Chesapeake
BAY CROSSING STUDY
TIER 2 NEPA

DRAFT ENVIRONMENTAL IMPACT STATEMENT

EXECUTIVE SUMMARY

JANUARY 2026

MDTA
Maryland Transportation Authority

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

DRAFT ENVIRONMENTAL IMPACT STATEMENT

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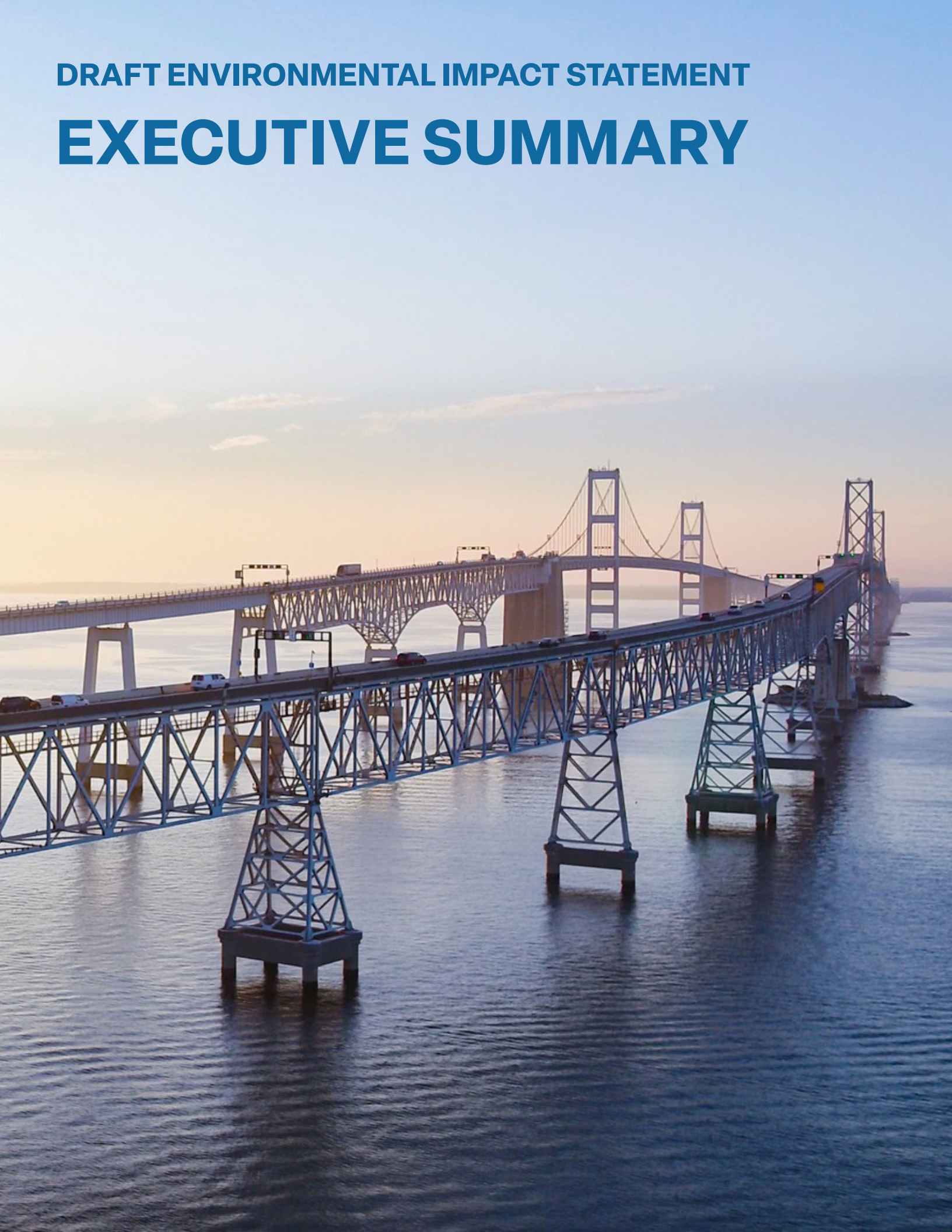
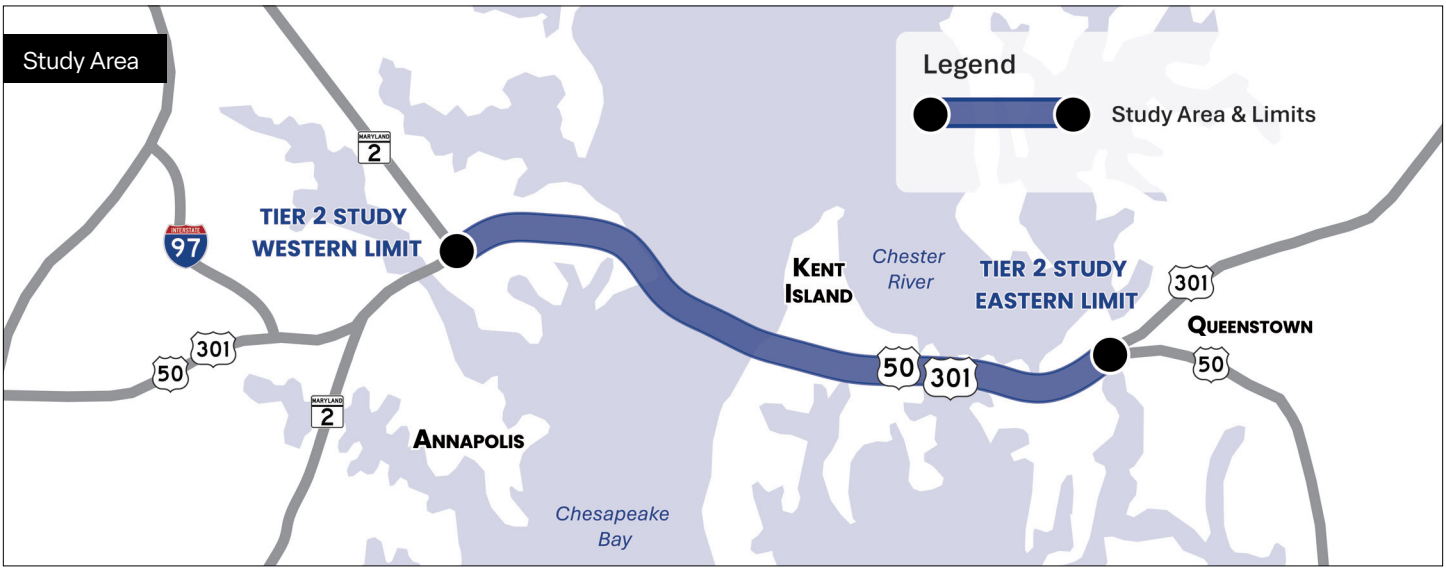


ENVIRONMENTAL IMPACT STATEMENT AT-A-GLANCE

- **Study Purpose & Need:** The Maryland Transportation Authority (MDTA) is conducting the Chesapeake Bay Crossing Study Tier 2 DEIS (Tier 2 Study) to address existing and future transportation capacity needs and access along the U.S. 50/301 corridor. The Tier 2 Study addresses five key needs, capacity, mobility, roadway deficiencies, maintenance, and navigation, while considering objectives for environmental and financial responsibility.
- **Tiered NEPA Process:** The Tier 1 Study concluded in 2022 and identified Corridor 7, the existing U.S. 50/301 alignment, as the Selected Corridor Alternative. The Tier 2 Study is examining specific alternatives and environmental impacts within this corridor.
- **Alternatives:** MDTA is evaluating the no-build alternative and six build alternatives along existing U.S. 50/301. Each build alternative would replace the two existing Bay Bridge spans with two new, higher-clearance spans. The build alternatives vary by the number of lanes on the new bridge and U.S. 50/301 approach roadways, as well as location north or south of the existing Bay Bridge.
- **MDTA Recommended Preferred Alternative (RPA):** MDTA has identified Alternative C as the Recommended Preferred Alternative. This alternative consists of two new spans south of the existing spans with eight lanes total (four in each direction), higher navigational clearance of 230 feet, an optional shared use path (SUP) if financial considerations allow, transit and operational considerations made through a financial commitment providing a one-time investment, and removal of the existing Bay Bridge spans.
- **Environmental Impacts:** An environmental impact assessment was conducted for the No-Build Alternative and six build alternatives to determine impacts to socioeconomic, natural, and cultural resources. Alternative C was determined to have the least impact to historic properties, recreational facilities, and natural resources including forested areas, wetlands, and surface waters. A Draft Section 4(f) evaluation was also conducted for the project to determine which alternative would have the least overall harm to properties protected under Section 4(f).
- **Next Steps & Timeline:** Following the combined Final EIS/Record of Decision (FEIS/ROD) is expected in November 2026, anticipated next steps include:
  - **2028:** Begin Final Design
  - **2031:** Obtain permits
  - **2032:** Begin Construction



INTRODUCTION

The Chesapeake Bay Crossing Study (Bay Crossing Study) is a two-tiered engineering and environmental study being advanced by the MDTA in coordination with the Federal Highway Administration (FHWA). The Bay Crossing Study is addressing existing and future transportation issues at the William Preston Lane, Jr. Memorial Bridge (Bay Bridge) and its approaches along U.S. 50/301.

The Chesapeake Bay is one of Maryland's most important natural, economic, and cultural resources and the largest estuary in the United States. 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. The 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 Bay Bridge, Maryland's only crossing of the Chesapeake Bay, plays a significant role in the State's regional transportation system and is vital in facilitating transportation, commerce, and tourism in the region.

The Bay Bridge structures have inadequate capacity for current and projected traffic volumes, particularly during summer weekends. Regional and statewide population growth estimates and future travel demand patterns indicate that Bay Bridge traffic volumes will continue to increase through 2045 and beyond. Increases in congestion reduce regional mobility and reliability, which is needed for accessing employment and recreation areas, moving commerce, and providing capacity for emergencies or evacuation events. Further, the bridge does not meet current standards for design or traffic operations. Maintenance activities and incident management often result in closed lanes, creating substantial congestion. These conditions are expected to worsen as the structures age and the risk of congestion-related traffic accidents rises. Lastly, the existing Bay Bridge is a key constraint for the height of ships that can travel the Chesapeake Bay, including the Port of Baltimore.

U.S. 50/301 Oceanic Drive Interchange

The purpose of Tier 2 of the Bay Crossing Study (Tier 2 Study) is to address existing and future transportation capacity needs and access across the Chesapeake Bay and at the Chesapeake Bay Bridge approaches along the U.S. 50/301 corridor. The MDTA has identified five needs for the Tier 2 Study:

- Adequate capacity and reliable travel times
- Mobility
- Roadway deficiencies
- Existing and future maintenance
- Navigation

Two objectives have been considered throughout the process of developing and evaluating Tier 2 Study alternatives. The Tier 2 Study considers environmental responsibility given the sensitivity of the Chesapeake Bay as an environmental resource, and financial responsibility to evaluate reasonableness of alternatives given the scope of the project.

THE NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) requires federal agencies to prepare an Environmental Impact Statement (EIS) for major federal actions (i.e., funding, approval, etc.) significantly affecting the quality of the human environment. Under NEPA, agencies must evaluate a reasonable range of alternatives and the reasonably foreseeable adverse effects of proposed major federal actions. NEPA promotes informed decision-making by federal agencies and provides information to and opportunities for participation by the public in the decision-making process.

Tiered NEPA Process

The FHWA and MDTA are following a tiered NEPA approach for the Bay Crossing Study. A tiered approach to NEPA is a staged process that allows a federal agency

to examine a potential action on a broad scale in an initial EIS (Tier 1) and subsequently analyze a more site-specific action in another EIS at a later date (Tier 2).

NEPA regulations issued by the FHWA (23 CFR § 771.111(g)) recognize tiering as an appropriate option for complying with NEPA, particularly for projects like the Bay Crossing Study that must examine information at a very broad scale (i.e., determining a potential corridor) before shifting the focus to a project at a site-specific scale (i.e., determining an alignment within a specific corridor).

Tier 1 Study

The MDTA and FHWA initiated the Tier 1 Study in 2016. The purpose of the Tier 1 Study was to consider corridors for providing additional capacity and access across the Chesapeake Bay in order to improve mobility, travel reliability, and safety at the existing Bay Bridge. The needs identified for the Tier 1 Study included adequate capacity, dependable and reliable travel times, and the flexibility to support maintenance and incident management. As part of the Tier 1 Study, the MDTA also considered financial viability of the proposed corridor alternatives and the presence of environmental resources within the corridor alternatives.

The Tier 1 Study evaluated 14 possible corridor alternative locations across the Chesapeake Bay. After close coordination with regulatory and resource agencies, the public, and other stakeholders to identify critical resources and determine potential impacts, the Tier 1 combined FEIS and ROD was issued by FHWA on April 14, 2022.

The Tier 1 Study combined FEIS/ROD identified Corridor 7 as the Selected Corridor Alternative. Corridor 7 was a two-mile-wide and 22-mile-long corridor that followed existing U.S. 50/301 and included the location of the existing Bay Bridge. On the Western Shore, the western limit of the corridor was 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 was the U.S. 50/301 split near Queenstown.

Tier 2 Study

The MDTA launched pre-NEPA studies for Tier 2 Study in June 2022 to focus on project-level (site-specific) analysis within Corridor 7. It includes preliminary engineering of alternatives for alignment, structure type, and modal and operational alternatives, and the assessment of potential environmental impacts associated with alternatives.

To evaluate ways to address the five needs, the FHWA and MDTA have prepared this Tier 2 Draft EIS (DEIS), released on January 23, 2026.

Proposed Action

The Tier 2 Study environmental review process was formally initiated with publication of a Notice of Intent (NOI) in the Federal Register on November 15, 2024. The NOI presented the Tier 2 Proposed Action and a reasonable range of alternatives to be analyzed in the EIS. The MDTA is proposing to replace the existing Bay Bridge spans with two new bridge spans over the Chesapeake Bay; both existing Bay Bridge spans would be removed.

Alternatives Screening and Development

As part of the NEPA process, the MDTA, in coordination with FHWA, developed a reasonable range of alternatives for the Tier 2 Study. These alternatives, referred to as the Alternatives Retained for Detailed Study (ARDS), were informed by previous studies and planning documents; input from federal, State, and local regulatory agencies; and public comments. To develop the alternatives, the MDTA analyzed key elements of a new crossing, which included the disposition of existing bridges, structure type, alignments relative to existing U.S. 50/301, number of lanes, structure location, transit/transportation systems management/transportation demand management (TSM/TDM), and a SUP. The MDTA then screened the options of each element to determine which would be reasonable for inclusion in the Tier 2 Study alternatives. Seven alternatives, including the No-Build Alternative and six build alternatives, were identified as the proposed ARDS and presented to the public in December 2024. Additional alternatives were evaluated to avoid or minimize impact to Section 4(f) properties, but were not carried forward pursuant to the requirements of Section 4(f).

KEY TAKEAWAY

The project follows the federal NEPA process using a two-tier approach.

Tier 1 (2016–2022)

Identified Corridor 7, the corridor along existing U.S. 50/301, as the Selected Corridor Alternative.

Tier 2 (2022 - Ongoing)

Focuses on project-level alternatives and environmental impacts within Corridor 7.

ALTERNATIVES RETAINED FOR DETAILED STUDY

The No-Build Alternative serves as a baseline for the evaluation of all other build alternatives. The build alternatives vary based on the number of approach lanes on both shores, number of lanes across the bridge, and positioning north or south of the existing spans, as presented in **Table 1**. The six build alternatives all include the construction of two new bridge spans and removal of the existing bridge spans along the U.S. 50/301 corridor that would provide a higher navigational clearance than the existing spans. The build alternatives also include the following items: an optional pedestrian/bicycle SUP if financial considerations allow, tolling, transit-related improvements made through a financial commitment from the MDTA, TSM/TDM, stormwater management (SWM), utilities, and truck weigh and inspection stations

Cost Estimates

Preliminary design and construction cost estimates were prepared for each build alternative. Alternatives B and C have the lowest costs because they would be the shortest alternatives. Alternatives F and G have the highest costs because they would have one more lane across the Bay Bridge in each direction than the other build alternatives.

Traffic

Traffic analyses were performed for existing conditions, Alternative A (No-Build), and each of the six build alternatives (Alternatives B through G). The Tier 2 Study included traffic analysis for non-summer weekdays (NSWD) and summer weekend days (SWED) during peak periods, and considered three measures of congestion: queuing, travel time, and throughput (number of vehicles able to travel across the bridge).

Queuing: For NSWD conditions, queuing in both directions for Alternative A (No-Build) would be worse than the build alternatives, both at the Bay Bridge and past the Bay Bridge. For SWED conditions at the Bay Bridge, queueing in both directions for Alternative A (No-Build) would be worse than or the same as the build alternatives. Departing the Bay Bridge in both directions, queuing would be worse for the build alternatives than for Alternative A (No-Build), because the additional lanes across the bridge in the build alternatives would allow more traffic to cross the Bay Bridge.

Travel Time: For NSWD conditions in both directions, the travel times approaching the Bay Bridge and through the full study area would be shorter for the build alternatives than for Alternative A (No-Build). For SWED conditions eastbound, the travel times approaching the Bay Bridge would be shorter for the build alternatives than for Alternative A (No-Build). The travel times through the full study area would be shorter for Alternatives B and C than either Alternative A or Alternatives D through G. For SWED conditions westbound, the travel times approaching the Bay Bridge would be similar for all alternatives. However, the travel times through the full study area would be longer for the build alternatives than for Alternative A (No-Build), due to the build alternatives having more lanes across the Bay Bridge and allowing more traffic to reach the Western Shore.

Throughput: On NSWDs and SWEDs in both directions, all build alternatives would allow a larger percentage of traffic to cross the Bay Bridge compared to Alternative A (No-Build) due to the additional lanes across the Bay Bridge.

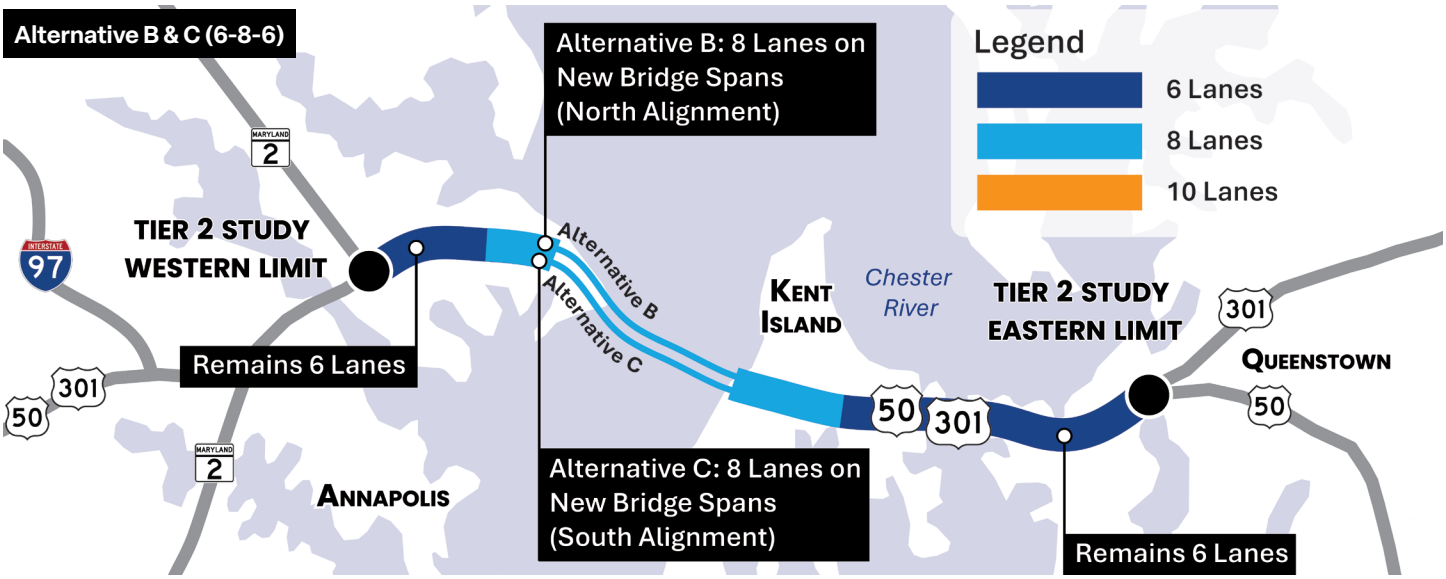
KEY TAKEAWAY

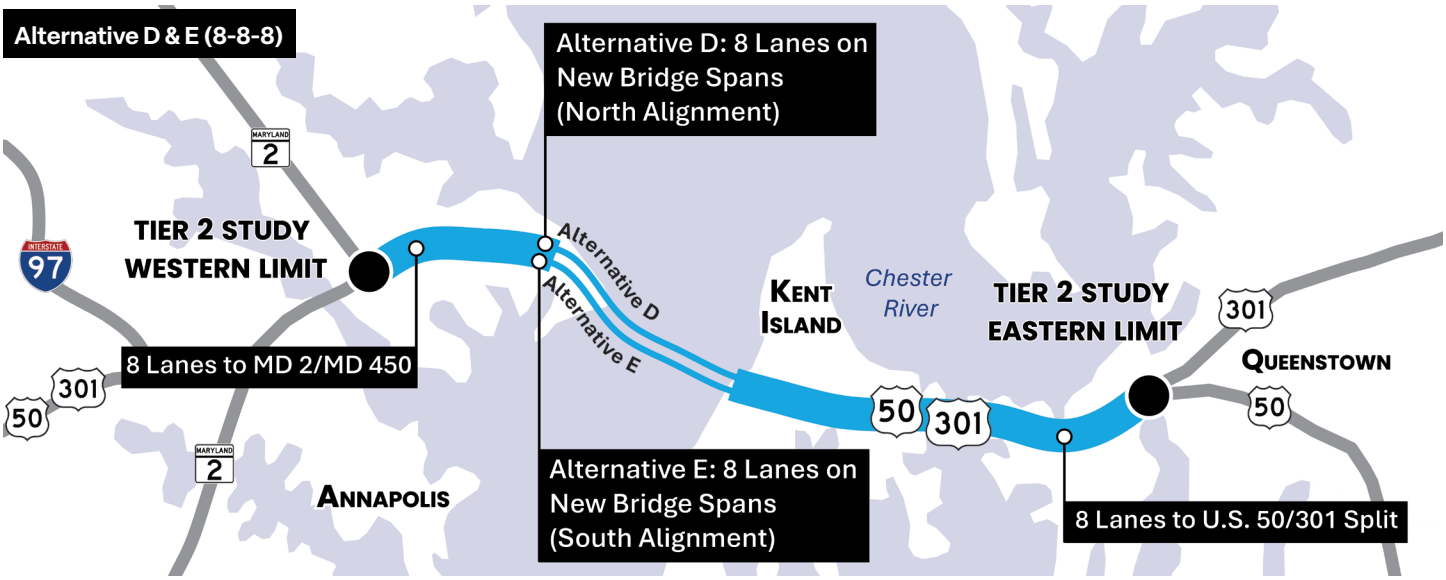
Each of the Build Alternatives would improve conditions at the Bay Bridge on NSWD, but would not alleviate all congestion within the corridor.

Table 1. Range of Alternatives and Costs

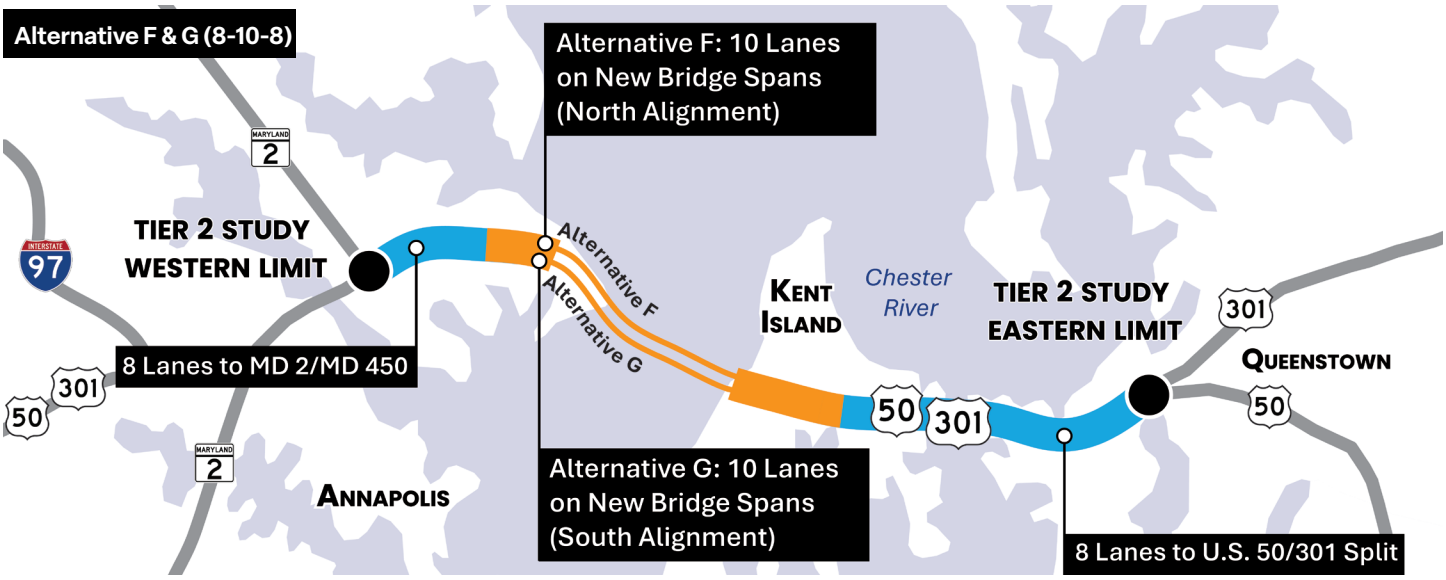
Alternatives	Western Shore Number of Lanes	Bridge Span Number of Lanes and Locations	Eastern Shore Number of Lanes	Total Cost (No SUP) ($B)	Total Cost (With SUP) ($B)
Alternative A: No-Build	6	5	6	$3.8*	N/A
Alternative B	6	8 North	6	$15.1 - 16.6	$16.3 - 17.9
Alternative C	6	8 South	6	$14.8 - 16.4	$16.1 - 17.6
Alternative D	8	8 North	8	$17.5 - 19.0	$18.8 - 20.3
Alternative E	8	8 South	8	$17.3 - 18.8	$18.5 - 20.1
Alternative F	8	10 North	8	$19.5 - 21.1	$20.8 - 22.3
Alternative G	8	10 South	8	$19.2 - 20.8	$20.5 - 22.1

**The cost for Alternative A: No-Build includes the estimated cost to maintain the existing Bay Bridge through 2065.*





Alternatives F & G (8-10-8)



Environmental Impacts

Potential environmental consequences were estimated based on the limit of disturbance (LOD) of each build alternative. The LOD for the Tier 2 Study was developed based on preliminary engineering. The LOD will be further refined during final design.

Because the existing six-lane configuration on U.S. 50/301 would remain for Alternatives B and C, the smaller construction footprint for those options would result in substantially less environmental impacts than Alternatives D through G. A summary of the environmental impacts for each build alternative from roadway improvements and an optional SUP, if financial considerations allow, is provided in **Table 2**.

Due to its proposed location, Alternative C was determined to have the least impact to protected resources as described below:

Natural Resources: Alternative C would result in less impacts to wetlands, waterfowl nesting areas, submerged aquatic vegetation (SAV), and forest areas than Alternative B.

Historic Properties: Alternative B and Alternative C would impact three historic properties protected under Section 106 of the National Historic Preservation Act (NHPA), but Alternative C would impact less acreage than Alternative B.

Section 4(f) Resources: Due to its location, Alternative C would have less impact to Section 4(f) properties than Alternative B.

Private Properties: Alternatives B and C were determined to have the least impact to private properties in the study area, requiring approximately 60 acres less right-of-way than the other build alternatives.

KEY TAKEAWAY

Compared to the other build alternatives, Alternative C was determined to have the least impact to environmental resources overall.

MDTA RECOMMENDED PREFERRED ALTERNATIVE

Based on the analysis of a wide range of engineering and environmental considerations for each alternative, as described in this DEIS, and input received from the public and from State and federal agencies, **Alternative C is the MDTA's RPA.**

KEY TAKEAWAY

Alternative C would consist of:

- Two new bridge spans with a total of eight travel lanes (four in each direction) and full shoulders across the Chesapeake Bay.
- Widening U.S. 50/301 to eight lanes from west of Oceanic Drive to east of Cox Creek to allow sufficient room to transition from six lanes to eight lanes on the new bridge crossing.
- Maintaining the existing roadway alignment and the number of lanes west of Oceanic Drive and Cox Creek.
- Increasing vertical navigational clearance to 230 feet to meet U.S. Coast Guard requirements.
- An optional SUP that would provide connectivity for bicyclists and pedestrians across the Bay Bridge.
- Improving transit and operational improvements.

Alternative C would meet the project purpose and need, address the project objectives, and have the least impact to natural, cultural, and socioeconomic resources compared to the other build alternatives, offering several advantages that contribute to its identification as the RPA:

- **Least impact to historic properties in consideration of Section 106 of the National Historic Preservation Act.**
- **Least impact to Section 4(f) properties, including park properties in consideration of the U.S. Department of Transportation Act.**
- **Least impact to wetlands and non-tidal surface waters in consideration of Section 404 of the Clean Water Act.**
- **Least impact to SAV.**
- **Least impact to Critical Areas and the Critical Area Buffer.**
- **Lowest cost of the build alternatives at $14.8-16.4B**

At this time, Alternative C is the MDTA's recommended preference only, and no alternative has been selected to advance to design or construction. FHWA has not concurred on the MDTA's RPA because the NEPA process is still underway.

Table 2. Summary of Environmental Impacts

Resource	Unit	Alternative B 6-8-6 North Roadway/ Optional SUP	Alternative C 6-8-6 South Roadway/ Optional SUP	Alternative D 8-8-8 North Roadway/ Optional SUP	Alternative E 8-8-8 South Roadway/ Optional SUP	Alternative F 8-10-8 North Roadway/ Optional SUP	Alternative G 8-10-8 South Roadway/ Optional SUP
Right of Way Required	acres	20.5 / 1.8	20.8/ 1.2	82.0 / 1.8	82.3 / 1.2	86.2 / 1.9	86.4 / 1.2
	no. of properties	48 / 0	48 / 0	211 / 0	211 / 0	215 / 0	215 / 0
Park and Historic Properties (Section 4(f))	acres	4.1 / 2.5	3.3 / 1.8	5.3 / 2.5	4.5/ 1.8	6.6/ 2.6	5.5 / 2.6
	no. of properties	8/2	8/2	11/3	11/3	11/3	11/3
Recreational Trails (Section 4(f))	linear feet	3140 / 0	3140 / 0	12100 / 0	12100 / 0	12110 / 0	12110 / 0
Water Trails (Section 4(f))	linear feet	1030 / 40	920 / 0	1260 / 40	1150 / 0	1260 / 40	1150 / 0
Historic Properties	acres	1.4 / 0.7	0.9 / 0.6	1.4 / 0.7	1.1 / 0.6	1.9 / 0.7	1.3 / 0.6
	no. of properties	3 / 1	2 / 1	5 / 1	4 / 1	5 / 1	4 / 1
Community Facilities	acres	9.2 / 1.8	9.5 / 1.2	16.4 / 1.8	16.7 / 1.2	18.2 / 1.9	18.4 / 1.2
	no. of properties	8 / 2	8 / 2	26 / 2	26 / 2	26 / 2	26 / 2
Agricultural Lands	acres	0 / 0	0 / 0	1.5 / 0	1.5 / 0	1.5 / 0	1.5 / 0
Forest Areas	acres	27.4 / 0.5	27.4 / 0.2	87.2 / 0.5	87.2 / 0.2	88.6 / 0.5	88.6 / 0.2
Critical Areas	acres	168.9 / 3.4	166.6 / 2.5	397.7 / 3.4	395.4 / 2.5	402.0 / 3.3	398.8 / 2.6
100' Critical Area Buffer	acres	19.0 / 1.2	17.7 / 1.0	28.2 / 1.2	26.9/ 1.0	28.8 / 1.2	27.3 / 1.0
Wetlands (Field Delineated)	acres	6.0 / 0.7	5.6 / 0.7	11.1 / 0.7	12.0 / 0.7	12.1 / 0.8	11.5 / 0.7
100-Year Floodplain Area	acres	33.5 / 1.6	35.6 / 1.4	57.0 / 2.3	59.0 / 1.4	59.1 / 1.9	60.7 / 1.4
Surface Waters - Tidal and Non-tidal	acres	131.9 / 2.0	133.0 / 2.0	136.5 / 2.0	137.5 / 2.0	140.4 / 2.0	141.2 / 2.1
SAV 2019-2023 (Submerged Aquatic Vegetation)	acres	0.4 / 0.3	0 / 0	0.7 / 0.3	0.4 / 0	0.9 / 0.5	0.4 / 0
Natural Oyster Bars (NOB)	acres	9.4 / 0.8	10.2 / 0.9	12.6 / 0.8	13.3 / 0.9	13.8 / 0.8	14.6 / 0.9
Oyster Sanctuaries	acres	0.6 / 0	0.6 / 0	1.1 / 0	1.1 / 0	1.6 / 0	1.6 / 0

AGENCY COORDINATION

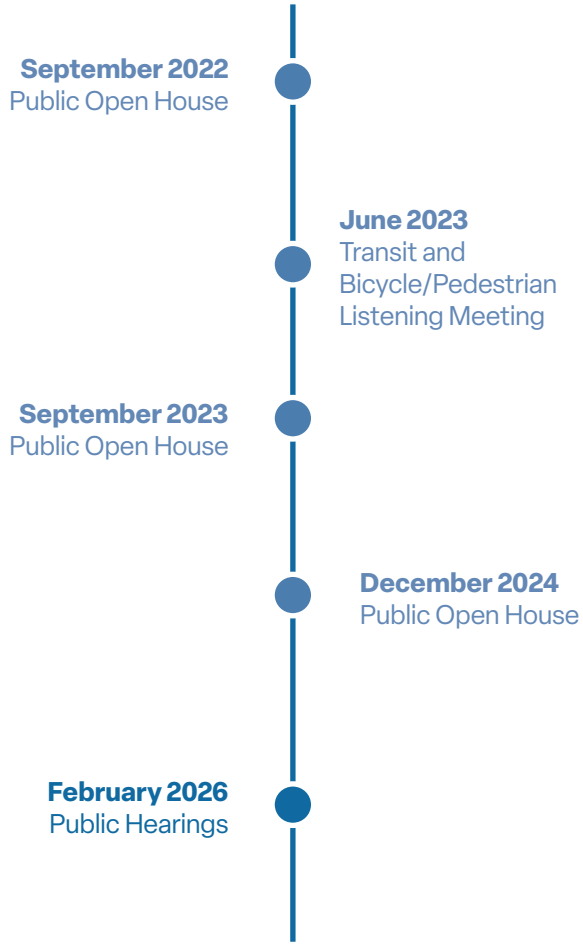
Extensive coordination with State and federal agencies has been conducted as part of the NEPA process. Agencies have been consulted regarding the project coordination plan and Tier 2 Study schedule, Purpose and Need, methodologies for studying environmental resources, the alternatives development process, the NOI, technical studies for environmental resources, and the ARDS presented in this DEIS. There are nine cooperating agencies (six federal and three State) and 16 participating agencies (five federal, eight State, and three local) for the Tier 2 Study. Cooperating agencies are those that have jurisdiction by law or special expertise with respect to an environmental impact from the project and are committed to participating in the scoping process, providing information or analyses in their area of expertise, and making their staff available to support the NEPA process. Participating agencies are those agencies with an interest in the project.

Meetings to facilitate cooperating and participating agency coordination, called Interagency Coordination Meetings (ICM), were initiated during the Tier 1 Study and continue during the Tier 2 Study. Concurrent with the ICMs, consultation with cooperating and participating regulatory and resource agencies was conducted. The purpose of this consultation was to discuss and obtain input on existing resources, potential impacts, and avoidance, minimization, and mitigation strategies. Consultation with regulatory and resource agencies will continue throughout the duration of the Tier 2 Study. The following are a list of cooperating agencies:

- U.S. Army Corps of Engineers (USACE)
- U.S. Coast Guard (USCG)
- Environmental Protection Agency (EPA)
- National Marine Fisheries Service (NMFS
- U.S. Fish and Wildlife Service (USFWS)
- National Park Service (NPS)
- State Highway Administration (SHA)
- Maryland Department of the Environment (MDE)
- Department of Natural Resources (DNR)

PUBLIC ENGAGEMENT

Public engagement activities were initiated shortly after the launch of the pre-NEPA studies for Tier 2 Study in June 2022. Three rounds of public open houses and one listening meeting have been held to date as part of the Tier 2 Study. In total, the MDTA has received over 4,600 public comments on the Tier 2 Study including letters, emails, website comments, public meeting comment cards, and the MDTA customer survey cards. A timeline of previous and future public engagement meetings is shown below.



In addition to these meetings, the Tier 2 Study team has attended approximately 60 community events throughout the corridor to date to provide information about the Tier 2 Study and encourage public participation. The Bay Crossing Study website (www.baycrossingstudy.com) is used to share project information, advertise upcoming engagement opportunities, and gather feedback from the public. All previous meeting materials and comments received can be viewed on the website.

2024 Public Outreach Events

COMMENT ON THE DEIS

The DEIS and supporting technical reports and documents can be viewed on the study website (**baycrossingstudy.com**). Comments on the DEIS will be accepted until March 9, 2026. Comments on DEIS can be provided in the following ways:

Attend the public hearing, and provide a testimony and/or fill out a comment card on the following dates:
Virtual: February 9, 2026
Anne Arundel County: February 10, 2026
Queen's Anne County: February 12, 2026

Email your comment to:
info@baycrossingstudy.com

Mail your comment to **Maryland Transportation Authority, Division of Planning & Program Development, Bay Crossing Study, 2310 Broening Highway, Baltimore, MD 21224**.

NEXT STEPS

The MDTA and FHWA will consider all comments received during the comment period, ending March 9, 2026, and develop a combined FEIS/ROD, which will include identification of the Selected Alternative. The FEIS/ROD will be published in November 2026.

The MDTA and FHWA do not anticipate submitting applications for any other permits and approvals that require design-level detail as part of NEPA or immediately following completion of the NEPA environmental review process. The development and review of applications for permits and other approvals will be completed as more detailed design and construction engineering progresses beyond the Tier 2 Study EIS.

The anticipated permit and authorization schedule is as follows:

- **November 2026**: FEIS/ROD
- **Fall 2026 – Spring 2028**: Procurement for Final Design
- **Spring 2028**: Begin Final Design
- **Spring 2030**: Permit Applications/Authorization Requests Submitted
- **Spring 2031**: All Permit Decisions and Authorizations Issued
- **Summer 2032**: Begin Construction