

Frequently Asked Questions

What is Maglev?

Maglev (magnetic levitation) is an advanced transportation technology in which magnetic forces lift, propel and guide a vehicle over a guideway. Utilizing special electric power and control systems, this configuration reduces the need for mechanical parts, thereby minimizing resistance and permitting speeds of 240 mph or more.

Who is conducting this study?

The Maryland Transit Administration (MTA) of the Maryland Department of Transportation, in cooperation with the City of Baltimore, Baltimore County, and the District of Columbia, is examining the feasibility of connecting Baltimore, BWI Airport and Washington, D.C. using Maglev technology. The Federal Railroad Administration (FRA) is providing funding under Section 1218 of TEA 21 which authorizes funding for the design and construction of one full-scale Maglev project.

How was our area selected for the study?

In May 1999, the Baltimore-Washington corridor was one of seven corridors selected as part of the Federal Railroad Administration's (FRA) Maglev Deployment Program. In January 2001, the FRA selected the Baltimore-Washington and Pittsburgh corridors to be funded for further study.

What does the current study include?

The MTA is preparing a Draft Environmental Impact Statement (DEIS) in compliance with the National Environmental Policy Act of 1969 (NEPA). NEPA establishes a national policy of preserving and enhancing the human environment for future generations while meeting the needs, including the transportation needs, of the present generation. The first phase was the scoping process. Scoping meetings for this project were held to introduce potential alignments to the public and local communities. Comments were requested at these meetings and also taken through the Maglev web site. The second phase of the DEIS is to determine which alternatives should be selected for more detailed study. Several alternative routes were studied to link Baltimore and Washington, D.C. The alternatives studied are the "no-build" alternative,

an alignment paralleling Interstate-95, an alignment paralleling the Baltimore-Washington Parkway, and an alignment paralleling the Amtrak rail corridor.

How has the public been involved in the process?

The public involvement process has included two rounds of public information meetings as well as ongoing briefings to community groups and elected officials. In addition a web site, www.bwmaglev.com, is available for public information, and a project newsletter is regularly distributed to a mailing list of more than 6,000.

What are the alignment options and where would stations be located?

The alignment options studied were the Baltimore-Washington parallel, the Amtrak parallel and I-95 parallel, including a number of sub-options within each major alignment option. Stations would be located at Camden Station in Downtown Baltimore, BWI Airport, Union Station in Washington D.C., and a potential fourth station at the Washington Beltway. Based on a rigorous evaluation of these alignments, the MTA is recommending that the Amtrak parallel alignment be retained for detailed study in a Draft Environmental Impact Statement (DEIS) as the “build” alternative. A “no-build” alternative will also be included in the DEIS. The I-95 parallel and the Baltimore Washington Parkway parallel alignments will be dropped from consideration.

How much right-of-way is required?

The width of the right-of-way required for a double guideway Maglev system is approximately 70 feet. The guideway is completely separated from pedestrians and traffic, but can be constructed at-grade, in tunnel or elevated. If constructed at grade, the alignment would be fenced to assure public safety. Due to the high operating speeds, curves and grades must be gradual.

Does the technology produce electromagnetic forces (EMF)?

FRA's Draft Programmatic Environmental Impact Statement (DPEIS) for this project, issued in June 2000, concluded that there are no major EMF or electromagnetic radiation (EMR) issues. The EMF characteristics of the Transrapid system, the project's technology provider, and the associated public and worker exposures have been extensively surveyed and documented by the U.S. Department of Transportation and FRA in a series of reports over the past decade.

Studies of EMF characteristics have focused on key system locations such as the vehicle, the guideway, station platforms, overpasses/underpasses, control and communication structures, power conditioning equipment and near distribution and power-rail cabling located under the guideway. EMF readings were then compared to other transportation systems such as conventional electric trains as well as common home or office sources. Key findings are that “average values of magnetic fields for Maglev are comparable to other electric transit and rail systems and below applicable limits.”

Does Maglev make noise?

Maglev is quieter than traditional trains, a complete evaluation will be conducted of potential noise effects of Maglev operation in the Baltimore-Washington corridor and mitigation measures will be presented in the EIS.

Is this technology being considered anywhere else?

Maglev is operational in Germany on a test track open to visitors and operated by Transrapid. There is currently a project under construction in Shanghai, China in a corridor from the central city to the airport. The project is about 40% complete, and is anticipated to begin revenue operations in January, 2003. The German government has also initiated planning studies for a new project.

Is Maglev safe?

Yes. Maglev is considered to be a very safe mode of high-speed ground transportation. The vehicle is designed to wrap around the guideway and therefore cannot be derailed. In case of power failures on board, batteries allow the train to remain levitated so it can be pushed to the nearest station or an evacuation point on the guideway. The technology being considered for this corridor has been certified as safe by the FRA. There are no intersections with any traffic.

What is the relationship of the project to the 2012 Olympics?

The project team has worked cooperatively with the 2012 Olympics committee to make them aware of the Maglev project. If the Baltimore-Washington region wins the 2012 Olympics designation, and if the Maglev project has been constructed by 2010,

undoubtedly each will benefit the other. However, the Olympics has not been a major factor in the Maglev environmental evaluation or ridership projections.

What would it cost to construct the project?

The preliminary cost estimate for the project \$3.5 -- \$4 billion which includes technology components, guideway infrastructure, stations, operation and maintenance facilities, right of way, and engineering construction management and training. The total estimates include a 25% contingency estimate for civil structures and a 40% contingency estimate for system elements.

If this region is selected, how will the construction of the project be funded?

The State has prepared a conceptual finance plan that indicates that the majority of the funds to construct Maglev would come from operating revenue bonds. \$950 million would come from a Federal grant, with most of the remaining amount coming from State and local contributions.

Are any State or local funds being used in this project?

Yes. By law, federal funds may make up no more than 2/3rds of any project-related expenditure. Therefore, funding for the first phase and the current phase is also being provided by the State, Baltimore City, Baltimore County and Washington, D.C.

What are some of the benefits of Maglev?

- Maglev can help meet growing travel demand in the Baltimore-Washington corridor as well as along the Eastern Seaboard, reducing the need for additional highways, rail capacity and airport expansion. Maglev is projected to divert about 30,000 vehicles per day from the highway system, and reduce daily vehicle miles traveled in the corridor in the year 2020 by 800,000 vehicle miles per day.
- Maglev does not produce local air quality impacts associated with gasoline engines, diesel locomotives or jet engines.
- A high speed Maglev connection could draw the Baltimore and Washington metropolitan regions closer together by reducing travel times between the two cities to less than 20 minutes. This could foster economic growth, particularly in downtown Baltimore.
- Maglev could greatly increase the market share for BWI Airport in the Washington region by reducing the travel time from downtown Washington to BWI.

- Maglev could generate significant job opportunities in regard to both its construction and operation.
- An American Maglev project could foster new research and development into additional transportation and industrial applications of the technology.

What are the next steps for the project?

The next phase of the study is to undertake detailed examination of the remaining alternative, the findings of which will be published in a Draft Environmental Impact Statement. In addition, the “no-build” alternative is always carried forward into the next phase of analysis. The “no-build” alternative does not include any additional construction beyond projects in the regional long range plan for transportation. The MTA is also coordinating activities and studies, including preparation of passenger projections and revenue forecasts; estimates of capital and operating costs; identification of benefits; and preparation of a public/private partnership plan for planning, design, construction, financing and operation of the project.

What is the schedule for the project?

- Submit the Draft Environmental Impact Statement to the Federal Railroad Administration -- late 2002
- Hold a Public Hearing on the Draft Environmental Impact Statement -- early 2003
- Complete the Final Environmental Impact Statement and secure Record of Decision -- 2003
- Federal Railroad Administration makes determination on whether the Baltimore-Washington or Pittsburgh project receives funding for Final Design and Construction -- early 2003
- Final Design and Construction -- 2005-2009
- Testing -- 2009-2010
- Revenue Service -- 2010

(This schedule assumes there are no delays obtaining project approvals or funding.)