



**I-81 Widening MM 221.45 to
MM 225.6
Initial Financial Plan**

November 30, 2022

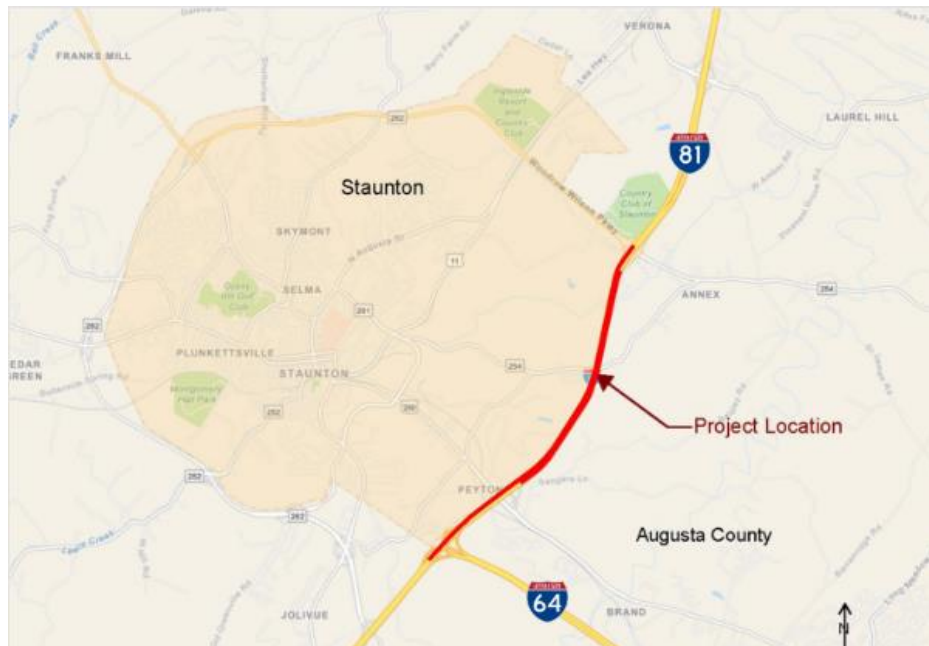
State Project Number: 0081-007-013, P101, R201,
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UPC: 116269

TABLE OF CONTENTS

1. Project Description	3
2. Schedule	4
3. Project Cost	5
4. Project Funds	6
5. Financing Issues	7
6. Cash Flow.....	7
7. P3 Assessment.....	7
8. Risk and Response Strategies	7
9. Annual Update Cycle	8

1. PROJECT DESCRIPTION

The 2018 I-81 Corridor Improvement Plan (CIP) Project ID 61 is located along I-81 between mile markers (MM) 221.45 and 225.6 and entered the Six Year Improvement Plan (SYIP) in the FY20-25 plan under the UPC 116269. The project is located within Augusta County immediately adjacent to the City of Staunton. The project has staggered northbound and southbound termini: Northbound improvements begin at Route (Rt.) 250 on-ramp and ends at the Rt. 262 off-ramp. The southbound improvements begin further south, approximately 2300 feet south of the I-64 off-ramp, north to the Rt. 262 interchange. The southbound limits were extended further south to avoid negative operational/safety impacts of dropping the new lane between the closely spaced Rt. 250 (Exit 222) and Interstate 64 (Exit 221) interchanges and the associated auxiliary lane weave.



GEOGRAPHIC AREA

The purpose of the project is to sensibly address existing and future capacity needs along I-81 Northbound (NB) and I-81 Southbound (SB), mile marker 221.45 - 225.6, while maintaining roadway and bridge safety features, improving operational safety by adding I-81 capacity, improving I-81 travel reliability for the public, limiting impacts to adjoining access ramps/loops, and replacing deficient bridge components within the project. The project will be accomplished in such manner consistent with the I-81 Corridor Improvement Program development at the project termini. More specifically, these improvements will:

- Add 1 lane and associated bridge widening in the northbound direction of I-81 from U.S. 250 on-ramp to Virginia Route 262 exit ramp
- Add 1 lane and associated bridge widening in the southbound direction of I-81 from Va. 262 south to ±1,200 south of the I-81 bridge over the I-81SB / I-64 Eastbound (EB) ramp

- Replace or repair deficient structural elements of the existing bridges with the project; replace the existing deficient bridge decks (five bridges total)

Interstate 81 between MM 221.45 to 225.6 is classified as Rural Interstate System (GS-INT) with a design speed of 70 MPH (posted 65 mph) between MM 221.45 to MM 224.6 and a design speed of 75 mph (posted 70 mph) between MM 224.6 to MM 225.6. The proposed widening scheme generally follows constructing an additional lane to the median. The typical section is primarily comprised of three 12' lanes and two 12' total shoulders per direction.

Originally, this project was identified as Project ID #61 in the 2018 I-81 CIP and was initiated as a design-bid-build project. Subsequent to the project scoping phase the delivery method was changed to design-build. VDOT determined that project delivery via design-build contracting afforded the opportunity for competition during the project's procurement as well as it would expedite completion of the improvements. VDOT developed a conceptual design contained in a Request for Proposal (RFP) Information Package that reflected the basic project design elements and configuration. The Design-Builder will be responsible for final design in accordance with the Contract Documents.

Environmental Summary

The environmental study for the project includes both the southbound and northbound lanes of I-81 between mile markers 221.45 and 225.6. The Federal Highway Administration (FHWA) concurred with a Categorical Exclusion (CE) level National Environmental Policy Act (NEPA) document on April 27, 2022. After public input the CE document was approved by the FHWA on September 21, 2022.

VDOT will update the Document Reevaluation for RW Authorization (EQ-201) prior to RW authorization, the Document Reevaluation for PS&E Authorization (EQ-200), and the Environmental Certification/Commitments Checklist (EQ-103) prior to the Design-Builder being authorized to begin construction.

Project Website

Additional information can be found on the Project website, which may be accessed on VDOT's external website. <http://www.improve81.org/>

2. SCHEDULE

Conceptual design and project development for the I-81 Widening between MM 221.45 and 225.6 project began in February 2020. The Request for Qualifications (RFQ) was advertised on July 1, 2022. It is anticipated that the Request for Proposals (RFP) will be released October 19, 2022 with due dates for the Technical Proposals and Price Proposals due on January 11, 2023 and February 15, 2023 respectively.

Milestone dates for the design-build contract are as follows:

- Notice of Intent to Award: February 22, 2023
- CTB Approval/Notice to Award: March 15, 2023
- Notice to Proceed: April 7, 2023
- Final Completion: June 8, 2027

PROJECT SCHEDULE OVERVIEW

Task	Calendar Year						
	Start	Finish	2023	2024	2025	2026	2027
Notice to Proceed	4/23		◆				
DB Team Activities	Design	4/23	5/24	■			
	RW/Utilities	6/23	12/24	■			
	Construction	8/23	6/27	■		■	
Construction Complete	6/27						◆

3. PROJECT COST

The total project cost estimate as of August 31, 2022 is \$178,281,682 in year-of-expenditure dollars. The estimated total project cost includes right of way and construction scope elements in addition to District pre-award and post-award costs. The project delivery method is design-build. The estimates, as well as current expenditures for preliminary engineering (PE), right of way (RW) and construction (CN) costs are summarized by phase in the table below.

PROJECT COST BY PHASE

UPC	Phase	Estimate	Current Expenditures as of 8/31/2022	Balance to Complete
116269	PE	\$11,298,000	\$4,335,510	\$6,962,490
	RW	\$2,713,250	-	\$2,713,250
	CN	\$164,270,432	-	\$164,270,432
	TOTAL	\$178,281,682	\$4,335,510	\$173,946,172

Cost Estimating Methodology

The preliminary engineering estimate includes field investigation costs for survey, geotechnical data collection, traffic counts, environmental support, professional engineering design services to develop conceptual design plans and contract documents, as well as proposal payments for the unsuccessful short-listed offerors.

The right of way estimate was developed using the impacts depicted on preliminary RFP plans. Land values were determined via market data. Costs were adjusted as needed for impacts to structures, railroad easements and administrative efforts.

The estimated construction cost was quantity-based, derived from the preliminary plans with appropriate allowances and contingencies applied commensurate with the level of plan

development detail. The design-build contract will be lump sum, with payments made based on Project physical percent complete.

4. PROJECT FUNDS

Project funding is demonstrated in the Staunton Augusta Waynesboro Metropolitan Planning Organization's Long Range Transportation Plan and Transportation Improvement Program (TIP), as well as the Commonwealth's Statewide Transportation Program (STIP). The Staunton Augusta Waynesboro Metropolitan Planning Organization approved its FY21-24 TIP on June 3, 2020 to include \$140,209,650 in I-81 Corridor Funds for all phases of this project. The FY21-24 STIP was subsequently approved by FHWA on September 30, 2020, adding the project and associated funding to the Commonwealth's STIP.

Preliminary Engineering Phase for this project was authorized by the Federal Highway Administration (FHWA) on February 2, 2020 under federal project number NHPP-081-2(329). Note that the project was initially authorized as a design-bid-build delivery with higher PE-phase cost; for revised PE and RW/CN phases as a design-build project are in process.

SUMMARY OF PROJECT AUTHORIZATIONS

Project Authorization Summary as of August 31, 2022					
Federal Project	UPC(s)	Phase Classification	Cost	Federal Funds	Advance Construction
NHPP-081-2(329)	116269	PE	\$11,298,000		\$9,038,400
NHPP-081-2(329)	116269	RW & CN	(Authorization pending)		
Total			\$11,298,000	\$	\$9,038,400

Six Year Improvement Program (SYIP) Funding

Summary of the approved FY23-28 SYP funds allocated to the projects by fund source and year:

SUMMARY OF PROJECT FUNDING BY SOURCE

Funding Source	Previous	FY24	FY25	FY26	FY27	FY28	TOTAL
I-81 Corridor Funds - State	\$30,644,256	\$4,535,323	\$7,677,314	\$11,910,277	\$13,023,442	\$14,686,534	\$82,477,146
I-81 Corridor Funds – Fuel Tax Funds - State	\$20,970,800			\$2,217,010	\$5,553,695	\$14,883,054	\$43,624,559
I-81 Corridor Funds - TIFIA					\$46,269,185		\$46,269,185
TOTAL	\$51,615,056	\$4,535,323	\$7,677,314	\$14,127,287	\$64,846,322	\$29,569,588	\$172,370,890

5. FINANCING ISSUES

VDOT is planning to apply TIFIA loan funds, in the amount of \$46,269,185 which will require additional project reporting requirements. This loan will fund a portion of project 116269 along with regional fuels tax revenues and other state allocations attributed to the I-81 fund.

6. CASH FLOW

The project’s annual cash expenditures will be based on the Design-Builder’s project schedule; the table below is a preliminary cash flow analysis for the project. The project’s cash flow analysis will be updated upon award/annually as expenditures are incurred. The deficit in the cash flow will be addressed in the upcoming SYIP where funding may be able to be adjusted in the outer years.

CASH FLOW ANALYSIS

(Amounts in \$000’s)

Expenditures		Thru FY24	FY25	FY26	FY27	FY28	FY29	TOTAL
116269	PE	5,576						5,576
	Right of Way	460	690					1,150
	Construction	25,732	34,309	42,886	51,463	17,154	0	171,544
Cumulative Expenditures		31,768	66,766	109,652	161,116	178,270	178,270	178,270
Total Annual Allocations		51,615	4,535	10,578	17,137	64,846	29,570	178,282
Cumulative Allocations		51,615	56,150	66,728	83,866	148,712	178,282	178,282
Cash Flow per Year		19,847	-10,616	-42,924	-77,250	-29,558	12	12

7. P3 ASSESSMENT

The Code of Virginia (§33.2-119.C) prohibits tolling on I-81 without prior approval of the General Assembly. As a result, the Interstate 81 Corridor Improvement Fund, Program and Plan was established by Code (§33.2-3601 et seq.), and this project is contained within the plan. Without legislative action abrogating the current CIP, P3 procurement is improbable.

8. RISK AND RESPONSE STRATEGIES

A Risk Management workshop was held on January 18, 2022 and the Risk Management Register was published. The register was an outcome of the discussions and the various risk components and the mitigation strategies associated with the project. Numerous items were discussed, and the list below summarizes the risk items identified at the workshop that have an overall severity rating of 6 or higher and the overall mitigation strategies for these risks. The full Risk Management Register can be found within the project files.

The active significant project risks are:

- **Market Conditions – Market Saturation and Unusual Inflation**
Mitigation: Accelerate this project as design-build to advance this project ahead of several other upcoming large CIP projects to lessen impacts of inflation and reduce concurrent procurements. Estimate has included an additional inflation contingency in accordance with Chief Engineers' memorandum dated June 27, 2022.
- **Erosion & Sediment Control – Sediment Discharge**
Mitigation: Clearly identify SWPP requirements and goals in the RFP technical requirements.
- **Existing Drainage Conveyances**
Mitigation: Department is completing video inspections and refining the scope of any repairs anticipated for existing drainage structures impacted by the project.
- **Railroad Agreement – Potential delays typically encountered with railroad involvement, compounded with the leasing of the line to a 3rd party and the recent sale to VPRA.**
Mitigation: The Department has finalized the rail agreement with all affected parties on October 7, 2022.
- **Cross-slope Correction**
Mitigation: Implementing strategy to facilitate design waivers/exceptions where feasible.

9. ANNUAL UPDATE CYCLE

The submission date of the Initial Financial Plan is November 30, 2022. The first annual update will be submitted by November 30, 2023 and will be based on a "data as of" date of August 31 2023. Future annual updates will be submitted by November 30 of that year, with a "data as of" date of August 31 of that year.