4,815

The following sections discuss the land use in the study area and the impact of proposed T.H. 36 on this use (and the Metropolitan Area as a whole). The section titled General Land Use gives a broad picture of the study area. Subsequent sections deal with the various aspects of development. These sections are as follows: Industrial and Commercial Facilities; Residential Areas, Characteristics of Population; and Community Services.

Three additional sections—Right-of-Way Acquisitions, Tax Structure Impact, and Relocation Analysis — follow the sections listed above. The section titled Right-of-Way Acquisitions gives an estimate of the amount and cost of the land, homes, and businesses that the proposed improvement will require. The Tax Structure Impact section discusses the expected losses and gains to municipal and county tax rolls. Lastly, the Relocation Analysis section examines the relocation needs of displaced persons and business. It also gives in detail the availability and costs of homes in the study area.

Figure 42



DATA COLLECTION DISTRICTS & ZONES

cedar ave. S.

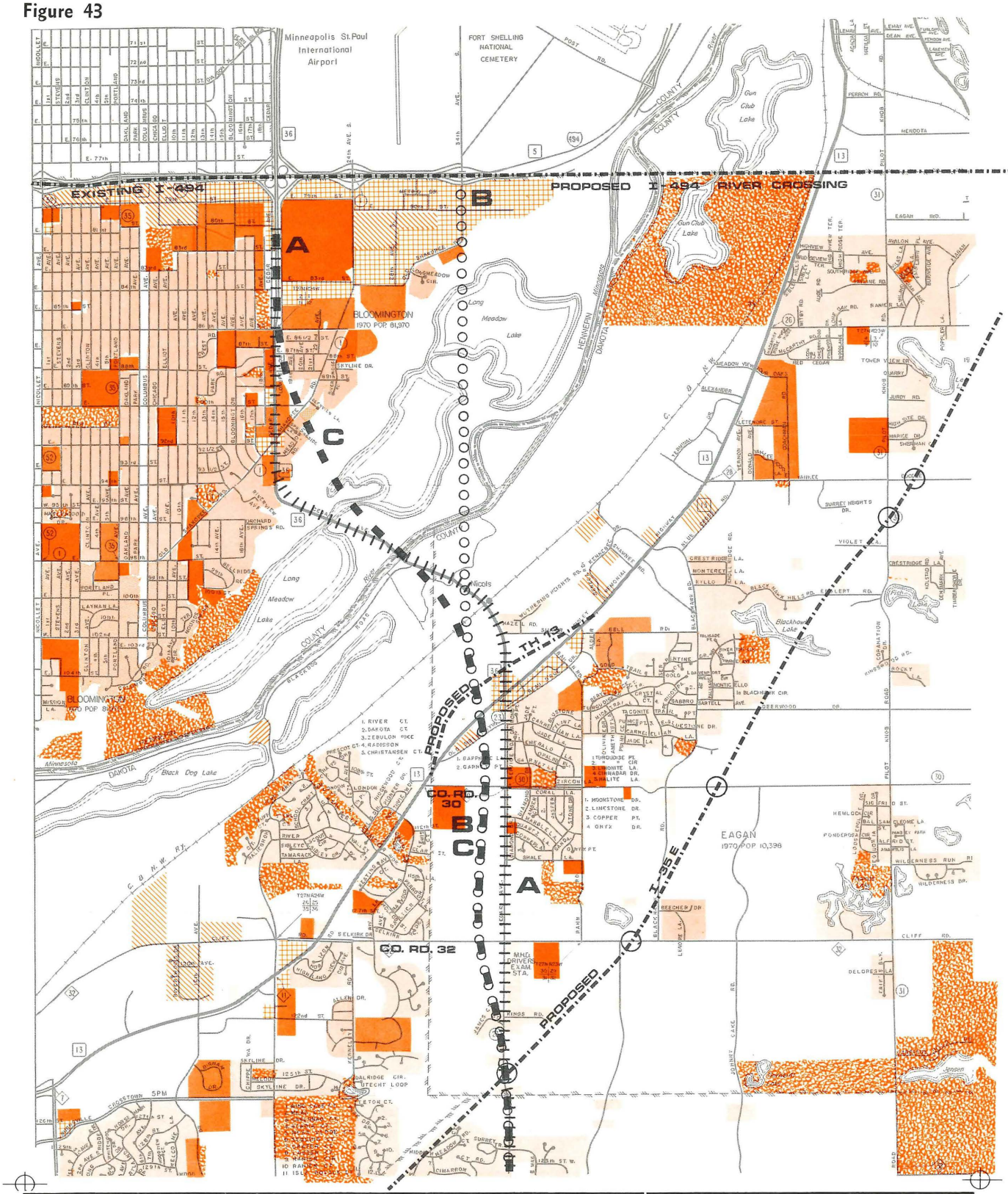
BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1 2 4miles

N

Figure 43



LAND USE (EXISTING)

- RESIDENTIAL SINGLE DWELLINGS
- MULTIPLE DWELLINGS
- COMMERCIAL
- INDUSTRIAL
- PUBLIC FACILITIES
- OPEN SPACE

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

2. GENERAL LAND USE

EXISTING LAND USE

The Minnesota River, which separates Bloomington from the remainder of the study area is also a separation line for two types of land-use development (See Figure 43, Existing Land Use).

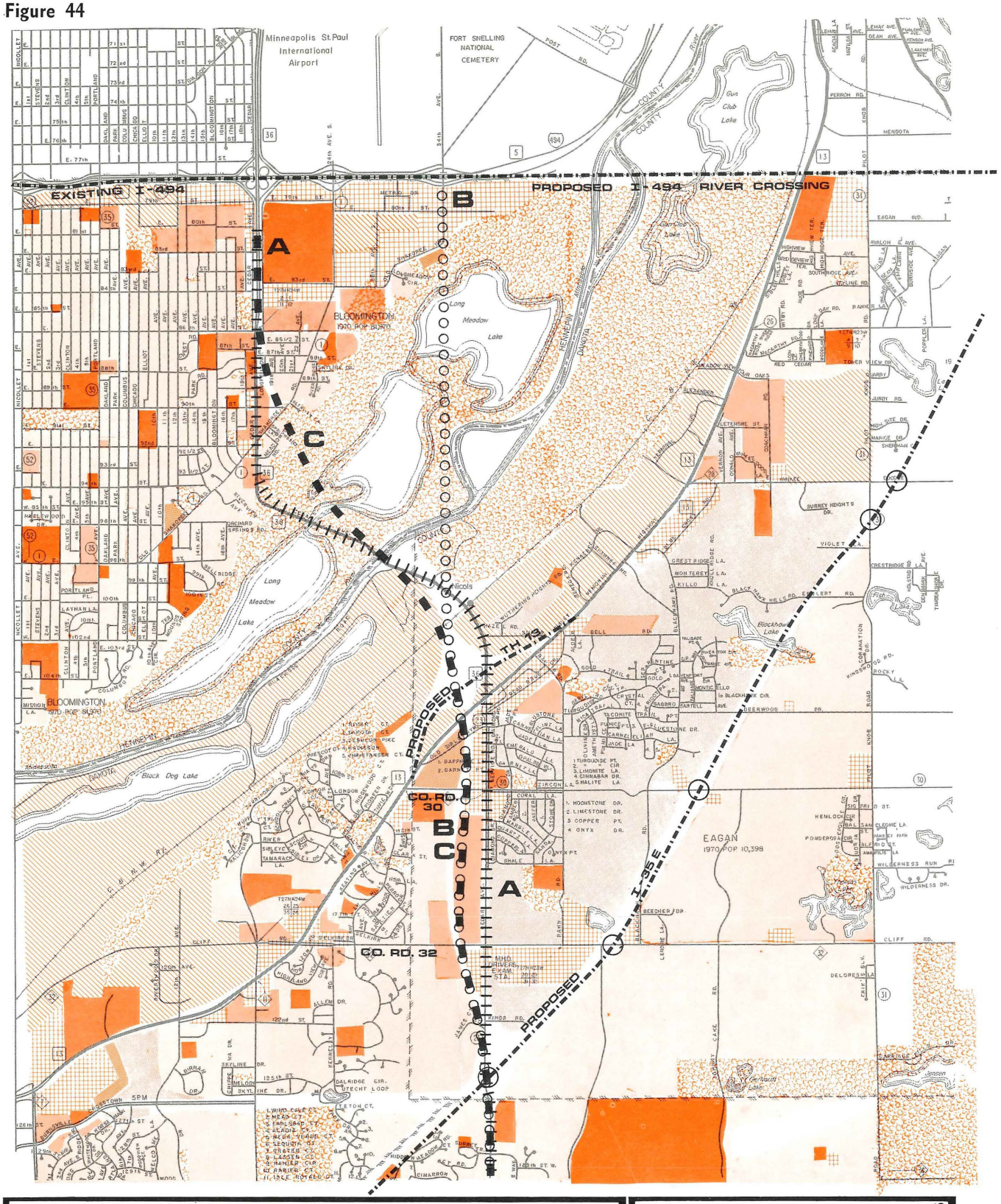
North of the Minnesota River is the old compact grid system. This method of development originated from and around the old public transportation and rail systems. The area here has a predominance of small to medium size lots, single family homes, convenience and neighborhood shopping centers and little open space. (Within Bloomington, however, the Minnesota River Valley provides a vast amount of open space not normally found in cities built around the old grid system).

South of the river is an entirely different development process, one not yet fully completed. Persons and agencies concerned with this area had time to adopt land use controls and began to work on planned community development. Lot sizes are larger. Street systems are usually long and curving with a large number of cul-de-sacs. Most schools are of large, modern construction. Also, the newer cities—Apple Valley, Burnsville, Eagan— have plans for regional shopping centers.

Development started or completed prior to the land use controls has created some incompatible land use, however. The development along T.H. 13 is a good example. Here farms are adjacent to apartment, businesses dependent on road traffic stand next to municipal buildings, and residential areas are in the midst of areas zoned industrial. For the most part, this type of development is due to a transition in uses (from agricultural to urban). It also indicates that in some cases, development occurred prior to the adoption of land use controls and planned community development.

Developers, land speculators and land investors have acquired most buildable land in the study area. As a result, the cost of land has increased at a fast pace. With the increase amounting to twenty to thirty per cent annually, it is difficult to determine current values. Because of the fast rate of development, particularly south of the river, the land values will more than likely continue to increase.

Figure 44



LAND USE (PROPOSED)

- RESIDENTIAL SINGLE DWELLINGS
- MULTIPLE DWELLINGS
- COMMERCIAL
- INDUSTRIAL
- PUBLIC FACILITIES
- OPEN SPACE

cedar ave. s.

trunk highway 36

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 1000 4000

N

PROPOSED LAND USE

Both Bloomington and Eagan, the communities which proposed T.H. 36 most directly affects, have future land use plans (see Figure 44, Proposed Land Use Plan). With Bloomington, other than the addition of proposed T.H. 36, the future plan is about the same as the existing plan. One change is the additional residential area zoned along T.H. 36. This area will have two-family structures, apartments, and town houses. Similar land use is planned for much of the surrounding area, especially along 86th St., Old Shakopee Road, and along the river bluff. Bloomington also plans minor street changes to complement proposed T.H. 36. Eagan's future land use plan reflects the City's anticipation of continued rapid growth, particularly in industrial and commercial development. Major developments will be the Eagandale Diversified Center and Industrial Park and the Minnesota River Industrial Center. (See Figure 45 Industrial, Commercial Facilities.) The Diversified Center will attract all types of vehicular traffic. The industrial centers will have a large amount of truck transportation. In addition to the industrial and commercial centers in Bloomington and Eagan, two other regional commercial centers are planned for the study area, both near enough to T.H. 36 to have considerable traffic impact on the proposed facility. They are the Burnsville-Apple Valley (Homart) Center near I-35W, south of C.S.A.H. 42, and the Rosemount Center in the Rosemount-Coates area. Other proposed development in or near the study area of major importance is the Minnesota Zoological Garden. Scheduled for opening in 1977, the Zoo will occupy 460 acres in Apple Valley. A park of approximately 750 acres will be directly north and east of the Zoo site. The anticipated rapid increases in land value in the area between now and 1977 will be partly attributable to the Zoo and related development. Land speculation in the surrounding area has already started. One motel is planned for construction in the near future. Additional proposals for similar transportation service establishments will no doubt be forthcoming.

IMPACTS ON LAND USE

Bloomington and Eagan consider T.H. 36 and I-494 the structuring elements of their Future Land Use Plans. Both include T.H. 36 in their plans, generally on the same location as proposed Alternate "C". They are depending on proposed T.H. 36 to encourage desired development. Eagan has set aside land (formerly agricultural or unused) for the proposed highway.

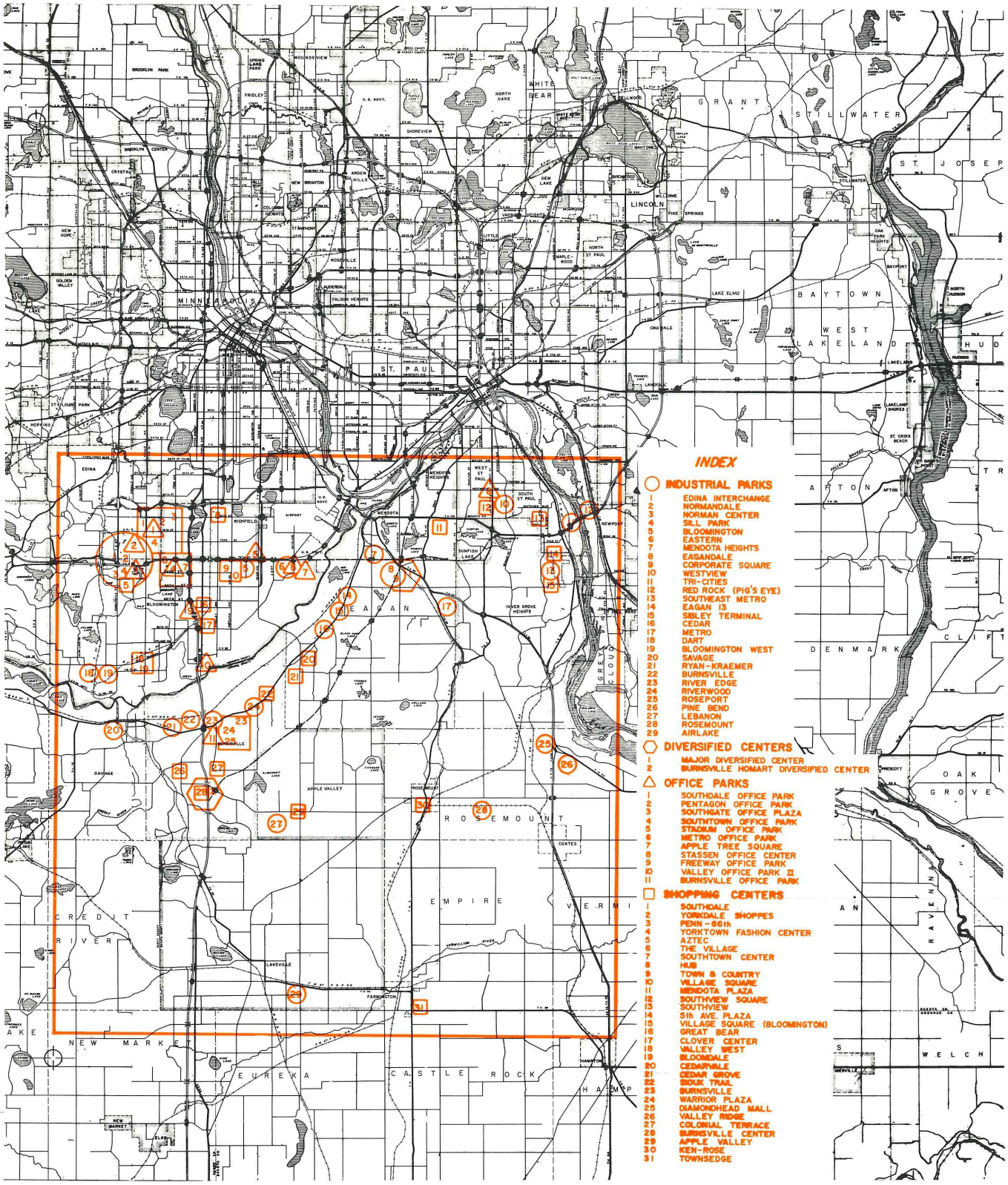
Proposed T.H. 36 will allow development to occur at a faster rate, and to a greater extent than if it were not built. As an improved facility, it will stimulate economic growth in underdeveloped areas where other ingredients for development exist. It will hasten economic changes already underway and open up new areas for development by providing or improving mobility.

Improved highway facilities will result in a higher value and a faster rate of appreciation for land near proposed T.H. 36. Land sufficiently remote from the highway route will not be affected. Regionally, the land south of the study area will receive a similar but lesser impact, as this area will be further opened for development of all types.

T.H. 36 will also benefit the new zoo. It will allow residents from throughout the region better access to the zoo, particularly those residents in Minneapolis and its suburbs and in western Dakota County. Although I-35W and proposed I-35E will handle much of the zoo traffic, if proposed T.H. 36 is not built, some of the traffic will be forced onto the county highways and residential streets.

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

Figure 45



MAJOR INDUSTRIAL PARKS SHOPPING CENTERS & OFFICE PARKS

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1 2 4miles

N

3. INDUSTRIAL & COMMERCIAL FACILITIES

EXISTING AND PLANNED FACILITIES

In general, study area industries are fairly new, in a good state of repair, and have a low level of vacancy. This means existing industry will probably remain. Many firms formerly located in Minneapolis or St. Paul have recently moved to the study area. From 1960 to 1970, 315 firms moved from the central cities to the suburbs.[10] Sixty-five (20.6%) of these moved to Bloomington, six (1.9%) to Burnsville, and 13 (4.1%) to Eagan. During the same period, a large number of new firms started operations in Bloomington, Burnsville, and Eagan.

Companies locating in the study area settled in two major industrial areas — one in Bloomington and one in Eagan (See Figure 45). The area in Bloomington is part of the giant diversified industrial-commercial strip along existing I-494, starting at the intersection of T.H. 100 and ending several blocks east of Cedar Ave. Immediately east of the industrial strip, the land is relatively undeveloped. Bloomington has zoned this section industrial. Therefore, development here will most likely be extensive.

Situated in the industrial area in Bloomington is the Metropolitan Region's largest concentration of office space outside the two central business districts. The 77 buildings here have a total of 3,214,000 square feet of space.[11] (This total does not include the Airport and Fort Snelling). Pentagon Park, with an estimated five hundred firms, and Metro Office Parks are the largest office parks. The Control Data Corporation Complex is the largest single company, employing about 3,000 people in 1970.

In this area also is the Metropolitan Sports Complex. The complex is the scene of professional sporting events the year round — baseball, football, basketball, hockey, and tennis — plus other events such as the circus and ice show. Surrounding the complex are numerous commercial establishments which cater mainly to persons attending the complex.

East of 34th Ave. and south of Interstate 494, Apple Tree Square is now under construction. Office space here will total about 250,000 square feet. The complex will have residential units and commercial facilities. Most new office-space construction along I-494 will take place at the west end near T.H. 100, however.

[10]The Metropolitan Council, **Industrial Expansion and Migration in the Twin Cities Metropolitan Area, 1960 - 1970** (April, 1973), p. 19

[11]The Metropolitan Council, Office Space: **An Inventory and Forecast for the Twin Cities Metropolitan Area,** Staff report, (June, 1973), p. 9

The second industrial area is south and east of the Minnesota River. A portion extends along Interstate 35W in Burnsville and along T.H. 13, from Burnsville north into Eagan. The largest portion of the industrial area is in the northern section of Eagan. Within the overall span is a diversity of industries, from firms with strictly office and administrative functions to those which require large warehouse and trucking operations.

The most significant addition to the industrial-commercial complexes in the study area will be the two major diversified centers, the Burnsville-Apple Valley (Homart) Center and the Eagandale Diversified Center.

Both will contain commercial (retail and office), industrial, institutional, and high density residential facilities. Table 6 shows the past, current, and projected employment, dwelling units, and population within a five-mile radius of the centers. Both centers will experience rapid growth in all three categories. The entire region will in all probability become a major industrial area with a heavy dependence on truck transportation.

Table 6

DATA ASSIGNMENTS TO AREA WITHIN A FIVE MILE RADIUS OF EACH SHOPPING CENTER

Eagandale			
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
Burnsville's Homart			
Year	**Employment**	**Dwelling Units**	**Population**
1960	11,707	16,121	66,366
1970	50,720	40,656	148,883
1980	84,936	66,614	226,609
1990	126,452	102,234	329,372
2000	174,687	143,957	451,148

IMPACT ON INDUSTRIAL AND COMMERCIAL FACILITIES

In general, proposed T.H. 36 will have a positive impact on the industrial and commercial facilities in the study area. Bloomington has approved proposed T.H. 36, calling for at least four lanes to allow rapid movement of through traffic and better access to the industrial area and to the Metropolitan Sports Complex. Also, they have planned local collector-distributor systems around the proposed new facility. Eagan also considers T.H. 36 essential to their industrial and commercial development, particularly that in the western portion of the city.

For the industrial development, proposed T.H. 36 will attract firms not otherwise willing to locate in the study area because of traffic problems on the existing facility. Industries locating near proposed T.H. 36 will experience savings in storage, inventory, and distribution costs. These savings will come from the capability of serving larger areas from a single point. Also, T.H. 36 will give firms in the study area better access to raw materials and provide better mobility for their labor force.

As with the industrial development, proposed T.H. 36 will encourage and support anticipated commercial development. The degree of impact will depend on the size of the business (sales volumes and employees), and the geographic boundaries of the market area. Businesses affected negatively will be those whose access will no longer be from the primary roadway but from frontage roads or secondary roads. In Eagan, Cedarvale Shopping Center and the surrounding commercial area will be in this category after the improvements on T.H.'s 36 and 13. The absence of through traffic will have a negative impact on the area. The impact will be minimal, however, as the commercial establishments located here are mainly for local community shoppers. One of the advantages of the lack of access from proposed T.H. 36 will be a decrease in congestion after the separation of through and local traffic.

Construction of proposed T.H. 36 will better serve the giant sports complex in Bloomington. Better access to and from the south will allow people to attend the various sporting events who either would not attend before or would not attend as frequently before.

Persons living either within or outside the study area should benefit psychologically knowing a wider array of opportunities for social activities is available, and that if they choose to accept this opportunity, a real savings in time and transportation expenditures would result by using the improved facility.

A new location for another major airport (with the possibility of phasing out the existing one or using it as an auxiliary) has been the topic of much discussion in recent years. Several areas around the Twin Cities have been considered one of which was in central Dakota County. Since circulation of the D.E.I.S. for the project, plans for a new airport have been rejected by the M.C. and probably will not be revived in the foreseeable future.

4. RESIDENTIAL AREAS

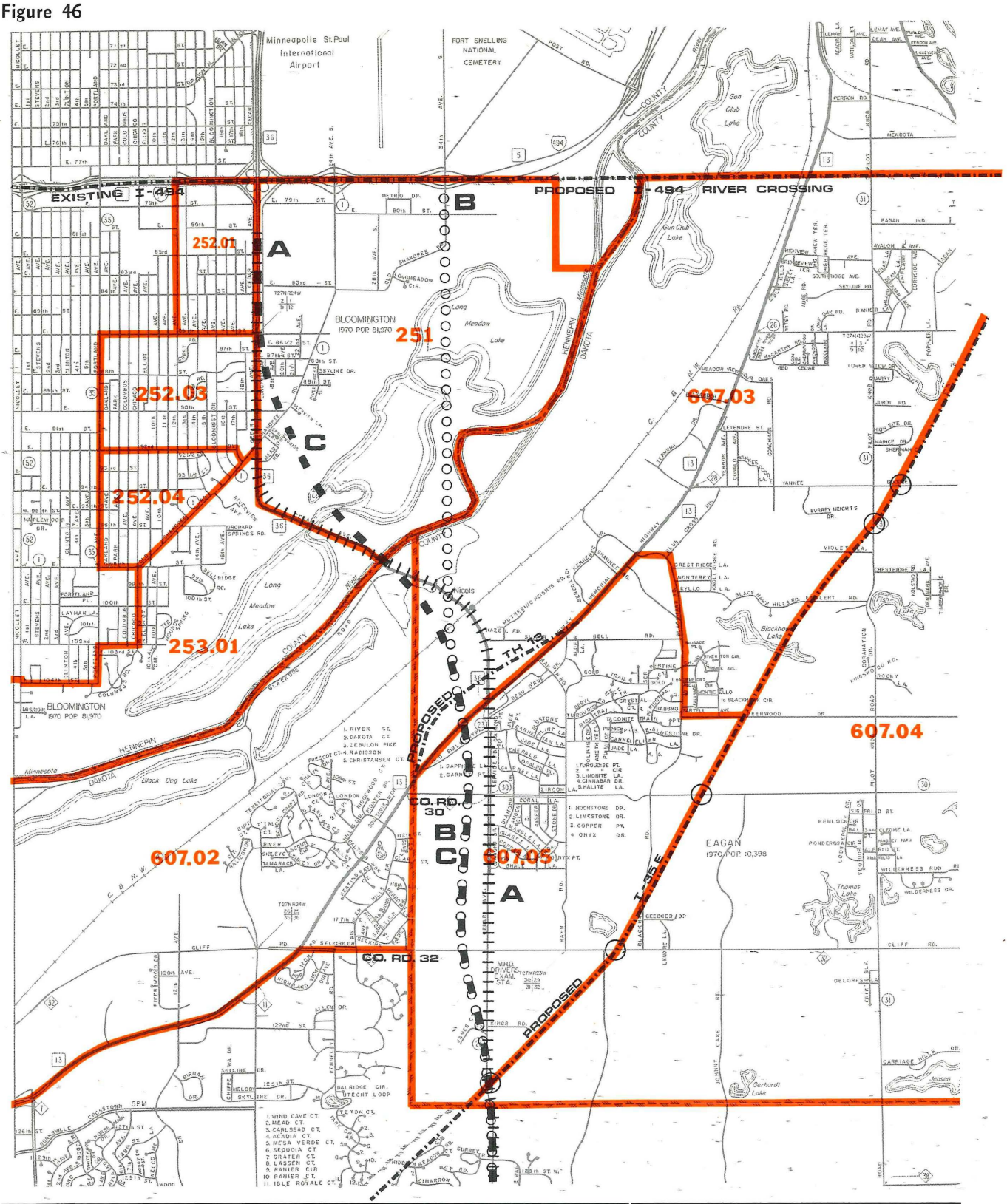
EXISTING CHARACTERISTICS

A review of 1970 Census Tract data reveals some pronounced differences between study area residents and residents to the north in the central section of the metropolitan region (see Table 7 and Figure 46). Study area residents are young, white, native Americans, with a high educational attainment level. By comparison, the central cities have an older population, and most of the neighborhoods have some residents who are of minority races, foreign born, or direct descendants of immigrants. Also, the average educational attainment level is lower.

Study area workers are predominantly white collar workers with median family incomes of about $13,415. In the portion of the study area north of the river, 43.6% of the homes have a value in excess of $25,000; south of the river, 67.7%. The metro area mean family income is about $10,600; only about 21% of the homes have a value in excess of $25,000. Two per cent of study area residents occupied their homes before 1950; metro average was over 12%. About 99% of study area families have at least one auto and 65% two or more. In the metro area on the whole, the percentages are 86% and 39%. Over 90% of the study area workers use the automobile for transportation to and from work. The metro average is 80.5%.

One can conclude from the statistics that study area residents are younger, more native-born American, better educated, more mobile, wealthier, and move more often than residents in the metro area as a whole. This means that study area residents, especially those south of the Minnesota River, have less affinity to their immediate surroundings than residents of traditional neighborhoods. In the traditional neighborhoods, residents use neighborhood facilities more. They work and play closer to home. Walking is more common; thus, incidents of personal encounter are frequent. Conversely, study area residents have little neighborhood contact, as the auto is their chief mode of transportation. Elementary schools might be the only neighborhood facility commonly utilized by study area residents.

Figure 46



CENSUS TRACTS

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

Table 7

1970 CENSUS TRACTS DATA

	East Bloomington Area						Eagan-Burnsville Area					Dakota County	Hennepin County	5 County Area
	251	252.01	252.03	252.04	253.01	Average	607.02	607.03	607.04	607.05	Average			
AGE														
% Age 65 and Over of total Population	3.8	1.3	2.1	1.8	5.7	2.7	.7	3.3	4.0	.4	1.4	5.2	9.7	8.7
% Ages 5 to 14 of Total Population	16.5	20.1	25.6	30.8	27.6	24.5	36.1	28.8	28.3	27.8	30.1	25.8	19.6	21.3
RACE														
% Negro of All Persons	.2	.6	.0	.1	.2	.2	.0	.4	.3	.2	.2	.1	2.1	1.8
NATIVITY														
% Foreign Stock of Total Population	13.4	9.9	9.4	12.2	18.8	12.3	6.0	15.4	11.1	9.5	9.6	12.8	19.4	17.7
EDUCATION														
Median School Years Completed	12.7	12.8	12.6	12.6	12.7	12.7	14.3	12.7	12.5	12.8	13.1	12.5	12.5	12.4
% High School Graduates of Persons Age 25 and Over	75.3	80.7	74.6	79.9	77.6	77.6	94.2	75.7	69.9	85.3	81.3	68.0	67.9	66.1
RESIDENCE														
% Persons Age 5 and Over Living in Same House for Last 5 Years of Total Persons Age 5 and Over	31.0	38.2	56.1	72.0	43.1	49.6	45.1	55.8	53.4	42.5	46.7	51.4	51.0	52.5
TRANSPORTATION														
% Workers Using Private Autos (Driver and Passengers) of All Workers	88.4	91.8	87.9	92.0	93.1	90.5	92.4	85.7	88.4	97.3	93.3	86.4	78.2	80.5
% Workers Using Bus of All Workers	.7	.7	3.9	3.3	2.3	2.3	.0	1.2	.7	.0	.3	3.5	10.6	8.9
% Workers Using Other Means* of All Workers	11.0	7.5	8.3	4.7	4.5	7.3	7.6	13.0	10.9	2.7	6.5	10.1	11.2	10.7
AUTO AVAILABILITY														
% Households with No Auto Available of All Occupied Housing Units	2.1	1.9	2.8	1.4	2.0	2.1	.0	2.9	1.6	.0	.6	6.0	16.0	14.2
% Households with 2 or More Autos Available of All Occupied Housing Units	52.4	53.5	40.8	71.8	68.9	55.3	77.5	66.5	65.7	54.4	64.2	48.6	37.8	38.7
OCCUPATION														
% White Collar Workers** of Total Employed	61.2	64.5	55.9	53.3	67.9	60.4	79.5	66.5	49.8	60.2	64.6	54.8	59.2	56.7
% Blue Collar Workers*** of Total Employed	38.9	35.5	44.1	46.7	32.1	39.6	20.5	33.5	50.2	39.8	35.4	45.2	40.8	43.3
INCOME—1969														
Median Family Income (In Dollars)	$13,082	$12,553	$11,954	$14,480	$16,821	$13,778	$14,546	$14,109	$11,810	$11,843	$13,077	$12,120	$11,805	$11,682
% of All Families with Income Less Than $4,000/year	5.8	5.5	3.0	.6	1.4	3.7	2.6	3.6	4.3	2.8	3.1	54.8	8.5	8.0
% of All Families with Income More Than $15,000/year	39.4	54.8	22.6	45.0	57.8	41.7	45.5	44.4	33.1	23.4	33.5	30.4	29.7	28.6
OWNER OCCUPIED HOUSING														
Median Persons Per Dwelling Unit of All Occupied Units	2.4	3.0	3.6	4.2	3.8	3.4	4.5	3.8	3.9	3.9	4.0	3.5	2.5	2.8
% Owner Occupied of All Year Around Housing Units	33.9	38.1	73.3	97.3	78.1	62.3	98.1	68.4	85.2	72.4	80.9	74.4	59.8	63.2
Median Value of All Specified Owner Occupied Units (In Dollars)	$28,900	$ $21,000	$21,900	$23,900	$33,400	$25,820	$35,000	$30,500	$24,100	$25,400	$28,750	$23,500	$21,900	$21,500
% Less Than $15,000 Value of All Specified Owner Occupied Units	4.0	7.0	8.1	2.4	1.4	4.7	.1	4.0	6.5	2.4	1.4	12.8	15.6	16.6
% More Than $25,000 Value of All Specified Owner Occupied Units	64.8	18.8	26.8	41.3	78.2	43.6	96.1	68.0	44.7	52.0	67.7	42.8	35.6	32.8
RENTER OCCUPIED HOUSING														
Median Rent of All Specified Renter Occupied Units (In Dollars)	$190.00	$211.00	$172.00	$145.00	$178.00	$179.20	$265.00	$175.00	$113.00	$171.00	$181.00	$132.00	$175.00	$121.00
% Less Than $100/mo. Rent of All Specified Renter Occupied Units	3.1	1.5	2.7	8.3	3.2	2.4	.0	5.3	26.8	1.6	5.1	27.1	33.3	35.8
% More Than $150/mo. Rent of All Specified Renter Occupied Units	91.9	89.3	76.9	41.7	86.5	86.9	78.6	82.9	14.3	83.7	74.8	34.5	29.1	26.7
AGE OF HOUSING UNIT														
% Structures Built Since 1950 of All Year Around Housing Units	92.1	92.7	90.7	94.6	86.7	91.6	96.8	90.5	75.2	98.8	93.5	70.4	48.1	51.0
YEAR MOVED INTO UNIT														
% Moved Into Unit Prior to 1950 of All Occupied Housing Units	2.7	1.8	2.7	1.0	4.1	2.5	1.4	.0	.0	7.3	1.7	10.4	11.9	12.2

*Other means includes categories: subway, etc.; walked to work; worked at home; and others.
**Professionals, managers and administrators, sales, clerical.
***Craftsmen, operaters, transport, laborers, farm and service workers, private household workers.

When study area residents (or would be residents) purchase a home, neighborhoods as such might not be an important factor. The residential districts, being virtually undeveloped, would not have any neighborhood characteristics to offer. Rather, the essential buying factors might be cost and required minimum space, taxes and schools, and distance to work, shopping centers, and places of entertainment.

The purpose of presenting this detailed analysis of the characteristics of study area residents is to provide a basis for determining the impact of T.H. 36 on the residential areas within the study area. In reality, traditional neighborhoods do not exist within the study area. Study area residential areas can best be defined as geographic or governmental areas rather than neighborhoods.

IMPACTS ON RESIDENTIAL AREAS

The impact on a young, mobile, auto-oriented people in a high turnover area is different from the impact on an older, closer-knit, pedestrian-oriented people. With the former, any disruption would be termed an area disruption; with the latter, a neighborhood disruption. Normally, the study area, being in the former category, would in all likelihood experience two types of area disruption after the construction of proposed T.H. 36. One would be the changes due to disorientation of people and business from the area. The other would be changes due to the impedance to travel which the new facility would cause. With the proposed T.H. 36 improvements, however, both possibilities are negated, as the existence of Inplace Cedar Ave. has already shaped area boundaries and travel patterns. Proposed T.H. 36 follows closely enough to the present alignment to preclude creating any new instability.

The proposed work should cause very little socio-psychological impact. This type of impact occurs when a highway alters the physical environment, bringing about a changed sense of community within the residents and reducing their feeling of well-being. Except in one small triangular-shaped area in Bloomington — an area which proposed T.H. 36, existing Cedar Avenue, and the Minnesota River Valley forms — the proposed work will effect no such changes to the physical environment. Little socio-psychological impact is expected north of Old Shakopee Road in the predominantly multiple family dwelling units. This area is similar to the area west of Cedar Avenue. South of Old Shakopee Road, an area comprised of twenty-five to thirty single family homes will be somewhat isolated, however. These people's natural movement and walking areas could change, and they might feel somewhat cut off from their physical surroundings, especially to the northeast. The total impact should not be too great, however, as Cedar Avenue and Old Shakopee Road have formed area boundaries or restrictions before the homes ever existed. Both automobile and walking access will still be provided to this area.

The changes due to travel impedance caused by the new facility are also negligible. Disruption of short trips should not occur since most all but local residential and private roads are provided with direct crossings of proposed T.H. 36, and most local trips can be made more conveniently due to the separation from through trips.

The only travel impedance that should occur is during construction. Detours and delays cannot be avoided. Both ends of the projects on T.H. 36 and T.H. 13 as well as bridging proposed T.H. 36 over existing T.H. 36 just south of the Minnesota River should cause some delays.

The preceding examination of community considerations used in identifying possible non-user impacts, have yielded little positive or negative impacts of proposed T.H. 36. To summarize, the social impacts on the community, neighborhood and/or area are in the form of the increased accessibility and mobility afforded by the proposed facility.

The only other possible social impact of proposed T.H. 36 is that on the individuals living close enough to the facility to be affected by the air pollution, noise annoyance and visual intrusion common to major highways.

However, owners that realize an economic loss due to their proximity to a freeway, or know that they would suffer such a loss should they sell, will undoubtedly suffer psychologically as well.

Economically, residential areas are generally benefited rather than damaged by nearby highways, with the obvious exception of those properties in very close proximity to the highway.

A study conducted in a midwestern city before and after construction of a highway showed a loss for residential property located within 110 feet of the edge of the roadway of 12 to 14%.[12] Property located 120-125 feet of the edge of the roadway showed a loss of 7 to 9%. These losses were concluded to be due to proximity to the roadway, and the primary factor was found to be the level of traffic noise as a function of distance from the roadway.

A similar study in Ohio showed that residential properties contiguous to the right of way decreased in value up to 50 feet from right of way, and increased in value beyond 50 feet from the right of way.[13]

A more comprehensive study[14] showed that residences within fifty feet of the right of way declined more in value than more distant residences of the same age. This study also examined resale of properties, and found that there was no difference in behavior of properties lying one to four blocks from the new transportation facility. This same study also found that professional realtors expect single family residences abutting such a facility's right of way to decline 20-30% in value, and that nearby residents were generally aware of traffic noise, but did not find a high degree of disturbance.

Other studies have shown that 88% of owners of residences adjacent to freeways stated that the facility was not a negative factor in deciding to buy their home.[15] Twenty percent of these residences adjacent to a freeway were aware of the noise, but 70% of these had no misgivings about their choice.

It appears then that residences adjacent to the proposed T.H. 36 right of way would suffer an economic loss, while residences slightly away from the right of way would not. Most residences between a block from the right of way to over a mile from the right of way would show an increase in value due to their proximity to a high level transportation facility.

The only area that will be greatly affected by this residential economic loss will be Bloomington, since there is very little residential development adjacent to proposed T.H. 36 south of the Minnesota River. Since Bloomington's Eastern Area Plan for the most part calls for the development of multiple family dwelling units in the proposed T.H. 36 area, it is unlikely that many single family residences will suffer economic loss due to proximity to the facility.

The area south of the river will benefit greatly from the construction of proposed T.H. 36 since the improved accessibility afforded by the improved facility will attract considerable residential development to the area.

Other economic residential impacts depend upon the results of displacement and relocation. Displacement itself can result in increased competition for housing. Residents relocated within the same area will have no effect on the tax base, but those relocated out of the area will mean a loss to the tax base. It does not matter whether they relocated to new or existing vacant residences within the same area.

---

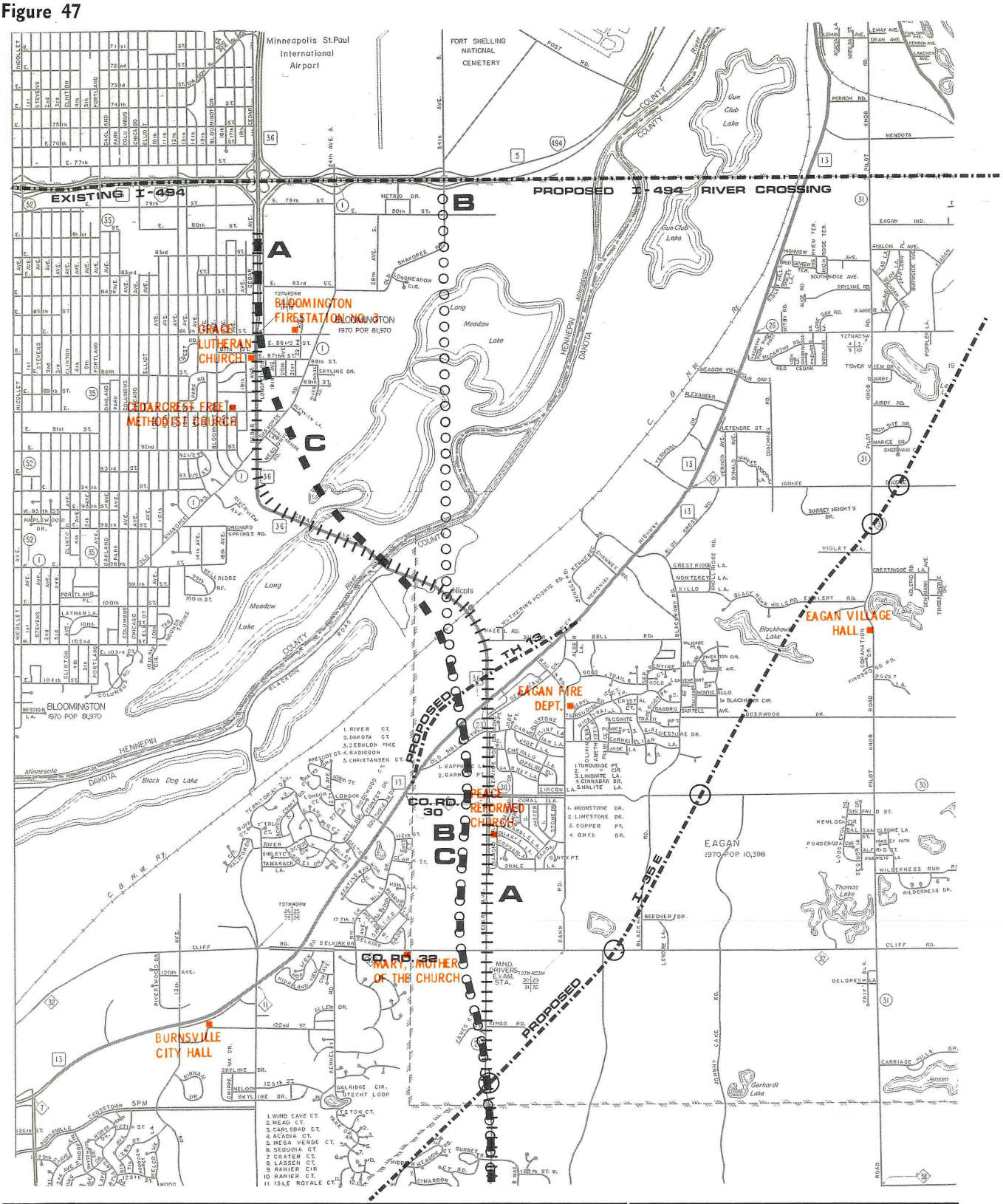
[12]Edgar C. Bartnelt, "Effect of a Highway on the Market Values of Adjoining Residential Property", **The Real Estate Analyst — Appraisal Bulletin,** XXX (January, 1961), p. 73-80

[13]David C. Colony, **Study of the Effect, If Any, of an Urban Freeway upon Residential Properties Contiguous to the Right of Way.** (University of Toledo, 1967)

[14]**Expressway Traffic Noise and Residential Properties,** (University of Toledo, 1967)

[15]**Three Economic Impact Studies on a Portion of the Baltimore Beltway,** (Maryland State Roads Commission, July, 1960) p. 15-16

Figure 47



COMMUNITY SERVICES

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

0 1000 4000

N

5. COMMUNITY SERVICES

Community services include schools, public safety facilities (police and fire departments), hospitals, libraries and community centers. Figure 47 shows study area community services, with the exception of schools. Study area schools appear in figure 48.

Public Safety

Study area police service originates from the city hall in each municipality. Bloomington's city hall is outside the study area at Penn Avenue and Old Shakopee Road. Eagan's city hall is on Pilot Knob Road (C.S.A.H. 31), northeast of proposed T.H. 36.

Two fire stations are shown in Figure 47—Bloomington's Fire Station #3 at 2050 E. 86th Street and the Eagan Fire Department at 3900 Rahn Road. These are the two fire stations within the study area that serve an area on both sides of proposed T.H. 36.

Impact on Public Safety Facilities

Proposed T.H. 36 should not adversely affect police or fire service vehicle access. Rather, the separation of through and local traffic, the controlled access, and the bridging of major east-west roads across T.H. 36 will be beneficial to public safety operations. Bloomington's Fire Station #3, on 86th Street just east of proposed T.H. 36 is the service facility located nearest the proposed highway. With its service area extending west of Cedar Avenue, this station will benefit from the better accessibility and increased safety which the new crossover at 86th St. will permit.

Churches

Figure 47 shows four study area churches located fairly close to the proposed T.H. 36. They are Grace Lutheran at Cedar Avenue and 87th; Cedarcrest Free Methodist at 90th Street and 17th in Bloomington; Peace Reformed at Diamond Drive and Quartz Lane in Eagan; and Mary, Mother of the Church on Cliff Road near the Eagan-Burnsville border.

Impact on Churches

Because of the dispersed locations of residential districts in the study areas, proposed T.H. 36 should mean better accessibility to the area churches for study area residents.

Hospitals, Libraries, and Community Centers

No hospitals, public libraries, or community centers are within the study area. The nearest hospital is Fairview South near Southdale Shopping Center, 3.9 miles west of Cedar on 62nd St. in Edina. Minneapolis hospitals are also fairly convenient. The nearest public libraries are in Bloomington at 9801 Nicollet Avenue and in Burnsville at 13712 Nicollet Avenue (both outside the immediate study area).

Impacts on Hospitals, Libraries, and Community Centers

For study area residents, existing Cedar Avenue is an important route to these hospitals. Accessibility will be improved upon completion of proposed T.H. 36. The libraries should not receive any noticeable impact.

For the convenience of students, shoppers, or any study area pedestrian, the crossovers in Bloomington at 86th Street and at Old Shakopee Road have pedestrian walkways. The same is true of the crossovers at County State Aid Highway 30 and at County Road 32 in Eagan. These crossings should be more than adequate, as the study area is characterized by a low degree of pedestrian travel.

Schools

The study area makes up a portion of three school districts — Bloomington (District #271), Burnsville (District #191), and Rosemount (District #196). Figure 48 shows the school district boundaries, and the location, attendance, and walk area of each school. Only the district boundary is shown for the Rosemount School District as it covers such a small portion of the study area and has no schools planned or in existence near proposed T.H. 36. Also, attendance and walking areas for the Burnsville schools are not shown as no such mapping is as yet available.

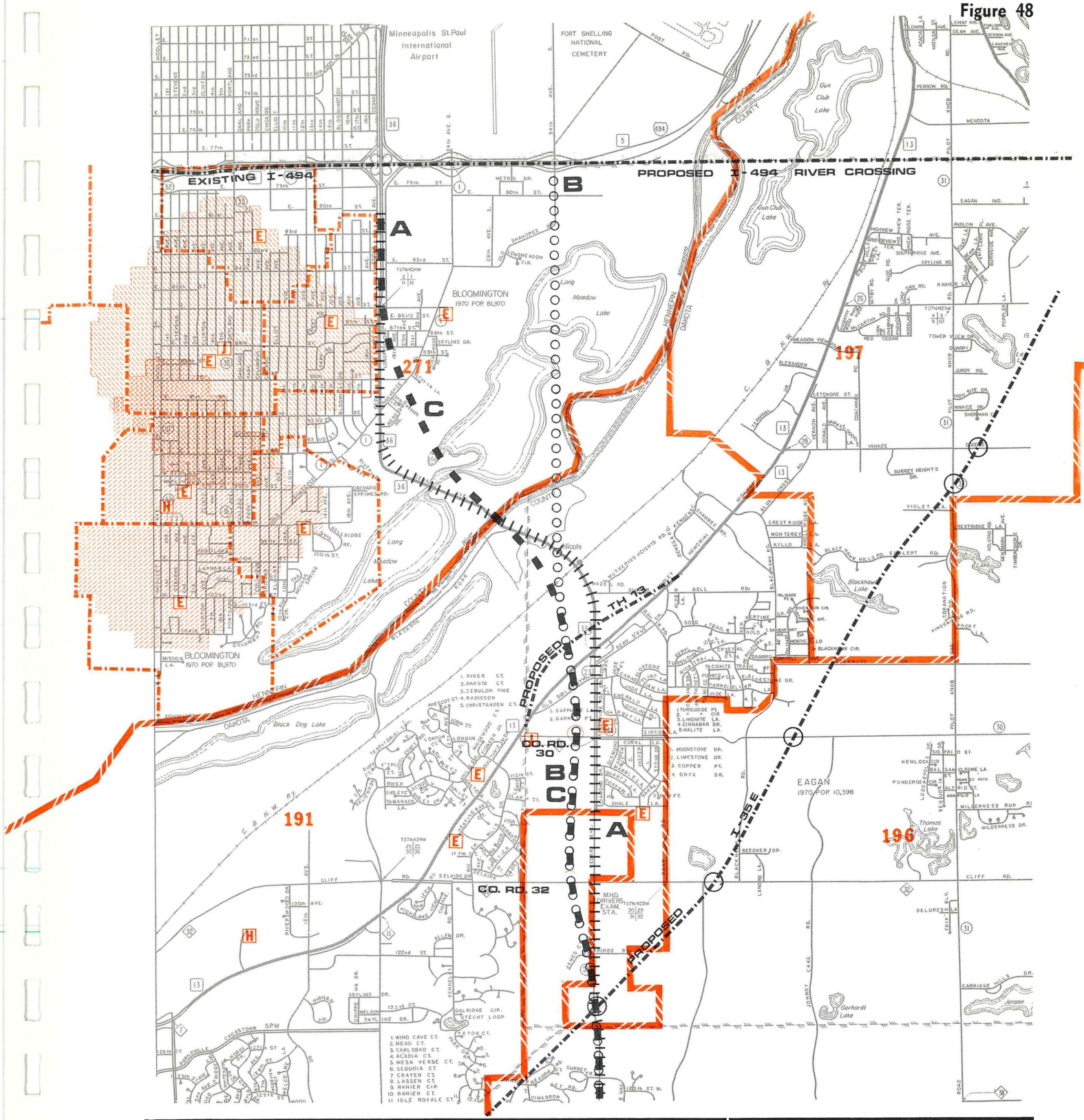
The data shown in Figure 48 is sufficient for measuring the impact of proposed T.H. 36 on schools, however. Metcalf Junior High in Eagan and River Ridge Elementary in Bloomington are the only schools which proposed T.H. 36 might possibly disrupt. No parochial schools are located close to proposed T.H. 36.

Impacts on Schools

River Ridge Elementary School, located east of proposed T.H. 36, has an attendance area that lies on both sides of existing Cedar Ave. and proposed T.H. 36. All students west of the existing and the proposed alignments live far enough from the school to require busing, however. School officials plan to continue busing these students. They do not see T.H. 36 causing any barriers to the bus routes.

A similar situation exists in Eagan (Burnsville School District) where existing Cedar Ave. divides the Metcalf Junior High School attendance area, as will proposed T.H. 36. Again, students get to school by bus, and no negative impact on students or bus routes should occur as the proposed improvements include adequate crossovers in this area, also.

Figure 48



SCHOOL DISTRICTS & WALKING BOUNDARIES

SCHOOL DISTRICT BOUNDARIES-------

ATTENDANCE BOUNDARIES----------

WALKING AREAS ----------

SCHOOL DISTRICT NUMBER----------191

ELEMENTARY SCHOOL----------E

JUNIOR HIGH SCHOOL----------J

HIGH SCHOOL----------H

cedar ave. s.

trunk highway 36

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 1000 4000

N

6. RIGHT OF WAY ACQUISITION

Table 8 lists the number of acres of land required to build proposed T.H. 36, both with and without the right-of-way for transit. The listing reflects current land-use zoning, although present usage of the land is not always as indicated. The right-of-way needed for Alternate C is shown as part of the existing land use map (see Figure 43).

Proposed T.H. 36 without transit provisions requires 34 houses and one commercial building. With transit provisions, it requires 37 houses and 3 commercial buildings. The photos, Figures 49 through 54 show houses and commercial buildings typical of those which T.H. 36 will remove. Table 9 shows in increments of $5,000, the market values of the homes to be removed.[16]

[16]Data compiled in 1973 by the Appraisal Section of the Minnesota Highway Dept.

Table 8

RIGHT OF WAY REQUIRED

Present Land Useage	With Mass Transit Facility	Without Mass Transit Facility
Agricultural Land	216 Ac.	209 Ac.
Industrial Land	30 Ac.	25 Ac.
Commercial Land	35 Ac.	33 Ac.
Residential Land	75 Ac.	70 Ac.
Public Land Including N.S.P., Northern Nat. Gas & Roadways	72 Ac.	68 Ac.
TOTAL ACREAGE REQUIRED	428 Ac.	405 Ac.

Table 9

MARKET VALUES OF HOUSES REQUIRED FOR RIGHT OF WAY

Price Brackets	With Mass Transit Facility	Without Mass Transit Facility
Below $20,000	1	1
$20,000 to $25,000	3	3
$25,000 to $30,000	4	4
$30,000 to $35,000	8	6
$35,000 to $40,000	9	8
$40,000 to $45,000	7	7
$45,000 to $50,000	3	3
$50,000 to $55,000	1	1
$55,000 and above	1	1
TOTAL	37	34

Figure 49

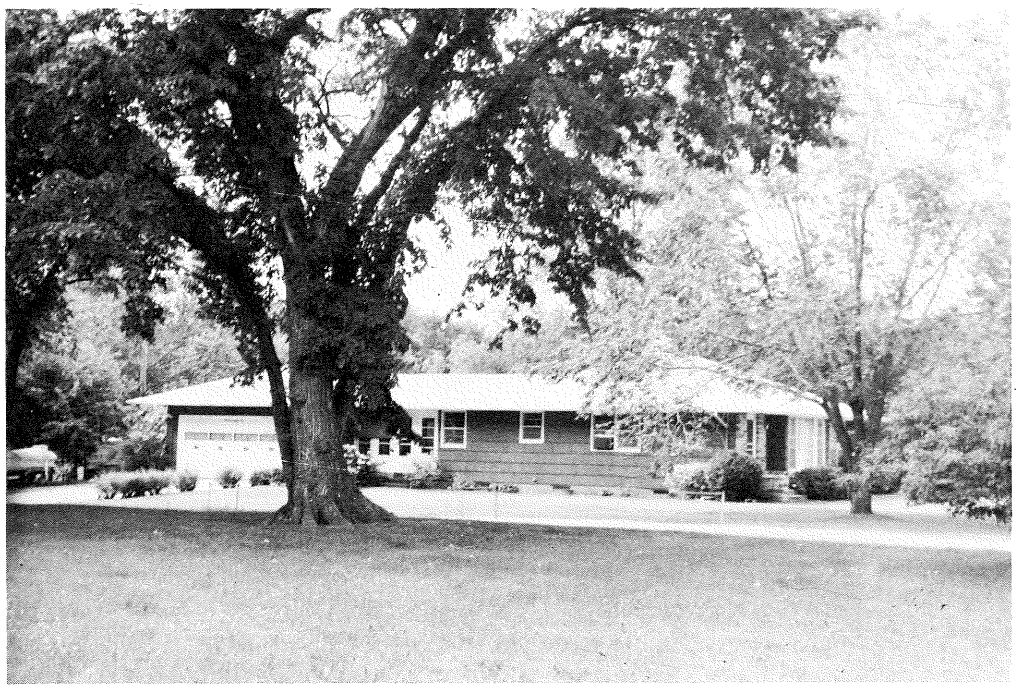
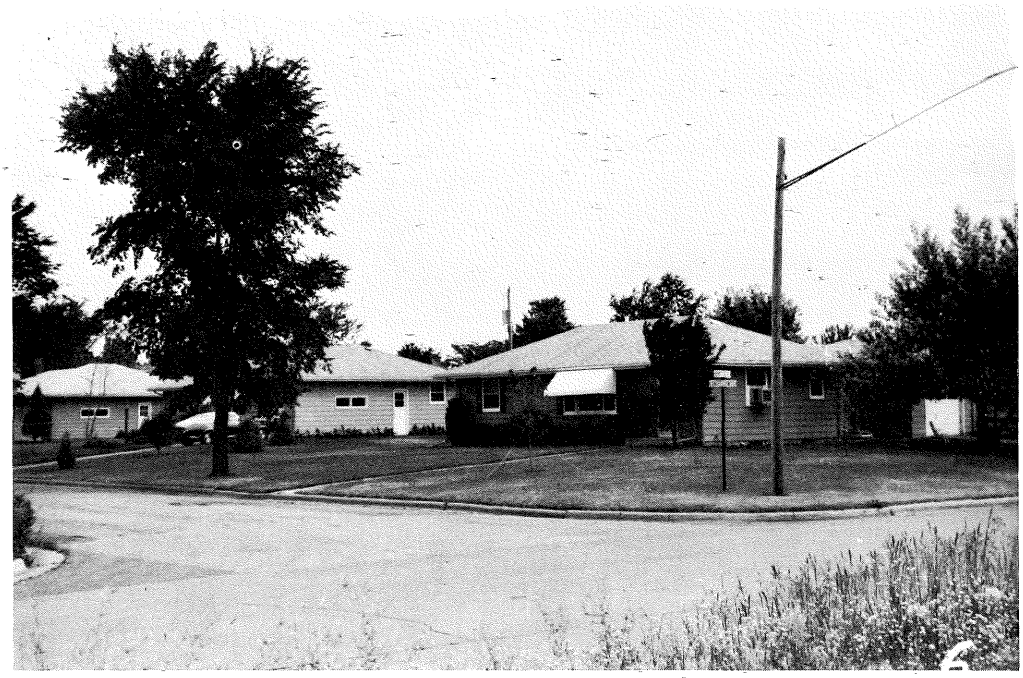


Figure 50



Typical Buildings Required for Right-of-Way

Construction of proposed T.H. 36 will also require the acquisition of a marina with five boat slips, located on the Minnesota River at the existing Cedar Ave. Bridge, and a mobile and modular home sales yard, located at the corner of existing Cedar Ave. and T.H. 13. A vegetable stand on Cedar Ave. north of T.H. 13 will also be required. (see figures 51, 52, and 53.)

Figure 51

Marina

Figure 52

Modular Home
Sales Yard

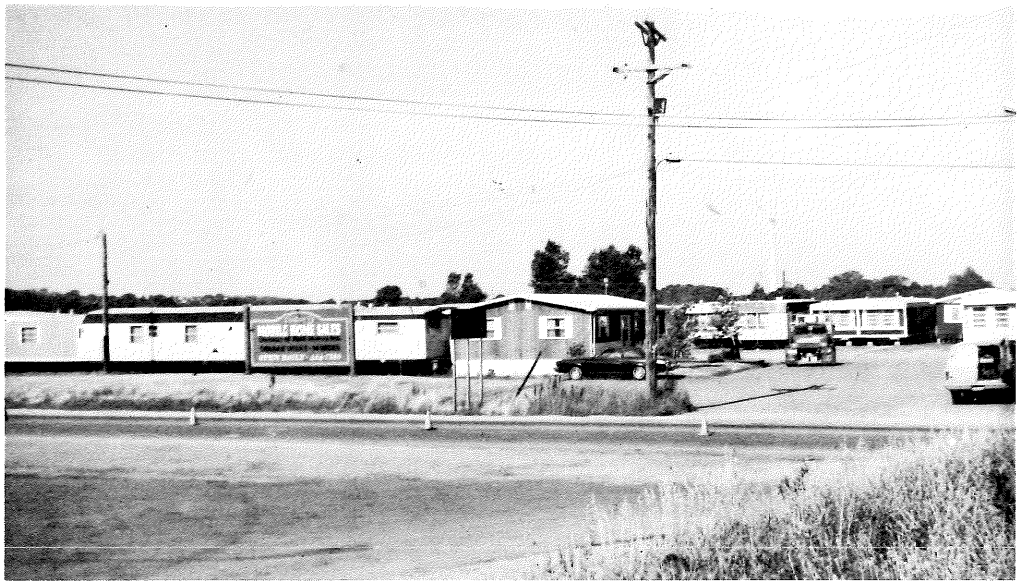


Figure 53

Vegetable Stand

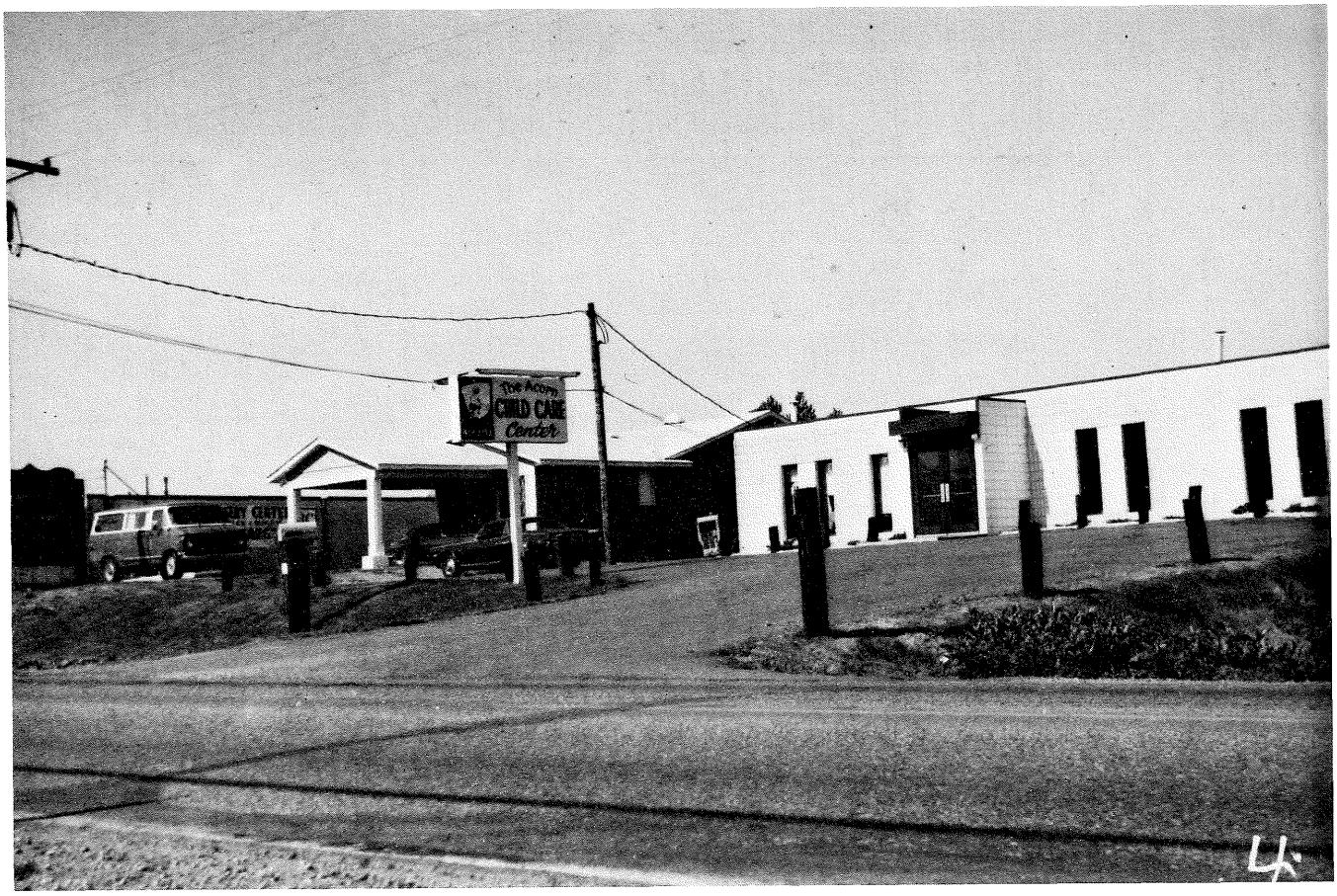
Adding the right-of-way for transit would necessitate taking two additional commercial buildings on Cedar Ave. between T.H. 13 and C.S.A.H. 30. One building houses a sauna and a real estate office. The other houses a day-care center for children.

ESTIMATED COST

The MHD's Appraisal Section estimates right-of-way costs will total $4,193,500 with transit and $3,987,500 without transit. Approximately one-half of the total cost will be used north of the Minnesota River and one-half south of the River. South of the River the right-of-way costs are mostly for undeveloped land. No estimates have been made as yet for the cost of acquiring ponding areas north or south of the Minnesota River as their exact size and location have not yet been determined.

The Right-of-Way Division of the MHD has prepared a more complete right-of-way report. It is available on request from the District 9 office, Oakdale, Mn.

Figure 54



The center building houses the sauna and real estate office, the day care center is at the right.

Table 10

LOCAL TAX REVENUE IMPACT WITH TRANSIT FACILITY

1973

Jurisdiction	Total Assessed Valuation	Assessed Valuation Removed by T.H. 36	Percent of Assessed Valuation Removed by T.H. 36	Local Tax Rate (Per $100 Assessed Valuation)	Indicated Annual Tax Loss
Bloomington	$361,283,461	$1,358,668	0.37%	$1.22	$16,576
Burnsville	92,871,018	12,224	0.01	1.44	176
Eagan	51,426,772	765,382	1.49	0.83	6,353

Table 11

LOCAL TAX REVENUE IMPACT WITHOUT TRANSIT FACILITY

1973

Jurisdiction	Total Assessed Valuation	Assessed Valuation Removed by T.H. 36	Percent of Assessed Valuation Removed by T.H. 36	Local Tax Rate (Per $100 Assessed Valuation)	Indicated Annual Tax Loss
Bloomington	$361,283,461	$1,202,149	0.33%	$1.22	$14,696
Burnsville	92,871,018	9,407	0.01	1.44	135
Eagan	51,426,772	746,302	1.45	0.83	6,194

IMPACT ON TAX STRUCTURE

The immediate impact of proposed T.H. 36 will be negative because a large amount of land and a number of properties will be removed from tax rolls. The longer term impact is positive, however, due to additional tax revenue from the increase in the value of real estate and from the new development which T.H. 36 will generate.

Tables 10 and 11 indicate each community's total assessed valuation, the assessed valuation which T.H. 36 will remove, and the local tax dollar loss as computed on an annual basis. This data has been determined assuming a facility with and without mass transit provisions. A great variation exists among the communities, with the annual loss of tax dollars running from less than $200 (1/10 of 1 per-cent of local tax revenue) for Burnsville to $14,600 or $16,600 (about ⅓ of 1 per-cent of local tax revenue) for Bloomington.

Although Bloomington would have the greatest tax loss, Eagan would show the highest percent local tax revenue loss (1.49%). This figure is not high because the land taken is almost completely undeveloped. Also, neither of the communities should suffer any reduction in municipal services because of their tax loss. Eagan is particularly fortunate in that the development which proposed T.H. 36 will generate will more than negate their loss. Because their portion of the study area is already mostly developed, Bloomington would realize the smallest long range benefit to their tax base.

7. RELOCATION ANALYSIS

Unless a major change occurs in the housing market in the Metropolitan Area, replacement housing will be available for all the families which the project displaces. Table 12 lists housing available in four areas, the list being compiled from the Multiple Listing Service, a publication for area realtors. From this publication, it was found that a minimum of three times as many homes were available as would be needed in any value category. The overall total is 224 houses available in the four areas with only 34 to 37 being needed.

Table 12

SINGLE FAMILY HOMES NEEDED FOR RIGHT-OF-WAY AND HOMES AVAILABLE FOR PURCHASE IN THE STUDY AREA
(within 5 mile radius of project)

Market Values	Homes Needed For Right-of-Way		Available Single Family Homes For Sale Classified by Multiple Listing Service Areas				
	Alt. C1 with Mass Transit	Alt. C2 without Mass Transit	East Bloomington	West Bloomington	Burnsville	East Suburban So., inc. Eagan	Total Homes For Sale
Below $20,000	1	1	3	2		1	6
$20,000 to $25,000	3	3	16	2			18
$25,000 to $30,000	4	4	8	9	1	23	41
$30,000 to $35,000	8	6	12	8	3	22	45
$35,000 to $40,000	9	8	2	7	14	16	39
$40,000 to $45,000	7	7	2	4	11	4	21
$45,000 to $50,000	3	3	1	12	14	3	30
$50,000 to $55,000	1	1	1	3	2	4	10
Above $55,000	1	1	1	6	2	5	14
TOTALS	37	34	46	53	47	78	224

Tabulation made fall of 1973

A wider selection of housing than what is shown here is available. Most suburbs in the Metropolitan Area offer similar types and prices of homes as are found in the study area. Experience has shown that while persons in the process of relocating claim intentions of remaining in the same area, they actually relocate in many different areas, often quite a distance from their last home.

New housing is another good source of replacement housing. During the 10 year period from 1962-1972, 12,118 new single family homes and 10,876 multiple family units were started within the cities of Bloomington, Eagan and Burnsville.

The current construction time schedule for the proposed project calls for right-of-way negotiations and consequent relocation to take place around 1977. The past annual fluctuations in new single family housing starts demonstrate the doubtful validity of projecting the number of starts for 1977. However, for those interested, a 1977 single family housing starts of approximately 1225 was obtained using a straight line, least squares method of projection.

Some persons may wish to relocate to multiple family dwelling units. This type of housing has shown a steady, rapid growth rate in the three communities. Again using the least squares projection method based on data for the last eleven years, we conclude that approximately 2150 multiple family dwelling units might be constructed in 1977. This means that a total of approximately 3375 new housing starts might occur during 1977 in the three community area.

It should be clear that these projections are not expected to be decidedly accurate. However, even a moderate change in the rate of housing construction in this area should not alter the fact that many new houses should be available for purposes of relocation.

Area monthly apartment rates currently range from $155 for a one bedroom to $325 for a three bedroom. Two bedroom home rentals are from $255 to $345, and three bedroom home rentals are from $287.50 to $400.

It is estimated that the relocation benefits for this project will average close to $5,000 per unit, or $185,000 total for all homes. This figure includes replacement housing, moving costs, closing costs, interest differential and any appraiser fees. The Department of Transportation reported that in 1970 payments to qualified owner-occupants averaged $2300, with costs expected to rise rapidly.[17] Relocation benefits for the possible five businesses may run to a total of $50,000.

RELOCATION IMPACTS — INDIVIDUALS AND FAMILIES

Physical Impacts — The physical aspects of relocation on individuals and families include the type of dwelling units available in terms of quality, size and relative location.

Studies show that the physical quality of housing for persons relocated appears generally to be an improvement over their prelocation housing. In most relocation projects there have been relocated families that were still left with substandard housing. This will not be the case for the proposed T.H. 36 project. The project area is predominantly a new, suburban area with housing reflecting the affluence of the residents. Individuals and families to be relocated already live in above standard housing, with an abundance of above standard housing available in the area.

Most available housing in the area is quite new, meeting all of the qualifications of decent, safe and sanitary housing required by relocation legislation. It is, therefore, expected that individuals and families will relocate from above standard housing to similar or improved above standard housing.

With an abundance of similar housing available throughout the suburban metropolitan area, the longer or shorter trips to work, shop or play will be a matter of choice rather than necessity to those persons being relocated. They will have some opportunities to choose their trip length because they have a large physical area of housing choices.

Economic Impacts — Economic impacts on individuals relate mainly to the cost of moving and the comparative cost of housing. As discussed previously, persons displaced by highways are paid reasonable moving expenses and packing costs. No economic disbenefits should occur to individuals and families due to moving expenses.

The cost of housing is a more complex situation. In the past, relocated persons have generally improved their living accommodations, though at an increased cost to them. This is because those persons who can afford it, find this an opportune time to obtain better housing. Persons selecting equivalent value housing should not suffer economically.

Historically, the poor, old and non-white dislocated persons had the highest chances of suffering economic losses in relocating. As has been shown previously, this project area is unique in having residents who are mostly

[17] **The 1970 Annual Report on Highway Relocation Assistance,** Federal Highway Administration, U.S. Department of Transportation

relatively wealthy, young and white. These are the people least affected economically by relocation, because current housing shortages are in the low income — adequate size (large family) category.

Social and Psychological Impacts — Persons that might have special problems in adjusting to changes in living patterns, or in the physical and emotional act of being displaced and relocating, are generally of the lower socio-economic status (as measured by median family income, % highschool graduates, type of employment, etc.), and residents of the project area have been shown to be near the opposite of these types of people.

It has been demonstrated that the lack of neighborhood identity, the relatively short duration of residence, and high degree of mobility of the area residents will minimize the effects of displacement and relocation. This does not mean displaced individuals and families will not suffer emotionally or psychologically; they will. Unfortunately, this impact is not measurable. There is no way of knowing if the overall general economic benefit is greater or less than the overall general social and psychological disbenefit.

Benefits and Disbenefits — Appearing in all the information on relocation impacts on individuals and families is the importance of finding decent, safe and sanitary replacement housing. It is felt that an adequate supply of acceptable replacement housing is available in the same general area, thus negating a possible disbenefit. Some disbenefits may occur at the actual time of relocation if the housing market changes, and changes could easily occur since right of way negotiations for residential properties are not expected to take place before 1977.

Some small economic benefits may occur to individuals and families during relocation due to savings through optional moving expenses or through better living accommodations at state and federal expense, but, overall, these possible benefits will probably be outweighed by the psychological disbenefit confronting those individuals and families that must relocate. This immeasurable impact is very important, and should receive significant consideration in deciding on this transportation proposal.

RELOCATION IMPACTS — BUSINESSES

Impacts on businesses forced to relocate or discontinue operation include not only those effects on the business itself, but also on the owners, employees and customers as well.

Physical Impacts — The physical impacts on businesses concern space and quality of the building(s), both before and after relocation, and their location relative to labor, supplies and customers, supplies and/or labor, and buildings and parking facilities better suited to current or proposed future operations. The businesses that suffer are those which are to some degree dependent on their existing location (usually neighborhood or service oriented), or would find difficulty in relocating because of special licensing or zoning restrictions.

Because of the small number of businesses involved (three without transit right of way and six with transit right of way), each business can be briefly discussed in relation to some possible impacts.

The seasonal vegetable stand would have the most difficulty in relocating successfully. Its present site location with natural visual advertising is ideal. Proposed T.H. 36 with its restricted access will not allow such ready access or high visibility. It is doubtful that as good a site on as high a traffic volume road with unlimited access can be found in the area.

The marina might also have a difficult time in finding a suitable relocation site. The nature of marina customers is such that they would continue to use the marina's services upon relocation if other circumstances remain the same.

The marina's excellent site near the confluence of the Minnesota and Mississippi Rivers poses the real difficulty. A similar replacement site might not be available. If a site was found it is quite likely new buildings and facilities would have to be built, as a suitable building is not likely to exist.

The modular-mobile home sales yard could probably find several possible relocation sites on major roads in

the area, but not as good as their present location at the intersection of two high volume, unlimited access roads. Their service area is large, but they would still probably have to relocate in the same general area.

Finding a suitable building within a small geographical area could be a major problem for the day care center. If it can be relocated in the same general area, customers loss should not be a problem.

Another special service business, the sauna, probably has a larger possible area in which to relocate, and the realty company will probably have the least difficulty in finding a suitable relocation site.

One possible advantage that could occur to any of the six businesses replaced is the potential opportunity to find a location, amount of land/or parking, size or type of building better suited to their current business situation than when they first located in their present location.

Economic Impacts — Economic impacts deal with costs of moving and replacement buildings, and profit or revenue changes of relocated businesses. Unemployment, forced retirement, or earnings from other employment for owners and employees who decide not to relocate are other economic impacts, but this type of impact cannot be determined until after project completion.

Small, neighborhood-oriented stores are the businesses most likely not to survive replacement. It is impossible to determine at this time which business(es), if any, will be discontinued due to replacement. The seasonal vegetable stand and the marina would seem to be possible discontinued business candidates, but only time will tell.

Of the businesses that do relocate, in all likelihood their replacement and moving costs will be adequately covered. However, rental at new locations will probably be higher and a disbenefit for relocated businesses that must rent.

Perhaps the most significant possible disbenefit to relocated businesses is loss of sales. The marina and vegetable stand, and to some extent the sauna and modular-mobile home sales yard seem to be potential recipients of this disbenefit, if they choose to relocate.

Another possible economic disbenefit may occur indirectly, if an employee(s) of a relocated business must increase commuting times and expenses.

Social and Psychological Impacts — The social impacts of businesses relate to the sociability among employees and between employees and customers. Changes in these interactions could occur through business relocations if these relocations caused turnovers of employees and/or customers.

The psychological aspects deal with the perceptions of the proprietors and employees of displaced businesses toward the physical, economic and social impacts. The anxiety of business replacement on those involved would be similar to residential replacement housing on individuals and families.

Positive and Negative Results — For owners who go out of business rather than relocate, the effect may range from a slight benefit to a considerable disbenefit. These effects cannot be determined at this time.

For those businesses that do relocate, the changes in rental rates, investment and income relate to many variables, such as size and condition of physical structures, volume of operations or sales, relative costs of facilities and loss or gain of customers or employees. Many of these variables can all be subsumed under the change in net income. It remains to be seen just what effects replacement will have on the net income of those businesses choosing to relocate, but it can be assumed that it will be negative.

The most probable benefit in business relocations are the opportunities to change space, the quality of land and building site that might not be possible without being relocated.

Part D. Socio – Economic Impacts of the Do Nothing Alternate

1. GENERAL DEVELOPMENT

To not build proposed T.H. 36 would have a great effect on the development of the study area, and much of western Dakota County. To close the Cedar Avenue bridge in a few years would not only have an enormous effect on the development of the area, but an extremely heavy impact on existing development, especially south of the Minnesota River.

Under Alternate 'D' (do nothing), it appears that the major social and economic impacts will change with the closing of the existing Cedar Avenue bridge. This means that one set of impacts will happen during the period of time that existing Cedar Avenue continues to be used, maintained and possibly improved. Impacts would change, however, when the Minnesota River bridge is closed and subsequently removed.

Since the first set of impacts would be temporary and most like the impacts of existing Cedar Avenue, these impacts will not be analyzed in a separate section of this report. Rather, they will be included, where appropriate, in the following text that generally analyzes social and economic impacts of closing the bridge under the do nothing alternate.

2. SPECIAL DEVELOPMENT

Among the important considerations for the selection of an alternate for T.H. 36 are the effects it would have on special developments in or near the proposed T.H. 36 study area. Two known existing or proposed facilities would be adversely affected by a do nothing decision.

The Bloomington Sports Complex

The eventual removal of the existing Cedar Avenue bridge would create a transportation barrier to western Dakota County. This barrier will limit the rate and amount of residential development south of the Minnesota River. Thus, the potential as well as the existing attendance at various sporting events will be affected.

The Proposed Zoo

The proposed improvement is essential to the zoo that is under construction in Apple Valley. A lack of good access from the north would create traffic problems on other facilities. This could discourage attendance and probably force zoo officials to withdraw part of the plans for zoo development. It would be difficult to assess the resulting impacts.

Related Events

A do nothing decision is at best an indefinite solution. Such a decision would merely create and compound developmental problems that require a new transportation facility as a solution.

The need for a new T.H. 36 might renew the fight for said facility at any time. Zoo proponents, highway users, developers of all types, municipal and county governments, the Metropolitan Council and the State Legislature might successfully move for reconsideration of the do nothing decision at any time in the future. The Minnesota Highway Department could be forced to repeat

the planning, design, environmental impact statement and hearing procedures even though a do nothing solution might have been originally selected. Any happenings of this type would render a do nothing alternative selection as indefinite or temporary.

3. LAND USE

A do nothing decision would have little effect on the existing land use, but a large impact on Bloomington's Eastern Area Plan and the Eagan and Dakota County Land Use Plans. In all likelihood, Bloomington officials would have to reconsider their plan, as much of it was based on proposed T.H. 36. What changes they might make can not now be surmised. The Dakota County and Eagan Land Use Plans would also have to be modified. Proposed development of all kinds would not take place in the Eagan area to the extent shown in the Plan. Areas of proposed specific land use would have gaps and holes. The modified Dakota County Land Use Plan would also have to reflect changes caused by the do nothing decision for proposed T.H. 36.

4. ECONOMIC CONSIDERATIONS

Predominant Economic Impacts

The overriding economic impact of the do nothing alternate will be the limitations on the amount and rate of development in that portion of the study area south of the Minnesota River. As will be seen, each type of development will be affected somewhat differently.

Land Value and Tax Structure

Generally, land values will be much lower south of the Minnesota River under the do nothing alternate than if proposed T.H. 36 was constructed. Much of all types of proposed development would be shifted to another part of the metropolitan area. Speculators who own or who will own land adjacent to proposed T.H. 36 (up to at least a mile away) will suffer economic disbenefits if the do nothing alternate is selected. Land appreciation rates would also be lessened considerably resulting from the lessened demand for land.

From the standpoint of immediate, short term results, the do nothing alternate would be the most beneficial to local tax rolls. Not constructing T.H. 36 would allow property which would have been acquired for the project to continue as sources for tax revenues. In the long run, however, the impact of the do nothing alternate would be negative. Tax revenues from property development which the proposed improvement would stimulate would be lost to the local communities.

Industrial, Commercial and Office Buildings

Obviously, industrial, commercial and office buildings development will be much less rapid under the do nothing alternate. It is possible that existing development may also be affected, but this can only be determined after the commitment not to build proposed T.H. 36 has been made.

Industrial

The attractions for new or relocated industries to that portion of the study area south of the Minnesota River will be much diminished if proposed T.H. 36 is not constructed. Abundant and relatively low cost land might still exist, but these factors may not be enough without a good transportation facility. Such a facility would allow for savings in storage and inventory costs, low cost truck transportation, customer convenience and ease of commuting.

The impact of discouraging industrial development can be either positive or negative depending on whether such development is considered desirable.

Commercial

The commercial impacts are similar to the industrial impacts in that the do nothing alternate discourages development. However, the reasons for development discouragement are not so similar.

Local oriented businesses are needed to support the general development of the area. The rate of this general development is expected to be greatly reduced under the do nothing alternate. Some potential markets may never come into existence.

Those transportation oriented businesses along Cedar Avenue would benefit by the continuance of good accessibility and high visibility.

A possible negative impact could occur to the Cedarvale shopping center. First, traffic congestion should continue to worsen, decreasing accessibility. Then, upon removal of the Cedar Avenue bridge, much of the traffic congestion will be relieved, but so will much of the existing market area.

Office Buildings

Since major office building concentrations are not expected to develop along proposed T.H. 36, the do nothing alternate will not have much effect in the immediate Cedar Avenue area. However, transportation accessibility to and from established and proposed offices adjacent to and outside of the study area will be negatively affected.

Residential

The rate of residential development would fall greatly if the do nothing alternate is selected, due to the lack of transportation facilities necessary to support residential development. Current residents would also suffer economically due to increased transportation costs, increased travel time and lower residential appreciation rates.

The advantage of the do nothing alternate is that home owners who are destined to live adjacent to proposed T.H. 36 should it be built, would not suffer economically or psychologically.

5. SOCIAL CONSIDERATIONS

Highways have been and are essential to the development of hitherto undeveloped or generally agricultural land. Therefore, those persons who favor study area development would consider the do nothing alternate as essential to the area's preservation. It is likely that many people would like to see some form of compromise, for various reasons.

An obvious example of such a person would be an area resident living south of the river who would like to see the development curtailed or opposes highway construction, but finds the Cedar Avenue bridge as an essential transportation facility.

It is unlikely that much of the study area would have developed to its present stage, or would have plans for future development had the Cedar Avenue bridge not existed. Highways have played a major role in allowing suburban areas to develop. To eliminate an existing major trunk highway would certainly affect the way study area residents live.

Accessibility

Greatly decreased trip opportunities and mobility can be expected if the Cedar Avenue bridge is closed. Many study area firms and residents are so dependent on auto and truck transportation in general, and the Cedar Avenue bridge specifically, that the announcement of the bridge's closing could stimulate psychological reactions. This could in turn thrust the Cedar Avenue bridge issue into the top political problem of the area. Consequential pressures could lead to restudies and uncertain actions.

Community Services

The do nothing solution would have very little immediate effect on community services as long as the existing bridge remains in place.

School impact would be much as it is now. Police and fire service and emergency vehicle access would also remain unchanged. Churches, hospital accessibility and libraries would be unaffected.

A negative impact would occur, however, when the bridge is eventually closed. Possible fire and police service could be adversely affected without this key transportation facility. Emergency vehicle and hospital access would be similarly affected. Area residents would be restricted as to their choice of churches, libraries and other area services.

Neighborhoods

Since the construction of proposed T.H. 36 is not expected to disrupt study area neighborhoods or geographical areas, not constructing said facility would also not affect the area. The differences to neighborhoods between build and no build is that the residential triangle to be formed in Bloomington by proposed T.H. 36, Cedar Avenue and the river would not be formed, and not suffer the isolation previously mentioned. Also, no immediate travel impedance would be encountered due to detours and delays as would occur if proposed T.H. 36 were to be built. However, more importantly, travel impedance would be one of the do nothing alternate's largest negative impacts upon the bridge's closing. All existing and proposed facilities that are expected to carry the traffic diverted from Cedar Avenue require considerably more driving time and mileage (cost) than most study area residents might be willing to make. Fewer trips, shorter trips, car pools and increased usage of other transportation modes would be necessary. Greater dependence on these transportation alternatives would help the present critical traffic needs but as the area further develops, more than this would be needed to serve the demands.

Relocation

The do nothing alternate will have no relocation impacts. In this category, then, the do nothing alternate is more beneficial than any proposed improvement which would require the removal of some dwelling units.

SECTION V

PROBABLE UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS AND STEPS TAKEN TO MINIMIZE HARM

Part A. Natural and Man Made Resources

1. DRAINAGE CONTROL

1. **Drainage Control** (See Map figure 55)

The study area for this project is characterized by rolling terrain. As such, it has many low areas where intermittent and permanent ponds have formed. These ponds receive precipitation from their own isolated drainage areas and most of them, at present, have no outlets. As a result, the confined water is dissipated only through evaporation and seepage into the soil.

The proposed drainage plan for the portion of the project lying between Federal Interstate Highway (I-35E) 35E and Trunk Highway (T.H.) 13, utilizes much of the areas natural drainage system. It will be basically a surface type of drainage plan, which means that precipitation falling on the highway right of way would be carried in open ditches to existing and proposed ponds. These ponds will be interconnected by a proposed city storm sewer system that will provide them with outlets. (See Map Fig. 45) During the construction of this project, temporary sediment basins and ditch checks will be built to protect these ponding areas from siltation and other debris.

The five existing ponds that will receive highway drainage, are designated permanent ponding areas in the City of Eagan proposed storm water drainage plan. As such they will collect run off waters from future development in the area as well as from the proposed highway project. Drainage from the highway project alone will not cause flooding of any of these ponds. However, combined with run off from the area's future development, some flooding could occur. Therefore, the Eagan storm water plan proposes draining the ponds into the storm sewer to be built as previously mentioned. Water levels would be controlled by placing the outlets at proper elevations.

Between Trunk Highway 13 and the Minnesota River, highway drainage will be carried in open ditches to a proposed underground storm sewer. This storm sewer will outlet into permanent pond "B" which will be built as a part of this project. (See Map figure 55)

As suggested by Eagan Engineering Consultants, the proposed storm sewer along Cedar Avenue can also be outleted into pond B. Then, nearly all highway run off, as well as that from future land development in the drainage areas along this corridor, will pass through permanent pond B. All water entering this pond would outlet into Black Dog Creek which flows into the Minnesota River just east of Cedar Avenue.

Before entering Black Dog Creek, water in pond B will have to pass through a specially built outlet control structure that would trap all floating chemicals, oils and debris. Pond B will also be designed to function as a sediment pond with the necessary size, length to depth ratio and trap efficiency to effectively settle out silt and other settleable solids. It will be built before the major part of project construction so that it will trap siltration due to erosion both during and after construction activities. (See discussion of alternate drainage plan for Eagan P. 39.)

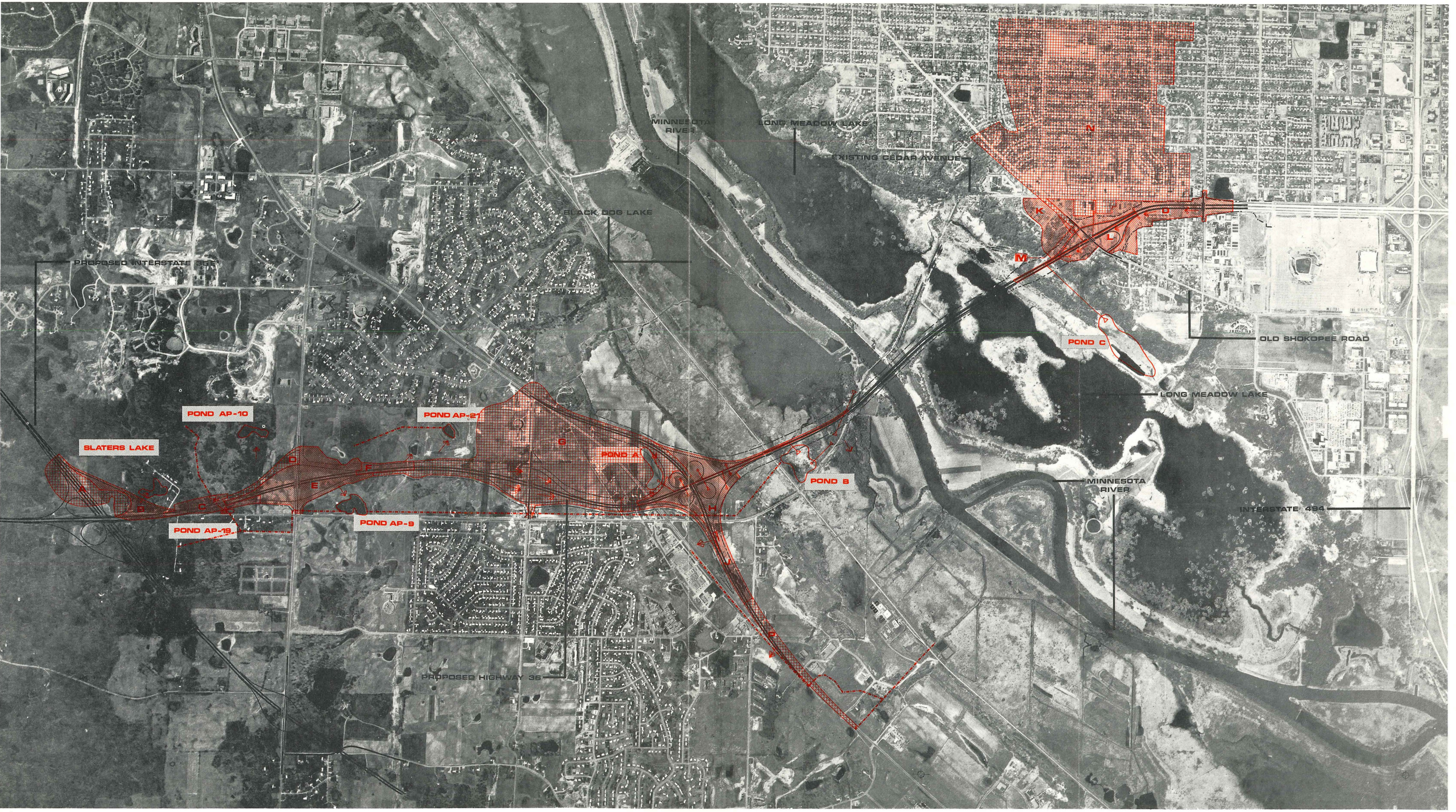
North of the Minnesota River in Bloomington, a permanent settling pond C will be constructed prior to roadway construction in that area. (See map figure 55). This pond will be constructed like pond B so that it will trap all floating debris and settleable solids. All run off from the proposed project in Bloomington will enter pond C before outletting, through a control structure, into Long Meadow Lake. In addition to highway run off, pond C will collect storm water from a 612 acre area in Bloomington labeled "drainage area N" on map figure 55. At present this area drains directly into Long Meadow Lake without settlement or filtration. Another existing 72" storm sewer that drains an area west and east of Cedar Avenue and south of T.H. 494 outlets near proposed pond C. The City of Bloomington has expressed an interest in outletting this storm sewer into pond C. This could be done if pond C were made large enough to handle the additional water.

With the drainage system as outlined above, nearly all highway run off would stay in a contained drainage system until it leaves ponds B and C. To help insure that the water leaving these ponds meets all local, state and federal water quality standards, the water in the ponds will be monitored on a continual basis. If a definite pollution problem is established by the results of this monitoring, it would be feasible to connect ponds B and C to the metropolitan interceptor sanitary sewer located in the immediate vicinity. The discharge into the sanitary sewer could be done at off peak periods by using the ponds for storage.

Drainage from the proposed bridge over the Minnesota River and flood plain will not be contained in ponds as with other portions of the project. Instead, water will be carried into downspouts that are connected to the bridge piers. The downspouts will discharge onto splashblocks at ground level and then run off water will follow the natural drainage of the area under the bridge.

A catastrophic chemical or oil spill is not likely to occur on the bridge over the river and flood-plain given the relatively flat horizontal and vertical curvature that is proposed. However, if a spill should occur, it would be reported to the Minnesota Pollution Control Agency, the Environmental Protection Agency and the U. S. Coast Guard immediately. In all likelihood, such a spill would be contained in Long Meadow Lake or the surrounding marsh area except during brief periods when the area is covered by floodwaters. If a spill were to occur at that time or in an area where natural containment is not possible, an inflatable boom can be dispatched to the scene. This boom would be used to surround and contain the spilled material so that it can be removed. When containment is achieved the material can be removed by a skimmer, pump, poly mop or by using specially designed absorption pads.

A complete "Drainage Report" prepared by the Hydraulics Section of the Minnesota Highway Department is available on request.



HIGHWAY DRAINAGE AREAS

PONDING AREAS

STORM DRAINAGE SYSTEM

PROPOSED EAGAN STORM SEWER

PROPOSED ROUTE DRAINAGE PLAN

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

trunk highway 36

N

0 500 1000

Figure 55

2. EROSION CONTROL

Erosion and sediment production are problems that affect every type of land disturbance or development as well as untouched, well vegetated areas. The sediment production on this project will be the result of three causes or activities:

(Type 1) Natural or Base Erosion — This type of erosion is caused by such things as wind, rain, freezing and thawing and other geologic processes.

(Type 2) Maintenance or Operation Erosion — This kind is due to the sand and debris from paved road surfaces migrating through the storm sewer system or in open ditches to ponding areas. It will occur as a result of road usage and maintenance operations.

(Type 3) Accelerated Erosion — This erosion is the result of areas being disturbed and exposed to the elements. It can be caused by man's activities or by natural catastrophies such as floods, tornadoes, earthquakes, etc.

Type 1 Erosion has been measured to be as much as 600 lbs. per acre, per year on a grass land vegetative complex.[1] This type of erosion cannot be practically further reduced and occurs in the study area at the present time. Grass stabilization on the disturbed areas will minimize the effects of natural erosion.

Type 2 Erosion, from the paved road surfaces, can be a significant source of sediment production. It has been estimated that it can contribute from ½ to 8 lbs. per 100 feet of road curbing per day.[2] Considering several years, a significant amount of debris could accumulate in storm sewer systems and eventually in ponding areas.

Debris and sediment of this type will be minimized by controlled sanding operations. It would also be reduced by maintenance sweeping crews, by the filtering action of the vegetation within the highway right of way slopes and ditches and by the proposed highway storm water discharge that will flow into permanent sediment ponds B and C. (See map figure 55.) These ponds will be maintained and dredged if and when necessary. Dredged materials will be kept out of the floodplain and disposed of so as not to cause environmental harm.

Type 3 Erosion that will occur during construction, was found to be only a moderate problem. Average predicted erosion for the construction area was estimated to be 55 tons per acre, per year. Estimates further indicate that backslopes, fillslopes and inslope areas make up approximately 40% of the disturbed areas and contribute 80% of the anticipated soil loss. From the high soil loss to area ratio on these slope areas, it can be concluded that stabilizing the critical areas as soon as possible during construction will significantly reduce soil loss and damage. In addition, stabilization will be accomplished as construction proceeds by drainage area and earthwork balance points to ensure a minimum of exposed area.

[1]Dr. L. E. Foote, "Soil Erosion and Water Pollution Prevention", National Association of County Engineers, (July, 1972)

[2]U.S. Department of the Interior, Federal Water Pollution Control Administration, "Water Pollution Aspects of Urban Runoff", **Water Pollution Control Research Series** WP-20-11, (January, 1970)

In critical areas, erosion will be controlled through a combination of special installations. These may include permanent sediment ponds, ditch checks, flumes, temporary basins, blanket mulch on slopes and noise abatement mounds, ditch liners and others. All necessary specialty installations will have to be determined during the detail design stage of the project.

No long term erosion problems are anticipated with the construction of the project.

A complete "Erosion Control Report" prepared by the Materials Section of the Minnesota Highway Department is available on request.

3. NOISE ABATEMENT

The proposed facility will be depressed below the surrounding terrain wherever practical and feasible. This, in itself, can provide sufficent noise attenuation in many developed areas. Where this is not feasible or where noise levels would exceed the design noise level, barriers will be considered. (See Figure 39.)

The barriers would be constructed using earth mounds, barrier walls or both. Extensive landscaping will be provided to help make them aesthetically pleasing to the motorist and people viewing them from the opposite side.

4. BIOLOGICAL RESOURCES

IMPACT ON VEGETATION/WILDLIFE

Vegetation and Wildlife — The construction of Cedar Avenue will result in certain impacts which, though the degree may vary with the different alternatives, may be considered as unavoidable. (See Page 52 for Habitats Listing.)

1) There will be a direct loss of some vegetated areas, and the associated wildlife habitat, to the construction activities.

This loss may be minimized by locating the highway so as to avoid heavily vegetated areas where such placement does not conflict with the other values that the project must maintain. In areas where vegetation is lost to construction, steps may be taken to regain some of the physical and amenity values that have been lost. The primary good that comes from the existence of vegetative ground cover is the stabilization of the topsoil or slope. This value can be maintained through the establishment of a turf covering on those areas which have been disturbed during construction.

A portion of the amenity values of vegetation can be maintained through the use of landscape material in desirable locations. Landscape projects would increase the blending of the roadway into its surrounding and minimize the loss of aesthetic values along the roadside.

Neither of these steps, however, would result in replacing the wildlife habitat which has been lost. The loss of this habitat will result in shifts in the territory size of the smaller animals. Should the population levels be near the site carrying capacity, the small animals will be unable to contract their territory size, and there will be a subsequent lowering of the population levels.

2) The loss of wildlife habitat will be somewhat offset by an increase in low shrub species along the edges of construction in wooded areas. These low shrubs usually provide good food and cover for small animals.

3) There will be an area beneath the river-crossing structure which will have little or no direct sunlight. This area, like the roadsides, can be covered through turf establishment. In this case, however, selection must be limited to vegetative covers which are highly tolerant of shade. (See figures 56 and 57.)

4) Another effect that the proposed highway will have is to alter the habits of some species of wildlife. The existence of a fenced, multi-lane highway, as proposed, will impede normal animal movement. However, this is presently somewhat restricted by the existing Cedar Avenue and other developments in the area. The proposed highway will also increase the potential for large animal-auto collisions due to the higher speeds and increased traffic volumes on the new facility.

Minimization — There is no sure way of eliminating the auto-animal collisions along the proposed project. Installation of fencing throughout the project's length will help control animal movement and to some extent encourage animals to cross the proposed highway under bridge structures. In the river valley area where most animal movement will likely occur, the proposed bridge will span the majority of the floodplain thus providing relatively free movement for valley animals.

Figure 56

IMPACT OF SINGLE BRIDGE

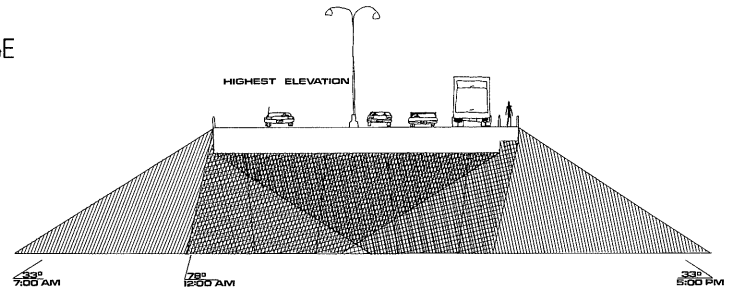
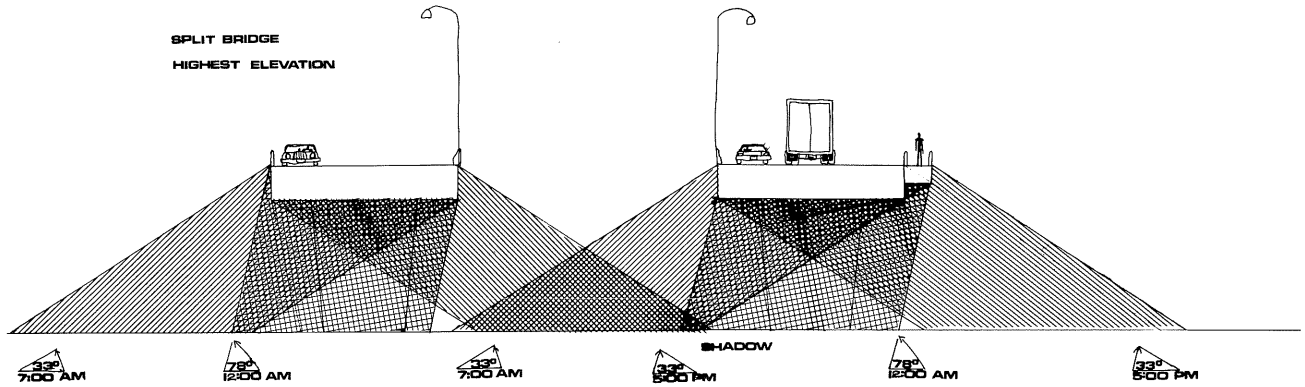


Figure 57

IMPACT OF TWIN BRIDGES



5) An indirect, unavoidable impact of the project is the loss of vegetation and wildlife habitat through the subsequent land use changes toward more intensive uses.

There are several ways that this could be mitigated; however, none of the possible steps fall under the jurisdiction of the Highway Department. All these steps would result in the establishment and maintenance of an open space system. This can be accomplished through three general methods:

(a) a land use control system which has open space and the preservation of natural values incorporated into it,

(b) an incentive program which makes open space preservation a viable economic alternative (this method includes tax breaks for holding open space in a developing area),

(c) a direct acquisition program for publicly owned open space, either through municipal, state or federal funding.

Each of these methods falls under a jurisdiction other than the Highway Department, and the implementation and success of such steps rests with their land use planning goals.

5. LAND RESOURCES

STEEP SLOPES

Disruption of the bluffs of the Minnesota River Valley is an unavoidable impact of a low crossing of the valley. Flatter grades required by modern highways cannot conform completely to rolling topography and steep slopes. Therefore, large cuts and long fills are necessary to construct a new highway.

As discussed previously in the probable impact section the main concerns of steep slopes are for its aesthetic

quality and for its contribution to erosion and sedimentation. A description appears in the aesthetic drainage and erosion sections as to the steps that will be taken to minimize the unavoidable impacts.

6. AMENITY RESOURCES

SPECIAL FEATURES

The abundance of historical, archeological and natural features that lay in the Minnesota River Valley make constructing a highway difficult. All of these features cannot be left undisturbed. However, steps can be taken to lessen their impact.

The Minnesota Historical Society has identified possible areas where Indian burial sites may be located in the study area. These sites have been reviewed by representatives of the Historical Society and the Indian Community. It was agreed that there is no visible, significant site affected by the proposed improvement. Should remains be uncovered during construction, operations will be delayed to allow for proper reburial.

OPEN SPACE UNAVOIDABLE IMPACT

No existing 4(f) land will be affected by any of the alternate alignments. However, the new bridge will impact proposed recreational trails in the Minnesota River Valley.

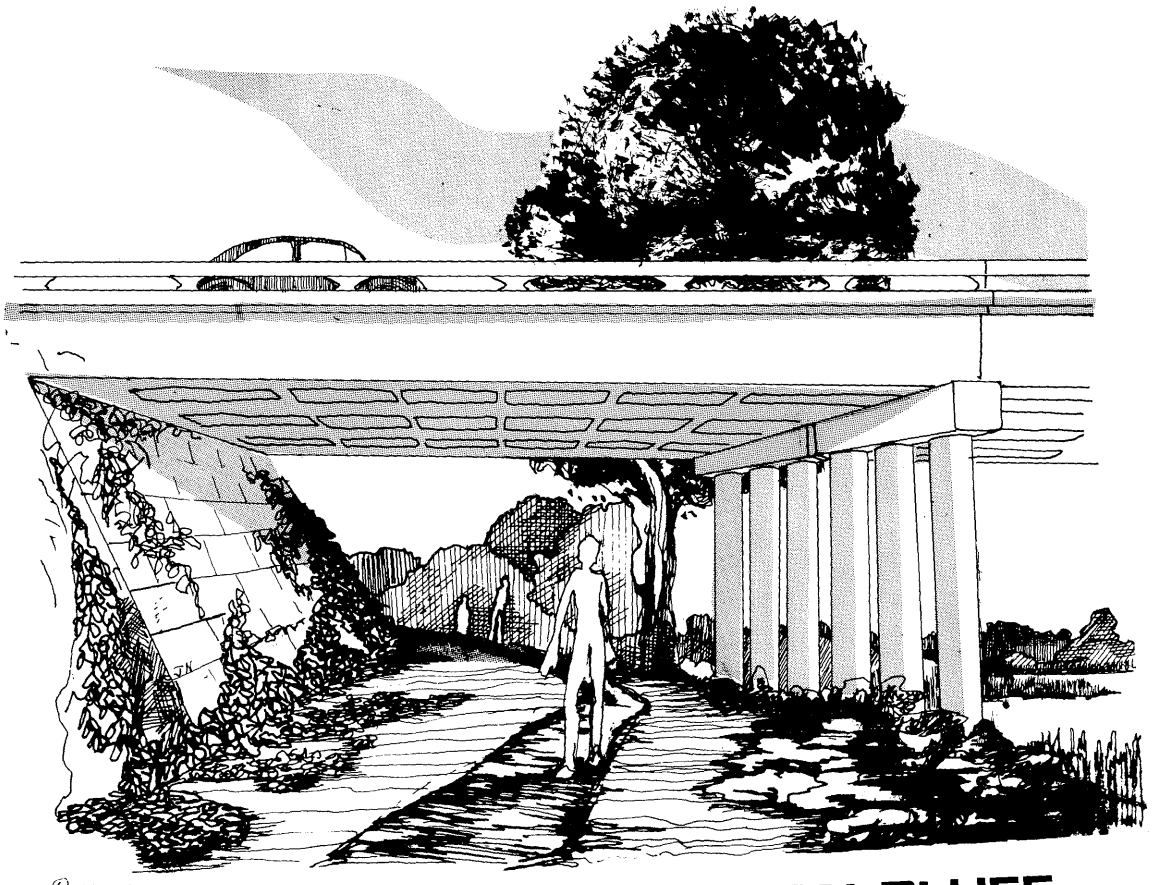
The Minnesota River Valley trail proposed by the Department of Natural Resources will be benefited by a provision for the trail to be attached to the bridge structure as shown in the sketches of the Cedar Avenue Bridge Crossing in the Aesthetics section that follows.

The Bloomington Bluff Trail could, however, be adversely affected if it is developed. The proposed earthen fill extending from the toe of the North bluff to Long Meadow Lake would impede recreational movements.

The impact of the fill will be reduced by extending the trail along the highway right-of-way to the bridge. At that point crossing under the highway bridge on a terrace constructed above the floodplain will allow free movement across this area. This is shown in the sketch on this page.

This terrace crossing would not only provide a good recreational link, but would also allow for wildlife movement as discussed in the wildlife section.

Figure 58



PROPOSED BLOOMINGTON BLUFF TRAIL CROSSING

7. AESTHETICS AND OTHER VALUES

VIEW OF THE ROAD

A roadway cannot be aesthetically satisfying unless it is designed to be as compatible as possible with the existing terrain. It should not appear to be a foreign body in the landscape.

Any of the T.H. 36 alternates will visually disturb the natural setting of the Minnesota River Valley. Four distinct areas where this visual impact will exist are the:

1. Scenic valley.
2. Wooded river bluff.
3. Residential neighborhoods.
4. Upland hard woods.

Although these areas are interdependent to some extent, they are discussed separately reinforcing the importance of each.

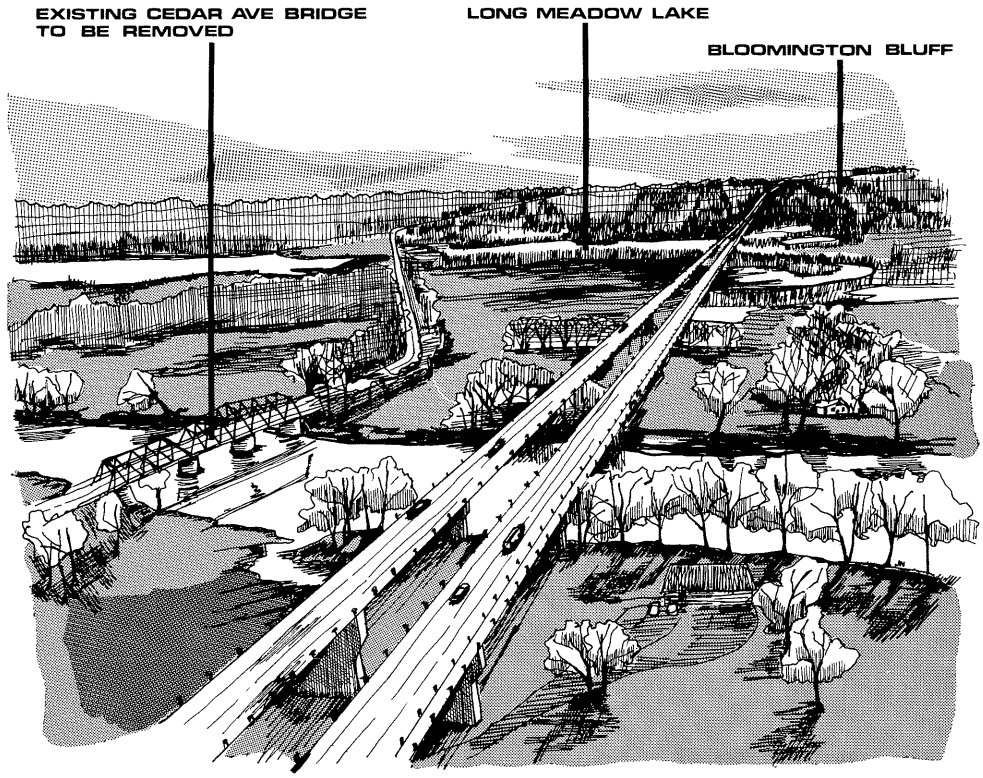
IMPACT ON SCENIC VALLEY

The aesthetics of the river valley crossing will be an important consideration. The proposed bridge will cross the river near the existing bridge but will be larger and higher because of traffic needs and navigational requirements.

The visual impact of the new crossing can be minimized somewhat by separating the northbound and southbound roadways as shown on the adjacent sketch of Alternate 'C-1'. Separate bridges would appear as two threads crossing the valley rather than one solid mass as portrayed in the sketch of Alternate 'C-2'.

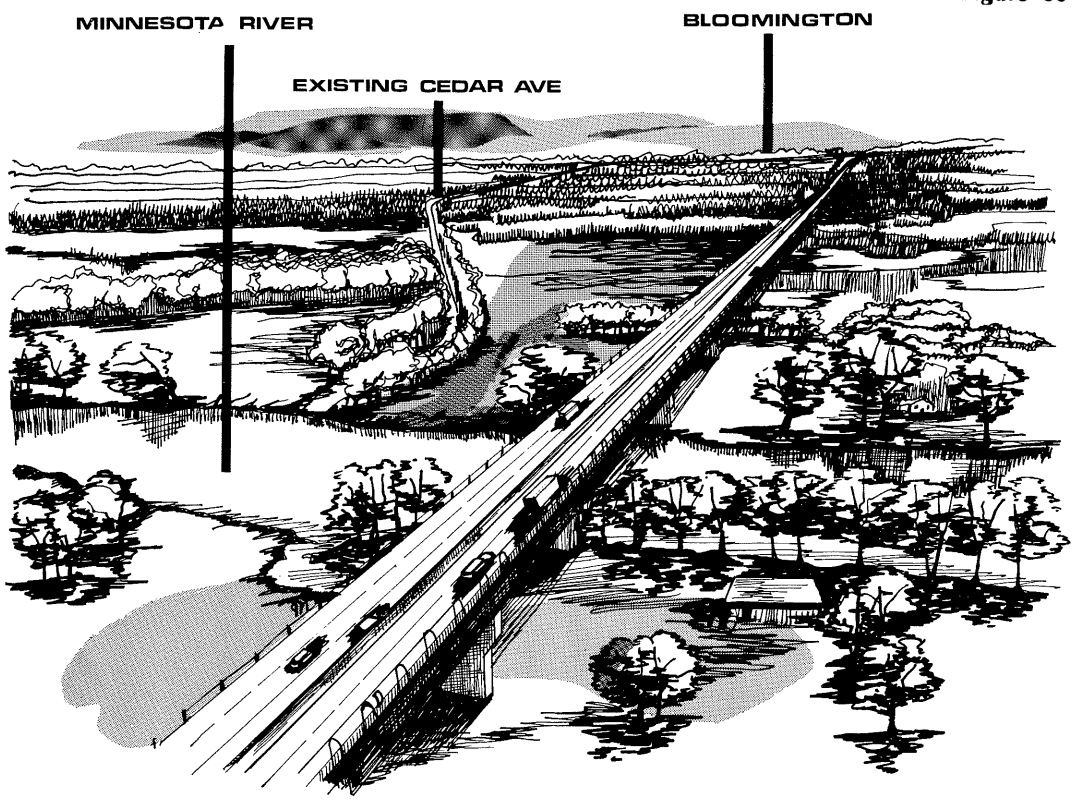
Alternate 'C-1' which provides space between two separate bridges would give this more pleasing appearance but only as long as a future mass transit facility were not constructed in that space.

Figure 59



SEPARATED BRIDGE CROSSING OF MINNESOTA RIVER ALT C_1

Figure 60



CEDAR AVE. BRIDGE CROSSING OF MINNESOTA RIVER ALT C_2

IMPACT ON RIVER BLUFFS

Minimization

The wooded river bluffs of the Minnesota River Valley are recognized as being very scenic. The transition between wooded slopes and the valley floor is very pronounced, especially on the Bloomington side. The proposed highway will descend into the valley passing through the bluff and filling to the edge of Long Meadow Lake. This fill will interrupt the visual and physical continuity of the valley and the transition between the bluff and the river valley floor will be diminished.

The impact of proposed T.H. 36 will be minimized by limiting the number of trees taken, rounding back the slopes into the surroundings and revegetating the cut areas as quickly as possible.

To minimize the impact of the proposed improvement on the bluff-valley transition, care will be taken to naturalize the fill slopes. Variable slopes and plantings will blend the highway into the existing terrain.

These measures will improve the scenic quality of the road for the motorist, minimize the potential erosion and will reduce the visual intrusion of the highway.

IMPACT ON NEIGHBORHOODS

In order to tie into the existing four lane Cedar Avenue in the vicinity of I-494, the proposed connection must go through a residential neighborhood in Bloomington. This will interrupt the physical and visual character of the neighborhood.

The negative effects of the highway's impact on a neighborhood will be reduced by:

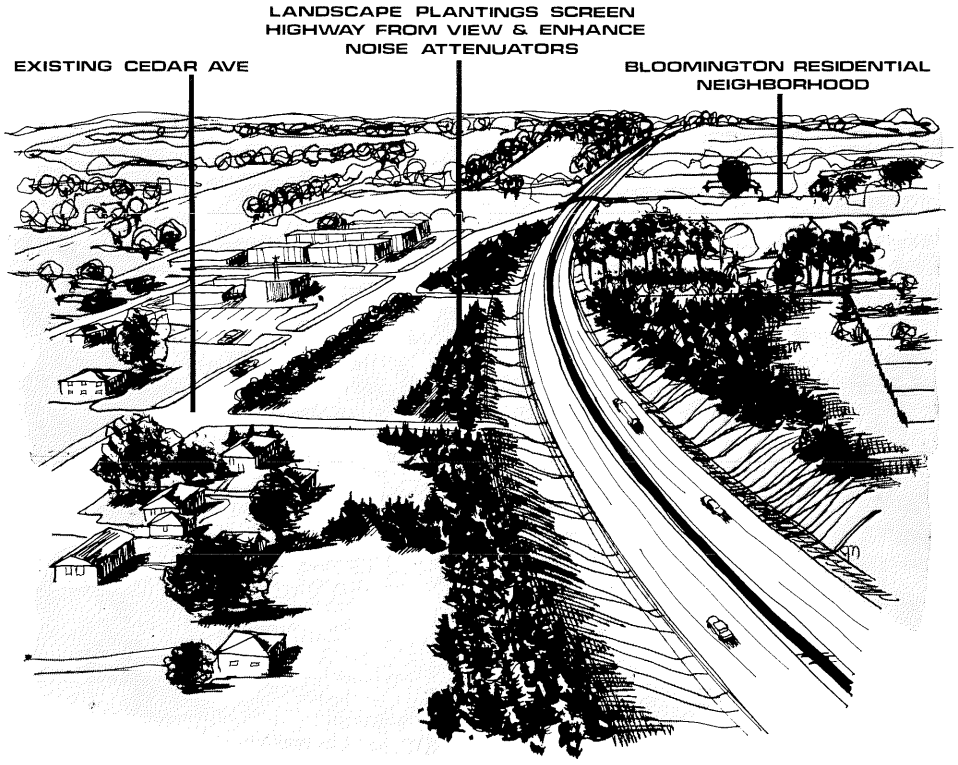
1. depressing the highway.
2. building structures that link the neighborhood together.
3. including landscape plantings where noise walls are proposed to subdue the harshness and size of the walls.
4. advising and encouraging local officials to control land uses adjacent to the freeway so that they conform to the residential character.

IMPACT ON UPLAND WOODS

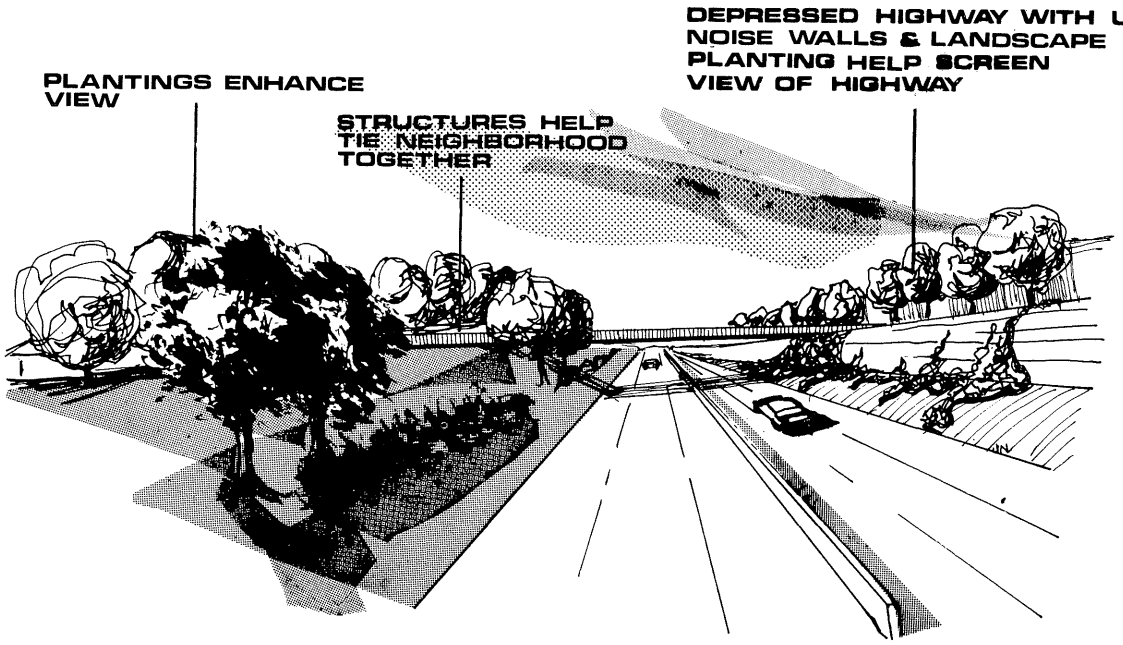
Disturbance to the woodlands near the I-35E interchange at the southern part of the study area is unavoidable. The highway standards for grades do not allow for rolling topography and steep slopes without requiring cuts and fills.

The visual impact of the highway on the upland woods can be minimized by careful control of the clearing of vegetation during construction. Preservation of the existing woods within the highway corridor adds to the aesthetic quality of the highway and lessens the cost of revegetation of the native cover with the landscape plan.

Figure 61



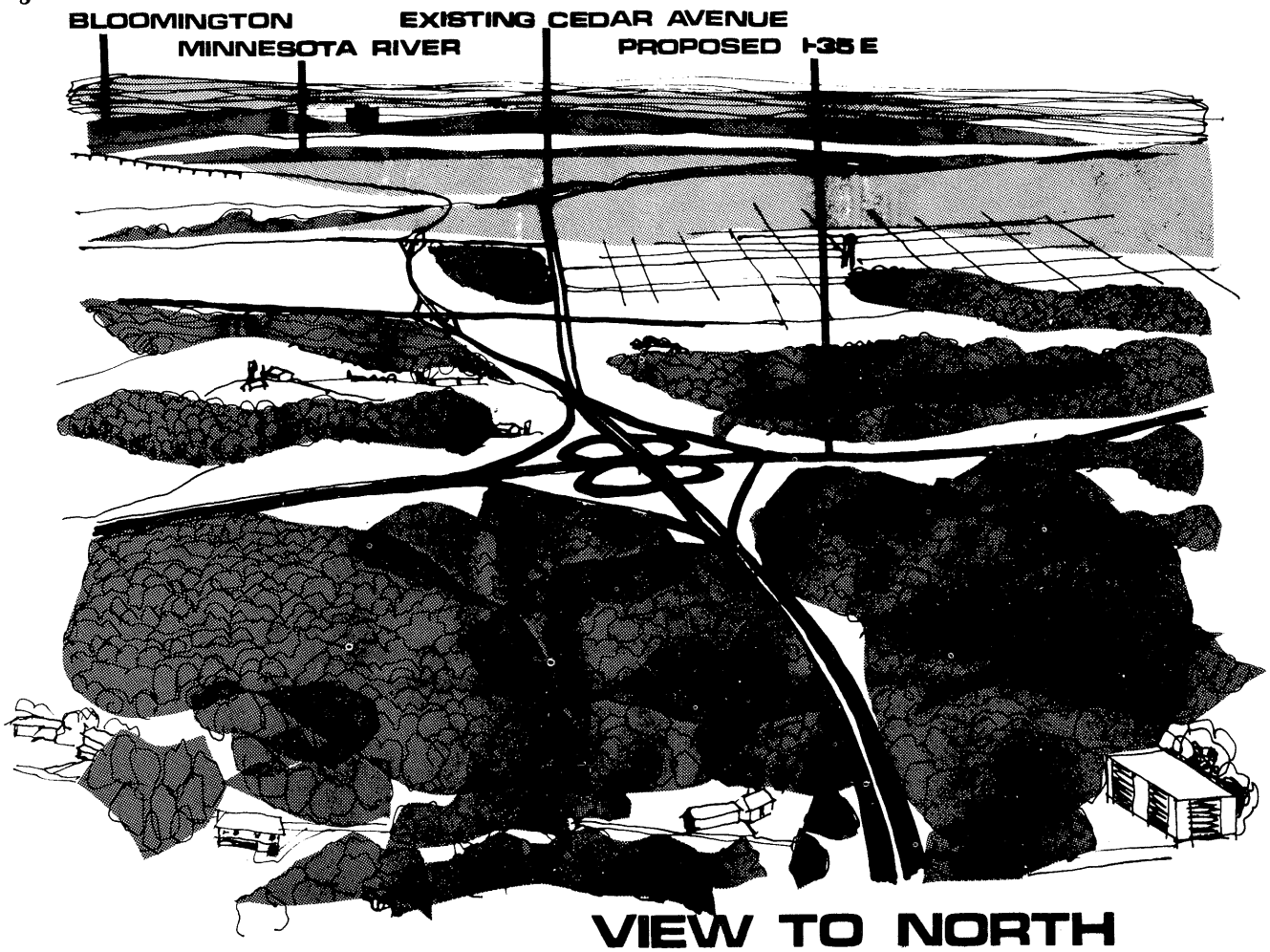
VIEW NORTH OF HIGHWAY IN BLOOMINGTON



MINIMIZATION OF VISUAL IMPACT

Figure 62

Figure 63



VIEW TO NORTH FROM UPLAND WOODS

LANDSCAPE PLAN

The landscape concept was prepared to minimize highway effects and blend the roadway into its natural settings. In addition, the plan attempts to reduce the future roadside maintenance, potential safety hazards, and noise irritation, in order to create a most pleasing, aesthetic, and properly functioning roadway.

The following planting principles are positive factors which when incorporated will both physically and/or psychologically reduce highway impact and noise irritation for both the motorist and residents, and serve to integrate the structure pleasingly into the landscape.

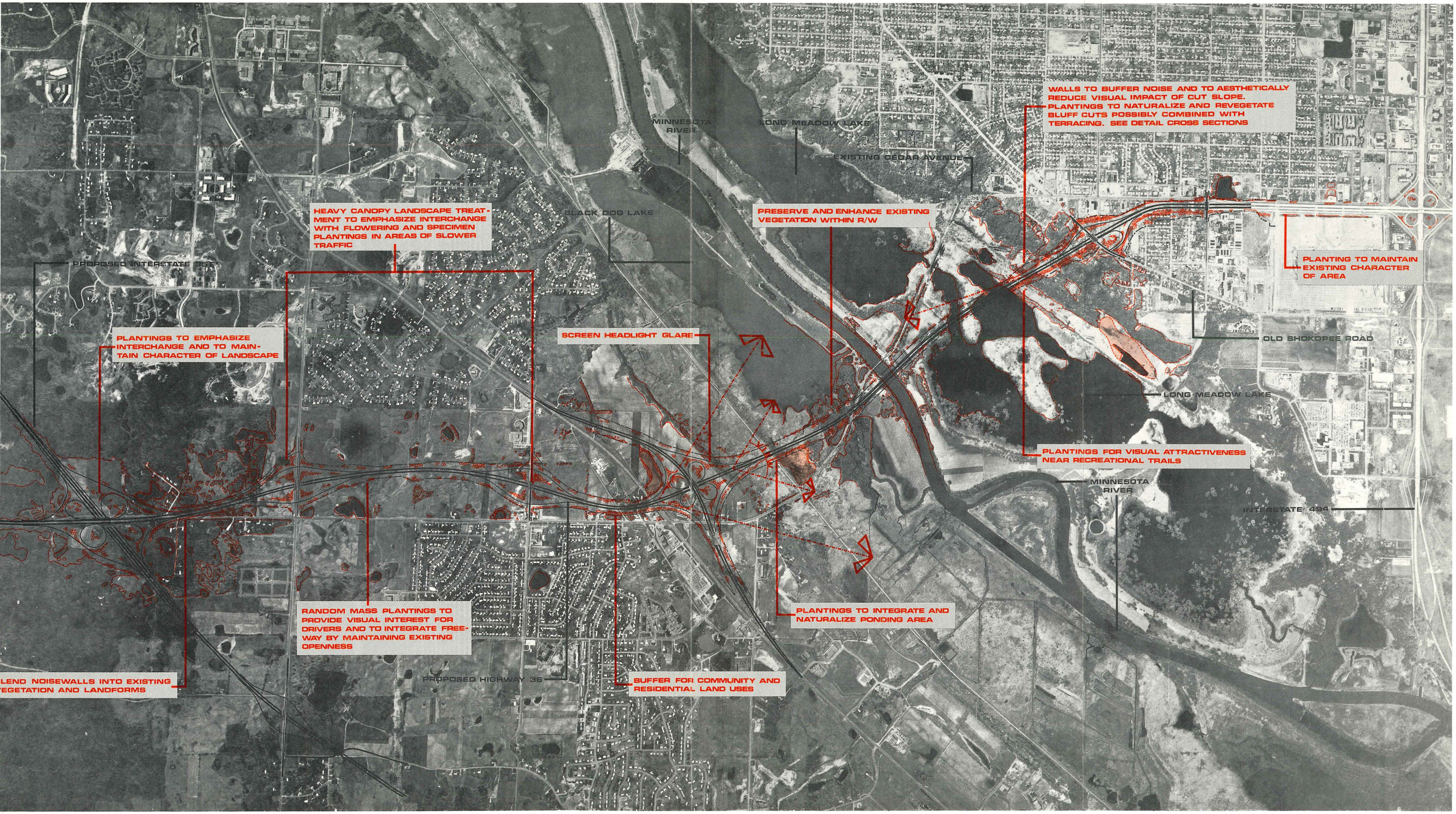
1. As much existing vegetation as possible will be retained as existing materials are of high quality, consisting of oaks, elms, ash, maples and evergreens.
2. Plant materials are used both in clumps and as specimens to provide interesting and attractive visual elements, thereby serving to lessen negative visual impact of wall.
3. Addition of boulevard plantings (large trees such as ash, maple, etc. with dense heads) on freeway right-of-way, next to frontage road, so as to provide a visual buffer, and a positive visual enhancement of the wall structure for both motorists and residents.
4. Mass plantings are used:
   —to naturalize slope areas and to break monotony of the wall structure on the residential side. For the motorist, plantings should undulate and vary in form so as to create a visually interesting, and safe, travel corridor.
   —to integrate bridge structures into the slopes by planting near abutments. These plantings should receive a good mulch of wood chips to reduce maintenance, aid plant growth, and improve appearance.
   —to increase survivability of plant material, as plant material within a mass tends to be more protected from elements. Most damage, if any, should occur on edge.
   —to provide for more natural forms, lessening visual impact of wall structures planned on the Bloomington site.
5. Species of plant material — ground covers, shrubs, vines, trees, grasses — should be selected to provide food for wildlife, particularly birds.

Conditions such as soils, slopes, sun, moisture, orientation, exposure, and drainage vary at each planting site; therefore, special consideration will be given to the selection of plant species at each site to ensure survival.

Plants also possess visual qualities such as texture, plant size, form, seasonal color changes, and varying densities, that will be considered when selecting species. All plants are to be selected as to their tolerance to urban conditions such as exposure to de-icing salts and other urban contaminants, in addition to temperature extremes.

Both the motorist and the nearby resident desire an attractive highway; the motorist expects to have a pleasing view of the road, and the resident desires to see a pleasant view of the landscape buffer, so as to preserve his property values. With proper plant selection, design installation, and maintenance, these values may be achieved.

The conceptual landscape plan, Figure 64, applies these principles to the proposed T.H. 36 improvements.



EXISTING VEGETATION----------

PROPOSED DRAINAGE POND-------

NOISE WALLS OR MOUNDS----------

PROPOSED PLANTING: LARGE TREES-------
HALF TREES/SHRUBS--

PROPOSED ROUTE

CONCEPTUAL LANDSCAPE PLAN

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

cedar ave. s.

BRIDGE CROSSING OF THE MINNESOTA RIVER VALLEY

0 500 1000

N

trunk highway 36

Figure 64

Part B. Other Design Features and Construction Methods

1. BRIDGE AND FILL CONSTRUCTION IN THE FLOODPLAIN

Spanning the flood plain will be T.H. 36's most sensitive encounter with the natural environment. Included in the construction here will be the bridge over the C&NW railroad tracks, the bridge over the Minnesota River and Long Meadow Lake, and the roadway embankment south and north of the river.

Certain design features of the two bridges will help minimize their impact on the area. One feature will be the openings under the bridges which will allow wildlife continued freedom of movement. South of the river, openings under the two proposed bridges will have a total or combined length of over 1,400 feet. The main river bridge will have an over-land extension of approximately 1,300 feet, and the bridge over the C&NW railroad track, which also spans a sanitary sewer line, will have an opening of well over 100 feet.

Old Cedar Avenue will pass under the extension of the main river bridge and serve as an access road for a private club and Northern States Power's Black Dog Plant. Wildlife movement across the road will not be hindered, however, as traffic to the two facilities will be minimal and infrequent.

On the north side of the river, the bridge extends about 3600 ft. inland. This added length takes the bridge over Long Meadow Lake and the surrounding marsh land. With this opening, wildlife will be able to continue its movement here also.

Another feature of the bridge will be that the construction materials used will be as maintenance free as possible — no painting will be required. This eliminates the possibility of paint chipping and falling into the river or spilling into the flood plain during maintenance operations.

Along the approach north of the river bridge, a major problem will be locating stable soil to support the construction equipment. Some of the area has been farmed and may be fairly stable. Other areas not cultivated may require a sand blanket of 3 to 5 ft. thickness.

Applying the blanket only where needed and using the minimum thickness possible will help minimize the harmful effects. Naturalization of the blanket should occur a few years after construction. Such invasive plants as sedge, rush, arrowhead, and willow now grow in the area. These should have no difficulty establishing growth on the new material.

A sand blanket or a temporary wooden trestle will also be needed to support construction equipment during the construction of the river bridge over Long Meadow Lake. The shallowness of the lake (average depth 1 foot) rules out using barges to support the construction equipment. The lake would need considerable dredging before it could accommodate barges. (Barges will be used, however, for the bridge construction over the main river channel.)

If a sand blanket is used, it will cause less environmental harm than dredging. When bridge construction is completed, the sand blanket can be removed. Some sediment would probably be left, but the natural springs in the lake should provide a cleansing action. (See Section V, Par. C-2). Construction of a temporary wooden trestle may prove to be feasible for this operation. If so, it will be used since it would cause the least environmental harm of any method.

South and north of the river, construction of the roadway will require embankment fill. Areas with unstable soils or peat will first have to be excavated down to stable materials. The excavated peat and organic soil will be used as slope-dressing and noise attenuation mounds wherever needed along the overall project route. To keep it from entering the water bodies, the excavated material will be removed from the valley area, placed in a diked area or consolidated under the fill slopes.

During construction, potentially harmful materials such as gasoline and oil will be kept in confined areas out of the flood plain to prevent any spillage from entering the water bodies.

2. BORROW PIT TREATMENT

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.

3. 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.

4. POLLUTION CONTROL DURING CONSTRUCTION

Precautionary measures will be utilized during the construction of this project to prevent air and water pollu-

tion. Controls over contractor's construction operations will be provided by the Minnesota Department 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. These specifications and special provisions will include the following: The Engineer will have authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations and to direct the contractor to provide immediate permanent or temporary control measures to prevent contamination of adjacent streams and other water courses, lakes, ponds, and areas of water impoundment. Cut slopes will be seeded and mulched as the excavation proceeds to the extent considered desirable and practicable.

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 run off 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.

Part C. De-icing Chemicals

1. POTENTIAL HARM

Minnesota highway winter maintenance operations have commonly included the use of salts (sodium and calcium chlorides) for ice control on primary highways. The proposed T.H. 36 improvement will be a primary highway and as such will receive salt treatment to achieve a level of maintenance consistent with public demand.

Information available indicates that de-icing salts can have a detrimental effect on surface and subsurface water quality and the soil and vegetation near roadside areas. Published data indicates that most salt is contained in the snow within 10 feet of the road surface.[3] The effects of salt are generally localized and not significant beyond 30 feet from the edge of the pavement. Water volume is usually small in this area and dilution is not always sufficient to prevent high salt concentrations. Larger bodies of water and rivers are not significantly affected by de-icing salts since the concentration is so low.[4]

The potentially harmful effects of high salinity levels on marine life are dependent on criteria other than salt as well. Such things as the oxygen supply in the water, the temperature, length of exposure, the rate of salt concentration increase and the concentration and nature of other chemicals in water.

Most plant species are more vulnerable to injury from de-icing salts than are animals, since plants cannot readily expel excess salt. Grassy plants adjust more readily to higher salt concentrations than do woody species and therefore, are more tolerant of de-icing salts. Injury to woody plant species occur either through salt spray or absorption by the root system. The cumulative effect of salt is not fully understood, although it is known that some species of woody plants are more tolerant of salt concentrations than others.

2. ACTIONS TO MINIMIZE HARM

The Minnesota Highway Department will take the following actions to minimize harm from de-icing salts:

1. Use the most salt tolerant turf species in the areas adjacent to the pavement.

2. Include the most salt tolerant woody plants for the essential near-roadway plantings.

3. When precipitation begins, under certain atmospheric conditions, the application of de-icing chemicals will prevent the bonding of snow and ice to the pavement surface. Much less salt is then needed to obtain a dry pavement condition.

[3]F. F. Hutchinson, "The Influence of Salts Applied to Highways on the Levels of Sodium and Chloride ions Present in Water and Soil Samples", **Project Completion Report,** (1969)

[4]G. H. Brandt, "Potential Impact of Sodium and Calcium Chloride Deicing Mixture on Roadside Soils and Plants", **Highway Research Record** No. 425, (1973)

4. Efforts have been made and will continue to find ways of reducing the amount of salt used to keep our highways safe for winter driving conditions. A salt monitoring and reduction program has resulted in a 42% decrease in salt usage based on a five year average.[5] Further reduction has been accomplished by using more efficient mixing and spreading methods. The quantity of salt required can also be reduced by using a combination of Ca Cl_2 and Na Cl. (Calcium and Sodium Chloride) This combination will also decrease the potential for environmental damage, particularly to the physical properties of soil.[4]

5. Salt and salt-sand stockpiles will be covered and kept away from ponds, wells, water supplies and drainage ways.

6. Implementation of the drainage plan as described in "Part A" of this section will be very beneficial. This plan will help confine highway drainage to the ditches, ponds and storm sewers that are planned to contain and carry it to settling ponds "B" and "C". From these ponds, drainage water will flow into Black Dog Creek and Long Meadow Lake respectively. (See Map Figure 55) The plan is designed so as to keep water moving through the drainage system as much as possible. This will provide a flushing action thus preventing a buildup of de-icing salts in the lake, creek and ponds that are a part of the system.

Any de-icing compounds that enter Black Dog Creek or Long Meadow Lake will be flushed out by the natural system that exists in the floodplain. Water from Black Dog Lake flows continuously through Black Dog Creek thereby providing a perpetual flushing action. Long Meadow Lake is flushed by two natural methods:

1. High water data obtained over the 20 year period from 1951 through 1971 indicates that the lake was flooded over 16 times. Therefore, during this time, the lake was flushed by floodwaters 3 out of every 4 years on the average.

2. During periods of low flow on the Minnesota River, underground springs and other discharge waters entering Long Meadow Lake cause the lake's water to flow into the river through a control dam at a continual rate of about 8 cubic feet per second.[6] Given the approximate volume of water in the lake (51,750,000 cubic feet)[7] this means that it has a complete change of water about every 75 days.

It can be concluded that de-icing chemicals will not accumulate in the lake because they will be flushed out by flooding, by ground water discharge or both.

[5]P. L. Chandler and D. S. Luoto, "Managerial Aspects of a Chemical Reduction Program", **Highway Research Record** No. 425, (1973)

[6]Minnesota Highway Department, District 9, 1973 Measurements

[7]Minnesota River Watershed District, "Over All Plan", (1973)

Part D. Fertilizers and Pesticides

Use of Fertilizers

The Department makes use of commercially available granular fertilizers in reestablishing the ground cover disturbed in construction. No urea, gaseous, or liquid fertilizers are used. These granular fertilizers are mixtures of compounds of nitrogen, phosphorous, and potassium. On new construction projects, topsoil to be used is analyzed for fertility, texture and PH. The type and application rate of fertilizer is based on the soil deficiencies.

Fertilizer which is leached out of the topsoil by heavy moisture is generally the excess above what can be utilized by the soil and plant life. Since the amount of fertilizer placed on the topsoil is matched to soil deficiencies shown by test results, leaching of fertilizers into ground waters should not be significant. Mulching is generally used with fertilizer application. This further prevents movement, through leaching action, into ground waters. Such an effect, when it does occur, is localized.

The use of fertilizer which is matched to the topsoil promotes the establishment of a dense, vigorous turf in a minimum length of time after ground exposure during construction. This minimizes erosion, sedimentation in natural waters, and conserves moisture for plant use.

In summary, it is felt that contamination of natural waters by highway fertilizers is not significant, whereas the prevention of erosion and sedimentation which is a direct result of their use is extremely desirable and beneficial.

Use of Pesticides

Herbicides are used in highway maintenance operations in specific problem areas to kill noxious weeds and brush growing within the safety clear zone as required. Primarily two herbicides are currently used. They are 2, 4-D and 2, 4, 5-T which are formulated into an anti-drift emulsion. Highway rights of way are not treated in a continuous manner. Instead, spot spraying is the normal procedure, only in specific problem areas. An invert sprayer is used to control wind drift and no spraying is done on days where wind velocity could be troublesome.

Benefits derived from herbicide usage include maintenance of roadside beauty, more effective erosion control (grasses grow more readily upon removal of noxious weeds, etc.) and reduction of accident potential (involving wildlife) by removal of tall weeds and brush alongside the roadway.

A soil residual called "Urox" is currently used to eliminate plant growth in areas that cannot be readily mowed such as around guardrail. Because this compound represents a hazard to plant growth beyond the treated area, it is mixed and sprayed with MC-250, a medium curing cutback asphalt. Due to the stickiness of this mixture, spread of this material by run off is prevented. The MC-250 also prevents erosion of the soil from which the plant growth is removed.

Although the use is a rare occurence, insecticides and fungicides are used in instances where no other method of insect or disease control has proven effective. These chemicals, which present a potential hazard to the environment, are used only in specific areas where infected trees represent a danger to neighboring trees. Avoiding their use, however, would present a much greater hazard. Sanitation cutting (removing infected trees, dead or infected limbs, etc.) is used more than treating with insecticides, fungicides, etc. The results are more permanent since they remove the source of the problem. A typical example of a current use of these chemicals is the use of "VaPam" to control and prevent the spread of Dutch Elm Disease. This is usually done by drilling holes in the ground at the base of the tree and inserting the compound in the holes.

The Highway Department is represented on an Environmental Quality Council Task Force which conducts an ongoing review of pesticide usage.

Part E. Relocation Assistance for Displaced Families

Families displaced by the highway will be relocated in the same general neighborhoods if possible. It is the policy of the Minnesota Highway Department that:

a. No person shall be displaced by its construction projects unless and until adequate replacement housing has already been provided for or is built and has been made available to all affected persons regardless of their race, color, religion, sex or national origin.

b. That services and payments shall be provided all relocatees within the limits of laws and administrative procedures established by the State.

c. To the greatest extent practicable, no person lawfully occupying real property shall be required to move from his dwelling or to move his business, farm operation or non-profit organization without written notice of at least 90 days prior to the date such move is required.

Relocation assistance will be provided by the Minnesota Department of Highways. Each family displaced will be contacted by a relocation advisor who will help find housing that meets the requirements of "decent, safe and sanitary" and explain the payments for which the displaced families are eligible. A preliminary survey indicates adequate replacement housing is available.

Relocation Payments Include:

1. Replacement housing payment or rent supplement
2. Moving expenses
3. Closing costs
4. Interest differential
5. Appraisal fees

A more detailed explanation of the relocation assistance and payments available are presented in 2 booklets entitled "Relocation Assistance" and "Minnesota Highways and Your Property."

SECTION VI

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

Part A. Short Term Effects

Short term effects of the proposed improvement would include the displacement of homes and businesses and the disruption of established access patterns to drivers and pedestrians. There will be an alteration of the topography and a loss of 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 acquisition.

Part B. Long Term Benefits

Long term benefits of the improvement 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 those south of the Minnesota River.

The availability of a high standard freeway will help to eliminate traffic on local streets making for a more desirable and safer neighborhood environment. Accident records on old Cedar Avenue compared with those on the freeway portion of T.H. 36 north of I 494 show that we can expect that the proposed improvement will also be safer for trunk highway traffic.

SECTION VII

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Part A. 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.

Part B. Surface Resources

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

Part C. Manpower and Materials

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

SECTION VIII

APPENDIX

In January, 1972, the M.H.D. mailed letters to 13 local agencies asking for any comments, recommendations, or criticism which they felt were important environmental considerations for the Cedar Avenue project. Of the 13 agencies, 6 replied.

The following agencies replied:

Hennepin County
Minnesota Pollution Control Agency
Burnsville
Bloomington
Lower Minnesota River Watershed District
Metropolitan Council

The following agencies did not reply:*

Bureau of Sport Fisheries and Wildlife
Environmental Protection Agency
Minnesota Historical Society
Department of Housing and Urban Development
Department of Natural Resources
City of Eagan
Dakota County

SUMMARY OF COMMENTS

Hennepin County

1. Depress T.H. 36 through residential areas.
2. Compare level of emissions from existing and proposed T.H. 36 for air quality.
3. Study the exological impact of crossing the Minnesota River, Long Meadow Lake, and adjacent marsh.

Minnesota Pollution Control Agency

1. Minimum pollution of Minnesota River and other waterways.
2. Take precautions against destroying wild life in marsh community. Keep disturbance to a minimum.
3. Comply with water quality standards, by trying to avoid turbidity, by stabilizing the slopes, and by using a curtain.
4. Avoid filling in areas containing standing water and maintain existing water ways.
5. Place the proposed bridge as close to the existing bridge as possible and maximize the length of span.
6. Give special attention to the control of chlorides used in de-icing roadway surfaces.
7. Prevent oil, gasoline, and other hazardous materials used during construction from reaching the marsh or river.

Burnsville

1. Adopt recognized standards of good engineering design, taking into account aesthetics, environment, and social considerations.

Bloomington

City Engineer

1. T.H. 36 will intercept a 66" storm sewer which runs to the Minnesota River.
2. The large cut at old Shakopee Road may affect the ground water for a considerable distance.
3. Coordinate this project with a sanitary sewer interceptor which parallels the project. Consider constructing a trunk sewer adjacent or in the right-of-way between 84th St. and 90th St. to eliminate a lift station operation.
4. Consider the effect on the level of Long Meadow Lake.
5. Acquire right-of-way as soon as possible. (Development and utility construction has been delayed pending construction.)

Natural Resources Commission (Bloomington)

1. The bridge must not increase the flood elevation more than 0.1'.
2. The bridge must not impede or restrict the movement of wildlife.
3. Roadway and bridge run-off must be controlled and treated to conform to water quality standards.
4. Minimize the impact of noise.
5. Landscape the right-of-way to blend with the surroundings. The presence of the structure should not lend itself to continuing destruction of the adjacent area.
6. Estimate the probable tonnage of siltage which will occur during construction, evaluate its effects, and determine how these effects can be reconciled with the water quality standards.
7. Evaluate the effects of traffic, noise and pollution on adjacent areas.
8. Evaluate, consider, and provide guidelines for using the roadway for a mass transit system.
9. Study the idea of an open trestle supported bridge.
10. Consider the possible harmful effect on the ground water caused by the excavation on the northern bank and by the piling and other excavation in the river valley.

Department of Community Development, City Planning Division (Bloomington)

1. Adopted the Eastern Area Land Use plan and recommended a pedestrian crossing between 86th St. and 90th St.
2. Consider the storage of flood waters, the movements of wildlife, recreational development, protection of flora and fauna, and effects of noise.
3. Roadway Design — Consider 400 feet right-of-way width, depressed roadway, 4 fluid lanes, provisions for a fixed guideway transit system, appearance, bridges (fill or span), elevation above 100 year flood level, pedestrian crossings on bridges, Collector Distributor systems, and buffering with the use of landscaping and earth berms.

Lower Minnesota River Watershed District

1. Design the Minnesota River Bridge maximum open structure economically feasible.

*Although these agencies did not reply to the letter inquiry, most have contributed information during subsequent stages of the EIS preparation. Their contributions have come through meeting or personal interviews.

Metropolitan Council

1. Consider the proposed DNR trail system.
2. Consider provisions for people to cross under the freeway and for a pedestrian lane on the bridge.
3. Consider where construction material will come from and measures to control excavation and reclamation of excavation areas.
4. Consider measures to minimize pollution and other effects caused by dredging of the river.
5. Consider measures to minimize the effects of rock blasting.
6. Consider provisions to prevent pavement de-icing salts from entering the Minnesota River.
7. Design and construction of the bridge and freeway should minimize the potential for flooding and siltation.
8. Six lanes is a minimum required to cope with the traffic volumes.

MINNESOTA POLLUTION CONTROL AGENCY
1935 W. County Road B2, / Roseville, Minnesota 55113

612-~~636-5740~~ 296-7373

May 13, 1974.

Mr. Ray Lappegaard, Commissioner,
Minnesota Department of Highways,
State Highway Building,
St. Paul, Minnesota. 55155.

Dear Commissioner:

The Minnesota Pollution Control Agency's Division of Air Quality has reviewed the air quality report on the proposed improvement of 5.2 miles of T.H. 36 from I-35E to I-494.

Based on data supplied by your Department to the Pollution Control Agency, construction and operation of the proposed project will not jeopardize air quality standards affecting vehicle emissions.

Your continued cooperation in assessing air quality implications of planned highway projects is appreciated. Thank you.

Sincerely yours,

GRANT J. MERRITT
Executive Director

GJM/rmg

AN EQUAL OPPORTUNITY EMPLOYER

MINNESOTA HISTORICAL SOCIETY

Fort Snelling Branch (Building 25), Fort Snelling, St. Paul, Minnesota 55111 • 612-726-1171

July 15, 1974

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

Subject: S.P. 1925, T.H. 36 South of Minnesota River

Dear Mr. Kachelmyer:

Field surveys in the vicinity of projected alternate corridors for the above referenced project indicate that archaeological materials within the project area have been disturbed too severely to warrant preservation.

As indicated on the Minnesota Highway Department blue line print of the relationship of alternate corridors for T.H. 36 and their relationship to the "Unique Features" in the study area (Exhibit A), all three projected alignments pass through site 21 DK 8 in NW¼, Sec. 19, T27, R23 (Exhibit B). This site, however, has undergone devastating damage in the intervening years since the group of 104 prehistoric burial mounds was recorded in 1881 (Exhibit C). Highway and industrial construction, coupled with gravel mining and extensive long-term cultivation, have served to totally obliterate all visible evidence of this once extensive archaeological site. The poor state of preservation of site 21 DK 8 precludes inclusion of this site on the National Register of Historic Places. Therefore, no historic or prehistoric sites of present or potential National Register quality are seen to exist within the corridor areas indicated.

Since some scattered subsurface vestiges of the mounds may remain, however, it is the position of the Minnesota Historical Society and the Minnesota Indian Affairs Commission that the Highway Archaeologist must be present when initial grading is carried out on this project. Therefore, it is requested that the Highway Archaeologist and the M.I.A.C. be kept informed of developments on this project and that provisions be made to allow for review of initial grading operations and possible removal of any human remains for reburial by the local American Indian Community.

Sincerely,

Elden Johnson, State Archaeologist

Russell Fridley
State Historic Preservation Officer

SECTION IX

COMMENTS RECEIVED ON THE DRAFT E.I.S. AND PUBLIC HEARING

INDEX OF COMMENTS RECEIVED
D.E.I.S.

Page

Part A. Introduction 133
United States Environmental Protection Agency 135
United States Department of Agriculture 136
United States Department of Transportation (TES) 136
United States Department of the Interior 137-140
United States Department of Health Education and Welfare 141
United States Department of Commerce 142-143
United States Coast Guard (2nd District) 143-144
United States Corps of Engineers (St. Paul District) 144
Minnesota Department of Natural Resources 145-147
Metropolitan Council 147-149
Metropolitan Transit Commission 150-151
Minnesota Zoological Garden 151-152
Lower Minnesota River Watershed District 153
Dakota County Board of Commissioners 154
Hennepin County Director of Public Works (County Engineer) 155
Bloomington City Council 156-157
Bloomington City Engineer 157-160
Bloomington City Planning Commission 160-161
Bloomington Natural Resources Commission 162-164
Concerned Citizen of East Bloomington 165-169
Burnsville Environmental Council, Inc. 169-170
Eagan City Council 171-172
Eagan City Engineer 173
Apple Valley City Council 174
Minnesota Public Interest Research Group 175-177
Minnesota Historical Society 177

Part B. Public Hearing Comments and Questions 178

INTRODUCTION

This section contains reproductions of the comments received on the D.E.I.S. (or summaries thereof). They have been placed in the same order as they appear in the summary sheet on Page VI. Substantive comments have been assigned letter designations which also appear in the subsequent discussion of their disposition.

The summary and disposition of substantive socio-economic environmental and other comments made at the December 1974 public hearing appear at the end of this section.

There are no known unresolved environmental issues.

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

Mr. Paul G. Velz
Road Design Engineer
Department of Highways
State of Minnesota
St. Paul, Minnesota 55155

Dear Mr. Velz:

As requested in your letter dated October 17, 1974, we have completed our review of the Draft Environmental Impact Statement (EIS) for T.H. 36 (Cedar Avenue) from the proposed junction of I-35E to I-494 in Hennepin and Dakota Counties, Minnesota. We have classified our comments as Category ER-2. Specifically, we have environmental reservations concerning the project's effect on induced development and the crossing of marsh lands of the Minnesota River; further, we believe additional information should be provided to more fully assess the total project impact. The classification and date of our comments will be published in the Federal Register in accordance with our responsibility under Section 309 of the Clean Air Act to inform the public of our views on proposed Federal actions. We offer the following comments for your use in preparing the Final EIS.

AIR

A

We believe the proposed project provides increased accessibility to the Minneapolis - St. Paul central business districts (CBD) while at the same time promoting the automobile as the main mode of transportation. As stated in the EIS, over 91% of the study area residents drive their automobiles to work, a good portion of which may commute to the CBD. In view of the above, the EIS should discuss this project's compatibility with Minnesota's ability to achieve the necessary reductions in carbon monoxide to meet Federal Air Quality Standards in the CBD.

WATER

B

We commend the Department of Highways on the planned drainage system and monitoring program designed for the proposed roadway. It should be noted that the proper permits should be obtained before construction of the drainage system begins. The

potential of flood waters reaching ponds B and C should be discussed in the EIS and the resulting water quality impacts thoroughly evaluated. The EIS states (page 39) that the proposed drainage system will utilize eight ponding areas; the current use of these areas should be explained.

C

The EIS indicated fill will be required from the bluff area near Bloomington to the edge of Long Meadow Lake. A similar estimate of the extent of fill required for the southern terminus of the bridge as well as an approximate location of the fill area should also be provided. Fill areas should be stabilized to prevent silting of wetlands and adjacent waters. Sufficient culverts should be used in fill areas so that surface and ground water flows are not disrupted and to prevent excessive silting of marsh areas from low velocity backwaters.

D

A program of immediate debris removal should be carried out when the existing Cedar Avenue bridge is razed to prevent the accumulation of unsightly and potentially polluted debris from entering the river and Long Meadow Lake. Provisions should be made for the proper disposal of all solid waste. All areas along the banks disturbed by bridge removal should be immediately restored to prevent erosion.

NOISE

E

The EIS should state the traffic volume and percent of trucks that were used in performing the nomograph noise analysis. It should be noted that the NCHRP Report No. 117 noise prediction method (also recommended in PPM 90-2) uses correction factors for depressed highway sections, shielding etc. and therefore, may provide a more accurate estimate of predicted noise levels.

F

We commend the Department of Highways' utilization of noise barriers to bring residential areas affected by excessive noise into compliance with the 70 dBA standard. The EIS should state specifically if all existing noise sensitive areas adjacent to the proposed roadway will be brought into compliance with the applicable standards. We suggest that buffer areas be obtained in such areas as mentioned on page 17 of the Noise Analysis Report where future incompatible land development is anticipated to occur.

GENERAL

G

The EIS should determine the effects of the proposed I-494 bridge on the T.H. 36 project. It should be explained in the EIS if the estimated traffic volumes listed on page 6 take into consideration the proposed I-494 bridge. If construction of the I-494 bridge would reduce traffic volumes on T.H. 36, further consideration should be given to the necessity of freeway standards for the proposed highway segment and to upgrading the existing T.H. 36 alignment as a project alternative. Attention should be given in the EIS to the total environmental impact of the interreaction of the two proposed river crossings.

H

We believe that the proposed T.H. 36 will encourage suburban sprawl south of the Minnesota River. While the EIS indicates that the Cedar Avenue project will open "the door for increased development", a complete discussion of the resulting environmental impacts on the project area due to induced development should be included in the EIS. In this same regard, the compatibility of the proposed project with Section 2, Subdivision 2 of the 1973 Minnesota Environmental Policy Act (as follows) should be discussed:

"Subd. 2. In order to carry out the policy set forth in this act, it is the continuing responsibility of the State government to use all practicable means, consistent with other essential considerations of State policy, to improve and coordinate State plans, functions, programs and resources to the end that the State may: . . .

(c) Discourage ecologically unsound aspects of population, economic and technological growth, and develop and implement a policy such that growth occurs only in an environmentally acceptable manner; . . .

(i) Practice thrift in the use of energy and maximize the use of energy efficient systems for the utilization of energy, and minimize the environmental impact from energy production and use; . . .".

We appreciate the opportunity to review this Draft EIS; please send us two copies of the Final EIS when it is filed with the Council on Environmental Quality.

Sincerely yours,
Ronald L. Mustard
for
Donald A. Wallgren
Chief
Federal Activities Branch

RESPONSE TO ENVIRONMENTAL PROTECTION AGENCY

A Based on comprehensive Origin-Destination studies, a relatively small percentage (16%) of the Cedar Avenue traffic goes to the Minneapolis Central Business District (C.B.D.). The average trip length for those vehicles that will use the new highway is 4.87 miles, while the project is over 10 miles from the Mineapolis C.B.D. As shown on page 128, the May 13, 1974, letter from the Minnesota Pollution Control Agency states: "Based on data supplied by your department to the P.C.A., construction and operation of the proposed project will not jeopardize air quality standards affecting vehicle emissions.

B Ponds B & C will both be located above previous high water elevations (717.5 feet during the 1965 100 year flood) However, the floodplain protection elevation established by controlling agencies is elevation 720 (except Bloomington which is elevation 722). If the 720 elevation is reached it would flood pond B but not pond C which will be several feet above the 720 elevation. If such a flood were predicted, Pond B could be cleaned of debris prior to flooding. Permanent diking of Pond B is also being considered to protect it from flooding. However, the flooding of Pond B would not have a measurable impact on the water quality of the river if it did occur. Additional siltation picked up from the pond during times of flooding will be insignificant in relation to the heavy silt load that the river naturally picks up throughout its normal course.

The existing ponds proposed as part of the drainage system are currently utilized as storage for local runoff and have been designated by the City of Eagan to be part of their storm water system. See page 39 for discussion of an alternate drainage plan in Eagan.

C The fill area immediately south of the river bridge will extend to a point approximately 300 feet south of where proposed Alternate C crosses existing Cedar Avenue. (See page 117).

Fill slopes will be stabilized as quickly as possible to prevent erosion and siltation into the adjacent waters. (See page 107).

Adequate culverts will be installed under fill areas to prevent disruption of natural water flowage.

D Minnesota Highway Department Standard Specifications for Highway Construction will be applied during bridge removal operations. Other special contract provisions will also insure proper removal and disposal procedures to protect the river and floodplain area.

E The traffic volumes and truck percentages for noise predictions are given in the Minnesota Highway Department System Planning and Analysis Reports numbered M114 and S119. A "Transportation Planning Report" published August, 1974 gives additional information. These documents are public information and are available on request. The traffic volumes used for predicting noise levels vary considerably depending on which one of the many segments that is analyzed. While it would be difficult to list all of the specific volumes used we can say that the two way average daily traffic (A.D.T.) varies from 24,000 vehicles near proposed I-35E to 63,000 vehicles near I-494. Truck percentages vary from 4.6 to 5.4.

The nomograph method was used to predict the probable areas where noise attenuation will be needed. However, the N.C.H.R.P. Report No. 117-141 will be used for the specific design of the noise walls and mounds.

F Noise sensitive areas adjacent to the proposed roadway will be brought into compliance with applicable standards. The more specific and comprehensive analysis for construction plans may show some exception to this, but no exceptions are anticipated at this time.

G Traffic volumes predicted for proposed T.H. 36 already reflect the proposed I-494 bridge and assume that both T.H. 36 and I-494 are built as a part of the overall transportation system. The impacts of I-494 will be addressed in a separate E.I.S.

H We agree that this action will promote increased growth in the immediate area and perhaps beyond. However, this growth has been considered by the Metropolitan Council as shown in their publication, the "Metropolitan Development Guide." The Council has given the T.H. 36 corridor a major route classification (Intermediate Arterial) to support existing and planned development. The anticipated growth has also been planned for by all communities that are directly involved. T.H. 36, as proposed, is one of many improvements that are proposed or already built to support the existing and planned development. The project lies totally within the Metropolitan Urban Service Area where the Metropolitan Council has established that complete urbanization has or will come to pass, and is consistent with State and local plans. The proposed highway will serve the anticipated growth in the area and will function as a major route for the existing Metropolitan Airport and Sports Center. It will also serve the Minnesota Zoological Garden that is under construction just south of the project area. The proposed improvement of T.H. 36 is necessary to serve the transportation needs and at the same time promote the socio-economic well being of the southern metropolitan area.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
NORTHEASTERN AREA, STATE AND PRIVATE FORESTRY
6816 MARKET STREET, UPPER DARBY, PA. 19082

215-597-3770

8400
December 11, 1974

Mr. Paul G. Velz
Road Design Engineer
Minnesota Dept. of Highways
St. Paul, Minnesota 55155

Re: 330; FHWA-Mn-EIS-74-04-D

Dear Mr. Velz:

We have reviewed the above Draft Environmental Statement for Trunk Highway 36 improvements and Minnesota River bridge. The effects on vegetation and mitigation measures are adequately described.

We appreciate the opportunity to review and comment on the Draft.

Sincerely,

for ALFRED H. TROUTT
Assistant Director
Environmental Protection & Improvement

Form DOT F 1320.1 (1-67)

UNITED STATES GOVERNMENT

Memorandum

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY

SUBJECT: MINNESOTA FHWA-MN-EIS-74-4-D
Draft Environmental Impact Statement: Highway Projects M 5405() and M 5409, Dakota and Hennepin Counties

DATE: January 3, 1975

In reply refer to: TES-70

FROM : Director, Office of Environmental Affairs

TO : E. Dean Carlson
FHWA Division Engineer
St. Paul, Minnesota

We appreciate the opportunity to review and comment on this draft environmental impact statement. We have no specific comments to offer on the statement.

We look forward to receiving the final environmental impact statement, including the comments received from other public agencies and the general public on the draft statement.

Martin Convisser

cc:
Regional Federal Highway Administrator

United States Department of the Interior

OFFICE OF THE SECRETARY
NORTH CENTRAL REGION
230 South Dearborn St., 32nd Floor
Chicago, Illinois 60604

ER 74/1355

December 23, 1974

Mr. Paul G. Velz
Road Design Engineer
Department of Highways
State of Minnesota
St. Paul, Minnesota 55155

Dear Mr. Velz:

This responds to your October 17 request for Department of the Interior review and comment on the environmental impact statement (EIS) for Trunk Highway 36 (Cedar Avenue) in Dakota and Hennepin Counties from Interstate 35 E in Eagan to Interstate 494 in Bloomington. We have reviewed the draft EIS in our area of expertise and jurisdiction and have the following comments:

GENERAL

This statement was nicely done. It is well laid out, contains good graphics and is easy to read.

A While the statement indicates that bridges for this project would be designed to minimize flood hazards, the statement does not specifically evaluate flood hazards in compliance with Presidential Executive Order 11296. This Order directs that flood hazards be evaluated when planning the location of federally-financed or supported new facilities such as highways. FHWA Federal-Aid Highway Program Manual, Vol. 6, Chapter 7.3.2 implements this Executive Order. The flood hazard evaluation should be based on the three types of highway design which could be used, i.e., on embankments, viaducts, or a combination of both fill and structure. This important information about potential environmental impacts of the project on the floodplain should be included in the statement.

B Construction of this proposed transportation facility across the Minnesota River will require a permit from the U. S. Coast Guard in accordance with the 1899 Rivers and Harbors Act. This permit will be required whether the project is constructed as an elevated bridge or on a fill type roadbed.

Under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) the Department of the Interior reviews Federal permit requests for proposed work in the navigable waters of the United States. Pursuant to these requirements, the U. S. Fish and Wildlife Service will review the permit application and make recommendations to the Coast Guard concerning the project. Based on what we know of the project now, we will most likely make the following recommendations at the time the Coast Guard sends the permit application to us for review:

C
1. If the bridge structure is to be elevated, we would concur with the six lanes as outlined in the EIS; however, if the new bridge will not be elevated and will instead be built on fill, we would recommend that the capacity be limited to four lanes, so as to minimize wildlife habitat losses.

2. Regardless of whether or not the bridge will be a low or high profile structure, and assuming it will be elevated on piers, we will most likely suggest that the piers straddle the old Cedar Avenue roadbed or, be constructed immediately adjacent to that old roadbed.

3. That the new bridge structure be constructed immediately adjacent to the existing Cedar Avenue roadbed on existing right-of-way. This would allow the present Cedar Avenue road to be used for transportation construction site and negate the need for new access roads or construction lanes.

4. That the bridge be designed to incorporate adequate room for future mass transit systems, to preclude future additional disruption of the Minnesota River Valley.

SPECIFIC COMMENTS

SECTION II - DESCRIPTION AND PURPOSE OF PROPOSED IMPROVEMENT

D This section should indicate whether the existing Cedar Avenue Bridge over the Minnesota River is to be removed. If so, it should be noted here and any projected impacts and intended protective measures should be discussed in other appropriate sections of the statement.

SECTION III - PROJECT ALTERNATIVES

E It is noted that alternatives A, B, and C will all accelerate urban sprawl in the project area located south of the Minnesota River and that alternative D, "Do Nothing," causes the least environmental impact. Although there are comparatively small social and monetary cost differences between alternatives C-1 (with mass transit space in the median) and C-2 (without mass transit space in the median), more descriptive information regarding the potential mass transit system should be provided so that the environmental impacts of sub-alternatives C-1 and C-2 can be more objectively evaluated.

SECTION IV - PROBABLE IMPACT OF THE PROPOSED IMPROVEMENT

F We note on pages 91 and 97 that constructing the new bridge will require relocating a private boat marina on the Minnesota River. We suggest consultation with the Minnesota DNR and the U. S. Fish and Wildlife Service to determine if there is a need to replace the marina, with river access points, in conjunction with highway development. The final statement should show evidence of consultation regarding these matters. These improvements could be provided under the provision of PPM 90-5 (Joint Development of Highway Corridors and Multiple Use of Roadway Properties).

G We think it is also important to provide an additional discussion of the project impact on the Minnesota Memorial Hardwood Forest which is located in an 8-county area immediately south of the proposed highway project. This 30-year project could be impacted adversely, especially in Dakota County, as a result of residential development occurring in areas proposed for acquisition to that forest. In addition, the highway will generate increased traffic resulting in increased stress on the forest's recreation resources.

While there are no Indian Trust Lands involved, we suggest that additional information be included on page 59 "Special Features Impacts," with reference to the Federal and State Antiquities Acts in the event Indian burial sites or artifacts are uncovered during construction.

On page 43, in the second paragraph, the term "(100-year flood)" should be inserted after "...regional flood..." as this is the regulatory flood under State regulations.

H At the end of the second paragraph on page 43 the following should be added: "Delineation of the floodplain is based on the flood-protection elevation by State regulations."

I This section might also contain a statement indicating that the project will not affect public water supply, treatment facility or distribution systems. It should be made clear that municipal systems will not be affected in any way, either during or after construction.

J The section needs to be expanded to give the reviewer additional information regarding loss of wildlife habitat because the information provided is general and rather vague. A clearer picture of habitat and wildlife impacts would be gained if acreages of the various habitat types affected by each segment of the facility were provided. For example, how many acres of wetlands, uplands, wooded bottom lands or wooded bluffs will be affected by the bridge? How many acres of each habitat type will be affected by the section of road from the bridge to the Highway 13 interchange, and from there to the I-35E interchange? How many acres will be affected by the interchanges themselves? How many acres will be affected from the bridge north to Old Shakopee Road?

K The temporary sandfill, mentioned on page 49 and explained in more detail on page 117, would cause additional impacts on wildlife and its habitat. How wide would this sandfill be? How many acres of each habitat type would be affected by this fill? Would the fill be needed for the entire length of the bridge? What problems would be associated with removing the fill from the construction site?

L Completion of this project will directly influence increased residential and commercial developments south of the Minnesota River. This information is presented on page 48. However, the EIS does not provide an estimate of the secondary environmental impacts associated with this increased development. The reader should know how many acres of wetlands, uplands, and wooded areas will eventually be affected in Dakota County because of this increased development. How will this increased development and commitment of habitat types affect fish and wildlife resources? Certainly, the commitments of wildlife and habitat to increased development will reduce wildlife populations in Dakota County in addition to the commitments made by the road itself. The statement on page 52 "The subsequent development will somewhat restrict the wildlife potential of the area." does not adequately depict the situation as we view it.

M On page 99 it is indicated that if TH 36 is not constructed, it would seem unlikely that the south side would remain as one of the three viable alternatives for a new major Metropolitan airport now being considered. Because establishing a new airport near the project is related to the highway project, we suggest that the final statement provide a general discussion of the impacts which would be created by such an airport.

SECTION V PROBABLE UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS AND STEPS TAKEN TO MINIMIZE HARM

N The discussion on the use of herbicides, perticides and fungicides on page 119 needs revision. We are unable to identify the herbicide Visko-Rhap and believe that the chemical involved should be identified. We wonder if the use of Chlordane, sprayed on trees suspected of having Dutch Elm Disease prior to burial, is a labeled use. We also wonder if the burial sites for the suspect trees are such that leaching to ground water will not occur. We suggest that it might be better to simply bury the trees without the Chlordane-fuel oil treatment. We think there should be an identification of those who advise the Department on the proper (i.e. label) use of chemicals; and in the absence of such an advisor, we suggest that the U. S. Fish and Wildlife Service at Fort Snelling might be of some help to you.

O The statement regarding oil spills, in the next to the last paragraph on page 104, should be revised. Oil and chemical spills have occurred in the past and will undoubtedly occur again. As written, the paragraph implies that so long as the spill is contained in Long Meadow Marsh and prevented from getting into the river, serious impacts will not occur. The impacts of a chemical or oil spill on waterfowl, muskrats, shorebirds and other marsh fauna would be disastrous whether in the marsh or in the river.

P Part B., Other Design Features and Construction Methods, should discuss in more detail the borrow areas and disposal of excess peat, etc. that will be excavated from the highway right-of-way. Where will the fill materials be obtained and how will this affect wildlife habitat? How many acres of natural habitat will be destroyed in obtaining the fill? Where are the disposal sites for the excess peat?

In our opinion, using the temporary wooden trestle appears to be a more feasible method of supporting construction equipment than the sand fill method since it would cause less damage to wildlife habitat.

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

Q This section incorrectly assesses the long-term productivity of wildlife. Since the project would irretrievably reduce the overall habitat base of the area, the carrying capacity of the land becomes less. In essence, wildlife values are being traded on a long-term basis for increased transportation efficiency.

SECTION VII - IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

This section tends to minimize the adverse impact of the project on wildlife and wildlife habitat, because as the acres devoted to wildlife habitat become less, that which remains increases in relative importance. In our opinion, rather than a"minimal" commitment of wildlife resources, this project would commit a significant amount of the resources remaining in the Metropolitan area.

Sincerely yours,

Madonna F. McGrath
Acting Special Assistant
to the Secretary

RESPONSE TO UNITED STATES DEPARTMENT OF INTERIOR

December 23, 1974

A See pages 23 and 43 of this Environmental Impact Statement.

B See page 43 of this Environmental Impact Statement.

C The highway will be elevated on a bridge for approximately one mile of its passage through the floodplain. Six lanes will be constructed. (See pages 23 and 117)

Building the new highway along the existing Cedar Avenue (Alternate A) through the floodplain as suggested would have some construction and environmental advantages. For example, the existing roadway could be used for gaining access to the construction site and as a platform for construction equipment. Another advantage to this proposal would be that it would disturb less habitat through the floodplain area. However, with Alternate C this loss of habitat would be temporary since the new bridge will span the floodplain, and the area under the bridge would soon return to its natural condition as it has in similar crossing situations.

Although these and other advantages described in Section III of the DEIS are very important considerations, the disadvantages seem to outweigh them. For example, this proposal would disrupt vehicular traffic on the existing road for a period of two or three years. Also, as explained on Pages 15 and 16, the alignment would cause serious socio-economic impacts, especially in the City of Bloomington. As compared with the Alternate C corridor which requires the displacement of 34 families and one commercial building at a cost of $3,987,500, the Alternate A corridor, would require the displacement of 400 families and 26 commercial buildings at a cost of $12,895,000. Although some modification of the Alternate A proposal could lessen these impacts, we believe that the proposed highway location, Alternate C-1, represents an appropriately balanced consideration of the need for fast, safe, and efficient transportation, public services, and socio-economic environmental effects, and national environmental goals.

Of those people giving testimony at the December, 1974, public hearing for this project, only three favored Alternate A, while 47 favored Alternate C. One person favored Alternate B, and three Alternate D. This response and comments to the Draft E.I.S., show overwhelming public support for Alternate C.

As explained in Section V of this document, building the roadways on structure (bridges) rather than on embankment through most of the floodplain and using many other mitigating measures will minimize the impacts of building on the Alternate C corridor.

Since existing Cedar Ave. has only a narrow right-of-way (66 to 160 feet), much additional land would be needed for Alternate A. Under the Alternate C proposal, the existing road — except for the river bridge — will be left inplace to provide access to adjacent lands and the proposed recreational trail system.

Both the Metropolitan Council and the Metropolitan Transit Commission have determined that busses in mixed traffic is the mass transit system proposed for this transportation corridor in the immediate future. Any of the Alternates proposed will satisfy this requirement.

D The existing river bridge structure will be removed when the new bridge is open for traffic. Protective measures will be imposed by special contract provisions.

E More information on future mass transit needs is not available at this time.

F The Minnesota Department of Natural Resources has proposed joint acquisition of land near this highway project for the purpose of providing access to the river and to the recreational trails. The Minnesota Highway Department is receptive to this and has held several meetings with the agencies concerned. Plans are being coordinated to achieve these facilities.

G The Minnesota Memorial Hardwood Forest (MMHF) is about 20 miles southeast of the T.H. 36 project area. Between the two locations are three major existing highways: T.H.'s 3, 52, and 61. Two of these — T.H. 52 and T.H. 61 — lead directly into the MMHF from the St. Paul-Minneapolis Metropolitan Area. By contrast, while a portion of T.H. 36 parallels the MMHF for about 16 miles, it never comes closer than 20 miles to the area. Thus, if the potential for residential development exists in the MMHF area, T.H.'s 52 and 61 would be the highways that would facilitate the development, and not T.H. 36.

Although T.H.'s 52 and 61, have been open for many years now, they have apparently done little to influence growth in the MMHF area. Three rural communities bordering the area — New Trier, Miesville, and Vermillion — show little growth during the past 25 years. Dakota County officials do not anticipate much change for the three in the next 10 years as indicated below.

	1950	1970	1972	1985 (Projected)
New Trier	73	153	149	200
Miesville		192	192	300
Vermillion		359	366	466

(Source: "Dakota County in Perspective", Dakota County Planning Department, 1973)

G The proposed improvements on T.H. 36 (Cedar Ave.) fall within the Metropolitan Area. Outside this area Cedar Avenue will remain an intermediate highway and will continue to provide service for the rural areas of southwestern Dakota County. When this proposal is implemented, its greatest influence on development in Dakota County will be within a 5 mile radius of the project area, and will include mainly the area in and around Apple Valley, Burnsville, and Eagan.

The State of Minnesota in cooperation with the U.S. Department of the Interior, Bureau of Outdoor Recreation is proposing the purchase of 200,000 acres of forest land in the MMHF area over a 30 year period. Included in the plans is the development of recreational facilities such as stream access sites, interpretive centers, picnic areas, sanitary facilities, parking lots, access roads and 1,800 miles of hiking, biking and horse trails.

This proposed development will make the forest increasingly attractive for recreational usage by people throughout the State, especially those in the expanding metropolitan areas. Although the proposed T.H. 36 project may be used by some people as a way to cross the Minnesota River, it would seem an unlikely route to the M.M.H.F. There will be no good connection from TH 36 to the forest. As previously stated, other routes such as T.H. 3, T.H. 52 and T.H. 61 are those which will facilitate travel to the forest area.

H As explained on page 59 and page 129, efforts have been made to identify Indian cultural features. Federal and State regulations will be complied with during construction operations. Ongoing coordination has been established with controling agencies.

I This project will not affect any public water supply treatment facility. A local portion of the water distribution system in the Bloomington area will need to be relocated. In the recently developed areas of Bloomington, Burnsville and Eagan all utility construction has been planned and coordinated with the proposed highway construction. (See Response B to Bloomington City Engineer.) (Also See page 31)

J See page 52 in Final E. I. S.

K Construction of either the temporary sand blanket or wooden trestle would result in some short term impacts on the natural environment in the river valley. However, the methods to be used for constructing the river bridge cannot be determined until final design of the bridge. If a sand fill is used, it would only be placed over a short portion of the area under the bridge structure. Permits will be obtained from controlling agencies for building, operating, and removing these temporary construction platforms before any work begins. Construction and removal methods will be employed to minimize environmental harm.

L This proposed highway will be built to help provide transportation service for the fastest growing area within the Minneapolis-St. Paul Metropolitan Region. The area is within the boundaries of the Metropolitan Urban Service Area which the Metro Council, Dakota County, and the local municipalities have proposed for development. Thus, by proposing improvements on T.H. 36, the MHD is reacting to a need created and planned for by other agencies. The MHD recognizes that implementing this proposal will mean some loss of wildlife habitat; however, since metropolitan planners have determined that increased residental, commercial, and industrial development in this area is compatible with regional plans, accommodations such as improved transportation routes must be provided.

M In recent developments (since the circulation of the TH 36 DEIS), the Metropolitan Airport Commission has ruled out the possibility of another major airport in the metropolitan area, at least for the time being. Therefore, the EIS no longer needs to consider the relationship of proposed TH 36 to a major airport in Dakota County.

N The Minnesota Highway Department pesticide application procedures have been revised in accordance with current usage laws and legal criteria. (See pages 119 and 120 for additional information.)

O Serious impacts can occur as a result of a chemical or oil spill. Quick containment before the spill can spread to faster moving river water would be one way of minimizing harm.

P Prior to detail design of construction plans, it is not possible to "pin point" borrow and disposal areas. Local zoning ordinances and Minnesota Highway Department Specifications will be complied with. All applicable permits from controlling agencies will be obtained.

Q The response in L above applies here also.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION V
300 SOUTH WACKER DRIVE
CHICAGO, ILLINOIS 60606

OFFICE OF
THE REGIONAL DIRECTOR

December 19, 1974

Mr. Paul G. Velz
Road Design Engineer
Department of Highways
St. Paul, Minnesota 55155

RE: Draft Environmental Impact Statement
Trunk Highway 36 (Cedar Avenue)
Hennepin and Dakota Counties, Minnesota

Dear Mr. Velz:

We have reviewed the Draft Environmental Impact Statement for the above project. To our knowledge, and based upon the information provided, this project will not impact to any significant degree on the health, education or welfare of the population.

Sincerely yours,

Robert A. Ford

Robert A. Ford
Regional Environmental Officer

cc: Charles Custard, OEA
Warren Muir, CEQ

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Science and Technology
Washington, D.C. 20230

December 4, 1974

Mr. Paul G. Velz
Road Design Engineer
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

Dear Mr. Velz:

The draft environmental impact statement for "Trunk Highway 36 (Cedar Avenue) in Hennepin and Dakota Counties, Minnesota," which accompanied your letter of October 17, 1974, has been received by the Department of Commerce for review and comment.

The statement has been reviewed and the following comments are offered for your consideration.

Bench marks, triangulation stations, and traverse stations have been established by the National Geodetic Survey in the vicinity of the proposed project. Construction required for the project could result in destruction or damage to some of these monuments.

The National Geodetic Survey requires sufficient advance notification of impending disturbance or destruction of monuments so that plans can be made for their relocation. It is recommended that provision be made in the project funding to cover costs of monument relocation.

Thank you for giving us an opportunity to provide these comments which we hope will be of assistance to you. We would appreciate receiving a copy of the final statement.

Sincerely,

Sidney R. Galler

Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

RESPONSE TO UNITED STATES DEPARTMENT OF COMMERCE

Careful attention will be given to all monuments during construction and any which must be relocated will be handled as suggested.

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
COMMANDER (oan)
SECOND COAST GUARD DISTRICT
FEDERAL BLDG.
1520 MARKET ST.
ST. LOUIS, MO. 63103
. Tel. 314-622-4607

3270
9 December 1974

Mr. Paul G. Velz
Road Design Engineer
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

Re: Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue) in Dakota and Hennepin Counties, Minnesota; Minnesota Projects M 5405( ) and M 5409( ) State Projects 1925 and 2758

Dear Mr. Velz:

Thank you for your letter of 17 October 1974 forwarding a copy of the Draft Environmental Statement for the referenced project.

The Minnesota River is considered to be a navigable waterway of the United States from its mouth to Mile 329± Big Stone Lake (33 C.F.R., §2.45-10).

A In order to construct a bridge across the Minnesota River, it will be necessary to obtain the approval of the Commandant, U. S. Coast Guard, prior to commencement of construction. Applications for such approval shall be addressed to the Commander, Second Coast Guard District, 1520 Market Street, St. Louis, Missouri 63103, Attention: Bridge Section. The application must be supported by sufficient information to permit a thorough assessment of the impact of the proposed bridge on the environment (Section 102(2)(c) of the NEPA of 1969, P.L. 91-190) (Section 4(f) of the DOT Act, P.L. 89-670).

The minimum vertical guide clearance for a bridge across the Minnesota River is 55 feet above normal pool.

We believe that a bridge at either location completely spanning the river would be adequate for existing and prospective navigation.

B In addition, oil spills which threaten to enter the Minnesota River should be reported to the appropriate federal agency (U. S. Coast Guard or U. S. Environmental Protection Agency).

C Also, this statement in relation to relocating the marina should state whether or not there are other boat launching ramps available to the boating public in this area or what consideration has been given to including boat ramps in some of the parks planned for this area.

9 December 1974

Re: Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue) in Dakota and Hennepin Counties, Minnesota; Minnesota Projects M 5405( ) and M 5409( ) State Projects 1925 and 2758

Please contact us if we can be of any further assistance.

Sincerely,

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

RESPONSE TO U.S. COAST GUARD

A Since this is a Federal-Aid action, the Federal Highway Administration will serve as lead agency for compliance with National Environmental Policy Act and Section 4(F) requirements. The Cost Guard bridge permit application will be prepared in accordance with the latest version of the Second District's pamphlet "Applications for Coast Guard Bridge Permits".

B See the corrected page 104.

C The Minnesota Highway Department (M.H.D.) is presently working with the Minnesota Department of Natural Resources on a plan to establish a public marina in the vicinity of the existing Cedar Avenue Bridge **south** of the Minnesota River. The recent proposal by the U.S. Fish and Wildlife Service (USFWS) to establish a National wildlife Refuge **north** of the river will be considered and coordinated with the U.S.F.W.S. before marina plans continue. Also, the M.H.D. is cooperating with the City of Burnsville to construct a public marina under the I-35W river bridge about 3.5 miles upstream from Cedar Avenue. An existing public marina is located Northeast (downstream) of the project area in Fort Snelling State Park.

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
1210 U. S. POST OFFICE & CUSTOM HOUSE
ST. PAUL, MINNESOTA 55101

IN REPLY REFER TO

NCSED-ER

5 November 1974

Mr. Paul G. Velz
Road Design Engineer
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

Dear Mr. Velz:

SUBJECT: 330 FHWA-Mn-EIS-74-04-D
Draft Environmental Statement for
Trunk Highway 36 (Cedar Avenue) in
Dakota and Hennepin Counties
Minnesota Projects M5405( ) and M5409( )
State Projects 1925 and 2758
From: Interstate 35E in Eagan
To: Interstate 494 in Bloomington

The Corps of Engineers has no comments on the subject report.

Sincerely yours,

MAJ, EN
DEPUTY

MAX W. NOAH
Colonel, Corps of Engineers
District Engineer

Copy furnished:
Mr. Timothy Atkeson
Council on Environmental
Quality
Executive Office of the
President
722 Jackson Place, N.W.
Washington, D.C. 20506

6400

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES
CENTENNIAL OFFICE BUILDING · ST. PAUL, MINNESOTA · 55155

December 13, 1974

Mr. Paul G. Velz
Road Design Engineer
Department of Highways
John Ireland Boulevard
St. Paul, Minnesota 55155

Re: 330 Negative Environmental Declaration for FHWA-Mn-EIS-74-04-D, T.H. 36 (Cedar Avenue), Dakota and Hennepin Counties, S.P. 1925 and 2758

Dear Mr. Velz:

The Department of Natural Resources has reviewed the Negative Declaration for the above project, together with the additional information you provided at our December 4 meeting, and offers the following comments.

We favor Alternate Route C-1 as shown on Figure 4 in the Draft EIS; however, we would like to see the road follow the present alinement more closely on the north side of the river, as far as practicable considering limitations to curvatures on the bridge structure, etc. This is to avoid as much as possible of Long Meadow Lake and the surrounding marsh.

We recommend and support the proposal for providing a trailway on the bridge to provide connections between the segments of the Minnesota Valley Trail on each side of the river as well as trails to be developed by Bloomington and possibly Eagan. Please note also the city of Bloomington may be interested in providing a bluff-top trail on the Bloomington side of the river. This would require an extension of the bridge on the north end, with a terrace provided to carry the trail underneath as described on page 109 and shown in Figure 58 of the Draft EIS.

As to the exact touch-down point of the trail ramps leading down to the river bottom from the bridge trailway, we request that you contact Milt Krona of our Division of Parks and Recreation (296-4778) at the appropriate time in the design process for inputs in this regard.

As you know, DNR permits will be required for the crossings of the Minnesota River, Long Meadow Lake, Black Dog Creek, and for drainage-storage ponds and any channel relocation.

A With respect to ponding area C as shown on Figure 55, it should be noted that this marsh has good waterfowl value, and will be harmed if excessive amounts of storm water are drained into it. Therefore, we request that an alternate site for this pond be found if possible, probably closer to the highway than the Pond C site shown.

We also have some concern that the storm sewers may dewater the shallow ground water aquifers in the outwash area north of the river. Such dewatering could affect surface waters located along
B the route. It should be noted that Wood and Penn Lakes located in similar outwash terrain as Wrights Lake are believed to have been affected by highways construction of Interstate 35W. Measurements of the levels of the ground water and of Wrights Lake are needed to verify the relationship between the two.

Rather than monitoring these water level relationships after construction is completed, as is indicated in the Draft EIS, these relationships should be clearly understood before construction begins so that the drainage system can be designed to avoid effects to the lakes. This would entail monitoring ground and surface water levels prior to final design.

DNR would also like to work with the Highway Department in the location of a boat access on the Minnesota River in conjunction with the construction. The site should be determined prior to
C the commencement of land acquisition so that any additional land necessary can be acquired simultaneously. Ron Harnack of the DNR Metro Region office, 296-2959, should be contacted in regard to the access site location.

We would also suggest that the trees cut in the clearing of the
D right-of-way be sold commercially to be utilized by a wood industry rather than being disposed of. It would appear that there is some good quality timber which will be affected.

Sincerely,

Donald R. Frye

for Jerome H. Kuehn
Planning Administrator

JHK:rd

cc: Archie D. Chelseth
PERT
Division Directors
Don Carlson, Regional Administrator

RESPONSE TO MINNESOTA DEPARTMENT OF NATURAL RESOURCES

A Three possible sites have been considered for the location of Pond C. One site is shown in Figure 55 on Page 105. Other sites (not shown on Figure 55) are adjacent to and directly northeast of the proposed Alternate C alignment. Moving the pond to one of these other sites would have the advantage of not affecting the marsh but would have the disadvantage of requiring the removal of some trees. We will consider all alternatives and impacts relative to the location of Pond C during the detail design stage of the project and will work closely with the Department of Natural Resources (D.N.R.) to insure minimal environmental damage. A permit from the D.N.R. will be obtained for construction and maintenance of Pond C if required.

B Piezometers were installed during 1973 in the Bloomington area for the purpose of monitoring ground water elevations. Based on information obtained thus far, the project can (and will) be designed so as not to interfere with the water table or Wrights Lake.

C We have in the past and will continue to work with the D.N.R. and local agencies to plan for proposed recreational facilities in the project area.

D Many trees within the project right of way will be carefully removed and transplanted as a part of the landscaping and beautification process. Those that cannot be salavaged will be disposed of in accordance with construction specifications.

METROPOLITAN COUNCIL
Suite 300, Metro Square Building, Saint Paul, Minnesota 55101

(MHD Note: The following paragraphs are excerpts from a general report from the Metropolitan Council to the MHD, dated January 23, 1975. Because of the size of the report, only the paragraphs requiring a response from the MHD are reproduced here.)

The MHD did not indicate where construction material would come from nor indicate measures to control excavation at the sites. The report indicated that upon completion of the project, these sites would be left neat and in as near natural condition as possible. Site restoration was to include cleaning, shaping, and replacement of top soil, establishment of vegetative cover on all areas disturbed by the construction operations.

A The present control over contractor's construction operations are innumerated in MHD's "Standards, Specifications for Highway Construction" stated January 1, 1972. Additional controls are to be included in special provisions for the contract. These specifications and special provisions will include the following: the engineer will have authority to limit the surface area of erodible material exposed by clearing and grubbing, excavation, borrow and fill operations, and to direct contractor to provide immediate, permanent or temporary control measures to prevent contamination of adjacent streams and other watercourses, lakes, ponds, and areas of water impoundment. If these special provisions are included in the contract and the project engineer directs the excavation and hauling operations at the site a minimum of damage to the site originally would be possible. This would be a more positive control than the earlier indicated restoration of the site after completion of the project. It is important that the special provisions be included in the contract.

Dredging Operations

It is recognized that considerable dredging is to be required for the project and measures should be undertaken to minimize pollution and other effects caused by the dredging of the river.

B The MHD report is not clear on the extent of dredging required. The bridge is approximately one mile long but this dos not extend beyond the peat deposits indicated in the future right-of-way. (Figure 13). Piles will be driven under the bridge piers for foundation support, but when the fill is introduced beyond the bridge section the peat must first be removed completely and replaced with more suitable soil. This peat material is decayed vegetation and contains considerable phosphorous, which could be introduced to the local wetland when excavated. This phosphorus acts as a nutrient and would accelerate eutrophication. The excavated peat should not be introduced at other points in the wetlands but should be disposed of outside of the floodplain so that the phosphorus and other materials will not adversely affect water resources. The complete disposal of this material is not clear in the report and should be spelled out in more detail. A profile map showing the type of soil, the excavation areas, places where the piling will be located, piling, and potential embankment areas should be included in the report. There was a reference to the unlikelihood for the need to blast rock, but should this become necessary every effort should be made to minimize the adverse effects on the adjacent property and water resources.

C

De-icing Salts

The salts used on the area's highways to prevent highway accidents melts the ice and the water runs off highway surfaces and is usually carried through storm sewers and ultimately into the rivers. The Metropolitan Development Guide Chapter on Water Resources, Policy #21 states: "Route . . . storm drains to minimize permanent damage to natural resources."

The report indicates that de-icing salts used on the new bridge would discharge to down spouts along the piers and onto splash blocks and from there onto the land and waters below the bridge. This would be unsatisfactory because the chlorides would pollute the wetlands, lakes and the Minnesota River. An alternative measure that prevents these salts from polluting the water resources of the area should be developed and incorporated into the proposal.

D

Protection of Wright Lake

The Metropolitan Council is concerned with the protection of water resources especially when nearby construction involves considerable earth moving and sometimes deep excavation. The construction, especially deep excavation, is particularly risky for the water resources when the lake is perched, i.e., when the bottom of the lake or part of it is above the adjacent general water table. The excavation disturbs the lake bottom or causes the hydrologic pressure on the lake bottom to change, seepage from the lake is likely to increase and this could reduce the appreciably the lake water level. This ecologically disturbing consequences.

The project calls for a depressed highway at the subject intersection with a bridge on 86th Street over Cedar Avenue. Required excavation for this depressed portion will be very close to Wright Lake which is on the northwest corner of this intersection. Extreme precaution should be taken in order to prevent disturbance of the soils in the bottom of the lake or adjacent soils beneath the lake bottom which might cause accidental increase in seepage out of the lake and eventually draining of the lake itself.

E

Protection of Slatter's Lake

The Metropolitan Council is concerned with the protection of water resources, especially in residential areas where lakes and similar water bodies are less plentiful than in other parts of the region. The lake provides a very attractive feature for properties located along the northern shore of Slatter's Lake. Slatter's Lake is on the southern end of the project and lies close to Cedar Avenue and the interchange ramps at the proposed Interstate Highway 35-E.

The lake is not a large lake and when interchange design for I-35E and Cedar Road encroaches on the southern perimeter of the lake with potential partial filling of the lake, considerations for alternate design of the ramp (causing the potential fill) should be given some priority of attention. The interchange location is not too restricted and slight alterations should be manageable in order to preserve Slatter's Lake by preventing this filling and its consequence of disturbance of the ecological relationship.

F

Preservation of Trees

The Metropolitan Council is concerned about the preservation of trees. Many trees will be taken by the construction of the new facility and more trees will be removed where there are noise control barriers to be erected. The trees along the bluff areas together with other vegetation have a positive effect on holding the soils and preventing their washing down into the valley causing siltation in the wetland areas below. Every effort should be made to minimize the number of trees removed.

The Highway Department is goining to build a sound barrier along certain parts of the highway. One place of particular concern is the bluff areas which contain a high density of trees. An effort should be made to determine the feasibility of substituting some form of wall as a barrier to noise rather than constructing mounds of earth, for the latter requires considerably more right-of-way and would entail the taking of a considerable number of trees in addition to those for the right-of-way.

RESPONSE TO METROPOLITAN COUNCIL

A Selecting the sources of construction material is normally a contractor's option as a part of the competitive bidding process. The contractor is required by Minnesota Highway Department contract specifications to restore borrow areas. Restoration of these areas will be accomplished as soon as possible after material has been removed from a given area.

B No dredging is anticipated on the entire project. Some excavation will be needed for bridge pier construction and for an embankment area between the south end of the river bridge and the railroad track. As stated on page 117 the excavated material will be either removed from the river valley, placed in a diked area or consolidated under under fill slopes in such a manner as to minimize pollution of adjacent water bodies. Only after design approval and the subsequent soil borings, surveys and preparation of construction plans can exact excavation and embankment areas, piling locations, etc. be determined.

C The drainage plan for this project has the preliminary approval of the controlling agencies. Alternate plans for preventing salts from entering the water resources have been found to be infeasible and extremely expensive. Also great amounts of electrical energy would be needed to make them operate. No known pollution problems currently exist under similar river crossings structures.

D A disturbance to Wrights Lake is not anticipated. If further research during detail design indicates that it will be disturbed, protection methods will be employed.

E Alternate designs for the Slaters Lake area are being considered and will be addressed in the I 35E E.I.S. The I 35 interchange is not part of this action.

F The project will be designed to take a minimal number of trees and other natural vegetation. The trees that have to be removed will all be screened by M.H.D. foresters who will determine the feasibility of transplanting. All transplanted trees will be replaced on highway right of way to augment the overall landscaping and soil stabilization plans.

TWIN CITIES AREA METROPOLITAN TRANSIT COMMISSION
330 Metro Square Building, Saint Paul, Minnesota 55101 Phone 612/227-7343

December 4, 1974

Mr. Ray Lappegaard
Commissioner of Highways
Minnesota Highway Department
St. Paul, Minnesota 55155

Re: 330
FHWA-Mn-EIS-74-04-D
Draft EIS for TH 36 (Cedar Avenue)

Dear Mr. Lappegaard:

We have reviewed the Draft Environmental Statement for Trunk Highway 36 from I-35E in Eagan to I-494 in Bloomington, and are herewith submitting our comments. Included are general comments regarding the need for a river crossing in the general vicinity of the existing Cedar Avenue Bridge, and more specific comments about provisions for transit in the design of the proposed facility.

In terms of the need for replacement of the existing Cedar Avenue bridge, the MTC is well aware of the deficiencies of the existing structure and connecting access routes, as well as the severe problems associated with its closing when accidents occur. In recognition of the deficiencies of the existing bridge and connecting routes, the limited life remaining in the structure, and the need for continuation of a river crossing in this approximate location, the MTC agrees with the general proposal to construct a new bridge and connecting highways to carry TH 36 across the Minnesota River.

However, the design of this facility should reflect the new metropolitan development policies evolving from the work of the Metropolitan Council, aimed at defining a metropolitan urban service area with accompanying policies to limit the spread of urban development. Provision of a large bridge in this location will tend to encourage extensive urban development south of the river, whereas a design with more limited capacity might help inhibit growth on the fringes of the urbanized area. The design capacity of this bridge should be based on an analysis of population and employment growth south of the river which is compatible with the new metropolitan development policies, accompanied by a realistic reassessment of the future use of private automobiles in view of the growing costs and energy problems associated with their use.

The general need for special facilities for transit has been recognized in the development of Alternate C-1, which provides ample space in the median for some type of transit facility. We agree that providing the structural support and space for some ultimate transit vehicle system which might be used in this corridor is

appropriate if it can be achieved on minimal costs. However, the Commission's Transit Development Program as adopted in December, 1972, shows TH 36 being used by express buses with preferential treatment in the section from TH 13 to I-494.

The Commission is currently conducting a study of the bus needs in Dakota County. This information, in combination with the Metropolitan Council's policy guidance, should lead to an estimate of bus useage in the area. We would recommend, therefore, that the design of the TH 36 (Cedar Avenue) bridge and connecting highways provide for proper access to permit the free flow of buses in accordance with this information.

Sincerely,

Camille D. Andre
Executive Director

CDA/HCF/khf

RESPONSE TO METROPOLITAN TRANSIT COMMISSION

This project lies totally within the Metropolitan Urban Service Area boundaries as proposed by the Metropolitan Council. Traffic analysis and design of the project are consistent with anticipated growth.

As stated in the Metro Council letter dated March 7, 1975 the proposed major river crossing bridge should be built for 50 years or more. The 3 lanes of traffic proposed for each direction of travel, in our opinion, is not exorbitant when one considers the needs for 50 year. All previously constructed river crossings, though adequate for several years after construction, have proven to be of inadequate capacity over a 50 year time span.

MINNESOTA ZOOLOGICAL GARDEN

November 27, 1974

Mr. Paul G. Velz
Road Design Engineer
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

Re: 330
FHWA-Mn-EIS-74-04-D
Draft Environmental Statement for
Trunk Highway 36 (Cedar Avenue) in
Dakota and Hennepin Counties
Minnesota Projects M5405 ( ) and M5409 ( )
State Projects 1925 and 2758
From: Interstate 35E in Eagan
To: Interstate 494 in Bloomington

Dear Sir:

This letter will acknowledge receipt of your letter dated October 17, 1974 enclosing a draft environmental statement for the above-referenced projects. We have reviewed that environmental statement and submit the following response.

The Minnesota Zoological Board wishes to express its strong support for the development of Cedar Avenue (Trunk Highway 36) along the lines proposed in Alternate C-1 continued in the environmental impact statement. It is important to the zoo to provide for adequate, safe traffic movement, and this alternative seems to offer the best opportunity for improved movement and safety. The provision for mass transit right of way is a significant feature of that alternate. It is the intention of the Minnesota Zoological Garden to make every possible use of mass transit.

A It should be noted that Cedar Avenue is particularly significant for the Minnesota Zoological Garden. Special state legislation has authorized an extension of that roadway south and easterly from the termination outlined in this environmental impact statement. That extension would provide the major access to the zoo. It would be expected that significant zoo traffic, both passenger vehicle and transit, would use the route proposed for upgrading. Present estimates indicate annual patronage of approximately 1,500,000. At least 60% of that traffic could use Cedar Avenue as one of its alternate approach routes.

B There are some points in the draft environmental impact statement which should be corrected. On page 77 in your proposed land use you note the Minnesota Zoological Garden and the relationship to a 700 acre park directly east of the zoo site. Actually, the park will be larger than 700 acres and will be both north and east of the zoo site.

Veterans Service Bldg., Columbus Circle, St. Paul, Minnesota 55155

In that same paragraph you note that anticipated rapid increase in land value would be "directly attributable to the zoo and related development". I believe it would be fair to state that land speculation is being made based upon anticipated zoo stimulation. However, it is also important to note that no real economic need for such development has been demonstrated nor have other zoos directly stimulated major land development. It is incorrect to state that any increases in land value would be directly attributable to the zoo.

C

I also note on page 99 in Part D of General Development that you indicate the failure to provide good access would probably force the zoo officials to "withdraw all or part of the plans for zoo development". That is not an accurate statement. The bonding program for the Minnesota Zoo is being used to fully design and construct Phase I of the zoo. This initial design will not be altered based upon possible traffic problems.

D

Obviously, the failure to construct adequate roads will have a significant environmental effect upon the surrounding communities if they must withstand increased traffic on local roads. Also, it would discourage attendance to the zoo. Under such circumstances, future zoo development might be limited. It is recommended that the paragraph on the zoo development be changed to indicate that future zoo development could be severely restricted if the access from the north is not provided.

In summary, we were well impressed with the quality of the environmental impact statement and with some minor modification, believe the statement ought to be approved and the roadway constructed along the lines of Alternative C-1.

Yours very truly,

Donald D. Bridgwater
Director

DDB/je

RESPONSE TO MINNESOTA ZOOLOGICAL GARDEN

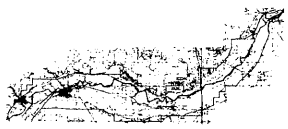
A This proposed T.H. 36 (Cedar Avenue) project has been recognized in this E.I.S. as being one of the important routes to the Minnesota Zoological Garden. However, the specific environmental impacts of the proposed Zoo and "Zoo Road", immediately south of this project, have been addressed in a separate State Environmental Impact Statement for that project.

A letter dated August 5, 1975, from the the U.S. Department of Transportation, Federal Highway Administration stated that the entire Zoological Garden Project including the access roads is considered a major State action and a nonmajor Federal action.

B See the Corrected page 77.

C Thanks for this insight. (again see the corrected page 77.)

D The statements on page 99 are valid. Much construction work and planning has already been done on the Zoo. Inadequate highways to the Zoo would have little bearing on the present construction plans. Leaving the highways in the vicinity of the Zoo unimproved would result in a substantial loss in attendance, however, and probably force Zoo officials to restrict future development.



Lower Minnesota River Watershed District

WARRIOR OFFICE BUILDING
BURNSVILLE, MINNESOTA 55378

December 2, 1974

Casimer Lubansky *President*
Jens Caspersen *Vice President*
William J. Jaeger, Jr. *Treasurer*
Merrill M. Madsen, Jr. *Secretary*
Paul G. Fallquist
Lawrence E. Samstad *Engineer*
Raymond A. Haik *Attorney*

Ray Lappegaard, Commissioner
Minnesota Department of Highways
State Highway Building
St. Paul, Minnesota 55155

Dear Mr. Lappegaard:

The Managers of the Lower Minnesota River Watershed District wish to acknowledge the receipt of the Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue) dated August 8, 1974. At this point they do not wish to comment since it is assumed that the Minnesota Department of Highways will, when ready with firm plans on this stretch of highway, make appropriate application to the Lower Minnesota River Watershed District for a permit for construction.

Review of the Statement indicates that more detailed information will be required in the areas of:

Groundwater Hydrology Impact
Foundation Soil Impact
Steep Slope Impact
Erodible Soils Impact
Surface Water Systems Impact

This detail information will be requested as a part of the final construction plan submitted to the Lower Minnesota River Watershed District for review and acceptance by the Managers.

Sincerely,

Lawrence E. Samstad

Lawrence E. Samstad, P. E.
Engineer

LES:jle
cc: Board of Managers
Raymond Haik

RESPONSE TO LOWER MINNESOTA WATERSHED

This information will be included with the permit application which the Minnesota Highway Department will submit after the detail design.

BOARD OF COUNTY COMMISSIONERS
DAKOTA COUNTY, MINNESOTA

Date November 26, 1974 **Resolution No.** 14

Motion by Commissioner Murphy ***-- Seconded by Commissioner*** Scully

Directed Comments for Public Hearing

December 3, 1974

To: Minnesota Department of Highways

WHEREAS, the State of Minnesota Department of Highways has prepared a Draft Environmental Statement for a segment of T.H. 36 (Cedar Avenue) from the proposed junction of FAI 35E northerly to FAI 494, and

WHEREAS, said Department of Highways has scheduled a combined Location Design Public Hearing, which will begin on December 3, 1974, and

WHEREAS, said Public Hearing is being held to inform the general public and the local elected and appointive officials of the social, economic and environmental effects of the proposed highway and bridge construction project over the length of the above mentioned segment of T.H. 36, and

WHEREAS, the State of Minnesota Department of Highways has also requested review and comment about the impact of said road and bridge construction project by the Dakota County Board of Commissioners, Dakota County Engineer, Dakota County Soil and Water Districts, Dakota County Housing and Redevelopment Authority, Dakota County Planning Commission,

THEREFORE BE IT RESOLVED, that the following comments be recorded into the transcript of said Public Hearing as the official response of the above named agencies:

There is no other single highway construction project that can provide greater social and economic benefit to the citizens of Dakota County than the completion of proposed Minnesota Projects M-5405 and M-5400 State Projects 1925 and 2758; this improvement has been needed and requested over the past quarter century.

Dakota County is a significant portion of the Twin Cities Metropolitan Area. Development in the county has been largely dependent upon its transportation linkage to other portions of the Metropolitan Area. The county is also separated from most of the heavily developed portions of the Metropolitan Area by the Minnesota River on the northwest and the Mississippi River on the east. Consequently, bridge location and construction has played, and continues to play, a vital role in the County's development pattern.

The County of Dakota and the Cities of Eagan, Apple Valley, Burnsville, Lakeville and Farmington have requested and accepted the necessity of a Principle Arterial Highway in this corridor. The area will be adequately served upon completion of this project. Land use, planning and zoning, utility installations and open space planning have been designed and constructed with the assumption that this project would be accomplished.

Urbanization in the communities served by the Cedar Avenue crossing has increased tremendously in the past decade and accounts for approximately 50% of the county's present population. By 1985 the population of Dakota County is estimated at 330,000 people or 13% of the projected Metropolitan population. The proposed project will promote development in an orderly radial progression from the vicinity of T.H. 13 thereby helping to retard the "sprawl or leapfrog" type of development which has been so prevalent in the Metropolitan Area.

Energy considerations are important in determining future roadway needs in the county. Recognizing the short range possibility of reduced travel, several factors still point to the necessity of moving ahead with this program;

1. The County will continue to grow. Even if fewer trips are made per household and car pooling is used, a significant number of new homes and industries are being added to Dakota County.
2. The County Highway Department has planned a major portion of its highway system as a complement to Minnesota T.H. 36.
3. The completion of this proposed project will provide safe and efficient access to the Minnesota Zoological Garden, which is scheduled for opening during 1977. The primary access to this state zoo from Hennepin County and areas north and west of the Twin Cities should be via Cedar Avenue. Furthermore, this project will provide the City of Apple Valley with its first and only state trunk highway service.
4. This project will relieve congestion, reduce accidents, reduce fuel consumption and air pollution on FAI 35W. Furthermore, this project will provide the only acceptable means of crossing the Minnesota River during periods of flood stage.
5. The project will provide a greatly needed southern entrance to the Metropolitan Sports Center and Stadium in Bloomington.

Finally, the present structure is inadequate to meet today's traffic needs and safety standards. The estimated 29,900 average daily traffic volume in 1980 will be significantly incapacitated if the present structure exists and barge traffic continues to disrupt normal vehicle movement.

It is the unanimous opinion of these agencies that the benefits to be realized from the completion of the project under the alternate "C" design will far outweigh any possible ecological damage to the river valley or environmental damage to the neighboring City of Bloomington. We urge the earliest possible completion of the project.

AND BE IT FURTHER RESOLVED, that the Dakota County Highway Engineer appear at the hearing in behalf of Dakota County and present the County Board's position and comments as outlined in this resolution.

	YES		NO
Scully	X	Scully	
Pagel	X	Pagel	
Murphy	X	Murphy	
Hollenkamp	X	Hollenkamp	
Ahlberg	X	Ahlberg	

State of Minnesota }
County of Dakota } ***ss.***

I, ***C. D. Onischuk,*** duly elected, qualified and acting County Auditor of the County of Dakota, State of Minnesota, do hereby certify that I have compared the foregoing copy of a resolution with the original minutes of the proceedings of the Board of County Commissioners, Dakota County, Minnesota, at their session held on the 26th day of November 19 74, now on file in my office, and have found the same to be a true and correct copy thereof.

Witness my hand and official seal at Hastings, Minnesota, this 2nd day of December, 1974

CARL D. ONISCHUK
County Auditor /s/

Public Works Phone 935-3381 320 Washington Av. South, Hopkins, Minnesota 55343

HENNEPIN COUNTY

December 6, 1974

Mr. K. K. McRae, District Engineer
Minnesota Highway Department
3485 Hadley Avenue North
Box 2050
North St. Paul, Minnesota 55109

Dear Mr. McRae:

Statement Submitted at the Minnesota Highway Department Combined Location/ Design Public Hearing - Trunk Highway 36 from I-35E in Egan to I-494 in Bloomington - Thursday, December 5, 1974 at the Howard Johnson Motor Lodge, 8401 Cedar Avenue, Bloomington, Minnesota

Our Staff has reviewed the Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue) in Hennepin and Dakota Counties, Minnesota from proposed junction of I-35E to I-494. We have the following comments and recommendations:

Alternates A and C intersect Hennepin County CSAH 1 (Old Shakopee Road). Hennepin County CSAH 1 is under the control and jurisdiction of the Hennepin County Engineer and the Hennepin County Board of Commissioners. Our staff has been working closely with the Minnesota Highway Department for many years on the alternatives for improvement of TH 36 from the Minnesota River to I-494. Hennepin County agrees with and encourages the development of Alternate C-1 as presented in the Draft Environmental Impact Statement. It is our further recommendation that the "do nothing" alternative is completely unacceptable because of the immediate need for a new Minnesota River Bridge in the area of TH 36 to provide for existing and planned regional mobility.

In conclusion, our department feels that enough time and money has been expended studying the alternatives for TH 36, and it is recommended that the Minnesota Highway Department move forward using Alternative C-1 in a cooperative manner with the many agencies and groups interested in this project to achieve a workable and acceptable design that can be implemented as soon as possible.

Very truly yours,

Herbert O. Klossner

Herbert O. Klossner, P.E.
County Engineer

HOK:JMW:rm

Minorities, Women and Other Protected Classes are Encouraged to apply for Employment at Hennepin County

CITY OF BLOOMINGTON
OLD SHAKOPEE ROAD AT PENN • BLOOMINGTON, MINN. 55431

December 16, 1974

Mr. Paul G. Velz
Road Design Engineer
Department of Highways
State of Minnesota
St. Paul, Minnesota 55155

Dear Mr. Velz:

Re: Draft Environmental Statement for
Trunk Highway 36

On December 9, 1974, the City Council of Bloomington again considered the proposed improvement of TH 36. The Council took several different actions on the matter including the following:

1. To approve the "C" corridor. This action of the Council related to the proposed alignment and was passed unanimously.

2. To approve proceeding without delay with completion by 1979 if possible.

3. To approve a bridge design to accommodate six lanes of traffic.

4. To approve four "fluid" lanes from the north end of the bridge to 83rd Street. In discussion, it was indicated by the several Councilmen it was intended there be three lanes in the northbound segment with one lane being devoted to trucks. They also indicated that, at this time, they approve only two lanes, with necessary widenings at intersections in the southbound direction. This motion was adopted five in favor and one opposed.

5. To approve accesses at 83rd Street and at Old Shakopee Road in a general manner only. Instructed the Bloomington staff to work with the Highway Department to improve the design in the "sensitive" areas, and indicated that this included both buffering of the adjacent residences and improved ramp configuration. This passed on a vote of five to one.

A

6. Acknowledged receipt of a report from the Bloomington Natural Resources Commission (which is appointed by and responsible to the City Council for advice) and directed that the report be sent to the Highway Department without comment.

7. To concur and adopt certain recommendations by Mr. Lyle Berg, Bloomington's Traffic Engineer, as follows:

   "A. Rather than constructing a new 'East Service Road' to connect 87th Street with 86½ Street and then to 86th Street - it appears preferable to join 87th Street to 86½ Street only by a short segment of roadway and DON'T connect them directly to 86th Street. Advantages seem multifold for nearly all concerned by this recommendation.

   B. Alter the alignment of the East Service Road intersection with 86th to a more easterly point as was planned with property development and for which rights-of-way is existing in the northeast quadrant of the intersection area.

B

   C. In general, it is recommended that land parcels which are taken for rights-of-way be taken in total if the portion of the original parcel which might remain is small and less than desirable for COMPATIBLE development of approved land use type."

The Council was most appreciative of the attendance and information of State Highway Department personnel, particularly Mr. Siggerud, Mr. Crawford and Mr. Burrill.

Very truly yours,

John G. Pidgeon
City Manager

JGP/et

cc: Russell Langseth,
Acting Public Works Director
City of Bloomington

RESPONSE TO BLOOMINGTON CITY COUNCIL

A All design details mentioned in the December 16, 1974 letter and Resolution No. 75-6 are being coordinated with the Bloomington Engineering Department and will be subject to Council approval.

B Right of way takings are subject to negotiations with individual property owners. City zoning and land use plans will be considered during these negotiations.

CITY OF BLOOMINGTON
OLD SHAKOPEE ROAD AT PENN • BLOOMINGTON, MINN. 55431

December 9, 1974

Mr. Paul G. Velz
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

Re: 330 FHWA-Mn-EIS-74-04-D
Draft Environmental Statement for
Trunk Highway 36 (Cedar Avenue) in
Dakota and Hennepin Counties
Minnesota Project M5405( ) and M5409( )
State Projects 1925 and 2758
From: Interstate 35E in Eagan
To: Interstate 494 in Bloomington

Dear Mr. Velz:

Thank you for your letter of October 17, 1974, the copy of the Draft Environmental Statement for the above referenced projects, and for the opportunity to review and make comments.

The following comments are submitted for your consideration in completing the final design and detailed construction plans for this project. Several of the items will repeat previous statements and correspondence with the Department of Highways.

1. PREVIOUS CONDITIONS

In the City Council consideration and approval of this project in 1963, certain conditions were stipulated as follows:

(1) Provisions be made to allow a roadway under the highway at the bottom of the bluff.

(2) Provisions be made to permit future access to the highway somewhere between the bottom of the bluff and the river at such time as traffic would warrant such access.

(3) That there be direct access from the highway to the Black Dog lands so that it is unnecessary to cross unincorporated lands in order to get from the highway to the lands Bloomington annexed.

(4) Proper access should be provided to the east part of Lot 57 (Nando's) to the house remaining between the new highway and Glenview Lane, and to any other properties whose access is cut off or altered.

(5) Old Cedar Avenue and the bridges (except River Bridge) remain to provide access, and that they be in good repair before being turned over to Bloomington.

AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

Condition (1) Provision has been made to allow a roadway under the Highway by proposing a long bridge.

Condition (2) Provision for access by the proposed trail system is being proposed.

Condition (3) No longer applicable.

Condition (4) No longer applicable because of revised design.

Condition (5) This condition is still valid. This roadway provides access to considerable land in the river bottom and is the location of a large natural gas main serving the metropolitan area. Discussion has been held on lowering the grade of this roadway and providing a different type lake crossing. This matter should be examined thoroughly by involved public agencies and resolved prior to reversion of the old alignment of T.H.36 in Bloomington.

A

2. DRAINAGE CONTROL

As mentioned in the statement the roadway will intercept the existing city storm sewer trunk at 90th Street. From examination of Figure 55 it appears that the outfall to Pond C will intersect the 66" storm sewer from Glenview Lane. Pond C is proposed at a location where a mining operation is in process at the present time. Further investigation is recommended on the possibility of decreasing the length of the outfall pipe from T.H.36 and the feasibility of a joint project on the ponding of the state storm sewer water and the city storm sewer water. Work should proceed on this promptly so that there will be no delay in obtaining the necessary right-of-way and agreements.

B

3. PUBLIC UTILITIES (City Owned)

The project does interfere with existing sanitary sewer and water mains in the area of 83rd Street to 88th Street. No details on the alteration for these utilities has been provided. The large water main on 86th Streetand 88th Street will require perpetuation but may be shut off for only short periods while being lowered. Details of this work should be coordinated with the Utility Division of the Public Works Department, Mr. William Lloyd, Supervisor.

4. INTERCHANGE AT OLD SHAKOPEE ROAD (CSAH#1)

C

It is recommended that a loop ramp be constructed in the northwest quadrant in addition to the other ramps proposed. This ramp would provide better operation and increased safety at this intersection. As a minimum the space should be provided for the loop and the bridge constructed to accommodate such construction in the future. This would allow free flow right turn movement on to the southwest ramp for east to south bound traffic on Old Shakopee Road.

Providing an exit from the northwest ramp to 90th could also be considered in the final details of this intersection or allowance made for that construction in the future.

It appears that the northeast ramp could be made shorter so as not to limit or restrict provisions for other movements further to the north.

It may be appropriate to extend the westerly limits of the construction of CSAH #1 to Old Cedar Avenue.

The residential lot shown on the southeasterly corner of Old Shakopee Road and 89th Street has been divided. Two houses exist where one is shown and the driveways are not shown correctly as one enters from East 89th Street. Also on this corner are several fine spruce trees which should be avoided by the construction. A copy of the half-section map and contour map (1965) is attached showing the houses.

5. INTERCHANGE IN 83 - 86th STREET *AREA*

As indicated at previous meetings and hearings the Minnesota Highway Dept. will proceed with preliminary plans for an interchange in this area to eliminate the "at-grade" intersection and provide suitable access to the adjacent area. Due to the proximity of I.H.494 and Old Shakopee Road the area must be considered as a whole, taking into consideration the existing and proposed local street system.

6. EAST FRONTAGE ROAD - KILLEBREW DRIVE (83rd St.) to 87TH STREET

C

The Frontage Road in the southeast quadrant of 86th Street and T.H.36 needs only to connect 87th Street and 86½ Street. Additional public right-of-way has been obtained with development in the northeast quadrant of 86th Street and T.H.36 as shown on the attached half-section map. Depending on final configuration and operation of the accessory roadways in this area frontage road can be moved further east to provide greater separation from the bridge end. Our information indicates that the Versailles Apartments and garages are not plotted correctly on the preliminary plan. Also, additional public right-of-way has been obtained in the area of the Howard Johnson's Motel in the southeast quadrant of Killebrew Drive (83rd Street) as shown on the attached half-section map. The Howard Johnson's Motel has not been shown on the Preliminary Plan.

7. SANITARY SEWER TRUNK

B

The Metropolitan Sewer Board maintains a large sanitary sewer lift station at 84th Street and 17th Avenue. The Bloomington staff considers it feasible and desirable to construct an interceptor along the alignment of T.H.36 to the existing interceptor on 90th Street. To date no response has been received from the Sewer Board regarding this proposal.

8. RIGHT-OF-WAY

The Bloomington Staff is prepared to provide any information regarding right-of-way previously obtained and the current status. Additional right-of-way has been previously obtained along the existing alignment of T.H.36 and in the southwest quadrant of 86th Street and T.H.36 along 86th Street as shown on the enclosed half-section map.

Again, thank you for the opportunity to review the proposed plan and the Draft Environmental Statement. The Public Works Staff will gladly provide any information regarding utilities, traffic, etc. that we can to expedite this project. It is realized that there are a great many details not covered by the preliminary plans or this letter that will need to be resolved.

As the final plans proceed we will assist in any way possible to provide the best plan for the residents of Bloomington and the travelling public.

Sincerely yours,

Russell L. Langseth

Russell L. Langseth
City Engineer

RLL/mlw
encls
cc: K. K. McRae, District Engineer
Wm. Crawford, District Engineer
John Pidgeon

RESPONSE TO BLOOMINGTON CITY ENGINEER

A Except for the river bridge, which will be removed after completion of the new bridge, existing bridges will remain to provide local access.

B All public utility services will be maintained. Provision for this will be coordinated with the Bloomington Engineering Department and appropriate Utility Companies during detail design of the project.

C These design considerations are all mutually important. They will be coordinated during detail design.

CITY OF BLOOMINGTON
OLD SHAKOPEE ROAD AT PENN • BLOOMINGTON, MINN. 55431

December 13, 1974

Mr. Paul G. Velz, Road Design Engineer
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

re: 330 FHWA-Mn-EIS-74-04-D
Draft Environmental Statement for Trunk Highway 36
(Cedar Avenue) in Dakota and Hennepin Counties
Minnesota Projects M5405( ) and M5409( )
State Projects 1925 and 2758
From: Interstate 35E in Eagan
To: Interstate 494 in Bloomington

The Planning Commission of the City of Bloomington has reviewed the Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue) and the proposed plans for the above referenced project and adopted the attached Resolution 74-1 on December 12, 1974.

Thank you for the opportunity to review and make comments.

DEPARTMENT OF COMMUNITY DEVELOPMENT
Division of City Planning

Galen P. Doyle

Galen P. Doyle, Associate Planner
and Secretary to the Planning
Commission of the City of Bloomington

lml

Attachment

CITY PLANNING COMMISSION
CITY OF BLOOMINGTON, MINNESOTA

RESOLUTION 74-1

A RESOLUTION TO THE MINNESOTA DEPARTMENT OF HIGHWAYS APPROVING THE "C-1" ALTERNATIVE IN THE "C" CORRIDOR AS CONTAINED IN THEIR "DRAFT ENVIRONMENTAL STATEMENT FOR TH36 (CEDAR AVENUE)"

WHEREAS, the Planning Commission of the City of Bloomington has reviewed and discussed the plans and "Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue)" prepared by the Minnesota Department of Highways for the proposed upgrading of TH36 between I-494 and I-35E; and

WHEREAS, the Planning Commission had recommended approval of the Eastern Area Plan adopted by the City Council of the City of Bloomington on October 2, 1972 which incorporated the concept of an improved TH36 as proposed by the Minnesota Department of Highways; and

WHEREAS, documentation and testimony has shown the existing river bridge and roadway to be unsafe and in a deteriorating condition; and

WHEREAS, the existing facility is incapable of providing desirable levels of traffic flow causing frequent periods of congestion; and

WHEREAS, the Planning Commission is familiar with the functional inadequacies, hazards and other unsatisfactory aspects of TH36 and the Minnesota River bridge; and

WHEREAS, the Planning Commission is of the opinion that the proposed improvement plans for TH36 will be of significant benefit to the City of Bloomington and the communities lying south of the Minnesota River; and

WHEREAS, the Planning Commission has determined that the proposed improvement is in accordance with community need and objectives; and

WHEREAS, the Planning Commission does not find the concept of the proposed improvement in conflict with environmental or land use goals in the community; and

WHEREAS, the Planning Commission has determined that the proposed improvement is in accordance with the adopted Eastern Area Plan; and

WHEREAS, the Planning Commission encourages the development of an improved TH36 and Minnesota River bridge with high standards of acces. control, of adequate design to carry anticipated traffic loads, provisions for minimizing noise and air pollutant effects, provisions for protecting and minimizing the impact upon the natural environment; and

WHEREAS, the Planning Commission approves the basic corridor concept and plans as prepared for the TH36 improvement;

NOW THEREFORE BE IT RESOLVED, that the Planning Commission of the City of Bloomington recommends that the Minnesota Department of Highways proceed with construction of TH36 and the new Minnesota River bridge within the concept of the "C-1" alternative in the "C" corridor as contained in the "Draft Environmental Statement for TH36 (Cedar Avenue)."

DATED this 12th day of December, 1974.

Robert J. Webster, Director
Department of Community Development
City of Bloomington

James Hancer, Chairman
City Planning Commission

CITY OF BLOOMINGTON
OLD SHAKOPEE ROAD AT PENN • BLOOMINGTON, MINN. 55431

December 13, 1974

Mr. Paul G. Velz, Road Design Engineer
State of Minnesota
Department of Highways
St. Paul, Minnesota 55155

re: 330 FHWA-Mn-EIS-74-04-D
Draft Environmental Statement for Trunk Highway 36
(Cedar Avenue) in Dakota and Hennepin Counties
Minnesota Projects M5405( ) and M5409( )
State Projects 1925 and 2758
From: Interstate 35E in Eagan
To: Interstate 494 in Bloomington

The Natural Resources Commission of the City of Bloomington has reviewed the Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue) and the proposed plans for the above referenced project. A copy of comments offered from a subcommittee of the Natural Resources Commission is submitted for your review.

Thank you for the opportunity to review and make comments.

CITY OF BLOOMINGTON

Elaine M. Mellott

Elaine M. Mellott, Chairman
Natural Resources Commission

lml

Enclosure

CITY OF BLOOMINGTON

m e m o r a n d u m

December 9, 1974

TO: John G. Pidgeon, City Manager
Mayor and City Council

FROM: Elaine M. Mellott, Chairman
Natural Resources Commission

SUBJ: Review of *Draft Environmental Statement for Trunk Highway 36 (Cedar Avenue)*

The following comments are offered from a subcommittee of the Natural Resources Commission to augment those already prepared by Galen P. Doyle, Associate Planner, Division of City Planning, in a memorandum to Robert J. Webster, Director, Department of Community Development, dated November 21, 1974.

A 1. If Alternate C-1 were more closely aligned with existing Cedar Avenue between 86th Street and the Minnesota River bridge, the impact of the freeway on the natural biological resources of Bloomington would be minimized.

B 2. As Alternate C-1 proceeds southward from the Bloomington bluff top, the bridge should begin 250 feet north of the Long Meadow Lake shoreline and continue to the C&NW Railroad on the south side of the river.

C 3. Because a single bridge requires less physical disturbance of the natural landscape, it should be encouraged.

4. Regarding Figure 29 on page 50:

   a. The area designated as #1 should be enlarged to provide for wildlife and pedestrian movement under the bridge on the north side of Long Meadow Lake, and

   b. Areas designated as #2 in Bloomington should also be designated as #4, because of the wildlife found there in abundance, such as pheasant, squirrel, rabbit, fox and others.

D 5. Regarding Figure 55, Pond C should be enlarged to handle additional water from Area N prior to roadway construction.

E 6. The increased swellhead created by new construction will not meet the requirements of the Bloomington floodplain ordinance even with the deletion of the old road bed (Section 11.13.F of the Bloomington Zoning Code allows for a 1/10th of a foot increase). The report refers to the 100-year flood level of 720-foot; the Board of Managers go by 722-foot; and it concerns the subcommittee that the lowest point on the roadway of the new bridge is only one foot above the 100-year flood level.

F

G 7. On page 107, with respect to erosion, the movement of 55 tons of dirt per acre per year is cited as moderate siltation. This seems a high figure to the subcommittee and it is hoped that every step will be taken to minimize that. The report does not speak to relating this figure to turbidity standards for the Minnesota River.

8. Alternate C-1 appears that it would create the least environmental impact on the river bluff and the valley, especially regarding Long Meadow Lake.

H 9. The subject of air quality has not been adequately dealt with. This is especially true when consideration is given to construction now underway on the I-494 bridge and the projected traffic increases and the total impact of auto emissions on east Bloomington. The Natural Resources Commission did ask that the environmental impact statement consider both of these roads at once at a meeting with representatives of the State Highway Department.

10. Particular attention should be given to PCA comments 4, 6 and 7; Bloomington comments 2 and 4; and all of the Natural Resources Commission's comments listed on Page 126 of the report.

The subcommittee acknowledges that the report does cover a large number of the questions asked by the Natural Resources Commission; however, it is felt that the depth of information provided in dealing with the problems created by proposed construction of this facility leave something to be desired. Part of the response to these problems may be addressed by technology yet to be developed. One of the most important considerations will be to provide on-going follow-up with the State Highway Department on which construction alternatives will be used and to assure that these techniques are incorporated into the construction contracts.

Finally, the subcommittee feels that provision for the movement of wildlife and recreational uses should be lauded and every support given to bridging as great a span as possible. The subcommittee wonders if the $4.3 million quoted in a newspaper article as additional expenditure for bridging rather than fill in conjunction with this project should really be put into perspective by the fact that reduction of the swellhead at this point will save money in upstream flood damage at locations such as Chaska where several million dollars is being spent on flood control projects.

Elaine M. Mellott

Elaine M. Mellott, Chairman
Natural Resources Commission

lml

cc: Robert J. Webster
Russell L. Langseth

RESPONSE TO BLOOMINGTON NATURAL RESOURCES COMMISSION

A See Department of Interior letter (December 13, 1974), Response C.

B There seem to be no prudent reason for extending the river bridge beyond the one mile long structure that is planned. See p. 117, pars. 1-4.

C This statement is contradictory to item #8 of the Commission's comments. (Alt. C-1 proposes two separate bridges.)

D This is stated on p. 104 par. 7.

E As stated on p. 43, the proposed construction will increase the 100 year flood swellhead 0.04 of a foot. This is 0.06 of a foot less than the maximum 0.10 of a foot allowable increase.

F The lowest point on the roadway of the new bridge is being re-analyzed. The grade will be given further consideration during detail design.

G The soil with the most severe erosion problem encountered is a type that could in extreme cases result in a movement of soils at a rate of 55 tons (equal to ¼ inch in depth) per year. Only about one tenth of this siltation is expected since construction specifications limit the amount of area that can be exposed in an unprotected condition at any one time. Also this limited area will be exposed for considerably less than one year.

As previously mentioned, temporary and permanent erosion control measures including sediment ponds, ditch checks, flumes, etc. will prevent sediment from reaching the Minnesota River. The river in its natural state is a rather turbid river (up to 200mg/1 susp'd. solids) and a small amount of eroded material reaching it during construction should not be measurably affect the turbidity level.

H See page 69.

November 23, 1974

CONCERNED CITIZENS OF EAST BLOOMINGTON
Analysis of "Draft Environmental Statement" for
T.H. 36 (Cedar Avenue)

An impact statement means precisely what is going to happen in a given area supported by exacting, current, factual data. The impact should be compared to something to show factual conclusions. Comparisons should be given and not vague generalities.

A
1. p. 3, ¶1 - "usually caused" and p. 4, ¶2 - "could expect" are not quantitative terms.
2. p. 37, ¶6, What is "quick stabilization"?
   ¶7, What is "visual impact"?
3. p. 75, ¶3 - "South of the river is an entirely different development process.... Most schools are of large, modern construction." Aren't most schools in Bloomington of large, modern construction?
4. p. 75, ¶2 - "North of the Minnesota River . . . ." Does this refer to the study area, the entire city of Bloomington, or Bloomington, Richfield, Minneapolis, etc.?
5. p. 81, column 2, ¶2 - Where are the statistics to back up their second sentence? The Twins will have to win more games to get better attendance.
6. p. 81, column 2, ¶3 - How will we benefit psychologically? Prove that to us with factual data.
7. p. 85, column 2, ¶2 - "It appears . . . ." Where is the factual data?

In the course of reviewing this environmental impact statement, several contradictions were evident.

B
1. p. 4 - The last sentence in 1 states, "Numbers of accidents are also likely to increase although hopefully not as rapidly as they have during the four-year period 1969-1972." Yet the last sentence in ¶2 states, "These figures indicate that one could expect a very marked reduction in accident rates."

C
2. p. 37, ¶2 - ". . . erosion may be a problem." but ¶6 says, "No long term erosion problems are anticipated."
3. p. 102, 4 - "Since the construction of proposed T.H. 36 is not expected to disrupt study area neighborhoods or geographical areas . . . ." It has already been stated several times in this EIS how the study area will be disrupted on both a long and short term basis.

Before we deal with the EIS by section, we would like to point out two large deficiencies.

D
1. No traffic studies are included analyzing where the traffic goes once it gets across the bridge into Bloomington.
   a. Does the traffic go primarily to the industrial park, north on T.H. 36, or is it distributed east and west on 494? What are the actual vehicles per day on these sections of road?

E
   b. It has been stated that T.H. 36 is needed to accommodate the sports complex and the industrial park.
      1) Only on 9 Sundays per year does the stadium fill to capacity and create a distribution problem, at which time there is no traffic from the industrial park.
      2) Most of the hockey games at Met Center are at night or weekend afternoons when the industrial park traffic is again at a minimum.
      3) If the sports complex and industrial park are the traffic generators, they should also be responsible for the collection and distribution of that traffic in their area.

F
   c. No mention has been made of the impact the new 494 bridge will have on the Cedar Avenue corridor.

G
2. Some of the factual data that is included is outdated.
   a. There is no reference to the Metro Council's "Guided Growth Plan" which is trying to contain urban sprawl.
   b. Accident rates and projected traffic volumes are all pre-energy crisis and do not reflect today's reductions in traffic volumes and accidents. (p. 65, ¶2 refers to 60 m.p.h. speed limit which is now 55 m.p.h.)
   c. p. 85 footnotes - studies used from 1960 and 1961 are grossly outdated. The most recent one listed is 7 years old.

In the remaining analysis, we have gone section by section.

Section I
Part A
1. p. 2, ¶ 4 - what are the "theoretical capacities" of Cedar Avenue, Interstate 35W, and T.H. 55 (Mendota Bridge)? They have not mentioned other bridges being built or already in use - 494 bridge and new Lexington bridge carrying traffic into St. Paul.
2. p. 3 - accident rates do not reflect the energy crisis.

G

Section II
Part C
The description of TH 36 does not include the fact that north of 58th Street it is a residential street in Minneapolis, and that a citizen's group has effectively stopped any upgrading beyond a two lane city street north of 58th Street. This was supported by the Minneapolis Park Board and the Minneapolis City Council.

H

Part D
1. What is the timetable for extending TH 36 beyond TH13 to accommodate the need for the zoo to be finished in 1977? Are there any concrete plans for extension of Cedar Avenue from 35E to the zoo?
2. p. 10, ¶ 2, last sentence - why should the development of Eagan and Apple Valley be at our expense?

I

L

Section III
Part A
1. This alternative was not the one we presented at the City Council hearings on the Eastern Area Plan. We proposed present Cedar Avenue as a four lane facility on the existing route not six lanes adjacent to the east.
2. Three pages were used to summarily dismiss the two alternatives we suggested, and the balance of the book (103 pages) to justify Alternate C.

Part C
1. We are not suggesting "no mass transit." We are suggesting that four lanes would accommodate express buses in mixed traffic. THIS IS THE MTC AND METO COUNCIL'S PROPOSAL FOR THE TH 36 CORRIDOR (p.21, last ¶)!
2. The State Highway Department has taken the liberty of going beyond these proposals without quantitatively stating what effects it would have on the environment (p.22, ¶ 2) and acknowledging their lack of specifics on noise levels and destruction of air quality (p.22, ¶ 3) should extra right-of-way be taken.

Part D
We have never been opposed to the construction of a new bridge across the Minnesota River at Cedar Avenue and do not support a "do nothing" alternative.

Section IV
Parts A & B
1. p. 59, last sentence - why are we scarring the view from the bluff for the permanent residents to allow people passing through a "viewing opportunity"? Aren't the highway travelers supposed to keep their eyes on the road, particularly at the high speeds traveled on a freeway?
2. Under "Aesthetic Impacts," pp. 63-65, they have devoted two pages to the motorist's physiological, education and cultural background in relation to his driving habits. We reiterate, "Just keep your eyes on the road, and you will safely cross the bridge."
3. Natural resources and environment are better evaluated from the input of experts such as the Environmental Quality Council, Natural Resources Commission, Lower Minnesota Watershed District, State Zoological Board, etc.; however, our proposal of four lanes with no extra ROW for mass transit would minimize environmental damage.

J

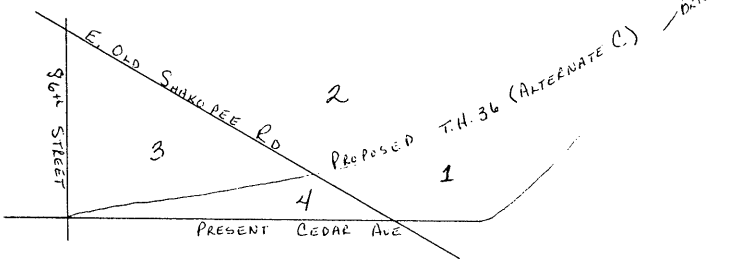
Part C
1. p. 72 - have the statistics in Table 5 been amended by the Metro Council's "Guided Growth Plan"?
2. p. 75, ¶ 5 - "Developers, land speculators and land investors have acquired most buildable land in the study area." Is this the force pushing for a hurry-up demand on the freeway?
3. p. 77, ¶ 1 - "One change is the additional residential area zoned along TH 36. This area will have <u>two-family structures, apartments, and town-houses</u>. Similar land use is planned for much of the surrounding area, especially along 86th Street, Old Shakopee Road, and <u>along the river bluff</u>." Is this type of development compatible with the Eastern Area Plan?

See M.P.I.R.G. Response B

K

4. p. 81 - "Conversely, study area residents have little neighborhood contact, as the auto is their chief mode of transportation." What about those of us who also own bicycles or walk or jog in the neighborhood?
5. pp. 84-5 - "Impacts on Residential Areas"
   a. p. 84 - last in the first column - "Except for one small triangular-shaped area in Bloomington - an area which proposed TH 36, existing Cedar Avenue, and the Minnesota River Valley forms - the proposed work will effect no such changes to the physical environment." They have summarily dismissed a lot of people concerned with their homes. How many people are they referring to? If the highway is put on Alternate C with an interchange at 90th and Old Shakopee Road, the physical environment will be altered in four triangles!

K



   b. p. 84, column 2, last ¶ plus ¶ 1 on p. 85 - they acknowledge that the residents who will be left sitting on the freeway will suffer psychologically.
   c. p. 85, column 2, ¶ 3 - "The only area that will be greatly affected by this residential economic loss will be Bloomington . . . it is unlikely that many single family residences will suffer economic loss due to proximity to the facility." How many?
   d. p. 85 footnotes - the only studies that have been used as factual substantiation at all are at least 7 years old, and one is 14 years old!
6. p. 88 - "Impacts on Schools"
   a. Shouldn't Bloomington School District 271 be a reviewing agency for this EIS? They aren't listed as one.
   b. p. 88, ¶ 3 - "School officials plan to continue busing these students." With the present budget crisis in our schools, the question is, "Can they afford to?" and "Are they reimbursed by the state to continue that particular type of busing?"
7. Table 9, p. 90 and Table 12, p. 95 - with the current inflation what will be the value of these houses when they are projected to be taken?
8. p. 93, ¶ 2 - "No estimates have been made as yet for the cost of acquiring ponding areas north or south of the Minnesota River as their exact size and location have not yet been determined." Shouldn't this be part of an EIS?

L

9. Tax structure
   a. p. 94, last sentence
   b. p. 85, Look at the last two sentences then look at p. 96, ¶ 1, "Experience has shown that while persons in the process of relocating claim intentions of remaining in the same area, they actually relocate in many different areas, often quite a distance from their last home." They are predicting that Bloomington will lose the taxes for most, if not all, of the homes taken. No factual data however.
10. p. 97, column 1, ¶ 3, first sentence - we always thought we lived in a neighborhood, and now we find out we're transients. Where is the factual data for all of these generalizations?

Part D

p. 101, column 1, ¶ 7 - "The advantage of the do nothing alternate is that home owners who are destined to live adjacent to proposed TH 36 should it be built, would not suffer economically or psychologically." They do admit that those of us who remain will suffer economically and psychologically.

Section VI

Part B

M p. 122, ¶ 3 - where is the factual data? Not "<u>especially</u> for those south of the Minnesota River," but <u>only</u> for those south of the Minnesota River.

RESPONSE TO CONCERNED CITIZENS OF EAST BLOOMINGTON

We haven't attempted to respond to all the points raised in the letter from the Concerned Citizens of East Bloomington. In some cases, we feel that additional comments or data wouldn't improve on the information given in the DEIS. We've replied only to those points pertaining to environmental issues and concerns.)

A Items 5, 6 and 7 are our conclusions based on available data and comparisons.

B Accidents are likely to increase on the existing Cedar Avenue but a marked reduction (per million vehicle miles) can be expected if a freeway is constructed.

C Erosion is always a potential problem **during construction,** especially on the steep slopes and bluffs (short term). **After stabilization** of the opened areas has been attained, with vegetation or other types of slope protection, no problems are anticipated (long term).

D See the "Transportation Planning Report" p. 38-41.

E State, County and local highway departments still have the responsibility for providing adequate roadways to serve development created by other agencies and individuals.

F A separate E.I.S. is being prepared to cover the potential impacts of proposed I-494.

G Accident rates and overall traffic volues decreased both nationally and in Minnesota during the energy crisis. However, the statistics show that the project area and Dakota County are not following this trend. Continued increases in both accidents and traffic volumes are very evident.

The list of accidents for Cedar Avenue which appears on page 3 can now be updated for 1973 and 1974. These figures show the actual number of accidents that occurred along Cedar Avenue between 123rd Street in Eagan and 86th Street in Bloomington:

Year	No. Accidents
1969	97
1970	103
1971	114
1972	181
1973	210
1974	197

Traffic volumes on Cedar Avenue have also increased approximately 30% during 1973 and 1974. Thus, the energy crisis has done little to slow down the trends in the rapidly developing project area.

A recent National Highway Needs Report published by the U.S. Department of Transportation states that national energy conservation goals are expected to reduce passenger car travel in the next several years (perhaps five). However, highway use will increase sharply after 1980 rising from the peak 1973 annual level of 1.3 trillion miles to 1.9 trillion miles by 1990 and to 2.6 trillion miles by the year 2000. The demand for mobility will continue to expand in our affluent, growing society. To permit this kind of growth there will be inreases in domestic oil production, improved vehicle efficiency and the development of other sources of energy.

Thus the overall upward trend of increasing motor vehicle usage will continue, with only temporary restraint resulting from todays crisis. According to U.S. Department of Transportation predictions, highway travel will be rising dramatically during the lifetime of this proposed highway. The traffic volumes shown on page 6 are expected to be attained and perhaps surpassed.

H See pages 45, 46 and 47 of the "Transportation Planning Report."

I J L The Zoo Road extension of Cedar Avenue is scheduled for 1979. The planned development south of the river, including the Zoo, will afford residents north of the river many new recreational, employment and shopping opportunities. We don't believe that building four lanes without provisions for mass transit would minimize environmental damage. Traffic demands for this corridor would make a four lane roadway obsolete by 1985. Congestion, with stop and start type of traffic operation, will result in added noise, air pollution, fuel consumption and time lost to motorists. If the need arises for a separate mass transit facility, the environmental damages that construction would cause will be far greater if provisions aren't made now.

K The physical environment in these areas will be altered to the extent that access and travel patterns will be changed. However, the socio-psychological impact, as defined, will be minimal as explained on pages 84 and 85.

L The drainage plan is conceptual. The exact size and location of ponding areas will be determined during detail design of the project. This as well as many other design details must come after the E.I.S. process.

M New development will come to Bloomington and other communities north of the river as well as those to the south as a result of this project. The tax benefits south of the river obviously will be greater simply because there is more undeveloped land there.

BURNSVILLE ENVIRONMENTAL COUNCIL, INC.

December 9, 1974

Mr. Ray Lappegaard
Minnesota Department of Highways
State Highway Building
St. Paul, Minnesota 55155

Dear Mr. Lappegaard:

We have reviewed the Draft Enviromental Impact Statement for improvements to Trunk Highway 36(Cedar Avenue) between Dakota and Hennepin Counties, Minnesota. Greater emphasis needs to be placed upon enviromental considerations, particularily the long-range consequences.

In the first place, we agree with the local municipalities and the Minnesota Department of Highways that there is a need for the existing thoroughfare and improvements to up-grade the highway.

The area known as Long Meadow Lake is one of a half-dozen large and extremely valuable and productive wetland complexes in the Lower Minnesota River Valley. The existing highway passes through a varied and unique marshland area, high in biological activity to a wide variety of fish and wildlife resources. Numerous muskrat houses attest to the productiveness of the area. During the spring and fall migration, tens of thousands of waterfowl and a few whistling swan utilize the area. Because of the importance of this area for the production and resting of a variety of fish and wildlife, greater emphasis and concern should be made to ensure minimal damage to the surrounding enviroment, and at the same time, provide adequate concourse for vehicular traffic.

The Minnesota Department of Highway's proposed route(Alternative C) would cut a new path across the marsh, destroying valuable habitat. Even though the new bridge would be supported by piers, the piers themselves and the associated construction activities would leave permanent scars and damaging effects to the landscape. The marsh located between the proposed Alternative C route and the existing bridge would receive significantly less use by wildlife than indicated in the Enviromental Impact Statement.

The Minnesota Department of Highways does not plan to remove the existing highway. The placement of additional structures in the Minnesota River floodplain reflects haphazard and inadequate

long-range planning and irresponsible use and degradation of the natural enviroment.

We therefore recommend that you adopt Alternative A, which up-grades the existing route, as the most feasible long-range solution. There are several reasons why we have concluded that Alternative A best meets and serves the broadest range of public interests.

First, the existing road-bed is utilized. Additional structures are not added to the landscape. The efficient use, or re-cycling, if you may, of existing facilities should be paramount in our planning judgements.

Second, up-grading the existing road would pose the least damage to the unique and highly productive Long Meadow Lake area. With an expanding urban population, the need for wildlands, wildlife and associated recreational values will become increasingly important to the residents of the inner city, second and third tier communities and the out-lying suburbs. The Long Meadow Lake area is located uniquely close to an area of high human population. Further encroachments, no matter how small, erode the size and usefulness of these areas for people. We believe that the long-range public benefits of preserving this area in its entirety from any encroachment, far out-weighs the short-range gain brought by over-zealous, rampant and un-coordinated development.

Several improvements or modifications to Alternative A would increase its practicality and feasibility.

First, south of Highway 13 in Dakota County, the route could follow the proposed Alternative B and C route, rather than the existing Cedar Avenue Road. This would reduce the construction cost of Alternative A by avoiding a heavily populated and commercial area.

Second, the north approach to the floodplain in Hennepin County could follow a compromise route between Alternatives A and C, thus eliminating a bad curve and the destruction of valuable wetlands.

Third, the central portion of the existing roadway across the floodplain would be useful during the construction phase. No additional roads into the marshes would be needed. The highway piers could be built to straddle the existing highway. The constuction of the Alternative A route could cause closure of the road for a short time. This immediate short-range hardship would be compensated by the long-range benefits.

Fourth, the mass transit option should be applied to the Alternative A route. With growth patterns expanding to the south, future needs should be anticipated for at this time.

The draft Enviromental Impact Statement prepared by the Minnesota Department of Highways does not address Alternative A in this manner. It does not consider these compromise measures which benefit the public by reducing enviromental damages, utilizing existing facilities and possibly reducing costs below the currently proposed Alternative A level. We believe that these improvements to Alternative A(up-grading the existing road) would increase the feasibility of this modified alternative over Alternative C(which is the route proposed by the Minnesota Department of Highways).

Improvements to the existing Cedar Avenue road are urgently needed. At the same time, we ask that you equally and prudently recognize the right of the public to wildlife and wildlands surronding one of the most beautiful and scenic travel lanes in the Twin Cities Metropolitan area.

Sincerely,

Nancy Sullivan

Nancy Sullivan
Chairman

Burnsville Enviromental Council, Inc.
11205 Radisson Drive
Burnsville, Minnesota 55337

RESPONSE TO BURNSVILLE ENVIRONMENTAL COUNCIL INC.

See the responses to the United States Department of Interior Comments, especially C and L.

PHONE 454-8100

CITY OF EAGAN

3795 PILOT KNOB ROAD
EAGAN, MINNESOTA
55122

November 26, 1974

Mr. Ray Lappegaard
Commissioner of Highways
Highway Office Building
St. Paul, Minnesota 55155

Re: Trunk Highway 36 (Cedar Ave.)
Draft Environmental Impact Statement
Eagan, Minnesota

Dear Sir:

The "Draft Environmental Impact Statement" relating to the construction of Trunk Highway 36 (Cedar Avenue) in Dakota and Hennepin Counties has been reviewed as it relates to the City of Eagan.

The City Council joins me in commending your staff for the preparation of an excellent detailed impact statement. All of the major impacts are well documented and sufficient detail is provided for a complete understanding of the minor items of impact.

The City of Eagan agrees with the necessity to construct this improvement and urges that all possible effort be expended to expedite its completion.

Of particular importance to our City are the following points:

1. Traffic Control and Accidents:
Part B of Section 1 shows the marked increase in traffic accidents on present Cedar Avenue from 1969 through 1972. Data compiled by the Eagan Public Safety Department shows an increase of approximately 30% more personal injury and 10% more property damage accidents in 1973 over 1972 on Cedar Avenue. Data has not yet been tabulated for 1974 but it will show significantly greater increases.

2. Life of the Present Bridge:
The life of the present bridge is projected at 10 years. The closing of this bridge prior to the opening of the new Cedar Avenue bridge would be disastrous to present and proposed development in Eagan. It would force the traffic to use other routes and the already overloaded I35W and Mendota bridges. Because the major population centers of Eagan are located in the western portion near Cedar Avenue, the resulting delays and the disruption of traffic in other areas would be totally unacceptable.

3. Project Alternates:
Alternate C as proposed by the Highway Department has been included in the Master Plan of Eagan since the early 1960's. All of the land use planning, major street system and utility system Master Plans have provided for this corridor.

No other alternate is considered feasible or acceptable.

Mr. Ray Lappegaard
Commissioner of Highways
St. Paul, Mn. 55155

November 26, 1974

Re: Trunk Highway 36 (Cedar Ave.)
Draft Environmental Impact Statement
Eagan, Minnesota

4. Environmental Impact:

The Environmental Impact has been thoroughly covered. The Eagan Park and Trail Systems have been coordinated with the planning for the proposed recreational trail and expansion of the Fort Snelling Park System.

Zoning for some residential uses exist between Co. Rd. 13 and Co. Rd. 30 which will require consideration of noise attenuation in the final design of this Highway in accordance with the new design criteria. However, sufficient land is available to accommodate berming in this area.

5. Economic Impact:

The installation of utilities such as water, sanitary sewer and storm sewer and of major streets have all required the sale of Municipal Bonds. All of the payment schedules and growth projections are geared to an orderly continued growth. If an adequate highway transportation network is not provided, the resulting loss of development can place a severe economic burden on the present residents of this community.

The present transportation delays are now placing an unfair burden on the area residents by causing approximately a 30 minute delay morning and night during the rush hours. The loss of man hours and extra motor vehicle fuel expended annually are staggering and must be stopped.

6. Drainage Control:

The staff of the City of Eagan has worked closely with the Highway Department to integrate the highway drainage needs into the City Master Plan for Storm Water Drainage. Continued cooperation will be extended throughout the final design and construction phases to provide joint projects where necessary to accomplish the desired drainage control.

In summary, the City of Eagan has planned for and has depended upon the construction of the proposed Trunk Highway 36 to be a vital link in the essential highway transportation network of this area. We recommend that all possible steps be taken to complete this highway as rapidly as possible.

Yours very truly,
EAGAN CITY COUNCIL

By Herbert H. Polzin
Herbert Polzin, Mayor

Page 2.

RESPONSE TO CITY OF EAGAN

There are many design considerations such as those mentioned here. These design details will be coordinated with the affected municipalities during the preparation of construction plans.

Bonestroo, Rosene, Anderlik & Associates, Inc. — *Consulting Engineers*

2335 W. Trunk Highway 36
St. Paul, Minnesota 55113
Phone: 636-4600

Otto G. Bonestroo, P.E.
Robert W. Rosene, P.E.
Joseph C. Anderlik, P.E.

Bradford A. Lemberg, P.E.
Robert D. Frigaard, P.E.
Richard E. Turner, P.E.
James C. Olson, P.E.
Lawrence F. Feldsien, P.E.
Glenn R. Cook, P.E.
Keith A. Gordon, P.E.
Thomas E. Noyes, P.E.

Charles A. Erickson
Richard W. Foster
Robert G. Schmiehi
Marvin L. Sorvala

November 29, 1974

Mr. Ray Lappegaard
Commissioner of Highways
Highway Office Bldg.
St. Paul, Minnesota 55155

Re: Trunk Highway 36 (Cedar Ave.)
Eagan, Minnesota

Dear Sir:

As City Engineers for Eagan, we have reviewed the "Draft Environmental Impact Statement" on the construction of new Trunk Highway 36 in Dakota and Hennepin County as it pertains to the City of Eagan. This report is very well prepared and adequately covers the preliminary design and environmental impact of this project.

All Eagan land use planning, zoning, utility plans and storm water drainage studies have anticipated the eventual construction of this freeway in the proposed Alternate C location. It is strongly recommended that Alternate C be approved and construction ordered immediately.

No major conflicts with existing development are anticipated. The following points of interest are mentioned to illustrate the need for local community staff participation in the final design phases of this project.

1. The existing Metcalf Junior High and the River Hills 9th Addition single family residential area each occupy 40 acre tracts on the west side of the proposed freeway just south of Co. Rd. 30. Consideration should be given to berming for noise control at these locations.

2. The Eagan Master Storm Sewer Plan will require some modifications to fit the drainage needs of the proposed Highway. The use of additional ponding areas and the construction of some joint projects by the City and the State Highway Department will be necessary to carry out the proper drainage control in an economical manner. Certain revisions should be made to the preliminary drainage plan shown on Figure 55 of the Draft Impact Statement.

3. Existing residential development near Slaters Lake will require special attention to minimize the detrimental effects of this construction on that area. Local staff may be able to assist in working with the local residents in this area.

4. The extension of sanitary sewer and water main to serve certain areas of Eagan west of the proposed Freeway will require coordination in the design and construction of both the Freeway and these utilities.

As this project moves into final design, we will welcome the opportunity to meet with your staff to coordinate local considerations in the final design and construction.

Yours very truly,

BONESTROO, ROSENE, ANDERLIK & ASSOCIATES, INC.

Robert W. Rosene

Robert W. Rosene
RWR:li

RESPONSE TO BONESTOO, ROSENE, ANDERLIK & ASSOCIATES, INC.

Local community staff people will participate in the design considerations that are stated. This will be accomplished during the detail design stage of the project development.

Village of apple valley 14200 Cedar Avenue S. Apple Valley, Minnesota 55068

Telephone 612, 432-7105

November 29, 1974

Mr. Ray Lappegaard, Commissioner
Minnesota Department of Highways
State Highway Building
St. Paul, Minnesota 55155

Re: Draft Environmental Statement - T. H. #36 to I-35E

Dear Commissioner Lappegaard:

The City of Apple Valley has reviewed the "Draft Environmental Statement" for the proposed improvement of 5.2 miles of T.H. #36 from Interstate 35-E to Interstate 494. The City's findings related to this draft are as follows:

1. Apple Valley commends the Minnesota Department of Highways for preparation of a very excellent and thorough report.

2. Apple Valley thoroughly agrees with the urgent need for the improvement of T.H. #36 which is documented several times in the report, namely:

   A. The existing bridge has a capacity for only 12,500 vehicles per day. According to an official traffic count earlier this year, Apple Valley alone generates over 8,000 trips on Cedar Avenue which could utilize TH#36. Presently, part of this traffic is forced along other routes such as I-35W which also are saturated at peak hours.

   B. Apple Valley urges strict adherence to the schedule which proposes initial construction in 1976, and opening in 1979. As stated in the report, the existing bridge has only a maximum life of ten more years, in addition to other limitations.

   C. Land use proposals and current construction in Apple Valley are very reliant upon the anticipated improvement of TH#36 as stated in the report. The most prominent are the Minnesota Zoological Garden and a Regional Shopping Center to be opened by 1980. The Zoological Garden scheduled to open in 1977, will generate in excess of 2-1/2 million visitors per year. The economic viability of this State institution is closely tied to the ability to provide adequate access routes. Cedar Avenue (T.H. #36) has been planned as the major access since inception of the Zoological Garden.

   D. Developers in Apple Valley state that their sales are closely tied to the ability to provide adequate access routes to Minneapolis and St. Paul. This means that the growth of areas such as Apple Valley, is dependent upon improved access routes such as T.H. #36, to serve this area.

   E. Apple Valley's bond prospectus and bond repayment for parks, schools, utilities and streets are tied to growth. If the community fails to grow due to lack of adequate thoroughfares, an unfair economic burden will be placed upon the community's residents.

   F. The safety and welfare of existing as well as future residents of Northern Dakota County will be greatly enhanced by the earliest possible completion of T.H. #36 so as to facilitate daily movements to and from the major employment, commercial, cultural and sports centers, the International Airport and the Metropolitan Twin City Area.

Geographically, T.H. #36 is the primary artery for Apple Valley as it relates to the Metro Area. To date, this artery has been marginal at best, and the community has had to rely upon I-35W located 3 miles to the west for a good, but often saturated highway link to cross the Minnesota River.

New T.H. #36, is absolutely vital to the Socio-Economic well being of this community. All of our land use planning to date has relied upon carefully planned and constant growth. The timely development of T.H. #36 is vital to these planning efforts.

Yours truly,

APPLE VALLEY CITY COUNCIL

Fred J. Largen

Fred J. Largen
Mayor

mpirg Minnesota Public Interest Research Group

3036 University Avenue Southeast, Minneapolis, Minnesota 55414 (612) 376-7554

November 25, 1974

Mr. Paul G. Velz
Road Design Engineer
Minnesota Highway Department
St. Paul, Minnesota 55155

Dear Mr. Velz: RE: T.H. 36 draft impact statement

Thank you for affording us an opportunity to comment on your draft environmental impact statement for T.H. 36 (Cedar Avenue).

In general we are quite encouraged by the quality of this impact statement; it is generally better prepared and more thorough than similar statements we have seen for extensive Interstate projects. We do, however, have a few comments and suggestions to offer. These are to be found in the attached document.

Yours truly,

Robert Hudnut
Executive Director

RKH:mc
Enc.

COMMENTS ON DRAFT E.I.S.--T.H. 36 (Hennepin and Dakota Counties)

1. In general, the "c-1" alternative (reservation of future transit right-of-way in the median) seems preferable to "c-2" (no reservation). It is hoped that transit planning will have progressed within the next two years to the point where lack of certainty over vehicle type and size in this corridor is resolved. This could mean reduction in contemplated right-of-way needs for transit if a small-vehicle fixed-guideway system is deployed in the corridor.

A 2. The draft E.I.S. does not discuss whether state noise standards would be violated by any of the alternatives. This should be discussed.

B 3. The discussion of impacts on land use does not mention whether the contemplated impacts are in conflict with proposed Metropolitan Council regional growth policies. This omission should be remedied.

C In addition, there is no discussion of the impact of this project on energy supplies. The project will encourage development of extensive single-family housing in the study area. To the extent that such a development pattern promotes long average trip lengths, and makes transit operations economically unattractive, it is apparent that this project will have a deleterious impact on efforts to conserve energy. In addition, single-family dwellings require more space heating/cooling energy per dwelling unit than multi-family dwellings. The lack of attention to this issue in the draft E.I.S. is lamentable; the final E.I.S. should discuss these factors.

4. The draft E.I.S. proposes use of various herbicides to control weeds and brush. We strongly object to this practice and request that it not be employed in the T.H. 36 corridor. We do so for the following reasons:

D A. When a pesticide is applied, not all of the applied chemical stays in the site of application. A portion migrates elsewhere--often very far away. Aerial transport of pesticides for hundreds of miles has been reported. The ease with which pesticides are transported, and the many and complex pathways by which they cycle from one environmental component to another, and their persistence (resistance to breakdown) all raise serious questions about possible damage to man, flora, and fauna.

Several models for pollutant transport in the atmosphere have been developed, including Gaussian, conservation of mass, and particle-in-cell models. These models thus far yield only general values since many environmental processes are not yet understood well enough to be modelled. However, they do indicate that pesticide transport can be a serious problem.

D

lhe importance of pesticide evaporation from soil, water, or plants must also be stressed. Even "nonvolitile" pesticides, such as organochlorine insecticides, move into the atmosphere in appreciable quantities by vaporization. Furthermore, the products of pesticide degradation may also volatilize.

B. Photodecomposition of pesticides may bring about toxological activation in some cases and inactivation in others, depending on the surrounding medium and available reagents. Photodecomposition may produce reaction products more toxic than the original compounds.

C. Various studies indicate that some of the pesticides proposed for use in particular--2,4,5-T and 2,4-D--may be hazardous to human health.

E

5. The draft E.I.S. lists among long term benefits "a decrease in traffic congestion" in the area. Since most of the area is presently undeveloped or partially developed, and since it is conceded that the project will spur development in the area, it is questionable whether congestion will actually decrease. This is particularly true over the long term.

RESPONSE TO MINNESOTA PUBLIC INTEREST RESEARCH GROUP

A The State of Minnesota has not implemented noise standard regulations.

B We have had early and continuous coordination of our project plans with local and regional governmental agencies, primarily to insure that the proposed highway will adequately serve both existing and proposed development. The responsibility for the development and comprehensive planning in this project area rests with the Cities of Bloomington, Burnsville, Eagan and Apple Valley and with the Metropolitan Council. All cities affected have stated that this project is consistent with their comprehensive plans and the project is consistent with the Metropolitan Council's Development Guide which lists the proposed highway as an intermediate arterial. Also the project area is totally within the Metropolitan Urban Service Area.[1]

C As you suggest, energy consumption in residential areas is determined primarily by heating and cooling, but auto usage is important also. Heating and air conditioning requirements are related primarily to the type of dwelling unit. For example, denser developments have lower demands than single family units. Transportation demands are affected by the degree of clustering and community planing and by density.

The development plans for the project area, which for the most part are already determined, do include substantial areas of single-family dwellings as well. It is true that energy requirements will be greater for this more diverse development than they would be for an area developed totally within high density dwellings. We recognize this and the relationship of our proposed action to the current energy situation.

Our responsibility, however, is to provide safe, efficient highways to serve the needs arising from existing and planned development. In our judgement, the success of the community plans are, by and large, dependent upon the implementation of proposed improvements such as T.H. 36.

One important consideration is that, although a part of the residential development proposed for the project area might promote longer trip lengths, major improvements in fuel economy have resulted from the construction of new highways similar to this proposal. The Interstate system, for example, will result in a 20% fuel savings compared to at-grade arterials, on a per mile basis. Also, research studies show that each 1% shift from at-grade arterials to new freeways results in a national highway fuel savings of 0.1%.[2]

D Certain herbicides are used in selected areas of highway right of way. The usage of these herbicides has been reviewed at the State and National level for conformance to legal requirements and regulations. All agents that are used in Minnesota are detoxified chemically. (See pages 119 and 120 for additional information.)

E Congestion during morning and afternoon rush hours along existing TH 36 increases the commuting time for motorist by about ½ to 1 hour daily. Most of the delay occurs in the vicinity of the Minnesota River Bridge, where the level of service[4] is F, the average operating speeds often falling lower than 10 mph during the rush hours.[5] This level of service (slow movement and constant stop-and-go with long periods of idling) is devastating to fuel economy.

[1]Areas which the Metropolitan Council has designated to receive sewer, water, gas, and other improvements necsesary to accommodate urban development.

[2]Robert Husted, "Mass Transit Impact on Energy Consumption," S.A.E. Special Report 383, July 1973.

By comparison, the Minnesota River Bridge under Alternate C will have a B level of service during rush hours. This level of service will permit traffic to move across the bridge at a constant flow, with operating speeds of 45 to 55 mph.[6] (Projected traffic volumes which traffic analysts use to calculate this level of service allowed for the study area's anticipated growth.)

[4]The quality of traffic service, scaled from A to F, with F being the worst possible condition. This means that traffic flow breaks down to a stop and start situation.

[5]"Transportation Planning Report, Trunk Highway 36," Resource Unit, MHD, District 9, August 1974, p. 20.

[6]Planning Report, p. 16.

MINNESOTA HISTORICAL SOCIETY

Fort Snelling Branch (Building 25), Fort Snelling, St. Paul, Minnesota 55111 • 612-726-1171

October 29, 1974

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

Subject: 330, FHWA-Mn-EIS-74-04-D, Draft Environmental Statement for T.H. 36 (Cedar Avenue) in Dakota and Hennepin Counties, Minnesota Projects M5405 ( ) and M5409 ( ), State Projects 1925 and 2758, from Interstate 35E in Eagan to Interstate 494 in Bloomington

Dear Mr. Kachelmyer:

The draft environmental statement for the above referenced project has been reviewed by staff from the Historic Sites and Archaeology sections of the Minnesota Historical Society and has been found to be totally acceptable. The significant cultural sites are identified properly in figure 34 (p. 58) and the recommendations are presented correctly on page 59.

Sincerely,

Russell W. Fridley

Russell W. Fridley
State Historic Preservation Officer

RWF:lt

Part B Public Hearing Comments and Questions

The following additional substantive environmental comments or questions were received during the December, 1974 public hearing. The page number following each comment or question is the page in the hearing transcript on which the comment or question appears.

Question: Why take out a natural wooded area to put in a noise barrier? (p 44)

Answer: While the design plans for noise attenuation mounding and/or walls have not been totally formulated, it is likely that certain selected trees will need to be removed for attenuation construction. Trees and other vegetation do not provide a significant noise level reduction. Therefore, special attenuation must be provided to achieve acceptable levels. If, in a given area, a majority of the people who would be affected by highway noise would rather not have attenuation, it can be omitted from the construction plans.

Question: Is the roadbed high enough to prevent flooding? (p 47)

Answer: Yes, the lowest point proposed for the highway in the river valley area will be well above the 100 year flood protection elevations.

Question: Why is the interchange at 90th? Why not on 86th or 83rd St.? (p 72)

Answer: An interchange is planned at Old Shakopee Road which is also Hennepin County Road 1. This road has continuity through all of Bloomington and is scheduled for other improvements by the County Highway Department. All of these improvements are consistent with Bloomington's "Eastern Area Comprehensive Plan". Other studies are under way for possibly building another interchange at or near 86th Street to provide additional local access.

Question: In the Environmental Impact Statement it was stated that a freeway could result in a 30% devaluation of property close to the freeway. What compensation do we homeowners receive whose property is within 100 feet of the freeway? (p 72)

Answer: No monetary compensation is possible under present State and Federal Laws and Regulations.