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Should AMTRAK's Highly Unprofitable Routes Be Discountinued? CED-79-3; B-175155. November 27, 1978. 21 pp. + 2 appendices (2 pp.).

Report to Sen. Birch Bayh, Chairman, Senate Committee on Appropriations: Transportation Subcommittee; Sen. Russell B. Long, Chairman, Senate Committee on Commerce, Science, and Transportation: Surface Transportation Subcommittee; Rep. John J. McFall, Chairman, House Committee on Appropriations: Transportation Subcommittee; Rep. Fred B. Rooney, Chairman, House Committee on Interstate and Foreign Commerce: Transportation and Commerce Subcommittee; by Elmer B. Staats, Comptroller General.

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Authority: Amtrak Improvement Act of 1974 (45 U.S.C. 644). Rail Passenger Service Act of 1970 (P.L. 91-518). Amtrak Improvement Act of 1975 (P.L. 94-25). Amtrak Improvement Act of 1978 (P.L. 95-421).

After operating for 4 years as a quasi-public, for-profit entity, the National Railroad Passenger Corporation (Amtrak) could point to improvements in the following operations: reservations and ticketing, equipment reliability and availability, ontime performance, onboard services, and corporate planning and programing for the future. Nevertheless, the upward trend of its losses and the required Federal operating subsidy greatly concerned Amtrak, the Department of Transportation (DOT), and the Congress. According to Amtrak, increased operating deficits are due to increased services, ownership costs of new equipment, takeover of the Northeast corridor, and inflation. Findings/Conclusions: In fiscal year 1977, no Amtrak routes made a profit. A review of 11 routes showed that operating losses were high despite route improvements such as adding new equipment and changing schedules to improve ontime performance. Increased ridership alone would not eliminate these losses. More riders would improve fuel efficiency on some routes, but on others, ridership would have

to triple or quadruple to make the trains more fuel-efficient than are automobiles. As long as Amtrak continues to operate these routes, it cannot hope to improve its poor financial condition. A DOT study of Amtrak's route structure preliminarily recommended discontinuing many of the routes that Amtrak's criteria identified as highly unprofitable. Any restructuring of Amtrak's route system should be accompanied by establishment of economic, social, and environmental standards representing the Congress' views as to the public service value of rail passenger service. Otherwise, the annual funding uncertainties will recur. (RRS)

8417

REPORT BY THE

Comptroller General

OF THE UNITED STATES

Should AMTRAK's Highly Unprofitable Routes Be Discontinued?

Despite new equipment, improved stations and tracks, changes to schedules, and additional intermediate stops, some routes operated by the National Railroad Passenger Corporation continue to be highly unprofitable and to waste energy. However, they are still operating. Procedures developed for deciding which routes, if any, should be discontinued are not effective.

CED-79-3
NOVEMBER 27, 1978

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-175155

The Honorable Birch Bayh
Chairman, Subcommittee on
Transportation
Senate Committee on Appropriations

The Honorable Russell B. Long
Chairman, Subcommittee on Surface
Transportation
Senate Committee on Commerce, Science
And Transportation

The Honorable John J. McFall
Chairman, Subcommittee on
Transportation
House Committee on Appropriations

The Honorable Fred B. Rooney
Chairman, Subcommittee on
Transportation and Commerce
House Committee on Interstate and
Foreign Commerce

This is our third report concerning Amtrak's route structure and its overall costs. It discusses some of Amtrak's highly unprofitable routes and examines the effectiveness of procedures for making route and service changes. We believe the information will be helpful to your Subcommittees during consideration of Amtrak activities in 1979.

We made our review pursuant to our authority under the Amtrak Improvement Act of 1974 (45 U.S.C. 644 (Supp. V, 1975)).

We are sending copies of this report to the Secretary of Transportation; Chairman, Interstate Commerce Commission; and the president of Amtrak.

Comptroller General
of the United States

REPORT OF THE
COMPTROLLER GENERAL
OF THE UNITED STATES

SHOULD AMTRAK'S HIGHLY UNPROFITABLE ROUTES BE DISCONTINUED?

D I G E S T

The Department of Transportation is in the process of recommending a new route structure for Amtrak because the rail corporation has not effectively used its standards and procedures for managing its system and its deficits continue to rise. GAO believes that the increased management flexibility envisioned for Amtrak has not been achieved because procedures and route performance standards for discontinuing highly unprofitable routes have not been carried out effectively. None of the highly unprofitable routes have been discontinued, and Amtrak continues to lose money.

GAO believes a restructuring of Amtrak's route system should be accompanied by establishment of economic, social, and environmental standards representing how the Congress views the public service value of rail passenger service. Otherwise, the annual funding uncertainties will soon recur. (See p. 22.)

REVIEW OF HIGHLY UNPROFITABLE ROUTES

GAO reviewed financial and ridership data for 11 of Amtrak's highly unprofitable routes. In fiscal year 1977, the Chicago-Seattle (North) route lost $28.1 million; the Washington-Montreal route lost $26.59 for each mile the trains covered; and the Chicago-Florida route lost over $105 for each passenger carried. (See pp. 5 and 6.)

Increased ridership will not eliminate the losses, but Amtrak believes its future losses will be reduced on a constant dollar basis. For example, Amtrak projects that ridership on the Chicago-Seattle (South) route will more than double by fiscal year 1982 and at the same time forecasts that losses will drop from $18.4 million to $16.3 million in constant dollars--or will increase to $24.6 million in fiscal year 1982 dollars. The forecasted increase would represent a daily loss of over $67,000 in fiscal year 1982. GAO estimates that at least 10 of the routes it reviewed would have lost money in fiscal year 1977 even if the trains were completely filled and expenses remained constant. (See p. 7.)

GAO also estimates that the trains on all 11 routes were less fuel efficient than automobiles. If the passengers carried on these routes in fiscal year 1977 had traveled in automobiles and the trains had not run, less fuel would have been used. Some routes needed only slight increases in ridership to make the trains more fuel efficient than automobiles; however, others would need to triple or quadruple ridership to meet or exceed auto fuel efficiency. (See p. 8.)

Amtrak has made numerous schedule changes, added new equipment and more intermediate stops, and improved the stations and track on the 11 selected routes. Despite the changes and improvements, these routes continue to lose money and waste energy. These routes are projected to show continuing losses even if ridership increases substantially. (See pp. 8 and 12.)

Amtrak agrees that its review procedures and standards have not become fully effective, mainly because there are so many different views on what its route structure and level of Federal subsidy should be. (See p. 20.)

Contents

ABBREVIATIONS

Amtrak	National Railroad Passenger Corporation
DOT	Department of Transportation
GAO	General Accounting Office
ICC	Interstate Commerce Commission

CHAPTER 1
INTRODUCTION

This is our third report concerning Amtrak's route structure and its overall costs. We examined some of Amtrak's most unprofitable routes, its experience in trying to improve or eliminate them, and the increased management flexibility envisioned for it to add or discontinue routes. The first report 1/ discussed Amtrak's goals for extending the northeast corridor development concept to other potential corridors. The second 2/ discussed Amtrak's inability to substantially reduce its operating costs without reducing the size of its system.

The Rail Passenger Service Act of 1970 (Public Law 91-518) created Amtrak as a quasi-public, for-profit entity to halt the decline of intercity passenger train service in the United States. With a relatively small amount of Government funding, Amtrak assumed responsibility on May 1, 1971, for operating 23,000 route-miles of service between 21 city-pair end points.

After operating for 4 years, Amtrak could point to improvements in all aspects of its operations: reservations and ticketing, equipment reliability and availability, ontime performance, onboard services, and corporate planning and programing for the future. Nevertheless, the amount and upward trend of its losses and required Federal operating subsidy greatly concerned Amtrak, the Department of Transportation (DOT), and the Congress. Its operating loss in calendar year 1974 was $273 million, and its budgeted deficits for fiscal years 1975 and 1976 were much higher. Its operating deficit was almost $537 million in fiscal year 1977. According to Amtrak, its increased operating deficits are due to increased services, ownership costs of new equipment, the takeover of the northeast corridor, and inflation.

AMTRAK'S PROBLEMS ATTRIBUTED TO INADEQUATE MANAGEMENT FLEXIBILITY

Early in 1975, DOT diagnosed Amtrak's problems as stemming from inadequate management flexibility. DOT

1/"Should Amtrak Develop High-Speed Corridor Service Outside The Northeast?" CED-78-67, Apr. 5, 1978.

2/"Amtrak's Subsidy Needs Cannot Be Reduced Without Reducing Service," CED-78-86, May 11, 1978.

said the responsibility for promoting intercity passenger service was too fragmented among the Interstate Commerce Commission (ICC), DOT, and the Congress and that Amtrak lacked sufficient management discretion because of the rigid regulatory process and political mandates that routes and services be started or continued for specific periods regardless of their need or utility.

DOT thought that Amtrak should be given more responsibility and accountability for developing and promoting efficient intercity rail passenger service and that it should be permitted to change its route system according to transportation demand and available resources. DOT proposed legislation that would give Amtrak the flexibility to add, delete, or alter routes and service, after it had established a systematic procedure for making these decisions based on transportation, economic, and environmental considerations, including a process of soliciting public views.

The DOT proposal was adopted in the Amtrak Improvement Act of 1975 (Public Law 94-25), signed into law on May 26, 1975. The act required Amtrak to develop procedures under which it would be authorized to add or discontinue routes and services.

Amtrak developed procedures covering economic, social, and environmental impacts of route changes as well as methods for obtaining public comments on any proposed route additions or discontinuances. After review by ICC, DOT, and the Congress, the procedures for making route and service decisions were approved for Amtrak on March 19, 1976. This new authority was viewed as an effort to depoliticize the route and service decisions and help Amtrak stay within available funding. However, procedures for making route and service decisions have not been effectively implemented, and Amtrak's deficits have continued to rise rapidly.

AMTRAK'S PROPOSED ANALYSIS OF THE NATIONAL ROUTE STRUCTURE

Amtrak's 1977 five-year plan suggested reducing route and train mileage in low ridership areas and increasing operation in higher ridership areas. This restructuring and "trading up" of routes was to be accomplished partly through continued application of the route criteria and procedures to seek out improvements to the existing system.

The plan also indicated that Amtrak would undertake with DOT a route-design study that would reexamine the basic route structure. The plan said this study would seek to establish route profiles that optimize markets, equipment use, and service levels across the Nation. It also said the study would include proposals for national support to certain emerging corridors in the pattern of the northeast corridor.

The plan indicated that Amtrak would undertake the route reexamination immediately and that it was intended to be completed by mid-1978. However, in November 1977, the Congress directed DOT to undertake the reexamination.

DOT'S REEXAMINATION OF THE AMTRAK ROUTE STRUCTURE

Late in 1977, the House-Senate Appropriations Committee conferees, disturbed by the continued increase in Amtrak's deficits, called for a comprehensive reexamination of Amtrak's route structure. The conferees directed DOT, in cooperation with Amtrak, to prepare and submit its recommendations for a route structure that would provide an optimal national railroad passenger system based on current and future market and population requirements, including projections of operating and capital appropriations required to support the system.

DOT released a preliminary report on May 8, 1978, containing its tentative recommendation for a system 8,100 miles smaller than Amtrak's current system. Many of Amtrak's most unprofitable routes would be discontinued. According to the report, this system would save the taxpayer between $570 million and $800 million over the 6-year period 1979-84 compared to continued operation of the current system. DOT is continuing its study, including consideration of public comments.

The Amtrak Improvement Act of 1978 (Public Law 95-421, enacted Oct. 5, 1978) established procedures for completing and implementing DOT's recommended route system. The act requires that final recommendations be submitted no later than December 31, 1978. The recommendations will be considered approved if neither House of the Congress disapproves them within 90 days of continuous session. It also provides that the route system will not be modified before October 1, 1979, but directs Amtrak to begin planning for the new system as soon as the final recommendations are approved and to complete implementation within 12 months after approval.

Although DOT's preliminary report lays out a recommended route network, it states that Amtrak is developing a complex rail network model which may permit refined routing plans and should facilitate Amtrak's long-range route structure planning.

SCOPE OF REVIEW

We reviewed background information and legislation concerning Amtrak's procedures for making route and service decisions. We determined the extent to which Amtrak has applied the procedures and the status of current applications.

We selected 11 of Amtrak's highly unprofitable routes and obtained revenue, expense, and ridership data for fiscal year 1977 as well as information on load factors, ontime performance, schedule and equipment changes, and station and track improvements. For revenue, cost, ridership, load factor, and ontime performance data, we used--without verification--Amtrak's computer-generated information.

This review was made at Amtrak headquarters in Washington, D.C. We also rode trains on 4 of the 11 selected routes to observe onboard services and station facilities.

We discussed the contents of this report with Amtrak and DOT officials, and their views are presented in the report.

CHAPTER 2
INFORMATION ON 11 HIGHLY UNPROFITABLE ROUTES

Amtrak has many highly unprofitable routes. Our review of 11 of these routes shows that while Amtrak added new equipment and intermediate stops, improved stations and track conditions, and made schedule changes to improve on-time performance over the past several years, these routes still lose money and waste energy. Some routes are projected to operate with even higher losses in the future in spite of estimated ridership increases.

The following table shows the 11 highly unprofitable routes we selected and their total expenses, revenues, and losses for fiscal year 1977.

Route end points	Total expenses	Total revenues	Total losses
	--------(000 omitted)-------		
Chicago-Seattle (North)	$ 39,708	$11,576	$ 28,132
Chicago-Seattle (South)	24,237	5,877	18,360
Chicago-Florida	21,227	5,759	15,468
New York/Washington-Kansas City	22,012	6,473	15,539
Washington-Montreal	18,405	5,253	13,152
Chicago-Laredo	12,677	2,688	9,989
Seattle-Portland	4,034	1,024	3,010
Oakland-Bakersfield	3,386	694	2,692
Washington-Cincinnati	3,046	636	2,410
Seattle-Vancouver	2,031	616	1,415
Washington-Tri-State Station (note a)	1,545	295	1,250
Totals	$152,308	$40,891	$111,417

a/Represents data since June 1, 1977, when the route began operations.

On the basis of data shown in the table, Amtrak spent $3.72 to take in $1 on these 11 routes. These routes represent about 21 percent of Amtrak's total loss of $536 million in fiscal year 1977.

Avoidable expenses are generally defined as those costs that would stop when a route is discontinued, and avoidable losses are the losses that would not be incurred. According to Amtrak, its avoidable expenses for the 11 routes in fiscal year 1977 would have been $88.1 million and its avoidable loss would have been $47.2 million.

LOW RIDERSHIP MEANS HIGH COST PER PASSENGER

In fiscal year 1977, 1.7 million passengers rode these 11 routes. This represents 9 percent of Amtrak's 19.2 million riders that year, who were responsible for 21 percent of Amtrak's total losses. The total number of passengers and the loss per passenger, loss per passenger-mile, and loss per train-mile for these 11 routes in fiscal year 1977 are shown below.

Route end point	Total passengers	Loss per passenger	Loss per passenger mile	Loss per train-mile
Chicago-Seattle (North)	297,180	$ 94.66	$0.14	$17.29
Chicago-Seattle (South)	205,642	89.29	.17	16.67
Chicago-Florida	146,550	105.55	.16	15.58
New York/Washington-Kansas City	191,692	81.06	.18	16.38
Washington-Montreal	349,059	37.68	.19	26.59
Chicago-Laredo	144,477	69.14	.22	12.69
Seattle-Portland	157,421	19.12	.13	11.08
Oakland-Bakersfield	90,248	29.83	.21	11.80
Washington-Cincinnati	51,042	47.22	.23	7.67
Seattle-Vancouver	87,386	16.19	.14	12.53
Washington-Tri-State Station	15,986	78.22	.32	6.29
Average for 11 routes	157,879	$ 64.16	$ .17	$15.74

These 11 routes lost an average of $64.16 for each passenger carried and an average of $15.74 for each mile the trains on these routes traveled in fiscal year 1977. These losses are partially explained by low ridership. For example, the Washington-Cincinnati route averaged only 33 riders onboard at any given time during fiscal year 1977. The trains operating on this route were only 18 to 24 percent full between October 1976 and May 1977. Another example is the New York/Washington-Kansas City route which averaged 93 passengers onboard. The trains on this route ranged from 26-percent to 48-percent full between October 1976 and May 1977. Amtrak and DOT officials told us that the average number of riders on a route is a good indicator of a route's value to the public.

Data presented in the previous tables shows that the number of passengers on these routes is not sufficient to prevent losses; however increased ridership alone would not eliminate the losses.

We analyzed what Amtrak's revenue would have been had the trains operated at full capacity during July 1976 through

May 1977--the most recent period for which Amtrak had complete data. Lack of data prevented analysis of the Washington-Tri-State Station route. Of the 10 remaining routes, all would have lost money--even if the trains were completely filled and expenses did not increase. Losses ran as high as $18.8 million on the Chicago-Seattle (North) route. The results of this analysis follow.

Estimate/Loss at Full Capacity (note a)

Route end point	Loss (millions)
Chicago-Seattle (North)	$ 18.8
Chicago-Seattle (South)	10.5
Chicago-Florida	8.3
New York/Washington-Kansas City	4.8
Washington-Montreal	6.1
Chicago-Laredo	3.8
Seattle-Portland	1.7
Washington-Cincinnati (note b)	.2
Oakland-Bakersfield	1.3
Seattle-Vancouver	.6
Washington-Tri-State Station	No data

a/ We used the actual capacity of trains operating during the period. If demand were sufficient, however, Amtrak could increase capacity on many of its trains with a less than proportional increase in cost.

b/ Represents 7 months of operation.

Amtrak forecasts that ridership will increase from 28 percent to 109 percent on these 11 routes by fiscal year 1982 and that losses will decline on a constant dollar basis. For example, on the Chicago-Seattle (South) route Amtrak projects that ridership will more than double by fiscal year 1982 and forecasts reduced losses from $18.4 million to $16.3 million in constant dollars, or an increase to $24.6 million in fiscal year 1982 dollars. The forecasted increase would represent a daily loss of over $67,000 by fiscal year 1982.

LOW RIDERSHIP MEANS INEFFICIENT ENGERY USE

While testifying before the Subcommittee on Transportation, House Committee on Appropriations, in March 1976, Amtrak's former president stated that a "little-used passenger train is terribly fuel inefficient." Our analysis

indicated that the trains on the 11 routes reviewed consumed more energy in fiscal year 1977 than would have been consumed if every passenger had used an automobile.

The graph on page 9 shows the ratio of crude oil equivalents used by the trains compared to what would have been used if the passengers had ridden in automobiles. These computations were based on Amtrak's formula for determining fuel efficiency, and they assume 2.5 passengers per automobile averaging 18 miles per gallon. The graph shows that the trains on all 11 routes were less fuel efficient than automobiles. While only slight increase in ridership would have made some routes such as Seattle-Portland more fuel efficient than automobiles, others like the Washington-Cincinnati route would need to triple or quadruple ridership to meet or exceed auto fuel efficiency.

REVIEW OF ROUTE CHANGES

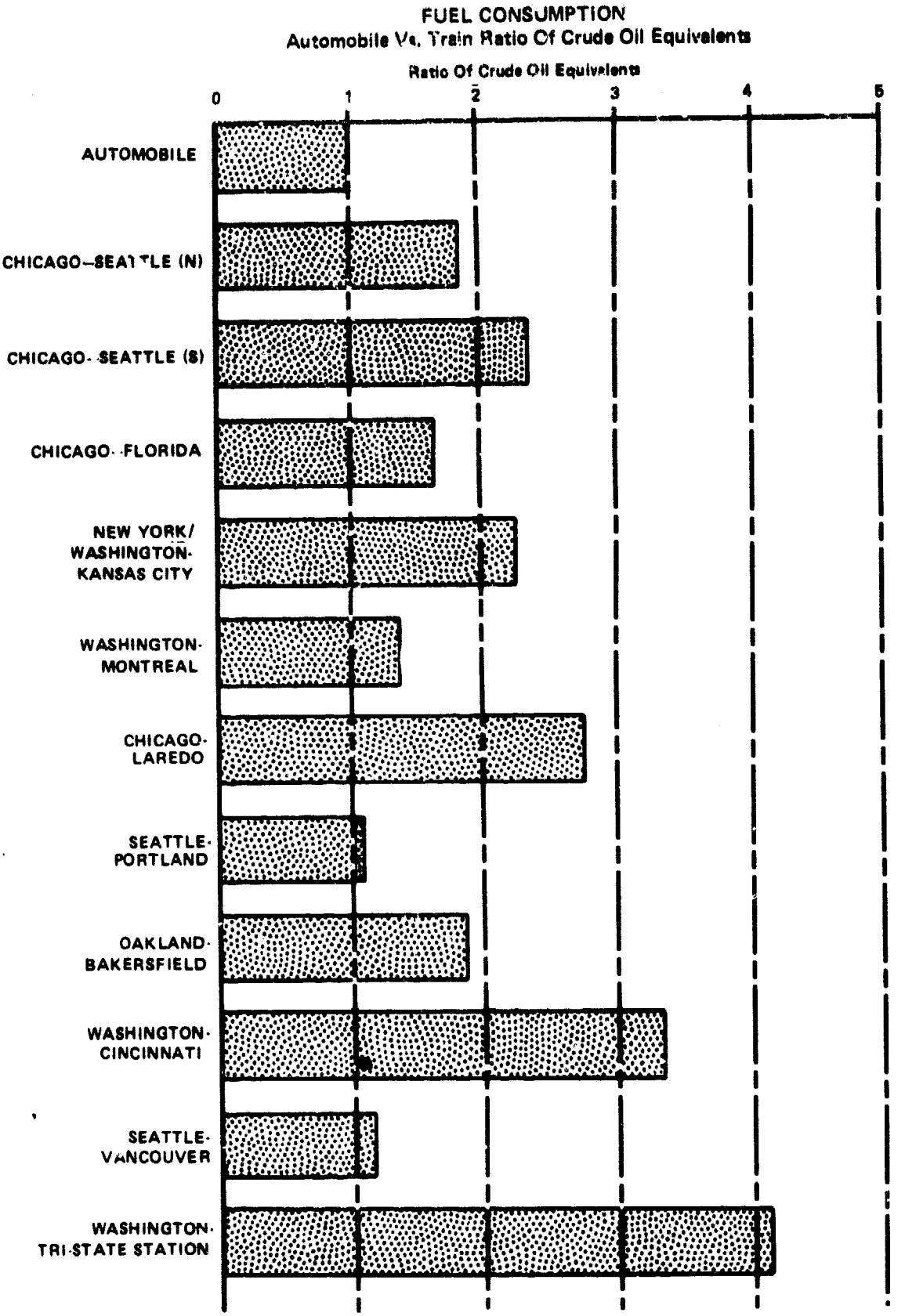
Amtrak has made numerous operating changes to the routes we reviewed, but ridership is still insufficient to recover operating costs.

Changes to schedule and ontime performance

Amtrak has made numerous schedule changes on most of the routes we reviewed. Some changes have been relatively minor such as those on the Oakland-Bakersfield route. Departure times from Oakland have ranged from 9:30 a.m. to 10:40a.m. Other changes have been significant. For example, departure times for the train leaving Chicago for Florida have ranged from 8:10 a.m. to 11:30 p.m.

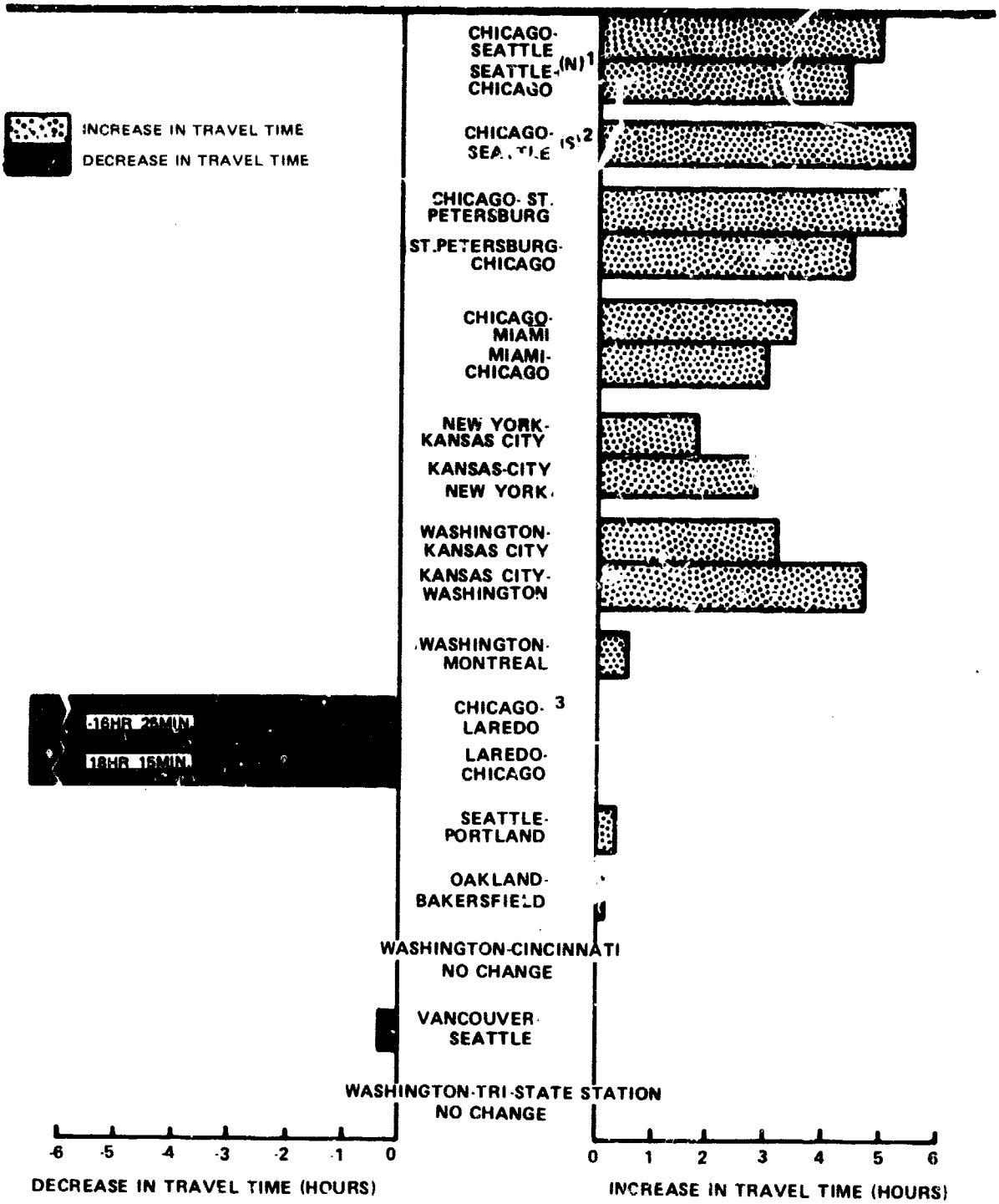
Amtrak has made few frequency changes to the 11 selected routes since they started. Eight routes began operating on a daily basis and continue to operate daily. The Chicago-Seattle (South) route has operated triweekly except for the summers of 1976 and 1977 and 3 weeks around Christmas 1976 when daily service was provided. The Seattle-Vancouver route began with triweekly service in September 1972 but has run daily since October 1972.

Of the 11 routes, schedule changes increased travel time between the origin and destination points on 7 routes, reduced it on 2, and had no efffect on 2. The graph on page 10 shows changes in scheduled travel time between selected cities since the route began and as of June 22, 1977.


FUEL CONSUMPTION
Automobile Vs. Train Ratio Of Crude Oil Equivalents
Ratio Of Crude Oil Equivalents
0
1
2
3
4
5
AUTOMOBILE
CHICAGO–SEATTLE (N)
CHICAGO–SEATTLE (S)
CHICAGO–FLORIDA
NEW YORK/WASHINGTON–KANSAS CITY
WASHINGTON–MONTREAL
CHICAGO–LAREDO
SEATTLE–PORTLAND
OAKLAND–BAKERSFIELD
WASHINGTON–CINCINNATI
SEATTLE–VANCOUVER
WASHINGTON–TRI-STATE STATION

CHANGES IN SCHEDULED TRAVEL TIME

Beginning Time Vs. Present Time



[1] *VIA HARVE MONTANA*

[2] *VIA BILLINGS MONTANA*

[3] *THESE REDUCTIONS IN SCHEDULED TRAVEL TIMES WERE ACCOMPLISHED BY REDUCING THE LAYOVER TIME TO MAKE TRAIN CONNECTION IN FORT WORTH.*

Although the scheduled travel time has been increased, Amtrak's ontime performance has not improved significantly on these routes since 1974. In fact, most routes have experienced poorer ontime performance since 1974, as shown below.

Route end points	Percent ontime			
	1974	1975	1976	1977
Chicago-Seattle (North)	87	89	79	54
Chicago-Seattle (South)	87	88	74	64
Chicago-Miami	a/	91	85	52
Chicago-St. Petersburg	a/	47	42	49
New York-Kansas City	2	17	77	34
Washington-Kansas City	49	42	59	29
Washington-Montreal	71	74	56	61
Chicago-Laredo	b/	b/	39	33
Seattle-Portland	79	94	94	94
Oakland-Bakersfield	94	98	97	93
Washington-Cincinnati	c/	c/	88	68
Seattle-Vancouver	74	90	61	82
Washington-Tri-State Station	d/	d/	d/	81

a/ Recorded as 67 percent for Chicago-Florida route in 1974. No breakout for Miami and St. Petersburg is available.
b/ Recorded as St. Louis-Laredo until Nov. 1976.
c/ Began running in Oct. 1976.
d/ Began running in June 1977.

More cities provided rail service

Since these 11 routes began operations, Amtrak has added and dropped service to intermediate stops on 7 of them; the other 4 routes are serving the same cities as when they started. Amtrak added service to 44 cities and discontinued service to 25 cities on these routes. For example, on the New York/Washington-Kansas City route Amtrak added service to 12 cities, later discontinuing service to 5 of them. The number of changes Amtrak has made indicates it has experimented to improve ridership and to provide rail service to more persons.

Equipment, station, and track improvements

Amtrak has added new passenger cars and improved the stations and track on the routes we reviewed. Four of the 11 routes operate with the conventional equipment purchased from predecessor railroads, while the other 7 routes

use new Amfleet equipment. Shown below are the dates new equipment replaced or will replace the conventional cars.

Route end points	Replaced conventional equipment
Chicago-Seattle (North)	Fall 1978
Chicago-Seattle (South)	Fall 1978
Chicago-Florida	Fiscal year 1980
New York/Washington-Kansas City	a/
Washington-Montreal	Feb. 1978
Chicago-Laredo	Aug. 1977
Seattle-Portland	Sept. 1976
Oakland-Bakersfield	Sept. 1976
Washington-Cincinnati	Oct. 1976
Seattle-Vancouver	Sept. 1976
Washington-Tri-State Station	June 1977

a/ The conventional equipment will be replaced by new low-level equipment when it becomes available. Additional Amfleet cars are not available, and the high-level cars will not clear the tunnels and overpasses.

Since fiscal year 1972, Amtrak has made station improvements on all these routes except Seattle-Portland. Track improvements have been made on four of the routes. The cost of these stations and track improvements since fiscal year 1972 is $17.4 million.

CONCLUSIONS

In fiscal year 1977 no Amtrak routes made a profit. Our review of 11 routes showed that operating losses remain high despite route improvements, such as adding new equipment and changing schedules to improve ontime performance. Increased ridership alone will not eliminate these losses. More riders would improve fuel efficiency on some routes, but on others ridership would have to triple or quadruple to make the trains more fuel efficient than automobiles.

CHAPTER 3

INCREASED MANAGEMENT FLEXIBILITY ENVISIONED FOR AMTRAK HAS NOT BEEN ACHIEVED

Amtrak has the authority to add or discontinue routes using congressionally approved procedures that consider economic, social, and environmental factors; however, it has not used these procedures effectively to discontinue its most unprofitable routes. As long as Amtrak continues to operate these routes, it cannot hope to improve its poor financial condition. 1/ DOT's study of Amtrak's route structure has a preliminary report which recommends discontinuing many of the same routes that Amtrak's criteria identified as highly unprofitable.

Amtrak's criteria for deciding route changes and its cost reduction program have taken too long to implement, it has been reluctant to discontinue unprofitable routes, and it has had to request additional funds to continue operations. We believe the route procedures and criteria should be used effectively to determine which routes are of value to the public--and those which are not--and to guide the Congress in setting appropriate subsidy levels for Amtrak.

After Amtrak's initial route system had been defined and established in 1971 at 23,000 route-miles between 21 city-pair end points, subsequent route and service decisions were made in a process that involved four entities: Amtrak, which analyzed the performance of current and proposed route additions or discontinuances; DOT, which controlled expenditures and designated experimental routes; ICC, which approved or disapproved route discontinuances; and the Congress, which mandated that certain routes or services be continued for specific periods.

Under this fragmented route decision process, Amtrak increased its route system from about 23,000 route-miles and 69,000 daily train-miles in 1971 to 27,000 route-miles and 87,000 daily train-miles in 1977. As the system expanded, however, Amtrak's losses increased, so that DOT and the Congress agreed that Amtrak needed more management flexibility to handle its route system and improve its economic performance. Accordingly, a key provision of

1/ See our reports entitled "Should Amtrak Develop High-Speed Corridor Service Outside the Northeast," CED-78-76, Apr. 5, 1978; and "Amtrak's Subsidy Needs Cannot Be Reduced Without Reducing Service." CED-78-86, May 11, 1978.

the Amtrak Improvement Act of 1975 gave Amtrak's Board of Directors responsibility for changing Amtrak's routes and services. The act also specified, however, that the Board must publicly describe the procedures it would use in making its route decisions.

From May through October 1975, Amtrak's management and Board of Directors developed procedures to ensure that future route and service decisions would be made with full consideration of the economic, social, and environmental consequences of those decisions. The procedures were described in an Amtrak Board of Directors report to the Congress dated October 29, 1975. The Congress held hearings on the report, and the procedures became effective March 19, 1976.

DEVELOPMENT OF PRELIMINARY ROUTE ECONOMIC PERFORMANCE STANDARDS

Over a period of several months, Amtrak developed methodologies and preliminary economic standards for implementing the procedures. The economic performance standards were designed to identify Amtrak's most unprofitable routes as candidates for more indepth analysis to determine if they could be made more profitable or had overriding social or environmental benefits. Amtrak's route criteria and related economic performance standards are shown below.

Route criterion	Current economic standards		Future economic standards	
	Long haul routes	Short haul and northeast corridor routes	Long haul routes	Short haul and northeast corridor routes
1. Financial contribution per revenue passenger-mile	$ -0.08	$ -0.08	$ -0.08	$ -0.08
2. Financial contribution	$ -8,000,000	$ -2,000,000	$ -8,000,000	$ -2,000,000
3. Financial impact on connecting parts of the system	$ 500,000	$ 100,000	$ -	-
4. Incremental capital investment	-	-	$ 10,000,000	$ 500,000
5. Return on incremental capital investment	-	-	8%	8%

Amtrak selected the economic performance standards essentially by applying the breakpoint method outlined below.

--Routes within each criterion were ranked in decending order of economic performance.

--The results were studied to determine where gaps or a breakpoint occurred.

--The midpoint of the gap was identified and rounded. This point was established as the preliminary economic standard.

The following is an example of how Amtrak developed the preliminary standard--in this case, the standard for current financial contribution on long haul routes $(8,000,000).

--Amtrak examined fiscal year 1976 financial contribution criterion rankings and found that the logical breakpoint occurred between the 10th and 11th ranked routes. This was a logical point, as illustrated by the size of the gap.

Rank	Route	Financial contribution
9.	Kansas City-New York/ Washington	$-5,036,000
10.	Chicago-New York/ Washington	-5,084,000
11.	Chicago-Seattle (South)	-8,947,000
12.	Chicago-Washington/Norfolk	-9,336,000

The midpoint of the gap was identified and rounded up to the next highest million in order to make the break-point within the higher range of the gap. Hence, the $8,000,000 loss standard was developed.

In the case of financial contribution per revenue passenger-mile, Amtrak observed on long, short, and northeast corridor routes that the $0.08 loss standard segregated the bottom one-third routes from the remaining two-thirds. This point was also determined to be a logical breaking point to segregate routes.

Amtrak's standard for return on incremental investment did not use the breakpoint method, because Amtrak's cost of capital (8 percent) used for planning purposes was the logical cutoff point.

Amtrak's final step in isolating routes that would require further study was to establish a process to identify routes that repeatedly failed to meet the preliminary economic standards. The following process was used:

--A route was selected if, under the three current economic standards, it exceeded the standard in two.

--A route was selected if, under the future economic standards, the route's performance exceeded the standard in three of the four.

AMTRAK SELECTED LOW PERFORMANCE ROUTES FOR MORE DETAILED STUDY

In January 1977, Amtrak completed ranking and selecting routes for further study on the basis of the preliminary economic standards. Through this process, it identified six routes that did not meet the preliminary economic standards:

--Chicago-Washington/Norfolk.

--Chicago-Florida.

--San Francisco-Bakersfield.

--Seattle-Portland.

--Washington-Martinsburg.

--New York-Philadelphia.

Amtrak chose two routes for further study: the Chicago-Washington/Norfolk route (the Mountaineer) and the Chicago-Florida route (the Floridian). The other four routes were not scheduled for further study because they were short haul routes and were not losing as much money.

The Mountaineer

Amtrak completed its economic study of the Mountaineer in March 1977. The objective was to determine if the data accurately described the route's economic conditions and if service could be upgraded to decrease its loss.

On the basis of that study, Amtrak shortened and restructured the Mountaineer in June 1977. The route now runs between Washington, D.C., and Tri-State Station in Catlettsburg, Kentucky, and is called the Hilltopper. Because the route was restructured, Amtrak did not proceed to study the social and environmental aspects of the route or hold public hearings. Even so, the restructuring effort took place about 15 months after the approved procedures became effective in March 1976, and, despite Amtrak's determination for the route, it would be discontinued under the DOT preliminary recommendation for a new Amtrak route structure.

The Floridian

Amtrak began further study in February 1977 to determine if the Floridian's economic performance could be improved. This work, completed in May 1977, identified four options for restructuring this route. Amtrak evaluated these options by using the social and environmental criteria and by holding public hearings between August and October 1977. Amtrak's Board of Directors approved dropping the Floridian effective January 19, 1978, unless more funds were received. This action would have been implemented about 22 months after the route procedures became effective. However, due to more recent congressional action, Amtrak has decided to reroute the Floridian instead of dropping it. DOT also recommended discontinuing this route in its preliminary report.

SUBSEQUENT EFFORT TO APPLY PROCEDURES

In September 1977, Amtrak reapplied the route criteria and procedures to all routes because the Congress had not approved its full budget request for fiscal year 1978. Amtrak completed its review of current and projected economics on all routes in October 1977 and identified 12 routes which did not meet the current and projected economic standards. Amtrak continued to study eight of these routes to determine if they could be upgraded to improve their economic performance. The remaining routes were not evaluated further because restructuring or dropping them would not reduce the deficit as much as the other eight routes.

Amtrak planned to complete its review and change the routes by March 1978. On November 8, 1977, however, Senate and House Appropriations Committee conferees directed DOT to study Amtrak and recommend an optimal systemwide route structure. According to an Amtrak official, future application of Amtrak's criteria and procedures will be decided after DOT completes its reexamination.

Although Amtrak developed and applied economic performance standards to identify its worst performing routes for more detailed study, those standards have not been used effectively as criteria that a route must meet in order to be operated. According to Amtrak, a decision to discontinue a route is based on substantial exercise of judgment. Under that approach, a route can be a bad performer in all aspects but still be continued if Amtrak has adequate funding. This explains, in part, why Amtrak's application of the route procedures has not been effective. Since the standards have not been used effectively for discontinuing routes, Amtrak has requested funding to continue operating all routes in the system. Another example of their ineffectiveness is the time required to implement the procedures, as demonstrated by Amtrak's 22-month study of the Floridian.

OTHER COST REDUCTION EFFORTS

In addition to the congressionally approved route procedures, Amtrak started a cost reduction program in July 1977 to permit it to operate within available funding. Amtrak planned to reduce costs by

--reducing train frequencies to trim the operating deficit by at least $30 million,

--restructuring routes and applying the route criteria and procedures to trim the deficit by $20 million,

--decreasing manpower, and

--streamlining preventive maintenance activities.

Amtrak identified train frequency reductions that would decrease the operating deficits by about $23 million. In August 1977 it announced that these reductions would take effect in September and October; later, some of these were postponed until November. Amtrak also began applying the route criteria, as previously discussed.

On September 20, 1977, Amtrak asked for supplemental operating appropriations of $56.5 million for fiscal year 1978. According to the request, these funds were needed to restore service to the fiscal year 1977 level, to avoid major route terminations, and to meet increased wage and price escalation above the amounts in the original budget request. Amtrak also stated that it fully supported the route criteria for determining route changes but that the process was very time consuming and its ability to terminate routes and operate within available funding

was marginal. The Congress provided supplemental funding for Amtrak operations in fiscal year 1978 and "froze" Amtrak's route system pending final action on the DOT route study.

In line with the congressional mandates, on December 2, 1977, Amtrak's president issued the following directives to Amtrak management:

--All operations running as of December 2, 1977, will continue to run.

--During the period of the study on route restructuring, all current and planned route criteria actions will be suspended.

--The personnel freeze will continue and efficiencies will be taken wherever prudent as long as these economies can be made while improving service.

PRELIMINARY REPORT ON DOT'S REEXAMINATION OF THE AMTRAK ROUTE STRUCTURE

As discussed in chapter 1 (see p. 3), DOT has made its preliminary recommendation for a new route system that would be 8,100 miles less than Amtrak's present system. However, DOT's preliminary report recognizes that public review and additional analysis, as well as route modeling being developed by Amtrak, will possibly bring about further refinements to the proposed new system. DOT expects to have its final recommendation for a new route structure completed by December 31, 1978; implementation should begin after congressional approval in 1979 and after the route freeze imposed by the Amtrak Improvement Act of 1978 ends on October 1, 1979. Amtrak's present route system is shown in appendix I, and DOT's shorter route structure is shown in appendix II.

According to DOT's preliminary report, there would be no "poorly" performing routes in the recommended new route system. Moreover, DOT believes its recommended route structure will require $118 million less Federal operating subsidy in fiscal year 1980 and $177.4 million less by fiscal year 1984 than the existing Amtrak system. Although not all of the same routes are involved, the reduced Federal subsidy estimated by DOT is reasonably close to the total fiscal year 1977 loss attributed to the 11 highly unprofitable routes covered by this review. (See p. 5.) We noted that six of the poorly performing routes we examined would be discontinued under DOT's recommended system and of the two Chicago-Seattle services, only one route would be retained.

DOT's recommended system would cost less because of fewer highly unprofitable routes, but its preliminary report does not show clearly what standards were applied to determine whether a route should be continued or dropped. We were told that a minimum level of 100 passenger-miles per train-mile was used as a basic standard, but was not adhered to for all routes recommended. Without more clearly established standards, acceptance or rejection of the recommended new system will have to be highly judgmental. Moreover, adoption of any new route system without development of performance standards will not help resolve questions of route additions or deletions in the future.

AMTRAK'S AND DOT'S COMMENTS

We discussed our findings with Amtrak officials. They believe they have developed sufficient economic, social, and environmental performance standards to determine whether any route should be discontinued or whether changes should be made to improve a route's performance. They also believe they can now complete route reviews and evaluations in 6 months, including a process of obtaining comments from the public on any proposed route discontinuances.

Nevertheless, Amtrak officials agreed that their review procedures and standards are not yet fully effective, mainly because so many different views exist on what Amtrak's route structure and level of Federal subsidy should be. They also pointed out that the route procedures become less effective when used merely as a budget-cutting exercise, after Federal funding decisions are made for a fiscal year. Because of the time involved, Amtrak believes the route procedures should be applied early in the planning and budget process and not on a stepped-up basis after funding decisions are made.

We also discussed our report with DOT officials responsible for the current reexamination of Amtrak's route structure. They said the report would be timely and should assist the Congress in its consideration of a new route structure for Amtrak.

CONCLUSIONS

DOT's current reexamination of Amtrak's route system is likely to result in some much-needed restructuring beginning in fiscal year 1980. The recommended system may change when DOT issues its final report, but its May 1978 preliminary report recommended discontinuing many of the

same routes Amtrak identified as poor performers by its route criteria and procedures and shown in this report to be highly unprofitable.

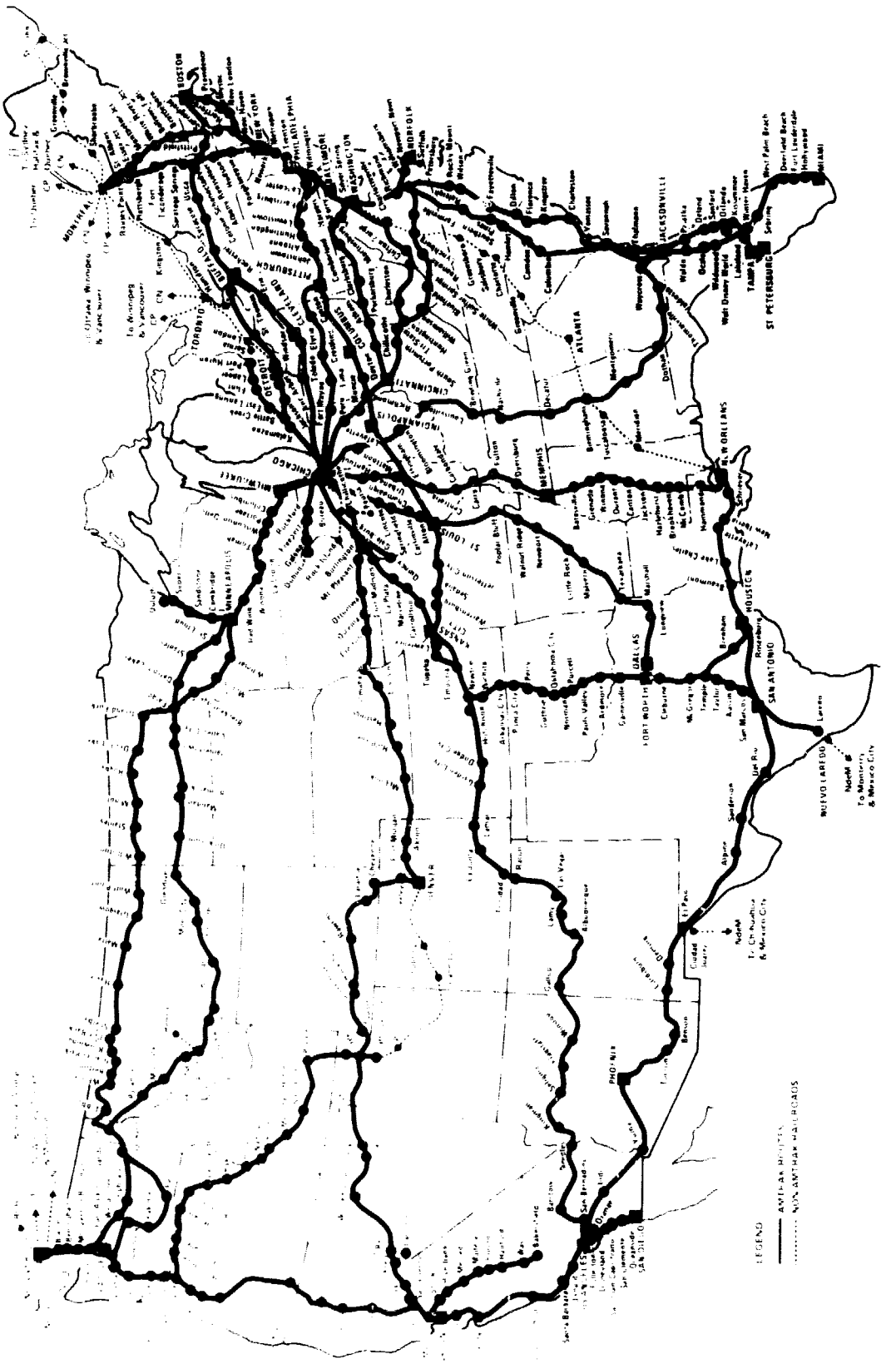
Aside from the restructuring that might result from DOT's study, the route criteria and procedures the Congress approved for Amtrak to manage its own route system have not been effective. These procedures take too long, and Amtrak has been reluctant to discontinue routes except as a last resort to cut costs. Moreover, Amtrak's reluctance to drop routes has been largely sanctioned by the Congress, as it has enacted legislation leading to expansion and continuation of routes rather than route reductions.

In our view, effective implementation of the route criteria and procedures could alert the public that passenger routes which consistently fail to achieve certain ridership levels, and meet certain cost/revenue levels or other reasonable measures of benefit will be discontinued. Further, timely and effective implementation of the procedures should improve Amtrak's plans and budgets and help the Congress to determine appropriate subsidy levels for Amtrak.

We believe the route criteria and procedures must be used effectively as guidelines for funding and operating Amtrak in the future, or the annual conflict over funding and service will continue. We believe economic, social, and environmental standards representing the congressional view of the rail passenger service's value to the public are needed. DOT's preliminary report, however, did not suggest such standards, and Amtrak's application of route criteria and standards has been a pragmatic, cost-cutting exercise rather than an attempt to define public service value. The Congress has a clear choice--it can allow conditions to remain as they are or it can insist that the route criteria and standards be used effectively.

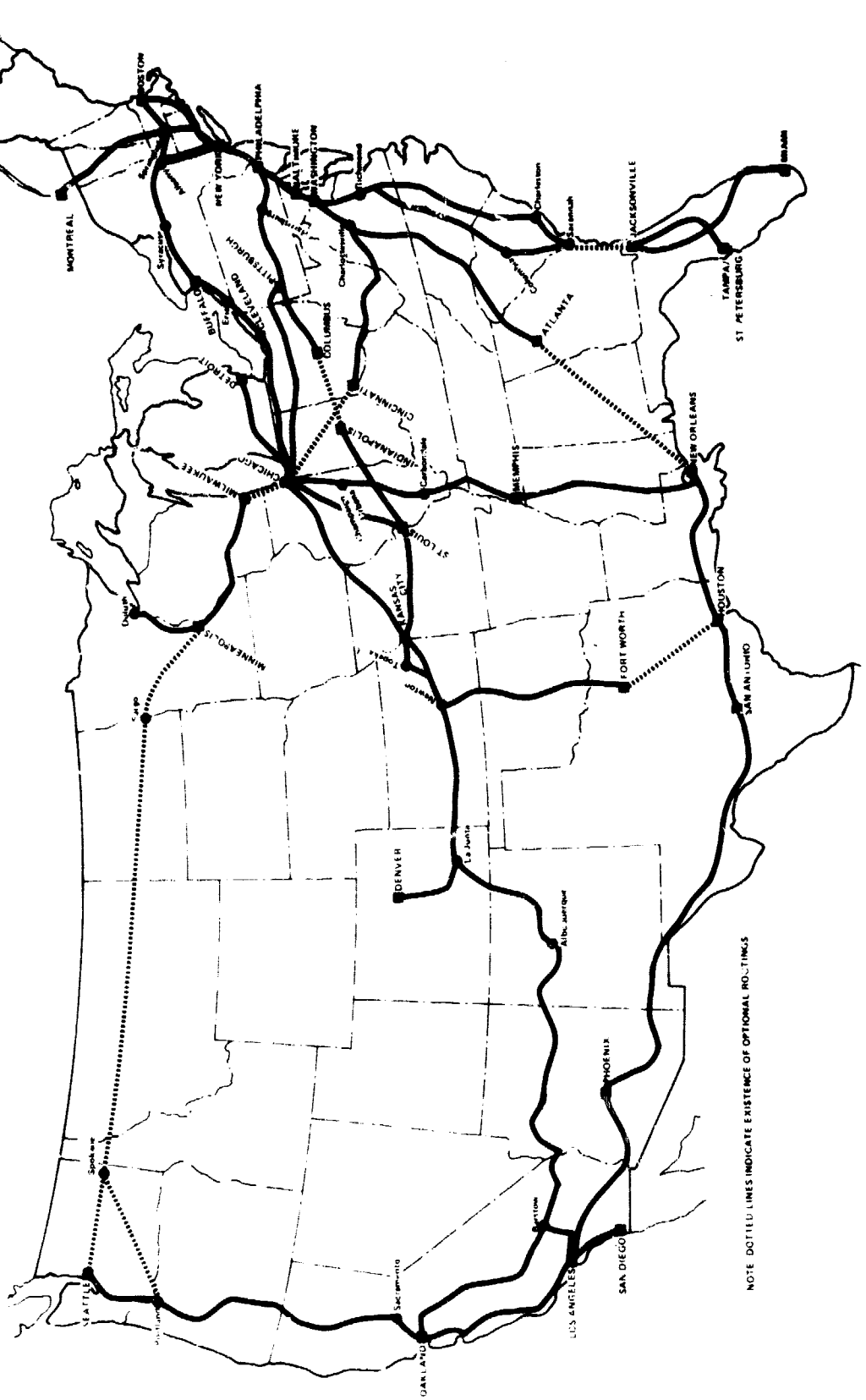
APPENDIX I

1977 AMTRAK SYSTEM



APPENDIX II

THE DEPARTMENT'S RECOMMENDED ROUTE STRUCTURE



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