MARYLAND DEPARTMENT OF TRANSPORTATION

The US 522 Bridge Connectivity and Freight Mobility Plan

Bridge Investment Program

Planning Grant Application Narrative

June 2026

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1. Basic Project Information – Project Description, Location, and Parties

1.1. Project Description

The Maryland Department of Transportation (MDOT), in partnership with the West Virginia Department of Transportation (WVDOT), is requesting $1.2 million from the Bridge Investment Program (BIP) to support ***The US 522 Bridge Connectivity and Freight Mobility Plan***. This $1.5 million project will support a Planning and Environmental Linkages (PEL) study of two bridges carrying US 522, a critical regional mobility link and cross-state connector between Maryland, West Virginia, and Pennsylvania.

Built in the 1930s, the US 522 bridges will soon exceed their useful service life. The largest bridge has been deemed fracture critical for years, and MDOT has already invested significant resources in replacing another bridge carrying US 522 over I-70 immediately north of this project area.

Figure 1 Deteriorated Column and Exposed Girders on One of the US 522 Bridges

These bridges suffer from deep corrosion and deterioration that will eventually impact deck integrity, posing growing danger to travellers on and under the bridge. **Failure of these bridges will result in increased travel time for freight operators, emergency services, commuters, and tourists.** Providing one of the only north-south crossings over the Potomac River, US 522 is an essential link in the National Highway Freight Network (NHFN), connecting Interstate 68 (I-68), Interstate 70 (I-70), and Interstate 76 (I-76) as the primary conduit for travel between the Mid-Atlantic and Appalachian regions. The nearest alternative river crossing is US 11, located 26 miles east in Williamsport, MD.

These bridges' potential failure is a regional concern and a full replacement cost will likely exceed $250 million. Both MDOT and WVDOT consider rehabilitation of these bridges a critical priority requiring thoughtful redesign to address safety, accessibility and reliability concerns. The requested $1.2 million would support a robust PEL study to:

- Define project needs, goals and objectives for redesign and replacement.
- Develop conceptual alternatives to assess the bridges' structure;
- Conduct a full traffic study of the Project Area; and
- Engage the public across states and regions to ensure connectivity concerns of families and communities are incorporated in preliminary conceptual alternatives.

The US 522 Bridge Connectivity and Freight Mobility Plan will advance FHWA's Freedom to Drive Initiative by removing a critical rural bottleneck, restoring full corridor capacity, and improving travel time reliability on a key multi-state route. This project directly addresses all of the BIP Merit Criteria as shown below.

Table 1 Merit Criteria Implementation Strategy Summary

Merit Criterion	Implementation Strategy
State of Good Repair	Plan a holistic study of the US 522 Bridges to develop a viable long-term replacement alternative
Safety and Mobility	Identify ways to reduce crashes, target known safety concerns, and protect users of all modes
Economic Competitiveness and Opportunity	Identify best practices to improve traffic, benefit regional initiatives, eliminate freight bottlenecks and promote investments in land use productivity
Resiliency and the Environment	Determine optimal future investments to improve resilience and disaster preparedness to all hazards
Quality of Life	Develop a comprehensive outreach strategy to prioritize the development of alternatives
Innovation	Strategize approaches to incorporate innovative technologies, construction methods, and financing

1.2. Project Location

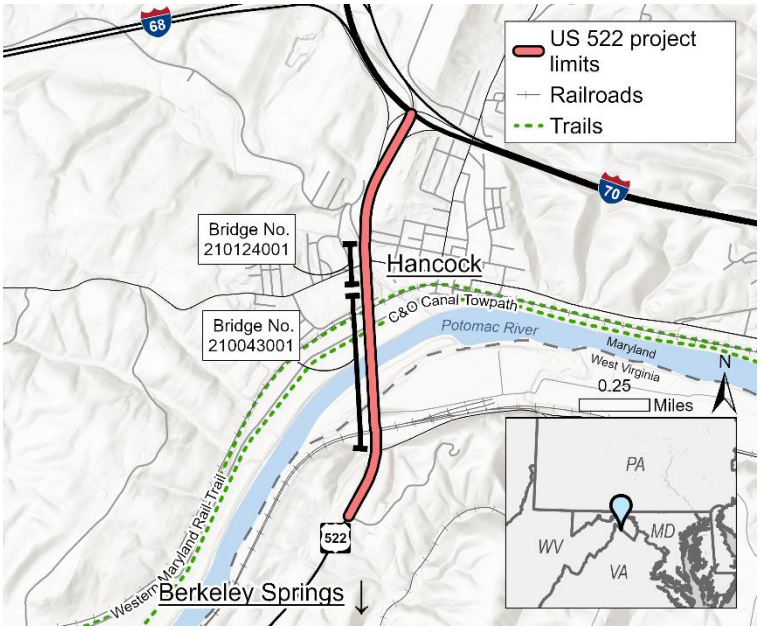
The Project is located within and primarily serves the Town of Hancock, Maryland, a small, rural community characterized by low-density development and a limited local street network. While Hancock is officially part of the Hagerstown-Martinsburg Metropolitan Statistical Area (MSA), the Project Area is surrounded by rural areas. The Project's area of influence extends to support regional mobility, freight movement, and connectivity. **Less than 105 miles separate the Project Area from Washington, D.C. (96 mi), Baltimore, MD (102 mi), and Harrisburg, PA (98 mi). These bridges must support regional commerce while remaining sensitive to the rural context and scale of Hancock.**

The larger of the two bridges identified in the grant application is **Bridge No. 210043001**. It is located on the border of Maryland and West Virginia, south of Hancock, MD crossing over the Potomac River and CSX railroad tracks and connecting Maryland to West Virginia. **This structure is over 2,500 feet long, 27 feet wide and was opened in 1939.** Rated as "poor" in condition, it has had bearings lubricated, tilt sensors and strain gauges installed, and multiple cracks arrested over the past ten years. **Inspections note that the size, significance, and status as a fracture critical bridge, merit preliminary work such as this PEL study to identify long-term needs and remaining service life of the bridge.**

The other bridge identified in this project is **Bridge No. 210124001,** spanning Little Tonoloway Creek and Hancock's West Main St and Limestone Road. It stands in the midst of the Town of Hancock and lies entirely in the State of Maryland. **This bridge is shorter, at 586 feet in length, but older, built in 1937.** These two bridges together carry US Route 522.

US 522 interchanges with I-68 and I-70 just north of Hancock making these bridges a critical connection for traffic travelling to and from cities like Hagerstown, MD; Cumberland, MD; and Breezewood, PA, where traffic can connect to I-76, the Pennsylvania Turnpike. To the South, the bridges connect US 522 to West Virginia, providing an essential connection over the Potomac River ensuring access to Berkeley Springs, WV; Winchester, WV and Culpeper, VA. US 522 and the two bridges supporting it also act as an alternative north-south link to I-81 and I-95 to the east.

Figure 2 Project Context, and Approximate Bridge Locations



Contributing to the Functioning and Growth of the Economy

The bridges as identified in the Project serve a crucial role in the regional economy by connecting freight and local traffic moving between Maryland and West Virginia. They also serve as one of the few links that provide regional connectivity to local communities, providing critical access over physical barriers like the Potomac River and multi-track CSX rail corridor. This criticality was recognized by the State of West Virginia when it designated its portion of US 522 as a Critical Rural Freight Corridor (CRFC) in 2023. These bridges also provide connections to I-68 and I-70, key components of the national supply chain. US 522 is also an alternate route for I-70's role on the Appalachian Development Highway System (ADHS) and the Strategic Defense Network. Recent investments in rehabilitating other nearby bridges will harmonize with the intended planning process for US 522.

The WVDOT recently opened the first phase of a bypass for US 522 around the core of Berkeley Springs, investing $60 million to realign the highway. The US 522 Bridge project, along with the northern corridor of the Berkely Springs bypass, will support this corridor's realignment, easing congestion in the town and providing a more efficient route for commercial trucks.

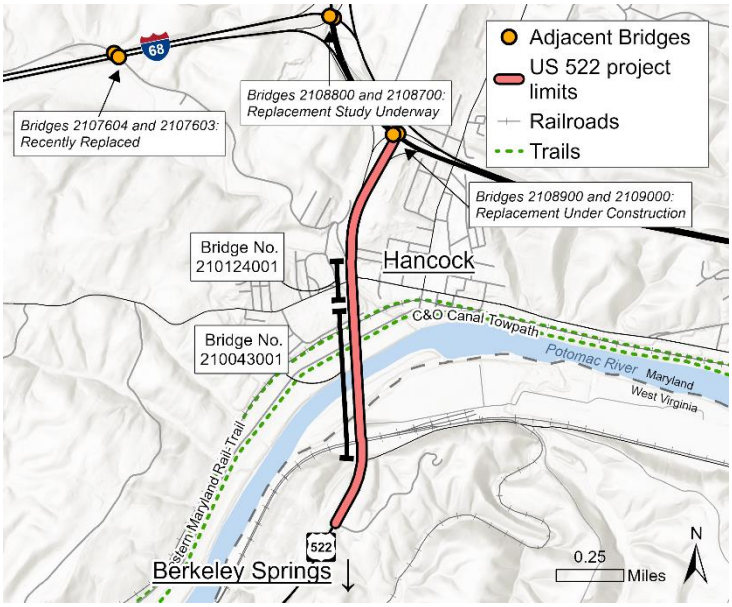
Locally, US 522 also provides critical connections to regional industrial and manufacturing. The legacy US Silica Company's Burnt Factory mining facility which lies to the south of the proposed project limit. The US Silica Company's Burnt Factory has been supplying the larger region with high-purity sandstone since the late-1800s. Its sole access is via US 522. The industry is expected to continue to grow throughout the region. Hagerstown/Eastern Panhandle Metropolitan Planning Organization's (HEPMPO) Regional Freight Plan projects

the economy to more than double by 2050, with employment increasing by 12% and warehousing to add more than 3,000 jobs alone.

A new and upcoming industry for the larger region is tourism, with tourists especially gravitating to the nearby recreational trails. Two of the popular trails, the Western Maryland Rail Trail (WMRT) and the Chesapeake and Ohio (C&O) Canal National Historical Park Towpath run directly beneath the US 522 Potomac River bridge. More than 5 million visitors use the C&O Canal Towpath each year and they regularly stop by in the Town of Hancock and contribute to the local economy by eating, shopping, and lodging at locally owned businesses. The region has been investing heavily in the C&O Canal Towpath with five phases of funding being awarded to rehabilitate the trail between 2017 and present. This more than $6.5 million investment will maintain the trail as an attractive destination and make it more accessible by paving sections and removing hazards.

Improvements to the bridges on US 522 will ensure safe and secure trail and town access for these tourists. The Project will contribute to the development of assessment and planning recommendations that propose the right steps to include and accommodate the needs and wants of local stakeholders during the life span of the project. **This project will also play a role in limiting adverse impacts on the natural and physical features within the project limits while developing a design best suited for a facility that supports the area's vital economic engines.**

Figure 3 Nearby Bridge Projects In-Progress or Recently Completed



1.3. Lead Applicant

The Lead Applicant is the Maryland Department of Transportation State Highway Administration (SHA). MDOT has vast experience administering federal funds and programs. In July 2025, MDOT's Transit Administration, in partnership with Washington County, was awarded a $2.83 million BUILD planning grant to advance a local bus facility to final design and through National Environmental Policy Act (NEPA). In January, 2024, USDOT awarded the state's first-ever Mega grant for the I-895 at Frankfurst Avenue Interchange Improvement Project. MDOT also received historic funding to support the Frederick Douglass Tunnel and Amtrak's Northeast Corridor from the Federal-State Partnership for Intercity Rail Program.

MDOT is committed to investing in, maintaining, and improving the transportation network western Maryland. In addition, as discussed in **Section 3,** both MDOT and WVDOT have committed **$150,000 in non-federal funds** to support this Project.

1.4. Other Public and Private Parties

The joint applicant is the West Virginia Department of Transportation. The State of West Virginia has received and is administering 37 grants totalling nearly $2 billion, of which approximately $600 million are USDOT grant funds. Some recent grants include the BIP Replacement of Market St. Bridge, RCE WV Crossing Safety Action Plan Implementation, and the BUILD US 522 Berkeley Springs Bypass. MDOT and WVDOT already work hand-in-hand maintaining the bridge, using a cost share agreement for portions of the bridge that cross state lines.

Figure 4 US 522 Bridge over the Potomac River

MDOT and WVDOT will also work closely in partnership with the following entities throughout the PEL development process: **MDOT SHA, WVDOT, Washington County, Maryland; HEPMPO, Town of Hancock, MD and Morgan County, WV.** The PEL will include a robust public engagement process seeking input from stakeholders and members of the public in the project area, including in Maryland and West Virginia.

1.5. Additional Eligibility Requirements

Any structures proposed or constructed because of this project would be maintained by MDOT's SHA, with potential agreements for cost sharing on segments that span states lines. MDOT's SHA houses an Asset Management Office (AMO), running the Asset Management Program to maintain performance of roadway assets by utilizing risk-based resource allocation. SHA maintains over 75 transportation asset types across 14 asset classes, with a total replacement cost of $39 billion. The Asset Management Program prioritizes asset needs based on age, condition, criticality, and risk. The program implements asset management standards, improves systems and data collection, fosters collaboration between stakeholders, and strengthens institutional knowledge. The responsibility for bridge assessment in the State of Maryland falls to the SHA Office of Structures.

MDOT leads among states in asset management. The State of Maryland is among the national leaders for bridge conditions. Only 3.40% of NBI deck area in Maryland was rated Poor in 2025. The rehabilitation of US 522 and the bridge spanning Little Tonoloway Creek and Hancock's West Main Street and Limestone Road shows MDOT's commitment to implementing its asset management principles - efficient resource allocation, risk-based investment, data-driven decision-making, and continuous improvement.

2. National Bridge Inventory Data

Table 2 National Bridge Inventory Data (Bridge 1 of 2)

No	Item	Record
1	State Code & Name	24 Maryland
8	Structure Number	100000210043010
5A	Record Type	1
3	County Code	043
6A	Feature Intersected	Potomac River, CSX Trans. Tracks
7	Facility Carried	US 522
16	Latitude	39690849
17	Longitude	078186014
98A	Border Bridge	543
99	Border Bridge Structure Number	00000000033A067
20	Toll	3
21	Maintenance Responsibility	01
22	Owner	01
26	Functional Classification	02
104	Highway System of Inventory	1
110	Designated National Network	0
112	NBIS Bridge Length	Y
27	Year Built	1937
106	Year Reconstructed	N/A
42A	Type of Service	5

No	Item	Record
28A	Lanes on the Structure	2
29	Average Daily Traffic	10,550
109	Average Daily Truck Traffic	20% or 2,110
19	Bypass, Detour Length	159
43A	Structure Type, Main	4
CONDITION	Bridge Condition	P
58	Deck Condition	6
59	Superstructure Condition	4
60	Substructure Condition	4
61	Channel and Channel Protection	7
62	Culverts	N
49	Structure Length	785.5
50A	Curb of Sidewalk Widths, Left curb or sidewalk width	0.9
50B	Curb of Sidewalk Widths, Right curb or sidewalk width	0.9
51	Bridge Roadway Width, curb-to-curb	8.2
52	Deck Width, out-to-out	9.9
32	Approach Roadway Width	10.4
47	Inventory Route, Total Horizontal Clearance	8.2
53	Minimum Vertical Clearance over Bridge Roadway	99.99

No	Item	Record
54A	Minimum Vertical Under clearance, Reference Feature	H
54B	Minimum Vertical Under clearance	6.71
55A	Minimum Lateral Under clearance on Right, Reference Feature	H
55B	Minimum Lateral Under clearance on Right	3.7
56	Minimum Lateral Under clearance on Left	0
111	Pier or Abutment Protection	5
39	Navigation Vertical Clearance	0
40	Navigation Horizontal Clearance	0
70	Bridge Posting	5
41	Structure Open, Posted, or Closed to Traffic	A
113	Scour Critical Bridges	8
90	Inspection Date	10/23

Table 3 National Bridge Inventory Data (Bridge 2 of 2)

No	Item	Record
1	State Code & Name	24 Maryland
8	Structure Number	100000210124010
5A	Record Type	1
3	County Code	043
6A	Feature Intersected	MD 144, West Main Street
7	Facility Carried	US 522
16	Latitude	39420191
17	Longitude	078113122
98A	Border Bridge	N/A
99	Border Bridge Structure Number	N/A
20	Toll	3
21	Maintenance Responsibility	01
22	Owner	01
26	Functional Classification	02
104	Highway System of Inventory	1
110	Designated National Network	0
112	NBIS Bridge Length	Y
27	Year Built	1937
106	Year Reconstructed	N/A
42A	Type of Service	5
28A	Lanes on the Structure	2

No	Item	Record
29	Average Daily Traffic	10,911
109	Average Daily Truck Traffic	8% or 873
19	Bypass, Detour Length	97
43A	Structure Type, Main	4
CONDITION	Bridge Condition	F
58	Deck Condition	5
59	Superstructure Condition	5
60	Substructure Condition	5
61	Channel and Channel Protection	7
62	Culverts	N
49	Structure Length	178.6
50A	Curb of Sidewalk Widths, Left curb or sidewalk width	0.9
50B	Curb of Sidewalk Widths, Right curb or sidewalk width	0
51	Bridge Roadway Width, curb-to-curb	8.2
52	Deck Width, out-to-out	9.9
32	Approach Roadway Width	8.5
47	Inventory Route, Total Horizontal Clearance	8.2
53	Minimum Vertical Clearance over Bridge Roadway	99.99

No	Item	Record
54A	Minimum Vertical Under clearance, Reference Feature	H
54B	Minimum Vertical Under clearance	5.18
55A	Minimum Lateral Under clearance on Right, Reference Feature	H
55B	Minimum Lateral Under clearance on Right	0.6
56	Minimum Lateral Under clearance on Left	0
111	Pier or Abutment Protection	N/A
39	Navigation Vertical Clearance	0
40	Navigation Horizontal Clearance	0
70	Bridge Posting	5
41	Structure Open, Posted, or Closed to Traffic	A
113	Scour Critical Bridges	8
90	Inspection Date	06/24

3. Project Budget – Grant Funds, Sources, and Uses of all Project Funding

The total future eligible cost of this project is estimated to be **$1.5 million**. The cost estimate supports the completion of a Planning and Environmental Linkages study including:

- Develop a purpose and need statement capturing national goals and local aspirations;
- Advance bridge concept development, including coordination of railroad requirements, to address structural deficiencies and functional issues;
- Complete crash analysis, a 2045 traffic forecast, and a construction-phase traffic management plan for the Project Area;
- Implement a hybrid public outreach approach to secure wide-reaching public input and feedback on the conceptual alternatives developed;
- Coordinate with the Town of Hancock on local revitalization and connectivity goals;
- Identify investments that increase land use productivity and improve supply chains to achieve optimum national and regional economic benefits;
- Assess resilience strategies to reduce vulnerability to future disruptions; and
- Evaluate Environmental Impact Areas that could be triggered by construction, such as:

– National Environmental Policy Act	– Quality of Life, Hazardous Materials
– Water, Stormwater and Air Quality	– Noise
– Endangered Species/Habitats	– Historical and Archaeological Resources
– Floodplains, River and Harbors Act	– Section 4(f) Review

3.1. Funding Sources and Federal Requirements

MDOT is requesting **$1.2 million** in Bridge Investment Program funding to support the PEL study. MDOT SHA and WVDOT will together allocate **$300,000**, split into equal shares of **$150,000** between the two agencies, in non-federal match from existing programmed state funding sources. No other federal funds have been allocated to this project.

Table 4 Funding Distribution for US 522 BIP Grant Request

	Non-Federal Funds	BIP Funds	Other Funds	Total
MDOT+WVDOT	$0.3 million	$1.2 million	N/A	$1.5 million

This Project satisfies the BIP statutory maximum federal involvement requirements. If awarded, BIP funds will support 80% of the budget, with other federal funds making up 0% and non-federal funds covering the remaining 20%. The Project partners (MDOT and WVDOT) have budgeted and additional **$200,000** to cover unanticipated cost increases. MDOT has determined this amount is sufficient to cover unanticipated cost increases based on the current needs of the US 522 Bridges.

Previous projects of similar size and scope under MDOT have succeeded with proportionate contingency funds set aside, which account for change orders, incentives, disincentives, force account work, and other miscellaneous expenses. In the unlikely event that the project budget evolves to exceed planned expenditure and contingency amounts, the project partners have developed a three-part **Plan to Address Potential Cost Overruns**.

1. **Value Engineering |** In the event that a project exceeds a total cost threshold, the Project partners will deploy a Value Engineering (VE) Study to conduct a comprehensive review of the proposed activities under this PEL to ensure that the budget remains in line with expectations and available funds.
2. **Prioritizing Investments |** The Project partners will employ robust Project Prioritization Processes, which collectively provide a framework for allocating funds to address cost overruns for projects ready for letting. The Chapter 30 Technical Guide is a legislatively mandated framework utilized by MDOT to evaluate and prioritize major projects. These principles will be applied throughout the PEL process to evaluate potential cost overruns during the Planning and Construction stages.
3. **Pursuing Additional Funding |** The Project partners have a tested strategy for successfully receiving and administering grants for major projects. Since 2023, MDOT has been directly awarded over $1 billion in discretionary grants. In 2024, WVDOT administered nearly $2 billion in grants with approximately $600 million in USDOT grant funds. In the event of a major cost overrun, MDOT and WVDOT could pursue additional competitive programs to secure complete funding for this project.

The State of Maryland and the State of West Virginia will ensure a stable and reliable funding partnership committed to maintaining the existing system and building new infrastructure to encourage economic growth. A broad range of State funding sources leverage federal funding support and are dedicated to funding public roadway projects, including State motor vehicle fuel taxes; Vehicle excise (titling) taxes; Motor vehicle fees (registration, licensing); State taxes on corporate income; Sales and use taxes on short-term rentals; and operating and bond revenue.

3.2. How All Project Funds May Be Used

PEL studies are an innovative, cost-efficient tool that advance NEPA forward by integrating environmental, community, and economic goals considerations and successfully carry each through full project development, design, and construction with streamlined decision-making, environmental awareness, and expedited delivery. PEL studies can be used for assessing various long-term transportation needs encompassing detailed traffic operations, overall user safety, evaluating capacity needs, bolstering economic development, and emergency evacuation planning.

Prior MDOT PEL studies include MD 90, MD 18, MD 404, MD 328, and MD 97. These studies are working to advance concepts that improve structural issues, address capacity needs, and evaluate geometric improvements.

The primary elements of this PEL will include:

- **Develop conceptual alternatives to establish a clear vision for the US 522 bridges.** The bridges have documented concrete spalling, deck deterioration, substructure condition, scour risk and pose a monumental safety concern for the residents of Hancock and vehicles travelling over and under the bridge. Putting funding towards studying the functional issues to multimodal access and safety concerns due to geometry and age will pave the path to identifying applicable and innovative ideas that may include upsizing the bridges' load rating and structural capacity, expanding on existing lane widths or ensuring shoulder continuity and adequacy.
- **Careful and deliberate traffic coordination will be central to any and all reconstructive work on the US 522 bridges, and this PEL is a first step towards understanding them.** The two bridges are a critical north-south corridor linking Appalachian communities and regional economies however they provide limited redundancy due to its narrow width and river crossing constraints. The bridges also loom over "Maryland's Trail Town" i.e. Hancock which is a popular tourist destination for outdoor recreation. This PEL study will do a careful evaluation of traffic operations by collecting traffic counts, developing MicroSim traffic models, projecting future travel and traffic conditions, and addressing traffic and safety management needs.
- **Strong public outreach underpins successful PEL studies.** Funding for extended and thorough public outreach will support the creation and dissemination of presentation materials to inform impacted families, communities and business owners. MDOT and WVDOT will collaborate to leverage a hybrid approach deployed in other recent PELs that includes both virtual and in-person events. Feedback from the public will shape how the corridor is transformed and developed to match citizen uses and prioritize specific needs across communities.
- **Careful consideration of existing and future land uses.** The grant funds requested here will help pinpoint vital community assets as well as necessary changes to enhance services, productivity, and output across businesses, schools, essential services as well as recreational facilities. Catering to commercial, residential, recreational, and/or industrial needs necessitates different infrastructure and access options. The PEL will also assess land uses for productivity in terms of attracting investments, as well as their role in improving supply chains.
- **Resilience that maximizes economic and community outcomes.** To safeguard impacted communities, this PEL will fully assess environmental impact areas to minimize environmental damage. MDOT and WVDOT will leverage community resources, HEPMPO, local businesses, and municipal partners to understand local needs and priorities for developing the new structures, as well as delivering community benefits that drive broader regional returns across both states.

This grant application is seeking **$1.2 million in BIP funds** to support PEL study costs only. This PEL study will be the first step in improving the quality of life for Maryland and West Virginia communities by strengthening infrastructure that enhances mobility, accessibility,

safety, and reliability. This will require significant time and resources. The total future eligible costs, including overhead and contingencies, are estimated to total $1.5 million. **Table 5** summarizes the anticipated costs by SF-424C Classification.

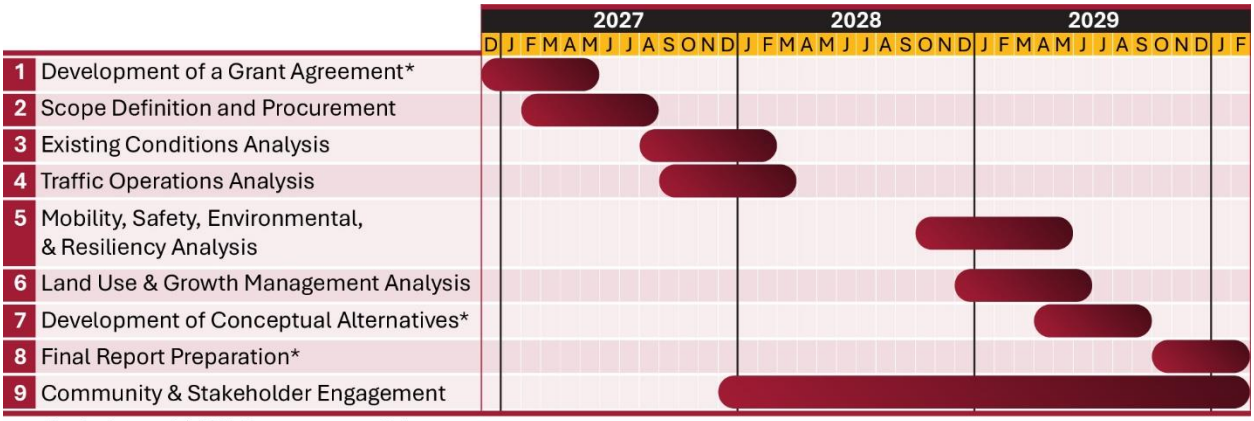
Table 5 Breakdown of Costs for Classifications Used on Standard Form 424C

Field Item	Field Name	Total Cost	Costs Not Allowable for Participation	Total Allowable Costs
1	Administrative and Legal	$10,000	$0	$10,000
2	Land, Structures, Rights-of-Way, Appraisals, etc.	-	$0	-
3	Relocation Expenses and Payments	-	$0	-
4	Architectural and Engineering Fees	$1,000,000	$0	$1,000,000
5	Other Architectural and Engineering Fees	$ 200,000	$0	$ 200,000
6	Project Inspection Fees	-	$0	-
7	Site Work	-	$0	-
8	Demolition and Removal	-	$0	-
9	Construction	-	$0	-
10	Equipment	-	$0	-
11	Miscellaneous	$90,000	$0	$90,000
12	**SUBTOTAL (Lines 1-11)**	**$1,300,000**	**$0**	**$1,300,000**
13	Contingencies	$ 200,000	$0	$ 200,000
14	**SUBTOTAL**	**$1,500,000**	**$0**	**$1,500,000**
15	Project (Program) Income	$0	$0	$0
16	**TOTAL PROJECT COSTS**	**$1,500,000**	**$0**	**$1,500,000**

3.3. Project Schedule

The following project schedule has been developed to reflect the expected completion of major milestones in this PEL study, assuming an Award Notification in December 2026.

Figure 5 Project Schedule Gantt Chart



*Includes an FHWA Concurrence Point

4. Merit Criteria

4.1. State of Good Repair

Restoring and Modernizing Core Infrastructure Assets

The US 522 bridges are a critical connection linking I-68 and I-70 to West Virginia, supporting regional mobility and interstate connectivity. Built in the 1930s, these bridges remain one of the few viable river crossings in a constrained geography establishing a direct north–south corridor linking West Virginia, Maryland, and ultimately Pennsylvania.

Figure 6 Elevation View of One of the US 522 Bridges

These bridges provide a strategic interchange point allowing local and regional traffic to access national markets and long-distance routes. They support routine cross border travel, act as a feeder route for freight and function as a critical lifeline infrastructure for Maryland and West Virginia's rural regions. The southern end of US 522 provides principal connections to I-68 and I-70 to families, communities and significant local industries. The US Silica Company's Burnt Factory mining facility is located approximately 2.5 miles south of the US 522 bridges which provide a critical connection for ferrying the factory's products to different regions across the country.

Significant trade and commerce between western Maryland and northern West Virginia depend on the continued functional sufficiency and structural viability of the US 522 bridges, as does the Town of Hancock – a rural town famous for its tourist trail beside historic canals and railway tracks. Residents and tourists alike utilize the US 522 as a primary connector to recreational activities, including the US Bicycle Route 50, C&O Canal National Historical Park, and the Western Maryland Rail Trail.

Maintaining the integrity of the US 522 bridges is absolutely essential for sustaining commercial trade and preserving regional connectivity. Over the decades, these bridges have undergone periodic rehabilitation, maintenance, and upgrades for worn joints, crash damage, substructure repairs, corrosion control and deck improvements. However, recent inspections showed signs of accelerated fatigue and wear through compromised deck integrity, concrete spalling on piers and abutments, and water infiltration into the substructure. The fracture-critical members consist of floor beams, rhomboid girders, deck truss tension members, and pins.

Considering the overall age of the bridge and current fatigue concerns, moving forward with additional repairs may not be the most appropriate alternative from a life cycle perspective. Reconstructive improvements to the US 522 bridges will not only revitalize a deeply critical regional infrastructure asset but also bring it up to modern design standards that cater to the current traffic loads and demands. It will ease the movement of cross border traffic and boost regional multimodal reliability between Maryland and West Virginia. Increased mobility between the US 522, the Town of Hancock, and other surrounding communities like the Town of Berkeley Springs will also enhance tourism and recreational opportunities for the region and improve economic outcomes for local businesses in the predominantly rural area.

Improving Long-Term Resiliency During Extreme Weather Events

West Virginia and Maryland have experienced several billion-dollar weather events within the last five years, including significant ice accumulation in northern West Virginia and western Maryland, catastrophic flooding in Western Maryland, a Central Tornado Outbreak, and Hurricane Ida. The impacts of these events are particularly pronounced for the aging US 522 bridges as it crosses over the Potomac River. Water infiltration into the substructure during extreme rain and flood events accelerate the degradation of steel girders inducing concrete spalling and steel corrosion.

Figure 7 Broken Railing and Blocked Drainage on the US 522 Bridge

Fast moving water can erode soil near the bridge foundations increasing scour risk to the bridge and potential bridge failure. De-icing operations during freeze condition can intensify wear at expansion joints and bearings due to the salts. The US 522 bridges are already showing signs of wear and fatigue, continued impact from these stressors exacerbate the demands placed on the bridges and the CSX lines below. Small retaining walls and rails are currently in place along the bridge over the Potomac River; however, severe weather events could potentially lead to catastrophic and fatal consequences for the bridges and its users.

The Project will explore strategies to improve the bridges resilience to impacts from extreme weather events. Additionally, specific improvements, including new lighting and safety infrastructure assets, can better illuminate the alignment, enhance visibility and secure multimodal intersection crossings along the US 522 bridges during every type of weather: alleviating any current conflict between roadways and pedestrian crossings. The US 522

bridges are also critical for evacuation and emergency response operations. They connect the local communities to I-70 and I-68 which are major regional evacuation corridors. Enabling evacuation of residents from flood prone areas and facilitating the movement of emergency resources into affected zones. The bridges also connect residents to rural medical services, including several primary care centers and the War Memorial Hospital, enabling ambulances and emergency responders to reach their destination in a timely manner. The already aging and structurally deficient US 522 bridges are further stressed by the impacts of frequent extreme weather events. This places the safety, mobility, and economic activity supported by the bridges at significant risk. Allowing these conditions to continue can lead to catastrophic failures, which is unacceptable.

Reducing Construction or Maintenance Burdens

Built between 1935 and 1940, the bridges are nearly 80 years old, with routine repairs and replacements being conducted on need basis.

Results from recent inspections i.e. 2023 Underwater Bridge Inspection Report and the 2024 Routine (Annual) and Fracture Critical Bridge Inspection Report (*Attached as Supporting Documents*) identify the bridge being in poor condition. Necessary repairs are made when needed on a routine basis, however continued deployment of deep repairs means routinely allocating money on a yearly basis for both minor and major facelifts. Despite the US 522 Bridge being maintained to the highest standards possible, the end of its useful life is approaching.

Figure 8 Deteriorated Columns under the Bridge Deck on One of the US 522 Bridges

A recent inspection found the fencing in poor condition, missing panels and components. The steel stringers on the bridge deck and rhomboid truss spans are in poor condition as well with isolated areas with painted over pitting, missing rivets, and areas of 100% section loss. At the joints, the floor beams had widespread areas of severe corrosion, delamination, and section loss of the top and bottom flanges below the deck joints; some section losses are up to full-length of the floor beams and occur in areas of positive and negative flexure and in certain locations, the top flange section loss is down to knife-edge and/or with loss of flange width. The expansion bearings show minor to moderate corrosion with numerous broken anchor bolts and misaligned bearings, and specific areas exhibiting bearing loss greater than 10%.

In addition to the obvious preservation repairs for the aforementioned bevy of issues, seasonal upkeep is also a concern. The absence of full shoulders along the entire length of the bridge hinders snow removal efforts. MDOT has remained vigilant of ongoing maintenance requirements to ensure the US 522 Bridge stays in a state of good repair, but costs continue to escalate as necessary repairs and preservation work are required to maintain the bridge in this condition. A modernized bridge combined with an ongoing maintenance plan can help lighten the load of maintenance needs, addressing regular as well as urgent issues. The PEL study and future capital construction improvements made as a result of the PEL study findings will help in lowering maintenance costs on the bridge.

4.2. Safety and Mobility

Targeting Known Safety Concerns on the Bridge

A primary outcome of the PEL study is to identify and address the safety, efficiency, and reliability needs of the community and bridge users, informing the development of bridge concepts and guiding the subsequent design process. The PEL study will prioritize intrastate agency coordination and active outreach with stakeholders to identify the best solutions to improve the US 522 bridges. **Currently, the US 522 bridges lack shoulders, have poor to no lighting, and provide limited multimodal access.** The lack of a clear line of sight on the US 522 bridges also present a hazard for routine commuters and freight drivers.

Figure 9 Trucks Navigating the Tight Two-Lane Cross Section on One of the US 522 bridges

The PEL study will conduct a thorough bridge condition and structural assessment including a hydraulic and scour analysis and constructability assessment to test the feasibility of phased construction, temporary structures, or detours. The study will also include a traffic analysis with a crash inventory, travel operations analysis and a freight movement analysis to understand existing conditions. The following safety and mobility considerations will inform the conceptual alternatives:

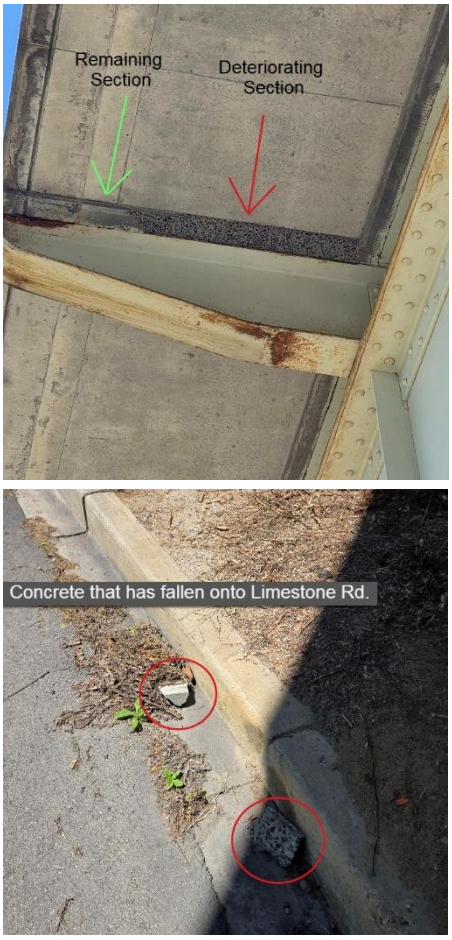
- Installing a new bridge entry/exit ramp to minimize conflict points between drivers and vulnerable road users;
- Improving bridges elements to reduce the risk of serious injuries and fatalities, widening exiting shoulder, improving railings and installing lighting upgrades;

- Replacing the superstructure to widen the cross-section and improve the load capacity of the bridges;
- Improving geometry and shifting crossing locations to reducing conflict points between vulnerable road users and vehicles entering and exiting US 522;
- Improving access to nearby available parking and trailheads for motorists and truck parking for freight carriers; and
- Improvement of the local multi-modal network and consideration of countermeasures for vulnerable road users identified in MDOT's Context Driven Toolkit.

Reducing Crashes on the Roadway Network

Maryland is a Vision Zero state, a USDOT Ally in Action for its National Roadway Safety Strategy and set the goal of zero motor vehicle-related fatalities or serious injuries by 2030. Maryland DOT has incorporated Enhancing Safety and Security as a guiding principle in its Long-Range Maryland Transportation Plan (MTP), or the Playbook, and adopted the 2026-2030 Maryland Strategic Highway Safety Plan (SHSP) (Dec. 2025). Maryland also maintains an online crash data dashboard as part of its data-driven approach to reach the goal of zero roadway fatalities and serious injuries. Between 2019 and 2023, there were four (4) serious injury crashes and 16 property-damage only crashes on the US 522 bridges. During vehicle-damage-only crashes, blockages on the bridge often force drivers to travel to I-81 to cross the Potomac River, a detour that is approximately 30 miles away from the US 522 bridges. The PEL study will analyze safety challenges in the Project Area to develop strategies that address roadway design, driving behaviors, technology, and policies to ensure crash prevention and severity mitigation through extensive stakeholder coordination. MDOT will continue to coordinate with key safety stakeholders, including WVDOT, HEPMPO, the Town of Hancock, and Washington County Department of Works, during the PEL Study.

Figure 10 Deteriorating Underside of the Bridge with Falling Concrete Spalls That Pose a Safety Concern for Road Users on Limestone Road



Protecting Roadway Users Under the Bridge

Local commuters regularly use the Limestone Road that runs under the US 522 bridges for movement. This road is an essential local route for travelling families, workers and visiting tourists. The Town of Hancock also serves as a popular access point to the C&O National Historic Park

and the widely popular WMRT, this section of the WMRT right by the US522 bridges attracts over 130,000 annual visitors. Falling concrete spalls debris from deteriorating sections from US 522 bridges have been documented to have fallen over moving cars and creating a state of shock and concern amongst local residents. The sudden impact of debris on moving vehicles can lead to unsafe driving behaviors and cause crashes. Additionally, the dangers exists of concrete spalls falling on pedestrians and causing severe to fatal injuries. The PEL study will conduct deep engineering and structural studies on the deck, superstructure and substructure to identify opportunities to improve safety for motorized and nonmotorized users under the bridge by analyzing existing and potential safety concerns arising from the bridges' deteriorating conditions.

Incorporating the National Roadway Safety Strategy

As an Ally in Action for USDOT's National Roadway Safety Strategy, MDOT committed nearly $250 million to construct data-driven, context-specific investments in Washington County, such as the US 40 design work and other quick-build improvements. This Project advances the vision laid out in FHWA's Freedom to Drive Initiative, which encourages states to optimize existing roadway capacity, catalyze projects that mitigate congestion chokepoints, and utilize data-driven solutions to reduce the approximately $269B productivity losses attributed to traffic congestion nationwide. By improving the US 522 bridges' operation, safety, and multimodal access, this Project supports FHWA's commitments to reducing delays for freight vehicles and commuters. The 2026 National Freight Strategic Plan emphasizes multimodal connectivity, data-driven planning, risk management to create a safe, secure and resilient freight system. The primary drivers behind the Project are to ensure that US 522 provides a safe and secure freight corridor by reducing crashes and improving system reliability and resilient to disruption.

The Project corridor has also been identified as a key multimodal freight corridor in the Draft National Multimodal Freight Network, and improvements through this Project will direct resources towards supporting comprehensive freight transportation planning on the US 522 bridges and the connecting routes and freight network.

4.3. Economic Competitiveness and Opportunity

Improving Traffic Flow and Conditions

As a major throughfare route for freight travel between West Virginia and Maryland, and adjacence to a designated freight route on the Maryland Highway Freight Route network, the US 522 bridges play a critical role is maintaining and enhancing economic prosperity, both regionally and locally. To the north of the US 522 bridges lie I-70 and I-68, both on the NHFN. I-70, which runs through Maryland from the Pennsylvania state line to Baltimore, is a designated Primary Highway Freight System (PHFS) route. While US 522 is not formally listed as a PHFS route, it functions as the sole north-south access point connecting the Potomac River to these nationally significant freight corridors.

While these connections make the US 522 bridges critical for freight and commuter travel, they also introduce traffic demands that these two laned bridges are ill equipped to handle. The limited cross section width paired with high truck volumes and seasonal as well as routine traffic creates traffic bottlenecks resulting in inconvenience for commuters and costly delays for freight operators.

Figure 11 Facebook Post Alerting Travellers to Use US 522 Due to Construction on I-70

Besides the US 522 bridges, there are very few access points to cross the Potomac River. All these crossing are miles apart from each other. MDOT SHA's Freeway Incident Traffic Management (FITM) Plan for I-70/US40 between Exits 3 and 5 highlights the operational complexity of closures on this corridor (*Attached as Supporting Documents*). The FITM Plan relies on the US 522 bridges as a diversion point and a key alternative route during freeway closures. If either of the US 522 bridges above the Potomac River fails or if an extreme weather event makes traveling along the bridge untenable, significant impacts for freight flows in the region would follow. To move north or south and access I-70 and I-68, commercial trucks would need to reroute to Cumberland, which is 38 miles to the west, or Hagerstown, which is 30 miles to the east, culminating in increased fuel cost per truck and additional financial losses for time sensitivity freight deliveries.

In 2024, the US 522 bridges saw an annual average daily traffic (AADT) count of 10,802 vehicles and an annual average weekday traffic count of 11,022. A significant share of this traffic is commercial vehicles. A commercial truck parking facility is located just north of the US 522 bridges with a capacity for dozens of semi-trailers, servicing US 522, I-70, and I-68.

About nine (9) miles south in West Virginia, is the Southern Belle Restaurant and Truck Stop that can fit approximately a dozen semi-trailers. The 2022 Maryland State Freight Plan identifies truck parking shortages as a statewide freight challenge, and the limited parking capacity near the US 522 bridge corridor is a real time example of this broader constraint in rural western Maryland. The 2026 National Freight Strategic Plan also calls for reducing delay and unreliability at nationally significant freight chokepoints, increasing redundancy for rerouting on freight corridors, and mitigating single points of failure in the National Multimodal Freight Network.

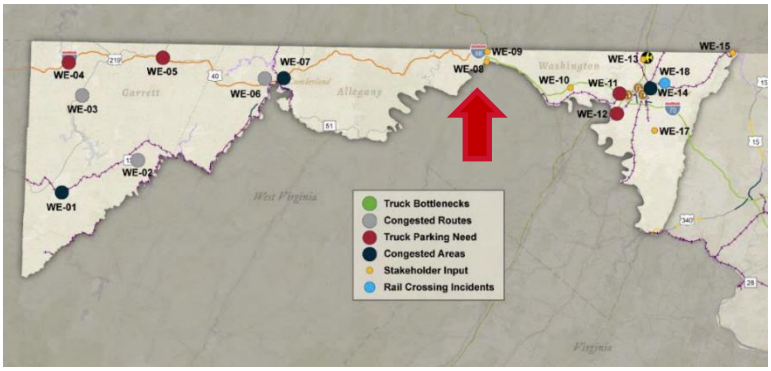
Figure 12 Access to One of the US 522 Bridges with a Weight and Size Restriction Signage for Heavy Trucks

Funding this Project to support a PEL study for the US 522 bridges is a necessary and proactive step in ensuring a seamless flow of traffic by combating triggers for localised congestion. The PEL study will focus on identifying and advancing strategies to improve traffic flow on the US 522 bridges, thereby enhancing overall traffic and freight capacity and supporting increased commercial investment in the surrounding communities of both Maryland and West Virginia.

Benefitting the Regional and National Economy

As a critical thoroughfare in Maryland that also offers a direct and reliable freight route from West Virginia to Pennsylvania, the US 522 and the US 522 bridges help to buttress the regional commercial economy. According to the HEPMPO Regional Freight Plan, the regional economy in Maryland employed over 125,000 workers, generating over $16.4 billion in GDP to the local economy in 2022.

Figure 13 The Maryland State Freight Plan Identifies the US 522 Bridges in Hancock (WE-08) as a Regional Freight Need



The US 522 bridges have also been programmed in the HEPMPO Transportation Improvement Plan, identified in the HEPMPO Long-Range Transportation Plan (as an unfunded priority) and categorically listed as a corridor supporting freight in the HEPMPO Regional Freight Plan. The 2022 Maryland State Freight Plan identifies western Maryland as having several freight needs around I-70, I-81, and I-68 reinforcing the strategic importance of the US 522 bridges for the surrounding region. The Plan's page 276 explicitly identifies the US 522 bridges in Hancock as a candidate project (WE-08).

The Town of Hancock is at the juncture of 11 trails, including the Great Alleghany Trail, WMRT, and the C&O Canal Towpath Trail. The C&O Canal National Historical Park alone is a significant economic engine for the surrounding region bringing in significant direct and indirect tourism revenue. In 2024, the C&O Canal overall saw 4,421,276 recreational visits, making it the most visited National Historical Park in the US. According to the C&O Canal Trust, visitors to the park generated expenditures totaling $131.5M and over 1,400 jobs in communities along the corridor.

Exploring the opportunity to add access points to the US 522 bridges at strategic points using entry/exit ramps and clever changes to the bridge alignment during the PEL study can help the aforementioned tourist spots in attracting more visitors, injecting the surrounding region with powerful economic growth. The Town of Hancock is a designated Washington County and State of Maryland Enterprise Zone - new businesses in the area receive incentives from both the State and Washington County. This provides the unique opportunity to not only increase revenue and good paying jobs for locals but accumulate

these monetary benefits manifold within the local communities through infrastructural improvements to the US 522 bridges.

Promoting Investments in Land Use Productivity

The US 522 bridges offer a key real estate opportunity for commercial space, public green space, and rural main street revitalization. With the existing alignment, the elevated US 522 bridges present an opportunity to reimagine the land under the bridge as a revenue and activity generator that directly benefits its local communities. A real estate boom is largely dependent on the potential to capture value. A corridor that serves heavy traffic will trigger development opportunities at all access points. The opportunity lies within arms reach for the Town of Hancock through the US 522 bridges. A potential alternative developed during the PEL study would be for a lowered alignment of the US 522 bridges portion over the land. In this scenario, the US 522 bridges would not just pass over Hancock, instead it will be connected to Hancock through exit/entry ramps that connect the town to US 522 travelers and offering them the opportunity to enjoy and invest in the Town of Hancock.

4.4. Resiliency and the Environment

Improving the Resilience of At-Risk Infrastructure

Frequent extreme weather events have accelerated deterioration of the aging US 522. Flooding and water infiltration increases scour risk and structural degradation (spalling, corrosion), while de-icing accelerates wear. These compounding stresses heighten failure risks, posing potential safety and operational consequences despite existing protective features. The PEL study is a critical step in advancing environmental understanding early on during the concept and design development phase of a project.

Through extensive agency coordination, community engagement and rigorous assessments, this PEL study will help decision makers find appropriate solutions that improve the overall health and resiliency of the US 522 bridges to bolster both infrastructure and community resilience.

Figure 14 Exposed Substructure of One of the US 522 Bridges Vulnerable to Floodings Events

The US 522 bridges play a critical role in strengthening the resilience of the community against extreme weather events as well. The US 522 bridges act as a feeder to I-68, which is a FEMA Hurricane Evacuation Route. During extreme weather events, US 522 bridges over Hancock provide much needed access to evacuation and emergency services to residents of Hancock and

Berkeley Springs. For a lot of West Virginians in the northern part of the state, the US 522 bridges are the only reasonable access point for urgent evacuation, immediate relief and emergency responder care.

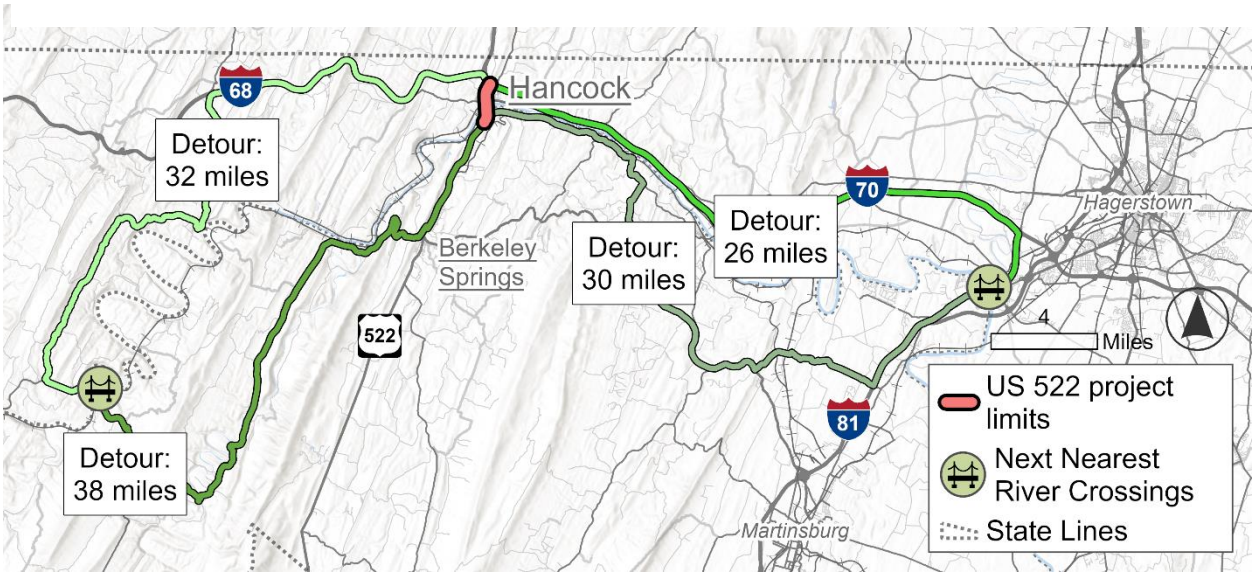
To improve resilient transportation planning and plan ahead of the curve against extreme weather events, MDOT has integrated the impact of extreme weather events and related hazards into its planning process through the MDOT SHA Vulnerability Viewer. This app directly informs MDOT's commitment to responsibly manage environmental resources to minimize harmful impacts of its activities on the environment through effective planning, project development, operations, and maintenance. Environmental screening during the PEL study will evaluate levels of air, water, and noise pollution.

This Project will directly address environmental concerns and align with Maryland's commitment to resilient communities during its PEL study. A conceptual alternative that could be explored during the PEL study is elevating the US 522 bridges to increase the clearance, creating more opportunities for additional use of the space, including multi-use green spaces under the bridge deck. Another concept under consideration is the addition of shoulders on the bridge over the Potomac River, giving MDOT the ability to plow snow as the storms become more intense. At present, there are no shoulders along the bridge.

Eliminating Risk of Failure

Any disruption to the US 522 bridges, either by structural failure, an extreme weather event, or a traffic crash, would generate cascading impacts across the four areas that the PEL will evaluate: community, mobility, economic competitiveness, and environmental considerations. As the sole Potomac River crossing in the immediate area, a US 522 closure will force detours of approximately 30 miles east to Hagerstown or 38 miles west to Cumberland, sharply increasing vehicle miles traveled, fuel consumption, and travel times

Figure 15 Detour Distance from US 522 Bridge to Alternative Crossings



for freight and passenger traffic. Emergency response times across the river would lengthen materially, compounding public safety risk.

Closure or failure of the structures in this Project would mean that freight carriers serving the warehousing, distribution, and manufacturing operations concentrated along I-70 and I-81 would face immediate delays and travel cost increases. Meanwhile, residents on both sides of the Potomac would lose reliable access to employment, healthcare, and essential services. A PEL study would help in evaluating the bridges criticality, redundancy, and vulnerability, and identify strategies to reduce the risk of complete system disruption. A potential alternative through the PEL study may be the development of strategies to improve traffic flow during stress condition and installing shoulder onto the bridge cross section to enable stopping for disabled vehicles. Another alternative can be to replace the existing structure with a modern high-capacity structure that eliminates the risk of bridge failure due to aging.

4.5. Quality of Life

Improving Quality of Life for Impacted Communities

The Project will determine ways to address a potential redesign of the US 522 bridges which also results in an improvement in the surrounding communities' residents' quality of life. A redesigning of the US 522 bridges could incorporate nature-based solutions and reconfigure exit ramps to improve access to local businesses, recreational opportunities and essential destinations. These changes, in addition to impacting the communities' local economy would also benefit the residents' health, increase access to services and employment, and raise overall quality of life. The Project mostly impacts the rural families living in the Town of Hancock. The Town has a modest population of approximately 1,600 people with a median income of $34,886. MDOT, through this PEL study, will take the appropriate measures to ensure extensive public engagement to ensure all community concerns are addressed and no negative impacts are experienced by the community from any and all reconstructive works to the US 522 bridges.

Expanding Access to Transportation and Community Services

Improved US 522 bridges will increase regional multimodal reliability between Maryland and West Virginia, and improve access to services across state lines, such as primary care services, hospitals, and banking services. Many residents and tourists in this area utilize US 522 as a primary connector to recreational activities, including the Town of Hancock, C&O National Historic Park, and the WMRT. Increased mobility between the US 522 bridges and the Town of Hancock can distribute economic impacts to the neighboring areas as well. T

At present, there is no public transit spanning the US 522 Bridge between Hancock, Maryland, and West Virginia. A shuttle is currently available, but parking and infrastructure are needed to develop a full-fledged transit service. An alternative solution from the PEL study could be the provision of direct access for travellers on US522 to the nearby trails through entry/exit ramps. The Project can also examine options to incorporate public transit

by improving access to transit stops, making changes to the intersection geometry at the bridge access and widening the lane widths to accommodate safe and frequent transit options.

Fostering Inclusive Public Engagement and Partnerships

MDOT has a long-standing commitment to proactively and inclusively engaging with the public affected by the transportation planning and infrastructure development process, as outlined in the State's Public Participation Plan. This includes partnerships with state, local, community-based, and private entities. For this project, SHA has already met with the State of West Virginia, the Town of Hancock, Washington County, and will meet with other stakeholders, including the CSX Railroad, during the project period.

During the course of the project, MDOT will execute public engagement efforts with a concerted focus on engaging underrepresented groups. MDOT has a Title VI Implementation Plan, which requires the agency to conduct outreach to individuals with a limited ability to read, write, or understand English due to physical, auditory, or visual impairments. As part of this, MDOT incorporates a variety of public involvement strategies, including mail-outs, advertisements, and public and targeted meetings, as well as non-traditional outreach that will be included in this Project, per the Maryland Action Plan.

4.6. Innovation

Innovative Technologies

MDOT has deployed several innovative transportation technologies, and the PEL study will identify which of those technologies may be appropriate to implement during the rehabilitation of the US 522 bridges. The modernized infrastructure asset could employ technology such as automatic traffic counters, pavement sensors, solar lighting, and weather cameras. By harnessing data, MDOT can identify spots in need of repair quickly and determine daily traffic flows, which in turn will better illuminate maintenance needs. Additionally, solar lighting will reduce carbon usage, and weather cameras will provide up-to-date data on extreme weather events. Ultimately, innovative technologies will empower MDOT to proactively address future concerns in the project area, resulting in lower operating costs and a quick, reliable, and safe user experience along the US 522 bridges.

During the PEL study and implementation of improvements to the US 522 bridges, MDOT will foster transparency and accessibility to the public through the use of interactive maps, allowing the public to understand the Project more clearly. A current example of an interactive tool is MDOT's Statewide Fatal Crash Dashboard page, which easily allows users to see time series crash statistics, broken down by emphasis area and region.

Innovative Project Delivery

This PEL study will support the analysis of innovative project delivery to mitigate public risk, manage project costs, and divide responsibility between relevant stakeholders. Strategic partnering can deliver complex projects on time and under budget by utilizing the

appropriate resources. For example, an application of the Design-Build-Finance-Operate-and-Maintain model creates opportunities to utilize a range of expertise, skillsets, and assets from various project partners.

MDOT can choose to leverage partnerships with other stakeholders depending on the intricacy of the project, existing maintenance burdens, funding levels, and future needs. The level of partnership ranges from formal agreements establishing Public Private Partnerships (P3) or an inter-agency Memorandum of Agreement (MOA) across management and operations. MDOT can partner with other agencies, including WVDOT, on this project to reduce unforeseen delays and manage risks.

Innovative Financing

The funding request for this grant, financing a PEL study, is conventional; $1.2 million is requested, with a $150,000 match from MDOT and WVDOT. However, during the capital construction phase, innovative financing may be necessary due to the number of important stakeholders and the scope of financing required. MDOT and WVDOT will consider future grant requests to fund the capital construction portion of the project, in addition to other financing schemes such as TIFIA loans, GARVEE bonds, and public-private partnerships to finance the eventual replacement of these structures. **The PEL phase of the project will allow project stakeholders to further refine the needs of the capital construction project for the US 522 Bridge, and initiate the early discovery and financial planning necessary to support efficient project delivery.**

Existing stakeholders on the project have resources at their disposal to potentially implement innovative financing on the capital construction portion of this project. CMX has assets that can maintain a capital construction project schedule and encourage expedited project delivery. Other resources include MDOT SHA, Washington County, MD, the surrounding MPO, nearby cities, and Morgan County, West Virginia. These public partners can leverage their expertise in managing public stakeholders.

5. DOT Priority Selection Considerations

Hancock, MD, and the surrounding community in general, are home to higher than national average birth and marriage rates; of the four nearest Census Tracts, three are above average in both metrics. The future, improved US 522 bridges will ensure an improved travel experience for these families during both local and regional travel.

Additionally, the Project will ease congestion and reduce time delay by enhancing redundancy and improving traffic flow and capacity (**Refer Section 4.3**). By funding a PEL study for the replacement of the US 522 bridges, MDOT and WVDOT will evaluate each alternative's impacts to identify the most effective rehabilitation or replacement approach for the community.

MDOT is well versed in executing construction projects and has a steady list of successful projects. MDOT is confident that after confirming the preferred alternative identified in the PEL study, the agency will start construction within two years of the PEL study's completion.

Figure 16 Adjacent Census Tracts; High Birth and Marriage Rates