



# VIEW*S* & VISIONS

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## Morgantown's PRT – A Visionary Idea Ahead of Its Time

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For nearly 40 years, the Personal Rapid Transit (PRT) system at West Virginia University has been the only public transit system in the United States that allows the passenger to select their destination choice.

Born in 1975 as part of an experiment in public transportation, the gold and blue electric-powered cars of the PRT have carried almost 80 million passengers. On my daily commute to work as director of transportation and parking, I am one of the more than 2.4 million passengers that ride the system annually.

The PRT cars each carry up to 20 people on a raised track from point to point. While other modes of public transport require passengers to take a circuitous route, during peak times the PRT takes passengers directly to the station they've requested.



The Boeing Corporation created the system when the company was still in the ground transportation business. Since Boeing left this market, there has been virtually no product support, and WVU engineers have had to make their own replacement parts when possible.

Much of the system is original, a fact that sometimes creates problems in the reliability of the master controls and the vehicles themselves. Most of the errors in reliability can be attributed to the train control system, a 1970s-era computer that uses the software language of that era. The cars each have between 300,000 and 600,000 miles of wear to their credit.

But in the last four years, a plan to update the PRT has taken off. Since the adoption of the





The PRT does not stand alone in easing the city's congestion and offering alternative transportation. It is part of a comprehensive University plan that encourages students and employees to use transportation other than personal cars.

Ridership on the area's Mountain Line bus service is at an all-time high, with 1.2 million rides last year. More than 1,000 riders have signed up for the Zimride carpooling service, which matches those with cars to those that need rides.

The recent offering of the Zipcar car rental service in the area has made WVU one of the highest collegiate users of the service. Drivers are able to schedule the use of the car as needed, with the payment of a fee. Morgantown also has a network of rail-to-trail paths and a thriving bicycle community that works to teach residents how to safely navigate the area's roads.

The PRT is a piece of the transportation puzzle in Morgantown that successfully carries 15,000 passengers a day. It is unique. And its future is being ensured through careful research and investment of WVU. When you visit Morgantown, be sure to experience it for yourself. ▽

PRT Master Plan in 2010, the University has spent close to \$20 million in repairs and updates that include making the fleet's onboard computers digital.

Up next is the installation of new propulsion units, with five being tested and the rest to be produced in the next year. The more involved projects will then include purchasing a modern train control system that relies on radio signals to communicate with the cars and not the current embedded wires. A new light-weight vehicle that relies on internal power such as batteries instead of the current electrified guide rail is being considered, though a prototype would have to be developed first. These large-scale alterations to the system would allow the PRT to meet the needs of a growing community.

Once these improvements are in place, we will be able to consider the extension of service to other areas of the campus and community.

Even with system errors, the PRT consistently posts a reliability score of 97 percent and above. This means that 97 percent of the time the PRT comes when called and transports riders as quickly as possible.

The system has embedded itself in the life of West Virginia University. The PRT transports 10 percent of the 60,000 people who fill Milan Puskar Stadium on football game days. The cars maintain a strong link between WVU's campuses and Morgantown's downtown area. Yet the general public also relies on the PRT. Eight percent of riders on the PRT have no University affiliation.

If the PRT hadn't arrived on the scene, Morgantown, West Virginia, would now need 34 more buses running daily between campuses to meet the area's transportation needs. That's a big difference in a city that already experiences daily traffic congestion on campus and in its downtown arteries.