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1988-89

MULTI-MODAL PROGRAM

MICHIGAN DEPARTMENT OF TRANSPORTATION

1988-89



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MICHIGAN DEPARTMENT OF TRANSPORTATION

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MAY 1, 1988

PREFACE

This document describes the Michigan Department of Transportation's fiscal year 1989 modal programs. It includes highways, comprehensive transportation, and aviation. There are five sections: Section one is an introduction and summary of the total program for all modes. Sections two, three, and four provide detailed information about the highway, comprehensive public transportation, and aviation modes, respectively. Section five is the appendixes.

The appendixes list specific projects to be undertaken during the fiscal year for highways and aviation. Public transportation activities are described in the main body of the report.

The highways and aviation sections of the document were written by the Program Planning Division, Bureau of Transportation Planning. Considerable assistance was provided by the Program Administration, Bureau of Highways, and the Airport Development Division, Bureau of Aeronautics. The comprehensive transportation section was written by the Office of Planning and Programming, Bureau of Urban and Public Transportation (UPTRAN), and the document was edited and published by UPTRAN's word processing manager.

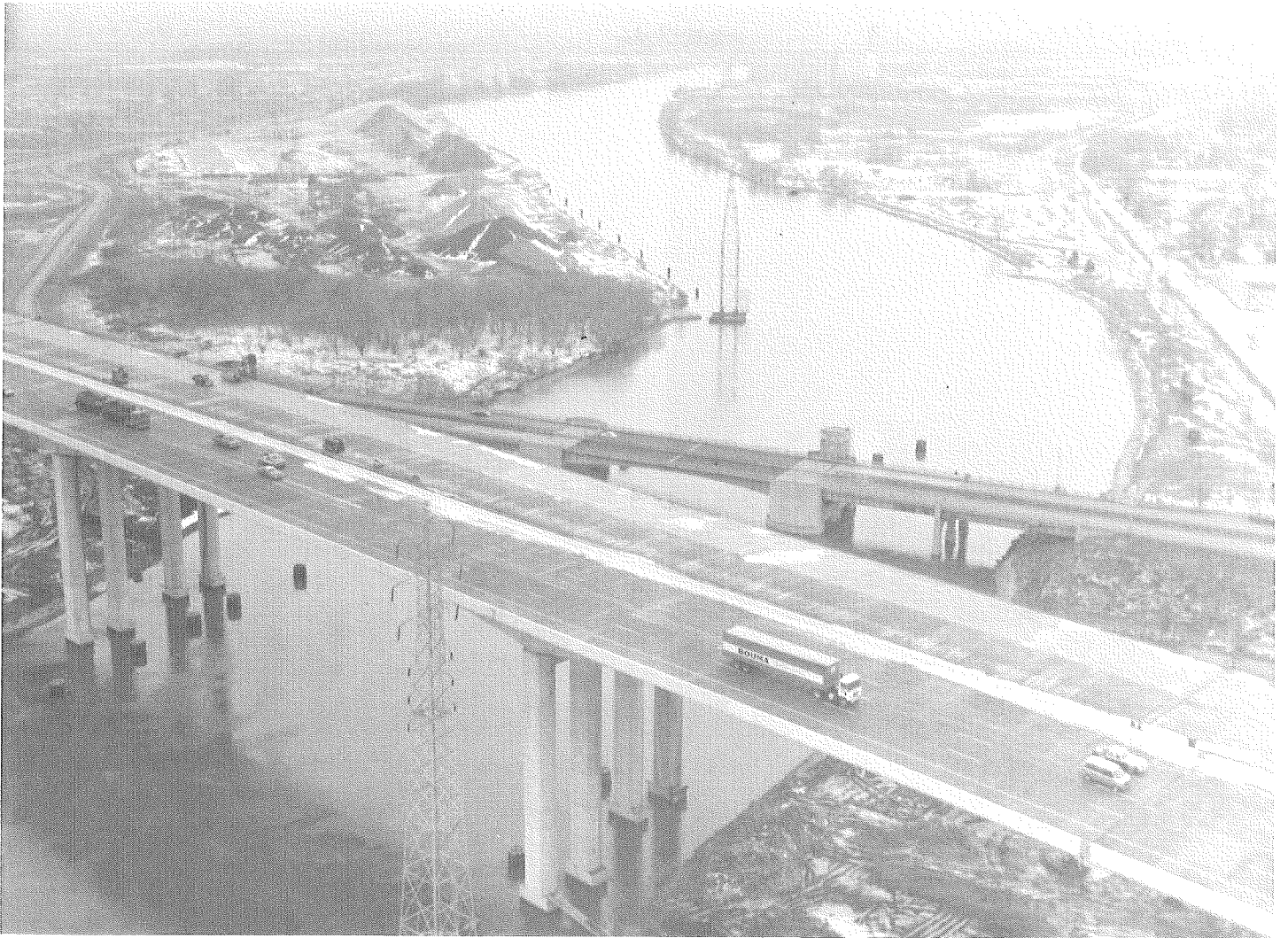
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INTRODUCTION



INTRODUCTION

We are making progress in providing the type of transportation services needed to make Michigan move.

In 1987 we opened the northbound lanes of the Zilwaukee Bridge. In 1988 we'll open the southbound lanes. No longer will there be miles of cars backed up while ships keep the draw bridge up. In 1987 we opened the segment of I-69 around East Lansing. In 1988 we'll open other major roads that will route truck traffic from city streets and make driving safer and more efficient for everyone.

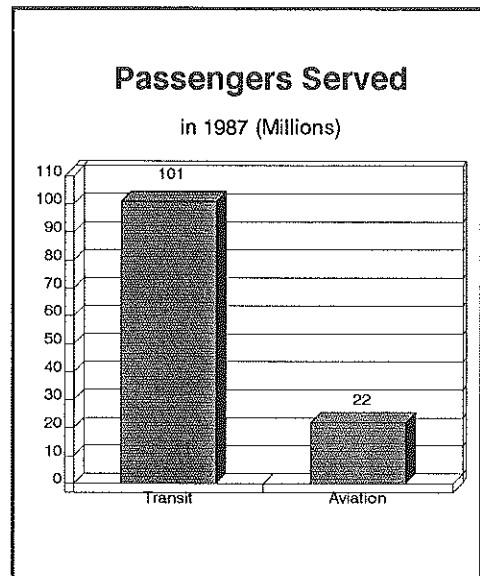
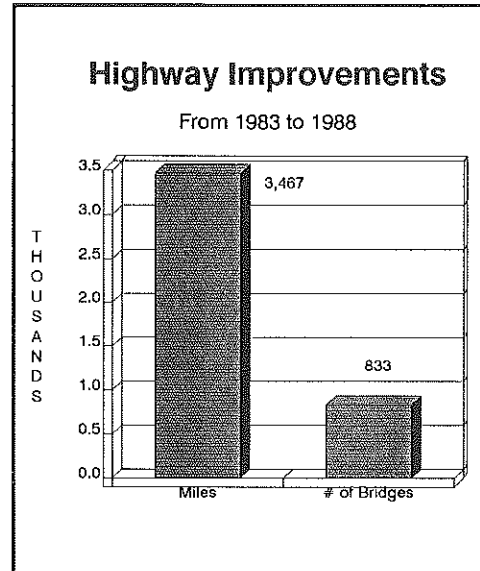
In 1987 we continued construction of the I-696 freeway through the suburbs north of Detroit. In 1988 we started construction on the final segment of the I-696 freeway.

Since 1983 we've repaired or expanded 3,467 miles of roadways and repaired 833 bridges. This is an annual average of 578 miles of roadways and 139 bridges.

We are making progress in providing public transportation services to seniors and handicappers, low-income families and students, vacationers, and business travelers. In 1987 over 100 million passengers traveled by local bus, almost 500,000 passengers traveled by train, and over 22 million passengers traveled by airplane. In 1987 runway and taxiway improvements were made at 33 airports. In 1988 improvements are scheduled at 38 airports.

We are making progress in providing transportation for the movement of goods that we buy and sell. In 1987 millions of tons of cargo rolled over our highways, almost 1.5 million rail carloads rolled over our system of railroads, over 75 million tons sailed into or from our ports, and over 400 million pounds flew through our skies.

"We are making progress..."



**"The 1989 Program
continues this progress..."**

We are making progress toward the transportation goals set by the State Transportation Commission. The commission established our transportation needs, set our priorities, and approved an investment plan so we could work toward our goals on a priority basis. After completion of the 1988 program, we'll have achieved much of that investment plan.

The 1989 program continues the direction set by the department's investment plan and calls for the repair and improvement of 452 miles of roads and the rehabilitation of 79 bridges.

This program provides for the continuation of public transportation service to 100 million bus riders annually on 66 transit systems statewide, almost 500,000 train riders, and almost 25 million airplane passengers. It also includes funding to preserve the commercial rail freight network.

Waterway activities will aid the shipping of an estimated 75 million tons of cargo in 1989.

The major projects to be undertaken in 1989 include:

UPPER PENINSULA

- Resurfacing 12 miles of M-69 from US-2 to M-95 in Iron County.
- Resurfacing 16 miles of M-28 from the west county line to Rathfoot Park in Alger County.
- Resurfacing 13 miles of M-77 from the south county line to Grand Marais in Alger County.
- Reconstructing 1 mile of M-26 from US-41 eastward in Houghton County.
- Increasing the capacity and reconstructing 1 mile of US-2 from US-41 eastward in Delta County.
- Continuing support for local bus systems in Alger, Baraga, Chippewa, Gogebic, Houghton, Luce, Mackinac, Marquette, Ontonagon, and Schoolcraft counties.
- Continuing support for ferry services between Neebish, Sugar, and Drummond islands and the Chippewa County mainland.
- Apron expansion at Delta County Airport in Escanaba.

- Landing aids, a new taxiway, safety fencing, and runway rehabilitation and extension at Mackinac County Airport at St. Ignace.
- A new taxiway at Ford Airport at Iron Mountain/Kingsford.

NORTHERN LOWER PENINSULA

- Resurfacing 10 miles of M-33 from I-75 to M-55 in Ogemaw County.
- Paving shoulders to 7 miles of M-109 in Leelanau County.
- Reconstructing 3 miles of M-75 from Brockway to Boyne City in Charlevoix County.
- Widening 1/2 mile of M-72 from I-75BL to Industrial Road in Crawford County to four lanes.
- Paving 3 miles of US-31 freeway between US-31 and US-10 in Mason County.
- Continuing support for local bus systems in 21 counties and cities.
- Reconstructing taxiway and apron at Antrim County Airport.

SOUTHERN LOWER PENINSULA

- Rehabilitating the I-75 bridge over the Rouge River in Wayne County.
- Patching 9 miles of I-75 from I-675 to M-13 Connector in Bay County.
- Reconstructing the Blue Water Bridge plaza in Port Huron.
- Widening 2 miles of US-131 from 44th Street to M-11 in Kent County.
- Widening and reconstructing 2 miles of M-29 from Dana Drain to Cox Creek in St. Clair County.
- Constructing about 18 miles of I-69 freeway in the Lansing area in Eaton and Shiawassee counties. Some of these projects are contingent on us receiving federal interstate discretionary funds.
- Continuing support for 27 local bus systems.

- Continuing support for Pere Marquette and International Limited Amtrak services.
- Acquiring land at the Livingston County Airport.
- Rehabilitating the runway at Detroit Metropolitan Airport.
- Constructing a runway at Kent County International Airport.

PROJECT COSTS

Providing these transportation services: road repairs, maintenance, and improvements; airports maintenance and improvements; and other public transportation services will cost \$584 million. Three hundred and eighty-nine million dollars are devoted to highways: \$218 million to preserve existing highways; \$19 million to improve existing highways, and \$152 million to expand the highway network. Three hundred ninety-eight miles of highway will be repaired or maintained, ten miles widened, and forty-four miles will be newly constructed. Of the \$152 million for expand projects, \$64 million is for the I-69 projects in the Lansing area.

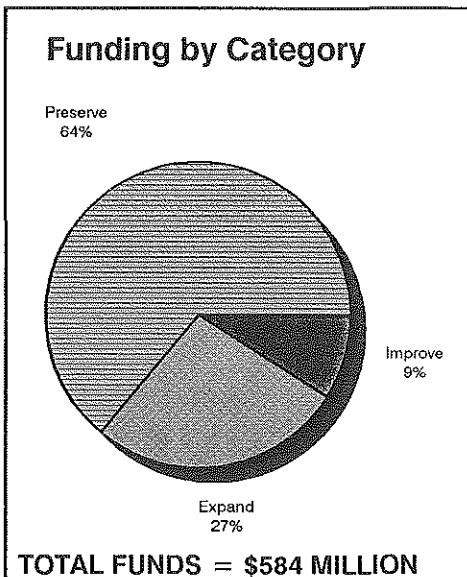
One hundred fifty-two million dollars will support local transit services, intercity passenger service, specialized services for seniors and handicappers, and freight services. One hundred thirty-four million dollars is to preserve existing public transportation services, sixteen million dollars to improve services, and two million dollars to expand services.

Forty-three million dollars will be used to provide much needed improvements to the system of airports and air services. This breaks down to \$25 million for preservation activities, \$16 million for improvements, and \$2 million for expansion.

UNFUNDED PROJECT NEEDS

We are making progress toward our goals. And we are providing services according to priorities established by the citizens of Michigan. However, there are many needed im-

	Hwy.	CTE	Avia.
Preserve	\$218	\$134	\$25
Improve	19	16	16
Expand	150	2	2
Totals	\$389	\$152	\$43



provements to the transportation system that our funds will not allow.

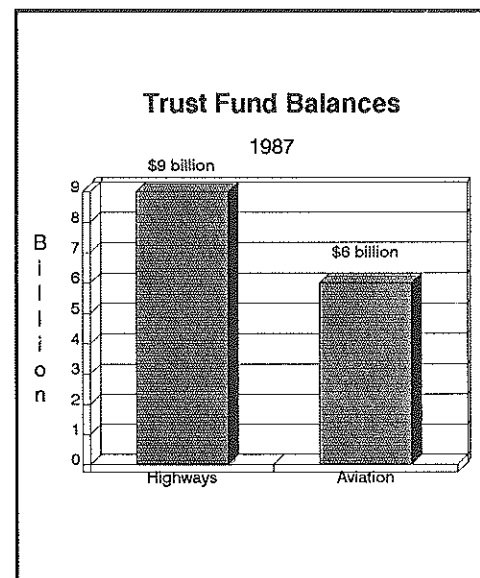
There is a need to make improvements to roads in the urban areas that are congested because of heavy traffic volumes and outdated roadway design; yet, money is unavailable for these relatively short, but much needed, congestion relief projects.

There is a need to complete and add to our ten-year core list of highway system improvement and expansion projects; yet, money is unavailable for these additions. There is a need to increase the number of bridges we repair each year; yet, money is unavailable for increasing our bridge program. There are other highway investment needs, and there are needs in public transportation and aviation that available funding will not allow us to meet.

**"We are making progress...
but..."**

TRUST FUND BALANCES

Funds could be available to meet these needs. The federal government is currently maintaining a balance of approximately \$23 billion in various trust funds. The federal highway trust fund has about \$9,000,000,000, and the aviation trust fund has about \$6,000,000,000 that our citizens already paid into them. These funds are being withheld from us by Congress. Congress is using the funds in a kind of shell game to reduce the federal budget deficit. If Congress would allow us to draw down these funds and use them on the transportation system as originally intended, we could fund much of these needs.



DOCUMENT DESCRIPTION AND ASSUMPTIONS

The remainder of this document details the specific programs for the highway, comprehensive transportation, and aviation modes. A listing of the projects to be undertaken during the fiscal year 1988-89 for highways and aviation is included in the appendix at the end of this document. Public transportation activities are described in the Comprehensive Transportation portion of this document.

In developing this program, we made several assumptions concerning revenues and several provisions for emergencies and other special situations that may occur throughout the year.

"We expect Gramm-Rudman to further reduce our funds."

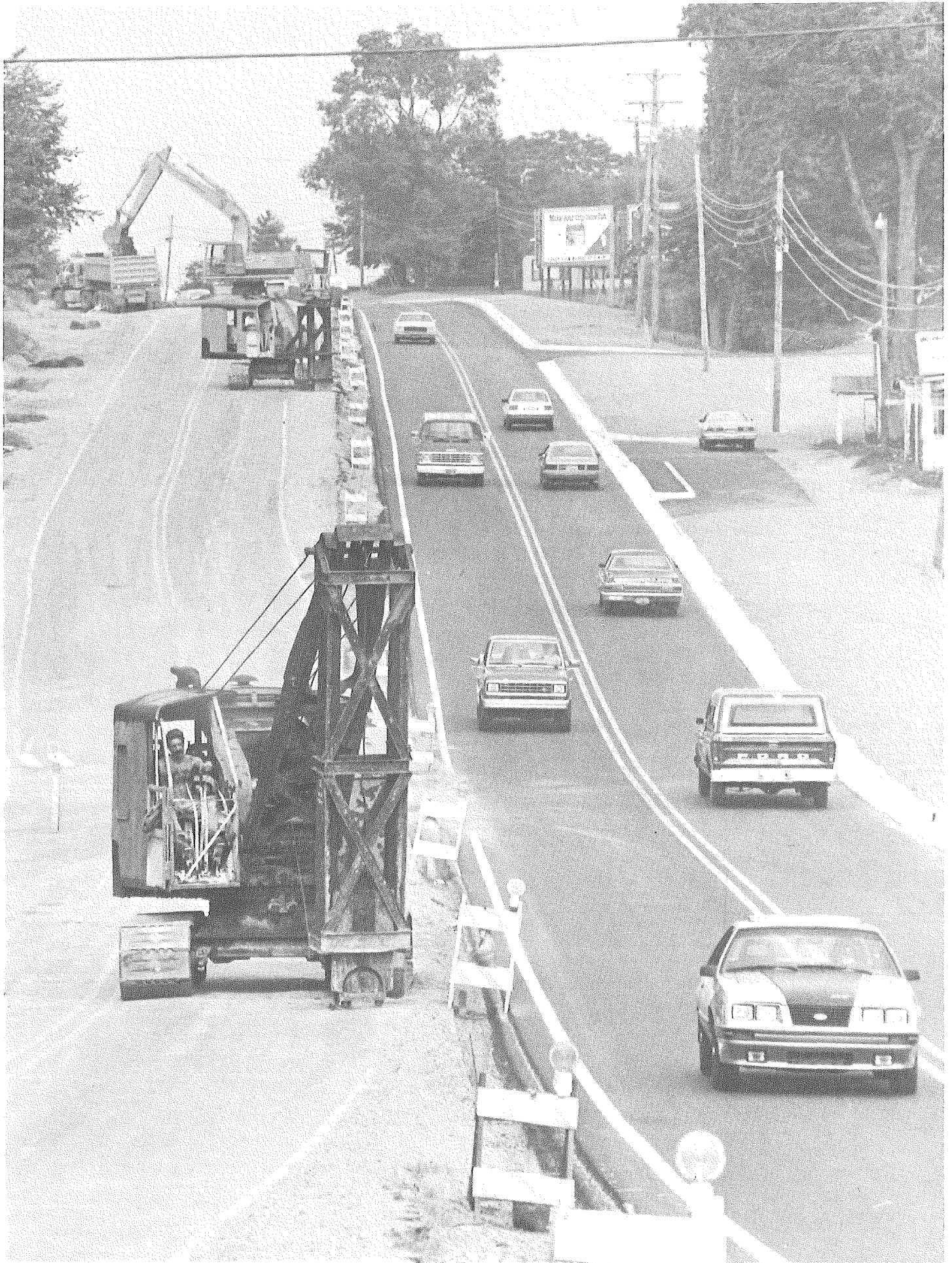
We've also had to plan the program at a time when the level of federal funding is most uncertain. While federal trust fund balances for both highways and aviation are historically high, Congress steadily reduces our authority to use these funds. As it now stands, we'll only be allowed to spend 83 percent of our federal highway funds in 1989. This is a reduction of about \$46 million from our appropriation. This is down from 97 percent in 1987.

The President's 1989 budget proposes to eliminate transit operating assistance to communities with 200,000 or more population. This jeopardizes \$27 million in federal funding to these transit systems. It also threatens our successful Amtrak services.

These factors increase the uncertainty of our funding and the stability of this program.

Other uncertainties are involved in developing the program. Individual projects are placed in the program on the basis of estimated revenue and their estimated cost and on the ability to complete preconstruction activities. We believe these estimates are accurate; yet, as with any estimate, changes can occur. As a result, additions, deletions, and other modifications may occur as we implement the program.

HIGHWAYS



HIGHWAYS

The overwhelming priority for the highway system is to repair and maintain the 9,500 miles over which the department has jurisdiction. This need is acute because of the large backlog created by deferred preservation prior to 1982. Thus, the program is heavily weighted toward preserving existing highways.

SYSTEM PRESERVATION

Eighty-eight percent of the miles and fifty-six percent of the dollars in the program are devoted to preserving the existing system. Twenty miles of highways are being completely reconstructed, two hundred fifty-eight miles resurfaced, one hundred fourteen miles rehabilitated, and six miles widened by less than a full lane's width, called minor widening. These minor widening projects are primarily on routes that experience heavy truck usage and are related to safety.

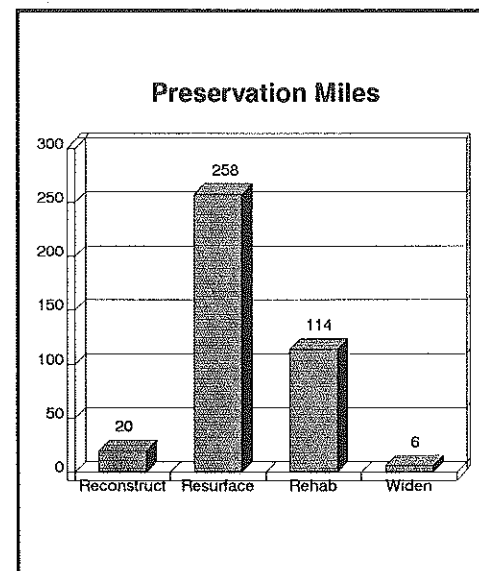
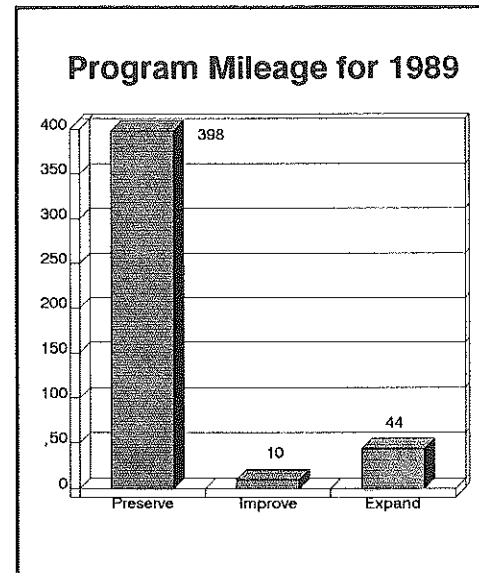
The above preservation projects cost a total of \$160 million. The remaining \$58 million of preservation expenditures is for projects that repair shoulders and joints, promote safety, and repair bridges. Seventy-nine bridges will be painted, have their road surfaces replaced, or otherwise be repaired or replaced in 1989.

The major preserve projects include:

1. Reconstruction Projects

- a. US-12 for 2 miles from Suszek Road to Mann Road in St. Joseph County.
- b. US-41 for 2 miles from M-203 in Hancock to Coburntown Road in Houghton County.
- c. I-94 plaza reconstruction at the Blue Water Bridge.

These roads need the extensive upgrading called for by reconstruction. Typical problems include pavements



that have cracked and shifted and are badly deteriorated, a base that is inadequate to support the traffic on the road, and inadequate drainage. The deficiencies associated with these projects require a more extensive treatment than resurfacing or rehabilitating the existing pavement.

2. Resurfacing Projects

- a. M-69 for 12 miles from US-2 to M-95 in Iron County.
- b. M-28 for 16 miles from the west county line to Rathfoot Park in Alger County
- c. M-94 for 16 miles from Chatham Corners to M-28 in Alger County.
- d. M-77 for 13 miles from south county line to Grand Marais in Alger County.
- e. I-75 for 2 miles from the south junction of I-675 north in Saginaw County.
- f. US-131 for 5 miles from 140th Street to the north county line in Allegan County.
- g. US-131 for 2 miles from 54th Street to 44th Street in Wyoming, Kent County.

"Preservation projects make the ride smoother and safer for the motoring public and reduces wear and tear on their cars."

These projects repair the pavement and provide a smooth ride for the motoring public. Additional surface material is placed on the existing pavement to improve the ride or strengthen the pavement. There may be some other work done in conjunction with the resurfacing, such as shoulder improvements, pavement patching, minor drainage corrections, crack sealing, elevation adjustments, or safety improvements. Sometimes a roadway will be resurfaced while it is still in fairly good shape to extend its life. This treatment may extend the life of the roadway for another ten years before major improvements are required.

3. Restoration & Rehabilitation Projects

- a. 3 miles of M-66 from M-46 to the north county line in Montcalm County;
- b. 10 miles of I-75 from the junction of I-675 to M-13 in Bay County.
- c. 3 miles of I-96 from M-52 to the east county line in Ingham County.
- d. 4 miles of I-94 from the St. Joseph River to Empire in Berrien County. This project will repair the joints along this section of I-94.

These projects rehabilitate pavement that is not good enough for simple resurfacing, or where there are only spot improvements needed.

SYSTEM IMPROVEMENTS

In addition to our preservation needs, there continues to be a need to improve services to businesses and to the motor-ing public. Some roadways are not wide enough to handle traffic that has been steadily increasing over the years. Other areas have developed to the point where new high-ways are needed. In these instances, the department must improve and expand services. The projects selected in the improve and expand categories are taken from a "core" list of projects, which is part of the department's ten-year in-vestment plan.

IMPROVE PROJECTS

Five percent of the highway dollars (\$19 million) is budgeted to improve ten miles of existing highways. The major improve projects are:

- a. 2 miles of M-29 from Dana Drain to Cox Creek in St. Clair County. This road cannot adequately handle the traffic using it.

"Improve projects reduce bottlenecks and traffic congestion. They also improve safety."

- b. 2 miles of I-96BL from Cloverland to Mt. Hope in Ingham County. We will be making this portion of I-96BL a five-lane roadway. The existing road cannot adequately handle the traffic using it.
- c. 1 mile of US-31 from Stuart to Division in Emmet County. The traffic on this roadway requires that we add a lane.

All these roads experience bottlenecks and traffic back-ups because they cannot handle the amount of traffic using them. The improvements will increase the efficiency of the roads and reduce delays experienced by motorists.

EXPAND PROJECTS

One hundred fifty-two million dollars are budgeted to build 44 miles of new highways. The major expand projects are:

- a. 3 miles of US-31 from the existing US-31 freeway north to US-10 in Mason County. This will be a new freeway to replace existing US-31 in this area.
- b. 6 miles of I-69 from existing I-69 to Shaftsbury Road in Shiawassee County. This project will continue our efforts to complete the I-69 freeway. The segments of I-69 in Eaton County are also included in the program for discretionary funding if discretionary funds are available.

These projects are designed to expand our system of highways so that travel is efficient for the citizens and businesses of Michigan.

This program continues our efforts to complete the interstate system which is a high priority in our investment plan.

"Expand projects provide much needed new service in rapidly growing areas."

CONDITION INFORMATION

The following information describes the state highway system and its condition:

Traffic Volumes

Michigan's state highway system includes about 9,500 miles of highways. Total traffic on the system averages 11,000 motor vehicles for each mile of highway every day with extremes from 500 to 175,000 per day. This represents a total of 38 billion miles traveled each year.

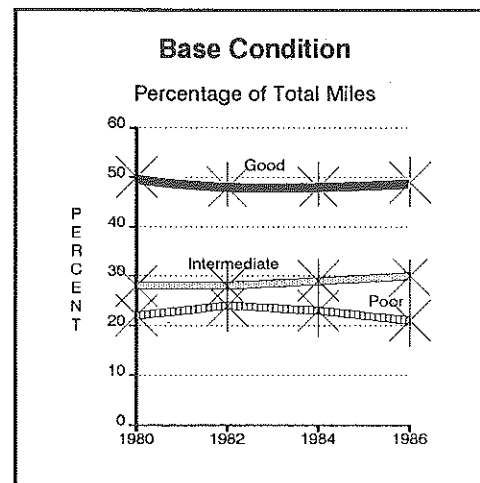
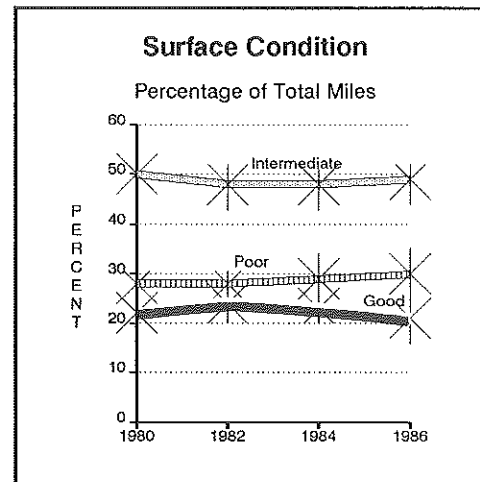
Heavy traffic volumes occur most commonly in the southern half of the Lower Peninsula. The Detroit metropolitan area, in particular, has a large number of routes with daily traffic volumes of 15,000 or more vehicles. Traffic volumes are important because high volumes subject the roadway to more wear and tear, creating the need for more frequent repair.

Traffic volumes have been increasing at a faster rate than funding for transportation. This growing gap between funding and traffic volumes bodes ill for the future condition of our highways.

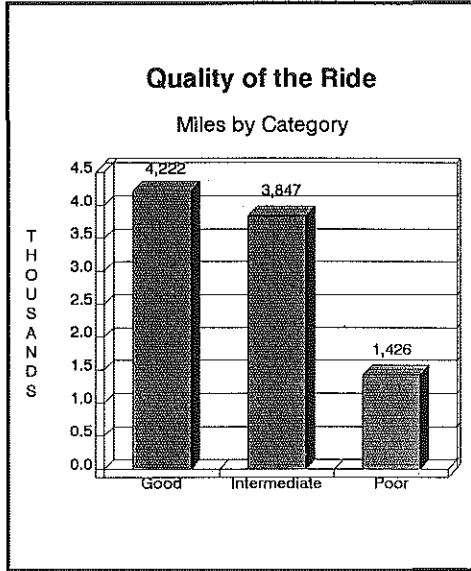
Highway Condition

The charts at right indicate the trend of the general condition of our roadways. This shows that, at the same time we have continued to experience declining revenues, we have been able to maintain the overall generally good condition of our roads and highways. Our ability to maintain this condition level is threatened by continued declines in federal funding. This year the number of miles of preservation work is down, compared to sustained increases over past years.

Annually, we review all state-owned roadways to determine their condition. Each roadway is assigned a score on the basis of its surface and base characteristics. Surface ratings measure the adequacy of the roadway surface itself; base ratings measure the soundness of the roadway foundation.



On the basis of the score received, a roadway is classified as in poor, intermediate, or good condition for both surface and base. The percentage of roadway miles in each of these classifications is shown in the previous charts.



Quality of Ride

A rating is given to state roadways that indicate the quality of the ride. This is an indication of the comfort felt by automotive occupants; and it is indicative of the motoring public's perception of our roads.

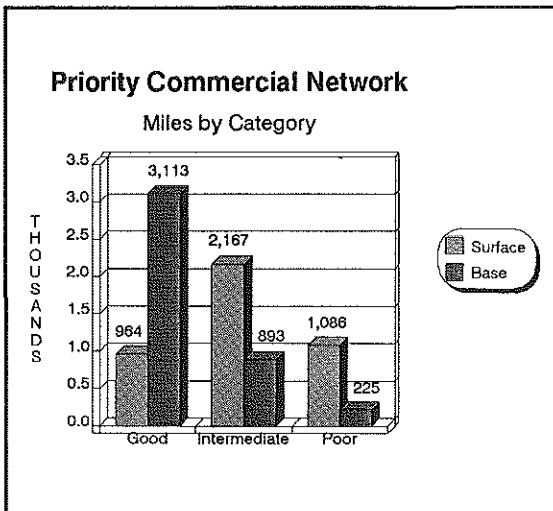
The miles of roadway with good, intermediate, and poor quality of ride are shown on the right.

Priority Commercial Network

The Priority Commercial Network is a subsystem comprised of state highways that are important for commerce in the state. Routes on the Priority Commercial Network are ones that are used extensively to haul goods to and from businesses in Michigan, and for tourism. A Priority Commercial Network route is given high priority when projects are considered for inclusion in the program. It is our intent to keep this subsystem of state highways in the best possible condition.

The surface and base condition of the Priority Commercial Network is shown on the right.

Eighty-six percent of the dollars and eighty-three percent of the miles in the program are on the Priority Commercial Network.



BRIDGES

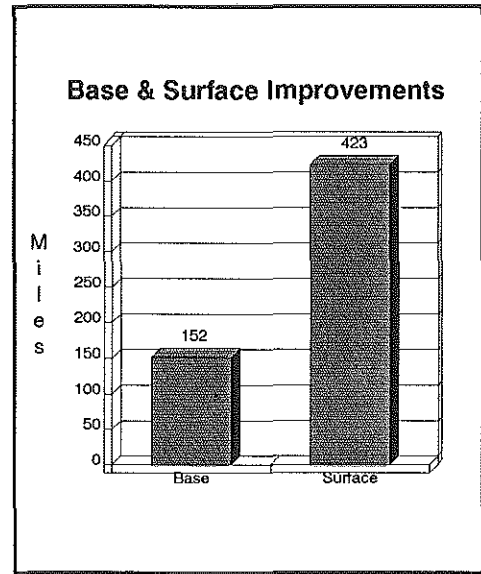
In addition to highways, bridges are rated and classified as either good or in need of repair. Of the 4,304 bridges on our system, 326 need repairing and 875 need painting.

IMPROVEMENTS TO CONDITION

Our major purpose in collecting this condition data is to guide us in selecting projects. Projects are selected with the objective of improving the overall condition of the roads.

Each year we must repair at least 475 miles of roads just to keep pace with deterioration. Any mileage above the 475-mile mark reduces the backlog of resurfacing needs. This year we have 459 miles of improvements in the program.

The chart on the right presents a summary of the improvements we will be making to the roads in 1989.



REVENUES AND THEIR USES

Funds used to finance highway projects are provided by state and federal taxes on gasoline and automotive related items. Weight taxes also contribute about one quarter of the state funds. State taxes are returned to the department through the State Trunkline Fund. Federal taxes are returned to the department in the form of federal aid. About 72 percent of the highway construction is financed by federal aid. To maximize the return on state monies, state trunkline funds are first used to match federal aid. Any additional funds are then used to fund projects for which federal aid is not available.

FUNDING BY SOURCE

Our current estimate for fiscal year 1989 funding for capital improvements is shown below:

\$195,000,000	Federal Aid
<u>75,000,000</u>	State Trunkline Funds
\$270,000,000	Total

Included in the appendixes of this program is a listing of the projects for 1989. These projects are grouped into the program structure of preserve, improve, and expand, and subcategories called worktype categories. This structure is described on the next page, along with the funding for each work-type category.

"About 72 percent of the highway program is financed by federal aid."

1988-89 HIGHWAY PROGRAM

Summaries by Non-Interstate and Interstate Classifications

	NON-INTERSTATE		INTERSTATE		TOTAL	
	<u>Amount</u>	<u>Miles</u>	<u>Amount</u>	<u>Miles</u>	<u>Amount</u>	<u>Miles</u>
PRESERVE						
Reconstruction	\$ 15,823,650	19.0	\$ 20,203,700	0.9	\$ 36,047,350	19.9
Restoration & Rehabilitation	1,139,950	73.2	47,178,213	40.8	48,318,049	114.0
Resurface	36,644,350	198.0	31,399,500	60.1	68,043,850	258.1
Minor Widening	7,068,850	4.8	607,800	0.7	7,676,650	5.5
Traffic Operation/TSM	3,020,390		1,921,450		4,941,840	
Safety	3,321,500		230,000		3,551,500	
Bridge Rehabilitation	13,772,251		17,301,400		31,023,651	
Roadside Facilities	2,455,750		15,736,000		18,191,750	
Miscellaneous	<u>0</u>	<u> </u>	<u>0</u>	<u> </u>	<u>0</u>	<u> </u>
SUBTOTAL	\$ 83,246,691	295.0	\$134,578,063	102.5	\$217,774,640	397.5
IMPROVE						
Capacity Improvement	14,607,450	9.8	275,000	0.5	14,882,450	10.3
Bridge Replacement	828,300		1,012,000		1,840,300	
Bridge Widening	0		0		0	
Roadside Facilities	<u>251,850</u>	<u> </u>	<u>2,180,650</u>	<u> </u>	<u>2,432,500</u>	<u> </u>
SUBTOTAL	\$ 15,687,600	9.8	\$ 3,467,650	0.5	\$ 19,155,250	10.3
EXPAND						
New Route	0	0	2,017,400	10.6	2,017,400	10.6
Relocation	30,580,000	9.9	114,128,300*	23.8	144,708,300	33.7
Roadside Facilities	<u>0</u>	<u> </u>	<u>5,086,400</u>	<u> </u>	<u>5,086,400</u>	<u> </u>
SUBTOTAL	\$ 30,687,600	9.9	\$121,232,100	34.4	\$151,812,100	44.3
GRAND TOTAL	\$129,464,177	314.7	\$259,277,813	137.4	\$388,741,900	452.1

*This includes projects that will only be constructed if we receive interstate discretionary funds.

PRESERVE COMPONENT

1. Traffic Operations \$4,941,840

This work includes items such as signing, pavement markings, and traffic signals.

2. Safety **\$3,551,500**

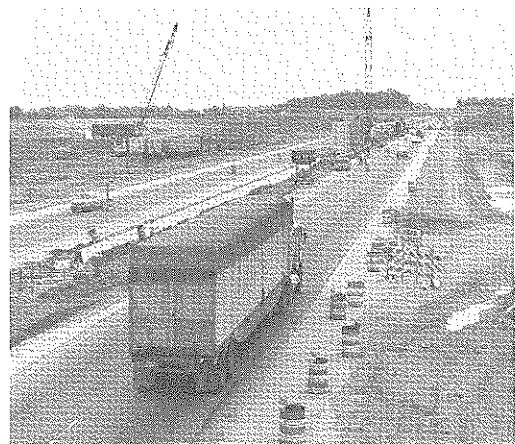
The purpose of this work is to enhance safety. It includes intersection revisions, lighting, median barriers, guardrails, railroad crossing improvements, obstacle removal, and improvements that increase the ability of drivers to see approaching and crossroad traffic.

3. Bridge Rehabilitation **\$31,023,651**

This category includes all work related to extending the life of a bridge. Typical work includes replacing or resurfacing the deck, replacing the railings, making underwater repairs, painting, and minor widening (less than one lane in width). It does not include replacing a bridge.

4. Resurfacing **\$ 68,043,850**

This work involves putting a new surface on the highway. Often other work is done in addition to the new surface. This includes improvements to the road edges or shoulders, repair of cracks in the pavement, correction of drainage problems, and minor repairs to the roadway base. In general, a resurfacing project is less extensive and less costly than a full restoration (discussed below) of the roadway.



5. Restoration and Rehabilitation **\$48,318,049**

The purpose of this type of work is to make extensive repairs to a roadway. Old pavement may be removed, the roadway base and drainage improved, and a new or reconditioned surface put down. Safety improvements and other incidental work may also be included. The following are examples of typical work:

- Recycling existing pavement
- Adding three feet of paved shoulders
- Minor drainage and base improvements
- Joint repairs and pavement patching

A restoration and rehabilitation project is less costly and less extensive than a reconstruction project.

6. Reconstruction **\$36,047,350**

This category of work calls for the removal and replacement of the old pavement. No additional lanes are added. It may include major changes to the elevation, drainage, and the roadway base. In general, this is an extensive reconstruction of the road and is more expensive than either a resurfacing or a restoration and rehabilitation project.

7. Minor Widening **\$7,676,650**

This category of work calls for widening an existing road without adding additional lanes. It includes adding turn lanes that are less than one-half mile in length.

8. Roadside Facilities **\$18,191,750**

These projects include rest areas and roadside parks; installing fences; planting trees, flowers, and grass; and other similar activities.

9. Miscellaneous **\$15,500,000**

This category includes projects that do not fall in the other categories. It also includes a lump-sum amount for special situations that arise during the year which cannot be foreseen at this time. The lump sum budgets are shown below:

<u>Item</u>	<u>Budget</u>
Contingencies	\$4,000,000
Traffic Operations	8,500,000
Safety	3,000,000

IMPROVE COMPONENT

10. Capacity Improvement \$ 14,882,450

Projects in this category add at least one lane to an existing road. When necessary, the old roadbed is reconstructed or the pavement resurfaced. Passing lanes of more than one-half mile are included in this category.

11. Bridge Replacement \$1,840,300

A completely new bridge is constructed in the place of an inadequate old one. Incidental work to the road on either side of the bridge for an adequate approach may also be included.

12. Bridge Widening \$-0-

Projects in this category add lanes to an existing bridge. Other repairs to the bridge may also be included as well as work to the approach road on both sides of the bridge.

13. Roadside Facilities \$2,432,500

These projects include constructing sound barriers, rest areas, installing fences, planting trees and flowers, and other similar activities.

EXPAND COMPONENT

14. New Routes \$ 2,017,400

This is the construction of a new road. The prime example is the construction of a new freeway, though the route need not be a freeway.



15. Relocation**\$144,708,300**

Under this category, a new road is constructed near, but not in the same place as, an existing road. The new road will take traffic off the old road, but the old road may remain to service neighborhood traffic. The old road may be retained under state jurisdiction, but it is more likely to be turned over to the jurisdiction of the local area governing body.

16. Roadside Facilities**\$5,086,400**

These projects include constructing sound barriers, rest areas, installing fences, planting trees and flowers, and other similar activities.

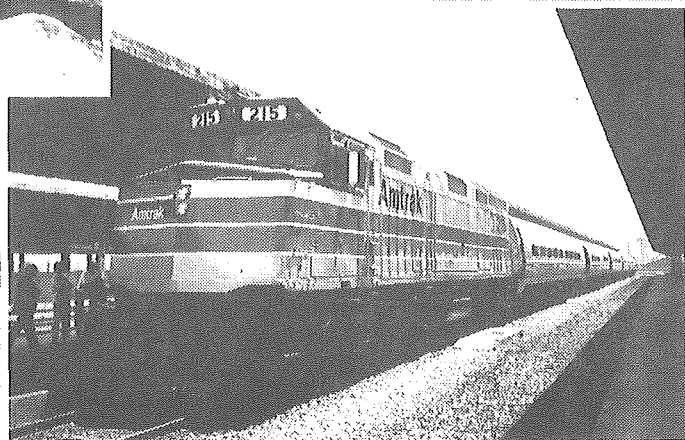
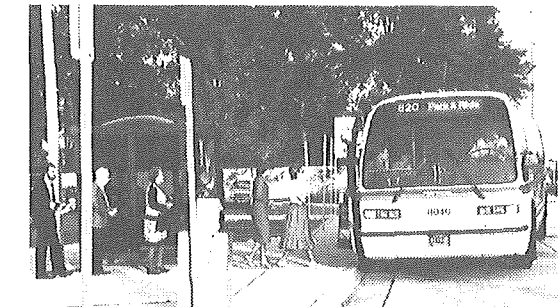
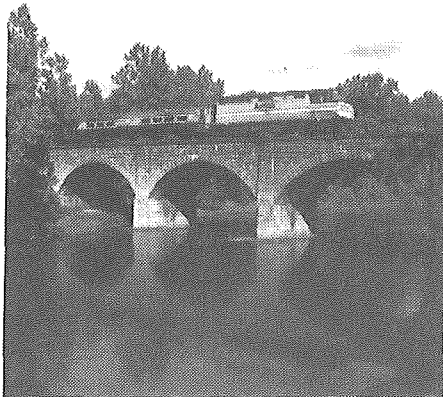
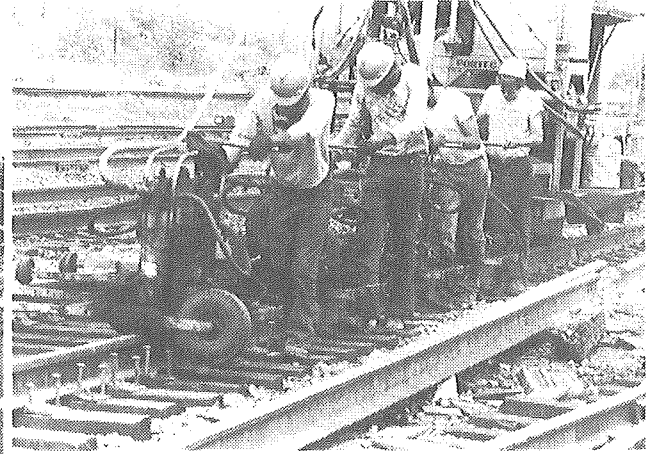
Our 1989 program includes projects in two categories where we are seeking federal discretionary funding. We are taking the initiative in this program to include additional projects in our program so that we can capture interstate discretionary funds. At the same time, we've included several projects on the primary system that we'll do only if interstate discretionary funds are not available. These projects will be done in lieu of the interstate projects. Programming in this manner allows us to capture as much federal aid as possible while maintaining flexibility to change as conditions change. We have adopted this approach to protect our program from fluctuations caused by federal funding changes.

Besides the construction projects listed in this program, we will continue preliminary engineering and right-of-way acquisition on a number of projects that are planned for construction in fiscal 1990 and beyond. These costs are estimated to be between \$11 million and \$13 million.

PADDEN AMENDMENT COMPLIANCE

This program is in compliance with the 90 percent maintenance provision of the Padden Amendment to Act 51.

**1988-89 COMPREHENSIVE
TRANSPORTATION PROGRAM**



1988-89 COMPREHENSIVE TRANSPORTATION PROGRAM

The Comprehensive Transportation Fund (CTF) supports local transit services, local bus new services, specialized services for seniors and handicappers, intercity passenger services, and freight services--helping keep public transportation "there" for everyone who needs it.

Local buses are there for people who need access to jobs, medical care, education, shopping, and recreation. Buses with lifts are there for handicappers, helping them lead more independent lives. Buses make seniors more mobile and self-sufficient--whenever they need a ride, buses are there!

Intercity buses are there for business and leisure travel. Amtrak passenger trains are there, too, for business and recreational travelers from Michigan and all over the country.

And, if your business depends on freight deliveries, Michigan's rail freight network is there for you.

This proposed FY 1988-89 Program describes these services in more detail. It is based on estimated CTF revenue of \$165.1 million, loan funds of \$8.7 million, and federal funds of \$9.4 million as shown on Table C-1 on the right.

After deducting funds for debt service and administrative costs, the CTF amount available for public transportation programs in FY 1989 is \$134.2 million. This is allocated according to Section 10 of Act 51 of 1951, as amended in 1987, as shown on the right.

"Helping keep public transportation
"there" for everyone who needs it."

**TABLE C-1
CTF Revenue Estimates**

Gas. & Wt. Tax	\$100,814,400
Sales Tax	45,500,000
Miscellaneous	<u>18,775,000</u>
CTF Subtotal	\$165,089,400
Intercity Bus Loan Fund	\$ 4,400,000
Rail Loan Fund	<u>4,300,000</u>
Loan Funds Subtotal	\$ 8,700,000
UMTA	\$ 9,350,000
FRA	<u>100,000</u>
Federal Funds Subtotal	\$ 9,450,000
Total Approp. Funds	\$183,239,400

**TABLE C-2
CTF Program Allocations**

Percent	Amount	Program
70%	\$ 93,914,700	Local Bus Oper. Assist.
10%	13,416,400	Intercity Passenger & Freight Trans.
<u>20%</u>	<u>26,832,700</u>	Public Trans. Develop.
100%	\$134,163,800	

TABLE C-3

FY 1988-89 COMPREHENSIVE TRANSPORTATION FUND PROGRAM

By Source of Funds
March 1, 1988

<u>Description</u>	<u>CTF</u>	<u>Loan</u>	<u>Federal</u>	<u>Totals</u>
Local Bus Operating Assist. - 70%	\$ 93,914,700	\$ 0	\$ 0	\$ 93,914,700
Section 18 Nonurban Assistance	<u>0</u>	<u>0</u>	<u>4,000,000</u>	<u>4,000,000</u>
	\$ 93,914,700	\$ 0	\$ 4,000,000	\$ 97,914,700
Intercity Pass. & Frt. - 10%				
Intercity Pass. & Frt. Discretionary	\$ 7,564,500	\$ 0	\$ 0	\$ 7,564,500
Intercity Bus Equipment Loan	0	4,400,000	0	4,400,000
Maps & Directories	50,000	0	0	50,000
Rail Passenger Service	3,500,000	0	0	3,500,000
Marine Passenger Service	1,000,000	0	0	1,000,000
Freight Property Management	1,000,000	0	0	1,000,000
Freight Preservation/Development	0	4,300,000	100,000	4,400,000
Port Development	<u>301,900</u>	<u>0</u>	<u>0</u>	<u>301,900</u>
	\$ 13,416,400	\$ 8,700,000	\$ 100,000	\$ 22,216,400
Public Trans. Development - 20%				
Specialized Services	\$ 2,000,000	\$ 0	\$ 0	\$ 2,000,000
Local Share Bonus	1,000,000	0	0	1,000,000
Effective Service Bonus	1,000,000	0	0	1,000,000
Municipal Credit Program	1,000,000	0	0	1,000,000
Bus Transit Capital	9,800,000	0	4,600,000	14,400,000
Bus Property Management	100,000	0	0	100,000
Technical Studies	35,000	0	500,000	535,000
Planning Grants	50,000	0		50,000
Ridersharing	250,000	0	0	250,000
Vanpooling	110,000	0	0	110,000
Service Development/New Technology	1,400,000	0	250,000	1,650,000
Discretionary	<u>10,087,700</u>	<u>0</u>	<u>0</u>	<u>10,087,700</u>
	\$ 26,832,700	\$ 0	\$ 5,350,000	\$ 32,182,700
PROGRAM TOTALS	\$134,163,800	\$8,700,000	\$9,450,000	\$152,313,800

TABLE C-4

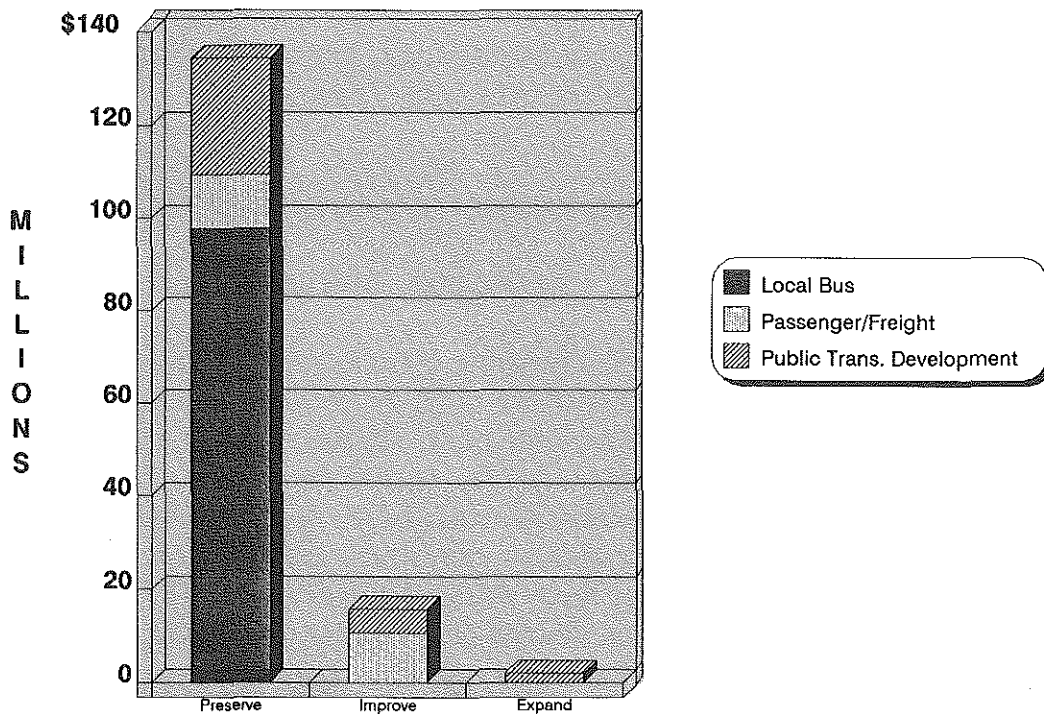
FY 1988-89 COMPREHENSIVE TRANSPORTATION FUND PROGRAM

**By Categories of Preserve, Improve, or Expand
March 1, 1988**

<u>Description</u>	<u>Preserve</u>	<u>Improve</u>	<u>Expand</u>	<u>Totals</u>
Local Bus Operating Assistance	\$ 97,914,700	\$ 0	\$ 0	\$ 97,914,700
Intercity Passenger & Freight	\$ 11,616,400	\$ 10,600,000	\$ 0	\$ 22,216,400
Public Transportation Development	\$ 24,947,700	\$ 5,235,000	\$ 2,000,000	\$ 32,182,700
PROGRAM TOTALS	\$134,478,800	\$15,835,000	\$2,000,000	\$152,313,800

<u>Preserve</u>	<u>Improve</u>	<u>Expand</u>
88%	11%	1%

FY 1989 CTF PROGRAM BY CATEGORIES



LOCAL BUS OPERATING ASSISTANCE - 70%

\$93,914,700 CTF

Urban Transit Systems	
Ann Arbor*	Kalamazoo
Battle Creek	Lansing*
Bay County*	Muskegon
Benton Harbor	Niles*
Flint	Saginaw
Grand Rapids	SEMTA*
Jackson*	

*Combined urban and nonurbanized system.

This program provides public bus transportation service to the general public, senior citizens, and handicappers of our state. Each year local transit systems serve a ridership of approximately 100 million passengers, providing access to jobs, medical care, education, shopping, recreation, and other needed services. Funds are distributed to eligible systems based on the percentage of eligible operating expenses.

It is anticipated that there will be 13 urbanized and 53 nonurbanized transit systems serving communities throughout Michigan in FY 1989. Six urbanized systems also provide service in nonurbanized areas, as shown by the asterisks in the listing to the right. Maps C-1 and C-2 on the following pages show the locations of these services across the state.

Nonurban Systems - Countywide	
Alger County	Kalkaska County
Antrim County	Keweenaw Bay
Barry County	Lenawee County
Bay Area	Manistee County
Berrien County	Marquette County
Branch County	Mecosta County
Charlevoix County	Ogemaw County
Clare County	Ontonagon County
Crawford County	Osceola County
Eaton County	Oscoda County
EUPTA	Otsego County
Gladwin County	Rosecommon County
Gogebic County	Sanilac County
Huron County	Schoolcraft County
Iosco County	Van Buren County
Isabella County	Wexford County
Kalamazoo County	

Performance data for FY 1986-87 (the most recently completed fiscal year) for urban transit systems are shown on Table C-5. Table C-6 shows performance data for nonurban systems, while Table C-7 portrays FY 1987 ridership by type of system.

NONURBAN OPERATING/CAPITAL

\$4,000,000 UMTA (Estimated)

Nonurban Systems - Noncountywide	
Adrian	Holland
Alma	Houghton
Alpena	Ionia
Belding	Lapeer Area
Big Rapids	Ludington Area
Caro	Marshall
Dowagiac	Midland
Grand Haven	Saugatuck
Greenville	Sault Ste. Marie
Hillsdale	Yates Township

This program, complementary to the Local Bus Operating Assistance program, provides federal operating assistance for public transportation in the nonurbanized areas of the state (under 50,000 population). Nonurbanized area transit systems and the nonurbanized portion of combined transit systems, which are shown on the right, are eligible to receive these Federal Section 18 funds. Effective 1987, this federal program also provides funding under the Rural Transit Assistance Program.

TABLE C-5

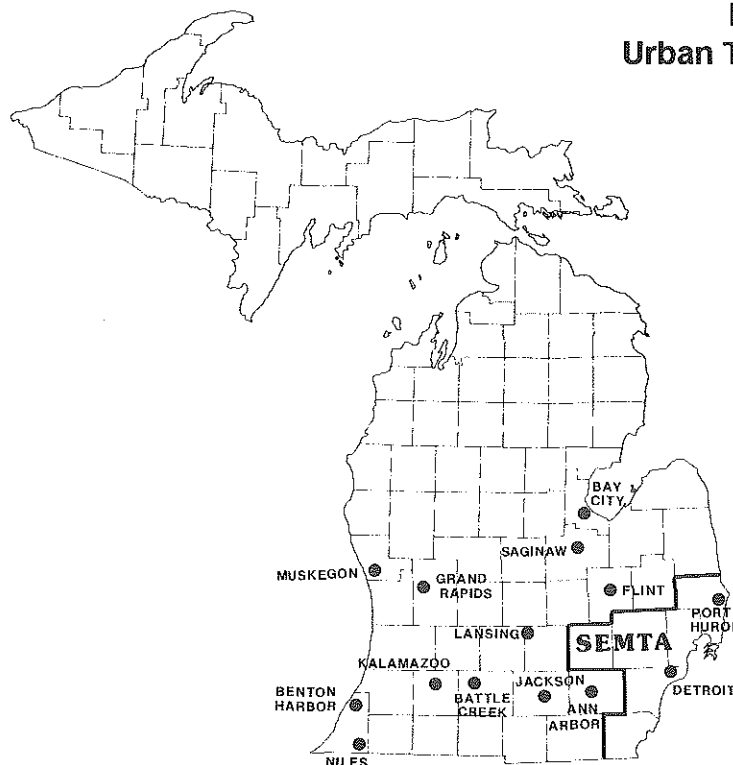
URBAN TRANSIT SYSTEMS

FY 1987 Performance Data

<u>Location</u>	<u>Vehicles</u>		<u>Passengers</u>	<u>Percent Seniors</u>	<u>Percent Handicappers</u>
	<u>Regular</u>	<u>Lift-Equipped</u>			
Ann Arbor	8	46	3,441,682	11	3
Battle Creek	15	9	680,434	18	12
Bay County	5	50	1,068,919	16	22
Benton Harbor	8	5	144,363	37	2
Flint	49	18	3,101,471	4	4
Grand Rapids	68	11	3,882,881	10	5
Jackson	12	23	460,901	37	4
Kalamazoo	1	49	1,562,769	5	9
Lansing	30	35	3,368,901	7	4
Muskegon	0	18	587,233	18*	3*
Niles	4	3	87,115	39	15
Saginaw	5	38	1,421,528	6	1
SEMTA	<u>486</u>	<u>511</u>	<u>75,087,000</u>	17*	5*
TOTALS	691	816	94,895,197		

* = Estimated

MAP C-1
Urban Transit Systems



NONURBAN TRANSIT SYSTEMS

TABLE C-6

FY 1987 Performance Data

<u>Noncounty Systems</u>	<u>Vehicles</u>		<u>Passengers</u>	<u>Percent Seniors</u>	<u>Percent Handicappers</u>
	<u>Regular</u>	<u>Lift-Equipped</u>			
Adrian	4	2	93,566	41	11
Alma	2	2	69,996	27	7
Alpena	4	1	90,012	32	32
Belding	1	2	49,137	22	3
Big Rapids	5	3	102,119	21	8
Caro (Village)	2	4	15,286	36	31
Dowagiac	0	3	26,087	37	3
Greenville	3	2	68,706	25	3
Grand Haven	8	6	146,134	21	26
Hillsdale	4	2	86,257	31	14
Holland	7	3	126,141	28	25
Houghton	5	4	59,322	26	37
Ionia	2	2	50,639	25	3
Ludington	6	6	109,595	33	18
Marshall	1	3	61,554	20	2
Midland	5	5	96,739	19	38
Niles (Buchanan)	1	2	10,773	41	14
Saugatuck Twp.	1	2	37,625	41	2
S.S. Marie	3	2	46,981	35	11
Yates Twp.	2	2	37,326	21	1
Subtotals	66	58	1,383,995		

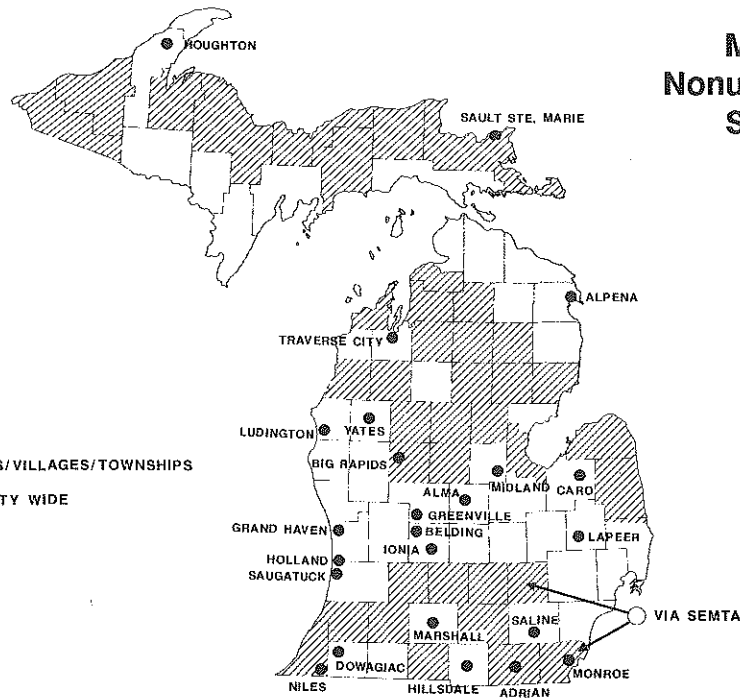


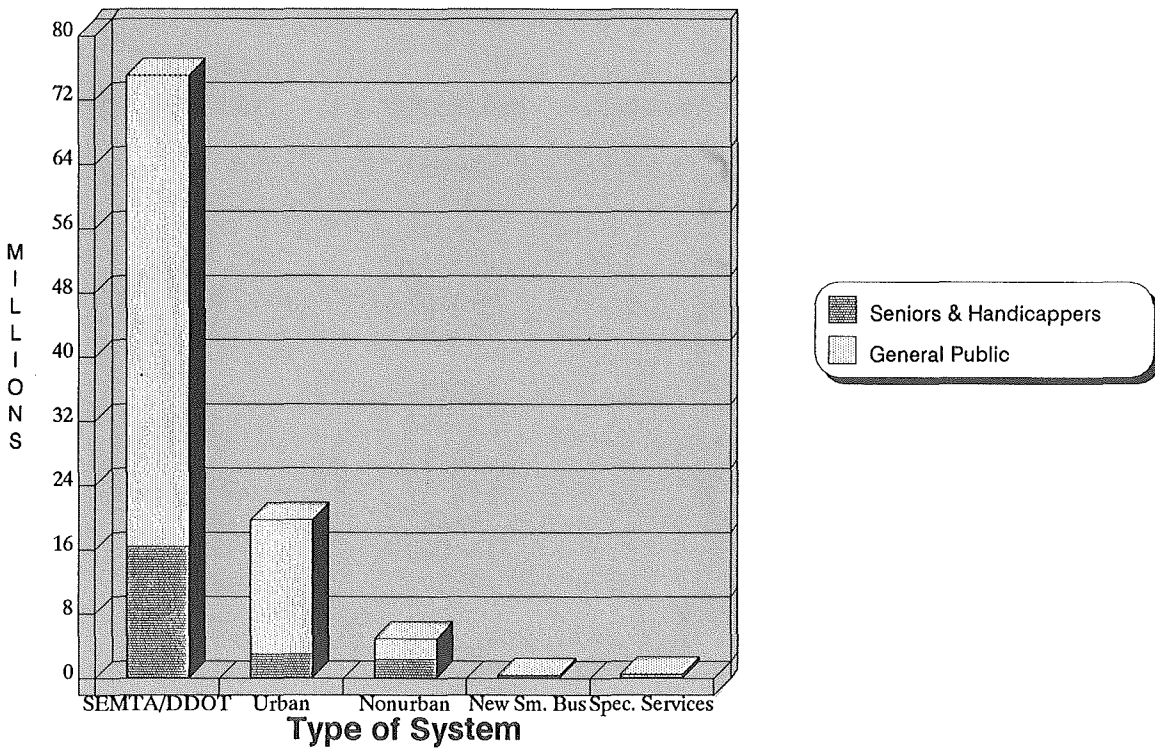
TABLE C-6
(Continued)

<u>County Systems</u>	<u>Vehicles</u>		<u>Passengers</u>	<u>Percent Seniors</u>	<u>Percent Handicappers</u>
	<u>Regular</u>	<u>Lift-Equipped</u>			
Alger Co.	5	4	39,083	21	7
Antrim Co.	6	8	90,172	18	21
Barry Co.	0	6	57,663	19	4
Bay Area	7	5	203,246	18	33
Bay Co.	7	4	264,180	5	39
Berrien Co.	6	5	148,253	9	61
CATA (Ingham Co.)	0	7	30,274	26	17
Charlevoix Co.	3	7	71,750	18	34
Clare Co.	3	3	60,882	15	52
Crawford Co.	4	7	128,319	19	2
Eastern U.P.	4	6	69,821	3	70
Eaton Co.	3	9	138,982	18	25
Gladwin Co.	4	7	98,291	18	26
Gogebic Co.	3	2	31,204	48	18
Huron Co.	9	6	164,299	7	35
Iosco Co.	2	6	42,126	16	50
Isabella Co.	15	11	260,559	15	36
Jackson	0	11	42,126	16	50
Kalamazoo Co.	0	12	76,494	17	79
Lenawee Co.	10	4	81,655	20	65
Manistee Co.	11	11	195,874	24	12
Marquette Co.	9	11	264,543	10	14
Mecosta Co.	4	4	57,349	9	79
Ogemaw Co.	1	4	35,584	20	36
Ontonagon Co.	3	3	36,763	21	11
Osceola Co.	2	3	37,545	25	65
Oscoda Co.	1	3	23,284	64	3
Otsego Co.	6	4	93,523	27	25
Roscommon Co.	5	5	104,062	20	8
Sanilac Co.	3	7	62,948	2	98
Schoolcraft Co.	3	2	32,282	22	51
SEMTA	0	34	357,219	17*	5*
Van Buren Co.	3	4	47,878	15	74
Wexford Co.	<u>6</u>	<u>7</u>	<u>127,381</u>	26	23
Subtotals	148	232	3,577,530		
NONURBAN TOTALS	214	288	4,961,515		

* = Estimated

TABLE C-7

**LOCAL TRANSIT RIDERSHIP
FY 1986-87**



INTERCITY PASSENGER AND FREIGHT TRANSPORTATION - 10%

INTERCITY PASSENGER AND FREIGHT DISCRETIONARY

\$7,564,500 CTF

The State Transportation Commission recently adopted revised policies for intercity passenger and freight programs, as follows:

"Essential Intercity transportation for students, families, and seniors."

1. Intercity Bus Programs

In 1987, the intercity bus network served more than 200 communities throughout Michigan. State assistance helps keep these services available for our citizens. Program policies include:

- Intercity bus operations assistance is considered only if all other efforts, including marketing and the bus equipment program, have failed to maintain essential service. This program would provide financial assistance to continue or reinstate service where termination would cause isolation to an area not designated as part of the core network, shown on Map C-3. Funding may be provided for 90 to 180 days to avoid a break in service while an evaluation is performed. Route services must generate a minimum of 30 cents per mile in passenger revenue to be eligible for continuation beyond the evaluation period. Continuation service contracts will be let on a bid basis with state funds being reduced over subsequent years of operations.
- The intercity facility development program provides funding on an 80 percent state/20 percent local basis, or on an 80 percent federal/20 percent state basis where facilities are approved for federal funding. Locations for proposed facilities are reviewed on a case-by-case basis to achieve the best response to the area of market, transportation industry needs, coordination, and economic development. This program has provided construction or development of convenient facilities for the traveling public in ten communities, to date, as shown on Map C-4.

- The intercity marketing program is designed to inform the public of the availability and advantages of intercity travel services. The goal is to enhance the image of public intercity surface transportation and to stimulate ridership on selected corridors. Promotion of intercity transportation is carefully aligned with the tourism industry so as to complement and highlight the state's tourism programs.

2. Freight Transportation Programs

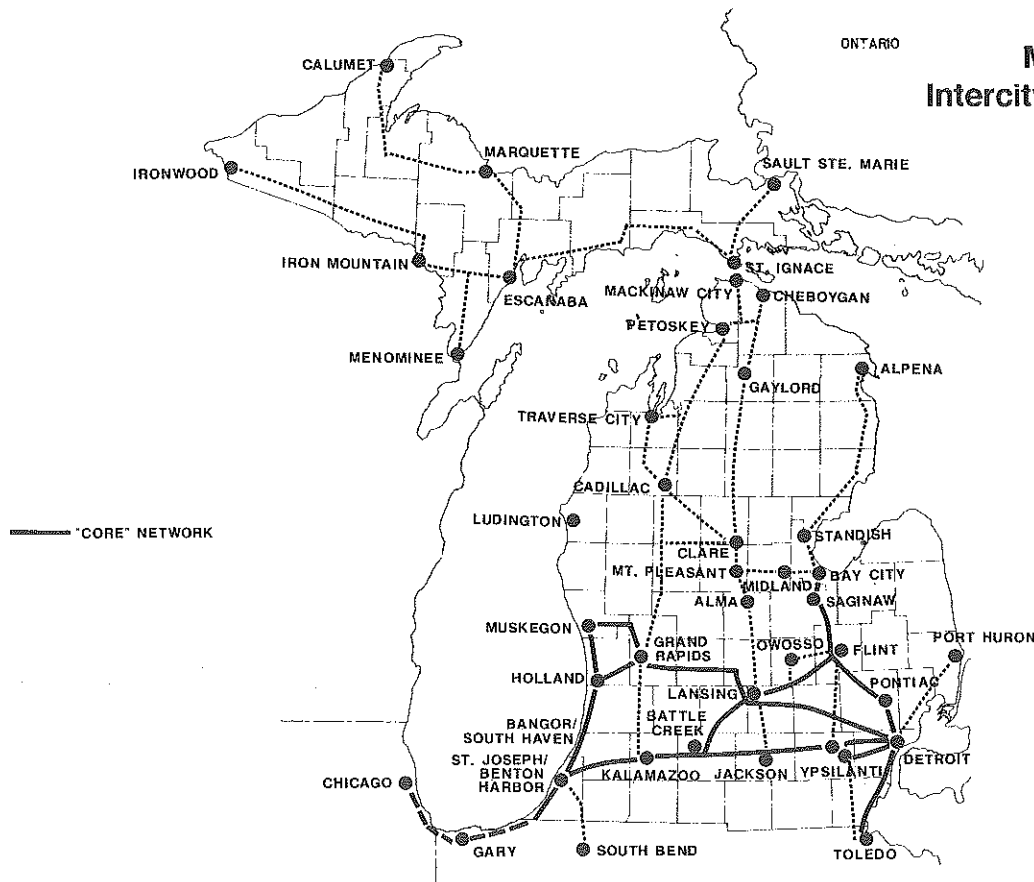
The freight transportation program helps assure that essential rail facilities are maintained for the movement of goods. Program policies include:

- Improvements to state-owned rail facilities will be prioritized according to available funds and relative importance of the project. Facility rehabilitation projects will be engineered based on concern for safety, traffic volume/tonnage, time sensitivity of commodities, function of segment in a corridor, and cost of operations.
- The state will consider purchase of a new line only where the proposed line is directly connected to a currently operating state-owned line, and the proposed line generates an annual minimum of 20 carloadings per mile. Acquisition of other lines may occur as a last resort to preserve service when a documented need exists and when other sources provide 50 percent of acquisition costs.
- Privately owned railroad companies may receive capital loans up to 30 percent of the total project cost to improve or expand the privately owned infrastructure.
- Nontransportation companies or local units of government may receive assistance for economic development purposes in the form of loans and/or grants up to 50 percent of the total cost of the rail freight portion of the project.

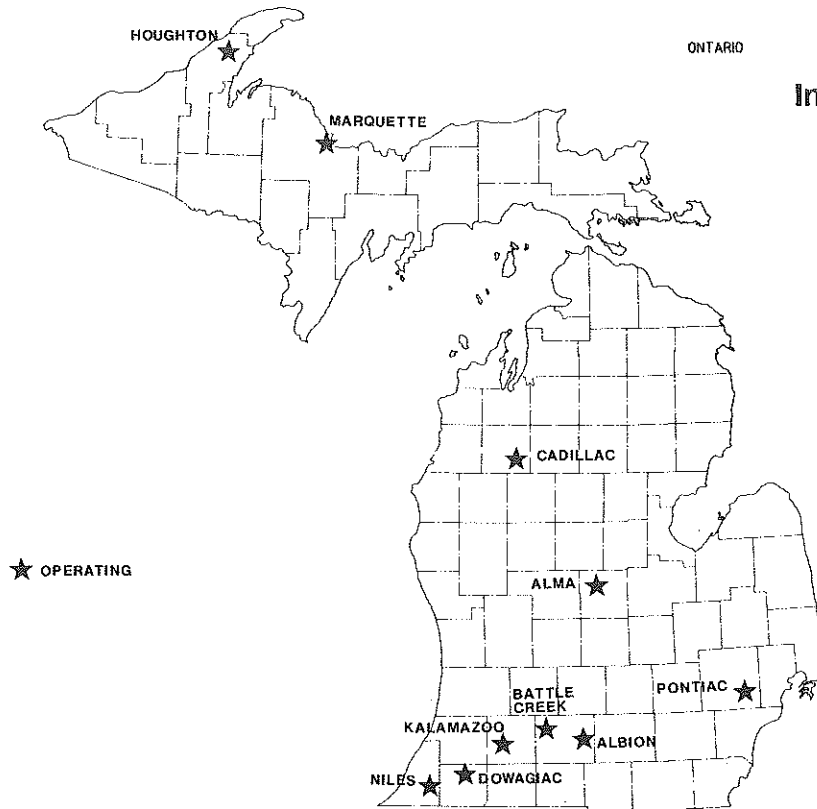
"Technical and financial assistance for Michigan's commercial rail network."

Programming of these discretionary funds to specific intercity passenger and freight projects, consistent with these Commission policies, will be provided in quarterly reports to the appropriations committees.

MAP C-3
Intercity Bus Network



MAP C-4
Intermodal Passenger
Facilities



INTERCITY BUS EQUIPMENT PROGRAM

\$4,400,000 Loan

This program provides modern vehicles to serve intercity travelers throughout Michigan. Carriers that have operated under a certificate of authority for two years may lease a maximum of five units a year for up to six years each. The lease rate is \$1 per year per bus. Carriers provide a security deposit of 2 percent of the vehicle purchase price and provide all necessary maintenance and operating costs. Use of the equipment is restricted to scheduled regular-route services that originate at, or are destined to, points in Michigan. This program enhances the operating safety and attractiveness of such service through provision of new equipment.

The funds on deposit are replacements received from intercity carriers under an earlier equipment loan program. This revised program does not include repayment provisions nor is the equipment available for charter use.

RAIL PASSENGER SERVICE

\$1,850,000	Operations
100,000	Market Development
<u>1,550,000</u>	Capital and Service Development
\$3,500,000	CTF

"Michigan's rail passenger service recently received a 90 percent satisfaction rating."

Rail passenger service provides an increasingly attractive mode of travel serving 20 communities along three primary Michigan routes. The "International Limited" route links Port Huron, Flint, Lansing/East Lansing, and other central and eastern Michigan cities with Chicago and Toronto. The "Pere Marquette" service links Grand Rapids and other southwestern lower Michigan cities with Chicago. Amtrak's Detroit-Chicago route provides daily corridor service to Dearborn, Ann Arbor, Jackson, Albion, Battle Creek, Kalamazoo, Dowagiac, and Niles. These three routes served almost 500,000 rail passengers in FY 1987. Continued attention to service quality is now realizing a 90 percent satisfaction rating by network users.

Rail passenger capital investments focus on passenger stations, track and signal improvements, equipment upgrading, and grade crossings to achieve improved service availability, attractiveness, safety, and performance. Completion of a \$60 million track improvement program by Conrail and Amtrak over virtually the entire Detroit-Chicago corridor is scheduled for completion in 1988.

Map C-5 shows Michigan's rail passenger network which extends more than 1,000-route miles. Table C-8 provides information on the percentage of total route miles able to support sustained operations of 80 m.p.h. Table C-9 below shows economic performance trends impacting state assisted rail passenger services. From FY 1977-78 to 1986-87, user support increased from \$12.61 to \$23.81 per passenger, while state support required dropped from \$17.14 to \$6.36 per passenger.

TABLE C-8
High Performance Passenger Train Operations
Percentage of Total Route Miles With Sustained 80 m.p.h.

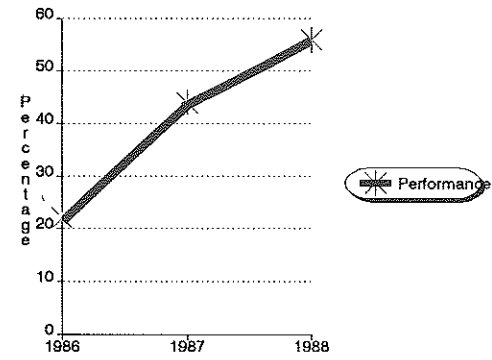
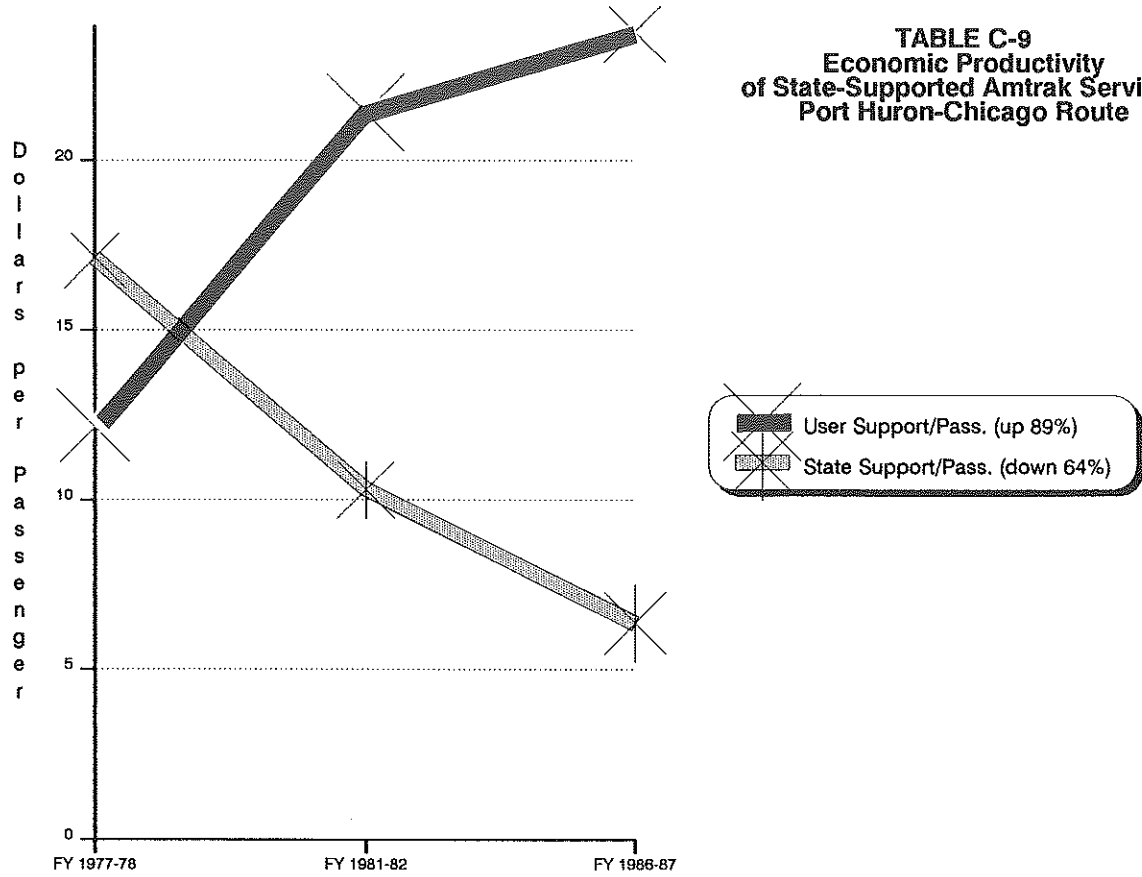
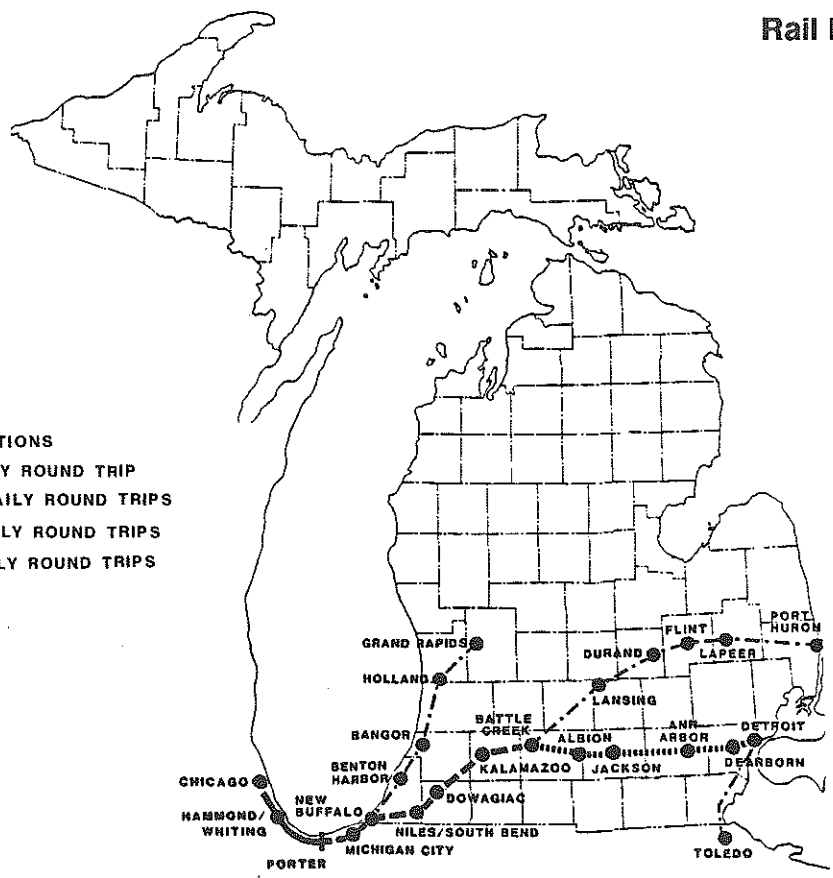


TABLE C-9
Economic Productivity of State-Supported Amtrak Services
Port Huron-Chicago Route



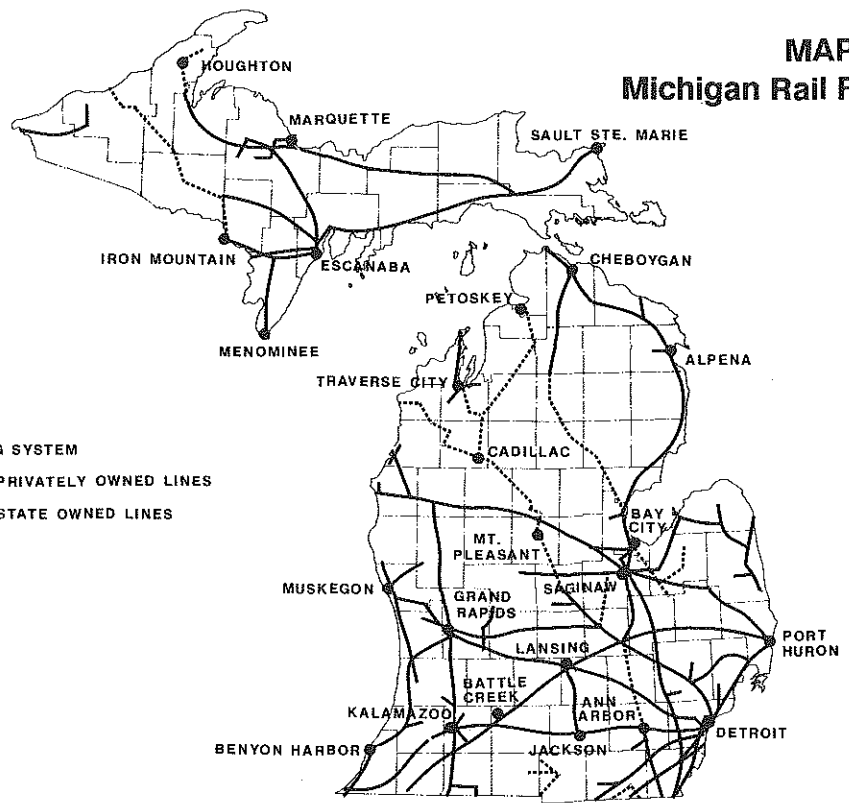
MAP C-5
Rail Passenger Network

- RAIL STATIONS
- ONE DAILY ROUND TRIP
- THREE DAILY ROUND TRIPS
- ==== FOUR DAILY ROUND TRIPS
- ===== FIVE DAILY ROUND TRIPS



MAP C-6
Michigan Rail Freight Network

- EXISTING SYSTEM
- PRIVATELY OWNED LINES
- STATE OWNED LINES



MARINE PASSENGER

\$1,000,000 CTF

The state provides operating and capital support to designated water ferry service linking Drummond, Neebish, and Sugar Islands with the Chippewa County mainland. These services are administered by the Eastern Upper Peninsula Transportation Authority. Residents of the islands are dependent upon these services for access to fuel and other basic supplies and services, as well as school and work transportation. The ferry services also promote tourism opportunities essential to Michigan's economy.

"Island residents depend on these services for school and work transportation."

TRANSPORTATION SERVICES DIRECTORY

\$50,000 CTF

The Michigan Public Transportation Map and Directory is a helpful passenger services guide. This composite brochure, divided into geographic sections, shows all inter-city bus, rail, airline and ferry routes, and identifies communities with local bus service. The directory lists, by community, the available transportation services by mode, with phone numbers and addresses. These directories are used by the tourism industry, the public transportation industry, and the general public.

"The Public Transportation Directory is used by the tourism industry and the traveling public."

FREIGHT PRESERVATION AND DEVELOPMENT

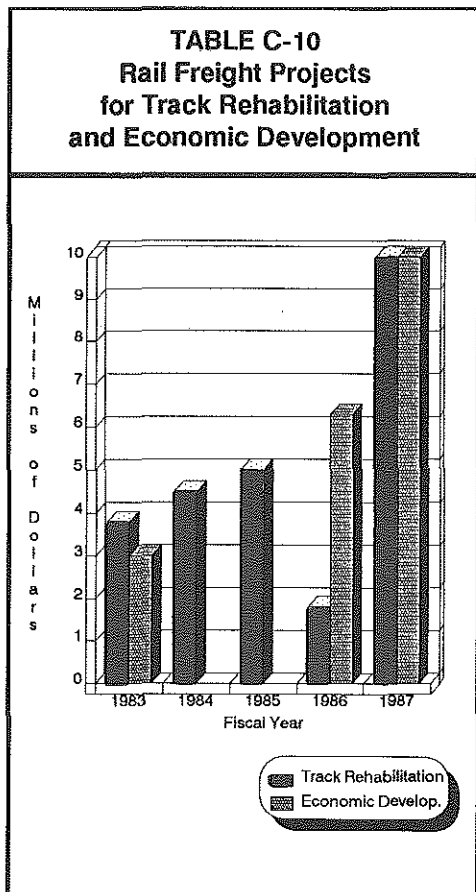
\$4,300,000 Loan
\$ 100,000 Federal Railroad Administration

The purpose of this program is to stabilize and enhance the statewide freight transportation infrastructure which plays a significant role in supporting economic development. Michigan's rail freight network of approximately 4,700-route miles is shown on Map C-6. This network is operated by five major railroad companies and numerous short line, regional, and terminal companies. In 1987, an estimated 1,375,000 carloads were generated from Michigan stations.

"The statewide rail freight network plays a significant role in supporting economic development."

The funds shown on the preceding page are in addition to the CTF funds to be programmed for freight preservation and development from the Intercity Passenger and Freight Discretionary account.

Freight construction projects carried out in FY 1987 include a rail side track to service a new manufacturing plant at Sagola and the rail portion of the reconstruction of bridges in the City of Howell. Track rehabilitation projects carried out in FY 1987 include improvements to 63 miles of track along the Ann Arbor Railroad, 117 miles of track between Iron Mountain and Ontonagon on the Escanaba and Lake Superior Railroad, and 20 miles of track and signal work between Durand and Howell. Table C-10 shows freight investments for FY 1983 through FY 1987.



FREIGHT PROPERTY MANAGEMENT

\$1,000,000 CTF

Effective property management is essential to protect the state's sizable investment in 872 miles of railroad rights-of-way, track structure, adjacent real estate parcels, and several buildings. Examples of expenses funded under this category are those arising from leases, taxes, inventory control, maintenance and repair, insurance, security, and appraisals.

PORT ASSISTANCE

\$301,900 CTF

The purpose of this program is to partially fund the operating budgets of eligible port authorities. By statute, upon city, county, and state approvals of a port authority budget, 50 percent is to be funded by the state and 25 percent each from the city and the county. The Detroit/Wayne County Port Authority is the only authority currently eligible for this state assistance.



PUBLIC TRANSPORTATION DEVELOPMENT - 20%

Sources

\$26,832,700 CTF
5,350,000 UMTA (Estimated)
\$32,182,700

Public Transportation Development Project Summary

Specialized Services	\$ 2,000,000
Local Share Bonus	1,000,000
Effective Service Bonus	1,000,000
Municipal Credit Program	1,000,000
Bus Transit Capital	14,400,000
Bus Property Management	100,000
Technical Studies	535,000
Planning Grants	50,000
Ridesharing	250,000
Vanpooling	110,000
Service Development/ New Technology	1,650,000
Discretionary	<u>10,087,700</u>
	\$32,182,700

PROGRAM HIGHLIGHTS

Public Transportation Development supports subprograms and projects that contribute to a balanced statewide network of public transportation services. Projects are selected based on statewide goals related to preserving basic services, generating technical improvements, and encouraging economic development. The first four projects are mandated by Act 51 of 1951. Each subprogram is described below:

1. Specialized Services

\$2,000,000 CTF

Many of Michigan's senior citizens and handicappers look to specialized services as a primary means of transportation. Act 51, as amended in 1987, provides that not less than \$2,000,000 shall be distributed as grants for specialized services. For FY 1989, new program guidelines will be developed by the department.

Performance data for those agencies receiving specialized services operating assistance in FY 1987 are provided on Table C-11 on the following page.

TABLE C-11

**FY 1987 PERFORMANCE DATA
Specialized Services for Senior and Handicappers**

<u>Location</u>	<u>Operator</u>	<u>Vehicles</u>		<u>Passengers</u>
		<u>Regular</u>	<u>Lift- Equipped</u>	
Allegan Co.	Resource Development Comm.	0	2	89,047
Alpena Co.	Thunder Bay Transit	0	10	31,342
	Northeast Michigan Rehabilitation	0	2	7,560
Baraga Co.	Baragaland SCC	0	1	648
Baraga/Houghton/K.	CAA	0	2	4,778
Benzie Co.	COA	0	2	8,045
Calhoun co.	CAA of South Central Michigan	0	1	12,497
Cass Co.	Westgate Center	0	3	9,912
	COA	0	3	1,962
Cheboygan Co.	Cheboygan COA	1	2	8,055
Delta/Menominee Co.	CAA	0	7	38,326
Dickinson/Iron Co.	CAA	0	9	36,110
Genesee Co.	Association for Retarded Citizens	2	7	68,839
	Service Center for Visually Impaired	0	2	1,786
	Center for Independent Living	0	1	7,619
	Haskell Owls	0	1	1,498
Gratiot Co.	HIC	0	2	2,964
Hillsdale Co.	Key Opportunity	1	4	33,143
Kent Co.	Hope Rehabilitation Net	0	4	8,841
Lapeer Co.	Christian and Family Services	0	1	5,805
Mackinac Co.	CAA	0	1	9,075
Midland Co.	COA	0	1	2,088
Montmorency Co.	COA	0	1	644
Muskegon Co.	W. Michigan Center for the Handicapped	0	2	55,511
Newaygo Co.	Five Cap. Inc.	0	1	5,075
Oceana Co.	COA	0	1	3,762
Ottawa Co.	Georgetown Seniors	0	1	730
Petoskey	Friendship Center	0	3	18,342
Presque Isle Co.	Presque Isle COA	0	2	4,032
Saginaw Co.	COA	0	2	9,207
	Child Development Center	0	3	9,647
	Frankenmuth Lutheran Home	0	1	718
Shiawassee Co.	COA	1	1	10,728
	ACKCO Service	1	2	15,436
St. Clair Co.	COA	3	2	23,985
St. Johns	CRV	0	3	15,263
St. Joseph Co.	COA & Arch Workshop	2	5	35,427
	Chelsea Area Transportation	1	0	7,446
Washtenaw Co.	Child & Family Service	0	2	6,32
	Manchester Senior Citizens	0	2	1,027
	People on the Move	0	3	3,790
	Work Skill Corp.	0	1	2,512
	People's Express	0	1	2,472
Totals		12	97	622,023

2. Local Share Bonus

\$1,000,000 CTF

Recent amendments to Act 51 provide that not less than \$1,000,000 shall be distributed to local transit agencies as a local share bonus. These bonus funds will be distributed based on percentage of local revenue, weighted by population.

3. Effective Service Bonus

\$1,000,000 CTF

Recent amendments to Act 51 provide that not less than \$1,000,000 shall be distributed to local transit agencies as an effective service bonus. These bonus funds will be distributed based on farebox revenue as weighted by vehicle miles.

4. Municipal Credit Program

\$1,000,000 CTF

Recent amendments to Act 51 provide that not more than \$1,000,000 from the 20 percent allocation shall be distributed as part of the Municipal Credit Program. This program, administered by the Southeast Michigan Transportation Authority, assists local communities within the authority's district in funding public transportation services.

5. Bus Capital

\$ 9,800,000 CTF
4,600,000 UMTA (Estimated)
\$14,400,000

This subprogram is designed to meet capital needs of local transit systems. Michigan's urbanized transit systems typically receive capital apportionments of \$12 million to \$18 million from UMTA's Section 9 program. To capture these funds, a local/state match of \$3 million to \$4.5 million is required. Federal grants for local transit systems may also become available from UMTA's discretionary program (Section 3), from

"Assisting communities in funding local transit services."

"There is a need for replacement vehicles and equipment."

UMTA's Section 18 program for transportation projects in nonurbanized areas, and from UMTA's Section 16(b)(2) program for private nonprofit agencies that primarily serve seniors and handicappers. In addition, there is a need for replacement vehicles and equipment in nonurban systems, rehabilitation of transit vehicles, and construction of transit facilities, for which no federal funds are anticipated.

6. Bus Property Management

\$100,000 CTF

This subprogram funds operating costs for the central facility operated by Bus Transit Division. This facility, conveniently located near Potterville, is used for inspecting vehicles, conducting vehicle maintenance training, and vehicle storage.

7. Technical Studies

\$ 35,000 CTF
500,000 UMTA (Estimated)
\$535,000

These Section 8 Technical Studies focus on operational and technical problems of local transit agencies. Activities can include operations manuals, technical assistance, and program management. Specific projects are selected by the department's Technical Studies Committee after funding guidance is received from UMTA. In-kind services are used to the extent possible to capture maximum federal funds.

"Providing technical assistance to local transit agencies."

8. Planning Grants

\$50,000 CTF

With the concurrence of local transit agencies, several state metropolitan planning organizations utilize UMTA Section 9 funds for planning tasks directly related to the area's transit program. This subprogram provides matching funds on an 80 percent UMTA, 10 percent state, 10 percent local basis. The federal funds are granted directly to local transit agencies.

\$250,000 CTF

"Ridesharing can reduce traffic congestion and energy consumption."

Ridesharing programs assist in finding alternative transportation services. Ridesharing for the work trip offers potential for reducing energy consumption, traffic congestion, and air pollution. This subprogram provides grants to local agencies for ridesharing marketing, organizational, promotional, and demonstration efforts. Most of the costs are associated with the continued support of local ridesharing offices. Continuation grants are based on evaluation of effectiveness. Map C-7 shows ridesharing and vanpooling activity throughout Michigan. Table C-12 provides performance data for FY 1987.

10. Vanpooling

\$110,000 CTF

This subprogram funds the continuation of MichiVan vanpool services to qualified community groups of nine or more persons throughout the state. Self-supporting except for marketing and administrative costs, MichiVan is an energy-efficient form of transportation that contributes to the relief of traffic congestion and air pollution. This subprogram, which has accelerated the expansion of vanpooling in Michigan, continues to meet transportation demands where public transportation is unavailable or is unsuited to commuter travel needs.

11. Service Development and New Technology

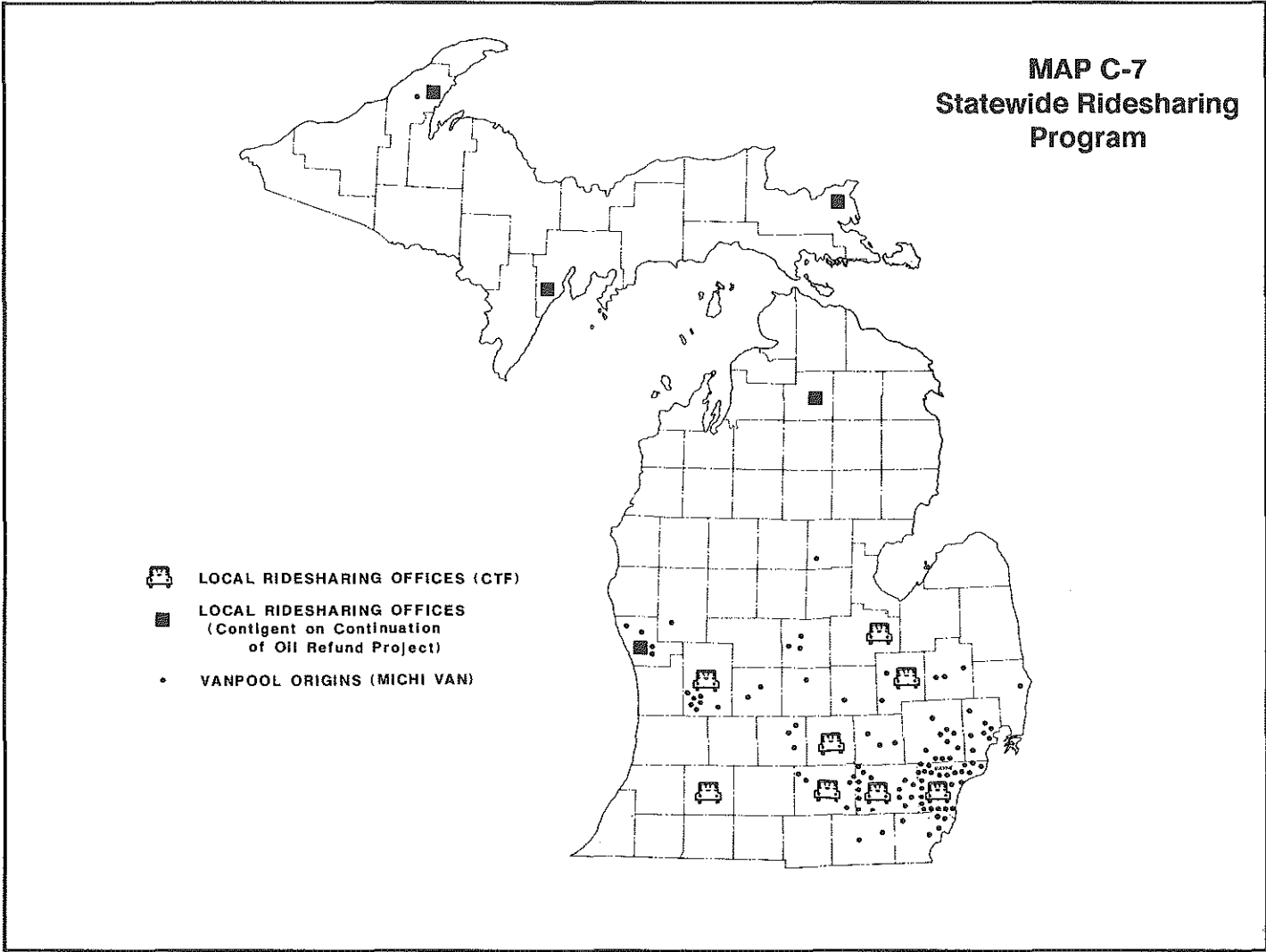
\$1,400,000 CTF
250,000 UMTA (Estimated)
\$1,650,000

"Working toward more effective transit services."

This subprogram is designed to assist public transportation providers in seeking more effective service delivery mechanisms. Examples of major activities include development of computer hardware and software systems, improvements to communications equipment, assistance with vehicle

**FY 1987 PERFORMANCE DATA
Ridesharing and Vanpool
Programs**

	<u>Ridesharing</u>	<u>Vanpooling</u>
Number of Carpools/Vans	1,904	59
Number of Carpoolers/Vanpoolers	5,331	767
Reduction in No. of Vehicles on Road	2,190	580
Vehicle Trips Saved	1,094,759	289,985
Gallons of Gas Conserved	906,270	270,515



maintenance schedules and vehicle purchases, development of a marketing program to promote greater awareness of public transit and to increase ridership, driver training programs, and technical assistance in accounting and financial management.

12. Public Transportation Development Discretionary

\$10,087,700 CTF

This discretionary account provides MDOT the ability to respond to emerging issues and to direct resources to areas of greatest need. For example, this could fund essential transit services, critical needs for transit vehicles, investments on state-owned rail trackage, rail freight facilities to support newly announced economic development projects, or technical improvements. Programming to specific projects is provided in quarterly reports.

Plans for funding from this account include Local Bus New Services, and providing capital and operating assistance for new service projects. This program has a 95 percent success rate with the vast majority of communities having opted to continue local funding after the initial three-year demonstration period.

Continuation systems for FY1989 under the Local Bus New Services program, shown on Map C-9, are anticipated to require \$2.5 million. This includes services previously provided under the LETS GO program. Performance data for systems operating in FY1987 is shown on Table C-13. Funding requirements for FY1989 starts are not known at this time. Applications are accepted on an ongoing basis from interested communities.

**Local Bus New Service
Continuation Systems**

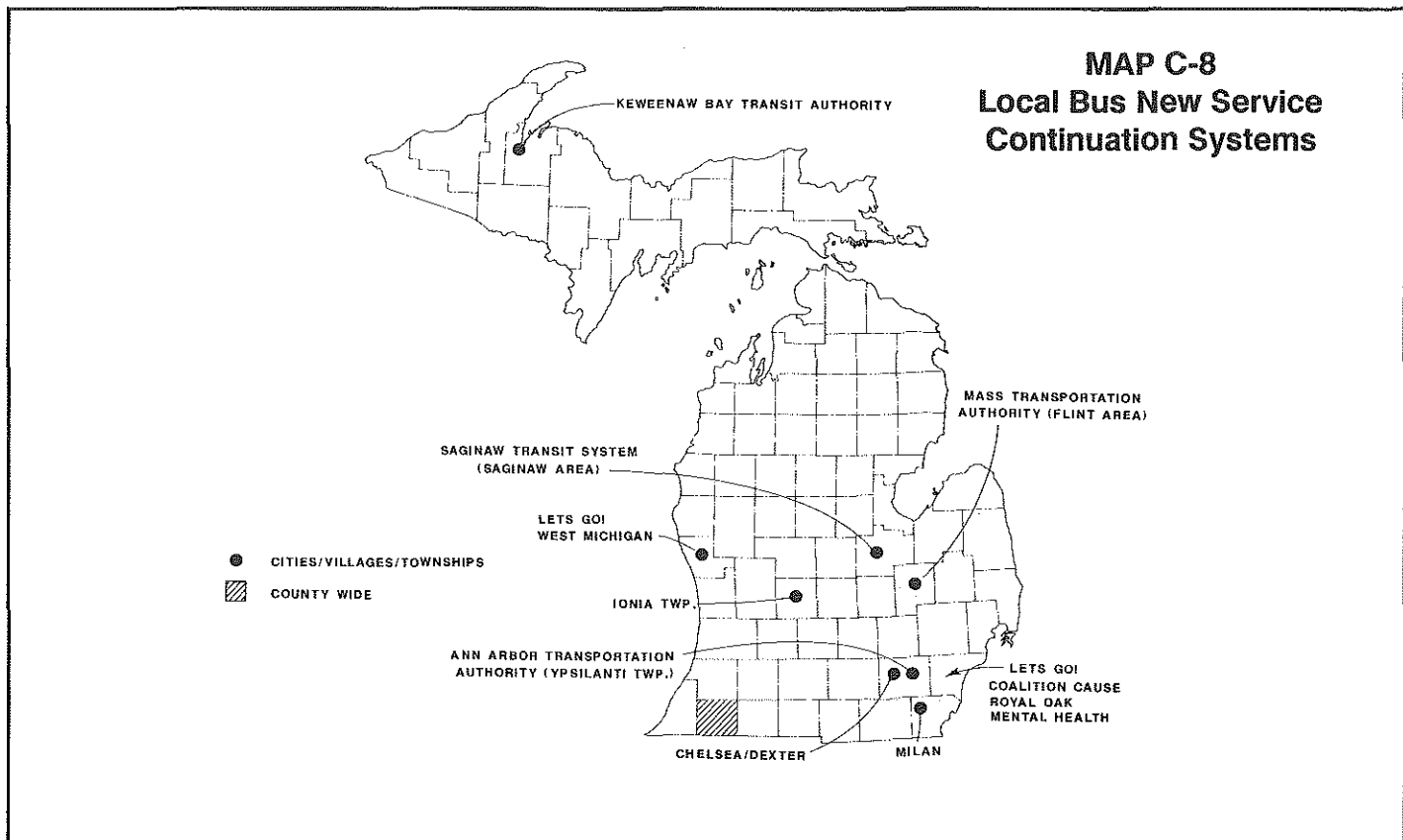
Chelsea/Dexter
Flint (part)
Millan
Saginaw (part)
SEMTA LETS GO Transfer
W. MI LETS GO Transfer

This account will also be utilized to provide the statutory maximums of 40 percent of eligible operating expenses for urban transit systems and 50 percent for nonurban systems. The 70 percent allocation of CTF program funds provides \$93.9 million for this purpose. It is estimated that an additional \$4.7 million will be required for Supplemental Operating Assistance.

TABLE C-13

**FY 1987 PERFORMANCE DATA
New Small Bus Services**

<u>Location</u>	<u>Lift Equip Buses</u>	<u>Regular Buses</u>	<u>Passengers</u>	<u>% Seniors and Handicappers</u>
Bay Area Transit	2	3	52,834	53
Berrien Co.	5	14	10,673	78
Branch Co.	5	3	85,300	73
Caro (Village of)	4	2	47,166	49
Chelsea/Dexter	2	0	5,173	10
Kalamazoo Co.	12	0	21,568	95
Kalkaska Co.	7	1	66,328	53
Keweenaw Bay	2	3	32,666	29
Greater Lapeer	3	3	19,613	72
Milan	3	0	29,023	9
Osceola Co.	3	3	26,712	37
Saginaw Co.	1	0	1,440	NA
Scottville/Hamlin	2	0	3,855	84
SEMTA LETS GO	9	15	99,798	100
Ypsilanti Twp.	2	0	33,961	15
Totals	62	47	536,100	



**"The citizens of Michigan enjoy
a good system of air service."**

AVIATION



AVIATION

HIGHLIGHTS

The citizens and businesses of Michigan enjoy a good system of airports and air service. The system of 243 airports and flying fields is the result of many years of cooperation between state, local, and federal agencies and investments by private interests. This program emphasizes preservation of the publicly owned facilities across the state. Fifty-eight percent of the \$43 million aeronautics program is targeted at preserving existing facilities. Thirty-seven percent of the program is devoted to increasing the capacity at existing airports. About \$2 million is programmed in the expand category.

"The citizens of Michigan enjoy a good system of air service."

Twenty-three airports have projects that either bring them up to recommended standards or preserve the pavement condition. Age, weather, and aircraft use and weight combine to cause pavements to deteriorate. To maintain a high level of service, we must devote the majority of the aviation budget to preserving the surface condition of existing runways and taxiways, and to maintaining existing facilities.

Some of the major projects aimed at preservation include:

- Battle Creek - Rehabilitating apron.
- Traverse City - Paving taxiway.

There are 20 projects that will improve the facility by constructing new runways, aprons or terminal expansions, acquiring land, and other similar activities. These improvements are needed to meet increased demand for a level of service that exceeds the existing design of the airport.

A major improve project is the construction of a new runway at Evart.

AIRPORT SYSTEM CHARACTERISTICS AND CONDITION

Michigan citizens and travelers are afforded access to the national air transportation system through the 243 airports and flying fields located throughout the state. There are air carrier airports for commercial service and general aviation airports for nonscheduled service.

Commercial Airports	
<u>Number</u>	<u>Aircraft Size</u>
5	100 or more passengers
13	50-100 passengers
2	less than 50 passengers
2	less than 10 passengers

COMMERCIAL SERVICE AIRPORTS

The 22 commercial airports are all publicly-owned and can accommodate commercial aircraft of all sizes. The number of airports and sizes are distributed as shown to the right.

GENERAL AVIATION AIRPORTS

General aviation airports are categorized in two primary ways: ownership and function. The 98 publicly-owned general aviation airports include 22 airports that provide service to nonscheduled passengers and cargo and 76 utility airports that services a variety of aircraft.

In addition, there are 123 privately-owned airports that are open to the public. These airports do not receive public funds but are widely used for corporate and utility purposes. These private airports help to round out air service in Michigan, because over 30 percent of the registered aircraft are located at these airports. Private airports are being squeezed out by competing land uses and increasing costs for insurance liability.

AIRPORT CONDITION

An in-house review of 58 airports was conducted in 1985 to determine the physical condition of the runways, taxiways, and aprons. All of the state's air carrier airports, the major general aviation airports, plus airports scheduled for improvement in 1986 or 1987, were also included in the

review. Since that time, no update has been conducted. The 1985 data are helpful, however, in understanding the general condition of our airports.

The 1985 survey results are presented at the right.

A more detailed review of the condition of our airports is underway. The information from this review will be available next year.

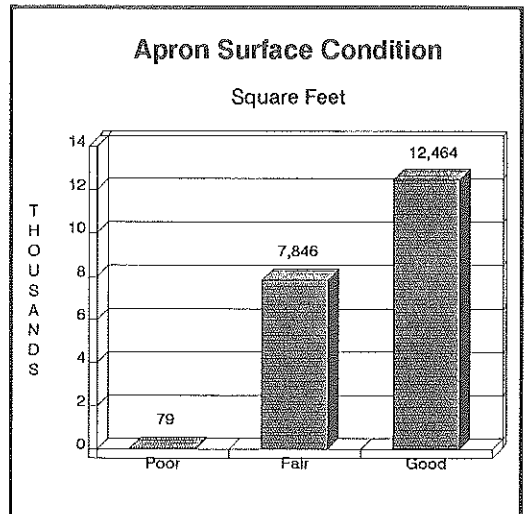
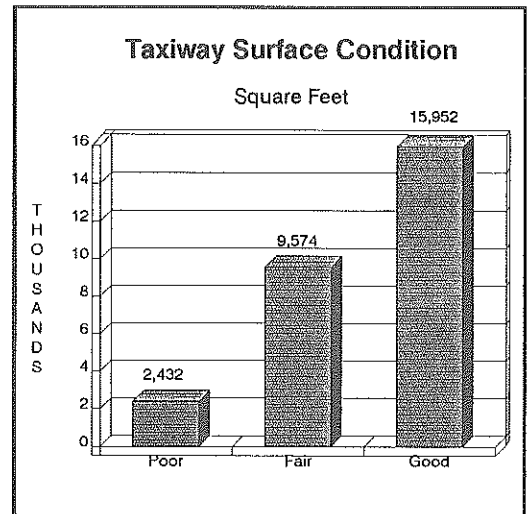
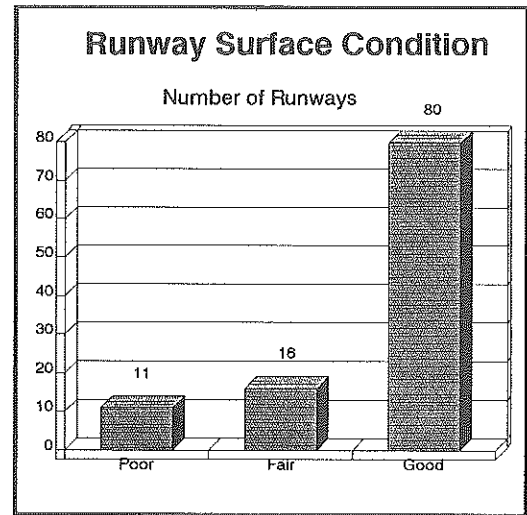
REVENUE SOURCES

Funding for aviation projects comes from federal grants, the state tax on airplane fuel, and local taxes. Tax on airline passenger tickets provides 83 percent of federal funds. The chief source of income for state funds is the aviation fuel tax, which accounts for 72 percent of the revenues.

Federal grants are appropriated through the Airport and Airways Trust Fund. These grants fund airport projects that are on the National Plan of Integrated Airport System (NPIAS). To be placed on the NPIAS listing, an airport must serve a minimum of aircraft, must not duplicate existing service from another facility in the same general service area, and must be included in the Michigan Aviation System Plan (MASP). Justification for improvements, such as runway extensions, must be substantiated before funds are made available.

The Airline Deregulation Act of 1978 significantly changed Michigan's air service. Subsidies were phased out to the point where only four airports in the state are subsidized today. In 1978, the state received \$8.6 million in subsidies. That amount dropped to \$1 million in 1986. Federal subsidies for air service are due to terminate in October of 1988 with the expiration of the act. In the event that the essential air service program does expire, alternative measures need to be explored to assure quality air service to small and medium sized communities in the state.

Prior to any allocation of state or federal funds for a project, local revenue must be budgeted for the local match. State and local funds are used to match federal aid on a 50/50



ratio. If the state is unable to participate, projects are funded on a 90 percent federal and 10 percent local basis. Projects not receiving federal aid are usually funded on a 50/50 basis by state and local funds.

The estimated revenues by source that are available for construction projects for 1989 are shown below:

	<u>A List</u>	<u>B List</u>	<u>Total</u>
Federal Aid	\$32,222,102	\$6,432,968	\$37,655,070
State Funds	1,124,406	174,465	1,298,871
Local Funds	<u>3,479,294</u>	<u>1,040,309</u>	<u>4,519,603</u>
TOTALS	\$35,825,802	\$7,647,742	\$43,473,544

The **A List** contains sufficient projects to use the minimum expected funding. The **B List** adds sufficient projects to bring their cost up to the maximum funding we can expect.

It is likely that Gramm-Rudman legislation will result in less expenditures when Congress passes the 1989 budget.

As with highways, there is a large balance in the Aviation Trust Fund. If the balance was returned to the states, we could go much farther in making needed improvement to our airports and the services they provide to Michigan's citizens.

PRIORITIES AND PROGRAM CATEGORIES

State funds are allocated to projects on the basis of the following priorities:

1. **Safety** - lighting, approach clearing and runway surfaces.
2. **Primary Airside** - primary runways, taxiways, aprons, and associated land.
3. **Secondary Airside** - secondary runways, taxiways, aprons, and related development.

routes. For example, extending or strengthening a runway to accommodate larger aircraft is an upgrade.

5. Capacity Development (Capacity) \$13,716,563

This category is oriented towards development of increased airport capacity beyond its present use. Typical development includes new runways, apron, and terminal expansion.

6. New Airports - Capacity \$-0-

These projects are constructed to increase metropolitan system capacity. The category includes all new reliever airports and new commercial service airports.

No projects are programmed for this category in 1989.

7. New Airports - Community \$1,840,353

This category is used for any new airport which will be the sole airport serving a community. It will normally be a general aviation airport. A small number of commercial service (new or replacement) airports outside of the large metropolitan areas may also be included.

8. Equipment and Buildings \$3,980,389

This category includes maintenance equipment and buildings, including the airport terminal.

Each of the eight categories has been grouped into the broader preserve-improve-expand designations. In relation to aviation, **preserve** is defined as maintaining existing air service, equipment, and facilities. **Improve** increases the capacity or service of existing airports. **Expand** provides a new service or facility. Increasing service to an existing airport would also be an expansion.

The funding for 1989 by the program categories and by preserve, improve, and expand are shown on the following page.

AVIATION PROJECTS SUMMARY

Priority A and B Lists

	<u>Total</u>	<u>Federal</u>	<u>State</u>	<u>Local</u>
PRESERVE				
Safety/Special Projects	\$ 3,413,633	\$ 3,072,270	\$ 57,891	\$ 283,472
Reconstruction	14,671,478	12,304,260	682,008	1,685,210
Standards	3,303,128	2,972,815	119,055	211,258
Building & Equipment	<u>3,980,389</u>	<u>3,132,800</u>	<u>12,644</u>	<u>834,945</u>
Subtotal	\$25,368,628	\$21,482,145	\$ 871,598	\$3,014,885
IMPROVE				
Upgrade Role	2,548,000	2,293,200	127,400	127,400
Capacity Development	<u>13,716,563</u>	<u>12,223,407</u>	<u>209,403</u>	<u>1,283,753</u>
Subtotal	\$16,264,563	\$14,516,607	\$ 336,803	\$1,411,153
EXPAND				
Special Projects	0	0	0	0
New Airports - Capacity	0	0	0	0
New Airports - Community	<u>1,840,353</u>	<u>1,656,318</u>	<u>90,470</u>	<u>93,565</u>
Subtotal	\$ 1,840,353	\$ 1,656,318	\$ 90,470	\$ 93,565
TOTALS	\$43,473,544	\$37,655,070	\$1,298,871	\$4,519,603

APPENDIXES

Highway Projects

FISCAL YEAR 1988-89 PROJECT LISTING

By Program Category Database as of April 6, 1988

CATEGORY: 1. PRESERVE

WORK TYPE: 11. TRAFFIC OPERATIONS

<u>Route</u>	<u>Location</u>	<u>Work Type</u>	<u>County</u>	<u>Cost</u>
I-75	SOUTH OF M-68 TO MACKINAC BRG + 24071	SIGN UPGRADING	CHEBOYGAN	\$ 198,950
I-75	US-27 TO SOUTH OF M-68 + 16093 & 69014	SIGN UPGRADING	CRAWFORD	337,700
I-475	I-75 N OF S JCT	SIGN UPGRADING	GENESEE	253,000
I-75	M-33 TO US-27 (65041 & 20052)	SIGN UPGRADING	ROSCOMMON	276,000
US-131	AT M-104, SPRING LAKE	MESSAGE SIGN	OTTAWA	72,450
I-696SR	AT COUZENS AVE, MADISON HT	TRAFFIC SIGNAL	OAKLAND	13,340
M-28	W COUNTY LINE TO I-75 (48041 & 42)	SIGN UPGRADING	SCHOOLCRAFT	195,500
US-131	M-66 TO MANCELONA (15091)	SIGN UPGRADING	ANTRIM	210,450
US-23	S COUNTY LINE TO M-32 (01051)	SIGN UPGRADING	IOSCO	319,000
M-37	I-96 TO NEWAYGO N CITY LIMITS (62032)	SIGN UPGRADING	KENT	275,000
M-58	M-47 TO I-675	SIGN UPGRADING	SAGINAW	25,300
M-13	M-84 TO M-247	SIGN UPGRADING	BAY	23,000
US-12	INDIANA LINE TO BRANCH E COUNTY LINE	SIGN UPGRADING	BERRIEN	495,000
M-36	US-127 TO US-23	SIGN UPGRADING	INGHAM	210,450
US-23	I-94 TO I-96	SIGN UPGRADING	WASHTENAW	440,000
US-23	I-96 TO I-75 (25031)	SIGN UPGRADING	LIVINGSTON	550,000
I-75	S COUNTY LINE TO DIXIE HWY (US-24)	SIGN UPGRADING	OAKLAND	440,000
M-28	US-2 E TO HOUGHTON E COUNTY LINE	SIGN UPGRADING	GOGEBIC	190,900
I-69	I-94 TO CHARLOTTE	SIGN UPGRADING	CALHOUN	415,800

SUMMARY FOR TRAFFIC OPERATIONS: \$4,941,840

WORK TYPE: 12. SAFETY

M-54	AT MAPLE RD, BURTON	LEFT TURN LANE	GENESEE	\$ 201,250
US-131	AT M-115 INTERCHANGE	RECONSTRUCT RAMP	WEXFORD	189,750
I-94	AT PIPESTONE RD INTERCHANGE	INTERSECTION REVISION	BERRIEN	143,750
I-275	AT ANN ARBOR RD INTERCHANGE	WIDEN RAMP	WAYNE	86,250
US-23	M-36 TO N COUNTY LINE (47014)	GUARDRAIL UPGRADING	LIVINGSTON	80,500
M-22	S COUNTY LINE TO GLEN ARBOR	GUARDRAIL UPGRADING	LEELANAU	129,950
M-37	AT C&O RAILROAD	GUARDRAIL UPGRADING	GRAND TRAVERSE	18,400
M-66	S COUNTY LINE TO M-72	GUARDRAIL UPGRADING	KALKASKA	98,900
M-75	BOYNE CITY TO WALLOON LAKE	GUARDRAIL UPGRADING	CHARLEVOIX	34,500
US-27	ROUND LAKE RD TO S CITY LIMIT, STJOHNS	GUARDRAIL UPGRADING	CLINTON	28,750
M-15	I-75 TO N COUNTY LINE	GUARDRAIL UPGRADING	OAKLAND	224,250
US-31	AT DEXTER/AMES, ELK RAPIDS	INTERSECTION REVISION	ANTRIM	57,500
US-31	AT M-110 INTERSECTION, N OF MANISTEE	INTERSECTION REVISION	MANISTEE	115,000
US-31BR	AT 8TH ST, HOLLAND	INTERSECTION IMPROVEMENT	OTTAWA	248,400
US-23	AT BLACK RIVER RD	TURN LANES	ALCONA	143,750
M-96	G01 AT CONRAIL, GALESBURG	RECONSTRUCT & SIGNALS	KALAMAZOO	63,000
M-96	AT G01 CONRAIL, GALESBURG	APPROACH PAVING	KALAMAZOO	46,000
M-156	AT G01 LENAWEE COUNTY RR, MORENCI	RECONSTRUCT & APPROAC	LENAWEE	74,750
M-46	G01 AT H&E RR, CARSONVILLE	RECONSTRUCT CROSSING	SANILAC	33,000
M-46	AT G01 H&E RR, CARSONVILLE	APPROACH PAVING	SANILAC	26,450
M-15	AT WALDON RD, CLARKSTON	GEOMETRIC IMPROVEMENT	OAKLAND	34,500
US-131	AT BROAD ST, CONSTANTINE	RADII IMPROVEMENT	ST. JOSEPH	34,500
M-82	ST WARNER & 72ND, S OF FREMONT	INTERSECTION REVISION	NEWAYGO	230,000

<u>Route</u>	<u>Location</u>	<u>Work Type</u>	<u>County</u>	<u>Cost</u>
M-54	AT DAVISON RD, FLINT	INTERSECTION IMPROVEMENT	GENESEE	\$ 182,850
US-12	AT RED ARROW HWY	INTERSECTION CHANNEL	BERRIEN	189,750
M-56	G02 AT GTW RR, FLINT	RAILROAD CROSSING	GENESEE	220,000
M-56	AT G02 GTW RR, FLINT	RAILROAD SIGNALS	GENESEE	40,000
US-41BR	SL RR TO FOURTH ST, MARQUETTE	UTILITY RELOCATION	MARQUETTE	330,000
M-203	G01 SL RR, HANCOCK	CROSSING REMOVAL	HOUGHTON	103,500
US-41	G05 SL RR, E OF HUMBOLT	CROSSING RECONSTRUCTION	MARQUETTE	94,000
US-41	AT G05 SL RR, E OF HUMBOLT	APPROACH REPAIR	MARQUETTE	48,300

SUMMARY FOR SAFETY: \$3,551,500

WORK TYPE: 13. BRIDGE REHABILITATION

US-10	S23 UNDER WYOMING, DET	DECK REPLACEMENT & RAIL	WAYNE	\$ 605,000
US-12	B01 OVER ST JOSEPH RIVER	NON MOTORIZED STRUCTURE	ST. JOSEPH	187,000
M-89	B01 OVER KALAMAZOO RIVER	UNDERWATER REPAIR	ALLEGAN	121,000
I-94	S03 UNDER 9TH ST	STRUCTURE REHABILITATION	KALAMAZOO	126,500
I-96	S32 UNDER UNDERWOOD & 82124	PAINT, PINS & HANGERS	WAYNE	1,302,400
I-196	S01 UNDER M-43	OVERLAY & RAILING	VAN BUREN	195,500
I-96	S03 UNDER MYRTLE, DET	ABUTTMENT REPAIR	WAYNE	115,000
M-55	B01 OVER W BRANCH MUSKEGON RIV. & B02	DECK REPLACEMENT	MISSAUKEE	341,000
M-150	AT R01 OVER GTW RR & CLINTON RIV	APPROACH & DECK	OAKLAND	5,548,751
M-28	AT B01 OVER E BRANCH FOX RIVER	STRUCTURE & PARKING AREA	LUCE	489,500
MDWD	VARIOUS PRIMARY STRUCTURES	STRUCTURE REPAIR	AREA WIDE	275,000
M-55	B03 OVER PINE RIVER	WIDEN, DECK & PAINTING	MANISTEE	2,145,000
I-375	S02 UNDER LAFAYETTE, DET	OVERLAY & RAILING	WAYNE	297,000
I-75	B01 OVER ROUGE RIVER, DET	RAIL, BAR & PINS & HANG	WAYNE	8,174,100
M-189	B01 OVER BRULE RIVER	APPROACH & STRUCTURE	IRON	474,100
M-11	R01 OVER C&O RR & M-21BR	DECK REPLACEMENT	KENT	891,000
M-38	B02 OVER SILVER RIVER	DECK REPLACEMENT	HOUGHTON	290,400
M-38	B01 OVER W BRANCH STURGEON RIVER	DECK REPLACEMENT	HOUGHTON	359,700
I-94	S02 UNDER JACKSON RD & S05 & 06	PAINTING	CALHOUN	520,300
I-69	S07 UNDER I69 & S10, S14 & S16	PAINTING	CALHOUN	1,130,800
US-223	B03 OVER RAISIN RIVER	BRIDGE REHABILITATION	LENAWEE	386,400
I-75	S13 UNDER I-75 RAMP	PAINTING	MONROE	139,150
US-223	B03 OVER RAISIN RIVER	BRIDGE REHABILITATION	LENAWEE	29,900
M-96	B01 OVER MILL RACE & (39032)	BRIDGE REPLACEMENT	KALAMAZOO	434,500
I-96	S01 AT M-39 & 3 OTHERS	PAINTING	WAYNE	501,600
I-196	S04 OVER OLD US-31	PAINTING	ALLEGAN	218,500
I-75	S03 UNDER MAPLE RD	PAINTING	SAGINAW	212,750
I-75SB	S09 UNDER M-134 & S10	PAINTING	MACKINAC	92,000
I-196WB	S26 OVER DANLY MACHINING BLDG	PAINTING	KENT	27,600
I-96	S22 UNDER BURT RD	PAINTING	WAYNE	273,700
I-96	S34 UNDER MAPLEWOOD AVE	PAINTING	WAYNE	220,800
I-275NB	S05 OVER US-24 & S11	PAINTING	MONROE	430,100
I-196	S06 UNDER M-40	PAINTING	ALLEGAN	207,000
I-196EB	S04 OVER BYRON RD & S15	PAINTING	OTTAWA	238,050
I-69	S15 UNDER M-53	PAINTING	LAPEER	302,500
I-96	S14 UNDER SCHAEFER RD	PAINTING	WAYNE	195,500
I-96	S30 UNDER LIVERNOIS AVE	PAINTING	WAYNE	430,100
I-96	S05 UNDER STARK RD	PAINTING	WAYNE	190,900
I-94	S12 UNDER US-12	PAINTING	WASHTENAW	657,800
I-94	S03 UNDER RAWSONVILLE RD	PAINTING	WASHTENAW	275,000
I-94	S04 UNDER SALINE RD	PAINTING	WASHTENAW	249,550
I-94	S05 UNDER STATE RD	PAINTING	WASHTENAW	331,100
I-94	B04 OVER ST CLAIR RIVER, PT HURON	PAINTING	ST. CLAIR	1,144,000
I-296	S16 OVER LEONARD & S17, S18 & R09	BITUMINOUS OVERLAY	KENT	246,100

SUMMARY FOR BRIDGE REHABILITATION: \$31,023,651

<u>Route</u>	<u>Location</u>	<u>Work Type</u>	<u>County</u>	<u>Cost</u>
WORK TYPE: 14. RESURFACE				
M-32 DTR	W OF HALL RD TO E COUNTY LINE	TEMPORARY DETOUR	MONTMORENCY	\$ 605,000
M-97	STATE FAIR AVE TO M-102, DET	RESURFACE	WAYNE	396,000
I-94EB	VERNIER TO JOY BLVD	OVERLAY	MACOMB	4,900,500
I-96	68TH ST TO 24TH ST	OVERLAY & JOINTS	OTTAWA	2,299,000
I-75	N OF MT MORRIS RD TO N OF M-54	RESURFACE	GENESEE	10,035,300
I-94	6.5 MILE RD TO E OF 11 MILE RD	OVERLAY & JOINTS	CALHOUN	4,499,000
I-94	FREER RD TO I-94BL	OVERLAY & PATCHING	WASHTENAW	3,599,200
US-12	US-127 TO M-50	RESURFACE & SHOULDERS	LENAWEE	1,558,700
US-23	1 MI N OF M-59 TO S OF CLYDE RD	RESURFACE	LIVINGSTON	507,100
US-12	MOSCOW RD TO W OF US-127 (46101)	RESURFACE	HILLSDALE	902,000
US-23	S COUNTY LINE TO SILVER LAKE RD	RESURFACE	LIVINGSTON	1,733,600
M-40	S VILLAGE LIMIT GOBLES TO VAN BUREN ST	MILL & RESURFACE	VAN BUREN	102,350
M-40	M-89 TO 136TH ST, HAMILTON	RESURFACE SHOULDERS	ALLEGAN	806,300
US-131BR	MICH AVE TO HOPKINS ST, KALAMAZOO	MILL & RESURFACE	KALAMAZOO	880,000
US-1	IND. LINE TO S VILL. LIMIT, NEW BUFFALO	WIDEN & RESURFACE	BERRIEN	744,700
M-205	IND. LINE TO US-12	RESURFACE & SHOULDERS	CASS	144,900
M-48	3.0 MILES S OF RUDYARD TO I-75	RESURFACE SHOULDERS	CHIPPEWA	551,100
US-31BR	NORTON SHORES DR TO LAKETON AVE	RESURFACE	MUSKEGON	495,000
US-27	M-57 TO US-27BR, ITHACA	RESURFACE	GRATIOT	1,705,000
M-21EB	E CITY LIMITS ZEELAND TO B01, JENISON	RESURFACE	OTTAWA	1,980,000
US-23BR	US-23 TO C&G, ROGERS CITY	RESURFACE & SHOULDERS	PRESQUE ISLE	262,200
M-21	TURKEY TRAIL TO W OF HAYNOR RD	RESURFACE	IONIA	946,000
M-68	E OF I-75 TO W OF AFTON	MILL & RESURFACE	CHEBOYGAN	990,000
I-94BL	BROWN TO THIRD, JACKSON	WIDEN & RESURFACE, CUR	JACKSON5	99,500
I-75BL	US-27 INTERCHANGE TO I-75BL S JCT	BITUMINOUS OVERLAY	CRAWFORD	392,700
I-75	S JCT OF I-675 NORTH	OVERLAY & PATCHING	SAGINAW	2,477,200
I-94	OAKWOOD BLVD TO SCHAEFER RD	OVERLAY & PATCHING	WAYNE	584,100
M-45	COVELL AVE TO I-196, GRAND RAPIDS	MILL & RESURFACE	KENT	291,500
I-75BR	EASTERDAY TO M-129	RESURFACE & JOINTS	CHIPPEWA	385,000
M-28	W COUNTY LINE TO RATHFOOT PARK	PULVERIZE & RESURFACE	ALGER	2,090,000
M-77	S COUNTY LINE TO GRAND MARAIS	RESURFACE & SHOULDERS	ALGER	1,199,000
M-32	S ARM (B01) TO NEW SURFACE	WIDEN, RESURFACE & SHOULDERS	CHARLEVOIX	353,100
US-10	N CITY LIMITS BALDWIN TO N JCT M-37	MILL & RESURFACE	LAKE	370,700
M-66	M-55 N JCT TO M-42	RESURFACE & SHOULDERS	MISSAUKEE	372,900
M-55	US-131 TO CROSBY RD, CADILLAC	MILL & RESURFACE	WEXFORD	264,500
M-55	CHAMBERS TO KOB5	RESURFACE & SHOULDERS	IOSCO	286,000
M-33	I-75 TO M-55	RESURFACE & SHOULDERS	OGEMAW	770,000
M-82	MECHANIC TO STEWART, FREMONT	MILL & RESURFACE	NEWAYGO	138,000
US-131	S OF 54TH TO S OF 44TH, WYOMING	RESURFACE & SHOULDERS	KENT	1,320,000
M-46	M-15 TO VASSAR RD	RESURFACE	TUSCOLA	346,500
M-40	N CITY LIMITS ALLEGAN TO M-89	RESURFACE & SHOULDERS	ALLEGAN	983,400
US-131	S OF 140TH TO N COUNTY LINE	RESURFACE & SHOULDERS	ALLEGAN	1,939,300
US-12	S CITY LIMITS N BUFFALO TO RED ARROW	RESURFACE & SHOULDERS	BERRIEN	841,500
M-96	MICHIGAN AVE TO G01, GALESBURG	RESURFACE, CURB & GUTT	KALAMAZOO	308,000
US-131	S JCT M-60 TO N JCT M-60	RESURFACE, JOINTS & SHOULDERS	ST. JOSEPH	438,900
US-12	CANTON CENTER RD TO LILLEY RD	MILL & RESURFACE	WAYNE	3,381,400
I-94	ST JOSEPH RIVER TO EMPIRE AVE	RESURFACE & JOINTS	BERRIEN	1,870,000
M-69	E OF US-2 TO M-95 (22041)	RESURFACE & SHOULDERS	IRON	984,500
M-35	PALMER TO COUNTY RD #480	RESURFACE & SHOULDERS	MARQUETTE	832,700
M-94	CHATHAM CORNERS TO M-28	RESURFACE & SHOULDERS	ALGER	1,650,000
M-21	BALLENGER TO COURT, FLINT	WIDEN & RESURFACE	GENESEE	1,188,000
M-21	HAYNOR RD TO E CITY LIMITS IONIA	MILL & RESURFACE	IONIA	742,500

SUMMARY FOR RESURFACE:

\$68,043,850

WORK TYPE: 15. RESTORATION AND REHABILITATION

M-65	CULVERT AT BRYANT CREEK	CULVERT REPLACEMENT	ALCONA	\$ 228,850
I-75	0.35 MILES S OF R01, NORTH	MEDIAN RECONSTRUCTION	MONROE	1,130,999
US-12	W VILLAGE LIMITS BRONSON TO WAYNE ST	DRAINAGE & JOINTS	BRANCH	184,000
M-40	MARCELLUS TO S OF LAWTON	BITUMINOUS SHOULDERS	CASS	569,800
M-46	MAPLE ISLAND RD TO RAVENNA RD	BITUMINOUS SHOULDERS	MUSKEGON	253,000
M-109	M-109 & M-209 (45051)	BITUMINOUS SHOULDERS	LEELANAU	457,600

<u>Route</u>	<u>Location</u>	<u>Work Type</u>	<u>County</u>	<u>Cost</u>
M-75	WALLOON LAKE VILLAGE TO US-131	WIDEN, RESURFACE & SH	CHARLEVOIX	\$ 187,450
M-117	US-2 TO N COUNTY LINE (GAP ENGADINE)	RESURFACE & SHOULDERS	MACKINAC	770,000
M-115	S COUNTY LINE TO US-31	BITUMINOUS SHOULDERS	BENZIE	217,350
M-66	S OF I-96 TO GRAND RIVER AVE	PAVEMENT REHABILITATION	IONIA	357,500
I-96	M-52 TO E COUNTY LINE	PATCHING & OVERLAY	INGHAM	2,775,300
US-127	S COUNTY LINE TO M-36 (33032)	JOINT REPAIR	INGHAM	1,161,600
M-68	US-31 AT ALANSON TO W OF OLD M-27	PAVEMENT REHABILITATION	EMMET	1,584,000
M-43	2ND ST TO US-131	BITUMINOUS RECYCLE	KALAMAZOO	1,963,500
M-43	N CITY LIMITS HASTINGS TO M-66	BITUMINOUS SHOULDERS	BARRY	820,600
US-10EB	MIDLAND & BAY RD TO W CITY LIMITS BAY CITY	PAVEMENT REHABILITATION	BAY	5,459,300
I-75	N OF KOCHVILLE RD TO M-13 CONNECTOR	PAVEMENT REPAIR	SAGINAW	1,353,000
I-96	SCHAEFER TO I-75	OVERLAY	WAYNE	6,299,700
M-66	M-46 TO N COUNTY LINE	UPGRADE EXISTING	MONTCALM	1,441,000
I-75	3.2 MILES S OF M-50 TO N OF POST AT I-275	PAVEMENT RECYCLE	MONROE	14,599,200
I-96	M-59 TO CHILSON RD	CONCRETE RECYCLE	LIVINGSTON	7,904,600
M-45	W OF 26TH ST TO E OF SAND CREEK	SUPER ELEVATION	OTTAWA	275,000

SUMMARY FOR RESTORATION

AND REHABILITATION:

\$48,318,049

WORK TYPE: 16. RECONSTRUCTION

M-125	AT B04 OVER RAISIN RIVER & B04	APPROACH & STRUCTURE	MONROE	\$ 1,100,000
US-12	SUSZEK RD TO E OF MANN RD	REPAIR & RELOCATE	ST. JOSEPH	2,062,500
M-26	US-41 EAST, HANCOCK	RECONSTRUCT & SHOULDERS	HOUGHTON	1,186,900
M-43	W OF I-196 TO 69TH ST	UPGRADE	VAN BUREN	1,426,700
I-75	AT US-10 INTERCHANGE	INTERCHANGE RECONSTRUCTION	BAY	385,000
I-94	AT SPRINKLE RD INTERCHANGE	RELOCATE RAMP	KALAMAZOO	357,500
I-94	AT 26 MILE RD INTERCHANGE	INTERCHANGE UPGRADE	ST. CLAIR	500,500
M-75	E OF BROCKWAY TO N OF BOYNE CITY	RESURFACE & SEWER	CHARLEVOIX	1,312,300
I-75	AT AMBASSADOR BRIDGE REST AREA (S28)	SERVICE ROADS & STRUC	WAYNE	2,258,300
US-41	2 MILES E OF M-95 EAST	RECONSTRUCT & RELOCATION	MARQUETTE	815,100
US-41	M-203, HANCOCK TO COBURNT. RD	WIDEN & RECONSTRUCTION	HOUGHTON	2,382,600
M-24	1 MILE N OF OLD M-21 & R01	APPROACH UPGRADE	LAPEER	180,550
M-24 EXT	M-138 TO N OF ACKERMAN RD & C05	RECONSTRUCT & CULVERT	TUSCOLA	2,200,000
I-75	AT WEIGH STATIONS N OF A COVE RD	INSPECTION BUILDINGS	MONROE	308,000
I-496	I69, I-96 & I-496 INTERCHANGE W OF LANSING	INTCHANGE REVISIONS	EATON	2,860,000
I-94	AT BLUE WATER BRIDGE, PT HURON	PLAZA RECONSTRUCTION	ST. CLAIR	16,394,400
US-24	SMITH & LAVOY RD TO CRABB RD	WIDEN & RECONST. TO 5L	MONROE	297,000

SUMMARY FOR RECONSTRUCTION:

\$36,027,350

WORK TYPE: 17. Minor Widening

M-21	FLINT W CITY LIMITS TO BALLENGER RD	WIDEN TO 5 LANES	GENESEE	\$ 212,750
M-89	FROM B01 TO OAK COURT, ALLEGAN	WIDEN & SEWER	ALLEGAN	432,300
I-94BL	AT GLENLORD RD	INTERSECTION IMPROVEM	BERRIEN	227,700
US-131	ST JOE RIVER (B01) NORTH	TURN LANES	ST. JOSEPH	354,200
US-12	EAST ST TO CONCORD RD, JONESVILLE	WIDEN, RESURFACE & CURB	HILLSDALE	517,000
M-54	AT COURT ST, FLINT	RIGHT TURN LANE	GENESEE	147,200
M-54	AT M-57	LEFT TURN LANE	GENESEE	271,400
M-53	AT GRANT PLAZA	LEFT TURN LANE	MACOMB	105,800
M-89	AT DIX RD, OTSEGO	LEFT TURN LANE	ALLEGAN	126,500
M-84	AT TITABAWASSEE	RIGHT TURN LANE	SAGINAW	46,000
M-43	AT ELM RD, SAGINAW	LEFT TURN LANE	SAGINAW	207,000
M-83	GENESEE TO N OF SCHLEIER, FRANKENMUTH	LEFT TURN LANE	SAGINAW	495,000
M-43	AT WHEELER RD, SAGINAW	LEFT TURN LANE	SAGINAW	238,050
M-60	W TO E OF VANDALIA	WIDEN & RESURFACE	CASS	497,200
I-94BL	AT HILLTOP RD, ST JOE	RIGHT TURN LANE	BERRIEN	55,200

<u>Route</u>	<u>Location</u>	<u>Work Type</u>	<u>County</u>	<u>Cost</u>
US-127	AT MICHIGAN AVE, JACKSON	WIDEN RAMP	JACKSON	\$ 92,000
I-94	AT CADIEUX INTERCHANGE	WIDEN RAMP	WAYNE	215,050
M-102EB	AT GRAND RIVER AVE INTERSECTION	WIDEN RAMP	OAKLAND	173,650
M-53	BORLUND RD TO 1ST ST, IMLAY CITY	WIDEN TO 5 LANES	LAPEER	423,500
M-153	AT I-275	WIDEN	WAYNE	103,500
US-41BR	AT RUBLIEN ST, MARQUETTE	LEFT TURN LANE	MARQUETTE	495,000
M-59	AT ADAMS RD	PASSING FLARE	OAKLAND	98,900
I-275	AT I-96 & M-14	EXIT LANE	WAYNE	341,000
I-275NB	AT 8 MILE RD	WIDEN RAMP	WAYNE	51,750
US-131	S04 UNDER 68TH ST & R01	WIDEN & OVERLAY	KENT	1,243,000
M-21	AT MAIN ST, OVID	LEFT TURN LANE	CLINTON	115,000
US-31	AT HAYES	LEFT TURN LANE	OTTAWA	172,500
M-43	AT M-100, GRAND LEDGE	RIGHT TURN LANE	EATON	103,500
M-55	AT LOXLEY	LEFT TURN LANE	ROSCOMMON	115,000

SUMMARY FOR MINOR WIDENING: \$7,676,650

WORK TYPE: 18. ROADSIDE FACILITIES

US-31NB	REST AREA N OF MEISENHEIMER RD	NEW REST AREA	MASON	\$ 935,000
I69WB	REST AREA E OF WOODBURY	GRADING & DRAINS	SHIAWASSEE	825,000
M-55	ROADSIDE PARK AT PINE RIVER BRIDGE	PARKING UPGRADE	MANISTEE	275,000
US-131	AT N BOUND REST AREA S OF GRAND RAPIDS	REST AREA UPGRADE	KENT	825,000
MSTWD	MICH MINOR ROADSIDE (PARENT)	ROADSIDE PROGRAM	*AREA WIDE	300,000
I-75	AT WEST RD INTERCHANGE	LANDSCAPING	WAYNE	218,500
US-2	NE QUADRANT OF US-2 & M-183 INTERSECTION	CARPOOL PARKING	DELTA	17,250
US-31	BEAR CREEK TO E CITY LIMITS PETOSKEY	NON MOTORIZED PATH	EMMET	103,500
I-94WB	REST AREA E OF WATERVLJET	REST AREA SEWER #2	BERRIEN	172,500
I-94	US-12 TO E OF BRADLEY ST & US-12NB	NOISE WALL	WASHTENAW	7,480,000
I-94	AT BLUE WATER BRIDGE, PT HURON	OFFICE BLDG	ST. CLAIR	3,300,000
I-94	AT BLUE WATER BRIDGE, PT HURON	CARGO FACILITY	ST. CLAIR	1,870,000
I-94	AT BLUE WATER BRIDGE, PT HURON	MAINTENANCE FACILITY	ST. CLAIR	1,870,000

SUMMARY FOR ROADSIDE FACILITIES: \$18,191,750

TOTAL FOR CATEGORY 1. PRESERVE: \$217,774,641

<u>Route</u>	<u>Location</u>	<u>Work Type</u>	<u>County</u>	<u>Cost</u>
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CATEGORY: 2. Improve

WORK TYPE: 21. Capacity Improvement

I-496	CANAL TO W OF CREYTS, LANSING	WIDEN TO 3 LANES	EATON	\$ 275,000
M-46	E OF FROST TO W OF CENTER	WIDEN TO 5 LANES	SAGINAW	270,250
I-96BL	N OF HOLMES TO MT HOPE, LANSING	WIDEN TO 5 LANES	INGHAM	1,540,000
US-31	W OF STUART TO DIVISION, PETOSKEY AREA	WIDEN TO 3 LANES CURB	EMMET	1,430,000
M-72	I-75BL TO INDUSTRIAL, GRAYLING	WIDEN TO 4 LANES	CRAWFORD	550,000
M-66	BAILEY PARK TO FREY DR	WIDEN & RECONSTRUCT	CALHOUN	387,200
M-29	W OF DANA DRAIN TO COX CREEK	RECONSTRUCT TO 5 LANES	ST. CLAIR	2,887,500
I-96BL	CLOVERLAND TO HOLMES & P02	WIDEN TO 5 LANES	INGHAM	2,070,000
US-131	44TH ST TO M-11	WIDEN TO 2 LANES AT 36	KENT	4,180,000
M-150TB	AVON RD TO SECOND ST	RECONSTRUCT TO 5 LANES	OAKLAND	1,292,500

SUMMARY FOR CAPACITY IMPROVEMENT: \$14,882,450

WORK TYPE: 22. Bridge Replacement

US-41	B02 OVER N BRANCH ESCANABA RIVER	BRIDGE REPLACEMENT	MARQUETTE	\$ 308,000
M-216	AT B01 OVER FLOWERFIELD CREEK	APPROACH & STRUCTURE	ST. JOSEPH	520,300
I-94	S07 UNDER PLATT RD	STRUCTURE REPLACEMENT	WASHTENAW	1,012,000

SUMMARY FOR BRIDGE REPLACEMENT: \$1,840,300

WORK TYPE: 23. ROADSIDE FACILITIES

I-696	W COUNTY LINE TO HAYES	LANDSCAPING	MACOMB	\$ 970,200
I-696	HAYES TO I-94	LANDSCAPING	MACOMB	431,200
I-696	S OF 10.5 MILE TO CHURCH (Z01 & Z02)	PLAZA LANDSCAPING	OAKLAND	566,500
M-66	BAILEY PARK TO FREY RD	NON MOTORIZED PATH	CALHOUN	28,750
M-29	W CITY LIMITS TO N CITY LIMITS ALGONAC	NON MOTORIZED PATH	ST. CLAIR	89,700
I-94	US-12 TO E OF BRADLEY RD	LANDSCAPING WALLS	WASHTENAW	212,750
US-31	STUART, PETOSKEY TO DIVISION	NON MOTORIZED PATH	EMMET	44,850
M-104	CUTLER AVE TO FRUITPORT RD	NON MOTORIZED PATH	OTTAWA	88,550

SUMMARY FOR ROADSIDE FACILITIES: \$2,432,500

TOTAL FOR CATEGORY 2. IMPROVE: \$19,155,250

<u>Route</u>	<u>Location</u>	<u>Work Type</u>	<u>County</u>	<u>Cost</u>
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CATEGORY 3. Expand

WORK TYPE: 31. NEW ROUTES

I-696	FRANKLIN RD TO I-75	FREEWAY SIGNING	OAKLAND	\$ 385,000
I-94	S13 UNDER ELLSWORTH RD	NEW STRUCTURE	WASHTENAW	1,320,000
I-696	S OF FAIRFAX & E OF LINCOLN DR	LANDSCAPING & MISCELLA	OAKLAND	312,400

SUMMARY FOR NEW ROUTES: \$2,017,400

WORK TYPE: 32. RELOCATION

US-31REL	N OF MATTHEW TO N OF LAKE CHAPIN	CONSTRUCT 2 LANES DIV	BERRIEN	\$ 9,790,000
US-31	N OF LAKE CHAPIN TO US-33	CONSTRUCT 2 LANES DIV	BERRIEN	17,831,000
I-75	AT N PERIMETER RD	INTERCHANGE CONSTRUCT	OAKLAND	12,051,600
I-69	N OF ISLAND HWY TO E OF STEWART	FREEWAY & STRUCTURES	EATON	20,838,400
I-69	S OF DAVIS HWY TO N OF MILLET HWY	FREEWAY & WIDEN	EATON	5,440,600
I-69	E OF STEWART TO W OF NIXON RD	FREEWAY & STRUCTURES	EATON	18,357,900
I-69	W OF NIXON RD TO S OF DAVIS HWY	FREEWAY & STRUCTURES	EATON	19,043,200
US-31	N OF EXISTING US-31 TO N OF US-10	FREEWAY PAVING	MASON	2,959,000
I-69	W OF PEACOCK TO E OF SHAFTSBURG	FREEWAY CONSTRUCTION	SHIAWASSEE	21,060,600
I-69	SHAFTSBURG TO W OF CHURCH	FREEWAY CONSTRUCTION	SHIAWASSEE	17,336,000

SUMMARY FOR RELOCATION: \$144,708,300

WORK TYPE: 33. ROADSIDE FACILITIES

I-696	FRAZHO EXTENSION TO LORRAINE	NOISE BARRIER	MACOMB	\$ 3,452,900
I-696	S OF 10.5 MILE RD TO W OF CHURCH	DEVELOP & LANDSCAPE	OAKLAND	1,633,500

SUMMARY FOR ROADSIDE FACILITIES: \$5,086,400

TOTAL FOR CATEGORY 3. EXPAND: \$151,812,100

GRAND TOTAL FOR ALL CATEGORIES: \$388,741,991

Aviation Projects

**BUREAU OF AERONAUTICS
1989 CAPITAL OUTLAY PROGRAM**

Priority A Projects

<u>LOCATION/AIRPORT</u>	<u>PRIORITY</u>	<u>PROJECT ITEM DESCRIPTION</u>	<u>TOTAL EST. COST</u>
CATEGORY 1: SPECIAL PROGRAMS/SAFETY			
BAD AXE/ HURON COUNTY MEMORIAL	3	TAXIWAY LIGHTING	\$ 37,500
BENTON HARBOR ROSS FIELD	1	AIRPORT MASTER PLAN	50,000
FLINT/ BISHOP INTERNATIONAL	1	SECURITY FENCING	90,000
HOWELL/ LIVINGSTON COUNTY	1	LAND-ACQUISITION	775,000
LANSING/ CAPITAL CITY	1	LAND FOR EXISTING AIRPORT	450,000
LUDINGTON/ MASON COUNTY	5	PERIMETER FENCING	70,000
MANISTEE/ MANISTEE CO.-BLACKER	5	PERIMETER FENCING	144,000
MENOMINEE/ TWIN COUNTY AIRPORT	1	LAND-ACQUISITION	30,000
MUSKEGON/ MUSKEGON COUNTY	1	UTILITY RELOCATION	112,000
PELLSTON/ EMMET COUNTY	1	SECURITY FENCING	160,000
PORT HURON/ ST. CLAIR COUNTY INTL	2	LAND-ACQUISITION	218,800
ST IGNACE/ MACKINAC COUNTY	1	INSTALL PAPI/REIL	33,333
		CATEGORY TOTAL	\$2,170,633
CATEGORY 2: RECONSTRUCTION			
ALMA/ GRATIOT COMMUNITY	3 3	TAXIWAY REHABILITATION RUNWAY REHABILITATION	\$ 14,000 140,000
BAD AXE/ HURON COUNTY MEMORIAL	2	PRIMARY RWY CONSTRUCTION	340,000
BATTLE CREEK/ W K KELLOGG REGIONAL	2	APRON REHABILITATION	2,500,000
BAY CITY/ JAMES CLEMENTS	2	APRON REHABILITATION	303,500
BELLAIRE/ ANTRIM COUNTY	3 3 3	SEAL TAXIWAY SEAL APRON SEAL TAXIWAY	30,000 70,000 90,000

<u>LOCATION/AIRPORT</u>	<u>PRIORITY</u>	<u>PROJECT ITEM DESCRIPTION</u>	<u>TOTAL EST. COST</u>
	3	SEAL TAXIWAY	\$ 30,000
DETROIT/ DETROIT METROPOLITAN WAYNE COUNTY	2	RUNWAY REHABILITATION	6,000,000
DETROIT/ WILLOW RUN	3	APRON REHABILITATION	1,125,000
EVART/ EVART MUNI	2	NEW TAXIWAY	88,000
	2	CONSTRUCT NEW APRON	61,000
	2	PRIMARY RWY CONSTRUCTION	628,000
FLINT/ BISHOP INTERNATIONAL	1	VAULT WORK	267,000
LUDINGTON/ MASON COUNTY	3	TAXIWAY REHABILITATION	89,200
PELLSTON/ EMMET COUNTY	2	REHABILITATE RWY LIGHTING	150,000
PONTIAC/ OAKLAND-PONTIAC	4	TAXIWAY CONSTR	32,000
STURGIS/ KIRSCH MUNI	2	PAVE EXISTING RUNWAY	293,700
	3	RUNWAY REHABILITATION	277,778
TRAVERSE CITY/ CHERRY CAPITAL	3	TAXIWAY PAVING	1,422,300
		CATEGORY TOTAL	\$13,951,478

CATEGORY 3: STANDARDS

BAD AXE/ HURON COUNTY MEMORIAL	2	LAND FOR EXISTING AIRPORT	\$ 144,000
CADILLAC/ WEXFORD COUNTY	1	LAND FOR EXISTING AIRPORT	300,000
DOWAGIAC/ CASS COUNTY MEML	3	CROSSWIND RWY CONSTR	288,000
EVART/ EVART MUNI	2	LAND FOR EXISTING AIRPORT	203,000
GREENVILLE/ GREENVILLE MUNI	2	LENGTHEN EXISTING RUNWAY	300,000
KALAMAZOO/ KALAMAZOO COUNTY AIRPORT	3	APRON LIGHTING	62,000
	2	LAND REIMBURSEMENT	200,000
LAKEVIEW/ LAKEVIEW	2	REHABILITATE RWY LIGHTING	95,000
	2	LENGTHEN EXISTING RUNWAY	181,000
MENOMINEE/ TWIN COUNTY AIRPORT	3	TAXIWAY LIGHTING	170,000
MUSKEGON/ MUSKEGON COUNTY	3	TAXIWAY SIGNS	50,000
PORT HURON/ ST. CLAIR COUNTY INTL	3	NEW TAXIWAY	521,500

<u>LOCATION/AIRPORT</u>	<u>PRIORITY</u>	<u>PROJECT ITEM DESCRIPTION</u>	<u>TOTAL EST. COST</u>
ST IGNACE/ MACKINAC COUNTY	2	MEDIUM INTENSITY RWY LTG	\$ 80,850
	2	LENGTHEN EXISTING RUNWAY	335,000
	3	NEW TAXIWAY	297,778
		CATEGORY TOTAL	\$ 3,228,128
CATEGORY 4: UPGRADING AIRPORT ROLE (UPGRADE)			
SAGINAW/ TRI CITY INTERNATIONAL	2	LENGTHEN EXISTING RUNWAY	\$ 2,548,000
		CATEGORY TOTAL	\$ 2,548,000
CATEGORY 5: CAPACITY DEVELOPMENT (CAPACITY)			
BAD AXE/ HURON COUNTY MEMORIAL	3	NEW TAXIWAY	\$ 140,000
	3	APRON EXPANSION	100,000
BAY CITY/ JAMES CLEMENTS	3	NEW TAXIWAY	304,000
DOWAGIAC/ CASS COUNTY MEML	3	CONSTRUCT NEW APRON	135,000
ESCANABA/ DELTA COUNTY	3	APRON EXPANSION	100,000
GRAND RAPIDS/ KENT COUNTY INTL	3	PRIMARY RWY CONSTRUCTION	6,000,000
HOLLAND/ TULIP CITY	3	CONSTRUCT NEW APRON	740,000
IRON MOUNTAIN/KINGSFORD/ FORD	3	NEW TAXIWAY	40,000
JACKSON/ JACKSON COUNTY-REYNOLDS FIELD	3	CONSTRUCT NEW APRON	487,500
KALAMAZOO/ KALAMAZOO COUNTY AIRPORT	3	APRON EXPANSION	227,555
LANSING/ CAPITAL CITY	4	CONSTRUCT HANGAR AREA	300,000
LUDINGTON/ MASON COUNTY	3	APRON EXPANSION	158,675
MASON/ MASON JEWETT FIELD	3	APRON EXPANSION	135,000
PONTIAC/ OAKLAND-PONTIAC	2	LAND FOR EXISTING AIRPORT	3,850,000
PORT HURON/ ST.CLAIR COUNTY INTL	3	APRON EXPANSION	100,000
STURGIS/ KIRSCH MUNI	3	APRON EXPANSION	133,333
		CATEGORY TOTAL	\$12,951,063

<u>LOCATION/AIRPORT</u>	<u>PRIORITY</u>	<u>PROJECT ITEM DESCRIPTION</u>	<u>TOTAL EST. COST</u>
CATEGORY 7: NEW AIRPORTS-COMMUNITY			
PONTIAC/ NEW AIRPORT	1	AIRPORT MASTER PLAN	\$ 111,111
CATEGORY TOTAL			\$ 111,111
CATEGORY 8: EQUIPMENT AND BUILDINGS			
BENTON HARBOR ROSS FIELD	5	SRE TRUCK PLOW/BLADE	\$ 145,000
DOWAGIAC CASS COUNTY MEML	4	ACCESS ROAD	20,000
EVART EVART MUNI	2	AUTO PARKING	24,000
FLINT BISHOP INTERNATIONAL	4	ACCESS ROAD	228,889
IRON MOUNTAIN/KINGSFORD FORD	5 5	SRE SWEEPER SRE SANDER/SPREADER	23,000 120,000
MARQUETTE MARQUETTE COUNTY	5	CFR EQUIPMENT	250,000
MUSKEGON	5	SRE FRONT END LOADER	54,500
CATEGORY TOTAL			\$ 865,389
GRAND TOTAL			\$35,825,044

**BUREAU OF AERONAUTICS
1989 CAPITAL OUTLAY PROGRAM**

Priority B Projects

<u>LOCATION/AIRPORT</u>	<u>PRIORITY</u>	<u>PROJECT ITEM DESCRIPTION</u>	<u>TOTAL EST. COST</u>
CATEGORY 1: SPECIAL PROGRAMS/SAFETY			
DETROIT/ DETROIT CITY	5	APRON BLAST FENCE	\$ 228,000
HANCOCK/ HOUGHTON COUNTY MEMORIAL	2	TURNAROUND	750,000
JACKSON/ JACKSON COUNTY-REYNOLDS FIELD	5	CFR EQUIPMENT	150,000
OWOSSO/ OWOSSO CITY	3	APRON FLOOD LIGHTING	30,000
	1	TAXIWAY LIGHTING	40,000
	1	REIL	15,000
CASEVILLE/ CASEVILLE TOWNSHIP AIRPORT	1	AIRPORT BEACON	20,000
	2	RWY ELECTR LANDING AIDS	10,000
CATEGORY TOTAL:			\$ 1,243,000
CATEGORY 2: RECONSTRUCTION			
CHARLOTTE/ FITCH H BEACH	3	RUNWAY REHABILITATION	\$ 200,000
GRAND HAVEN/ GRAND HAVEN MEML AIRPARK	3	APRON REHABILITATION	200,000
	2	RUNWAY REHABILITATION	320,000
CATEGORY TOTAL			\$ 720,000
CATEGORY 3: STANDARDS			
OWOSSO/ OWOSSO CITY	1	LAND FOR EXISTING AIRPORT	\$ 75,000
CATEGORY TOTAL			\$ 75,000
CATEGORY 5: CAPACITY DEVELOPMENT (CAPACITY)			
DETROIT/ DETROIT CITY	2	APRON EXPANSION	\$ 578,000
OWOSSO/ OWOSSO CITY	4	NEW TAXIWAY	37,500
	3	APRON EXPANSION	150,000
CATEGORY TOTAL			\$ 765,500
CATEGORY 7: NEW AIRPORTS-COMMUNITY			
CASEVILLE/ CASEVILLE TOWNSHIP AIRPORT	2	ACCESS ROAD	\$ 97,000
	2	RUNWAY DRAINAGE	120,000
	2	CONSTRUCT NEW APRON	110,000
	2	AUTO PARKING	30,942
	2	LAND FOR NEW AIRPORT	450,000
	2	NEW TAXIWAY	30,000

<u>LOCATION/AIRPORT</u>	<u>PRIORITY</u>	<u>PROJECT ITEM DESCRIPTION</u>	<u>TOTAL EST. COST</u>
	2	MEDIUM INTENSITY RWY LTG	\$ 194,000
	2	PRIMARY RWY CONSTRUCTION	697,300
		CATEGORY TOTAL	\$ 1,729,242
CATEGORY 8: EQUIPMENT AND BUILDINGS			
DETROIT/ DETROIT METROPOLITAN WAYNE COUNTY	5	ACCESS ROAD	\$ 3,000,00
IRONWOOD	5	SRE SWEEPER	115,000
		CATEGORY TOTAL	\$ 3,115,000
		GRAND TOTAL	\$ 7,647,742