1 INTRODUCTION

Substantive changes that have been made to this Final EIS since the publication of the Draft EIS are indicated with underlined text. Substantive changes that have been made in response to public or agency comments are indicated with double underlined text. Public comments and responses are in **Appendix G,** and agency comments and responses are in **Appendix H**.

1.1 Importance of a Chesapeake Bay Crossing

The Chesapeake Bay is the largest estuary in the United States and one of Maryland's most important natural, economic, and cultural resources. The 64,000-square-mile watershed that flows into the Bay spans six states and the District of Columbia and includes 150 major rivers and over 100,000 tributaries. The Bay has historically shaped the region's identity, culture, and traditions. Due to its ecological resources and geographic location, the Chesapeake Bay area has a rich archaeological history that spans thousands of years and has also played an important role in the founding and development of the United States of America. The Eastern Shore of Maryland is now best known for its farming and agricultural enterprises, seafood, and waterfront industries, as well as tourism and recreational activities in coastal areas, influenced by the Bay. The Western Shore is characterized by its major metropolitan employment centers and surrounding communities in the Baltimore-Washington region, complemented by agricultural, seafood, and waterfront industries.

The William Preston Lane, Jr. Memorial (Bay) Bridge is a two-span structure that crosses the Chesapeake Bay from Anne Arundel County on the Western Shore to Queen Anne's County on the Eastern Shore. The original span was built in 1952 to connect communities on both sides of the Bay. Within ten years of opening, the traffic volumes on the original span had nearly doubled. Planning began for a new structure that would provide additional capacity, and a parallel span directly north of the original Bay Bridge was opened in 1973. The Bay Bridge has become one of Maryland's most iconic and recognizable landmarks, used by millions of Marylanders and other travelers. As Maryland's only crossing of the Chesapeake Bay, the Bay Bridge plays a significant role in the State's regional transportation system and is vital in facilitating transportation, commerce, and tourism in the region.

In 1974, the first full year that the first and second spans were open to traffic, 7.5 million vehicles crossed the bridge. By 2002, that number had more than tripled, to 25.0 million. Annual volumes have been above 25.0 million each year since, except for the COVID-19 pandemic year of 2020. Today, the Bay Bridge structures have inadequate capacity for current volumes, particularly during summer weekends. Queues longer than one mile routinely occur and can persist for as long as eight hours. During those eight hours, queues have been observed to extend to nearly five miles. Based on regional and statewide estimates for population growth and travel demand patterns, it is projected that traffic volumes across the Bay Bridge will continue to increase over time.

1.2 Previous Actions and Studies

The Maryland Transportation Authority (MDTA) has adopted transportation management operation practices to improve traffic flow at the Bay Bridge and manage the growing travel demand. However, congestion has persisted despite these practices. Major efforts have included:

- Allowing for two-way traffic during peak periods: With completion of the second span in 1973, the MDTA was able to implement a reversible traffic lane that could be changed to accommodate heavier traffic in either direction.
- Elimination of the westbound toll plaza: the MDTA eliminated the westbound toll plaza and increased the prices eastbound in 1989, resulting in the free flow of westbound traffic without reducing toll revenue. The eastbound toll plaza was eliminated in 2020 and was replaced with all-electronic (cashless) toll collection, further encouraging free traffic flow.
- Implementation of an Automated Lane Closure System (ALCS) Project: Since 2023, this measure has allowed two-way operations on either span to be initiated or discontinued remotely.
- Extensive promotional and education efforts: The MDTA provides live traffic cameras and encourages travel during off-peak periods through a variety of methods.

Since 2004, the MDTA has completed several studies that are related to the Bay Crossing Study, as described below.

- 2004 Transportation Needs Report: Study found that the lack of roadside shoulders impacts the vehicular capacity of the bridge during incident management activities and determined that the bridge carried approximately 53 percent more traffic on an average summer weekend day than on an average weekday.
- 2006 Task Force Report: In 2005, the MDTA formed a Task Force to examine a range of issues to help educate stakeholders about the need for additional capacity across the Bay. The Task Force recommended an Analysis of Transit Only Concepts to Address Traffic Capacity Across the Chesapeake Bay, which was completed in 2007 with the conclusion that transit as a standalone alternative would not provide significant relief to summer weekend or peak period weekday traffic.
- 2015 Life Cycle Cost Analysis: Build recommendations were not given in the analysis, but a National Environmental Policy Act (NEPA) study was recommended for reviewing any proposed improvements.
- 2020 Public Operated Ferry Service for the Chesapeake Bay Crossings: Study found that an electric ferry service would not be a feasible standalone option to alleviate congestion at the Bay Bridge.

1.3 The Tiered NEPA Process

The MDTA and Federal Highway Administration (FHWA) have conducted the Bay Crossing Study as a tiered NEPA Study. The tiered approach to NEPA allowed the MDTA and FHWA to focus on broader, planning-level decisions related to the preferred location of a potential new Bay crossing in the Tier 1 Study Environmental Impact Statement (EIS), and then analyze more specific, project-level alternatives and potential impacts in this subsequent Tier 2 Study EIS. NEPA regulations issued by FHWA, 23 Code of Federal Regulations (CFR) Part 771.111(g), recognize tiering as a reasonable approach for complying with NEPA.

The tiered approach was implemented for the Bay Crossing Study due to the broad nature of needs being addressed, the large study area, the multiple crossing possibilities, potential alternatives over nearly 100 miles of the Chesapeake Bay, and the potential for large-scale

environmental impacts. In the Tier 1 Study, the MDTA narrowed the area under consideration to an approximately two-mile-wide corridor located around the existing Bay Bridge and its approaches. This smaller geographic area for the Tier 2 Study allowed for a more detailed evaluation and efficient environmental review.

1.3.1 Tier 1

The Tier 1 Study, initiated in 2016, encompassed a broad geographic area that spanned nearly 100 miles of the Chesapeake Bay between Harford and Cecil counties to the north, and St. Mary's and Somerset counties to the south. The Tier 1 Study Final EIS defined existing and future transportation conditions and needs at the existing Bay Bridge, identified broad corridor alternatives (including a "No-Build" alternative), documented the corridor alternative screening process, and concluded with the identification of a Selected Corridor Alternative.

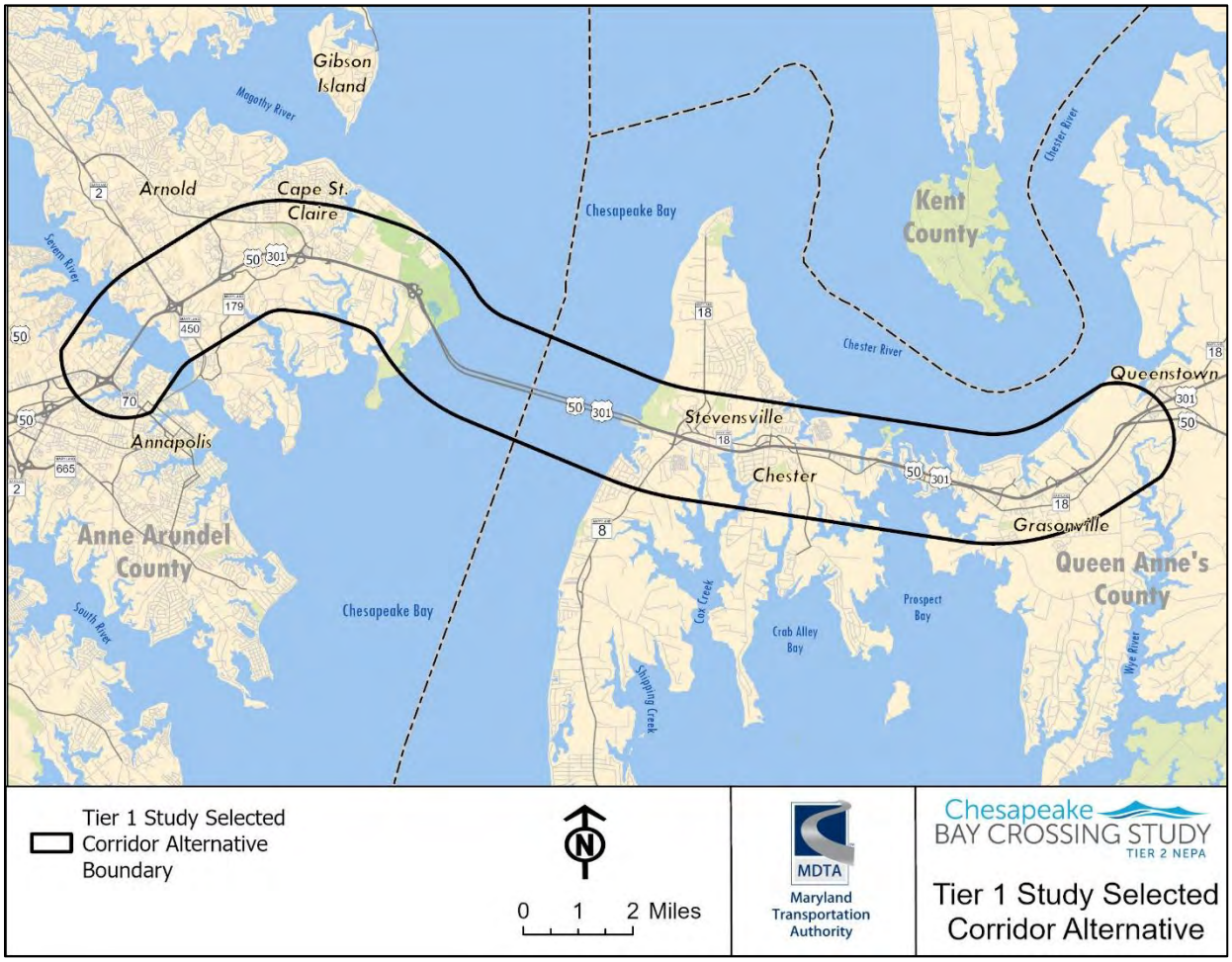
The purpose of the Tier 1 Study was to consider corridors for providing additional capacity and access across the Chesapeake Bay to improve mobility, travel reliability, and safety at the existing Bay Bridge. The evaluation of potential corridors included assessments of existing and potentially expanded transportation infrastructure to support additional capacity, improve travel times, and accommodate maintenance activities, while considering financial viability and environmental responsibility. Three primary needs were identified in the Tier 1 Study and were the basis for evaluating corridor alternatives: adequate capacity; dependable and reliable travel times; and flexibility to support maintenance and incident management in a safe manner.

The Tier 1 Study evaluated 14 possible corridor alternative locations in total. Corridor 7 was identified as the MDTA-Recommended Preferred Corridor Alternative (MDTA-RPCA). After close coordination with regulatory and resource agencies, the public, and other stakeholders to identify critical resources and determine potential impacts, FHWA issued the Tier 1 combined Final EIS/Record of Decision (ROD) in April 2022. This document identified Corridor 7 as the Selected Corridor Alternative.

The Tier 1 Study Selected Corridor Alternative (Corridor 7), depicted in **Figure 1-1**, is a two-mile-wide and 22-mile-long corridor that follows existing U.S. 50/301 and includes the location of the existing Bay Bridge. On the Western Shore, the western limit of the corridor is west of the Severn River near the MD 70 (Rowe Boulevard) interchange, north of Downtown Annapolis. On the Eastern Shore, the eastern limit of the corridor is the U.S. 50/301 split near Queenstown.

The Tier 1 Study Selected Corridor Alternative (Corridor 7) would provide the greatest congestion relief at the existing bridge crossing, particularly at peak hours, thus having the greatest ability to meet the purpose and need identified in the Tier 1 Study. Corridor 7 was also the least costly corridor due to the ability to utilize existing infrastructure, particularly the U.S. 50/301 roadway and associated right-of-way. Additionally, this location is the shortest distance across the Chesapeake Bay between the Western and Eastern shores. The Tier 1 Study also concluded that Corridor 7 would likely have the least adverse impacts to sensitive natural areas and fewer induced growth effects than the other corridors. A full summary of Corridor 7 and the Tier 1 Study alternatives analysis is provided in the *Chesapeake Bay Crossing Study: Tier 1 NEPA Final EIS/ROD.*

Figure 1-1: Tier 1 Study Selected Corridor Alternative



1.3.2 Tier 2

Pre-NEPA studies were launched in June 2022 to focus on project-level (site-specific) analysis within the Tier 1 Selected Corridor Alternative (Corridor 7). It included preliminary engineering of alternatives, including alignments, structure types, and modal and operational alternatives, and the assessment of potential environmental impacts associated with alternatives within Corridor 7. A Notice of Intent (NOI) was published in the Federal Register on November 15, 2024, to initiate the Tier 2 NEPA environmental review process.

As described in the *Purpose and Need* chapter of this Final EIS, the transportation issues identified during the Tier 1 Study were further developed and refined to better describe the specific needs associated with Corridor 7. Tier 2 Study alternatives within the Tier 1 Study Selected Corridor Alternative were evaluated based on this refined purpose and need. This Tier 2 Study Final EIS also includes a "No-Build" alternative, which consists of no significant proposed action and provides a baseline for which the impacts of build alternatives can be compared. Several other alternatives were also studied as part of the Section 4(f) avoidance and minimization analysis. Consistent with NEPA requirements, engineering and environmental impact analyses, along with agency and public involvement, were essential parts of the Tier 2 NEPA process. This information is documented in this Final EIS, appendices, and supporting technical reports and documents, which are located on the study website (baycrossingstudy.com).

1.3.3 Tier 2 Study Limits

To determine the appropriate study limits for the Tier 2 Study, the MDTA analyzed the traffic volumes along Corridor 7 and its interchanges. Similar to the Tier 1 Study, the traffic analysis included the collection of traffic volume data and analysis of traffic operations on both non-summer weekdays and summer weekends. For details on the traffic data obtained, and analyses performed that led to the establishment of the Tier 2 Study Limits, refer to the *Notice of Intent to Prepare an Environmental Impact Statement Additional Project Information Document (NOI APID)*.

As a result of the analysis described above, the Tier 2 western study limit is the MD 2/MD 450 interchange, and the Tier 2 eastern study limit is the U.S. 50/301 split, as both interchanges provide logical termini given the possible extent of transportation improvements and are rational end points for a comprehensive review of environmental impacts that could result from additional transportation capacity across the Chesapeake Bay.

While the study limits define the area for proposed improvements, individual resource review areas are identified in **Chapter 5** and the EIS Supporting Technical Documents. Various resources present within the study limits are identified and defined by individual resource review areas. These areas are comprehensive for each resource for the review of impacts.

1.4 Planning and Fiscal Constraints

At the July 7, 2026, meeting of the Baltimore Regional Transportation Board (BRTB) Technical Committee and Interagency Consultation Group, the following resolutions were recommended to be sent to the BRTB for approval:

1. Resolution #27-2: Approval of the preferred alternative for the U.S. 50/301 Bay Bridge Replacement Project and adding the project to the 2023 Baltimore Regional Transportation Plan, known as Resilience 2050 as well as the associated Air Quality Conformity Determination. This resolution identifies the programming of $14M for engineering and $4M for right-of-way funding for the next phases of the project.
2. Resolution #27-3: The 2027-2030 Transportation Improvement Program (TIP) and the corresponding Air Quality Conformity Determination of the 2027-2030 TIP and Resilience 2050.

The final TIP and Conformity was approved and adopted by the BRTB on July 28, 2026.

FHWA and FTA approved the BRTB Conformity Determination on October 8, 2026.