

I. PROJECT DESCRIPTION

Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) is the economic engine that powers Maryland’s economy. BWI Marshall is one of the 25 busiest U.S. airports, moving more than 22 million passengers and nearly 1.5 million pounds of cargo in 2022. The Airport provides over 16,000 direct and 12,000 indirect jobs in a variety of fields. BWI Marshall Airport is linked to the broader region by well-planned transportation infrastructure, including excellent highway connections and mass transit, with easy access to the Port of Baltimore and a connection to the regional rail network. The Maryland Department of Transportation (MDOT) and Maryland Aviation Administration (MAA) are committed to improving customer service and ease of access to benefit all Marylanders and visitors through proactive engagement and planning efforts.

A multi-modal ground transportation center (GTC) and automated people mover (APM) have been longstanding objectives for BWI Marshall. A GTC will centralize transportation facilities and accommodate improved connectivity including anticipated new routes and modes, and will help separate vehicle types to optimize safety, efficiency, reduce vehicle idling, and provide capacity for new service within the terminal. An APM will allow for expanded, reliable and efficient connectivity throughout the BWI Marshall campus and into the surrounding community. Advancing the planning for the GTC and APM will support State and Federal greenhouse gas reduction goals, resiliency, job growth and access, and regional economic opportunity. The study will also identify opportunities to incorporate advanced mobility and connected vehicle technologies and enhance vehicular and pedestrian safety throughout implementation of the GTC, APM and additional roadway improvements.

I.1 Planning Study Challenges

The **BWI Marshall Airport Multi-Modal GTC and APM Planning Study** (the Study) will address various transportation challenges including:

- Managing anticipated vehicular traffic increases while ensuring safety and minimizing negative impacts on the traveling public, employees and residents, particularly as it relates to individuals from low-income and disadvantaged communities employed at the Airport.
- Accommodating anticipated new, advanced and expanded modes of transit.
- Accommodating changes in personal travel preferences, and proactively addressing barriers to employment opportunity through enhanced transit connectivity.

The Study will address these transportation challenges by:

- **Developing a plan for a multi-modal GTC and APM to accommodate evolving transportation technologies and needs, accessibility for all passengers and employees, and expanded connectivity.** In accommodating growing airport operations, these facilities will be designed and constructed in a manner that ensures equitable transit access and maximizes economic opportunity in particular for environmental justice (EJ) populations.
- **Identifying and improving potential safety issues.** The Study will evaluate necessary safety enhancements to accommodate growing traffic while minimizing conflicts between modes, and how these improvements can be made through development of a GTC and APM, in connection with local and regional transit initiatives and other transportation projects.

- **Undertaking early and continuous collaboration with impacted stakeholders** to gather input and consensus on the program and ensure stakeholder plans, concerns and suggestions are incorporated into Study objectives.

I.2 Statement of Work

The Study statement of work includes nine (9) sequential tasks as described below. Additional detail regarding study scope and process can be found in the detailed Statement of Work [here](#). While MAA will provide the local funding for the study, several key stakeholders involved in complementary planning efforts will be engaged, including State Highway Administration (SHA), Maryland Transit Administration (MTA), and Anne Arundel County, among others.

Task 1: Project Initiation

In coordination with key stakeholders, define the purpose, perceived benefits, and desired outcomes of the Study, to address at a minimum: optimized passenger experience, enhanced traffic safety, reduced greenhouse gas emissions, enhanced access, increased job opportunities, natural resource protection and climate resiliency, operational reliability, regional economic health/strength, and support for compatible and sustainable land use patterns.

Identify methods/forums for inclusive involvement of stakeholders. Establish a Stakeholder Steering Committee to gather on-going input and build consensus on the program. Plan, coordinate, and conduct kickoff meeting(s) with MAA staff and stakeholders.

Task 2: Targeted Public and Agency Engagement

Undertake varied means of outreach to determine the transportation challenges and needs of Airport and nearby business employees, particularly those traveling from [Areas of Persistent Poverty \(APPs\) and Historically Disadvantaged Communities \(HDCs\)](#) in the region (i.e., Baltimore City and County). Survey Airport employees and Airport users and develop an interactive webpage for individuals to provide input on travel preferences, needs and obstacles relative to commuting and traveling. Survey residents of APPs/HDCs to determine any transportation barriers preventing them from applying for work at the Airport and surrounding area. Create a demographic profile of Airport and area employees to inform the development of multi-modal access concepts. Utilize the interactive webpage to solicit ongoing feedback and input from impacted populations.

Task 3: Establish Existing Conditions

Review adopted plans and agency guidance. Obtain relevant data, including base mapping, traffic counts and models, parking data, and aviation forecasts.

Task 4: Airport Needs Assessment

Conduct a needs assessment in relation to multi-modal, such as bus and transit ridership and potential demand associated with an APM connecting the MARC/Amtrak station to the Airport. The needs assessment will be used to determine facility space requirements, strategies to encourage a shift in airport access modes away from single occupancy private vehicles and potential terminal functions that could be provided in a GTC.

A workshop with the Stakeholder Steering Committee will be held to establish a range of forecast scenarios such as reviewing alternatives with and without MAGLEV,¹ impacts of emerging technology including autonomous vehicles and eVTOL, use of autonomous shuttles and net-zero/net-plus airport ground transportation, and/or other sustainability focused options.

Task 5: Site Development Planning Parameters

Identify development issues or constraints that could influence concept design, such as: airfield setbacks/height restrictions; roadway access; utilities; existing and planned facilities; and sensitive environmental resources. Identify opportunities for green technologies such as solar, geothermal, and identification of target Leadership in Energy and Environmental Design (LEED) standards.

Conduct a workshop with the Stakeholder Steering Committee to establish their perspectives on challenges and priorities for improving regional access. Select screening criteria that align with the goals set in Task 1, addressing considerations such as safety, wayfinding, adaptive re-use, resiliency/flexibility, sustainable infrastructure and development practices, revenue generation/grant/P3 potential, and phasing/constructability.

Task 6: Concept Development and Screening/Refinement

Develop and evaluate up to six GTC and APM concepts taking into consideration currently accepted long-range development (Airport hotel, MAGLEV station, etc.). GTC concepts will include floorplans depicting how all transportation modes will be accommodated and APM alignments will depict remote facilities that may be connected to the terminal. APM concepts will also consider alternate technology, such as autonomous shuttles, to achieve a circulator connecting disparate airport facilities throughout the study area. Identify access improvements to support the GTC and APM concepts, light rail transit (LRT) station, parking lots, and a potential MAGLEV connection. Conduct a workshop with the Stakeholder Steering Committee to select three concepts or concept families to carry forward.

Further refine and analyze short-list alternatives for GTC, APM alignment, and terminal access. Provide technical options to preserve and protect for future major projects with minimal up-front investments. Conduct a one-day workshop with the Stakeholder Steering Committee to select a preferred concept for the GTC, APM and supporting infrastructure.

Task 7: Preferred Concept and Cost Estimate

Develop detailed layouts of the development phases for the preferred concept including improvements to the supporting roadway/transit/multi-modal network to optimize airport accessibility and connections to the regional roadway and transit network and adjacent communities. Document advocacy positions and develop a strategy for interagency partnering that builds wider support for implementing projects outside of MAA's property. Develop preliminary engineering and rough order of magnitude cost estimate.

Task 8: Implementation and Impact Analyses

Develop a recommended capital program for 0-5 years, 5-10 years, and 10+ years including financial feasibility summary showing expected costs, revenue gains, grants and potential P3 or third-party investments. Generate a phased development plan for the recommended projects.

¹ The Northeast MAGLEV is a proposed superconducting high speed rail line connecting DC to New York and beyond. BWI Marshall is the only local stop currently proposed between DC and Baltimore.

Fiscal: Complete a financial feasibility analysis with expected capital and operating costs, and potential revenue gains for GTC, APM and associated roadway improvements.

Economic: Complete an economic impact evaluation, including potential job growth from the construction of airport-led projects, as well as the growth of local businesses supporting an increase in passengers and employees (i.e., restaurants, shops, etc).

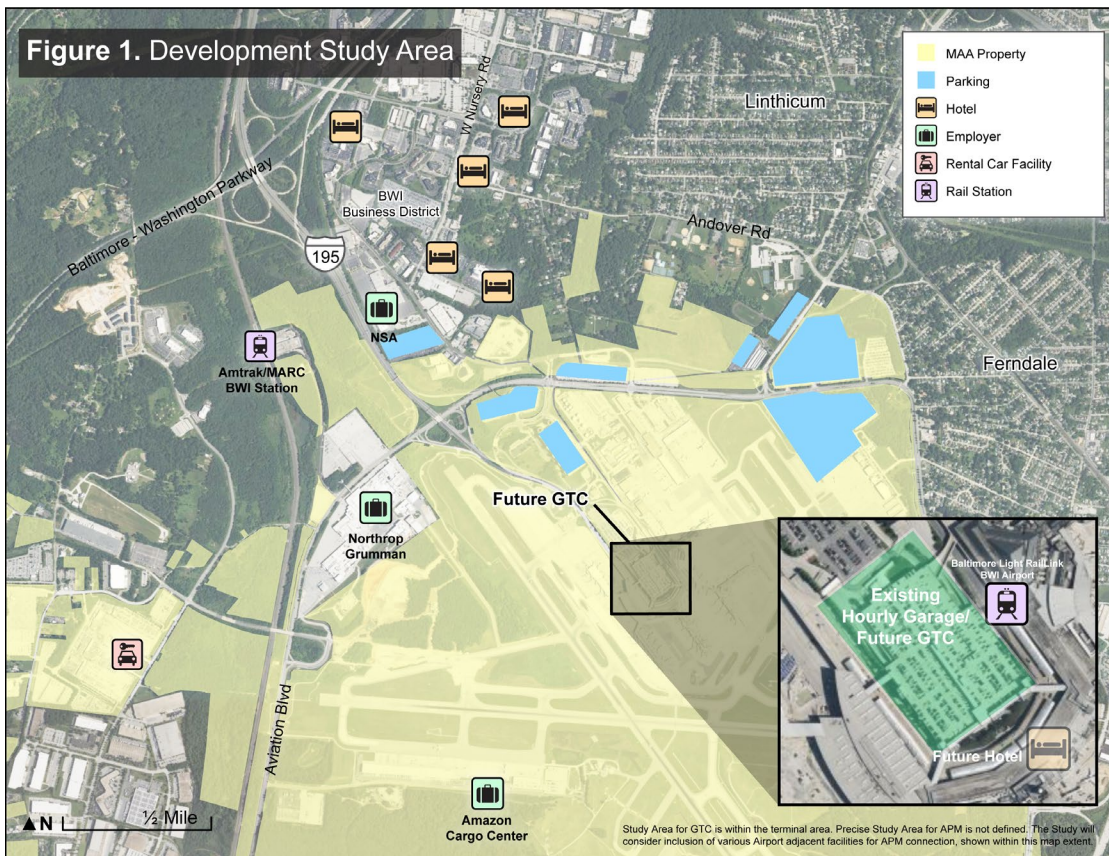
Environmental: Provide an overview of potential environmental impacts, potential NEPA review, recommended mitigation strategies, and necessary permits, approvals, and reviews.

Task 9: Final Report and Deliverables

Prepare a detailed narrative report and an executive summary describing the process and outcomes.

I.3 Study Location

BWI Marshall Airport is located in Anne Arundel County, Maryland. As depicted in **Figure 1: Development Study Area**, the Study Area includes the terminal roadway system, airport parking and ground transportation facilities, the Airport’s connections to state and county roads and rail lines, and areas to potentially be connected with an APM (employment centers, hotels, rental car facility).



The Airport is also served by a network of interstates, rail lines and bus routes connecting to nearby Baltimore and DC (see **Figure 2: Study Area Context**). Located in the census-designated urbanized area of Baltimore, MD, BWI Marshall itself is not in an APP or HDC. However, **APPs and HDCs** are located elsewhere in the region, and both travelers and employees from these communities will benefit from implementation of the Study projects.

I.4 Study Context

BWI Marshall serves as the hub of Maryland’s extensive transportation network and is strategically located at the center of a large metropolitan region. Echoing MDOT’s mission to “connect our customers to life opportunities,” BWI Marshall enjoys roadway, rail, bike, and public transportation connectivity.

BWI Marshall is a key component of the BWI Business District, established in 1985, along with the BWI Business Partnership

(Maryland’s first Transportation Management Association). With the support of the BWI Business Partnership, the goal of the BWI Business District is to bring together the businesses and hotels in the region, creating a better, stronger connection with BWI Marshall Airport, nearby Fort Meade and the National Security Agency (NSA), plus numerous other federal, state and county government agencies including the forthcoming FBI headquarters relocation to Greenbelt, Maryland.

MAA undertakes comprehensive long-range facility planning through the development of an Airport Master Plan and Airport Layout Plan (ALP) in accordance with guidance issued by the Federal Aviation Administration (FAA). Long range planning includes both airside facilities and landside facilities – the terminals, access roadways, and other transportation modes. Once demand levels reach specified thresholds, and pending funding availability, projects identified on the ALP are carried forward in detailed environmental review and preliminary design. MAA capital projects are included in the MDOT [Six-Year Consolidated Transportation Program \(CTP\)](#) which outlines the capital budget for transportation projects throughout the State. Facility improvements identified by this Study will be incorporated into the CTP.

MAA collaborates with regional and local partners on long-range transportation policies, programs, and investments. This consultation includes the [Northeast MAGLEV](#), a proposed superconducting high speed rail line connecting DC to New York and beyond. BWI Marshall is the only local stop currently proposed between DC and Baltimore. The Study will also consider [MDOT’s initiative](#) to study potential transit-oriented development sites at light rail and subway stations in the Baltimore region and at MARC Penn Line stations in the Baltimore-Washington corridor. As part of this Study, regional and local transportation and land use plans and processes, including those by Anne Arundel County, Maryland Transit Administration (MTA), the Metropolitan Washington Council of Governments (MWCOCG), and the Baltimore Metropolitan Council, will be reviewed and incorporated. MAA staff, and their ongoing collaboration with the local planning agencies, play a vital role in ensuring that BWI Marshall's existing and forecast growth, transit and transportation needs, employment, sustainability efforts, and economic benefits are represented and reflected in the various planning processes.

