

ASSEMBLY, No. 2031

STATE OF NEW JERSEY 211th LEGISLATURE

INTRODUCED FEBRUARY 5, 2004

Sponsored by:

**Assemblyman JOHN S. WISNIEWSKI
District 19 (Middlesex)**

Co-Sponsored by:

Assemblymen Gibson and Stack

SYNOPSIS

Requires DOT to conduct study of Personal Rapid Transit to alleviate congestion and supplement rail transportation options.

CURRENT VERSION OF TEXT

As introduced.



(Sponsorship Updated As Of: 9/24/2004)

1 AN ACT requiring a study of the viability of Personal Rapid Transit
2 applications as a supplement to transportation system options.

3
4 **BE IT ENACTED** by the Senate and General Assembly of the State
5 of New Jersey:

6
7 1. The Legislature finds and declares that:

8 a. New Jersey's transportation needs are broad and diverse. It is
9 in the State's interest to actively improve and diversify the system that
10 has proven fundamental to its long-term economic success; which has
11 as its hallmarks the ability to move large volumes of people and goods
12 through an extensive intermodal network of roads, rail, seaports and
13 airports.

14 b. As new technologies have been made viable, the State has
15 benefited from being an early-adopter, implementing a combination of
16 public and user-fee funded roads, heavy and light rail networks, an
17 extensive public bus system, and most critically, integrating these parts
18 through intermodal transfer stations. This system has proven to be a
19 bedrock of economic growth for the State, enabling it to diversify its
20 economy over the years, by being a leader in shipping transfer through
21 its ports and heavy-rail systems, and more recently, able to move large
22 workforce populations and support tourist and entertainment venues
23 through its passenger and light-rail systems. The key to the system's
24 success has been the linking of the parts, in which passengers can rely
25 on intermodal transfer, from rails to roads.

26 c. It is in the State's economic interest to investigate new types of
27 service which may improve the usefulness and integration of existing
28 platforms, provide fast, inexpensive travel options, reduce capital costs
29 of projects, and reduce pollution from motor vehicle travel. Personal
30 Rapid Transit (hereinafter "PRT") is one such technology currently
31 being made available.

32 d. According to the Federal Transit Administration, average capital
33 cost per two-way mile for heavy rail is \$150 million, and for light rail
34 is \$70 million. For operating cost per passenger mile: heavy rail is
35 \$1.20, light rail is \$1.80. However, PRT has the potential to cost
36 much less than heavy and light-rail applications, carry high capacity,
37 be flexibly located, and require much less physical "footprint,"
38 potentially reducing easement impact for currently scheduled projects.
39 PRT studies have shown a capital cost of about one-tenth the cost of
40 existing rail technology, with similarly low operating costs. A
41 demonstration of PRT in Minneapolis, Minnesota found that PRT can
42 be built for \$15 million per two-way mile, has an operating cost of
43 about \$0.40 per passenger mile, and operated at a break-even fare
44 (including depreciation) of \$0.60 per trip.

45 e. The transportation system of New Jersey may benefit greatly
46 from fostering a niche role for profitably managed rapid transit as a

1 supplement to its current system. It is in the State's interest to
2 consider the integration of PRT into its transportation system.

3
4 2. The Commissioner of Transportation, in consultation with the
5 Executive Director of the New Jersey Transit Corporation
6 (hereinafter, the "corporation"), shall prepare and submit, within one
7 year of the effective date of this act, to the Chair of the Senate
8 Transportation Committee and the Chair of the Assembly
9 Transportation Committee, or the respective successor committees, as
10 appropriate, a written report which evaluates the viability of PRT as
11 a supplement to the corporation's current project plans and future
12 possibilities. The report shall include the following:

13 a. A complete and thorough description of PRT technology, and a
14 comparison with the corporation's current light rail and heavy rail
15 systems, including potential differences in capital and operating costs,
16 ridership, and break-even fares, and State subsidy required.

17 b. A detailed examination as to the extent PRT application could
18 be expected to reduce traffic congestion in various regions throughout
19 the State.

20 c. An assessment of the estimated savings or costs of PRT
21 applications, including the acquisition of property and rights-of-way,
22 which compares current cost estimates for future rail stations with that
23 of locating such stations in less expensive easements and
24 supplementing the stations with PRT.

25 d. A recommendation as to which options overall are most
26 sensitive to the environmental concerns of the region as well as to the
27 feasibility and safety of traffic management and impact in the region.

28
29 3. This act shall take effect immediately.

30
31
32 STATEMENT

33
34 This bill would require the Department of Transportation, in
35 consultation with the New Jersey Transit Corporation, to conduct a
36 study of Personal Rapid Transit technology and assess the viability of
37 integrating PRT into its project plans, to improve and integrate its
38 intermodal mass transit system.

39 The report, which shall be submitted in one year, shall include a
40 description of possible options, including the technology to be utilized
41 in any new construction; an examination as to the extent PRT could be
42 expected to reduce traffic congestion in the region; an assessment of
43 the estimated costs of applying PRT, including the acquisition of
44 property and rights-of-way. The report shall include a comparison of
45 capital and operating cost of constructing PRT versus Heavy and Light
46 Rail systems, the break-even fare required for all systems, and public

1 ridership subsidy required for all systems.

2 Personal Rapid Transit systems are privately managed supplements
3 to an intermodal transportation system, which have potential to greatly
4 leverage the usability of current projects. PRT is a fully-automated
5 system with small, on-demand driverless vehicles running on an
6 elevated network of guideways, offering individual trips without
7 intermediate stops. These service characteristics are comparable to an
8 automobile. In suburbs or along freeway routes, the carrying capacity
9 of PRT can be equal to 3 lanes of freeway traffic, taking only seven
10 feet of width space compared to 50 feet of freeway width. The route
11 has a low environmental impact: a post every 90 feet supports a
12 lightweight aluminum guideway, on which passenger vehicles run. The
13 emission free cars are propelled and slowed by linear induction motors,
14 with a fuel efficiency equivalent to about 85 miles per gallon.

15 PRT systems have been shown in demonstration projects to cost a
16 fraction of existing rail systems to both build and operate, allowing a
17 niche role for a private sector, for-profit rapid transit system in the
18 State, thus diversifying the State's integrated, intermodal system. The
19 system is intended to link with existing routes and stations. Potential
20 benefits include allowing increased safety on short distance trips, in
21 which riders may find more adequate parking at a distance from the
22 light or heavy rail station, and allowing rail stations to locate "off-
23 site," with lower easement and construction costs, minimizing station
24 impact on existing parking and roads in established urban areas.

25 According to the Federal Transit Administration, average capital
26 cost per two-way mile for heavy rail is \$150 million, and for light rail
27 is \$70 million. For operating cost per passenger mile, heavy rail is
28 \$1.20, light rail is \$1.80. A PRT demonstration in Minneapolis,
29 Minnesota showed capital costs of about 1/10 the cost of existing rail
30 technology. The demonstration study showed that PRT can be built
31 for \$15 million per two-way mile, and operated at a break-even fare
32 (including depreciation) of \$0.60 per trip. The operating cost alone
33 was found to be \$0.40 per passenger mile.