Regional Plan Association

. . . a research and planning agency supported by voluntary membership to promote the co-ordinated development of the New York- New Jersey-Connecticut Metropolitan Region.

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Comparison with other systems nationwide

STUDY OF MTA COSTS FINDS POTENTIAL 15 TO 20 PERCENT SAVINGS; MORE COST-EFFECTIVE TO BUILD NEW SUBWAYS THAN REHAB ELS

A study comparing the Metropolitan Transportation Authority (MTA) with other rapid transit systems nationwide indicates that savings of 15 to 20 percent of the MTA's operating expenses may be possible with a long-term program of capital investment, procedural changes and institutional reform.

The most important of the study's recommendations is to replace many of the old elevated lines with high-speed alignments near the surface or in short stretches of tunnel. This would cost more than rehabilitating the els at first, but would pay for itself in the long run with reduced operating costs and community benefits, according to Regional Plan Association, the nonprofit research organization which issued the report.

The study also recommends using the current MTA capital program more aggressively to introduce labor-saving technology. Operating costs could be cut by 6 to 13 percent just by streamlining fare collection, the Association said.

Even greater savings could be attained through organizational changes, according to the report. Comparison with other systems reveals considerable overmanning on the subways in such areas as track maintenance, for example.

"Twenty-five years ago, the Paris Metro adopted a very useful principle--No capital investments without productivity payoffs!--and today they have one of the most modern and efficient systems in the world," said RPA President John P. Keith. "If there is one thing we've learned from comparing the MTA with other systems, it is that many modern systems are more productive. A program of subway improvements must therefore include reconstruction, abandonment and new construction. Limiting investment to rehabilitation presupposes that the existing system, as built by several competing companies between 1890 and 1940, is optimal for the years 1990 to 2040 and beyond. That assumption can only lead to spending large sums to rehabilitate lines and stations which ought to be completely replaced."

Replacing Els with New Lines

Money spent on reconstructing an existing route produces no new benefits; by contrast, replacing an elevated line with a new line produces a long list of benefits, including:

- -- much lower maintenance costs;
- -- higher speeds (25 miles per hour vs. 18) leading to greater productivity;
- -- fewer stations, hence higher speeds and lower station costs;
- -- to the extent the new line replaces an IRT line, 33 percent greater output per employee because of larger cars;
- -- better coverage of the City's neighborhoods;
- -- elimination of noise and blight of elevated structures, with corresponding increase in property values.

Since bus service in New York City costs an average of 70 cents per passenger mile, compared to 20 cents for subway service, the operating savings from replacing bus routes with new subways can virtually pay for some new subway lines, says RPA.

In March, Regional Plan will propose a comprehensive program of transportation improvements which will include construction of some 37 miles of new subway and surface lines and

removal of some 26 miles of elevated lines. Only 17 of the 37 miles of new lines would require new subway tunnels, and much of it would be on existing rights of way. The proposals will emphasize the importance of opening the new lines before removing the els, the Association said.

Examples of Labor-Saving Technology

Spot-checking tickets on commuter rail. For every train placed in service at rush hour, Metro-North employs six conductors and the LIRR employs nine. It currently costs about a dollar to collect each ticket. European systems long ago turned to spot verification of tickets purchased from automatic vending machines, with very stiff fines for evasion. Adopting that policy here could save up to 10 percent of the total operating costs of Metro-North and the LIRR.

Capital investments to reduce maintenance costs. Most of the commuter rail and rapid transit systems examined in the study average between one and three maintenance-of-way employees per mile of track. Only the TA and PATH stand out with nine workers per mile. If the subway system could cut down even halfway to the industry average, it would mean a 40 percent reduction in the TA's hefty maintenance-of-way costs.

Investments that would help cut maintenance costs include the replacement of ballasted track with rigid roadbed; replacing mechanical wayside signals with electronic cab signals; centralization of traffic control and closing of some towers; and yard and shop improvements to enhance maintenance productivity. Many of these improvements have already begun to be implemented under the current MTA capital program.

Speeding up the scheduled shift from manually operated to automatic electric substations would reduce the need for maintenance-of-power workers--and would allow the phaseout of two energy-inefficient power plants, with fuel savings of up to 16 percent, the Association said.

Automatic fare collection and unmanned subway stations. The operation of stations is a heavy fixed cost on the subway system. Some of this cost, such as station cleaning, is unavoidable; but much of it could be reduced by speeding up the adoption of automatic fare collection and gradually shifting toward unmanned stations. PATH has demonstrated that unmanned stations can be operated successfully in New York City.

On systems where stations are for the most part unattended--including the Atlanta (MARTA) and Philadelphia (PATCO) systems, as well as PATH--the average number of employees per station is about three. Systems with full-time station attendants require 6 to 11 employees per station. The Transit Authority (TA) employs more than 11. If all of the stations on the subway system were unmanned, the TA would require 3,800 fewer personnel, about 13 percent of the total.

"Given the debilitating effect of fare increases on transit ridership, containing the MTA's skyrocketing operating costs has to be an overriding priority," says Dr. Keith. "Judicious capital investment can help to achieve that goal, but only if it is part of a broader program in which management and labor work together to cut costs and enhance productivity. Such a program will take political courage, but if the usefulness of public transit is destroyed by rising operating costs, it will undermine the whole regional economy."

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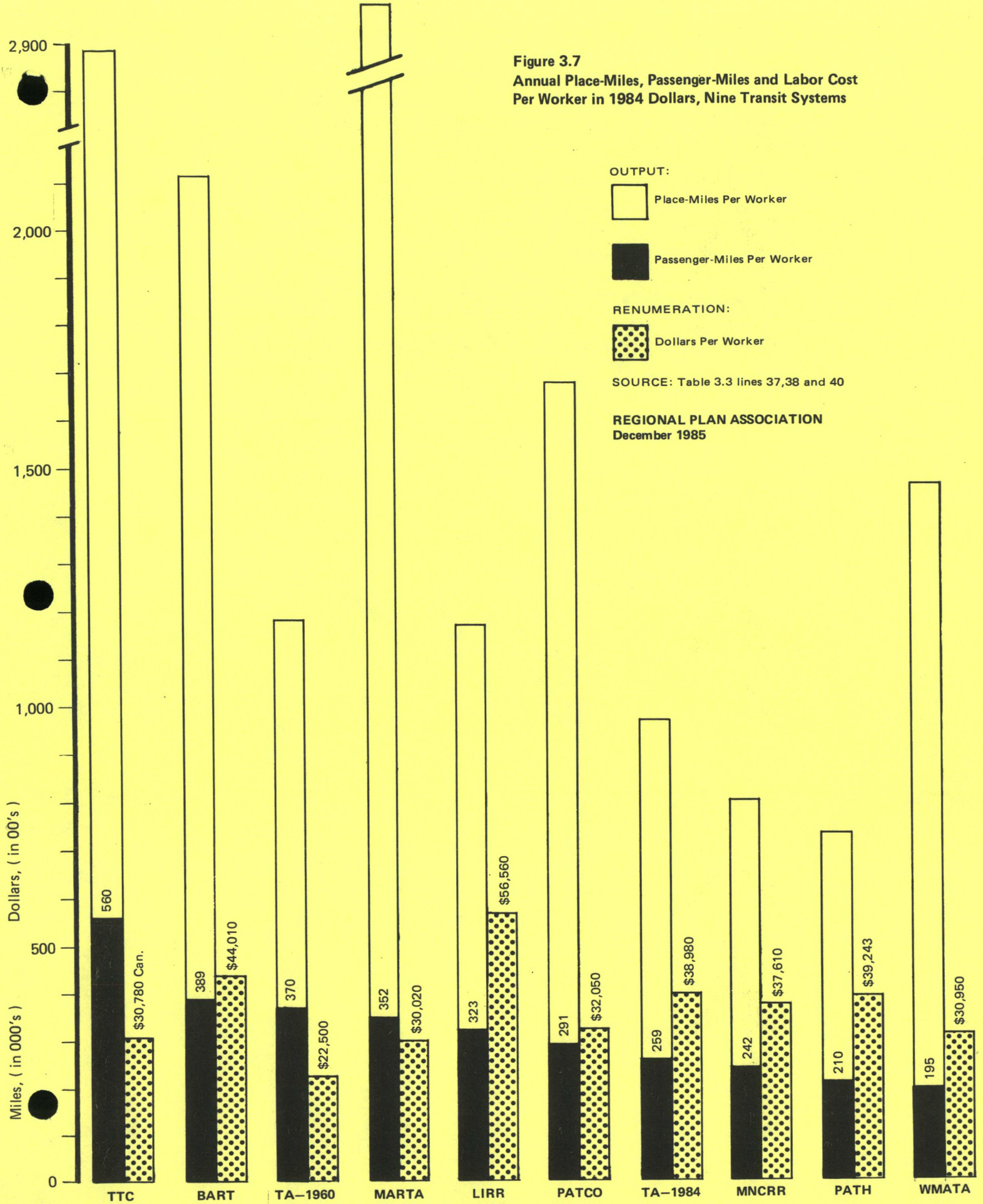
Attached is a chart showing some of the broader comparisons of the MTA and other systems in Toronto (TTC), San Francisco (BART), Atlanta (MARTA), Philadelphia (PATCO), and Washington D.C. (WMATA). Within this Region, the study looked at PATH, as well as Metro-North (MNCRR), the Long Island Rail Road (LIRR) and the Transit Authority (TA) both in 1960 and 1984.

This is the fourth of eight weekly press releases based on RPA's three-year study of the future of public transit, conducted by Boris Pushkarev, RPA's Vice President of Research and Planning. Today's release is based on a paper entitled, "Operating Costs and Output: TA Transit and MTA Commuter Rail," which is available upon request.

Figure 3.7
Annual Place-Miles, Passenger-Miles and Labor Cost Per Worker in 1984 Dollars, Nine Transit Systems



SOURCE: Table 3.3 lines 37,38 and 40

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