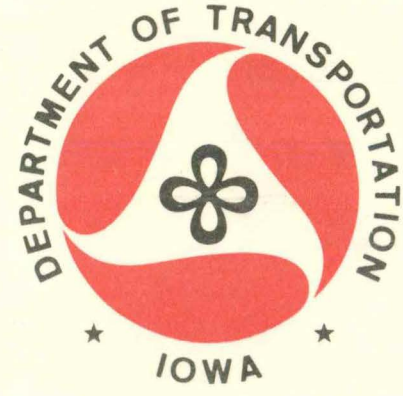
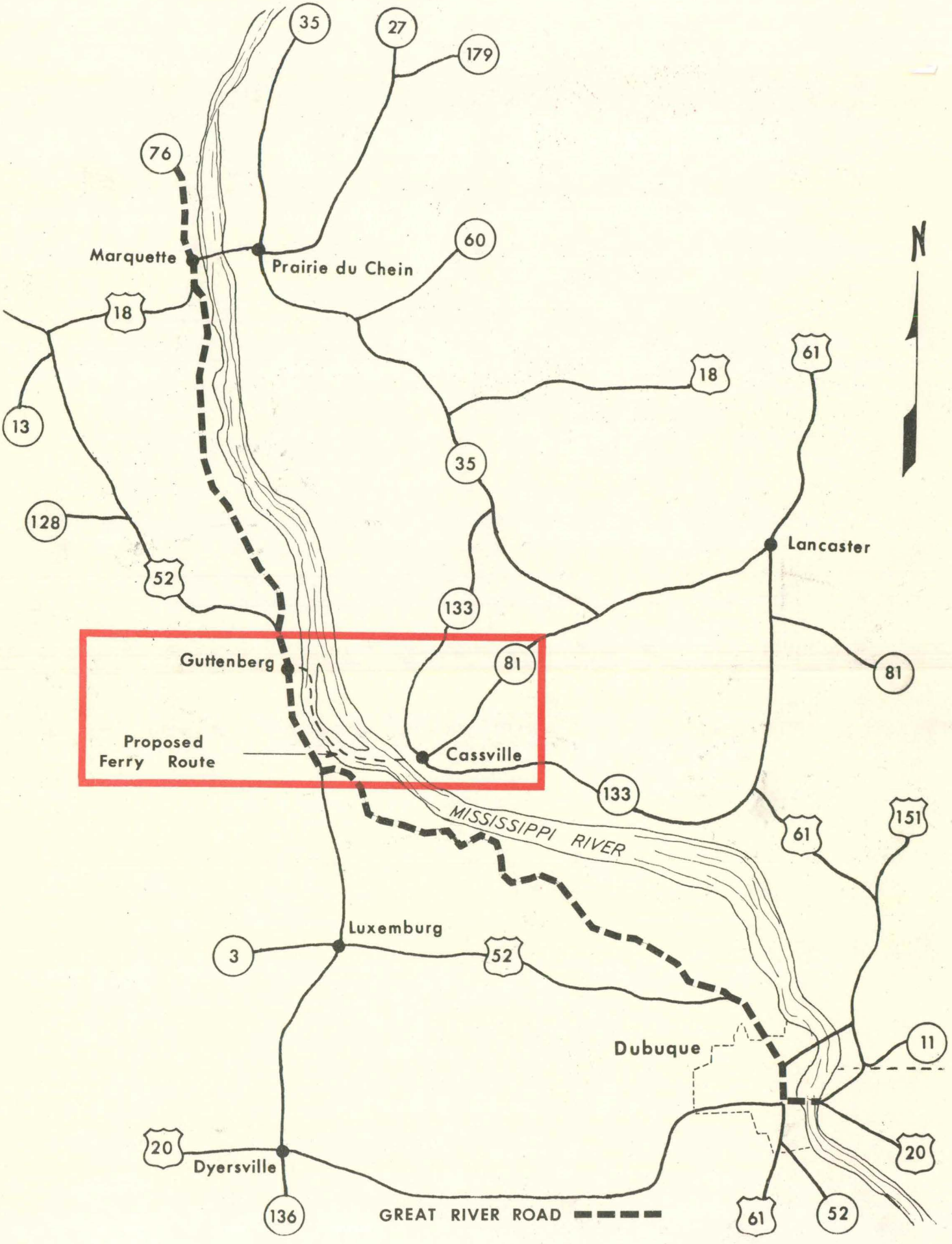
GUTTENBERG TO CASSVILLE FERRY SERVICE

A FEASIBILITY STUDY

JUNE 1977

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Introduction

Over a period of several decades the matter of a Mississippi River crossing facility in the Cassville, Wisconsin-Guttenberg, Iowa area has been proposed. Early emphasis was directed toward construction of a bridge. The most recent analysis was made in 1968 in conjunction with the Iowa Toll Bridge Act. The conclusion of that study was that there was inadequate potential cross-river traffic at this location, present and projected, to warrant such an expenditure.

More recently the possibility of ferry service has been studied. In 1974 the Wisconsin D.O.T. prepared an analysis of such a proposal to which the Iowa D.O.T. contributed traffic and construction estimate data. A copy of that report is included in the appendix of this report.

That study proposed a direct cross-river movement to a point near the Turkey River mouth and would have required construction of a 2-mile Iowa side spur plus dockage facilities. The estimated usage was 200 vehicles per day.

This proposal differs in that the Iowa terminal would be at Guttenberg, eight miles upstream from Cassville. While this would eliminate the need for any additional Iowa road construction, the trip length and terminal location would affect the usage characteristics.

This report is an attempt to gather and analyze the information needed to determine the cost and usage factors for such a service.

The basic question of concern to a state transportation agency is whether this is a critical transportation service or a recreation/tourism oriented service.

Summary and Conclusions

Following are conclusions that can be drawn from this feasibility study.

1. The average usage of this service is estimated to be in the range of 50 vehicles per day using two boats and 39 with one boat.
2. Eighty percent of the trips would be recreation/tourism oriented as opposed to transportation oriented.
3. The Iowa Constitution, 18th Amendment, precludes usage of state road user taxes for this purpose.
4. Federal highway funds can be used to buy equipment for a ferry service under specific conditions, one of which is that the service must be publicly owned and operated with operating authority under control of the state.
5. Energy savings through this service would be minor at best because of alternate routings available to most potential users and the small number with origin and destination near Guttenberg and Cassville.

In response to the basic question, the analysis of origin and destination data and trip purpose shows that the ferry service proposed would predominantly be used for recreation and tourism interest. This would be an attractive facility for that kind of interest.

The daily cost of the service is estimated to be $675 for a two-boat operation and $529 for a one-boat operation with standby equipment. At 50 vehicles per day average, the Iowa estimated usage range, the cost per trip would be from $10.50 to $13.50 depending on the scope of the operation. If higher usage were experienced, the cost per trip would reduce to $5.29 to $6.75 at 100 trips.

The expenditure of Federal Great River Road funds or other federal highway aids would require public ownership and operation of the service under state control and is not available for operating cost subsidy.

Participation with Iowa state funds could be done only from general fund sources authorized and appropriated for that purpose.

Since the predominant usage of such a service would be recreation and tourism, it is recommended that the Iowa Development Commission be encouraged to become the lead agency in requesting authority and funding from the Legislature and that the Department of Transportation, Conservation Commission, and Mississippi River Parkway Commission support the program.

It is further recommended that the Wisconsin Department of Transportation and others be encouraged to continue to explore and develop the proposed service and that the general support of the Iowa Department of Transportation be made available as requested.

Guttenberg/Cassville Ferry Proposal

Feasibility Factors

BASIC INFORMATION ABOUT THE PROPOSAL

1.	River Distance Between the Two Cities	8 miles
2.	Travel Time	1.5 hours
3.	Operating Season	April 15 - Nov. 15 (213 days)
4.	Number of Transport Units	2 or 1 with standby unit
5.	Minimum Crew	2 Members (Including Licenced Operator)

Alternate No. 1 - Two-Boat Operation

ESTIMATED ANNUAL OPERATING COSTS

(Assume 16 hours per day)

Operator	16 x $7.00 = $112 x 2 = $224 $224 x 213 days =	$ 47,712.00
Deckhand	16 @ $3.00 = $ 48 x 2 = $ 96 $ 96 x 213 days =	20,448.00
Fuel	213 x $100/day =	21,300.00
Insurance	($5 M. coverage Figure from Ray Eckstein)	32,500.00
	Sub-Total	$121,960.00
Repairs & Contingency		5,000.00
	Probable Minimum Cost	$126,960.00
	Probable Range $125,000 to $135,000	

ESTIMATED ANNUAL ACQUISITION COST

It is assumed that two units can be purchased either for 15 vehicle capacity ($100,000) or 12 vehicle capacity ($60,000). These costs assume the units would be modified as necessary to meet Coast Guard and other

requirements and delivered to Cassville. For this analysis the smaller, lower cost units will be assumed, and without reduction in usage (load factors would increase).

$60,000 amortized over ten years at an interest rate of 7% would approximate $9,000 per year.

Therefore the probable range of annual costs to own and operate the service would be $134,000 to $144,000.

USAGE

Iowa Estimate (Total Season Trips)

213 days at 50 per day = 10,650 trips

(See Appendix)

Wisconsin Estimate

213 days at 198 per day = 42,174 trips

(See Appendix)

THUS THE RANGE OF FARES CAN BE COMPUTED AS FOLLOWS:

	Low Range Cost	High Range Cost
Low Range Use	$\frac{134,000}{10,650} = \$12.58$	$\frac{144,000}{10,650} = \$13.50$
High Range Use	$\frac{134,000}{42,174} = \$\ 3.18$	$\frac{144,000}{42,174} = \$\ 3.41$

Expressed as average daily costs the range of values would be:

$$\frac{134,000}{213} = \$630 \qquad \frac{144,000}{213} = \$675$$

Alternate No. 2 - One-Boat Operation

An alternative to the initial proposal of using two boats has been advanced. This would involve using one 12-vehicle ferry. The service span, 16 hours for a 213-day season, would remain the same. Other features would include:

1. The service would be non-governmental (which precludes use of federal highway funds).
2. A second boat would be available as a standby.
3. Federal C.E.T.A. funds (Comprehensive Employment and Training Act of 1973) would be used to pay the cost of deckhands. This is a federal job training program.

The usage/fare relationship for this service concept are calculated as follows:

Item	Actual Cost
Crew: Pilots (2)	$29,000
Deckhands (2)	19,000
Fringe Benefits	5,800
Insurance	16,200
Fuel	9,000
Maintenance & Repair	14,000
Depreciation (5-Year)	6,000
Standby Boat ($50/day)	10,600
Administrative Costs	25,000
	$134,600
Less Cost of Deck Hands (including fringe benefits)	22,000
Estimated Annual Cost	$112,600

$\frac{\$112,600}{213}$ = $529 per day

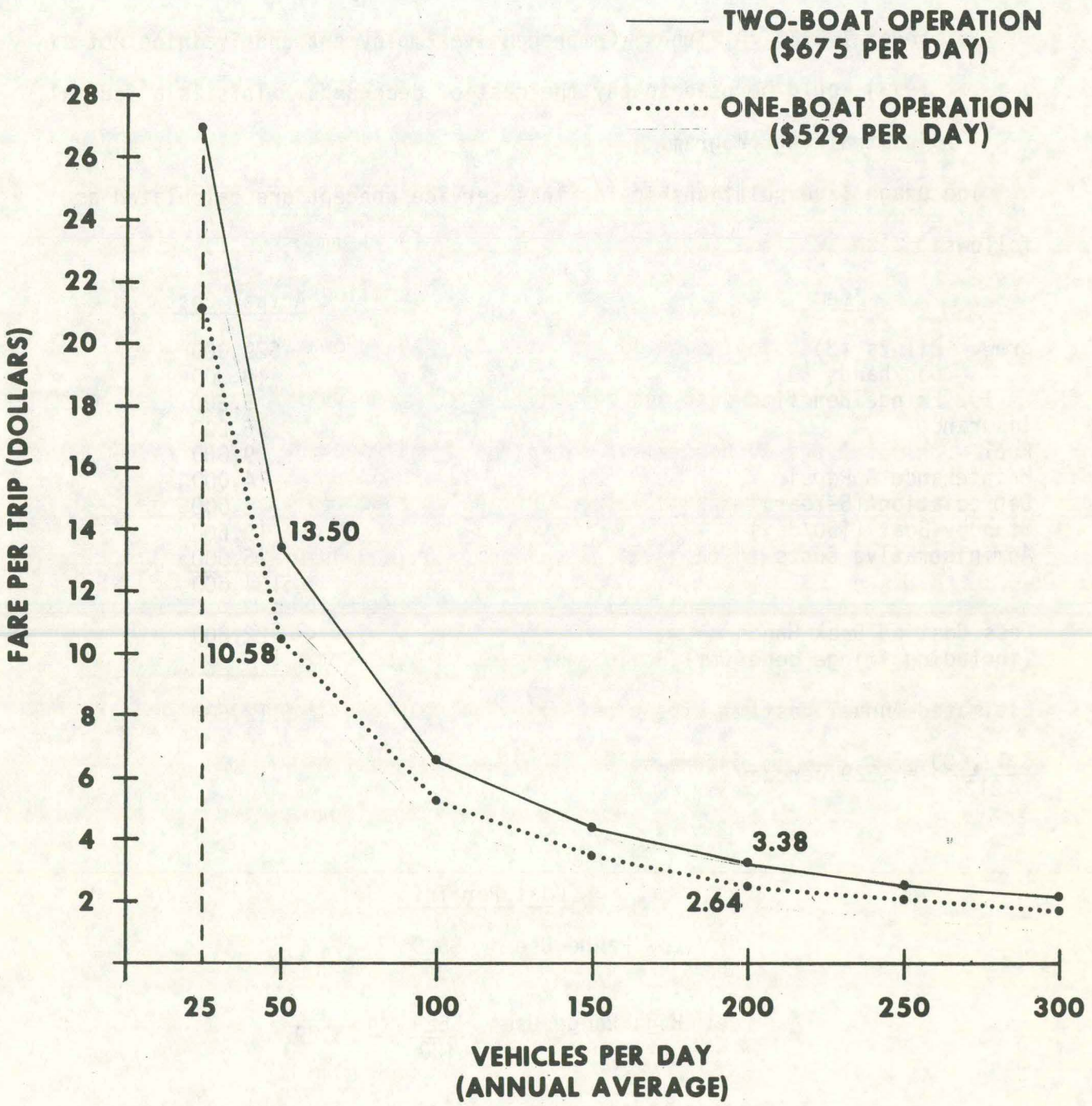
Cost Per Trip

Low Range Use $\frac{\$529}{39}$ = $13.56

High Range Use* $\frac{\$529}{100}$ = $5.29

* Absolute capacity would be 11 trips/day at 12 vehicles per trip = 132. Practical capacity would be less depending on operational factors.

USAGE/FARE RELATIONSHIP



Using the high range cost the toll would vary as shown above. Particularly noteworthy is the high sensitivity of tolls to usage in the lower volume ranges.

ENERGY ANALYSIS

The potential energy savings in motor fuel consumption by reducing the trip distance and driving time is an important consideration in evaluating the feasibility of a proposed ferry operation.

As previous sections of this report on traffic volumes have indicated, the major potential users of the proposed ferry operations would be trips with a social-recreational or vacation trip purpose. However, only trips with both origins and/or destinations in the immediate Cassville-Guttenberg area would realize a savings in driving time and distance using the proposed toll ferry operation. Trips from other areas may actually spend more time and use more fuel driving out of their way to utilize the proposed ferry.

From our available trip data, it has been estimated that approximately 11 trips daily (1976 volumes) would originate and/or terminate in the immediate vicinity. These 11 trips would drive approximately 67 miles via existing roads and bridges. Based on a consumption rate of 13.5 mpg. (Source: "The Fuel Consumption of Automobiles", Scientific American, January, 1975), the 11 trips would consume approximately 11,600 gal. of fuel during the April 15 to November 15 period using existing highways and river crossings.

Based on data obtained from the River Division of the Iowa Department of Transportation, the fuel consumption rate for a ferry operation of this size would be approximately 8-12 gal./hr. Using the capacity of 15 vehicles per boat, one round way trip would accommodate the 11 vehicles from the Cassville-Guttenberg area. This would be three hours of operation each day. For the April 15 to November 15 period, the hours of operation would be 213 (3) or 639 hours. The fuel consumption would range from a low of (639)(8) = 5,112 gal. to a high of (639)(12) or 7,668 gal. If we assumed that on the

average approximately 6,000 gal. of fuel was consumed to accommodate the 11 vehicles per day during the season, there would be a potential savings of 11,600-6,000 or 5,600 gallons.

However, this does not represent the total picture of energy costs involved in the ferry operation. The entire toll ferry operation needs to be considered. If we assume that two ferries operate continually for 16 hrs./day, the total fuel consumption for the 213-day period would range from (16)(213)(8)(2) = 54,528 gal. (low) to (16)(213)(12)(2) = 81,792 gal. (high), or an average of 68,000 gallons.

Of the total 50 vehicles/day estimated to be potential users of the proposed toll ferry operation, only 11 vehicles per day would realize a fuel savings by using the proposed ferry operation as opposed to the existing network of highways. This savings of 5,600 gals. per season does not make the toll ferry operation energy efficient. In order to make the toll ferry operation break even in terms of fuel consumption, there would have to be an estimated $\frac{(68,000)}{11,600}$ (11) = 64.48, or approximately 65 vehicles per day between Cassville and Guttenberg. Based on our existing origin and destination data, it is doubtful if this many more trips could be generated between those two communities by the proposed toll ferry operation.

Sec. 301. Freedom from tolls.

Except as provided in section 129 of this title with respect to certain toll bridges and toll tunnels, all highways constructed under the provisions of this title shall be free from tolls of all kinds.

Sec. 129. Toll Roads, Bridges, Tunnels, and Ferries.[120]

(g)* Notwithstanding section 301 of this title, the Secretary may permit Federal participation under this title in the construction of ferry boats, whether toll or free, subject to the following conditions:

(1) It is not feasible to build a bridge, tunnel, combination thereof, or other normal highway structure in lieu of the use of such ferry.

(2) The operation of the ferry shall be on a route which has been approved under section 103 (b) or (c) of this title as a part of one of the Federal-aid systems within the State and has not been designated as a route on the Interstate System.

(3) Such ferry shall be publicly owned and operated.

(4) The operating authority and the amount of fares charged for passage on such ferry shall be under the control of the State, and all revenues derived therefrom shall be applied to actual and necessary costs of operation, maintenance, and repair.

(5) Such ferry may be operated only within the State (including the islands which comprise the State of Hawaii and the islands which comprise the Commonwealth of Puerto Rico) or between adjoining States. Except with respect to operations between the islands which comprise the State of Hawaii and operations between the islands which comprise the Commonwealth of Puerto Rico and operations between any two points in Alaska and between Alaska and Washington, including stops at appropriate points in the Dominion of Canada, no part of such ferry operation shall be in any foreign or international waters.[126]

(6) No such ferry shall be sold, leased, or otherwise disposed of without the approval of the Secretary. The Federal share of any proceeds from such a disposition shall be credited to the unprogrammed balance of Federal-aid highway funds of the same class last apportioned to such State. Any amount so credited shall be in addition to all other funds then apportioned to such State and available for expenditure in accordance with the provisions of this title.[127]

CONSTITUTION OF THE STATE OF IOWA—AMENDMENTS

[18] AMENDMENT OF 1942

That Article Seven (VII) of the Constitution of the State of Iowa be amended by adding thereto, as Section eight (8) thereof, the fol lowing:

Motor vehicle fees and fuel taxes. [SEC. 8.] All motor vehicle registration fees and all licenses and excise taxes on motor vehicle fuel, except cost of administration, shall be used exclusively for the construction, maintenance and supervision of the public highways exclusively within the state or for the payment of bonds issued or to be issued for the construction of such public highways and the payment of interest on such bonds.

U. S. Coast Guard

The Coast Guard is the agency governing the navigational aspects of the Mississippi. This includes the licensing of operators of vessels as well as certifying the condition of the equipment and safety features. The vessels in use must be inspected and certified every five years.

U.S. Corps of Engineer Requirements

If the project will involve the construction of a fill below the high water of the river, a permit will be required under the provisions of the Federal Water Pollution Control Act (PL92-500), Section 404. Excerpts from a Department of the Army publication relating to permits is included in the Appendix.

U.S. Environmental Protection Agency

This agency will be concerned with the potential discharge of pollutants and must be consulted. Specific involvement will depend on the specific service and equipment involved. A letter is included in the Appendix.

State Agencies (Iowa)

Agencies in Iowa that must be consulted are the Natural Resources Council, the Department of Environmental Quality and the Conservation Commission. Addresses are as follows:

Iowa Natural Resources Council
State Capitol
Grimes Office Building
Des Moines, IA 50319 281-5914

Iowa Department of Environmental Quality
3920 Delaware
Des Moines, IA 50313 265-8134

Iowa Conservation Commission
Valley Bank Building
Des Moines, IA 50309 281-5145

APPENDIX

Potential Traffic Volumes
Proposed Toll Ferry Operation
Cassville, Wisconsin - Guttenburg, Iowa

An estimate of potential traffic volumes has been prepared for the proposed toll ferry operation on the Mississippi River between Guttenburg, Iowa and Cassville, Wisconsin. This estimate is based on trip data available from 1972 origin and destination studies conducted on the US 18 bridge at Marquette; US 20 Bridge, Dubuque; and the Eagle Point Bridge, Dubuque. Using current traffic volumes the 1972 trip data was updated to a 1976 average annual daily traffic volume. Figure 1 illustrates the 1976 average annual daily traffic volumes on primary highways in the Cassville, Wisconsin - Guttenburg, Iowa area. Figure 2 illustrates the 1976 average annual daily traffic volumes at the three bridge crossings by vehicle type and trip purpose.

Of the total trips crossing the Mississippi River, 92% are by passenger car and pickup; 8% are by trucks. 29% of the total trips had a trip purpose of vacation-social-recreation; 36% were work related trips; and 35% were in other categories, including shopping, medical, school, etc.

The following table represents the distance and average driving times between various Iowa cities and Cassville, Wisconsin.

From	To	Approx. Distance Miles	Approx. Driving Time Minutes
Dubuque, Iowa	- Cassville, Wis.	40	60 min.
Guttenburg, Iowa	- Cassville, Wis.	67	98 min.
Elkader, Iowa	- Cassville, Wis.	59	89 min.
Marquette, Iowa	- Cassville, Wis.	35	53 min.

As you can see from the table the longest driving time experienced is between Cassville, Wisconsin and Guttenburg, Iowa. It is between these two cities that the proposed toll ferry would operate. According to data from the Wisconsin Department of Transportation, the average time for a one-way trip via the proposed ferry would be 90 minutes. Table 1 provides some significant data regarding the proposed Cassville-Guttenburg ferry operation.

TABLE 1
Significant Data - Proposed Cassville Ferry

Period of Operation:	April 15 to Nov. 15 - 213 days
Hours of Operation:	16 hours daily
Number of Ferries Operating:	2
Length of One-Way:	1.5 hours
Number of Trips per Ferry per Day:	11 trips
Total Trips Daily:	22 trips
Capacity of Ferry:	15 vehicles (passenger cars)
Total Maximum Daily Capacity 15 X 2 X 11	330 vehicles per day

Using a 60% load factor, a total daily practical capacity is (330)(0.60) = 198 vehicles per day during the operating season.

Considering the 90 minute crossing time and the intermittent period of operation, the major trips that can be considered potential users of the proposed ferry are the social-recreational or vacation trips. Between the cities of Cassville and Guttenburg there would be a limited number of other purpose trips that could be considered potential users.

Using the 1972 origin and destination data from the three bridges, 1976 traffic volumes, considering the travel time, out-of-distance travel involved,

and that the social-recreation-vacation trips are the major potential users of the proposed ferry, it is estimated that approximately 50 trips would utilize the proposed ferry for an average day during the period of operation.

Figure 3 illustrates the origin and destination of these potential trips. As can be seen from the figure approximately 22% of the trips have both trip termini in Grant County, Wisconsin or Clayton County, Iowa.

Figure 4 illustrates the trip purpose of the potential trips. As the data indicates approximately 80% of the trips are social-recreation-vacation trips with the remainder work or other.

Table 2 shows the distribution of potential traffic by day of week and month of year for the period of operation. As the data indicates the heaviest use occurs on weekends and during the months of June, July, August, and October. This is indicative of the social-recreation and vacation trips.

TABLE 2

DAILY TRIP DISTRIBUTION DURING MONTHS OF OPERATION

POTENTIAL 1976 TRAFFIC VOLUME

GUTTENBERG-CASSVILLE FERRY

Month	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Average Day
April	59	39	39	43	41	50	58	47
May	90	49	42	43	46	57	72	57
June	102	50	49	52	50	63	82	64
July	94	62	48	52	52	65	82	65
August	100	52	49	52	51	67	77	64
*September	86	56	44	45	44	56	75	58
*October	96	41	36	41	43	52	69	54
November	53	34	34	38	40	46	49	42
Annual	74	42	39	41	41	51	62	50

Distribution based upon 1976 Sabula Toll Bridge Data

*With fall leaf season, weekend volumes for approximately 2-3 weeks during September and October would exceed those shown in the above table.

TABLE 2A

DAILY TRIP DISTRIBUTION DURING MONTHS OF OPERATION

POTENTIAL 1976 TRAFFIC VOLUME

GUTTENBERG-CASSVILLE FERRY

FOR ONE FERRY BOAT - 12 VEHICLE CAPACITY

Month	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Average Day
April	45	30	30	33	31	38	45	36
May	69	38	32	33	36	44	56	44
June	78	38	38	40	38	48	63	49
July	72	48	37	40	40	50	63	50
August	77	40	37	40	39	51	59	49
*September	67	43	34	35	34	44	58	45
*October	74	32	28	32	34	40	54	42
November	41	26	26	29	30	35	37	32
Annual	57	33	31	32	32	40	48	39

Distribution based upon 1976 Sabula Toll Bridge Data

*With fall leaf season, weekend volumes for approximately 2-3 weeks during September and October would exceed those shown in the above table.

Significant Data

Period of Operation:	April 15 to Nov. 15 - 213 days
Hours of Operation:	16 Hours Daily
Number of Ferries Operating:	1
Length of One-Way:	1.5 Hours
Number of Trips Per Day:	11 Trips
Total Trips Daily:	11 Trips
Capacity of Ferry:	12 Vehicles (Passenger Cars)
Total Maximum Daily Capacity: 12 x 1 x 11	132 Vehicles Per Day
Total Daily Practical Capacity: 60% Load Factor (132)(0.60)	79 Vehicles Per Day

Figure 1

1976 Average Annual Daily Traffic

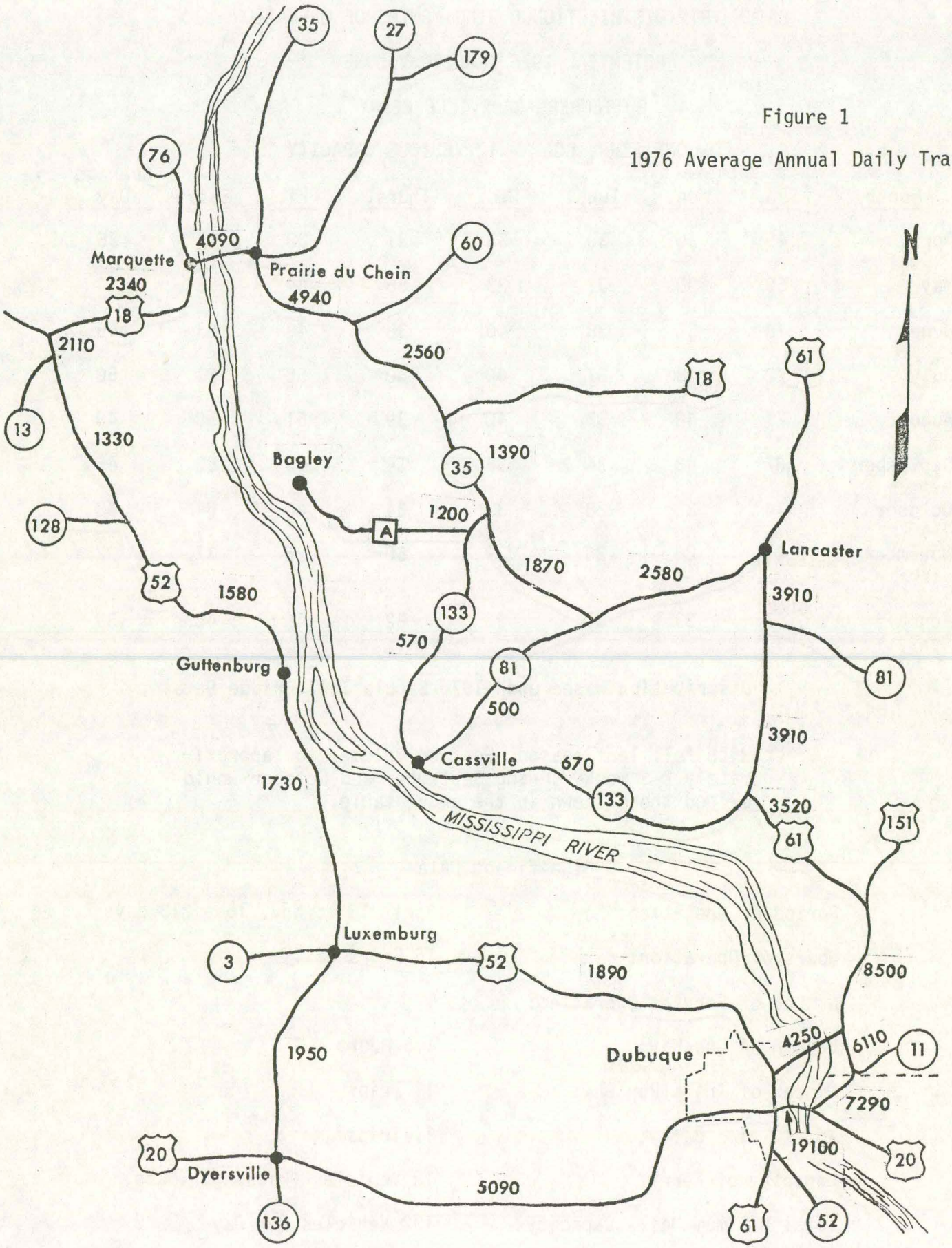


FIGURE 2

1976 AVERAGE ANNUAL DAILY TRAFFIC

ROUTE	VEH. TYPE	WORK	OTHER	VAC. REC.	TOTAL
US18	P.C.PU	665	1459	1704	3828
	TRUCKS	223	20	9	262
	TOTAL	898	1479	1713	4090
EAGLE POINT BRIDGE	P.C.PU	1958	1257	1003	4218
	TRUCKS	28	2	2	32
	TOTAL	1986	1259	1005	4250
US20	P.C.PU	5350	6594	5228	17172
	TRUCKS	1782	98	48	1928
	TOTAL	7132	6692	5276	19100
TOTAL	P.C.PU	7973	9310	7935	25218
	TRUCKS	2043	120	59	2222
	TOTAL	10016	9430	7994	27440

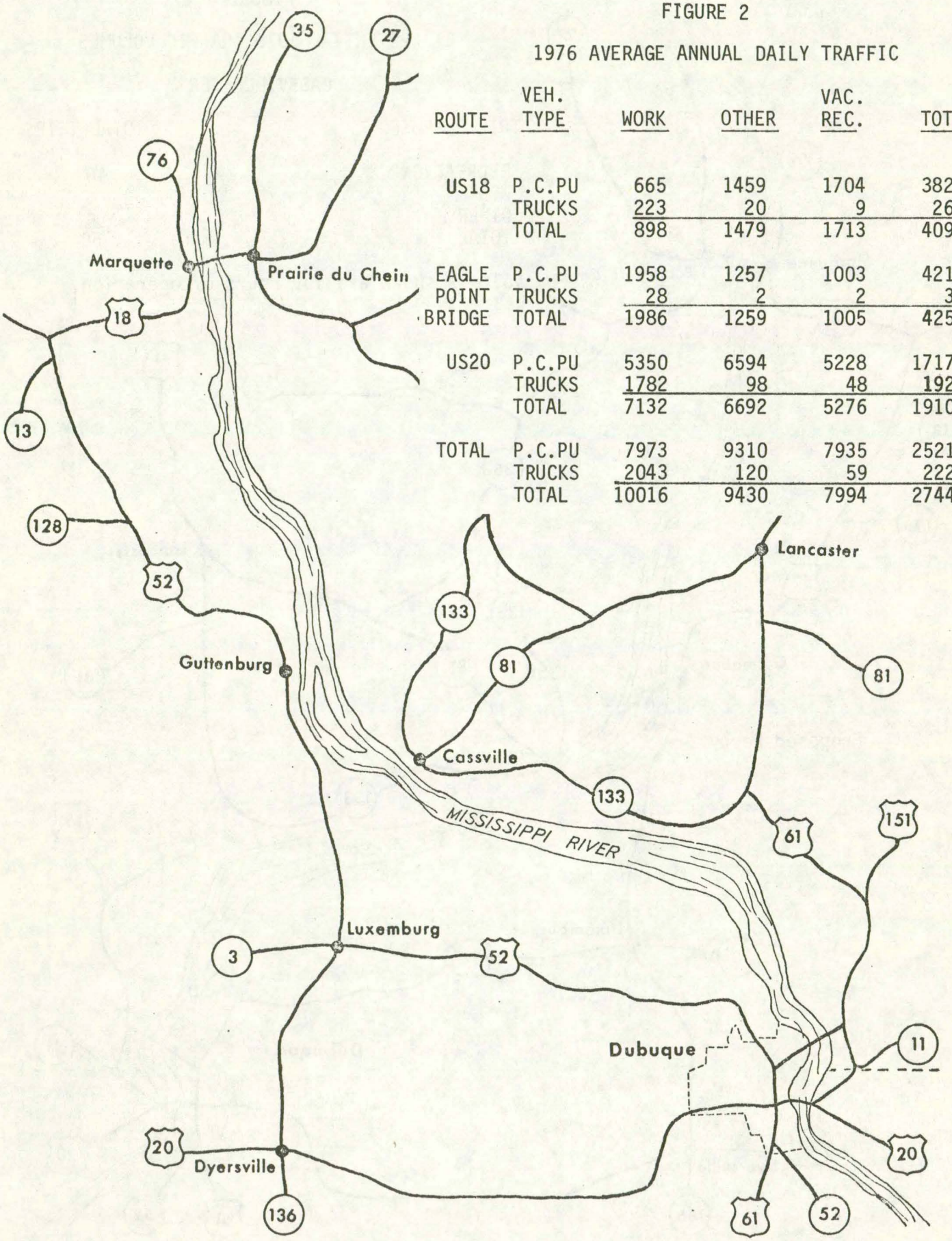


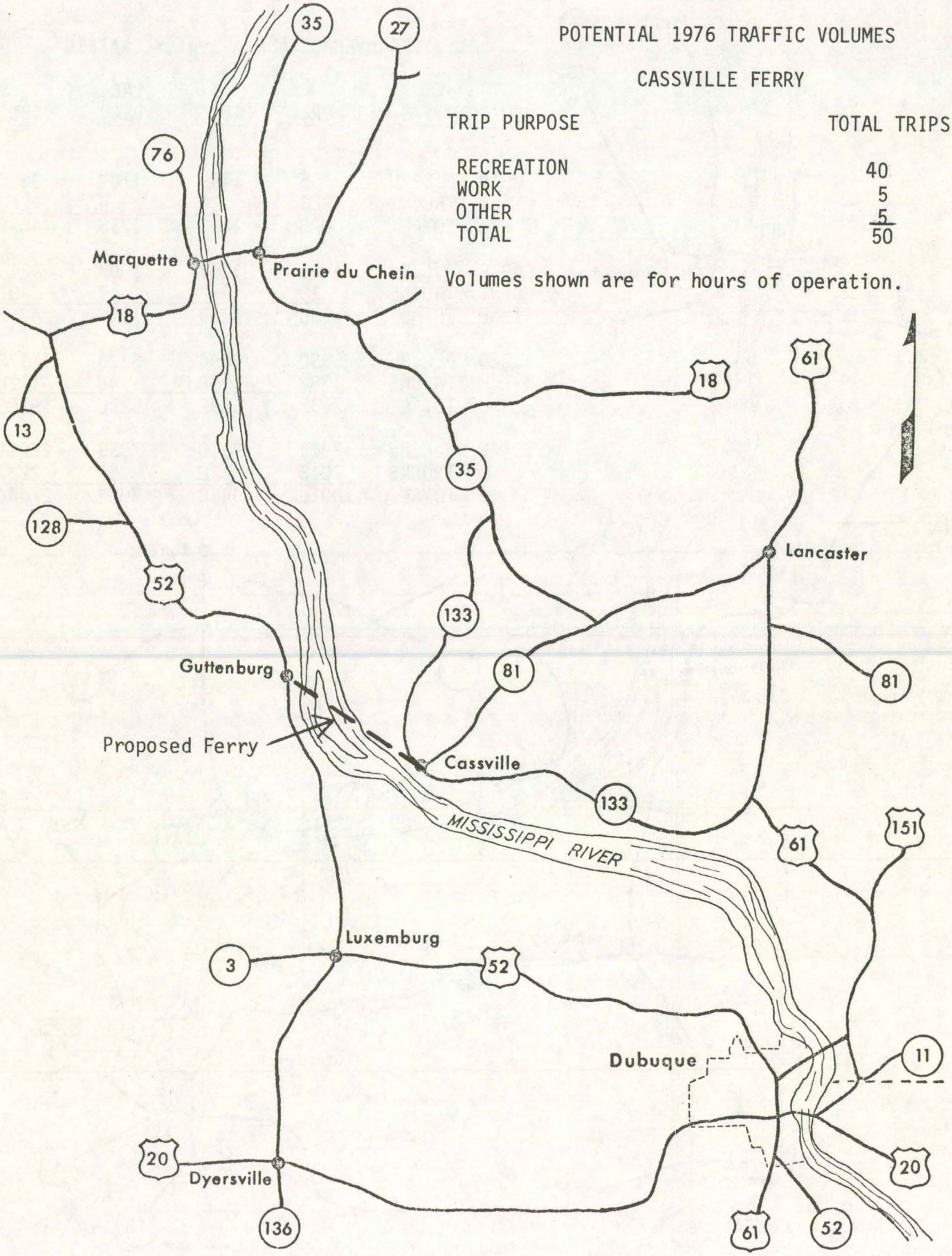
FIGURE 4

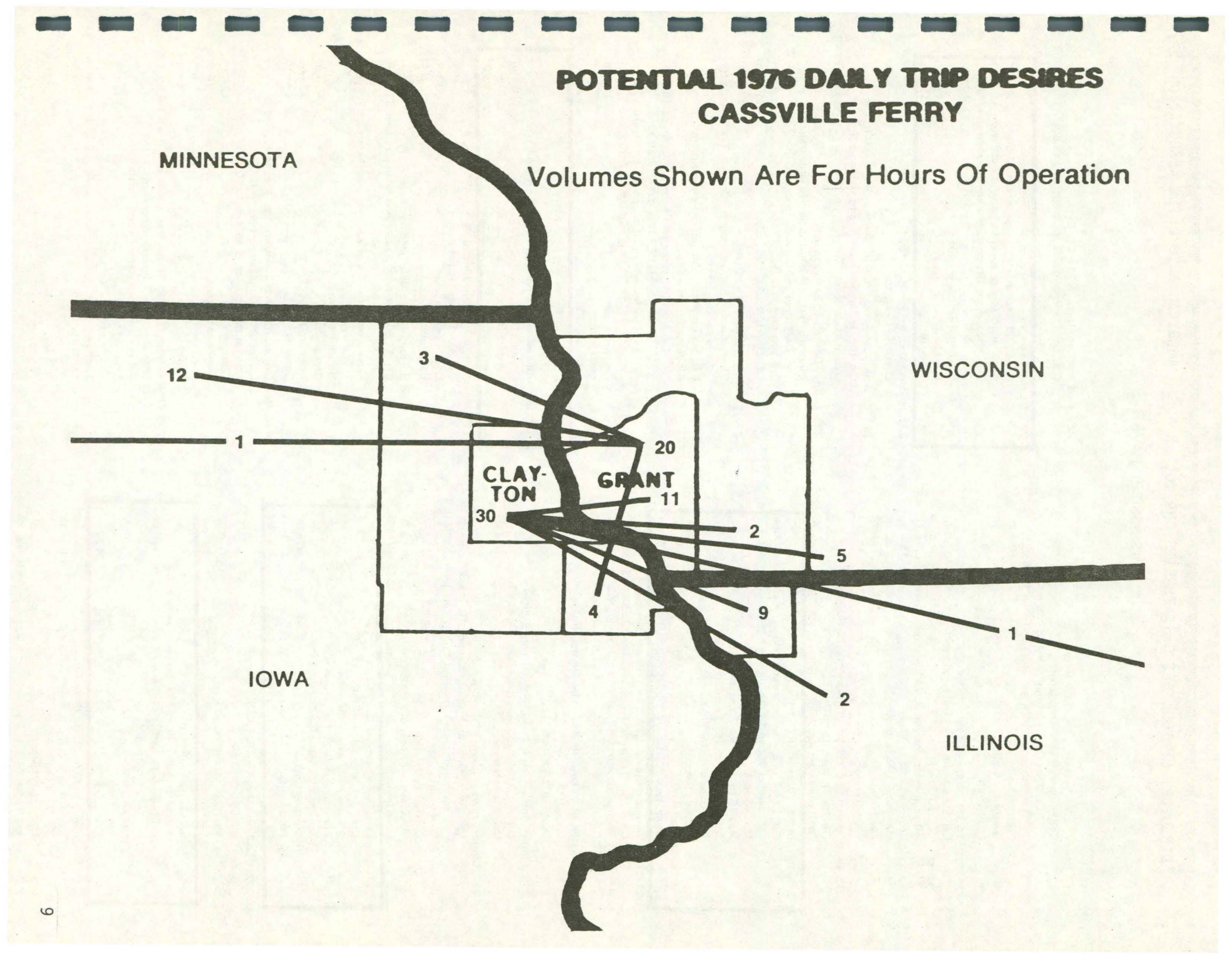
POTENTIAL 1976 TRAFFIC VOLUMES

CASSVILLE FERRY

TRIP PURPOSE	TOTAL TRIPS
RECREATION	40
WORK	5
OTHER	5
TOTAL	50

Volumes shown are for hours of operation.




POTENTIAL 1976 DAILY TRIP DESIRES
CASSVILLE FERRY
Volumes Shown Are For Hours Of Operation
MINNESOTA
WISCONSIN
IOWA
ILLINOIS
CLAY-
TON
GRANT
12
3
1
20
11
30
2
5
4
9
1
2

MISSISSIPPI RIVER

213. Belle Chasse–Scarsdale, La.: Free ferry.
Continuous all-year daily service.
Lv. Belle Chasse on the hour and half hour.
Lv. Scarsdale a quarter before and after the hour.
Crossing time: .....10 min.
Overhead clearance: ..... 21 ft.
Load limit: .....7 tons

214. Brasher, Mo.–Heloise, Tenn.: Ferry.
Not in Operation
Car $2.50 one way. Trailer and pickup-camper $2.50 to $3.50.
All-year service on signal, 24 hours daily, river permitting.
Crossing time: .....15 min.
Maximum vehicle length: ..... 35 ft.
Load limit: .....34 tons
Capacity: ..... 15 cars

215. Burlington, Iowa–US 34, Ill.: MacArthur Bridge.
Car 25c. Trailer 10c to 75c.
Overhead clearance: .....14½ ft

216. Canton, Mo.–Meyer, Ill.: Ferry.
Car $1.50 one way, $2 round trip. Trailer and pickup-camper 75c to $1.50 one way.
Mar. 15 to May 15: 7 a.m. to 7 p.m.
May 15 to Sept. 15: 7 a.m. to 8 p.m.
Sept. 15 to Dec. 15: 7 a.m. to 6 p.m.
Dec. 15 to Mar. 15: No service.
Crossing time: .....5 to 7 min.
Load limit: .....30 tons
Capacity: ..... 6 cars

217. Caruthersville, Mo.–SR 79, Tenn.: Powell Ferry.
Not in Operation
Car $2.50. Trailer and pickup-camper $2.50 to $3.50.
All-year service on signal, 24 hours daily, river permitting.
Capacity: ..... 15 cars

218. Chester, Ill.–Claryville, Mo.: The Chester Bridge.
Car 60c.
Overhead clearance: ..... 25 ft.

219. Clinton, Iowa–East Clinton, Ill.: Gateway Bridge.
Car 20c. Trailer and pickup camper 10c to 50c.
Overhead clearance: ..... 14 ft.

220. Clinton, Iowa–Fulton, Ill.: Lyons & Fulton Bridge.
Car 20c. Trailer and pickup-camper 10c to 30c. Bridge restricted to automobiles except cars pulling small trailers.
Overhead clearance: .....14 ft
Maximum vehicle width: ..... 7 ft.
Load limit: .....10 tons

221. Columbus, Ky.–Belmont, Mo.: Ferry.
Car $2. Trailer $3.50 to $4.
All-year daily service on signal.
Apr. through Dec.: 6 a.m. to 8 p.m.
Jan. through Mar.: 6 a.m. to 6 p.m.
Crossing time: .....6 min.
Load limit: .....60 tons
Capacity: ..... 6 cars

222. Donaldsonville–Union, La.: Sunshine Bridge.
Car 60c.
Overhead clearance: ..... 15 ft. 9 in.
Load limit: .....36 tons

223. Dorena, Mo.–Hickman, Ky.: Ferry.
Car $2. Pickup-camper $2.50. Trailer $5 to $20.
All-year daily service on signal, 7 a.m. to 7 p.m., weather permitting.
Crossing time: .....10 min.
Load limit: .....60 tons
Capacity: ..... 12 cars

224. Dubuque, Iowa–Wis.: Eagle Point Bridge.
Car and driver 25c one way; passengers 10c. No trailers. One way rates only.
Overhead clearance: ..... 15 ft.
Load limit: ..... 4 tons gross

225. Fort Madison, Iowa–Niota, Ill.: Bridge.
Car 25c. Trailer and pickup-camper 25c to 50c.
Overhead clearance: ..... 16 ft.

226. Golden Eagle, Ill.–St. Charles, Mo.: Ferry.
Car $1.50. Trailer and pickup-camper $1.50 to $5.
Continuous service except Jan. and Feb. when ice interferes. Night service during summer months only.
Crossing time: .....10 min.
Maximum vehicle length: ..... 46 ft.
Load limit: .....75 tons
Capacity: .....15 cars

227. Helena, Ark.: Bridge. Vehicle $1.
Overhead clearance: ..... 16 ft.

228. Keokuk, Iowa–Hamilton, Ill.: Keokuk Municipal Bridge.
Car 10c. Trailer and pickup-camper 10c to 35c.
Overhead clearance: .....14½ ft.

229. Luling–Destrehan, La.: Free ferry.
All-year service, 24 hours daily. No large trailers.
Lv. Luling and Destrahan every 15 min.
Crossing time: ..... 3 min.
Load limit: .....10 tons

230. Lutcher–Vacherie, La.: Ferry.
Car and driver 50c; passengers 10c each. Trailer and pick-up-camper 50c to $2.
Explosive or flammable bottled gas not permitted.
All-year daily service.
Lv. Vacherie every half hour 5:30 a.m. to 10 p.m., 10:45, 11:15, 11:45 p.m., 12:15 a.m.
Lv. Lutcher every half hour 5:45 a.m. to 10:15 p.m., 11, 11:30 p.m., midnight, 12:30 a.m.
Crossing time: .....15 min.
Load limit: .....20 tons
Capacity: .....32 cars

231. Modoc, Ill.–Ste. Genevieve, Mo.: Ferry.
Car $2. Trailer $5.
All-year daily service on signal, 7 a.m. to 5 p.m.
Crossing time: .....6 min.
Load limit: .....30 tons
Capacity: ..... 8 cars

232. Muscatine, Iowa: Muscatine Bridge.
Car 50c. Trailer 25c per axle.
Overhead clearance: ..... 15 ft.
Load limit: .....8 tons

233. New Boston, Ill.–Oakville Landing, Iowa: Ferry.
Car $1.50 one way. Trailer and pickup-camper $1.50 to $4.
Service on signal 7 a.m. to 7 p.m., weekends and holidays only.
No winter service.
Crossing time: .....15 min.
Load limit: .....22 tons
Capacity: ..... 8 cars

234. New Orleans (Canal St.)–Algiers, La.: Free ferry.
No trailers. Pickup-campers permitted.
All-year daily service, 5:48 a.m. to 10:45 p.m.
Crossing time: .....12 min.
Overhead clearance: ..... 10 ft.
Load limit: .....5 tons
Capacity: .....35 cars

235. New Orleans (Donald St.-Algiers)–Chalmette (Paris Rd.), La.
Free ferry. No trailers. Pickup-campers permitted.
All-year daily service, 5:48 a.m. to 10:45 p.m.
Crossing time: .....12 min.
Overhead clearance: ..... 10 ft.
Load limit: .....5 tons
Capacity: .....30 cars

236. New Orleans (Jackson Ave.)–Gretna, La.: Free ferry. No trailers. Pickup campers permitted.
All-year daily service, 5:30 a.m. to 10:15 p.m.
Crossing time: ..... 12 min.
Overhead clearance: ..... 10 ft.
Load limit: ..... 5 tons
Capacity: ..... 23 cars

237. Plaquemine–Plaquemine Point, La.: Free ferry.
All-year service, 24 hours daily. No trailers.
Lv. Plaquemine every hour and half hour.
Lv. Plaquemine Point every half hour on the quarter hour.
Crossing time: ..... 15 min.
Overhead clearance: ..... 12½ ft.
Capacity: ..... 17 cars

238. Pointe-a-la-Hache–Diamond, La.: Free ferry.
All-year daily service.
Lv. Pointe-a-la-Hache every half hour 8 a.m. to 5 p.m.; hourly 6 a.m. to 8 a.m. and 5 p.m. to 11 p.m.
Lv. Diamond every half hour 8:15 a.m. to 5:10 p.m.; hourly, 6:30, 7:30 a.m., and 5:30 p.m. to 11:30 p.m.
Central Standard Time.
Crossing time: ..... 5 min.
Load limit: ..... 7 tons
Capacity: ..... 35 cars

239. Rock Island, Ill.–Davenport, Iowa: Rock Island Centennial Bridge
Car 10c. Pickup camper 15c. Trailer depending on number of axles
Overhead clearance: ..... 16 ft.

240. St. Francisville–New Roads, La.: Free ferry.
All-year service, 24 hours daily.
Explosive cargo restricted.
Crossing time: ..... 15 min.
Overhead clearance: ..... 13 ft. 6 in.
Capacity: ..... 40 cars

St. Louis, Mo.–No passenger service is available on the Mississippi River from St. Louis. Commercial barges operating from St. Louis do not carry passengers or private automobiles.

241. St. Louis, Mo.–East St. Louis, Illinois: Douglas MacArthur Bridge. From Chouteau Ave. and 7th St., St. Louis, to Piggott St. and 10th St., East St. Louis.
Car 15c. Trailer and pickup-camper 30c to 50c.
Overhead clearance: ..... 15 ft. 6 in.
Load limit: ..... 8 tons per axle

242. St. Louis, Mo.–East St. Louis, Illinois: Eads Bridge. From Washington Ave., St. Louis, to Broadway, East St. Louis.
Car 25c. Car and trailer 40c.
Overhead clearance: ..... 14 ft. 2 in.
Load limit: ..... 30 tons

243. St. Louis, Mo.–East St. Louis, Ill.: Martin Luther King Memorial Bridge. From Collinsville and Illinois Aves., East St. Louis, to 3rd and Franklin Aves., St. Louis.
Car 20c.
Overhead clearance: ..... 15½ ft.

(Continued)

244. St. Louis, Mo.–Venice, Ill.: McKinley Bridge.
Car 30c one way.
Overhead clearance: ..... 14½ ft.

245. Savanna, Ill.–Sabula, Iowa: Savanna–Sabula Bridge.
Car and passengers 45c; pedestrians 10c. House trailer 30c.
Overhead clearance: ..... 14 ft.
Load limit: ..... 20 tons

***246.** Tiptonville, Tenn.–SR 162, Mo.: Tiptonville Ferry.
Car $2. Trailer and pickup-camper 50c to $1.
All-year service on signal, 24 hours daily.
Crossing time: ..... 8 to 12 min.
Load limit: ..... 90 tons
Capacity: ..... 15 cars

August, 1976

TOLL FERRIES

ame	Location	River	Owner and/or Operator	Address
Akers"	Akers (Shannon County)	Current	Owned by National Park Serv. Eugene (Buck) Maggard, Oper.	Akers, Mo. 65467
Gasconade	Route "J" (Osage & Gasconade Counties)	Gasconade	Roland (Whitey) Meyer	Morrison, Mo. 65061
Canton-Meyer"	Meyer, Ill. to Canton, Mo. (Lewis Co.)	Mississippi	Allen Blackmore	707 Donaldson St. Canton, Mo. 63435
Columbus"	Columbus, Ky. to Belmont, Mo. (Mississippi County)	Mississippi	J. L. Ferguson	Columbus, Ky. 42032
Dorena"	Hickman, Ky. to Dorena, Mo. (Mississippi County)	Mississippi	Hugh Lattus	Hickman, Ky. 42050
Golden Eagle"	Golden Eagle, Ill. to St. Charles County, Mo. (St. Charles County)	Mississippi	Calhoun-St. Charles Ferry Co. Fred Pohlman-Operator	Golden Eagle, Ill. 62036
Hamburg" +	Hamburg, Ill. to Rte. P(Pike County)	Mississippi	David Bailey	Box 78, Hamburg, Ill. 62045
Winfield" +	Batchtown, Ill. to Winfield, Mo. (Lincoln County)	Mississippi	Steven and Vincent Baalman	Meppen, Ill. 62006
Little Rock"	Kellogg, Ill. to Ste. Genevieve, Mo. (Ste. Genevieve County)	Mississippi	Michael Kertz	Ste. Genevieve, Mo. 63670
Tiptonville"	Tiptonville, Tenn. to S-162 (New Madrid Co.)	Mississippi	Wade Yates and Son	Tiptonville, Tenn. 38079
Tower Rock" +	Grandtower, Ill. to Wittenburg, Mo. (Perry County)	Mississippi	East Prairie Lumber Co.	East Prairie, Mo. 63845

+ Not shown in the 1973 Directory

No particular generator responsible for ferry location or existence.

Ferry Name	Location From	To	Owner's Name & Address
Canton-Meyer	Canton, MO	Meyer, IL	Mr. Allen L. Blackmore Canton, MO

Data

Length of Crossing	2600'
Average Crossing Time	8 minutes
Number of boats	1
Capacity	6 passenger vehicles
Load Limit	24 tons
Days of operation	March 15 through December 15
Hours of Operation	Varies with Season
Yearly Traffic	Unknown
Rates	Passenger - $1.00 Commercial - $1.25 to $2.25
Total Yearly Revenue	Unknown

Ferry Name	Location From	To	Owner's Name & Address
West Point	Winfield, MO	Meppen, IL	Mr. Merle Inman Batchtown, IL

Data

Length of Crossing	1980'
Average Crossing Time	4 Minutes
Number of Boats	1
Capacity	6 passenger vehicles
Load Limit	25 tons
Days of Operation	Year-round, if possible
Hours of Operation	9:00 AM to 6:00 PM
Yearly traffic	Passenger - 11,000 Commercial - 3,500
Rates	Passenger - $1.00 Commercial - $1.00 to $5.00
Total Yearly Revenue	$18,000

Ferry Name	Location From	To	Owner's Name & Address
Grand Tower	Whittenberg, MO	Grand Tower, IL	Mr. Donald E. Lovejoy, P. O. Box 75 Grand Tower, IL 62942

Data

Length of Crossing	3000'	
Average Crossing Time	5 minutes	
Number of Boats	1	
Capacity	9 passenger vehicles	
Load Limit	60 tons	
Days of Operation	Year-round, if possible	
Hours of Operation	7:00 AM to 6:00 PM	
Yearly Traffic	Passenger - 4,000	Commercial - 4,500
Rates	Passenger - $1.75	Commercial - $2.00 to $5.00
Total Yearly Revenues	$20,000	

Ferry Name	Location From	To	Owner's Name & Address
Hamburg	Elsberry, MO	Hamburg, IL	Mr. David B. Bailey Hamburg Transportation Co. Hamburg, Illinois

Data

Length of Crossing	3960'
Average Crossing Time	7 minutes
Number of boats	1
Capacity	6 passenger vehicles
Load Limit	24 tons
Days of Operation	March to December
Hours of Operation	6:30 AM to 6:30 PM
Yearly Traffic	Unknown
Rates	Passenger - $1.50 Commercial - $2.50 to $6.00
Total Yearly Revenue	Unknown

Ferry Name	Location From	To	Owner's Name & Address
Golden Eagle	St. Charles, MO	Golden Eagle, IL	St. Charles Ferry Co., St. Charles, MO

Data

Length of Crossing	5914'
Average Crossing Time	8 Minutes
Number of Boats	1
Capacity	16 Passenger Vehicles
Load Limit	75 tons
Days of Operation	Year-round, if possible
Hours of Operation	5:00 AM to 12:00 midnight
Yearly traffic	Passenger - 35,000 Commercial - 3,000
Rates	Passenger - $1.00 Commercial - $1.25 to $5.00
Total Yearly Revenue	$41,000

Ferry Name	Location From	To	Owner's Name - Address
Little Rock	Ste. Genevieve, MO	Kellogg, IL	Mr. Orville Albert Kellogg, IL

Data

Length of Crossing	3500'
Average Crossing Time	5 minutes
Number of Boats	1
Capacity	8 passenger vehicles
Load Limit	30 tons
Days of Operation	Year-round, if possible
Hours of Operation	7:00 AM to 5:00 PM
Yearly Traffic	Passenger - 10,000 Commercial - 2,500
Rates	Passenger - $2.00 Commercial - $2.25 to $5.00
Total Yearly Revenue	$27,000

State of Wisconsin \ DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS
4802 Sheboygan Ave.
P.O. Box 1487
Madison, WI 53701

April 18, 1977

Mr. Ray Kassel
Deputy Director
Department of Transportation
826 Lincoln Way
Ames, Iowa 50010

RECEIVED
APR 20 1977
RAYMOND L Kassel

Dear Ray:

Re: Ferry between Guttenberg, Iowa and Cassville, Wisconsin.

Per our phone conversation, I am forwarding what information we have concerning the ferry between Guttenberg and Cassville.

It is proposed that the operation would begin about April 15 and run to November 15 each year, a total of 213 days. There would be two ferrys operating a 16 hour day with each one way trip taking approximately 1½ hours. This breaks down to 11 trips per ferry per day.

The initial cost of the two used ferrys is $100,000. These ferrys are currently in storage and can be purchased.

We have worked out some operational costs as follows:

a) Insurance - $11,000/yr./boat for $1,100,000 liability

b) $360/day for pilots and deck hands

c) $100/day for gas and oil.

$460/day x 213 days	=	$ 97,980
Ins. $11,000 x 2	=	22,000
Operational costs	=	$119.980
Say $120,000/year		

Revenue:

Charge a toll of $4.00 per vehiecle. Each boat can handle 15 cars per trip. We have assumed a 60% load factor per year.

213 days x 11 trips/day x 2 boats x 15 veh./boat x $4/veh. x 0.6 load factor = $168,696
Say $170,000

This leaves $50,000 per year to cover other maintenance and operating costs, since if federal aid were used in the purchase of the boats, tolls could only be charged for operating and maintenance costs.

It is possible to use Great River Road funds in the purchase of the boats by either designating the Guttenberg to Cassville run as a GRR Spur or considering the run as an amenity to the Great River Road at Guttenberg. Preliminary discussions with FHWA has indicated that designating the ferry service as an amenity from Guttenberg may be more desirable, since FHWA is not looking at spurs accross the Mississippi with much enthusiasm.

From our discussions with local people, it appears that the landings on both Guttenberg and Cassville would be adequate for the Ferry operation, with the minimum amount of work.

There are several combinations of units of government that could operate the ferry operation, such as Grant Co. and Clayton Co. or the two States operating the ferry service with State personnel or reinbursing the counties for furnishing the personnel.

Looking forward to seeing you on the 26th.

Sincerely,

D. L. Strand
Chief of Facilities Development

RESEARCH BULLETIN 74-2

FEASIBILITY OF ESTABLISHING FERRY SERVICE AT CASSVILLE, WISCONSIN

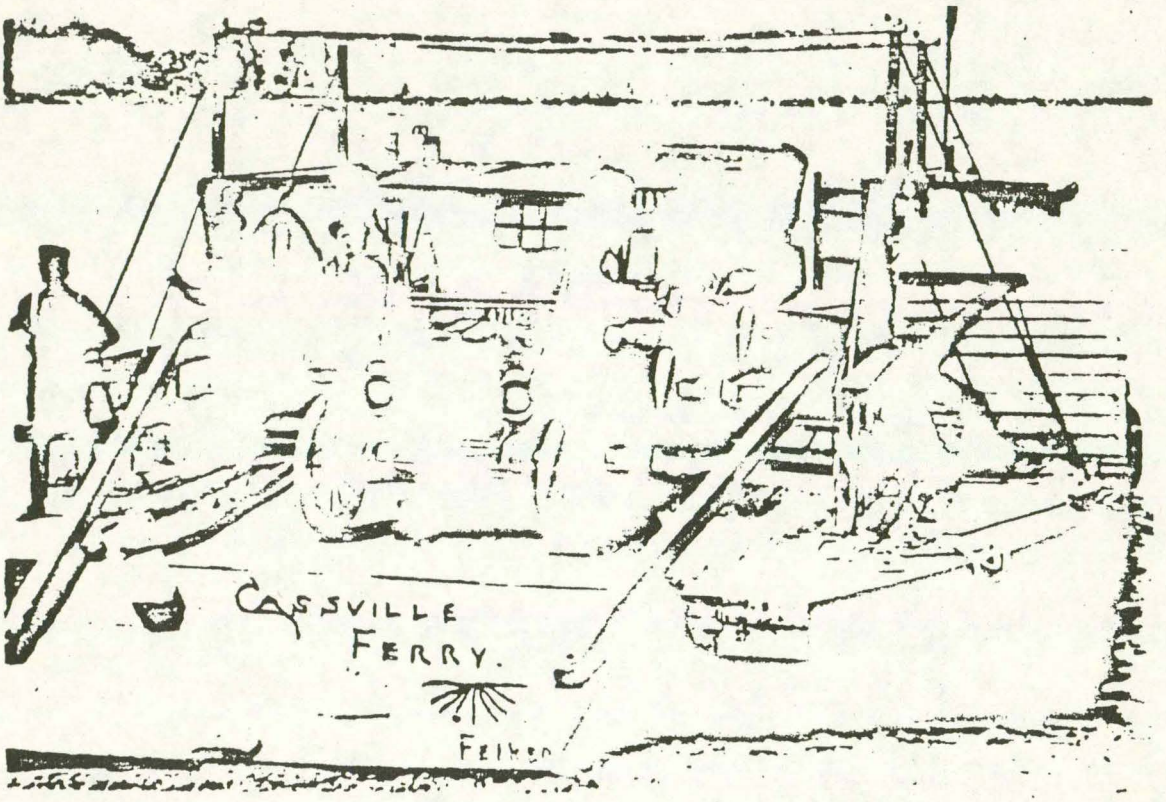
Wisconsin Department of Transportation
Division of Planning

and

Wisconsin Legislative Council Staff

State Capitol
Madison

May, 1974
RB-74-2



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PREFACE

At a joint meeting held on August 16, 1973, the Senate Transportation Committee, the Assembly Highways Committee and the Assembly Transportation Committee directed the Legislative Council Staff to make a study of the feasibility of establishing ferry service between Wisconsin and Iowa with one terminal at Cassville. Such ferry service was provided in the early part of this century, but was discontinued in the early 1930's after the construction of the series of locks and dams on the Mississippi River created a wider flood plain.

The Department of Transportation was requested to work with the Council Staff in conducting the research necessary to secure information about terminal locations, the cost of the facilities and the potential usage of the ferry. The research was conducted under the supervision of T. J. Hart, Deputy Secretary of the Department of Transportation, and Bonnie Reese, Executive Secretary of the Legislative Council. Credit for the majority of the work involved in gathering the necessary information and preparing the report must be given to Donald Revello, Chief, Traffic Planning Section, and James V. Lovo, Engineer, Urban Studies Unit, Department of Transportation, who were assisted by Mrs. Wilena Books of the Legislative Council Staff.

Information supplied by members of the Iowa State Highway Commission staff has been helpful in preparing this report.

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[The above figures were adapted from maps and figures contained in Bridge Location, Revenue and Traffic Studies Near Cassville, Wisc., June 1968, Iowa State Highway Commission]

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Wisconsin Department of Transportation
Division of Planning
Wisconsin Legislative Council Staff

State Capitol, Madison
May, 1974

RESEARCH BULLETIN 74-2

FEASIBILITY OF ESTABLISHING FERRY SERVICE AT CASSVILLE, WISCONSIN

INTRODUCTION

A. THE PROBLEM

Cassville, in southwestern Wisconsin, and Guttenberg, in northeastern Iowa, are located on opposite sides of the Mississippi River, about 35 miles north of Dubuque (See Figure 1). Residents of the Cassville-Guttenberg area (See Figure 2) must now travel a considerable distance to the north or south to cross the Mississippi River. The 2 communities are located about midway between Prairie du Chien, Wisconsin and Dubuque, Iowa, the locations of the nearest river crossings. The reach of the Mississippi River between the 2 present crossing is approximately 50 miles and the highway distance about 75 miles.

B. AUTHORITY AND PURPOSE OF INVESTIGATION

On August 16,1973, at a joint meeting of the Senate Transportation Committee, Assembly Highways Committee and the Assembly Transportation Committee of the State Legislature, the Legislative Council Staff was directed to "make a study of the feasibility of establishing ferry service ... between Wisconsin and Iowa with one terminal at Cassville".

This report contains the results of a survey conducted by the Department of Transportation of the physical and economic aspects of establishing ferry service, and an estimate of the traffic potential of a ferry service.

C. THE PRESENT HIGHWAY SYSTEM

Direct highway access to Cassville presently is provided by 2 routes in Wisconsin - STH 81 and STH 133. State Trunk Highway 81 runs northeast from Cassville, intersecting USH 61 at Lancaster; while the other route, STH 133, joins with USH 18 about 13 miles east of Prairie du Chien and enters Cassville from the north and then follows an easterly orientation until it joins USH 61 near Potosi.

On a regional basis, the Cassville area is served primarily by USH 18 and USH 61. The former is an east-west facility lying approximately 20 miles to the north of Cassville (via STH's 133 and 35) and crosses the Mississippi River at Prairie du Chien. The other facility, USH 61, carries north-south traffic and is located 20 miles east of Cassville. This route connects with USH 18 to the north, while to the south it continues into the Dubuque urban area. Crossing of the Mississippi in that area is via a toll bridge immediately northeast of Dubuque or a free bridge located at East Dubuque, Illinois. From Dubuque, east-west movement is by way of USH 20.

On the Iowa side, access to the proposed ferry service would be provided by USH 52. This is a north-south route located about 2.5 miles west of the river bank opposite Cassville. It connects with USH 18 to the north and intersects Iowa Route 3 to the south. The latter route then follows an easterly alignment to Dubuque.

D. PLANNED IMPROVEMENTS

Presently there are no planned or committed highway improvements that would result in a major change in travel habits in the Cassville area. Several of the routes that serve the area are scheduled for upgrading, but travel growth produced by these improvements would be minimal.

In regard to the existing river crossings, replacement of the antiquated bridge at Prairie du Chien is scheduled to be completed by mid-1974. Dubuque is also making a preliminary investigation on the feasibility of constructing a replacement or supplemental crossing in the Dubuque area.

Among long-range possibilities for transportation pattern changes would be the construction of the Great River Road, a proposed major scenic highway. Future plans for the Great River Road, currently signed as STH 133 through Cassville, call for this route to be continuous along the entire length of the Mississippi. In response to Federal directives, the Department of Transportation is currently engaged in studying the Great River Road in Wisconsin. The study's purpose is to define a route location only and will include alternatives along certain sections. In most cases the route will follow existing roads.

Another long-range highway development possibility was revealed in the 1973 Federal Highway Act. A section in the Act has called for a study "on the feasibility and necessity for constructing ... an extension of Interstate Highway 74 from the Davenport, Iowa, area through Dubuque, Iowa to Interstate 90 at La Crosse, Wisconsin."

Completion of these potential long-range projects, if they were to occur, would appear to be far enough in the future so as to have no major influence on the conduct of this ferry feasibility study.

E. PREVIOUS STUDIES

Several previous studies exist which are relevant to the current investigation. All the information developed in these prior studies was reviewed and considered in this current analysis. These previous studies are noted in the Bibliography at the back of this report.

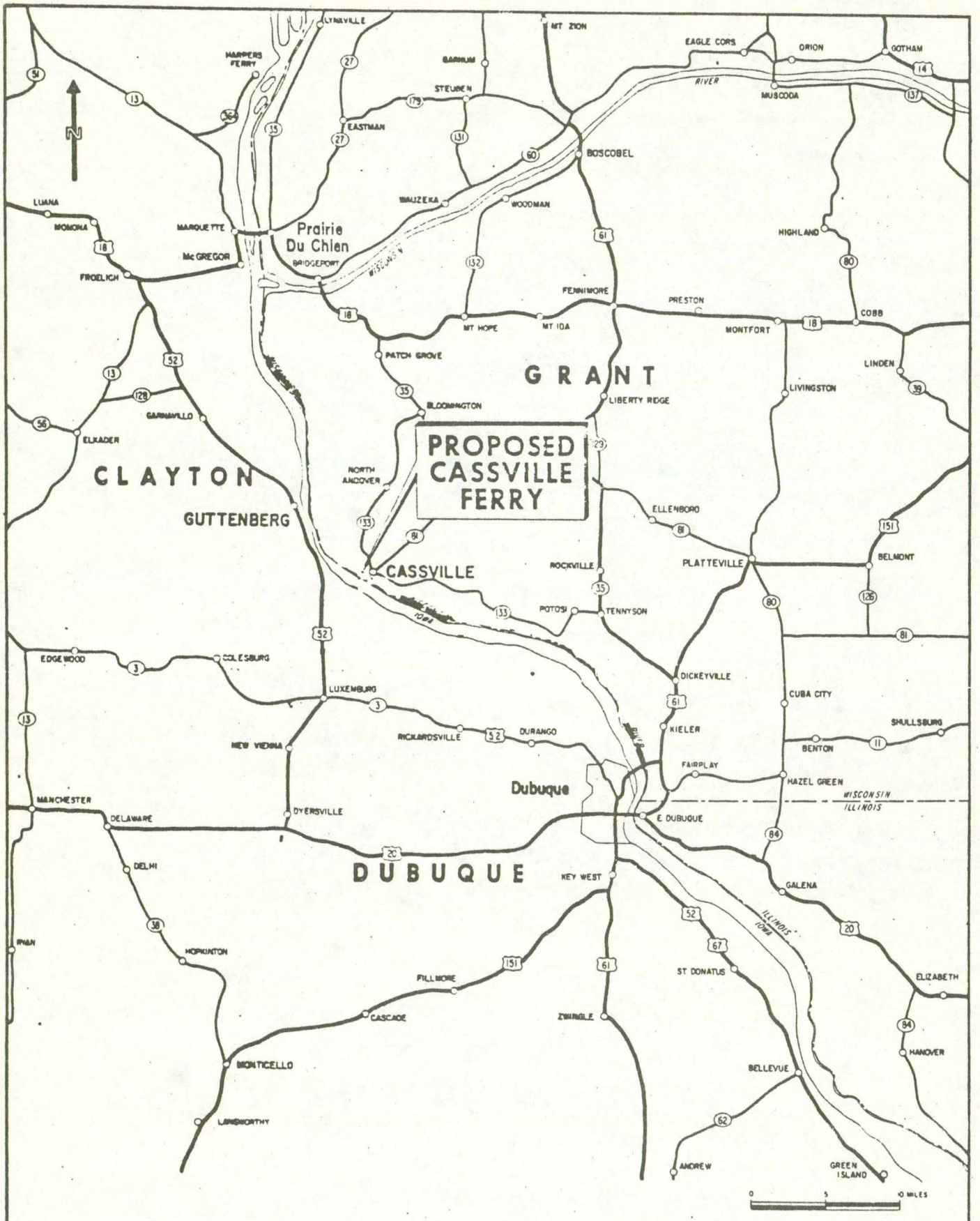


FIGURE 1

THE STUDY REGION

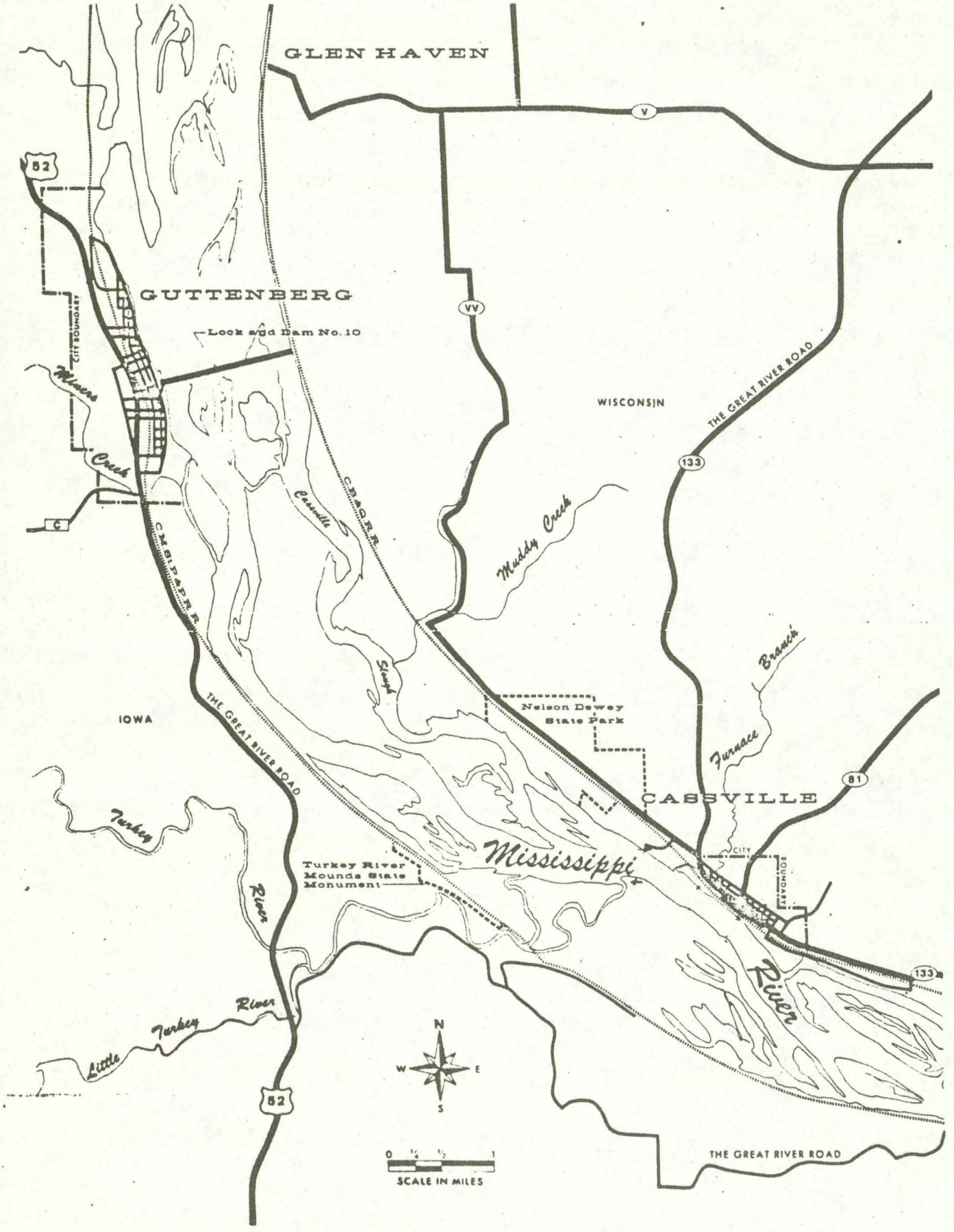


FIGURE 2
CASSVILLE STUDY AREA

PART I

ESTABLISHING FERRY OPERATIONS AT CASSVILLE, WISCONSIN

A. PHYSICAL ASPECTS OF ESTABLISHING FERRY SERVICE

1. General Physical Features of the Area. The Village of Cassville is located in Grant County in southwestern Wisconsin. The village is approximately a one-hour drive from Dubuque and Prairie du Chien, and 2 hours from Madison or La Crosse. The principal physical feature of the area is the Mississippi River which acts as a western boundary for Cassville. The village is situated at the base of bluffs which rise up from the floor of the river valley. Beyond the bluffs to the east, the terrain consists mainly of rolling hills and small, narrow valleys. In the village, prominent features include the two large electric power generating plants situated on the river bank at the north and south ends of Cassville. Tracks of the Chicago, Burlington, and Quincy Railroad run through the village on its western edge, adjacent to the Mississippi River. (The study area for the proposed Cassville ferry is shown in Figure 2)

Opposite Cassville, the Iowa river bank is characterized by a broad, relatively flat flood plain. Bluffs rise from the western edge of this flood plain to form the other wall of the Mississippi valley. The Chicago, Milwaukee, Saint Paul and Pacific Railroad mainline tracks are located alongside the western edge of the flood plain. The Iowa community which would be best served by the proposed ferry is Guttenberg, located approximately 8 miles upstream from Cassville.

2. River Characteristics. An inventory of basic data pertaining to Mississippi River characteristics in the area is necessary to an evaluation of ferry service feasibility. The general features of the Mississippi River in the Cassville area are shown in Figure 2.

A major feature of the Mississippi River in the Cassville area is the existance of U.S. Lock and Dam No. 10, 8 miles upstream at Guttenberg, Iowa. Below the dam the river splits into the main channel and the Cassville slough, rejoining at a point one mile upstream from Cassville. It is also at this point that the Turkey River enters the Mississippi from the west. As it passes Cassville, the Mississippi River has a northwest-southeast orientation. River width at this location is relatively narrow, being about 1,100 feet. U.S. Corps of Engineer records indicate a mean elevation of 606.3 feet above sea level.

Climatological factors which would determine a navigable season for ferry operations include ice in spring and winter and spring flooding. An average operating season based only on ice conditions would extend from mid-March through mid-December. Spring flooding follows the ice break-up, normally reaching its peak during late April. Record floods such as those experienced in 1951, 1965 and 1969 would interrupt ferry operations, but spring runoff would not be a disruptive factor during an average year. A

flood profile chart for Cassville is shown in Appendix I. Low elevation is not so great as to affect ferry operations at the Cassville terminal, but a small amount of dredging at an Iowa terminal might be required during low water periods.

3. Terminal Locations. Several alternate locations for termini of the proposed ferry operations were analyzed. Among the factors considered in this analysis were the present highway network, navigational requirements, property values, existing ownership of land, flood conditions and potential construction costs. The actual range of alternates was limited by a desire to minimize both the need for approach road construction and the distance of water-borne travel. The principal features of the alternates are presented below:

Cassville Terminal, Alternate A. Alternate A is located at the north edge of Cassville, as shown in Figure 3. Specifically, the site is located immediately south of the Wisconsin Power and Light Company's generating plant. Presently, this land is being leased from the company by a private individual. This location has the advantage of potential year-round operations because of warm water discharge from the generating plant. Approach road construction would be minimal and river bank conditions would present no unusual problems for construction of a terminal at this location. Also, this location would provide good access to the business district of Cassville and to the existing routes serving Cassville.

Cassville Terminal, Alternate B. Alternate B is the public boat-launching site, located near the center of Cassville and adjacent to the village park as shown in Figure 3. The ramp is made of concrete and an adjacent parking lot is paved with asphalt. The entire facility is owned by the Village of Cassville. The central location of this site would provide excellent access to the Village's business district and connection with the State Trunk Highways via the existing street system would be relatively easy. Negative aspects of this alternative include possible conflicts with recreational boaters, and its central location could, on occasion, cause congestion on the local street system.

In contrast to the Cassville side, no convenient terminal sites exist on the Iowa bank. An Iowa terminal (for either of the Cassville alternates) would be located on the flood plain of the Mississippi and Turkey Rivers, and thus subject to periodic flooding. This condition would require portions of the Iowa approach road to be constructed as a causeway or a similar type facility. The terminal and parking lot (if provided) would likewise have to be designed to withstand flood conditions. Both Iowa alternates present potential environmental complications since the flood plain is presently classified as a U. S. Wildlife and Fish Refuge Area.

Iowa Terminal, Alternate A. Alternate A for an Iowa terminal is located directly across from the Cassville Alternate A, as shown in Figure 3. An advantage of this location is that it would allow the lowest

cost connection to a major highway in Iowa, USH 52. After extending across the flood plain for a distance of approximately 6,500 feet, the approach road would cross the Chicago, Milwaukee, St. Paul and Pacific Railroad tracks and then follow the base of the bluffs on the south side of the Turkey River until it joined with existing routes.

Iowa Terminal, Alternate B. The other site considered for an Iowa terminal was directly across from the Cassville Alternate B. Approach road construction would be similar to that of Alternate A with the difference being that a somewhat longer causeway across the flood plain would be required. Because of the expense of causeway construction, the longer distance is a distinct disadvantage of this site. The advantage of the Alternate B site is that water-borne travel would be minimized if the Cassville Alternate B were to be selected.

On both the Iowa and Cassville banks, the Alternate A was judged as the most advantageous terminal location. Subsequent analysis performed in this study assumes these as the ferry termini.

4. Rules and Regulations. The construction, equipping, inspection, certification and manning of the proposed ferry necessarily would have to be in accordance with the applicable regulations and standards set forth by the United States Coast Guard. These regulations are based upon the size of the vessel, the service in which it is engaged and the waters upon which it operates. The appropriate publication describing the specific details of this matter is "Rules and Regulations for Small Passenger Vessels", U.S. Coast Guard (See Bibliography). In any potential conflict between the ferry and commercial activity on the river, the applicable Coast Guard regulations would cover.

Federal law prohibits placing of structures in or across navigable waters of the United States, unless the plans for such structures have been recommended by the Chief of the U.S. Army Corps of Engineers and authorized by the Secretary of the Army. Therefore, before any work on the construction of causeways or terminal facilities needed for the operation of ferry service could be started, approval would have to be secured from these federal officials. The procedure for obtaining this authority is outlined in the publication entitled "Permits for Work in Navigable Waters" published by the U.S. Army Corps of Engineers (See Bibliography).

On the state level, permits for construction on or modification of the river bank would have to be obtained from the respective Departments of Natural Resources of Iowa and Wisconsin. Any dredging would also require DNR permits.

B. ECONOMIC ASPECTS OF ESTABLISHING FERRY OPERATIONS

With the physical feasibility of ferry operation analyzed, the next step is to evaluate the costs that would be associated with such an operation. These costs can be divided into 2 basic categories, (1) capital costs and (2) operating costs.

Capital costs would occur early in the project and would include the cost of acquiring the necessary rights of way and the cost of constructing approach roads and terminals. The cost of purchasing a ferry vessel would also be a capital cost.

In contrast, operating costs would continue throughout the life of the proposed ferry service. Included in this category would be items such as operators' salaries, maintenance expenses, fuel and lubrication, and insurance.

In order to evaluate both capital and operating costs, questionnaires were sent to the owners of approximately 25 ferry services operating on the Mississippi, Ohio and Illinois Rivers. About half of those who replied indicated the operation was publicly owned with the remainder being privately operated. The original costs of the boats or barges ranged from $25,000 to $848,500, for a boat operating in the New Orleans urban area. The costs of terminal facilities ranged from $3,000 to $750,000. No tolls were charged for the use of any of the publicly owned facilities. Tolls charged by private operators ranged from $1.50 to $2.50 for passenger automobiles.

Therefore, in view of the wide variance and sometimes incompleteness of data from the questionnaires, it was decided to evaluate the capital and operating costs of the Merrimac ferry. This ferry is operated by the State of Wisconsin and currently provides a connection across the Wisconsin River for STH 113 in south-central Wisconsin. Since this is a state operation, cost information is readily available.

Costs associated with this operation were used to establish estimates for the proposed Cassville ferry where adequate similarities were thought to exist. Cost estimates for other items were obtained from different sources including the Contract and Estimates Section of the Division of Highways of the Wisconsin Department of Transportation.

It must be emphasized that all costs presented are very preliminary estimates. They are intended only to give a general picture of expected costs. Any final analysis would require a detailed economic investigation to accurately determine the precise costs of establishing and operating a ferry at Cassville.

FIGURE 3

ALTERNATE TERMINAL LOCATIONS

1. Capital Cost Estimates

(a) Cost of Ferry Vessel. A vessel similar to that currently in use at Merrimac apparently would be adequate for operations at Cassville. That vessel is 37 feet by 80 feet in size, and it carries up to 12 passenger cars (8 ton gross limit) per crossing. The Merrimac ferry is propelled along a fixed cable guideway with a diesel engine furnishing the power. Because of the fixed cable guideway, only one operator is required. This type of guideway, however, would not be feasible for operations on the Mississippi River due to Coast Guard navigational requirements. Autos load and unload at the ends of the ferry via ramps attached to the vessel.

The Merrimac ferry was purchased new in 1963 at a cost of nearly $80,000. This total does not include the cost of the cable guideway. At today's prices, the cost of a similar vessel would probably be approximately $100,000 to $125,000.

(b) Cost of Acquiring Right of Way Access Roads. On the Cassville side right of way needs are minimal. Access road right of way length is estimated at 1,000 feet and the expected purchase price would be approximately $6,000 at the present time. On the Iowa side, right of way needs are more extensive. Here, an estimated 10,000 feet of access road right of way would be required. Of this, 6,500 feet would be on federal property. The total cost of acquiring right of way on the Iowa side is estimated at $25,000.

(c) Cost of Constructing Terminal Facilities. The type of terminal facilities proposed for a Cassville ferry would be similar to a conventional boat launching-loading ramp. That is, they would basically consist of a concrete ramp inclined in such a way as to allow loading and unloading of vehicles at all water levels. In addition to a ramp, pilings would be required for docking and securing the vessel while transfers took place. A parking lot adjacent to the docking terminal may be desirable. However, the approach roadway and shoulders could function as the necessary storage device for waiting vehicles. Consequently, the cost of constructing a parking lot was not included in the terminal estimates.

The estimated cost of constructing such a docking and loading-unloading facility on the Cassville bank was $22,000. On the Iowa bank the estimated cost was $35,000. The higher cost of an Iowa facility reflects the fact that the construction would be on a flood plain.

(d) Cost of Constructing Access Roads. The cost of constructing an access road to the Cassville terminal is estimated at $60,000. Because of the estimated 6,000 feet of causeway construction required, the cost of an access road to the Iowa terminal is put at $1.3 million. A detailed breakdown of this estimate is contained in Appendix H.

The total of the estimated capital costs is $1.573 million. Again, these are preliminary estimates and are intended only to give a general indication of expected capital costs. Subsequent phases of project design would refine these estimates.

(2) Operating Cost Estimates. The main operational costs of running a ferry service would be salaries and fringe benefits of the crews, vessel and roadway maintenance expenses, and the cost of fuel and insurance. Since the proposed ferry could be expected to be owned by a public agency, it has been assumed that it would not be subject to property or local taxes.

Principal among the operating costs would be salaries. Personnel requirements for the proposed ferry would consist of a pilot and docking assistant for each 8 hour shift. If the ferry was operated on a 24 hour-a-day, year-round schedule, personnel costs would amount to approximately $55,000 annually.

Expenses for maintenance, fuel and insurance are estimated at $30,000 annually, based on costs experienced at the Merrimac ferry operation. This brings the estimated annual operating costs to a total of $85,000.

PART II

THE TRAFFIC POTENTIAL OF A FERRY OPERATION AT CASSVILLE, WISCONSIN

Two previous studies have examined the traffic potential of a Mississippi River crossing at Cassville. The first study was conducted in 1967 by the Wisconsin State Highway Commission and was based on the assumption that the type of crossing would be a toll-free bridge. The results of the study are contained in a report entitled "Traffic Analysis For A Potential Bridge Crossing of The Mississippi River At Or Near Cassville, Wisconsin". In 1968, consultants working for the Iowa Highway Commission investigated traffic potential of a toll-bridge at Cassville, and their findings are published in a report entitled "Preliminary Engineering Report on Mississippi River Toll Bridge Near Cassville, Wisconsin".

The information developed in these 2 studies provides a basis for conducting the present analysis.

A. PRESENT TRAFFIC VOLUMES

Present traffic volumes on routes in the Cassville Ferry study region are shown in Figure 4. This figure illustrates the relative importance and influence of the larger urban areas of Dubuque and Prairie du Chien on current traffic.

In the immediate vicinity of Cassville, volumes decrease significantly. Latest counts (1971) on the routes entering Cassville (STH's 81 and 133) are all in the range of 500 to 700 AADT (Average Annual Daily Traffic).

Current traffic volumes on the existing river crossing vary from the 4,110 AADT (1972) at Prairie du Chien to 3,610 AADT (1972) and 17,220 AADT (1972) on the Eagle Point and Julien Dubuque Bridges at Dubuque respectively. Traffic trends for the existing Mississippi River crossing are shown in Table 1.

The figures in Table 1 indicate a sustained trend of trans-river traffic growth in the region. The increase has been the most rapid in crossings at Dubuque where average daily traffic on the Eagle Point Bridge has grown at an annual rate of 8.1% since 1958. At the other Dubuque crossing, the Julien Dubuque Bridge, the rate was slightly lower (7.2%), although actual volume increases have been larger.

TABLE 1

TRANS-RIVER TRAFFIC VOLUMES

Year	Prairie du Chien Bridge	Eagle Point Bridge (Toll)	Julien Dubuque Bridge
1958	2,400	1,690	8,600
1960	3,210	1,860	9,370
1965	2,840	2,250	12,000
1970	3,650	3,370	14,440
1971	3,820	3,490	15,830
1972	4,110	3,610	17,220

Source: Figures compiled by Department of Transportation.

For the Prairie du Chien Bridge, usage increased from an AADT level of 2,400 in 1958 to 4,110 vehicles per day in 1972. This represents an average annual growth of 5.1%

Annual traffic trends in the immediate vicinity of Cassville have been quite stable. This condition is evidenced by the fact that on the routes entering Cassville, the largest increase in average annual daily traffic counts from 1958 to 1971 was 100 (590 to 690 AADT on STH 81, or 17.0% over the 13 year period.

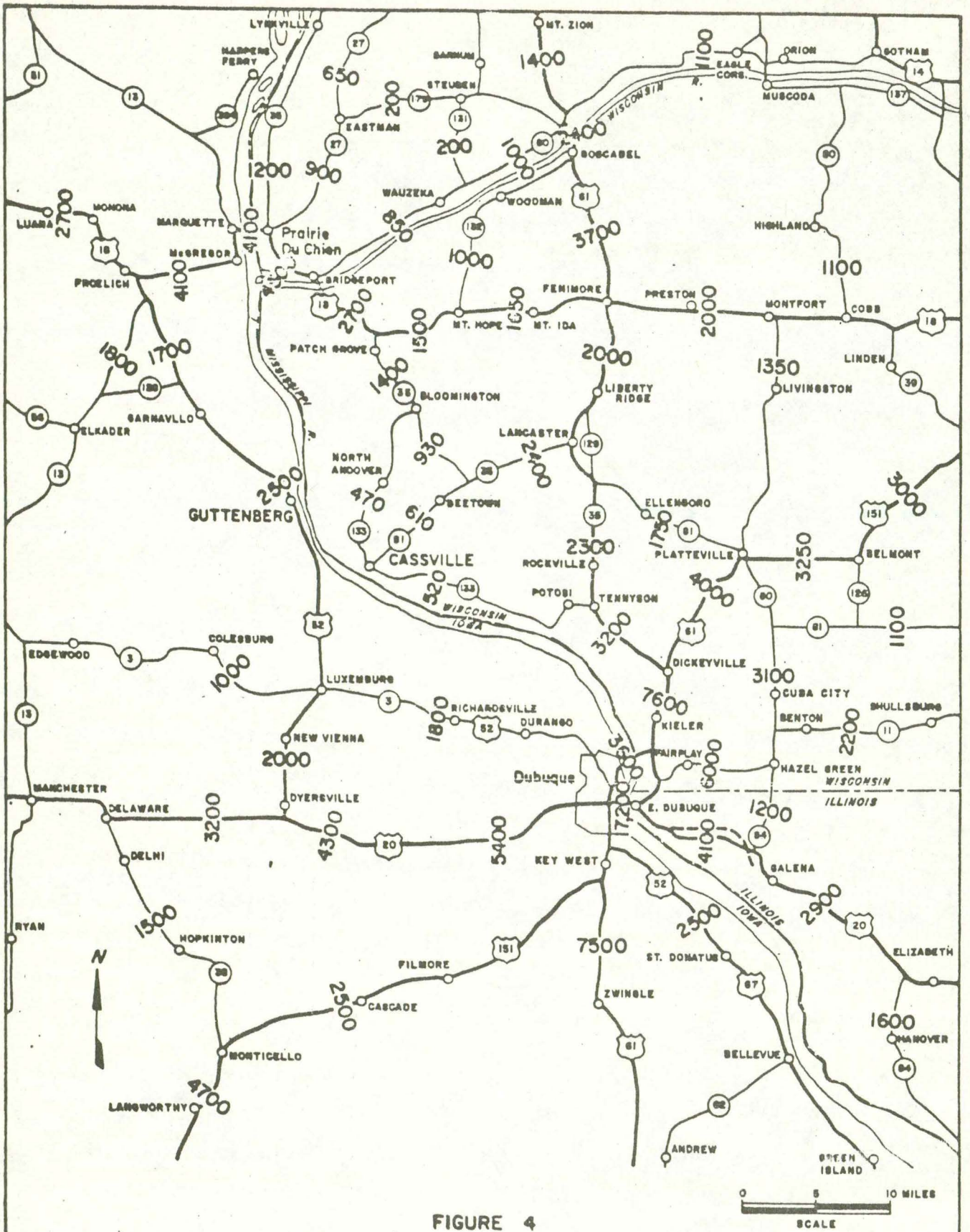


FIGURE 4

PRESENT TRAFFIC VOLUMES

1972 AVERAGE DAILY TRAFFIC

NOTE: Counts have been adjusted to a common base year.

B. TRAVEL DESIRES

Existing travel desires in the Cassville region are illustrated in Figure 5. This picture of trans-river travel desires is based on information collected during 2 previous studies, (1) the Mississippi Valley State Screenline Origin and Destination Survey (MVSSOD), and (2) the Dubuque Area Transportation Study (DATS).

The MVSSOD survey was conducted during the summer of 1960 as a multi-state survey of traffic crossing and grid series of screenlines. One interview station for that survey was located at the Prairie du Chien Bridge. Information from interviews taken at that location was used to partially develop the picture of travel desires shown in Figure 5.

Travel desires of trans-river traffic on Dubuque bridges were determined from roadside interviews conducted in the spring of 1965. Travelers crossing the 2 Dubuque bridges were interviewed as part of an origin and destination survey made on all roads crossing a cordon line at the Dubuque Metropolitan Area boundary.

The composite picture of travel desires obtained from these origin and destination interviews was used in determining which trips might be divertable from the existing river crossings to the proposed Cassville ferry.

While not used in compiling the picture of travel desires shown in Figure 5, a statewide Origin and Destination Survey made by the State of Iowa during the summer of 1972 provided more recent data on travel desires. This survey was made at Iowa's border and survey locations included the Prairie du Chien Bridge and the 2 bridges at Dubuque. In addition, a recently conducted Grant County 701 Travel Survey was reviewed and used as background information. (See Bibliography)

C. ESTIMATED TRAFFIC

Estimated traffic for the proposed ferry operation at Cassville is primarily based upon the number of motorists who would be diverted from the existing crossings at Prairie du Chien and Dubuque. In addition, a ferry operation can be expected to generate some additional trips because of both its convenience and novelty. In fact, the Wisconsin State Historical society, which operates Stonefield Village near Cassville, states "...All of southwest Wisconsin would benefit from the establishment of the ferry as new traffic patterns emerge to use it. ..." (See Appendix D)

In making this estimate of traffic, certain conditions were assumed. They are:

1. No new river crossings other than a Cassville ferry in the reach of the Mississippi River between Prairie du Chien and Dubuque will be provided.

2. The ferry will be operated as a toll-free crossing.

3. The vessel used will have a maximum capacity of 8-12 vehicles.

4. The ferry will be in operation 24 hours per day, year around.

5. Adequate approach roads will be constructed to the terminals.

6. No major new highway facilities will be constructed in the Cassville region.

7. The present general trend in economic activity in the Cassville region will continue.

8. The existing forecasts for recreational activity and development potential for the Cassville region are valid.

9. The present energy crisis will not abnormally restrict the use of motor vehicles, nor will it drastically affect existing recreational travel habits in the area.

Any significant departure from the above conditions could affect the traffic estimates for the proposed ferry.

1. Base Year Traffic Assignment. An estimate of traffic at base year (1973) levels has been made in order to establish a picture of the current usage potential of a ferry operation. Estimates of future growth can then be added to this base figure to arrive at a forecast of potential future volumes.

Traffic in the base year would consist mainly of trips diverted from existing crossings north and south of the proposed ferry. A small amount of generated (new) traffic would also contribute to base year volumes.

Diversion estimates were made in both of the previous studies conducted by Wisconsin and Iowa, and the 1973 base year estimate assignment is derived from these along with other pertinent data. A summary of previous diversion estimates is presented in Table 2.

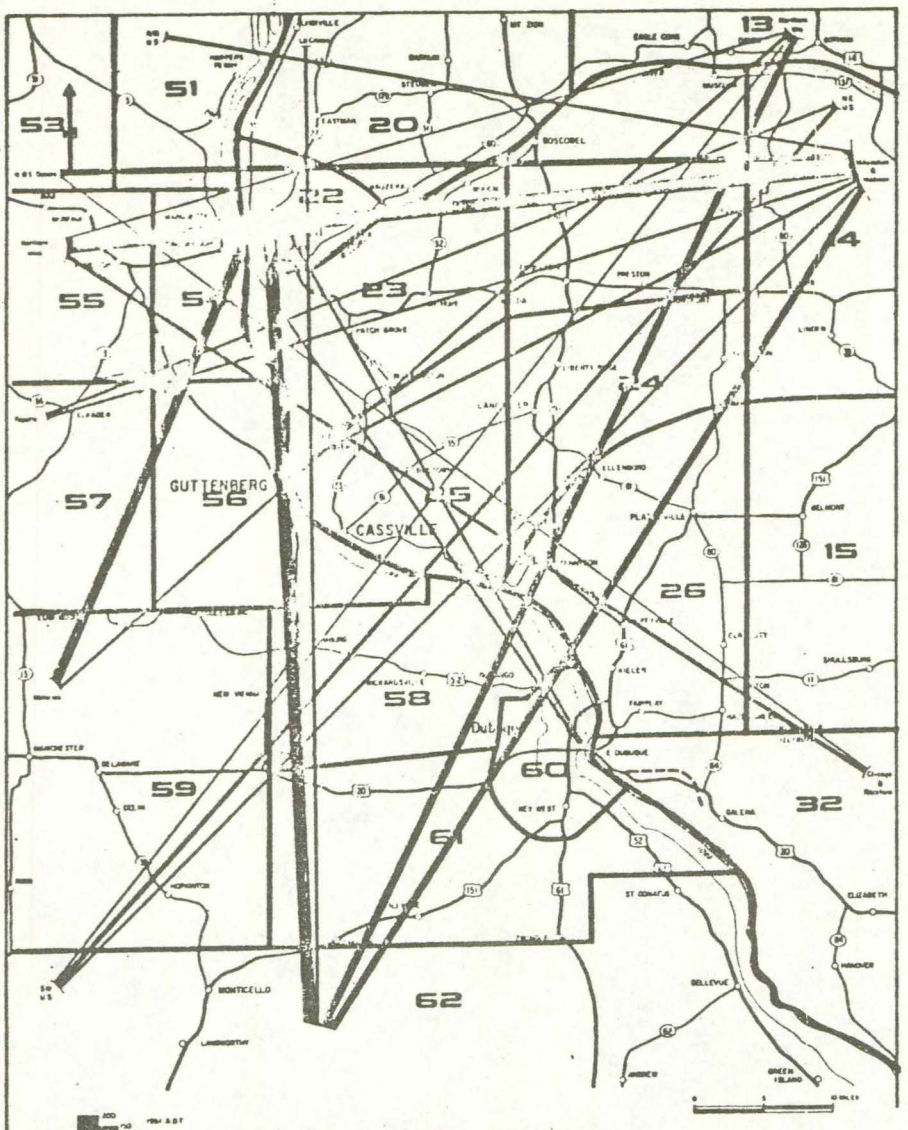
TABLE 2

SUMMARY OF PREVIOUS ESTIMATES OF DIVERTED TRAFFIC

	(1967 Wis.Study) To A Toll-Free Bridge*	(1968 Iowa Study) To A Toll Bridge**	(1973 Iowa Anal.) To A Toll-Free Ferry***
From Prairie du Chien Bridge:	300 AADT	200 AADT	10 AADT
From Dubuque Bridges:	550 AADT	275 AADT	220 AADT
Summary	850 AADT	475 AADT	230 AADT

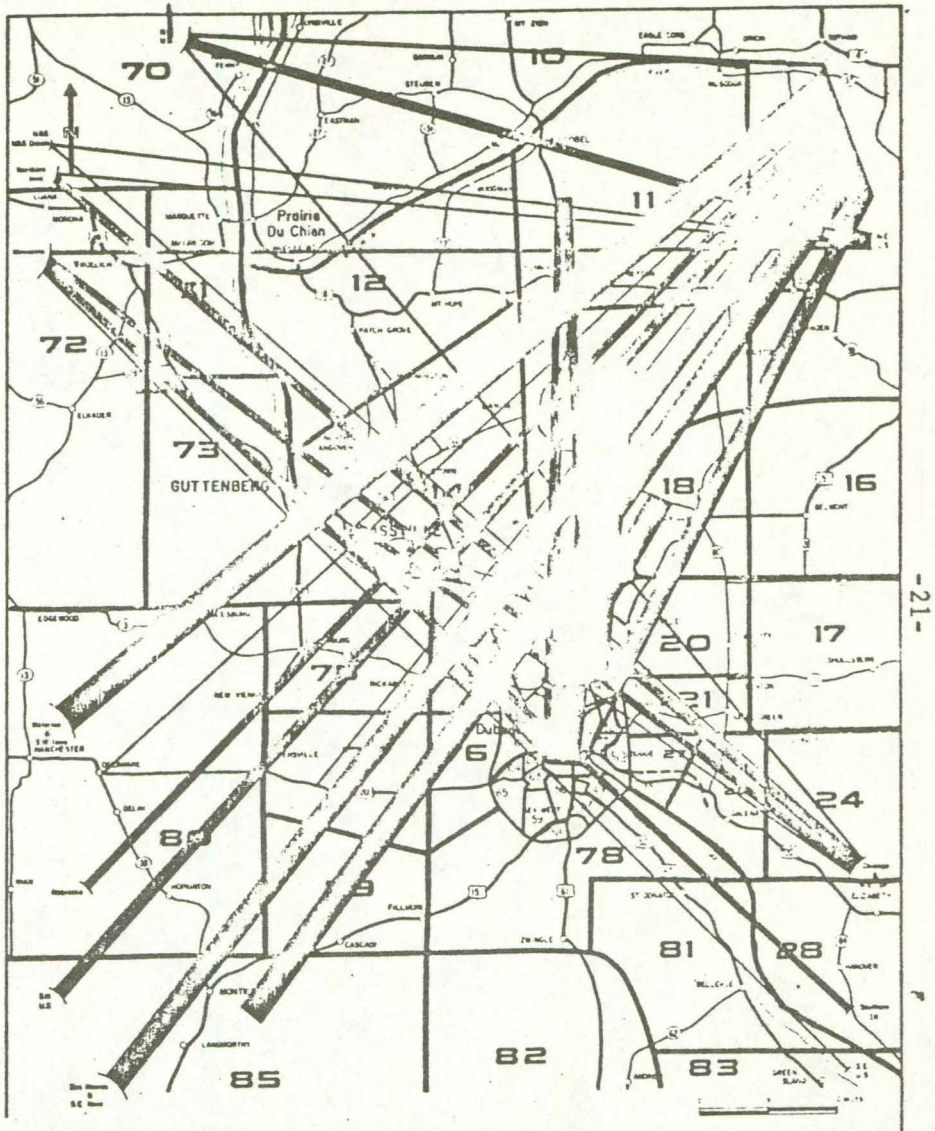
* at 1965 traffic levels
** at 1967 traffic levels
*** at 1972 traffic levels

Source: Figures compiled by Department of Transportation.



PRAIRE DU CHIEN BRIDGE

1961 AVERAGE DAILY TRAFFIC



DUBUQUE BRIDGES

1965 AVERAGE DAILY TRAFFIC

FIGURE 5

TRAVEL DESIRES

Both the 1967 Wisconsin study and the 1968 Iowa study (the latter performed by Wilbur Smith and Associates) utilized data from origin and destination surveys conducted in 1960 and 1965. The 1968 study by Iowa represents a more detailed investigation and as such, a summary of their analysis of divertable traffic is presented below:

Prairie du Chien Bridge. The 1968 Iowa study indicated a majority of the 200 trips judged divertable from the Prairie du Chien Bridge were of the long distance variety. Specifically, these were trips between Madison-Milwaukee and central-western Iowa, Prairie du Chien and central-western Iowa and between Prairie du Chien and east-central, south-eastern Iowa. Relatively little local traffic potential to a Cassville crossing was found on the Prairie du Chien Bridge.

Dubuque Bridges. Of the 275 trips considered divertable from the Dubuque bridges, a high percentage again had a Wisconsin terminus outside the Cassville region. The most important local or shorter distance movement was between the Platteville area and an urban traffic zone in northern Dubuque near Sageville--125 trips per day. The other trip interchanges considered divertable from the Dubuque bridges were all under 100 vehicles per day.

1973 Iowa Analysis. Additional information on divertable trips is supplied from analysis performed by Iowa in 1973. Utilizing data from a 1972 statewide Origina and Destination Survey, Iowa concluded a total of 229 trips (1972 Average Weekday Volumes) could be considered "potential" users of a ferry service at Cassville. This analysis assumes a ferry crossing would predominately serve "local" trips; that is, trips with origins and destinations within Clayton, Dubuque, Grant and Lafayette counties.

Results of Current Diversion Analysis. It is concluded that a total of approximately 500 vehicles per day could be considered divertable from the existing river crossings. This total is a maximum and includes some longer distance trips having a terminus outside the four county region as well as local trips. Of this total, 200 trips were considered divertable from the Prairie du Chien Bridge and 300 trips from the Dubuque bridges.

However, based on the intermittent nature of a ferry operation, the anticipated ferry capacity (8-12 vehicles per trip) and the pattern of the existing road system it is judged that only about 200 of the maximum 500 divertable trips could realistically be considered likely to utilize a Cassville ferry.

In addition to this diverted traffic, a certain amount of generated traffic would also occur. These are trips not presently being made in the ferry corridor but trips that would occur because of the convenience and novelty of a new ferry crossing. For the base year of 1973 it was estimated that generated traffic would amount to approximately 100 vehicles per day (AADT). Most of the traffic is estimated to occur during the seasonal

months of the peak tourist season and the demand during that period would be considerably greater than the annual average.

The combination of diverted traffic and generated traffic results in an estimated base year (1973) traffic assignment of 300 vehicles per day (AADT) to a Cassville ferry.

2. Future Traffic Volumes. The size of future traffic volumes carried by the proposed Cassville ferry would depend primarily on 2 factors. The first factor is population in the 4-county region (Grant, Crawford, Dubuque and Clayton counties) and the other is recreational activity. A survey of these 2 influential factors and their growth potential is presented below:

Population. Population trends of selected areas which influence traffic to the proposed ferry are shown in Table 3.

TABLE 3

POPULATION TRENDS OF SELECTED AREAS

Area	Population 1950	1960	1970	Percent Change (1950-60)	(1960-70)
Cities:					
Cassville	984	1,290	1,343	+31.1%	+ 4.1%
Lancaster	3,266	3,703	3,756	+13.4%	+ 1.4%
Platteville	5,751	6,957	9,599	+21.0%	+38.0%
Prairie du Chien	5,392	5,649	5,540	+ 4.8%	- 1.9%
Guttenberg	1,912	2,087	2,177	+ 9.2%	+ 4.3%
Elkader	1,584	1,526	1,592	- 3.7%	+ 4.3%
Dubuque	49,671	56,606	62,309	+14.0%	+10.1%
Counties:					
Grant (Wis.)	41,460	44,419	48,398	+ 7.1%	+ 9.0%
Crawford (Wis.)	17,652	16,351	15,252	- 7.4%	- 6.7%
Dubuque (Iowa)	71,337	80,048	90,609	+12.2%	+13.2%
Clayton (Iowa)	22,522	21,962	20,606	- 2.5%	- 6.2%
4-County Total	152,971	162,780	174,865	+ 6.4%	+ 7.4%

Source: Report on 1970 Census of Population--Iowa and Wisconsin

The information presented in Table 3 indicates that Cassville and Guttenberg, the 2 communities located closest to the proposed ferry termini, have both experienced population increases during each of the past 2 decades.

For Cassville the rate of increase over this period averages out to 1.8% annually, while Guttenberg's is a slightly lower rate of 0.7% annually. The most influential urban area in the region, Dubuque, has registered an annual increase of 1.3% in the years from 1950 to 1970. Current Dubuque population stands at 62,309.

On a county-wide basis, Grant (Wis.) and Dubuque (Iowa) have sustained positive growth trends. Dubuque county's 12.2% and 13.2% increases during the past 2 decades verify the continuing pattern of rural-to-urban migration. The slight decreases noted in Clayton (Iowa) and Crawford (Wis.) counties are also part of this movement.

Projections of future population indicate that the increases in Grant and Dubuque counties can be expected to continue through 1990. Based on projections by the Wisconsin Department of Administration, the magnitude of this growth in Grant county is expected to be approximately 3%. Projections made in conjunction with the Dubuque Area Transportation Study have established a 20% increase as likely for Dubuque county. Slight decreases in population are predicted to continue in Clayton and Crawford counties, but the net outlook for the 4-county region is a positive increase in 1990 population.

Projections of the 1990 Cassville population have been made by the Wisconsin Department of Local Affairs and Development as part of a "comprehensive plan" for Cassville. These projections have established a range of 1,420 to 1,920 as the expected 1990 population. Cassville's current (1970) population is 1,343.

Recreation. The greatest potential for increases in ferry traffic volumes lies in the area's recreational activity. In fact, a ferry itself would be a type of recreation travel generator.

Numerous recreational attractions presently exist in the ferry influence area. Some of those located in Wisconsin include Wyalusing State Park, Nelson Dewey State Park and Stonefield Village. The latter is a replica of a small village of the vintage of the 1890's and is operated by the Wisconsin Historical Society. Attendance trends at these facilities are shown in Table 4 on page 26.

Nearby state parks on the Iowa side of the Mississippi River include Turkey River Mounds State Monument and Pikes Peak State Park. Other public and private campgrounds supplement the state facilities in both Wisconsin and Iowa. In general, the prospects for future recreational activities in the ferry influence area appear good, with the present societal trend being towards increased leisure time and affluence.

As noted in the 1972 Wisconsin Outdoor Recreation Plan, recreation demand in the southwestern portion of Wisconsin will continue to be dominated by out-of-state residents, in particular from the neighboring states of Iowa and Illinois. The novelty and nostalgic aspect of a Mississippi River ferry

crossing to these out-of-state vacationers would appear to have a great potential for increasing traffic to the proposed Cassville ferry. These qualities would also be likely to create a mutually beneficial relationship with Stonefield Village which is presently being operated at a deficit by the Wisconsin Historical Society.

TABLE 4

TRENDS IN RECREATIONAL ACTIVITY
(Annual Visitations)

Year	Nelson Dewey State Park Visitations	Wyalusing State Park Visitations	Stonefield Village Visitations
1960	70,752	116,253	8,378
1965	77,160	139,585	23,391
1968	113,367	125,785	38,379
1969	91,438	119,866	41,625
1970	116,153	131,042	41,325
1971	112,135	137,874	40,383*
1972	105,740	133,822	41,904*
1973	105,785 (est.)	127,000 (est.)	38,861

*For 1971-73, out-of-state attendance from Illinois averaged 8.5% and Iowa 8.9% of total Stonefield Village visitations.

Source: Wisconsin Department of Natural Resources and Wisconsin State Historical Society records.

Estimated Future Traffic. The forecasts of population and recreational activity, along with other relevant information were used to arrive at an estimate of annual traffic growth.

Traffic growth on the proposed ferry would consist of three components: (1) normal increases in trans-river traffic, (2) generated traffic, and (3) development traffic.

Normal increases were estimated to amount to 30% over a twenty-year period (1973-1993). Generated traffic, or additional trips due to the novelty and convenience of a ferry crossing was estimated at 60%. The third component, development traffic, added another 20% primarily because of the closer integration of the ferry would provide between the communities of Cassville and Guttenberg.

Therefore, estimated future volumes are as follows:

Base year (1973) volume	= 300 AADT
+ normal increases (30%) = 0.30 x 300	= 90 AADT
+ generated traffic (60%) = 0.60 x 300	= 180 AADT
+ development traffic (20%) = 0.20 x 300	= 60 AADT
Estimated 1993 traffic	= 630 AADT

D. ALTERNATE CONDITIONS

The above estimate of future traffic reflects an assumption of near optimum conditions. That is, the estimate assumes the ferry would be operated on a 24 hour-a-day, year-round, toll-free basis and that the "energy crisis" will have a minimal effect on travel habits. Because all these "optimum" conditions might not be realized, the possible affect on traffic estimates of changes in assumed conditions is analyzed below.

1. Seasonal Operation. If, because of ice conditions, the proposed Cassville ferry is operated on a seasonal basis (mid-March through mid-December) rather than year-round, only 85% of the originally estimated traffic can be expected to occur during the 9-month period. This would reduce the base year (1973) estimated traffic to 255 vehicles per day (AADT) and the 1993 estimate to 535 vehicles per day (AADT).

2. 16 Hour-a-Day Operation. If the proposed Cassville ferry is operated on a 16 hour-a-day schedule (6 a.m. to 10 p.m.), previous traffic estimates should be reduced by 7%. For example, the 1973 estimated traffic would become 280 vehicles per day (AADT) and the 1993 volume 585 vehicles per day (AADT).

3. Tolls. The effect of operating the proposed Cassville ferry as a toll facility is more difficult to quantify than are the previous alternative conditions. Predictibly, a "free ferry" has the maximum appeal for travelers. A toll-free ferry would best compete with the existing river crossings at Prairie du Chien and Dubuque in diverting traffic from these bridges, especially the antiquated Eagle Point Toll Bridge. Likewise, a toll-free operation would attract the highest number of crossings from tourists wishing to experience the nostalgia and novelty of a ferry trip. At the Merrimac free ferry, this trip category appears to be a significant

portion of the total volume. The public relations impact of a free ferry on recreational attractions - particularly Stonefield Village - is another consideration. However, if the alternative of a toll charging ferry is chosen, certain assumptions can be made about the effect on the ferry's traffic potential.

In the case of local residents, the ferry service would afford significant savings in time and distance for those who would otherwise have to drive to the nearest bridge to cross the river. For example, on a trip between Cassville and Guttenberg the proposed ferry would save approximately 60 minutes and 45 miles over the best existing routes using the Prairie du Chien Bridge. Thus, these trips would undoubtedly use the ferry rather than the distant bridges, even if the fare were raised substantially above zero.

Much the same is likely to be true for most tourists. Tourists and other travelers who value time highly will not wish to take the proposed ferry, since for most it would not be part of their direct routes. However, those tourists attracted by the novelty and adventure of a ferry trip will also be willing to pay for this recreational activity. For this reason, a nominally priced ferry would still attract significant amounts of recreational and tourist travel.

Thus, tolls can be anticipated to have a minimal effect on both local and recreational and tourist travel - if they are kept at nominal levels. Intuitively, a maximum nominal fee would be 75 cents per crossing. Above that, significant reductions in the previous traffic estimates could be expected.

4. Energy Crisis. Because of recent events, it is necessary to analyze another alternative condition - the energy crisis. Changes in energy relationships have the most potential to affect the ferry traffic estimates, but the exact nature of this effect is also the most difficult to determine. Part of the reason for the uncertainty is that the energy crisis is a very recent event. Firm data on the precise degree of the crisis is lacking, and the manner in which travel habits will be changed is even more speculative.

Primary among these speculations regarding travel habits is the effect on recreation and vacation travel. It seems reasonable to assume longer-distance vacation and recreation travel would be sacrificed for the more essential work and shopping trips. But this may result in a corresponding increase in shorter-distance recreation and vacation travel as it appears likely urban dwellers will still want to spend their vacations away from home, although now probably at a shorter distance. Thus, recreation and vacation areas in proximity to urban areas may actually experience traffic increases during an energy shortage.

In spite of the uncertainties, some trends seem to be materializing. Currently, the Wisconsin Department of Transportation anticipates a 15% decrease in travel statewide during 1974. Travel is also forecasted to

remain very nearly at that level until about 1980. Beyond 1980, it is assumed that corrective action will have been taken and pre-crisis travel growth rates will be replicated.

The preceding forecasts are still tentative, awaiting more information from all levels. Because many questions do remain as to the precise way travel will be affected, the ferry traffic estimates were not adjusted to reflect the energy crisis at this time. However, prior to preparation of any final design plans the traffic estimates should be re-evaluated, hopefully in light of more accurate data.

The preceding alternative conditions were analyzed separately. They also may occur in combination. If that should happen the effect would be additive. For example, a 16 hour-a-day, seasonal schedule would reduce the base year estimate to 235 vehicles per day and the 1993 estimate to 490 vehicles per day.

PART III

FINDINGS AND CONCLUSIONS

The investigations conducted in this feasibility study found no insurmountable physical obstacles to the establishment of a ferry service at Cassville. A terminal on the Iowa flood plain would require rather extensive approach road construction and would also present potential environmental complications, but these problems are considered solvable by appropriate engineering and construction techniques. In contrast, a Cassville terminal would not involve an unusual construction or extensive approach roads, as several convenient sites exist.

A 9-month (mid-March to mid-December) operating schedule would appear to be the most practicable from a climatic as well as a fiscal standpoint. Record floods such as those experienced in 1951, 1965 and 1969 would interrupt ferry service, but spring runoff would not halt operations during a normal year. However, there is some potential for year-round operations at this location due to the warm water discharge from the generating plants.

All construction and operations would have to comply with the applicable laws and regulations. Since this would be an interstate operation and on a federal waterway, several different federal and state agencies would be involved.

The potential costs associated with establishing and operating a ferry service at Cassville were also analyzed. Capital costs - or the cost of right of way, approach road construction, terminal construction and the purchase price of a ferry vessel - were estimated at a total of $1,573,000. The majority of this total was for the causeway construction required for an Iowa approach road across the Mississippi and Turkey River flood plains. Annual operating costs of a ferry service at Cassville were estimated at $85,000. This estimate includes such items as salaries and fringe benefits, maintenance expenses, the cost of fuel and insurance costs.

Federal monies are theoretically available, if the ferry service could be considered a portion of the Great River Road or other federal project. Again, funds would have to be specifically appropriated for this purpose.

Among the benefits resulting from the establishment of a ferry service at Cassville is the enhancement of Stonefield Village, operated by the Wisconsin Historical Society (See Appendix D). Naturally, the primary benefit is the reduction of travel time for trans-river trips by residents of the Cassville-Guttenberg area.

While the estimated costs of this project probably are not of a magnitude that would seem to permanently eliminate the project from consideration, there are other factors which may mitigate against its immediate implementation. These present uncertainties created by the energy crisis

and the apparently higher priority of other projects in the state may make establishment of a ferry service at Cassville more feasible at some later time rather than in the immediate future. However, the on-going Great River Road study could result in further review of the compatibility of ferry service with the over-all objectives of this highway system if federal funds become available.

The second half of this feasibility study analyzed the traffic potential of a ferry service at Cassville. Based on information developed in previous studies, traffic count trends on the existing Mississippi River crossings at Dubuque and Prairie du Chien and other pertinent information, the potential traffic for a base year of 1973 was put at 300 vehicles per day. This estimate is a maximum and assumes optimum conditions. Because some of the optimum conditions might not be met, the effects of alternate assumptions were analyzed. For example, assumption of a 16 hour-a-day seasonal schedule reduced the base year estimated traffic to 235 vehicles per day.

A forecast of future traffic levels was also made. Considering past trends of traffic volume on the existing crossings along with forecasts of population and recreational activity, annual traffic usage of the proposed ferry was estimated to increase to 630 per day by 1993. Assumption of a 16 hour-a-day seasonal schedule reduced the 1993 estimate to 490 vehicles per day.

This investigation has revealed no insurmountable physical or operational circumstances which would prevent the establishment of a ferry service between Wisconsin and Iowa at Cassville. However, for such a ferry operation to be financially feasible, one of 2 alternative methods of public involvement probably would have to be considered: (1) One or both of the 2 states involved may have to subsidize the operation, if the ferry were privately owned and operated; or (2) The 2 states may have to enter into an interstate cooperative arrangement to construct and operate the ferry with public monies.

Under either of these financial arrangements, it will be necessary to answer certain legal questions regarding the use of public monies for such a project. For example, Iowa's state constitution prohibits the use of highway funds for any purpose other than for highways. Although Iowa has appropriated money for the construction of toll bridges, the statutory language governing the funding for this program refers only to the construction of toll bridges. It is doubtful that such funds could be used for providing any other type of river crossing, such as a ferry service. Before Iowa could enter into any subsidy or ownership arrangement with Wisconsin for the operation of a ferry facility, the legal effect of these and any related constitutional or statutory provisions would have to be thoroughly examined, preferably in close consultation with knowledgeable public officials in Iowa. (Appendix C contains a letter on this matter from an Iowa State Highway Official.)

Wisconsin constitutional and statutory provisions also would require careful examination before any final conclusion is reached on a ferry arrangement between the 2 states. For example, the Wisconsin state constitution contains provisions which may affect a possible interstate ferry operation. Under art. IV, s. 31 (3d), the Legislature is prohibited from enacting special or private laws for "authorizing persons to keep ferries across streams at points wholly within this state." (Emphasis added) It can be argued that this constitutional restriction does not appear to apply to general laws relating to ferries nor to laws relating to interstate ferry service.

It should be noted that since 1933, the state has, in fact, owned and operated the Merrimac Ferry across the Wisconsin River between the Columbia county terminus of STH 113 and the village of Merrimac in Sauk county. The ferry is operated by the state in conjunction with STH 113 and is considered a segment of that highway. (Appendix J contains a more detailed description of the history of the Merrimac Ferry.)

Article VIII, s. 10 of the Wisconsin constitution (the internal improvements clause) may be an obstacle to state operation of a ferry service at Cassville. However, the Wisconsin Supreme Court has recently enunciated a relatively broad and flexible rule in interpreting the internal improvement clause. (See State ex rel. Wis. Housing Finance Authority vs. Nusbaum (1973) 59 Wis. 2d 391.) It is not certain, considering the language of this decision, how restrictive art. VIII, s. 10 may be if the state decided to participate in the development and/or operation of a Cassville ferry. Also, there has been speculation that since the internal improvements prohibition applies only to the state, and not to local governmental units, it may be legally possible to channel state aid to a local unit of government to reimburse it for all or part of the cost of operating a ferry service.

Before any final decision is made on the feasibility of a ferry operation between Wisconsin and Iowa, further exploration of the constitutional and statutory arrangements in each state will be required. The legal factors needing extensive and conclusive analysis no doubt will vary, depending on the specific physical, operational and financial arrangements which are considered feasible for the establishment of a ferry service. Therefore, at such time as these arrangements may be developed, it is urged that there be intensive and joint study and review of the legal ramifications affecting both states.

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APPENDICES

APPENDIX A August 16, 1973

RESOLUTION REQUESTING FEASIBILITY STUDY
OF ESTABLISHING FERRY SERVICE BETWEEN
WISCONSIN AND IOWA

Whereas, all of southwestern Wisconsin, including Grant county, is becoming increasingly popular as a location for small industries, as an area for year-round sports and as a tourist mecca; and

Whereas, Grant county has many historical sites including Stonefield Village and the home of Nelson Dewey at Cassville, the Grant County Courthouse at Lancaster, St. Johns Mine at Potosi, First State Normal School built in 1853 at Platteville and the Boscobel Hotel; and

Whereas, the waters of the Mississippi River and its tributaries are popular fishing grounds, for both summer and winter fishing; and

Whereas, there are several public and private campgrounds in the county including Wyalusing State Park at Wyalusing and Nelson Dewey State Park at Cassville; and

Whereas, the public is developing an awareness of the out-of-doors and the environment, the need for a coordinated transportation system; and

Whereas, there is no means of crossing the Mississippi River between Prairie du Chien and Dubuque, Iowa - a distance of almost 75 miles; now, therefore, be it

Resolved, That a request be presented to the Highway Interim Committee of the Legislative Council, asking that a feasibility study be conducted of establishing ferry service between the states of Wisconsin and Iowa with one terminal at Cassville, Wisconsin.

Ray J. Eckstein

Ray J. Eckstein, Village President, Cassville

Richard Markus

Richard Markus, County Board Chairman, Grant County

APPENDIX B

U. S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

SUBJECT	FHWA NOTICE
Criteria for the Selection of the Route of the Great River Road for Study Purposes	N 5180.1 February 13,197

1. PURPOSE

To inform the affected offices of the Federal Highway Administration, the State, county, and city highway agencies of the criteria to be used for selecting the route of the Great River Road for study purposes, and to request the route be designated for study purposes.

2. BACKGROUND

Section 129 of the Federal-Aid Highway Act of 1973 (Public Law 93-87) requires the establishment of criteria for the location and construction or reconstruction of the Great River Road by the ten States bordering the Mississippi River.

3. CRITERIA

The Great River Road, a scenic and recreational highway along both sides of the Mississippi River from the Gulf of Mexico to Lake Itasca in Minnesota, shall:

a. Provide the user with the opportunity to view picturesque or interesting scenery en route as well as the opportunity to stop at unique features and activities. Provide roadside rest areas spaced conveniently along the highway either in conjunction with scenic viewing areas or not, including recreational facilities, educational and interpretive exhibits, and other appropriate facilities.

b. Provide within a scenic corridor highlights that follow a variety of experiences or themes - that of scenery, nature, history, geology, science, or man's use of the land.

c. Provide for the protection of the scenic corridor through direct acquisition of scenic, historic, and other areas, through the acquisition of scenic easements, and through the effective control of signs, displays and devices, and development inconsistent with the nature and purpose of the highway.

(more)

Distribution: Headquarters
Regions: 4, 5, 6, and 7
Divisions, Arkansas, Illinois, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Tennessee and Wisconsin

OPI: HHO-13

d. Provide convenient access, particularly to the larger population centers, with connections to other Federal-aid highways and preferably with the Interstate. Provide access to, and appropriate development of, areas of historical, archaeological and scientific interest; and furnish the highway user access to local services consistent with the purpose of the highway.

e. Provide a safe, adequate roadway with appropriate control of access, marked with uniform identifying signs.

f. Provide for the free public use of any highway, bridge, or tunnel constructed under this memorandum. No fees shall be charged for the use of any facility constructed under this memorandum.

4. ACTION

a. Using this criteria, the ten Mississippi River States shall select for study purposes and for the apportionment of Federal funds to the States, the route of the Great River Road. To the maximum extent possible the route should follow existing roads.

b. For the purpose of selecting a study route, a scenic and recreational highway is an arterial highway generally within a scenic corridor of parkway-like development having significant scenic, historical and recreational features.

c. The proposed study location shall be marked on strips of county maps of a scale, 1 inch to the mile, or 1 inch to 2 miles, whichever scale map the State is using, and submitted to Washington Headquarters, HHO-13, by May 1, 1974. The State should show, by using an appropriate symbol or note, any segments that currently meet the Great River Road criteria. The state should also submit any construction and right-of-way cost data that the State has developed which would be helpful to our preparing a report, as well as any comments concerning the criteria.

s/ Ross W. Kraiser
For: H. A. Lindberg
Associate Administrator for
Engineering and Traffic Operations

Iowa a place to grow

THE IOWA STATE HIGHWAY COMMISSION

· 515-296-1101 · AMES, IOWA 50010

JOSEPH R. COUPAL, JR.
Director

H. E. GUNNERSON
Chief Engineer

January 22, 1974

REFER TO: 700

Mr. D. V. Revello, Chief
Traffic Planning Section
Wisconsin Department of Transportation
Division of Planning
4802 Sheboygan Avenue
Madison, Wisconsin 53702

Dear Mr. Revello:

I have reviewed your letter of January 15 regarding the establishment of a ferry service between Wisconsin and Iowa with one terminal at Cassville, Wisconsin. The Iowa State Highway Commission is interested in serving the transportation needs and specifically the highway transportation needs of Iowa.

The feasibility of the project has one factor that we would have to consider in the matter of subsidizing part of the costs of this ferry operation. The extent and the how of subsidization would depend upon many questions. One of the questions that would have to be resolved is the constitutional prohibition in Iowa on the use of highway funds for other than highway purposes. A Toll Bridge Act in Iowa is limited to the construction of toll bridges rather than mention of any other crossings. These questions would be reviewed as well as the feasibility study you are working on to determine the possibility of subsidizing this ferry operation.

Please keep us informed as the study progresses so that we may react in an appropriate manner.

Very truly yours,

Raymond L. Kassel
Deputy Chief Engineer -
Planning

RLK/ty

APPENDIX D

THE STATE HISTORICAL SOCIETY OF WISCONSIN

816 STATE STREET / MADISON, WISCONSIN 53706 / JAMES MORTON SMITH, DIRECTOR

Historic Sites and Markers Division

January 22, 1974

Mr. James Lovo
Division of Planning
901 Hill Farms
4802 Sheboygan Avenue
Madison, Wisconsin 53702

Dear Mr. Lovo:

The State Historical Society is working cooperatively with the Department of Natural Resources in developing the historical assets in Wisconsin's state parks, not only for their educational values but also for their tourist attraction benefits. One of the most important of these is Stonefield Village and Nelson Dewey State Park at Cassville.

During the last five years, our historic sites at Cassville have attracted approximately 40,000 visitors each season (May 1 through October 31) and at the end of 1973 had drawn a total of 313,268 people to that community.

A ferry at Cassville would open the southwest Wisconsin area to a portion of Iowa that presently has to drive out of the way to Dubuque or Prairie du Chien to cross the Mississippi. The ferry would add another attraction in itself, as it offers a service that is becoming unique in the country.

All of southwest Wisconsin would benefit from the establishment of the ferry as new traffic patterns emerge to use it. The increase in tourism would be of particular benefit to service stations, food outlets, motels and tourism related businesses which in turn provide employment opportunities for the localities in which they are located.

Sincerely,

Raymond S. Sivesind
Director
Historic Sites and Markers Division

RSS:kq

APPENDIX E

(Copy)

C I T Y O F D Y E R S V I L L E

Gustave C. Wilhelm, Mayor

Dyersville, Iowa 52040

August 16, 1973

To Whom It May Concern:

The City of Dyersville, Iowa considers the establishment of a ferry crossing the Mississippi River between Cassville, Wisconsin and the Turkey River junction in Iowa as a necessary alternative to the present bridges at Dubuque and Prairie Du Chien.

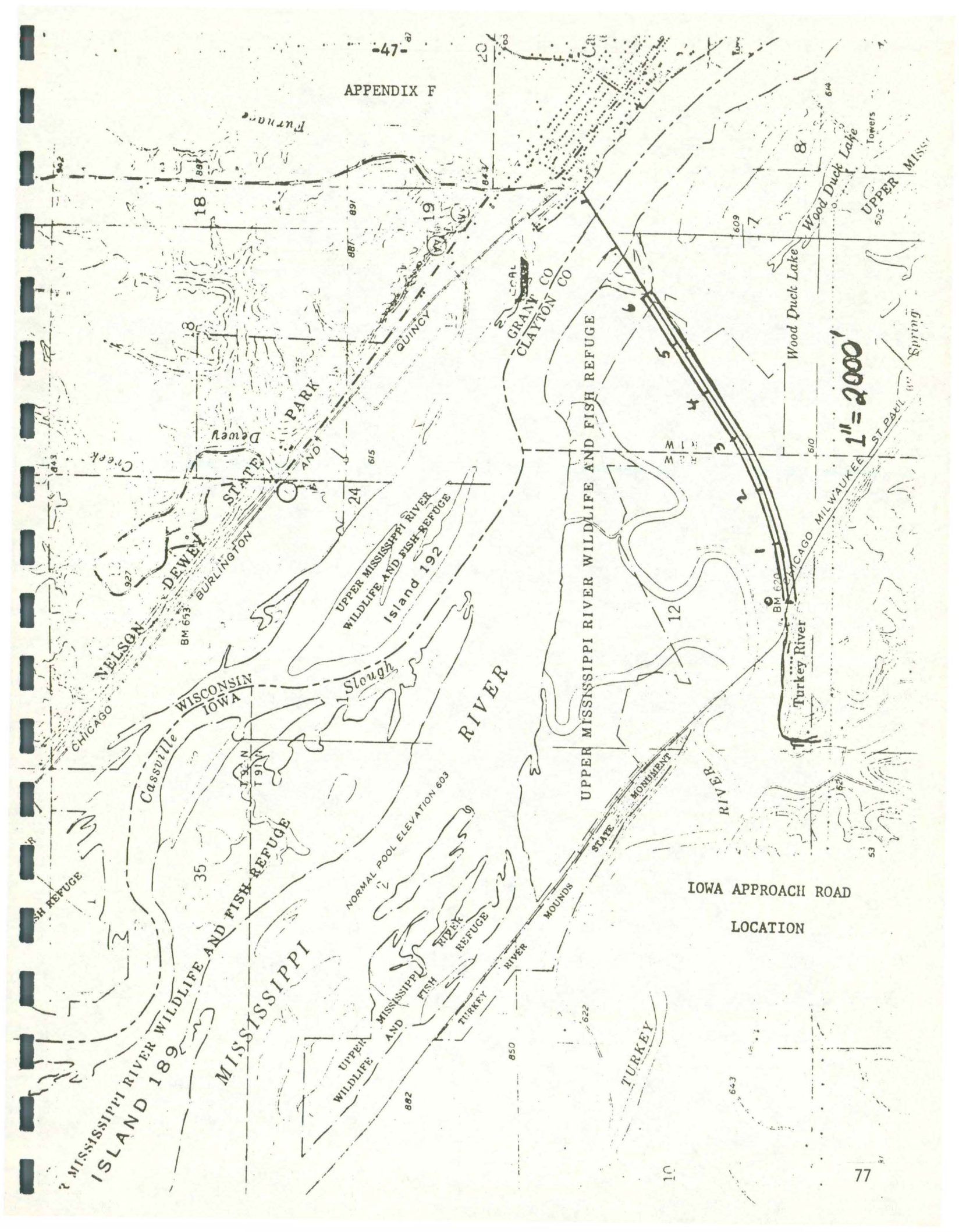
The proposed ferry would mean a substantial savings for our motorists traveling to Madison and other points in eastern Wisconsin, and such a ferry would effectively tie the Great River Road together on both sides of the Mississippi.

Renewed ferry service would restore a significant piece of history to the area which would be enjoyed by present and future generations.

Very truly yours,

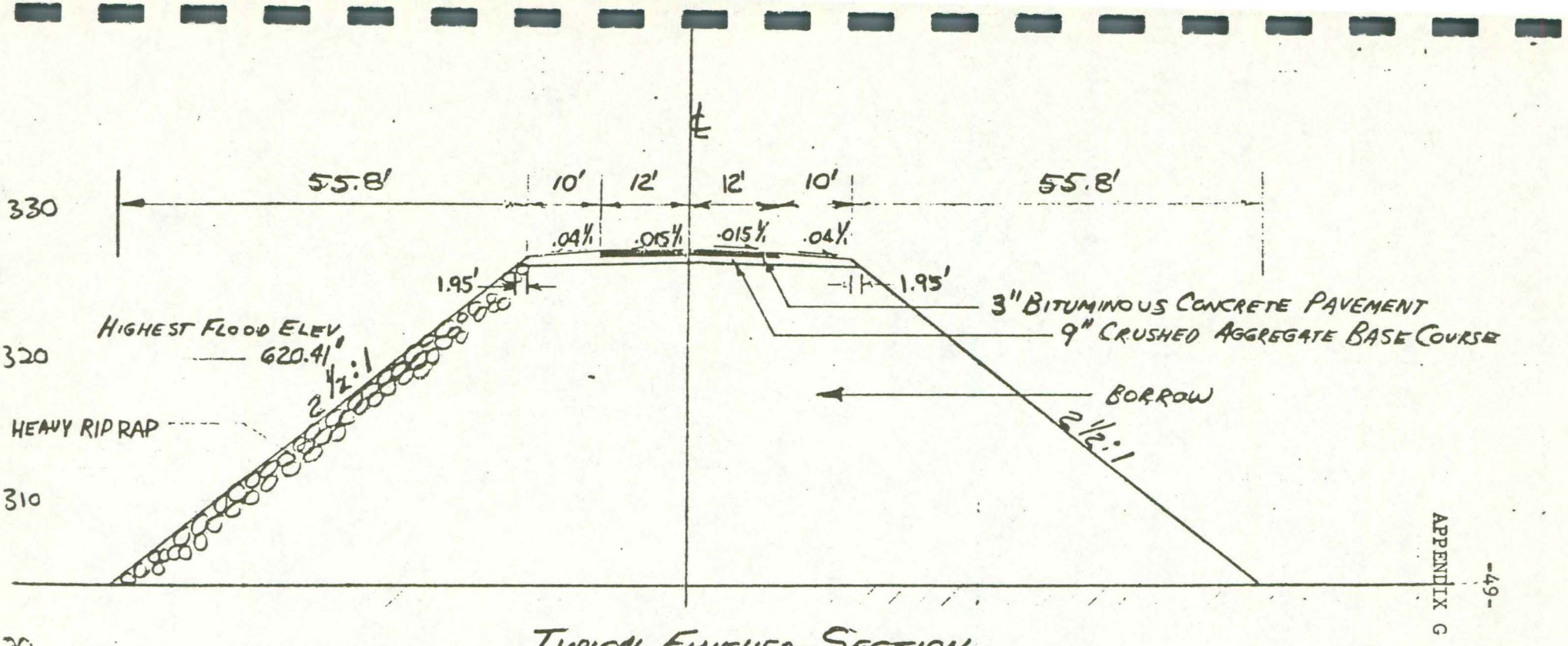
s/ William J. Baum
Administrative Assistant

APPENDIX F



IOWA APPROACH ROAD

LOCATION



TYPICAL FINISHED SECTION

3" BITUMINOUS CONCRETE PAVEMENT = $.25' \times 24' \times 100' \times \frac{144\ lbs}{ft^3} \times \frac{1\ TON}{2000\ lb} = 43.2\ \frac{TONS}{STA}$

9" CRUSHED AGGREGATE BASE COURSE = $\left[(0.5' \times 12) + \left(\frac{1.0+.75}{2}\right) \times 10 + \left(\frac{1.95 \times .78}{2}\right)\right] \frac{3 \times 100}{27} \times \frac{2\ TON}{yd^3} = \frac{229.8\ TONS}{STA}$

BORROW MATERIAL = $\left[\left(\frac{46.0 + 153.6}{2}\right) \times 22.0'\right] \times \frac{100}{27} \times 1.33 = \frac{10\,815\ yd^3}{STA}$

HEAVY RIP RAP = $59.7' \times 2.0 \times \frac{100}{27} = 442.2$

BIT. MATER'L FOR SURFACE = $43.2\ \frac{TONS}{STA} \times .06 = 2.59\ \frac{TONS}{STA}$

[Note: Figures relate to material needed to construct 1 unit station or 100' of roadway.]

TYPICAL FINISHED SECTION

OF

IOWA APPROACH ROAD

APPENDIX H

IOWA APPROACH ROAD ESTIMATE
TOTAL QUANTITIES*

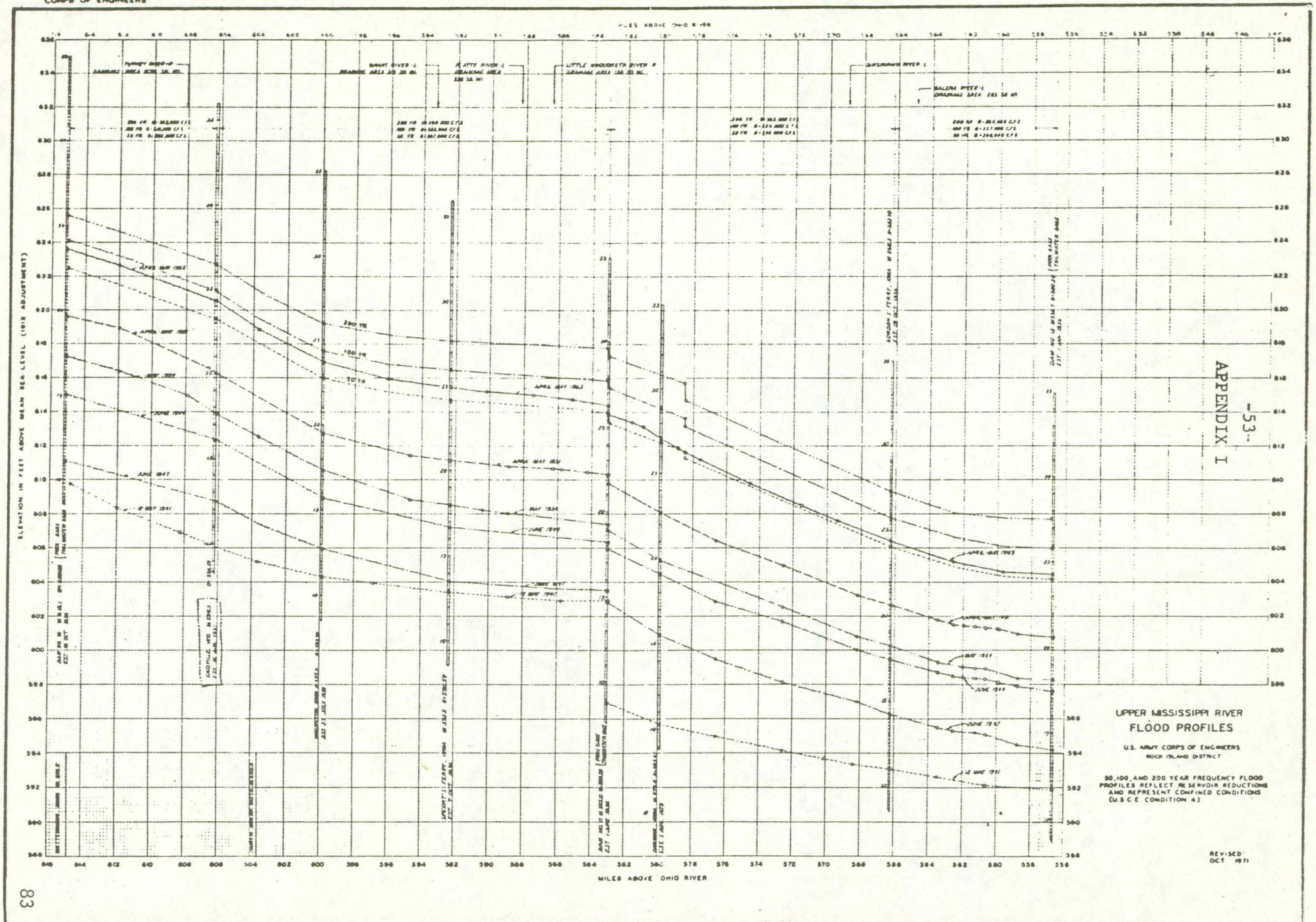
Volume

3" Bit. Conc. Pave.	= 43.2 Tons/Station x 60 Stations	= 2,600 Tons
9" Crushed Aggregate	= 229.8 Tons/Station x 60 Stations	= 14,000 Tons
Borrow	= 10,815 $Yds.^3$/Station x 60 Stations	= 650,000 $Yds.^3$
Heavy Rip Rap	= 442.2 $Yds.^3$/Station x 60 Stations	= 27,000 $Yds.^3$
Bit. Matl. for Surface	= 2.59 Tons/Station x 60 Stations	= 160 Tons

Cost

	Quantity	Unit	Unit Price	Amount
Bit. Concrete Pave.	2,600	Ton	$10.00	$26,000
Crushed Aggr. Base Course	14,000	Ton	2.50	35,000
Borrow Excavation	650,000	Cyd.	0.75	487,500
Heavy Rip Rap	27,000	Cyd.	20.00	540,000
Bit. Matl. for Surface	160	Ton	60.00	9,600
			Sub-Total	$1,098,100
			Design	60,000
			Engineering & Const.	110,000
			Total	$1,268,100

*1 Station = 100'


MILES ABOVE OHIO R. 198
ELEVATION IN FEET ABOVE MEAN SEA LEVEL (1912 ADJUSTMENT)
MILES ABOVE OHIO RIVER
BALLOM RIVER-L
DRAINAGE AREA 185 SQ MI
UPPER MISSISSIPPI RIVER
FLOOD PROFILES
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
50, 100, AND 200 YEAR FREQUENCY FLOOD PROFILES REFLECT RESERVOIR REDUCTIONS AND REPRESENT CONFINED CONDITIONS (U.S.C.E. CONDITION 4.)
REVISED OCT 1971

APPENDIX J

THE MERRIMAC FERRY

CHRONOLOGY

1844 Charter granted to a Chester Matson to provide ferry service. Subsequently operated as a toll service.

1911 One of first recommendations of newly organized State Highway Commission was to construct a bridge at Merrimac.

1913 Allegedly, legislation passed and approved by Governor McGovern authorizing construction was found unconstitutional. (We have not substantiated this as fact.)

1924 Columbia and Sauk counties took over operation of ferry, renamed Colsac I, ran it as a toll facility.

1928 Sauk County Board petitioned, in accordance with statutes, for bridge; Commission subsequently conducted hearing in accordance with statutes, and petition was denied by split vote of Commission in March.

1933 Commission assumed responsibility of ferry, abolished toll, has since operated it toll-free.

1941 Sauk and Columbia counties petitioned as provided by statutes, Commission minutes indicate setting date for hearing, but no record found, at this time, of action.

1942 According to newspaper accounts and unofficial references (but not substantiated) Federal government proposed to pay half the cost of a bridge to improve the area connections to Badger Ordnance. Bridge Section records contain plans for an 1,800-foot-long, 26-foot-wide structure that would have cost between $250,000 and $300,000. Newspaper accounts say the late Governor Heil vetoed the project because he felt the federal funds should cover the entire cost. (This may be largely rumor.)

1958 Bridge Section says a more sophisticated structure, still only 26-feet-wide, however, was discussed to a point where costs were estimated at about $750,000, but no plans were made.

1963 Colsac II was placed into service. It cost about $77,000 to put into service; now costs about $50,000 annually to operate.

1967 Proposed construction discussed by Commission according to official minutes. Decision was to discuss it later.

1968 Congressional and citizen correspondence in file.

1969 "Accelerated Bridge Program" presentation lists Merrimac bridge among those needed, estimated cost at $1,360,000, but did not include it among the 24 priority structures.

1970 Modifications for holding area, estimated to cost about $125,000, announced. South approaches improved. (District I still to supply cost of this work.)

Press reports indicated that ferry moves about 1,200 cars on peak days; about 150,000 to 200,000 in a single season.

1971 Improvements of North Approaches announced as part of 1972 construction program. Grading, base course, bituminous surfacing estimated at $35,000.

1972 Commission, in March, included wayside development and historical Marker at Ferry site. Estimated to cost $20,000, shared equally by state roadside improvement and LAWCON funds.

Bridge section estimates modern, 30-foot bridge, would cost between $1.5 and $2 million.

The above information supplied by the Department of Transportation, Division of Highways

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3. 1970 Grant County 701 Travel Survey, Grant County Planning Office, 1970.

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5. Preliminary Engineering Report on Mississippi River Toll Bridge Near Cassville, Wisconsin. Howard, Needles, Tammen & Bergendoff--Wilbur Smith & Associates, June, 1968.

6. Preliminary Planning Report No. 1 for Cassville, Wisconsin, Wisconsin Department of Local Affairs and Development, September, 1969.

7. Rules and Regulations for Small Passenger Vessels, Department of Transportation, United States Coast Guard, December, 1971.

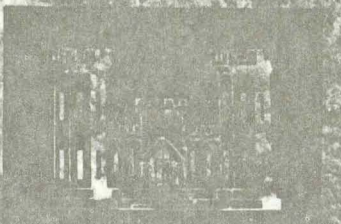
8. Traffic Analysis for a Potential Bridge Crossing of the Mississippi River at or near Cassville, Wisconsin. Wisconsin State Highway Commission, January, 1967.

9. Wisconsin Outdoor Recreation Plan - 1972, Wisconsin Department of Natural Resources, 1972.

10. Wisconsin Population Projections - 2nd Ed., Wisconsin Department of Administration, March, 1972.

EP 1145-2-1
1 OCT 74

Applications for Department of the Army Permits for Activities in Waterways



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY
Office of the Chief of Engineers
Washington, D.C. 20314

EP 1145-2-1

DAEN-CWO-N

Pamphlet
No. 1145-2-1

1 October 1974

Civil Regulatory Functions

APPLICATIONS FOR DEPARTMENT OF THE ARMY PERMITS FOR ACTIVITIES IN WATERWAYS

1. **Purpose.** This pamphlet is designed to provide guidance to the general public in applying for Department of the Army permits for activities in navigable waters, or ocean waters.

2. **Applicability.** This pamphlet is applicable to all field operating agencies having civil works responsibilities.

3. **General.** This pamphlet should be made available to the general public as may be required.

FOR THE CHIEF OF ENGINEERS:

RUSSELL J. LAMP
Colonel, Corps of Engineers
Executive

7 Appendixes
APP A – Applicable Laws
APP B – Application Form and Blank Drawing
APP C – Drawing Requirements and Checklist
APP D – Sample Drawings
APP F – Division and District Boundary Map
APP G – District Engineer's Addresses

CONTENTS

1. INTRODUCTION

a. The purpose of this pamphlet is to furnish general information on the Department of the Army permit programs and instructions for submitting an application to the Corps of Engineers for a Department of the Army permit for work or structures in navigable waters of the United States, the discharge of dredged or fill material into navigable waters, or the transportation of dredged material for the purpose of dumping into ocean waters. Federal laws prohibit such activities unless the activity is authorized by a Department of the Army permit. These laws include the River and Harbor Act of 1899, the Federal Water Pollution Control Act Amendments of 1972, and the Marine Protection, Research and Sanctuaries Act of 1972. In addition, other laws are directly related to the procedures for processing permit applications. These include the Fish and Wildlife Coordination Act of 1958, the National Environmental Policy Act of 1969, and the Coastal Zone Management Act of 1972. See Appendix A for a more detailed discussion of these laws. Rules and regulations governing the Department of the Army permit programs are listed in Title 33, Section 209.120 of the Code of Federal Regulations. A copy may be obtained by writing to the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

b. The concept of what constitutes "navigable waters of the United States" has become very broad through administrative and judicial interpretations. In the administration of the navigation laws, the Corps considers that permits are required for work or structures in all tidal areas (channelward of the mean high waterline on the Atlantic and Gulf Coast and the Great Lakes and channelward of the mean higher high water on the Pacific Coast); in the ocean and Gulf waters to the outer limit of the continental shelf; and in all rivers, streams, and lakes which have evidence of past, present, or potential use for interstate or foreign commerce. Where a river, lake, or other non-tidal water body is found to be subject to the permit laws, the lateral limit of jurisdiction extends to a line on the shoreline reached by the ordinary high waterline. In addition, permits may be required for activities landward of the mean or ordinary high waterline if such work affects the navigable capacity of the water body. If there is any doubt as to whether or not the location of a proposed activity is subject to the permit laws, an inquiry should be directed to the District Engineer or his representative having jurisdiction over the location. Survey data submitted to indicate a lack of Corps jurisdiction should be certified by a registered engineer or land surveyor.

2. ACTIVITIES REQUIRING A PERMIT

Activities requiring a Department of the Army permit include but are not limited to piers; wharfs; docks; dolphins, mooring cells; excavation; commercial sand and gravel dredging; filling; disposal of dredged material; riprap and revetments; retaining walls; groins; breakwaters; levees; wires or cables over the water; pipes, cables and tunnels under the water; fishing reefs; clearing; channel and upland canal connections; intake and outfall pipes and/or structures; navigational aids (except those established by the U. S. Coast Guard); platforms; ramps; signs; fences and the transportation of dredged material for ocean dumping. Permits are required from the U. S. Coast Guard for bridges, causeways, and overhead pipelines. Permits for discharges of other than dredged or fill material must be obtained from the appropriate water pollution control authorities. Upon request, the District Engineer will furnish applicants general information and appropriate addresses for submission of applications subject to the discharge and bridge permit programs.

3. PERMIT APPLICATIONS

a. *General:* One completed copy of ENG Form 4345 shall be submitted to the District Engineer having jurisdiction over the location at which the activity is proposed. ENG Form 4345 shall be accompanied by the original(s) and two copies of detailed plans for the activity. The plans shall conform to the requirements of Appendix C and generally follow the format of the sample drawings included in this pamphlet as Appendix D. The blank application and drawing forms included in this pamphlet as Appendix B may be used as working drafts or removed and submitted. Additional copies of the application form may be obtained from the District Engineer. Questions and answers concerning the permit requirements are included herein as Appendix E. Appendix F shows Corps District

boundaries and Appendix G gives the mailing addresses of the District Engineers and a telephone number for obtaining permit information.

b. *Government-owned Land:* If the proposed activity involves the use of Government-owned land or land over which the Governments own an easement or other real estate interest, the applicant should contact the official in charge of the Federal project prior to submitting a permit application to determine if the Federal lands or easement areas can be made available for the intended use. The application in this case should be submitted to the official in charge of the Federal project. All other applications should be submitted to the District Engineer in charge of the location of the proposed activity.

c. *Discharges:* If the activity may result in a discharge into navigable waters, certification from the appropriate water pollution control authority that applicable effluent limitations and water quality standards will be met must be obtained in accordance with Section 401 of the Federal Water Pollution Control Act Amendments of 1972 before the permit can be issued. Also, the identification number of any required application for a discharge permit assigned by the appropriate water pollution control agency or a copy of that application shall be included. Federal agencies are exempt from the Section 401 certification requirement but not from the requirement to obtain a discharge permit. Examples of activities requiring certification include the deposit of fill or dredged material in navigable waters, outfall pipes, and the connection of canals and basins to navigable waters. If in doubt the applicant should consult with the District Engineer's office on the need for certification. Requests for certification should be sent directly to the appropriate water pollution Control authority with a copy of the request furnished to the District Engineer.

d. *Dredging:* If the activity includes dredging in navigable waters of the United States, the application must include a description of the type, composition, and quantity of the material to be dredged, the method of dredging and the site and plans for disposal of the dredged material.

e. *Fills and Platforms:* If the activity includes the construction of a fill or pile supported or floating platform, the application must specifically describe the structures to be erected on the fill or platform.

f. *Boating Facilities:* If the activity includes the construction of boating facilities, the application should include a description of the types of vessels that will use the facility and whether sewage pump out and/or vessel refueling facilities will be provided.

g. *Coastal Zone Management Areas:* If the activity will be located within a coastal zone of a state having a coastal zone management program approved by the Secretary of Commerce, the applicant must certify that his activity complies with the state's coastal zone management program.

h. *Marine Sanctuary Areas:* If the activity will be located within a marine sanctuary established by the Secretary of Commerce, the application must include a copy of the certification from the Secretary of Commerce that the proposed activity is consistent with the purposes of Title III of the Marine Protection Research and Sanctuaries Act of 1972.

i. *Fees:* If the activity includes the discharge of dredged material or the placement of fill material in the navigable waters or the transportation of dredged material for the purpose of dumping it in the ocean waters, the application must be accompanied by a fee of $100 for quantities exceeding 2,500 cubic yards and $10 for quantities of 2,500 cubic yards or less. Federal, State and local governments are excluded from this fee requirement. All other types of permit applications are exempt from any fee requirements. Checks should be made payable to the Treasurer of the United States.

j. *Hazardous Materials:* If the activity includes the handling, storage, or transportation of petroleum and/or other hazardous materials, a spill contingency plan should be submitted with the application.

k. *Environmental Impact Statements:* If the District Engineer believes that granting the permit may be warranted but that the proposed activity would have a significant environmental impact, an Environmental Impact Statement will be prepared prior to final action on the permit application as required by Section 102(2)(c) of the National Environmental Policy Act of 1969. The Corps will prepare the EIS but the applicant will be required to submit data and may be assessed for preparation expenses.

l. *Additional Information:* In addition to the information required above, the applicant may be required to furnish such additional information or plans as may be necessary to assist in the evaluation of the application. This information may include an environmental assessment, possible alternate methods and cites, analyses of materials to be discharged into navigable or ocean waters, and other information as may be necessary for a complete evaluation of the application or preparation of an environmental impact statement.

4. HOW APPLICATIONS ARE PROCESSED

a. *Public Notice:* After the District Engineer determines that the application is in proper order, a public notice (usually 30 days) is issued to all known interested individuals, groups, and governmental agencies. Substantive comments received in response to the public notice are furnished the applicant to afford him an opportunity to resolve or rebut the comments or objections.

b. *Public Meetings and Hearings:* The District Engineer may hold a public meeting to afford interested parties full opportunity to express their views and to develop pertinent data to evaluate the permit application. In addition, the District Engineer must hold a public hearing when requested by any party who may be affected by issuance of a permit if the proposed activity involves the disposal of dredged or fill material. In such cases arrangements will be coordinated with the applicant and a 30-day advance notice issued to the public.

c. *Evaluation Factors:* The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accure from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered: among those are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use classification, navigation, recreation, water supply, water quality and, in general, the needs and welfare of the people. It is emphasized that if a proposed activity is to be performed in valuable wetlands, District Engineers will evaluate it to determine whether it is a necessary alteration, and the unnecessary alteration or destruction of these wetlands will be discouraged as being contrary to the public interest. In determining whether the alteration is necessary, the District Engineer will primarily consider whether the proposed activity is dependent on the wetland resource and whether feasible alternative sites are available. No permit will be granted unless its issuance is found to be in the public interest.

d. *Timing:* If there are no substantive objections to the proposed activity and the necessary state and local approvals are obtained, a permit can usually be issued within 60 to 90 days after receipt of a completed application. However, if the application becomes controversial, a public hearing or public meeting is necessary, or an environmental impact statement must be prepared, the processing of the application could take up to one year or more. Therefore, it is important that permit applications be submitted well in advance of the date that work is proposed to commence.

5. STATE AND LOCAL APPROVALS

It is the applicant's responsibility to determine what State and local authorizations are required for the proposed activity. The District Engineer's staff will provide the applicant with known information on local and State regulatory programs. Although it is preferable to obtain local and State approvals before applying to the Corps, applications will be accepted and processed simultaneously but will not be issued until the required State and local approvals are obtained. If local and/or State authorizations are denied and procedures for reconsideration exist, reasonable time not to exceed 90 days will be allowed for the applicant to attempt to resolve the problem. If the State or local denial of authorization cannot be resolved the application for a Department of the Army permit will be denied.

6. REVISION OF PLANS

District Engineers may approve revised plans for proposed activities already authorized by a permit. Notice of the revised plans will be sent to all parties of interest before approval can be granted, unless the revision is minor and clearly not adverse to the public interest.

7. TRANSFER OF PERMITS

Permits express the assent of the Federal Government so far as concerns the public rights of navigation and the general public interest. Although issued to a specific party, the assent is not limited to execution of the work by the party and the permit may be availed of by the assignees or purchasers of the property affected, provided the terms of the permit are strictly complied with. Notification of the transfer and the agreement of the new owner to comply with the permit requirements must be furnished to the District Engineer in writing.

8. INSPECTION OF WORK

District Engineers will inspect all work authorized under permits and will require that the work be conducted and executed in conformance with the approved plans and conditions. Such inspections as are necessary for this purpose are made on timely occasions during construction, and notices and instructions will be given permittees to insure that they do not depart from the approved plans. In unusual cases the permittee may be required to bear the inspection expenses.

9. TIME LIMITS FOR CONSTRUCTION

A reasonable period of time, based on the estimate given in the application form, will be allowed for the start and completion of the work covered by the permit. It is very important that the work be completed within the time specified since it may not be a routine matter to grant a time extension. However, should an extension be needed, a written request should be submitted at least 6 months prior to expiration, to allow time for whatever coordination and processing may be required. If the authorized work is not completed within the specified time, a new application must be submitted and new authorization obtained before work can recommence. Permits for structures and fills, once completed, are valid indefinitely, unless otherwise conditioned, as long as the structure or fill remains in place and conforms to the original authorization.

10. MAINTENANCE

With the exception of maintenance dredging, works constructed under a Department of the Army permit must be maintained in good condition and no further authorization is required for routine maintenance. However, major renovation or a change in the size or type of structure must be authorized. Permits for works requiring periodic maintenance dredging will authorize maintenance dredging for a specified time which will not exceed 10 years. The permittee must give advance notice to the District Engineer each time maintenance dredging is performed. A revalidation (or extension) should be requested at least 6 months prior to the expiration date set forth in the permit.

11. POWER TRANSMISSION LINES

Department of the Army permits are required for all power lines crossing navigable waters of the United States unless those lines are part of a water power project subject to the regulatory authorities of the Federal Power Commission.

In the interest of safety for transmission lines over navigable waters of the United States, the following clearances are required:

Nominal system voltage, KV	Clearance (ft) above clearance required for bridges
115 and below	20
138	22
161	24
230	26
350	30
500	35
700	42
750-765	45

The above clearances are based on the low point of the line under conditions which produce the greatest sag. Clearances for communications lines, steam gaging cables, ferry cables, and other aerial crossings are usually required to be a minimum of ten feet above clearances required for bridges. Greater clearances will be required if the public interest so indicates.

APPENDIX A

APPLICABLE LAWS

The principal laws administered by the Corps of Engineers in regulating structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into navigable waters, and the transportation of dredged material for the purpose of dumping into ocean waters are as follows:

Section 9 of the River and Harbor Act approaved March 3, 1899 (30 Stat. 1151; 33 U.S.C. 401) prohibits the construction of any dam or dike across any navigable water of the United States in the absence of Congressional consent and approval of the plans by the Chief of Engineers and the Secretary of the Army. Where the navigable portions of the water body lie wholly within the limits of a single state, the structure may be built under authority of the legislature of that state, if the location and plans or any modification thereof are approved by the Chief of Engineers and by the Secretary of the Army.

Section 10 of the River and Harbor Act approved March 3, 1899 (30 Stat. 1151; 33 U.S.C. 403) prohibits the unauthorized obstruction or alteration of any navigable water of the United States. The construction of any structure in or over any navigable water of the United States, the excavation from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters are unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. The authority of the Secretary of the Army to prevent obstructions to navigation in the navigable waters of the United States was extended to artificial islands and fixed structures located on the outer continental shelf by Section 4 of the Outer Continental Shelf Lands Act of 1953 (67 Stat. 463; 43 U.S.C. 1333 (f.)).

Section 11 of the River and Harbor Act approved March 3, 1899 (30 Stat. 1151; 33 U.S.C. 404) authorizes the Secretary of the Army to establish harbor lines channelward of which no piers, wharfs, bulkheads, or other works may be extended or deposits made without approval of the Secretary of the Army. Regulations have been promulgated relative to this authority and published as Title 33 of the Code of Federal Regulations, Section 209.150. By policy stated in those regulations effective May 27, 1970, harbor lines are guidelines only for defining the offshore limits of structures and fills insofar as they impact on navigation interests. Permits for work shoreward of those lines must be obtained in accordance with Section 10 of the same Act, cited above.

Section 12 of the River and Harbor Act approved March 3, 1899 (30 Stat. 1151; 33 U.S.C. 406) provides for penalties of up to $2500 and/or one year imprisonment for violation of the Act as well as removal of unauthorized structures.

Section 13 of the River and Harbor Act approved March 3, 1899 (30 Stat. 1152; 33 U.S.C. 407) provides that the Secretary of the Army, whenever the Chief of Engineers determines that anchorage and navigation will not be injured thereby, may permit the discharge of refuse into navigable waters. In the absence of a permit such discharge of refuse is prohibited. While the prohibition of this section, known as the Refuse Act, is still in effect, the permit authority of the Secretary of the Army has been superseded by the permit authority provided the Administrator, Environmental Protection Agency, under Sections 402 and 405 of the Federal Water Pollution Control Act (PL 92-500, 86 Stat. 816).

Section 14 of the River and Harbor Act approved March 3, 1899 (30 Stat. 1152; 33 U.S.C. 408) provides that the Secretary of the Army on the recommendation of the Chief of Engineers may grant permission for the temporary occupation or use of any sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the United States. This permission will be granted by an appropriate real estate instrument in accordance with existing real estate regulations.

Section 1 of the River and Harbor Act of June 13, 1902 (32 Stat. 371; 33 U.S.C. 565) allows any persons or corporations desiring to improve any navigable river at their own expense and risk to do so upon the approval of the plans and

specifications by the Secretary of the Army and the Chief of Engineers. Improvements constructed under this authority, which are primarily in Federal project areas, remain subject to the control and supervision of the Secretary of the Army and the Chief of Engineers.

Section 404 of the Federal Water Pollution Control Act (PL 92-500, 86 Stat. 816) authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into the navigable waters at specified disposal sites. The selection of disposal sites will be in accordance with guidelines developed by the Administrator of the Environmental Protection Agency (EPA) in conjunction with the Secretary of the Army. Furthermore, the Administrator can prohibit or restrict the use of any defined area as a disposal site whenever he determines, after notice and opportunity for public hearings, that the discharge of such materials into such areas will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas.

Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (PL 92-532, 86 Stat. 1052) authorizes the Secretary of the Army to issue permits, after notice and opportunity for public hearings, for the transportation of dredged material for the purpose of dumping it in ocean waters. However, similar to the EPA Administrator's limiting authority cited above, the Administrator can pervent the issuance of a permit under this authority if he finds that the dumping of the material will result in an unacceptable adverse impact on municipal water supplies, shellfish beds, wildlife, fisheries, or recreational areas.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
1735 BALTIMORE
KANSAS CITY, MISSOURI 64108

May 12, 1977

Mr. G. W. Anderson, Director
Office of Program Management
Department of Transportation
Planning and Research Division
826 Lincoln Way
Ames, Iowa 50010

Dear Mr. Anderson:

Reference is made to your May 4, 1977, letter on the establishment of ferry service crossing the Mississippi River at Guttenberg, Iowa. Not enough information was presented in your letter for us to determine the extent of permits that may be required.

If the project will involve construction of a fill below the high water line of the Mississippi River, a Section 404 permit will be required from the Corps of Engineers. The permit will be issued in accordance with the Environmental Protection Agency guidelines for the disposal of dredged and fill material.

If the project will involve a discharge of wastewater, a National Pollutant Discharge Elimination System (NPDES) permit will be required.

As plans for the proposed activity become more clear, please contact Mr. Robert Koke of the Federal Activities Program (816-374-2921) for assistance in meeting the necessary Environmental Protection Agency regulations.

Sincerely yours,

Charles V. Wright

Charles V. Wright
Acting Regional Administrator

Form 6000
2-75 H-2875

IOWA DEPARTMENT OF TRANSPORTATION

To Office Program Management Date May 13, 1977

Attention Gus Anderson Ref. No. 095

From Dave Marshall DM

Office River Division

Subject Guttenberg/Cassville Proposal

The three vessels will require one licensed operator--"Operator of a mechanically propelled passenger vessel"--or a higher grade license such as Ocean Operator, Master, Mate, or Pilot. A deckhand is required as a second crew member.

Wages for crew:	Operator	$56/8 hrs.	$112/16 hrs.
	Deckhand	$24/8 hrs.	$ 48/16 hrs.

Crew cost for operation of two boats for 16 hours per day would be $320.

DJM:vh

Additional Information

A. Manning.

Only licenses which authorize service on inspected passenger vessels may be substituted for an operator's license. Some licenses restrict operation to specific bodies of water or river segments.

Barge Name	Maximum # of Passengers	Crew Required	Last date drydocked for Coast Guard inspection.
Letetia	68	2	February, 1976
#3	99	2	1973 (Must be drydocked, surveyed, inspected, external and internal exam.)
M. V. Shepard	78	2	January, 1977

Union pay scales are:

Master	$120/12 hrs.
Mate	$72/12 hrs.
Pilot	$80/12 hrs.
Operator	$84/12 hrs.
Deckhand (Experienced)	$60-65/12 hrs.
Deckhand (Inexperienced)	$35-60/12 hrs.

B. Rules and regulations for the boats and barges.

1. Boats: M. V. Sheplar and M. V. Volturno must meet rules and regulations for uninspected vessels - subchapter C (CG-258) May 1, 1970.

2. Barges: Letetia, #3, and M. V. Shepard must meet the rules and regulations for small passenger vessels (under 100 gross tons) subchapter T (CG-323) September 1, 1973.

The Coast Guard will aid in evaluating compliance with these regulations - the barges must be inspected and certified. If no alterations have been made since the equipment went out of operation, they should meet all regulatory requirements.

C. Corps of Engineers.

The Army Corps of Engineers will become involved if construction along the river bank or in the river is necessary. Prior to the Corps' issuance of required Section 404 and Section 10 permits for construction, permission from the Iowa Conservation Commission, Iowa Department of Environmental Quality, and the Iowa Natural Resources Council is needed.

D. Insurance.

Providing additional crew members and/or a crew with better licenses does not reduce insurance rates. Operations of this nature are normally insured for the following values:

1. Primary liability for the crew is insured to the value of the boat and barges.

2. Boats and barges are insured to their value.

3. Passengers are insured to the desired limit--be it $1 million or $10 million.

E. Miscellaneous.

All the above mentioned boats and barges were certified up to December, 1976. Service was terminated because a bridge was built and the service was no longer required.

Every ~~three~~ FIVE years the barges must be drydocked, inspected, and certified by the Coast Guard. Barge #3 must be inspected prior to going into service.

The barges should be drydocked and inspected or surveyed as to their structural soundness. A representative of the purchasing agency should inspect the equipment prior to purchase.

Contacts:

United States Coast Guard

Minneapolis - 612-725-7452 (Lt. Lawrence)
St. Louis - 314-425-4657
Memphis - 901-521-3941 (Lt. Chandler and Commander Simpson)

Marine Officers Association

St. Louis - 314-533-3900

U. S. Army Corps of Engineers

Rock Island, Ill. - 309-788-6361 (Mr. Warner)

National Maritime Union

Pittsburgh, Pennsylvania 412-471-7745

Master, Mate, Pilots Union

Cleveland, Ohio - 216-228-8121

R. B. Jones, Inc. (Insurance)

St. Louis - 314-727-6666 (Bob Ellis)

Form 6000
2-75 H-2875

IOWA DEPARTMENT OF TRANSPORTATION

To Office Program Management Date May 27, 1977

Attention G. W. Anderson Ref. No. 060

From K. P. Harris

Office Accounting

Subject Liability Insurance - Ferry Boats

Per your recent request, I have done some checking with other states in an attempt to get a recommendation as to the amount of liability insurance one should carry to adequately cover a ferry boat operation. From what I have been able to find out, it appears that it isn't a matter of how much you need, it's how much you can get.

The State of Washington has a large State owned operation and are self insured.

The State of Michigan have no publicly owned ferrys but they do subsidize them to an extent. This is done, as I understand it, in much the same manner as our Public Transit Division operates. Mr. Joseph Cook of the Highway Department advises that they anticipate that they may have to take over ownership of some of these private operations within the next few years due to the rising costs of operation -- including insurance costs. Cook referred me to Roger Fisher, Executive Director of the Eastern Upper Peninsula Transportation Authority at Sault Ste. Marie. Mr. Fisher told me that he only knew of two insurance companies writing coverage on ferry operations and that they were not making high coverages available. He mentioned the Louisiana disaster and said that rates jumped immediately. He sent me a copy of the policies they have covering their operation between DeTour, Michigan and Drummond Island, Michigan. Truthfully, my comprehension would have been just as great if they had been written in Arabic. I was able to determine that this was a two boat operation with primary single limits aggregate coverage of $300,000 per occurence with a $2,500 deductible -- and only one boat could operate at any one time. The annual premium was $8,295.00. In addition they had an Excess policy,with the same company, of $700,000 for a premium of $3,700.00.

Incidentally, Mr. Fisher appeared quite knowledgeable and was very cooperative. I am attaching a copy of his letter for your future reference. I might mention, too, that Mr. Cook of the Highway Department suggested I contact the State of Wisconsin for information.

Ron Thompson of the Office of General Counsel for the Louisiana Highway Department advises that they have a number (8 I believe) of ferry boat operations. At the time of the disaster in which 78 persons lost their lives, they had total aggregate coverage of only $300,000 per occurence for each boat -- and they were paying an annual premium of $123,000. Naturally the disaster drew wide spread publicity and some knowledgeable, influential people became aware for the first time of the problems the State encountered in trying to get adequate coverage at an affordable figure. As a result, an agency in New Orleans

has come up with a policy through a Lloyds of London combine which provides $11,000,000 coverage at an annual rate of $63,500. He said he would send a copy but I haven't received it yet.

I also contacted an insurance agency in Clinton which has our Toll Bridge coverage and write quite a lot of marine insurance. They advise that they have contacted a number of River Marine underwriters and say that they can get a policy providing $100,000 limits with a $100 deductible and perhaps up to $300,000 although they found very few underwriters interested in the $300,000 limits. The $100,000 coverage would cost about $4,000 per boat. This liability coverage was quoted in connection with a hull coverage policy. I don't know whether this means that the company would offer liability insurance only if they also carried the hull insurance or not. I didn't check further since the limits appeared to be too low anyway.

Gus, I am afraid that I have accomplished very little -- other than to discover that it is not going to be easy for us to set limits of coverage for adequate protection. Incidentally, it apparently makes no difference to an insurance company whether there is public or private ownership. If there is more I can do, please advise.

KPH/mjh
attachment

MULTI - MODAL
TRANSPORTATION

EASTERN UPPER PENINSULA TRANSPORTATION AUTHORITY
322 COURT STREET (906) 632-3421 SAULT STE. MARIE, MICHIGAN 49783
ROGER L. FISHER, EXECUTIVE DIRECTOR

May 19, 1977

Mr. Keith Harris
Iowa Dept. of Transportation
Ames, Iowa 50013

Dear Mr. Harris:

Enclosed are copies of our liability and hull insurance through Great American.

I hope this information can be of some help in your anticipated ferry service.

We have spent considerable time in designing dockage and ramp structures as well as extensive vessel modification.

If either myself or any member of my marine crew can assist you in any fashion, please no do hesitate to notify me.

Warm personal regards.

Sincerely,

Roger L. Fisher
General Manager

RLF/ldl

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

REPLY TO
ATTENTION OF:

NCSCO-S

7 June 1977

Mr. G. W. Anderson
Director, Office of Program Management
Department of Transportation
Planning and Research Division
826 Lincoln Way
Ames, Iowa 50010

Dear Mr. Anderson:

We are responding to your 4 May 1977 letter asking about Corps of Engineers jurisdiction concerning proposed ferry service across the Mississippi River in the Cassville, Wisconsin area.

Any structure placed, or work performed in, over, or under the river would require a Department of the Army permit. Work requiring our permit would not include the actual operation of a ferry; however dredging, discharge of fill or dredged material, and dock or other construction are included.

We suggest you contact the U.S. Coast Guard for further information concerning the ferry project at:

Commander (OC)
2nd Coast Guard District
Federal Building
1520 Market Street
St. Louis, Missouri 63103

We are inclosing an application form and environmental-data booklet for your possible future use and since they contain information which you may find useful.

Please contact our office at (612) 725-7558, or write, when we may be of help.

Sincerely,

William D Parsons

WILLIAM D. PARSONS
Chief, General Regulatory Branch
Construction-Operations Division

2 Incl
As stated

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