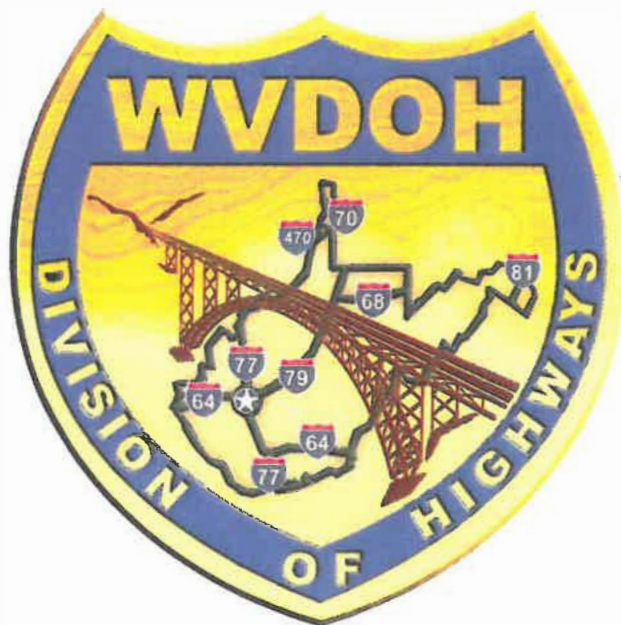


**West Virginia Division of Highways
Design-Build Program Experience**



**Report to the Joint Committee
on Government and Finance**

January 4, 2022



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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D. Alan Reed, P.E.
State Highway Engineer

Jimmy Wriston, P. E.
Secretary of Transportation
Commissioner of Highways

January 4, 2022

The Honorable Craig Blair
West Virginia Senate
1900 Kanawha Boulevard, East
Building One, Room 451M
Charleston, West Virginia 25305

The Honorable Eric Householder
West Virginia House of Delegates
1900 Kanawha Boulevard, East
Building One, Room 464M
Charleston, West Virginia 25305

Joint Committee on Government and Finance
1900 Kanawha Boulevard, East
Building One, Room 214W
Charleston, West Virginia 25305

Dear Senator Blair, Delegate Householder, and Committee Members:

Please find enclosed a report on the Division of Highways' Design-Build Program in 2021.

I appreciate your continued support and interest in highway matters. Should you require additional information, please do not hesitate to contact my office.

Sincerely,

A handwritten signature in blue ink that reads "Jimmy Wriston, P.E.".

Jimmy Wriston, P.E.
Secretary of Transportation/
Commissioner of Highways

JW:DLBb

Enclosures

**Report to the Joint Committee on Government and Finance
Division of Highways Experience on Design-Build Projects
January 4, 2022**

This report has been prepared in accordance with West Virginia Code Chapter 17, Article 2D, “Highway Design-Build Pilot Program” (See Appendix A).

As per the legislation, “the Commissioner of the West Virginia Division of Highways may expedite the construction of projects by combining the design and construction elements of a highway or bridge project into a single contract as provided in this article. On or before January 15, 2014, and annually thereafter the commissioner shall prepare and submit to the Joint Committee on Government and Finance a written report evaluating the experience of the Division of Highways with each project, including whether the division realized any cost or time savings, the number and cost of change orders, the quality of work performed, the number of bids received and other issues the commissioner considers appropriate.”

WVDOH Design-Build Program – 2021

During 2021, the West Virginia Division of Highways (WVDOH) has used the Design-Build method of project procurement to award 24 projects. Twenty-three of the projects were from the regular program and one project was awarded under the bond program.

The design-build project procurement method allows for the design phase and construction phase of a project to be completed by a team, usually a contractor paired with an engineering firm, which typically allows the project to be completed on an accelerated schedule because design and construction can occur concurrently. WVDOH has experienced these time savings on nearly all the design-build projects. With the contractor owning the design from the beginning, they can steer the final design to fit their company's individual strengths while providing a final product that meets the requirements of the original contract. This not only allows for innovation on projects, but it also allows for a better final product which benefits the travelling public. The quality of work performed has been comparable to the projects awarded through the traditional design-bid-build process. The number of contractors that bid on the design-build projects for the WVDOH has increased since the first design-build projects were awarded. The increased competition for projects has led to more competitive bids and a larger number of bids in general. Another benefit of having one team complete the project is the reduction in number of change orders and value engineering proposals compared to traditional design-bid-build projects. It should be noted that all contracts, whether design-bid-build or design-build, will have at least one administrative change order to finalize and close out the project because of the software used to manage the schedule and funds for the projects.

The Design-Build tool continues to be one of the most valuable tools that the WVDOH has at its disposal for expediting work and maintaining quality in design and construction. WVDOH has reported extremely favorable results to the Legislature for all 15 years since the Legislature approved the use of design-build project delivery. As can be seen from the attached list of projects, this tool remains crucial in the delivery of the Roads to Prosperity Program.

Since July 1, 2019, the WVDOH has been required to track contractual obligations of the design-build program instead of contract expenditures. This section of the code was changed to mirror the tracking procedures of federal funds.

Project List

PROJECT NAME	STATE PROJECT NUMBER	LETTING	LOW BID	# OF BIDS REC'D	# OF CHANGE ORDERS	CHANGE ORDER COST
BOND PROJECTS						
Cheat River Bridge	X342-H-40.21 08	11/9/2021	\$147,859,550.00	5	0	\$0
REGULAR PROGRAM PROJECTS						
Guyandotte Ave ADA Ramp +7	U355-16-23.44 00	2/9/2021	\$783,809.00	7	1	\$0
Huttonsville - Beverly ADA Ramps	U342-219-21.54	2/9/2021	\$344,277.00	8	1	(\$500)
Dry Branch Bridge	S320-79/3-17.16 00	4/13/2021	\$1,705,377.00	5	1	\$0
Cove Road	S315-507-0.39 00	5/11/2021	\$136,447.00	7	0	\$0
Junior - Philippi Rd +4	S301-250-1.29 00	5/11/2021	\$163,793.00	5	0	\$0
MacCorkle Ave SE +1	S320- 61/ 21.42 00	5/11/2021	\$570,073.00	6	0	\$0
Red Sulphur Bridge	S332-12-9.23 00	5/11/2021	\$6,331,300.00	4	0	\$0
Wardensville ADA Ramps +2	U316-55-35.10 00	5/11/2021	\$599,640.00	4	0	\$0
35th St +1	S320-60/63-0.39 00	6/8/2021	\$182,468.00	6	0	\$0
I-70 Mining - Panels 19	S335-70-11.95 04	6/8/2021	\$3,493,393.00	1	0	\$0
Jackson St +3	S325-19-10.31 00	6/8/2021	\$1,281,978.00	8	0	\$0
Pennsylvania Ave +1	S315-105-0.00 00	6/8/2021	\$809,000.00	6	1	\$0
Sissonville Drive +2	S320- 21-6.83 00	6/8/2021	\$235,978.00	7	0	\$0
Weston - Jane Lew Rd +3	S321-19-24.64 00	6/8/2021	\$209,964.00	8	0	\$0
Burroughs St. +4	S331-59/2-0.01 00	7/13/2021	\$577,000.00	8	0	\$0
Bigley Ave South & North	S320-119-0.01 00	8/10/2021	\$280,777.00	4	0	\$0
Lt Darwin K Kyle Memorial Bridge	S303-17-11.50 00	8/10/2021	\$4,677,125.00	7	1	\$0
Pennsylvania Ave North & South	S320-119-18.31 00	8/10/2021	\$119,687.00	4	0	\$0
Shepherdstown ADA Ramps +2	U319-480/1-0.01 00	8/10/2021	\$335,878.00	3	0	\$0
Barboursville Curb Ramps	S306-60-12.10 00	9/14/2021	\$562,440.00	6	0	\$0
Bethany Pike +8	S305-88-2.47 00	9/14/2021	\$425,778.00	4	0	\$0
I-70 Mining - Panels 20	S335-70-11.95 05	10/19/2021	\$15,629,738.48	1	0	\$0
Adams Ave Curb Ramps +1	S306-60-1.20 00	11/9/2021	\$748,140.00	7	0	\$0

***Projects listed with no change orders are not at the point to finalize the project which would reflect the final administrative change order. Zero dollar change orders are used to change the item of payment from Lump Sum to Dollars/Unit.**

Appendix A

West Virginia Code §17-2D

“Highway Design-Build Pilot Program”

CHAPTER 17. ROADS AND HIGHWAYS.

ARTICLE 2D. HIGHWAY DESIGN-BUILD PILOT PROGRAM.

§17-2D-1. Short title.

This article shall be known and may be cited as the **West Virginia Highway Design-Build Pilot Program**.

CHAPTER 17. ROADS AND HIGHWAYS.

ARTICLE 2D. HIGHWAY DESIGN-BUILD PILOT PROGRAM.

§17-2D-2. Highway Design-Build Program.

(a) Notwithstanding any provision of this code to the contrary, the Commissioner of the West Virginia Division of Highways may expedite the construction of projects by combining the design and construction elements of a highway or bridge project into a single contract as provided in this article.

(b)(1) The Division of Highways may contractually obligate no more than \$50 million in each year in the program: Provided, That if any of the \$50 million is not so contractually obligated in one year, the remaining amount may be applied to the following year's contractual obligation amount: Provided, however, That the total aggregate amount to be contractually obligated may not exceed \$150 million in any one year: Provided further, That for fiscal years beginning after June 30, 2017, the Division of Highways may contractually obligate no more than \$200 million on any one project: And provided further, That for fiscal years beginning after June 30, 2017, the Division of Highways may contractually obligate no more than \$400 million in each year in the program: And provided further, That for fiscal years beginning after June 30, 2017, if any of the \$400 million is not contractually obligated in any year, the remaining amount may be applied to the following year's contract obligation amount: And provided further, That for fiscal years beginning after June 30, 2017, the total aggregate amount to be contractually obligated may not exceed \$500 million in any one year.

(2) Notwithstanding the limits set forth in §17-2D-2(b)(1) of this code, for projects financed without bonds for fiscal years beginning after June 30, 2019, the Division of Highways may contractually obligate in the program:

(A) No more than \$200 million on any one project;

(B) No more than \$200 million in each year; and

(C) No more than \$300 million in the total aggregate amount in any one year.

(3) Notwithstanding and in addition to the limits set forth in §17-2D-2(b)(1) and §17-2D-2(b)(2) of this code, for projects financed with bonds for fiscal years beginning after June 30, 2018, the Division of Highways may contractually obligate in the program:

(A) No more than \$300 million on any one project;

(B) No more than \$600 million in each year; and

(C) No more than \$700 million in the total aggregate amount in any one year.

(c) A design-build project may be let to contract only in accordance with the commissioner's established policies and procedures concerning design-build projects.

(d) Projects receiving funding above the amount of federal core funding as appropriated to the state by formula in a federal highway authorization, currently titled MAP-21, may utilize the program, but shall not be included in calculating contractual obligation limits provided by §17-2D-2(b) of this code.

(e) The contractual obligations made for projects that are necessitated by a declared state of emergency within a county that the Governor has included in a declaration of emergency shall not be included in calculating contractual obligation limits provided in §17-2D-2(b) of this code.

CHAPTER 17. ROADS AND HIGHWAYS.

ARTICLE 2D. HIGHWAY DESIGN-BUILD PILOT PROGRAM.

§17-2D-3. Invitation for bids.

(a) The division shall prepare an invitation for bids for prequalified design-builders, which must provide at a minimum:

- (1) The procedures to be followed for submitting bids and the procedures for making awards;
 - (2) The proposed general terms and conditions for the design-build contract;
 - (3) The description of the drawings, specifications or other information to be submitted with the bid, with guidance as to the form and level of completeness of the drawings, specifications or submittals that will be acceptable;
 - (4) A proposed time schedule commencement and completion of the design-build contract;
 - (5) Budget limits for the design-build contract, if any;
 - (6) Requirements or restrictions for the subletting of specific portions of the design-build contract, if any; and
 - (7) Requirements for performance bonds, payment bonds, insurance, professional liability insurance and workers' compensation coverage.
- (b) The division shall make available to the qualified design-builders, a list of prequalified consultants, approved subcontractors, suppliers and sureties, as applicable, additional information including, but not limited to, surveys, soils reports, drawings or information regarding existing structures, environmental studies, photographs or references to public records, or other pertinent information.
- (c) The division shall set forth its needs with sufficient clarity to assure that there is a comprehensive understanding of the project's scope and requirement.

CHAPTER 17. ROADS AND HIGHWAYS.

ARTICLE 2D. HIGHWAY DESIGN-BUILD PILOT PROGRAM.

§17-2D-4. Acceptance of design-build bid.

- (a) The design-builder shall submit the bid to the division as required in the invitation for bids.
- (b) The design-builder shall furnish a bid bond not to exceed five percent of the maximum cost of the design-build contract.
- (c) The selection committee may choose to reject all bids. If the selection committee chooses to accept a bid, the committee shall award the project to the qualified design-builder based on low bid or a value-based selection process combining technical qualifications and competitive bidding elements. The selection committee shall ascertain that the submissions comply with the requirements of this article and the policies and procedures of the commissioner.

CHAPTER 17. ROADS AND HIGHWAYS.

ARTICLE 2D. HIGHWAY DESIGN-BUILD PILOT PROGRAM.

§17-2D-5. Report to the Legislature.

On or before January 15, 2014, and annually thereafter, the commissioner shall prepare and submit to the Joint Committee on Government and Finance a written report evaluating the experience of the Division of Highways with each project completed during the prior calendar year, including whether the division realized any cost or time savings, the number and cost of change orders, the quality of work performed, the number of bids received and other issues the commissioner considers appropriate: Provided, That the report submitted on or before January 15, 2014, shall contain such information as to all design-build projects that have been completed under the program prior to 2014.