



Pennsylvania High-Speed Maglev Project Fact Sheet

April 2002

Quick Facts

- Estimated travel time between Pittsburgh International Airport and Greensburg is approximately 30 minutes.
- A vehicle has a 400+ passenger capacity.
- Estimated cost to travel between stations is \$5.00, including parking.
- Operates at speeds from 0 to 311 mph.
- The system is not affected by adverse weather conditions.

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General Information about the Pennsylvania High-Speed Project

The proposed Pennsylvania High-Speed Maglev project is a 47-mile high-speed magnetic levitation transportation system from Pittsburgh International Airport to Greensburg with MAGport™ stations located at the Airport, Downtown Pittsburgh, Monroeville and Greensburg. The system would take passengers from Greensburg to the Airport in approximately 30 minutes.

The project is being developed in response to the Federal Government initiative to construct the first high-speed maglev system in the United States. MAGLEV, Inc. is the private partner that is working with Port Authority of Allegheny County and the Pennsyl-



Image courtesy of Transrapid International. (Germany)

vania Department of Transportation to bring this technology to the Pittsburgh area.

The Pennsylvania High-Speed Maglev Project is estimated to generate up to 10,000 temporary construction jobs in the region and 1,200 permanent jobs. These estimates do not include spin-off jobs from enhanced tourism and an

enhanced business climate in southwestern Pennsylvania. Many of these will be manufacturing and fabrication jobs, related to an anticipated need for 200,000 pounds of US produced plate steel required to build the guideway, as a result of the \$2.8 billion project cost.

Project Initiatives and Funding

The project is administered by the Federal Railroad Administration (FRA) under federal legislation called the Transportation Equity Act for the 21st Century (TEA-21). Among other national transportation initiatives, the legislation calls for the deployment of a high-speed maglev

system as a future means of transportation technology. The FRA requires that the system operate safely at speeds in excess of 240 mph. Additionally, the project must contain 70% American content.

A project Environmental Impact Statement (EIS) is being conducted by the

Port Authority of Allegheny County and the Pennsylvania Department of Transportation utilizing the services of the MSM consulting group that includes Maguire Group, Skelly & Loy and McCormick, Taylor & Associates.

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Station Locations

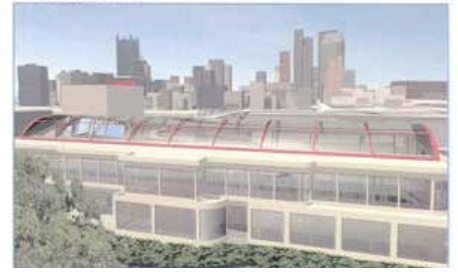
The stations, officially referred to as MAGport™ Stations, were identified in the Federal Railroad Administration's Programmatic Environmental Impact Statement. Stations will be located at the Pittsburgh International Airport, Downtown Pittsburgh, Monroeville and Greensburg.

The specific locations of the stations within each site will be identified during the EIS process based on the project purpose and need, screening criteria and with input from the public, agency and regional and local officials. Stations

will be designed for passenger convenience and connectivity to other modes of transportation.

Stations will be accessible to people with disabilities and feature adjacent parking areas and retail businesses. The size of the parking areas for each station will be determined by the forecasted ridership numbers.

The infrastructure improvements needed to support automobile and public transit access to the station will be included in the station design.



Conceptual MAGport™ Design

The airport area will have two station locations. This will allow for commuter traffic to utilize the necessary parking for daily trips and still allow easy access for airport passengers at the landside terminal.

Operating Schedule

The Maglev system would operate 18 hours on weekdays, with reduced service on weekends and holidays. Vehicles would run approximately every 7.5 minutes during peak hours between the Pittsburgh International Airport and Monroeville. Operation would be every 10 to 15 minutes during off peak hours. Travel between Monroeville and Greensburg would be one vehicle every 22.5 minutes during peak operation and approximately every

30 minutes during non-peak operation.

Vehicles will initially be three cars in length, with the potential of expansion to five cars. Each car is capable of holding approximately 140 passengers. During rush hours, it is anticipated that seven vehicles would be operating throughout the system.

The projected cost of riding the system would be \$5.00 per segment,

including parking. (An average of \$0.33 per mile.) Fares would be discounted for regular commuters.

The estimated travel time between each station varies, with an average of 7 minutes from the Airport to Downtown Pittsburgh; 11 minutes from Downtown to Monroeville and 6 minutes from Monroeville to Greensburg. In order to achieve the efficiency and speed benefits, a minimum distance of 12 to 15 miles is required between stations.

Ridership Information

Two studies were conducted in the areas that high-speed maglev would serve to estimate the ridership.

The ridership is being reviewed by a national panel of experts recommended by the Federal Railroad

Administration. The final ridership will be refined based on recommendations from the panel.

To be conservative, current ridership estimates were reduced to 60% of the total, to estimate Project costs and ridership.

- Daily one way segment trips are estimated at approximately 67,000 trips when the entire system is operating.
- Most people travel only one segment to their destination, and one segment returning from

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Project Initiatives and Funding

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As part of the EIS, the following points should be considered.

- The EIS will be conducted in compliance with the National Environmental Policy Act (1969) regulations.
- Current study work underway includes: the environmental impact statement; preliminary engineering; ridership and revenue refinement studies; partnering agreements and technology transfer; petition for rule of particular applicability; and construction erection planning.
- Funding under the legislation of the TEA-21 authorizes \$950 million toward construction of the selected project. The federal funding requirements dictate that state and/or private funds must contribute one-third of the necessary dollars needed for the project. Federal and matching dollars are only available to fund guideway construction, propulsion and energy supply equipment.
- Vehicles and MAGport™ Stations will be financed by private funds.
- Total cost for the project is estimated at \$2.8 billion dollars.
- Final costs will include associated infrastructure, such as roads, intermodal connections and access ramps.

Project Milestones

The following are anticipated milestone dates for the project.

- June 18, 20, 25 & 27, 2002 — Round 3 Public Meetings to present the results of detailed studies
- October 2002 — Completion of Draft Environmental Impact Statement (EIS)
- November 2002 — Public Hearings on the EIS
- January 2003 — Federal Railroad Administration selection of a single project to implement the first High-Speed Maglev System in the United States
- April 2003 — Submission of Final Environmental Impact Statement
- May 2003 — Record of Decision
- 2007 — Airport to Downtown segment anticipated to be operational
- 2008 — Downtown Pittsburgh to Monroeville segment anticipated to be operational
- 2009 — Monroeville to Greensburg segment anticipated to be operational

Alternative Alignments

When considering alternative alignments for the High-Speed Maglev system, the project team was bound by various design requirements. The general design criteria for establishing the preliminary alignments were:

- Passenger safety and comfort
 - The TEA-21 criterion speed of 240 mph.
 - An elevated guideway for safety that is a minimum of 16.6 feet above roadways and 23 feet above railroads
 - Curve requirements that are compatible with the speed
 - Following existing or planned transportation corridors.
 - MAGport™ Station locations that allow for a level guideway.
- This design criteria poses the following challenges:
- Existing transportation corridors are designed for speeds of 60-70 mph. The average speed of the Maglev system is 110 mph. Therefore it is not always possible to follow existing transportation corridors.
 - To meet the passenger safety and comfort needs, larger curve radii must be applied to the guideway.
 - The guideway for the alignments is 96% elevated. (Non-elevated in station areas.)
- Eleven alternative alignments were considered in the preliminary alternatives analysis of the project. The EIS study team applied the following screening criteria to the preliminary alternatives before alignments were advanced to detailed study:
- Length of alternative alignment
 - Engineering design criteria
 - Operational considerations
 - Environmental features and associated impacts
 - Public and agency input
- The alignments advanced into the detailed study phase are being refined. Extensive data collection and fieldwork is being completed in concert with refining the Engineering design and gathering Public and Agency input.



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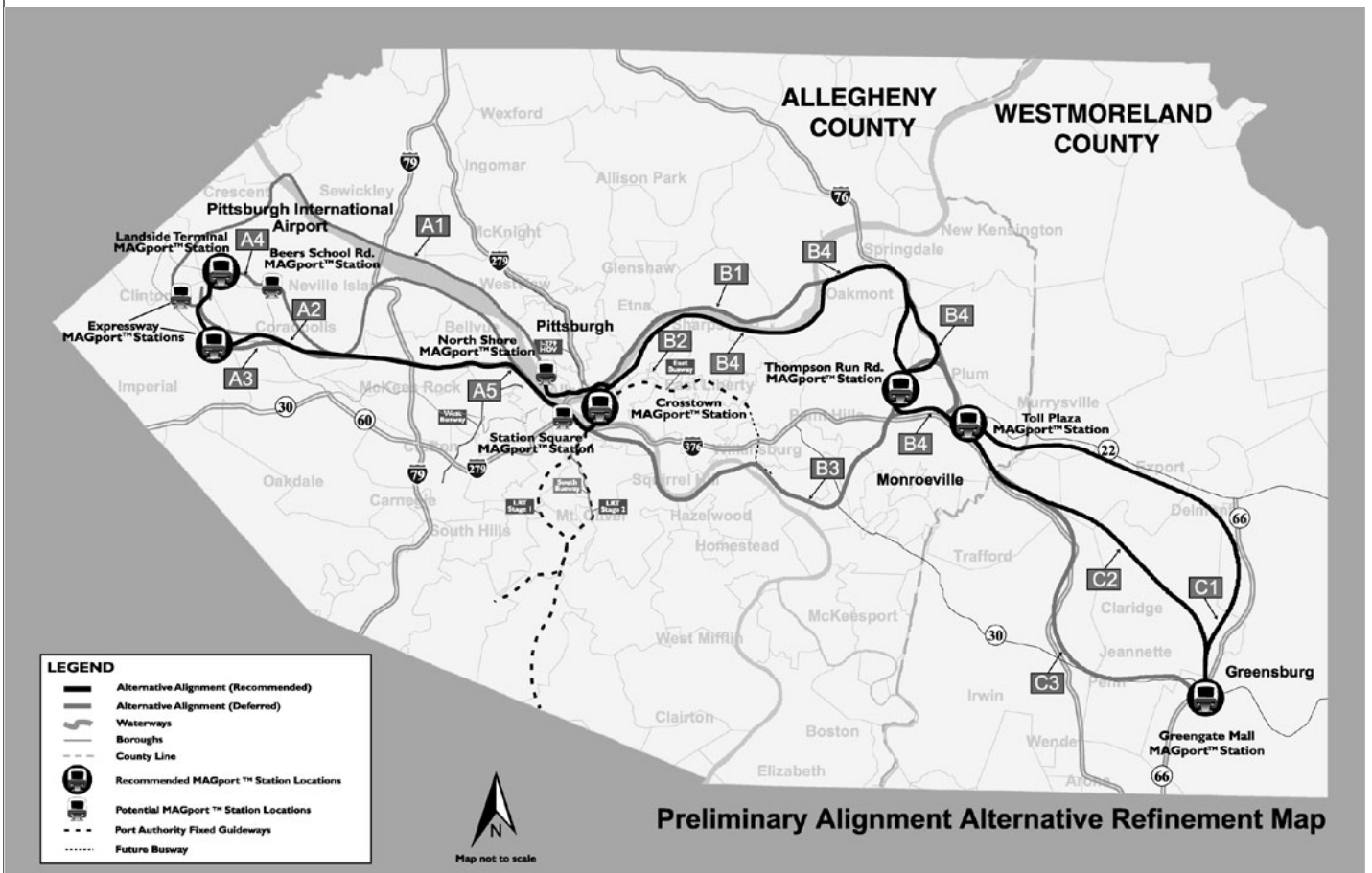
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Ridership Information

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their destination. Therefore, the 67,000 segment trips translates to approximately 33,500 people riding the system daily to and from their destination when all segments are in service.

- The estimated number of passengers making trips in each segment is:
 - Airport to/ from Downtown: 15,600 (47%)
 - Downtown to/ from Monroeville: 14,050 (42%)
 - Monroeville to/ from Greensburg: 3,850 (11%)
- Average fare cost per segment trip is estimated at \$5.00 and includes the cost for the first 24 hours of parking.
- The estimated ridership represents approximately 5% of work force trips and 17% of the non-work trips in the corridor the system will serve.



Preliminary Alignment Alternative Refinement Map