

March 2019

## West Virginia 2 – Proctor to Kent

State Project U352-2-11.66 00  
Federal Project NH-0002(528)D

# ENVIRONMENTAL ASSESSMENT – FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Prepared for:



**CDM  
Smith**

**FEDERAL HIGHWAY ADMINISTRATION  
FINDING OF NO SIGNIFICANT IMPACT: WEST VIRGINIA 2 – PROCTOR TO KENT PROJECT  
WETZEL AND MARSHALL COUNTIES, WEST VIRGINIA**

**State Project No. U352-2-11.6 00  
Federal Project No. NH-0002(528)D**

The Federal Highway Administration (FHWA) and the West Virginia Department of Transportation, Division of Highways (WVDOH) have prepared an Environmental Assessment (EA) to identify and evaluate the potential environmental impacts as a result of the proposed West Virginia 2 – Proctor to Kent Project, located in Wetzel and Marshall Counties, West Virginia.

The EA analyzed the potential impacts of the proposed action on the natural, physical, cultural, and socioeconomic environments. In accordance with the appropriate federal regulations (40 CFR 1502.14 [a]; 23 CFR 771.123 [c]) and FHWA Technical Advisory T 6640.8A, five alternatives were evaluated. They included the No-Build Alternative and four build-alternatives. All of the build alternatives would upgrade and relocate a 5.25-mile portion of West Virginia 2 (WV 2) from Proctor, West Virginia to Kent, West Virginia and meet the purpose and need. Following a screening evaluation that included engineering design, environmental data, and public input, Alternative 1A was identified as the Preferred Alternative and carried forward for detailed analysis.

Impacts from the Preferred Alternative are not anticipated to be significant on the natural, physical, social, or cultural environs. The combined effects of this project with foreseeable future projects are not anticipated to produce significant cumulative impacts to these resources.

The Finding of No Significant Impact (FONSI) was prepared pursuant to the Council on Environmental Quality Regulations (40 CFR, Parts 1500-1508). The FHWA has determined that construction of the Preferred Alternative will have no significant impact on the human environment within the meaning of the *National Environmental Policy Act of 1969* (42 USC 4321 et seq.). This FONSI is based on an EA which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

4/16/19

Date

  
For FHWA

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# 1. OVERVIEW

The West Virginia Department of Transportation Division of Highways (WVDOH), in cooperation with the Federal Highway Administration (FHWA), has prepared this Finding of No Significant Impact (FONSI) pursuant to the Council on Environmental Quality Regulations (40 CFR, Parts 1500-1508) for the proposed West Virginia 2 – Proctor to Kent Project. The project is located in Wetzel and Marshall Counties, West Virginia.

The project will upgrade and relocate a 5.25-mile portion of West Virginia State Route 2 (WV 2) from Proctor, West Virginia to Kent, West Virginia. The project begins 0.47 of a mile south of the Marshall County Line and ends 0.18 of a mile south of Marshall County Route 78 just north of Sims Run. The proposed improvements include the upgrade of WV 2 from a rural two-lane arterial to a four-lane divided highway. This project is one of many on WV 2 that will ultimately provide a safe, convenient highway with increased traffic capacity from Interstate Route 77 (I-77) in Wood County, West Virginia to Hancock County, West Virginia.

The project location is shown in **Figure 1-1**.

In accordance with the appropriate federal regulations (40 CFR 1502.14 [a]; 23 CFR 771.123 [c]) and FHWA Technical Advisory T 6640.8A, five alternatives were evaluated. They included the No-Build Alternative and five build-alternatives. All of the build-alternatives would meet the purpose and need as defined in the Environmental Assessment (EA). Alternative 1A was identified as the Preferred Alternative following a screening evaluation that included engineering design, environmental data, and public involvement. Alternative 1A's configuration was shifted to avoid and minimize impacts to a historic property boundary and industrial properties, including the adjustment of the horizontal curves and vertical profile. The complete EA is incorporated into this document by reference and attached as an electronic file.

## 1.1 Purpose and Need

The WV 2 project has the following needs:

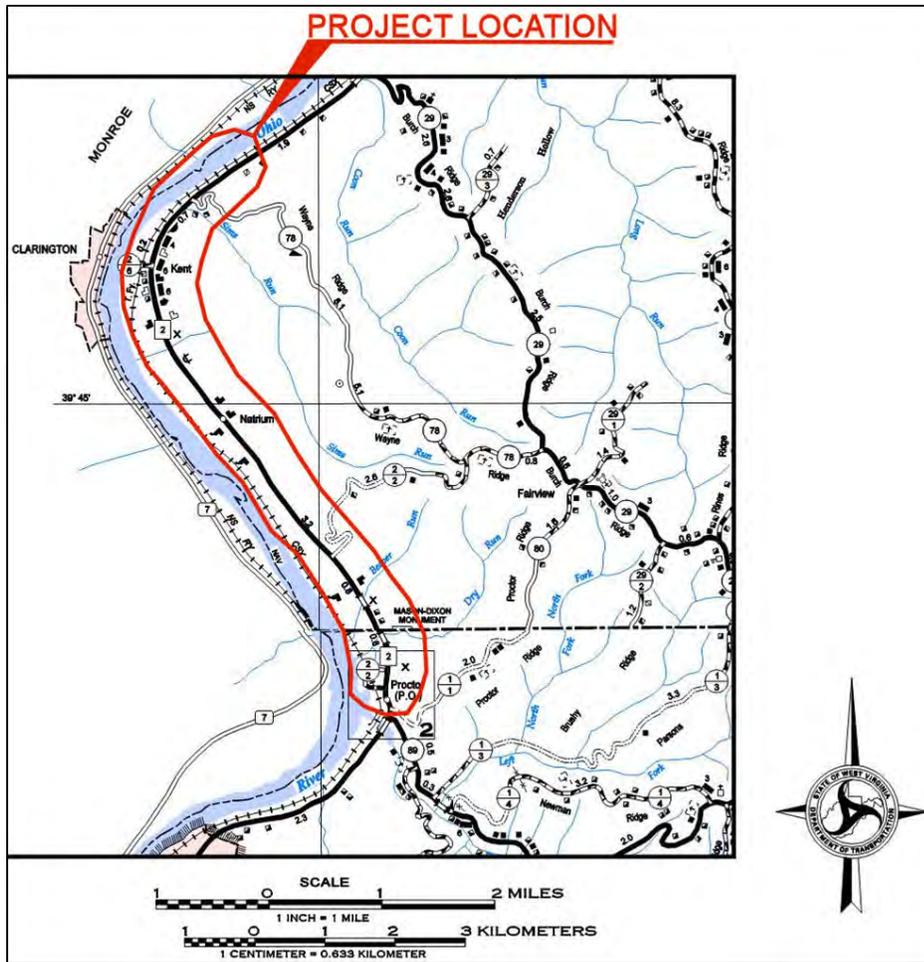
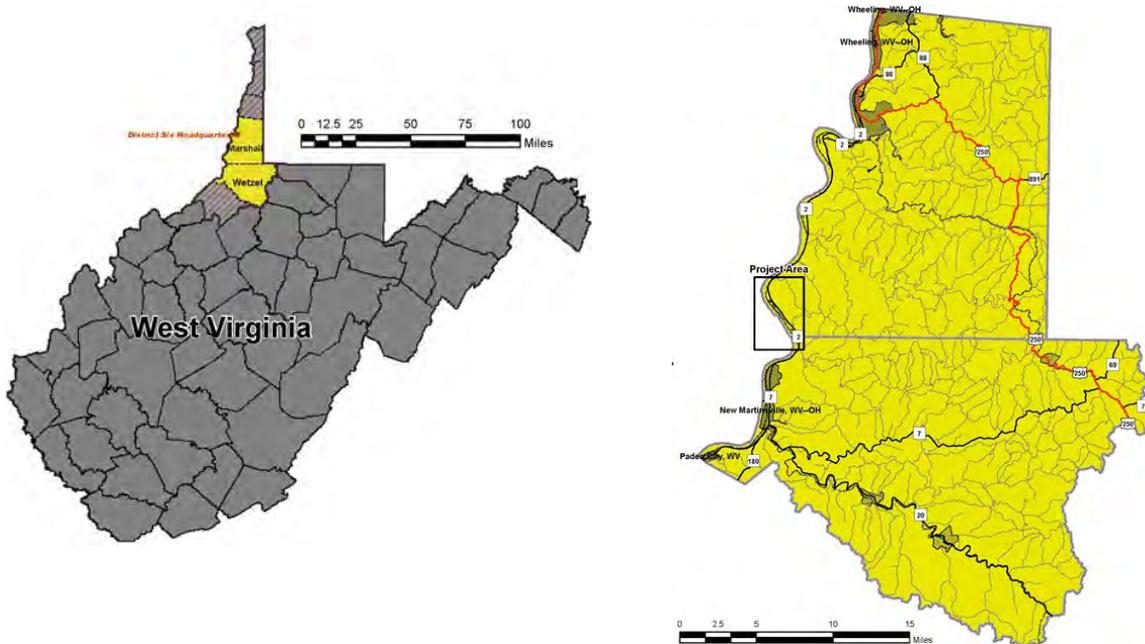
1. Improve traffic volume capacity.
2. Enhance safety by providing operational improvements to reduce crash rates by widening the roadway and reducing the number of at-grade access points and the traffic conflicts associated with multiple at-grade intersections.

Thus, a relocated and widened WV 2 would alleviate traffic congestion and enhance safety along WV 2.

Based on these transportation needs, WVDOH developed the following project purpose statement:

*The purpose of the proposed project is to increase system capacity and enhance safety through operational improvements.*

Figure 1-1: Project Location



## 1.2 Environmental Impacts

Table 1-1 presents a summary of key impacts for the Alternative 1A Preferred Alternative.

**Table 1-1: Alternative 1A Preferred Alternative Summary of Environmental Impacts**

| Evaluation Factor  | Key Impact   |
|--|--|
| <b>Engineering</b>   |  |
| Prelim. Length of WV 2 Improvements (miles)  | 5.3 miles  |
| Roadway Configuration  | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders |
| Estimated earthwork excavation (cubic yards)   | 3,059,351  |
| <b>Natural Environment</b>   |  |
| Stream Impacts (linear feet)   | 1,913  |
| Wetlands (acres)   | 3.03   |
| Floodplains (acres)  | 5.59   |
| T&E Species  | 0  |
| <b>Human Environment</b>   |  |
| Forested Land (acres)  | 174.61   |
| Historic Resources   | None   |
| Archaeological Sites   | None   |
| Cemetery   | None   |
| Industrial Facilities (e.g. Chemical Plant)  | 1-Axiall Brine Piping Infrastructure   |
| Commercial Facilities (e.g. Businesses)  | 1 – Bayer Heritage Credit Union  |
| Residential Displacements  | 5  |
| Environmental Justice Populations  | None   |
| Noise <sup>2</sup>   | Yes  |
| Air  | No   |
| Prime Farmland/ Farmland of Statewide Importance (acres)                                 | 2.97/76.52   |
| Section 4(f)/6(f) Properties   | 0  |
| <b>Physical Impacts</b>  |  |
| Hazard Waste Sites   | None   |
| Public Utility Conflicts   | None   |
| <b>Financial / Costs</b>   |  |
| Estimated Construction Costs (Excluding utility relocation and right of way acquisition) | \$58,494,312   |

## 2. PROPOSED MITIGATION

The following table identifies mitigation commitments for the project as discussed in the EA.

**Table 2-1: Mitigation Measures**

| Resource or Element          | Mitigation Measure  |
|------------------------------|---|
| Property Acquisitions        | All properties to be acquired, or used temporarily, will be purchased or utilized in accordance with the Uniform Relocation and Real Property Acquisition Policies Act, Title VI of the Civil Rights Act, and applicable West Virginia laws.  |
| Cultural Resources           | Site MR-0037-0109 is currently located along existing WV 2 and will not be directly affected by Alternative 1A. The location of the resource will be noted on construction plans with instructions that it is not to be disturbed.  |
| Air Quality                  | Heavy construction equipment, including excavators, scrapers, graders, rollers, compactors, and pavers, may be used to clear and grub, excavate, grade, and pave for construction of the project. Air pollution control measures should be employed by contractors during construction demolition, excavation, and transportation of soils/aggregates to reduce dust emissions as addressed by 45CSR4 and 45CSR17. Backup or emergency electrical generators may be subject to federal and state requirements and may require an air permit in accordance with 45CSR13.   |
| Noise                        | Construction noise impacts will occur due to the close proximity of numerous noise-sensitive receptors to project construction activities. All efforts should be made to minimize exposure of noise-sensitive areas to construction noise impacts. The contractor shall notify WVDOH if construction activities are required in the vicinity of one or more residential neighborhoods.  |
| Streams and Wetlands         | The following permits are required for the project prior to construction: <i>Clean Water Act (CWA) Section 404 Permit</i> from the U.S. Corps of Engineers (USACE); <i>CWA Section 401 Certification</i> from the West Virginia Department of Environmental Protection (WVDEP); and a <i>National Pollutant Discharge Elimination System (NPDES) Permit</i> from WVDEP. Mitigation for wetland and stream impacts will be handled by paying into the West Virginia Department of Environmental Protection In Lieu Fee program. Best management practices (BMPs) will be used during construction to control sedimentation and erosion and protect water quality.                                    |
| Floodplains                  | During final design and prior to construction, WVDOH will coordinate with the Wetzel and Marshall County Floodplain Coordinators, as appropriate. During construction, impacts to floodplains will be mitigated by using appropriate erosion and sedimentation control measures. Post-construction mitigation measures for base floodplain encroachments may include committing to special flood-related design criteria, elevating facilities above base flood level where feasible, and locating non-conforming structures and facilities out of the floodplain. In addition, appropriate stormwater controls will be installed. Design of these controls will occur during road widening design. |
| Potentially Hazardous Wastes | The contractor shall develop a Hazardous Materials Contingency Plan (HMCP) in coordination with the WVDEP to include standard construction measures required by federal, state, and local policies for hazardous materials, removal of onsite debris, and confirmation of presence of pipelines on-site.  |

### 3. PUBLIC PARTICIPATION

Development of the EA involved coordination with local, state, and federal agencies, and the public. A public informational meeting for the project was held on November 2, 2017 at New Martinsville Elementary School. A summary of this meeting and comments received are located in the Appendix B of the EA. Following the November 2017 meeting, the WVDOH considered comments from the agencies, public and project stakeholders and made refinements to the alternatives to avoid and minimize impacts to both the human and natural environment.

The EA for the project was posted on the WVDOH website in early August 2018. Hard copies were distributed to federal, state, and local agencies at the same time. A meeting flyer announcing the availability of the EA and the time and date of the upcoming public informational workshop was posted on the WVDOH website and published in the local newspaper. The WVDOH conducted the public informational workshop on August 16, 2018 at the New Martinsville Elementary School in Martinsville, WV. The meeting was held to review the EA with federal, state, and local agencies, and the public, to answer questions on the project and gather comments. A total of 33 members of the public participated in the public meeting. The meeting summary is included as an attachment of this FONSI document.

### 4. COMMENTS ON THE EA

The comment period on the EA continued through September 17, 2018. Comments could be submitted at the August 2018 meeting, through postal mail, email, and on the WVDOH website. A total of 23 written comments were received during the comment period including 20 from citizens, and three letters from the West Virginia Department of Natural Resources, West Virginia Division of Culture and History, and the U.S. Environmental Protection Agency. Comments and responses on the EA are discussed in this section. All comment letters on the EA can be found in this FONSI as an attachment.

#### 4.1 Agency Comments

##### 4.1.1 West Virginia Department of Natural Resources

Comment 1: The EA contained data on chemical and biological parameters but did not contain data on the physical habitat of the channels that may be potentially impacted. The EPA RBP is the standard methodology used in West Virginia to determine habitat quality. It is a quick but relatively robust methodology and probably should have been included in the EA so that the public would have a better understanding of the potential environmental impacts of the proposed project.

Response 1: Detailed information on physical, chemical and biological parameters is provided in the *West Virginia State Route 2 Proctor to Kent Project Stream and Wetland Technical Report*, updated May 2018. The report is included in the project file and available for review upon request. The information provided in the EA on streams and wetlands was based on preliminary engineering design to provide a baseline for the permitting process that will be completed during final design. Permit applications will include detailed information on impacts and also mitigation, consistent with the 2008 Final Compensatory Mitigation Rule.



Comment 2: The Ohio River is a significant high quality fishery within the immediate vicinity of the project. While impacts to the Ohio River resulting from the proposed project are highly unlikely, given the significance of the resource the EA should have at least acknowledged that the Ohio River is within the area of potential impacts.

Response 2: The streams discussion in the EA notes that the streams in the study area are tributaries of the Ohio River. Further discussion of the streams systems within the Ohio River floodplain are provided in the *West Virginia State Route 2 Proctor to Kent Project Stream and Wetland Technical Report*, updated May 2018.

#### 4.1.2 West Virginia Division of Culture and History

Comment 3: We have reviewed the submitted information and remain in concurrence with our earlier reviews in which we determined that resources MR-0037-0109; MR-0058; MR-0144; WZ-007; WZ-0028; WZ-0136; and WZ-0140 are eligible for the National Register of Historic Places. While it was determined that Alternative 1 would result in a visual adverse effect to resource MR-0144, in our most recent review letter, dated March 15, 2018, revisions to the route for Alternative 1A avoided the adverse effect. We also remain in concurrence that no other resources eligible for or listed in the National Register will be affected by the proposed project with preferred Alternative 1A. No further consultation is necessary regarding this architectural resource; however, we do ask that you contact our office if your project should change.

Response 3: Comment noted.

Comment 4: We understand that an informational public meeting regarding the proposed project will be held at the New Martinsville Public Library in New Martinsville on August 16, 2018. Comments are due by September 17, 2018. Please forward any comments that you receive to this office. If you receive no comments by the deadline, please indicate that *in writing* to this office.

Response 4: Comments received during the comment period were forwarded to the WV Division of Culture and History.

#### 4.1.3 United States Environmental Protection Agency

Comment 5: We suggest that additional information be provided to support the project purpose and need. This discussion should also describe the logical termini for this project, existing traffic capacity and projected data.

Response 5: WV 2 is a two lane highway with 12-foot lanes and variable width shoulders through the limits of this project. Immediately to the south there is a four-lane bridge and a short section of four-lane highway, a new bridge design is under construction. Several miles to the north of this project WV 2 has a continuous four lane typical section from Franklin to Wheeling. The next project to be constructed is the Kent to Franklin section. This project will complete the continuous four-lane to Wheeling. The traffic analysis and project data is provided in the EA and Appendix A – Design Report.

Comment 6: We suggest additional detail be provided explaining the reasons for dismissing the widening alternative. Additional opportunities to widen the existing road to minimize impacts should be considered.

Response 6: The four build alternatives were developed taking into consideration the impact of existing facilities, impacts to environmental resources, and minimizing construction cost. Widening the existing WV 2 would not meet the project need of enhancing safety by providing operational improvements by reducing the number of at-grade access points. An additional project requirement was to improve the industrial plant security by consolidating plant entrances and limiting the access to their property. Elimination of previous alternatives was coordinated with FHWA and WVDOH.

Comment 7: Page 3-26 mentions methods that may reduce construction air emissions. We suggest these methods and other current best management practices be implemented.

Response 7: Air pollution control measures will be employed by contractors during construction demolition, excavation, and transportation of soils/aggregates to reduce dust emissions as addressed by 45CSR4 and 45CSR17.

Comment 8: EPA recommends early consideration of potential mitigation options to ensure that the proposed mitigation plan is in line with the 2008 Mitigation Rule and that mitigation provided is the most ecologically preferable option. Page 3-39 states that mitigation for stream and wetlands impacts will be handled by paying into the In-Lieu Fee Program. All practicable measures to avoid and minimize adverse impacts to aquatic resources should be implemented before suggesting mitigation.

Response 8: The information provided in the EA on streams and wetlands was based on preliminary engineering design to provide a baseline for the permitting process that will be completed during final design. Permit applications will include detailed information on impacts and also mitigation, consistent with the 2008 Final Compensatory Mitigation Rule.

Comment 9: It appears that the field work for aquatic resources included more data collection than is presented in the EA and appendices. We suggest that additional description be provided for aquatic resources within the EA and appendices. Please include a narrative describing the functions of the potentially impacted resources and supplement this with information that appears to have been collected, such as RBP, HGM, SWVM calculations, photographs, etc. From the information provided in Table 3-12, much of the sampling could not be conducted due to dry conditions. We recommend discussion of the sampling and any implications dry conditions may have, including to RBP and SWVM calculations.

Response 9: Detailed information on physical, chemical and biological parameters for aquatic resources are provided in the *West Virginia State Route 2 Proctor to Kent Project Stream and Wetland Technical Report*, updated May 2018. The FHWA requested this technical report be removed as an Appendix to the EA and is therefore referenced in the EA on page 3-39 as follows “...this information is included in the project file and available for review upon request.” The information provided in the EA on streams and wetlands was based on preliminary engineering design to provide a baseline for the permitting process that will be completed during final design. Permit applications will include detailed information on impacts and also mitigation, consistent with the 2008 Final Compensatory Mitigation Rule.

Comment 10: There is no detailed information regarding terrestrial resources. Please provide additional discussion.

Response 10: Habitats in the project area of the realignment are generally made up of lawns, hardwood dominated woodlands, streams and drainages, perched wetlands, a few ponds, areas of fields and woodland edges, residential areas, industrial areas, and recently disturbed land. The majority of the area includes large industrial plants such as Covestro, LLC and Axiall Corporation. The remaining areas are mostly residential. Habitats contain steep slopes surrounded by a mixed deciduous hardwood forest. Most of the forested habitat occurs on the eastern side of the project area and the existing WV 2.

Detailed information on terrestrial resources is provided in the *West Virginia State Route 2 Proctor to Kent Project Wildlife Report*, revised December 2017 and the *West Virginia State Route 2 Proctor to Kent Project Stream and Wetland Technical Report*, updated May 2018, both under separate cover.

Comment 11: Please discuss how the project complies with Executive Order 11988 related to floodplain management.

Response 11: The four Build alternatives were designed to minimize the impact to floodplains to the furthest extent possible; however impacts to floodplains from relocating the highway are unavoidable. Alternative 1A, the Preferred Alternative, was designed to minimize the impacts to the 100-year floodplain and as a result impacts the least acreage of floodplains. During construction, impacts to floodplains will be mitigated by using appropriate erosion and sedimentation control measures. Post-construction mitigation measures for base floodplain encroachments may include committing to special flood-related design criteria, elevating facilities above base flood level where feasible, and locating non-conforming structures and facilities out of the floodplain. In addition, appropriate stormwater controls will be installed. Design of these controls will occur during road widening design.

Comment 12: Stormwater management should address existing and new roadway design and incorporate current best management practices. Also, stormwater management facilities should not be located in aquatic habitats. We suggest opportunities to improve fish and wildlife passage at culverts and other stream crossings be investigated. Measures could include bridges, natural bottom culverts, over-sized culverts, etc.

Response 12: The amount of vegetative clearing and impervious surface within the right-of-way will be minimized through BMPs and highway design. The following BMPs and recommendations will be considered during final design and construction: minimize the linear distance of streams being impacted; design and construct culvert structures that promote the reestablishment of benthic habitat within the culvert; implement an approved *Erosion and Sedimentation Control Plan* to prevent sediment deposition to aquatic habitats; promptly revegetate all disturbed areas to prevent accelerated erosion; designate any equipment fueling and service areas away from aquatic habitats; and construct all stormwater management facilities to prevent or minimize runoff resulting in erosion and sedimentation.

Comment 13: We suggest this project comply with EO 13751 *Safeguarding the Nation from the Impacts of Invasive Species*. It would be helpful if the study included any plans for invasive species monitoring or eradication.

Response 13: All seeding and revegetation will be conducted in a manner to prevent the introduction of invasive plant species onto the roadway's right-of-way. Efforts will be made to ensure that no invasive species are introduced into the area and any replanting or reseeding will be accomplished with native, noninvasive plants. All efforts will be taken to minimize or prevent the movement of invasive plants (roots, tubers, and seeds) found in the project area. There are no plans specifically to monitor vegetative success after the project is completed beyond routine maintenance operations.

Comment 14: We suggest the EA consider EO 13045 *Protection of Children from Environmental Health Risks and Safety Risks*.

Response 14: Both FHWA and WVDOH have considered the health effects from potential impacts to air quality, water quality and safety. Consideration of potential impacts to children's health and safety linked to highway transportation occurs through FHWA programs, initiatives, and research to address health-related issues. Transportation planning results in affirmative steps to minimize and mitigate any adverse effects to children. Although EO 13045 does not require project-specific children's Health Impact Assessment as part of the environmental review process for NEPA compliance, the EA does address potential direct, indirect, and cumulative health and safety impacts to children as part of the potential impacts analysis for all populations in the potential project area.

Comment 15: We suggest the project team closely coordinate with the public on design and construction impacts as the project moves forward.

Response 15: Coordination with the public will continue in a variety of ways. The WVDOH will update the public on this project at informational workshops for other transportation projects in the area. This project is in the Roads to Prosperity program and as it progresses, information will be posted on the Drive Forward WV website that provides the latest updates for projects in the Roads to Prosperity program. Information will also be posted on the WVDOH's project website. When appropriate, the WVDOH will prepare news releases on the status of the project. The WVDOH will also directly contact residents, local businesses, emergency service and public health providers, and government officials when in the best interest of maintaining public health and safety.

Comment 16: We suggest the project team consider Federal Highway's handbook for supporting pollinators. It would be helpful if the study discussed any opportunities to plant species attractive to pollinators.

Response 16: Pollinators must have a diversity of plants with overlapping blooming seasons to be most effective in conserving bee populations. Prior to construction, the WVDOH will utilize the *West Virginia Pollinator Handbook*, a cooperative effort of the Natural Resources Conservation Service, WVDNR, and the Xerces Society for Invertebrate Conservation, to determine the proper seed mix and most appropriate replanting locations to attract native bee populations.

Comment 17: Page 3-42 mentions Birds of Conservation Concern but states that they were not identified in the project area. We recommend the document discuss the species, their habitat and how this determination was made.

Response 17: None of the listed Birds of Conservation Concern for Wetzel and Marshall Counties were documented in the project area. Detailed discussion of wildlife field investigations is provided in the *West Virginia State Route 2 Proctor to Kent Project Wildlife Report*, revised December 2017, and is available under separate cover as requested.

Comment 18: The secondary and cumulative impacts analysis does not address impacts to environmental resources. Please evaluate secondary and cumulative impacts to aquatic and terrestrial resources. This should include loss of wetland functions, habitat fragmentation, water quality, etc.

Response 18: There is the potential for mixed impacts to water quality, wetlands, and terrestrial habitat as a result of converting land to highway use. Effects would be mitigated in various ways, including avoiding, minimization, and replacement. A detailed hydraulic and hydrologic analysis will be performed during final design. The effects will be addressed through coordination with the U.S. Army Corps of Engineers (USACE) and Floodplain Managers required for the project to proceed to construction.

Comment 19: The preferred alternative will have 3,059,351 cubic yards of earthwork excavation. Please explain how this waste will be handled and disposed. We recommend the document state that no material will be placed in wetlands or waterways.

Response 19: The following BMPs and recommendations will be considered during final design and construction: minimize the linear distance of streams being impacted; design and construct culvert structures that promote the reestablishment of benthic habitat within the culvert; implement an approved *Erosion and Sedimentation Control Plan* to prevent sediment deposition to aquatic habitats; promptly revegetate all disturbed areas to prevent accelerated erosion; designate any equipment fueling and service areas away from aquatic habitats; and construct all stormwater management facilities to prevent or minimize runoff resulting in erosion and sedimentation. If construction encroaches in wetlands or waterways not already identified as impacted and permitted, the Contractor will be responsible for obtaining additional Clean Water Act permits.

## 4.2 Citizen Comments

Comment 20: R. Burrow, Proctor, WV – The BHFCU requested to be notified of each step in the process of the project as it occurs.

Response 20: Throughout the life of the project, WVDOH has continuously communicated the preferred alignment would take BHFCU's property. However, this is a design-build project and the design-build contracting team will acquire right-of-way based upon their final design. The purchase of private property will follow all relevant federal and state property acquisition laws, policies, and procedures. The division of highways will be responsible for properties that require relocation.

Comment 21: B. Miller, Jr., Wheeling, WV – Thanked WVDOH for the event.

Response 21: Comment noted.

Comment 22: Bruce Sivert, New Martinsville, WV – A four lane road is a huge waste of money. Questions why he received the project information as it doesn't affect him.

Response 22: Comment noted.

Comment 23: Don Cain, Proctor, WV – The planned expansion of Route 2 is very close to his home and his parents’ home next door. Consider changes to the design including moving the Gas Regulator Building to the west and move the Mason Dixon Monument to the east side of Route 2 for safety. Questions why the barn carries more value than homes. The new entrance to Dry Run is potentially dangerous, consider moving to a safer location. The existing culvert needs to be extended under the new Route 2 so water can drain from existing properties.

Response 23: The alignment cannot be shifted to the west because of the historical eligibility of the Green Barn and the Mason-Dixon Monument. We have attempted to eliminate the ROW takes from the parcel and we have attempted to shift the alignment away from the 3 structures along old route 2. This alignment shift resulted in impacting the Mason Dixon monument which is a historical resource and would require further dealing with SHPO, etc. In addition, any alignment shift would result in impacting the Gas compressor station on the west side of the existing route 2, impacting a stream on that side and potential impacts of private stream mitigations which were constructed few years ago (refer to plan sheet in **Appendix C**).

Based on the above, we strongly believe we are doing what reasonable, prudent given all the constraints in the area. We have reduced the ROW takes from the northern most structure of the 3 along existing old route 2. The current take is only a small corner of the property and will not impact the structure itself. The other 2 structures are not impacted at all, no ROW take will result from these 2 structures since we are utilizing existing old route 2 ROW.

Relocating the “Gas Regulator Building” is prohibitively expensive compared to the surrounding property values, this value was quoted by the owner at \$1,000,000.

The National Historic Preservation Act (NHPA) is a law that protects cultural resources. Section 106 of this law requires Federal agencies to consider the impacts of federally funded projects on historic properties. A historic property is defined as any property that is over 50 years of age and has been determined eligible for inclusion or is already included in the National Register of Historic Places (NRHP). According the State Historic Preservation Officer (SHPO) the green barn has been determined as eligible for inclusion in the NRHP. As part of the NEPA process we are required to avoid all historic resource. In reviewing the project’s study area it was determined that avoidance of this federally protected resource was feasible.

The driveway access to the Dry Run properties will be constructed on a 2% grade, which is flatter than the 16% grade maximum for a driveway accessing three properties. The mainline alignment has a minimum of 1,600 feet of sight distance, which exceeds the worst-case requirement for sight distance at 65 mph of 1,365 feet.

The drainage of the project will be designed to adequately convey the appropriate design storm through the project. The Dry Run culvert will be replaced and configured to conform to the new roadway. All other drainage to north will be accommodated with roadside ditches and cross-drain culverts to adequately drain the right-of-way and reduce downstream and upstream impacts.

Comment 24: Cecelia Palmer, Proctor, WV – Home is being impacted. Has concerns about losing her heritage as well as the relocation process and costs of moving into a new home.

Response 24: Right-of-way acquisition cannot begin until all approvals for the project have been secured and final design has been completed. WVDOH right-of-way staff and design engineers will work with the property owners regarding the acquisition of property. The purchase of private property will follow all relevant federal and state property acquisition laws, policies, and procedures.

Comment 25: Paul & Donna Jo Cain, Proctor, WV – Concerned that their son who lives next door and helps take care of them will have to move due to the relocation of Route 2. They are in their 80s and 90s. They request a few alterations so their son’s home will not be impacted and he can stay to help them.

Response 25: See response to comment 23.

Comment 26: John Cain, New Martinsville, WV – Concerned that the proposed route will devalue parent’s property (Paul and Donna Jo Cain) and that of Donald Cain and Robert Rothlisberger. Consider moving the Columbia Gas building.

Response 26: See response to comment 23.

Comment 27: Donny Arrick, New Martinsville, WV – Concerned about parents’ property that is located along existing WV Route 2. The new WV Route 2 will be located 200 feet behind their property. The state wants to purchase a portion of their property for an exit ramp from the old WV 2 to new WV 2. Requests WVDOH to make offer to purchase entire property to allow the new WV 2 to be shifted to the west and not be close to properties of Don Cain and Paul and Donna Jo Cain.

Response 27: See Response 23.

Comment 28: Robert Rothlisberger, New Martinsville, WV – Request the WVDOH to consider relocating the Columbia gas building to the West so the angle of the proposed four lane can be changed to give the homes at Dry Run a larger buffer area from the four-lane proposed.

Response 28: See Response 23.

Comment 29: Andrea Cain, Proctor, WV – Several generations of family have lived in the Dry Run area since the early 1930s whose properties are now being impacted by the proposed project. Reconsider utilizing the green barn property instead of impacting family homes that have been owned by same family for 90 years. Questions the historical and archaeological significance because family members know the property as a former dairy farm that has been inactive for years and was purchased by Coverstro (formerly Bayer). Consider moving the gas regulator building west to allow additional space to move Route 2 west of current position. Requests a WVDOH representative to come speak with them.

Response 29: The National Historic Preservation Act (NHPA) is a law that protects cultural resources. Section 106 of this law requires Federal agencies to consider the impacts of federally funded projects on historic properties. A historic property is defined as any property that is over 50 years of age and has been determined eligible for inclusion or is already included in the National Register of Historic Places

(NRHP). According the State Historic Preservation Officer (SHPO) the green barn has been determined as eligible for inclusion in the NRHP. As part of the NEPA process we are required to avoid all historic resource. In reviewing the project’s study area it was determined that avoidance of this federally protected resource was feasible.

Comment 30: Robert Parsons, WV – Unnecessary to expand to four lanes. No need to impact homes.

Response 30: Comment Noted.

Comment 31: Rachael Cain, WV – No need to expand road.

Response 31: Comment noted.

Comment 32: Brittany McConnell, New Martinsville, WV – The new road may not allow a safe parking area for people visiting the Mason-Dixon monument. Don’t take people’s homes.

Response 32: There were no specific provisions incorporated into the design for public access to the monument. There does not appear to be a demand for a specific facility. The roadway shoulders would be used as a pull-off to view the monument. Right-of-way acquisition cannot begin until all approvals for the project have been secured and final design has been completed. WVDOH right-of-way staff and design engineers will work with the property owners regarding the acquisition of property. The purchase of private property will follow all relevant federal and state property acquisition laws, policies, and procedures.

Comment 33: Babette Boyd, New Martinsville, WV – Truck traffic should be rerouted away from the community. No need to widen the road.

Response 33: Comment noted.

Comment 34: Allison Kidwell, WV – Consider moving the Columbia gas building to the west to create larger area in front of homes on Dry Run Road.

Response 34: See Response 23.

Comment 35: Stephen Conlon, New Martinsville, WV – Encourages the DOH to “back burner” considering that traffic and population in the area has decreased. Consider improving the existing road with a jersey type barrier in the center and guardrails along the utility poles.

Response 35: Comment noted. The National Historic Preservation Act (NHPA) is a law that protects cultural resources. Section 106 of this law requires Federal agencies to consider the impacts of federally funded projects on historic properties. A historic property is defined as any property that is over 50 years of age and has been determined eligible for inclusion or is already included in the National Register of Historic Places (NRHP). According the State Historic Preservation Officer (SHPO) the green barn has been determined as eligible for inclusion in the NRHP. As part of the NEPA process we are required to avoid all historic resource. In reviewing the project’s study area it was determined that avoidance of this federally protected resource was feasible.



Please note that Jersey Barrier is not appropriate for the existing two-lane highway. The barrier would impede access in one direction requiring U-Turns to be constructed to maintain driveway access. This type of traffic movement is not a desirable condition from a safety and convenience perspective. Especially, considering the numerous plant access driveways located along the existing road. Constructing WV 2 on a parallel alignment allows the existing road to function as plant access and reduces the conflict points along the new 4-lane highway.

Comment 36: Katie Haught, WV – States that a four-lane road is not needed. Family used to own the big green barn and states it will be devastating if it is torn down.

Response 36: The green barn property will not be impacted by the proposed project.

Comment 37: Jacqueline Null, Pittsburgh, WV – States that people should not be forced to give up their homes.

Response 37: Right-of-way acquisition cannot begin until all approvals for the project have been secured and final design has been completed. WVDOH right-of-way staff and design engineers will work with the property owners regarding the acquisition of property. The purchase of private property will follow all relevant federal and state property acquisition laws, policies, and procedures.

Comment 38: Matthew Null, WV – Opposes the widening of Route 2 as it will displace families.

Response 38: Comment noted.

Comment 39: Anna Berardinelli, WV – Consider not forcing friends out of their homes.

Response 39: Right-of-way acquisition cannot begin until all approvals for the project have been secured and final design has been completed. WVDOH right-of-way staff and design engineers will work with the property owners regarding the acquisition of property. The purchase of private property will follow all relevant federal and state property acquisition laws, policies, and procedures.

## 5. ENDANGERED SPECIES ACT SECTION 7 CONSULTATION

Threatened and endangered wildlife and plant species are protected under Section 7 of the federal *Endangered Species Act of 1973* (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). Bat mist netting surveys were conducted for the project in 2011 and 2017 because the federally listed species, *Myotis sodalis* (Indiana bat) and *Myotis septentrionalis* (Northern long-eared bat), were identified as possibly occurring in the project area. No threatened or endangered bat species were captured during the survey efforts. The U.S. Fish and Wildlife Service (USFWS) issued a concurrence form for Myotid Bat Survey Reports on April 6, 2018 concluding that no Indiana bats or northern long-eared bats (NLEB) are expected to be adversely affected by the project. On April 30, 2018, the WVDNR noted that there are no known occurrences of any rare, threatened and endangered (RTE) species or natural trout streams within the project area. As a result, no further Section 7 consultation is required.

## 6. NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION

Historic resources surveys were conducted in 2012. Seven properties were identified as potentially eligible for listing on the National Register of Historic Places (NRHP). None of the NRHP-eligible properties will be impacted directly by the project. On March 15, 2018, the SHPO concurred that the project would have No Adverse Effect on any of the seven properties and no further consultation is necessary.

Archaeological surveys were conducted in 2012. On February 4, 2014, the SHPO concurred that no further archaeological work is necessary.



February 2019

## West Virginia 2 – Proctor to Kent

State Project U352-2-11.66 00  
Federal Project NH-0002(528)D

# ENVIRONMENTAL ASSESSMENT – FINDING OF NO SIGNIFICANT IMPACT (FONSI) – APPENDICES

Prepared for:



**CDM  
Smith**

# APPENDIX A – ENVIRONMENTAL ASSESSMENT

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June 2018

## West Virginia 2 – Proctor to Kent

State Project U352-2-11.66 00  
Federal Project NH-0002(528)D

# ENVIRONMENTAL ASSESSMENT

Prepared for:



**CDM  
Smith**

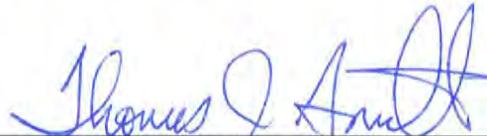
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State Project U352-2-11.66 00  
Federal Project NH-0002(528)D  
Environmental Assessment  
West Virginia 2 – Proctor to Kent

Submitted Pursuant to 42 USC 4332(2)(c)  
U.S. Department of Transportation  
Federal Highway Administration  
and  
West Virginia Department of Transportation – Division of Highways

June 29, 2018

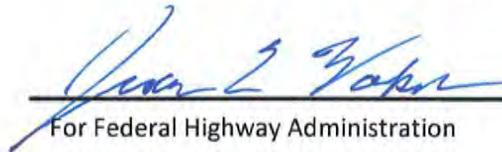
Date of Approval



For West Virginia Division of Highways

July 16, 2018

Date of Approval



For Federal Highway Administration

The following persons may be contacted for additional information concerning this document:

Mr. Jason Workman  
Director, Program Development  
Federal Highway Administration  
154 Court Street  
Charleston, WV 25301

Mr. Ben Hark  
Environmental Section Head  
Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, WV 25301

The proposed project consists of the upgrade and relocation of a 5.25-mile portion of West Virginia State Route 2 (WV 2) from Proctor, West Virginia to Kent, West Virginia in Wetzel and Marshall Counties. This project will provide a safe, convenient highway with increased traffic capacity.

Comments on this Environmental Assessment are due by September 17, 2018 and should be sent to:

Mr. R. J. Scites, P.E.  
Director, Engineering Division, WVDOH  
1334 Smith Street  
Charleston, West Virginia 25301

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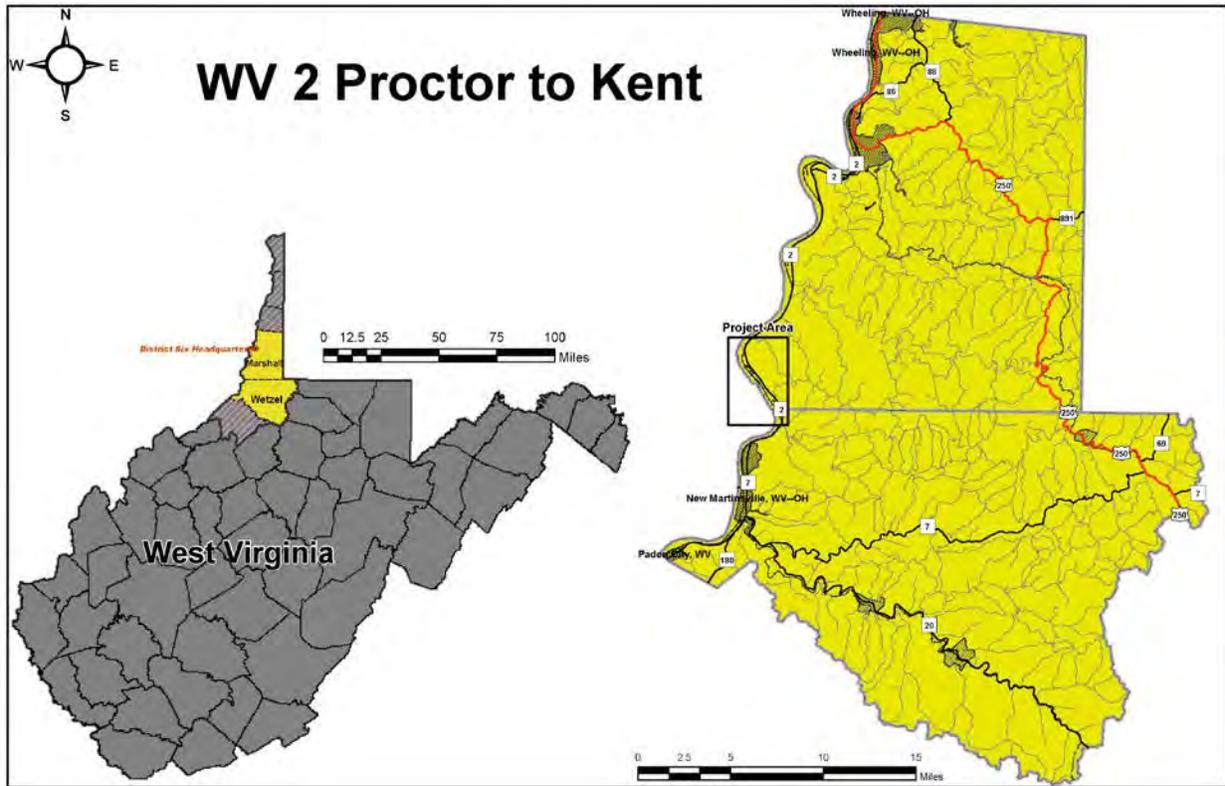
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## ES. 1 Project Description

The West Virginia Department of Transportation Division of Highways (WVDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to upgrade and relocate a 5.25-mile portion of West Virginia State Route 2 (WV 2) from Proctor, West Virginia to Kent, West Virginia in Wetzel and Marshall Counties. The project begins 0.47 of a mile south of the Marshall County Line and ends 0.18 of a mile south of Marshall County Route 78 just north of Sims Run. The proposed improvements include the upgrade of WV 2 from a rural two-lane arterial to a four-lane divided highway. This project is one of many on WV 2 that will ultimately provide a safe, convenient highway with increased traffic capacity from Interstate Route 77 (I-77) in Wood County, West Virginia to Hancock County, West Virginia. The general project location is shown on **Figure ES-1**.

**Figure ES-1: General Location of Project Area**



## ES. 2 Purpose and Need

The WV 2 project has the following needs:

1. Improve traffic volume capacity.

2. Enhance safety by providing operational improvements to reduce crash rates by widening the roadway and reducing the number of at-grade access points and the traffic conflicts associated with multiple at-grade intersections.

Thus, a relocated and widened WV 2 would alleviate traffic congestion and enhance safety along WV 2.

Based on these transportation needs, WVDOH developed the following project purpose statement:

*The purpose of the proposed project is to increase system capacity and enhance safety through operational improvements.*

## ES. 3 Alternatives Considered

Four Build alternatives were considered under this EA. The No Build Alternative and the widening of WV 2 were also considered but eliminated because they do not meet the purpose and need of the project.

### Alternative 1

Alternative 1 begins at the southern end of the project limits at the existing four-lane section in Proctor, just south of the Marshall County line. A curve to the west is introduced to move the alignment away from the steep hillside located to the east. Because of the slope of the hillside, any impact would result in a high cut. The tangent alignment continues to Dry Run where a curve to the east places the alignment along the foot of the hillside. The alignment in this area is located between residences at Dry Run and the Mason Dixon Monument. This curve continues through the Bayer property past the Bayer Heritage Federal Credit Union up to CR 2/2, which is an access to Axiall's brine wells and to several gas well pads located at the top of the hill. A short section of tangent roadway follows, which runs parallel to the existing roadway. A new curve to the east and a reverse curve to the west align the roadway behind the Axiall facilities. Finally, a long curve to the east aligns the roadway with the project to the north. This alignment impacts a portion of a historic property boundary (MR-0144, the green barn property), residences at Dry Run, the Bayer Heritage Credit Union, the Blue Racer supply gas lines, and the Axiall brine well infrastructure.

Alternative 1 meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

### Alternative 2

Alternative 2 was developed to maximize the separation between the chemical facilities and the roadway. This separation was obtained by pushing the alignment higher up on the hillside. The general configuration is similar to Alternative 1, but located further to the east and at a higher profile grade. This alignment impacts the residences at Dry Run, the Bayer Heritage Credit Union, the CR 2/2 Access Road, and the Blue Racer supply gas lines.

Alternative 2 meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

### Alternative 3

Alternative 3 was developed to avoid properties such as the Bayer Heritage Federal Credit Union and the Dominion Gas (now Blue Racer Mid-Stream) processing area and gas lines. The alignment was pushed east, which is further into the hillside. The profile grade was also raised even higher to mitigate the elevated grade. The overall alignment is similar to Alternatives 1 and 2. This alignment impacts the Dry Run Residences, and the brine well access located at CR 2/2.

Alternative 3 meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

### Alternative 1A – The Preferred Alternative

Alternative 1A was developed to primarily maintain the features of Alternative 1 but has been shifted to avoid and minimize impacts to the green barn historic boundary and the encroachment on the pipelines and valve complex near the Blue Racer Plant. The horizontal curves and vertical profile for Alternative 1A have been adjusted near these features to minimize the overall impacts. This alignment would relocate the Bayer Heritage Credit Union and a portion of the brine piping infrastructure at the Axiall plant. Alternative 1A has the least amount of costs and overall impacts.

The Preferred Alternative, Alternative 1A meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

## ES. 4 Environmental Impacts

Table ES-1 presents a summary of key impacts for the build options for the WV 2 project.

**Table ES-1: Summary of Environmental Impacts**

| Evaluation Factor                            | Alternative 1  | Alternative 2  | Alternative 3  | Alternative 1A Preferred Alternative   |
|--|--|--|--|--|
| <b>Engineering</b>                           |  |  |  |  |
| Prelim. Length of WV 2 Improvements (miles)  | 5.8 miles  | 5.8 miles  | 5.9 miles  | 5.3 miles  |
| Roadway Configuration                        | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders |
| Estimated earthwork excavation (cubic yards) | 2,813,849  | 4,605,846  | 6,183,857  | 3,059,351  |
| <b>Natural Environment</b>                   |  |  |  |  |
| Stream Impacts (linear feet)                 | 2,023  | 3,321  | 2,759  | 1,913  |
| Wetlands (acres)                             | 4.19   | 4.12   | 4.01   | 3.03   |
| Floodplains (acres)                          | 10.07  | 10.02  | 10.91  | 5.59   |

| Evaluation Factor  | Alternative 1  | Alternative 2  | Alternative 3                                     | Alternative 1A Preferred Alternative |
|--|--|--|---|--------------------------------------|
| T&E Species  | 0  | 0  | 0   | 0                                    |
| <b>Human Environment</b>   |  |  |   |                                      |
| Forested Land (acres)  | 152.21   | 273.34   | 221.57  | 174.61                               |
| Historic Resources   | 1  | None   | None  | None                                 |
| Archaeological Sites   | 1  | No adverse effect  | No adverse effect                                 | None                                 |
| Cemetery   | None   | None   | None  | None                                 |
| Industrial Facilities (e.g. Chemical Plant)  | 2 - Axiall Brine Well Infrastructure <sup>1</sup> and Blue Racer Valve Cluster | 1 - Axiall Brine Well Infrastructure <sup>1</sup>        | 1 - Axiall Brine Well Infrastructure <sup>1</sup> | 1-Axiall Brine Piping Infrastructure |
| Commercial Facilities (e.g. Businesses)  | 1 – Bayer Heritage Credit Union  | 1 – Bayer Heritage Credit Union                          | None  | 1 – Bayer Heritage Credit Union      |
| Residential Displacements  | 9  | 5  | 9   | 5                                    |
| Environmental Justice Populations  | None   | None   | None  | None                                 |
| Noise <sup>2</sup>   | Yes  | Yes  | Yes   | Yes                                  |
| Air  | No   | No   | No  | No                                   |
| Prime Farmland/ Farmland of Statewide Importance (acres)                                 | 6.21/121.38  | 6.07/88.48   | 4.41/102.22                                       | 2.97/76.52                           |
| Section 4(f)/6(f) Properties   | 0  | 0  | 0   | 0                                    |
| <b>Physical Impacts</b>  |  |  |   |                                      |
| Hazard Waste Sites   | None   | None   | None  | None                                 |
| Public Utility Conflicts   | Gas pipelines feeding the Blue Racer Fractionation Plant                       | Gas pipelines feeding the Blue Racer Fractionation Plant | Electrical tower                                  | None                                 |
| <b>Financial / Costs</b>   |  |  |   |                                      |
| Estimated Construction Costs (Excluding utility relocation and right of way acquisition) | \$60,100,000   | \$77,900,000   | \$89,300,000                                      | \$58,494,312                         |

<sup>1</sup>The brine wells are used to retrieve brine water from the earth as a “raw material” which is then used in chemical production.

<sup>2</sup>Noise modeling indicated the 2032 Build scenario would impact several existing receptors; however, those receptors are slated for relocation due to encroachment on the right-of-way.

## ES. 5 Recommended Preferred Alternative – Alternative 1A

All four Build alternatives have similar impact characteristics and equally meet the purpose and need of the project. The recommended preferred alternative for this project is Alternative 1A. Alternative 1A has the least overall impacts and construction costs.

# CHAPTER 1. INTRODUCTION AND PURPOSE AND NEED

---

## 1.1 Introduction

The West Virginia Department of Transportation Division of Highways (WVDOH), in cooperation with the Federal Highway Administration (FHWA), proposes to upgrade and relocate a 5.25-mile portion of West Virginia State Route 2 (WV 2) from Proctor, West Virginia to Kent, West Virginia in Wetzel and Marshall Counties. The project begins 0.47 of a mile south of the Marshall County Line and ends 0.18 of a mile south of Marshall County Route 78 just north of Sims Run. The proposed improvements include the upgrade of WV 2 from a rural two-lane arterial to a four-lane divided highway. This project is one of many on WV 2 that will ultimately provide a safe, convenient highway with increased traffic capacity from Interstate Route 77 (I-77) in Wood County, West Virginia to Hancock County, West Virginia.

The WVDOH has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508) and FHWA's Environmental Impact and Related Procedures (23 CFR 771).

This EA evaluates the alternatives developed and discloses the potential environmental impacts for the four Build Alternatives including the Preferred Alternative.

## 1.2 Existing Highway Network

WV 2 is a rural two-lane highway within the northwest portion of the state that links Huntington, West Virginia to Chester, West Virginia just northeast of Pittsburgh, Pennsylvania within the Upper Ohio River Valley region. The project area lies between the communities of Proctor and Kent in Wetzel and Marshall Counties. **Figure 1-1** illustrates the general location of the project in the region and **Figure 1-2** shows the project location.

The existing WV 2 roadway has one 12-foot travel lane in each direction with variable width shoulders through the limits of this project. The project area has no major intersections within the project limits. Immediately to the south of the project limits is a four-lane bridge and a short section of four-lane highway. Several miles to the north of the project limits, WV 2 has a continuous four-lane highway from Woodlands, WV to Wheeling, WV. In addition to the Proctor to Kent segment of WV 2, two other segments of WV 2 are undergoing widening projects: the Franklin to Woodlands segment is under construction and the Kent to Franklin segment is designed and awaiting construction.

## 1.3 Regional Transportation Plans

Plans to upgrade WV 2 in Marshall County are consistent with the area's future vision described in the *2040 Belmont-Ohio-Marshall Transportation Study Transportation Plan*, adopted June 2016 by the Belomar Regional Council. The WV 2 Proctor to Kent project is listed as *2LN-12: WV2 from Wetzel County Line to CR 78*. The following is an excerpt from that plan.



*“This is the only remaining two lane segment of WV2 in Marshall County. A portion of this segment is included in the current long-range plan for upgrade to four lane. This section will remain in this plan. A second section will complete the four laning to the Wetzel County line. As part of the WV2 upgrade to four lanes, the remaining section is added.”*

**Figure 1-1: General Location of Project Area**

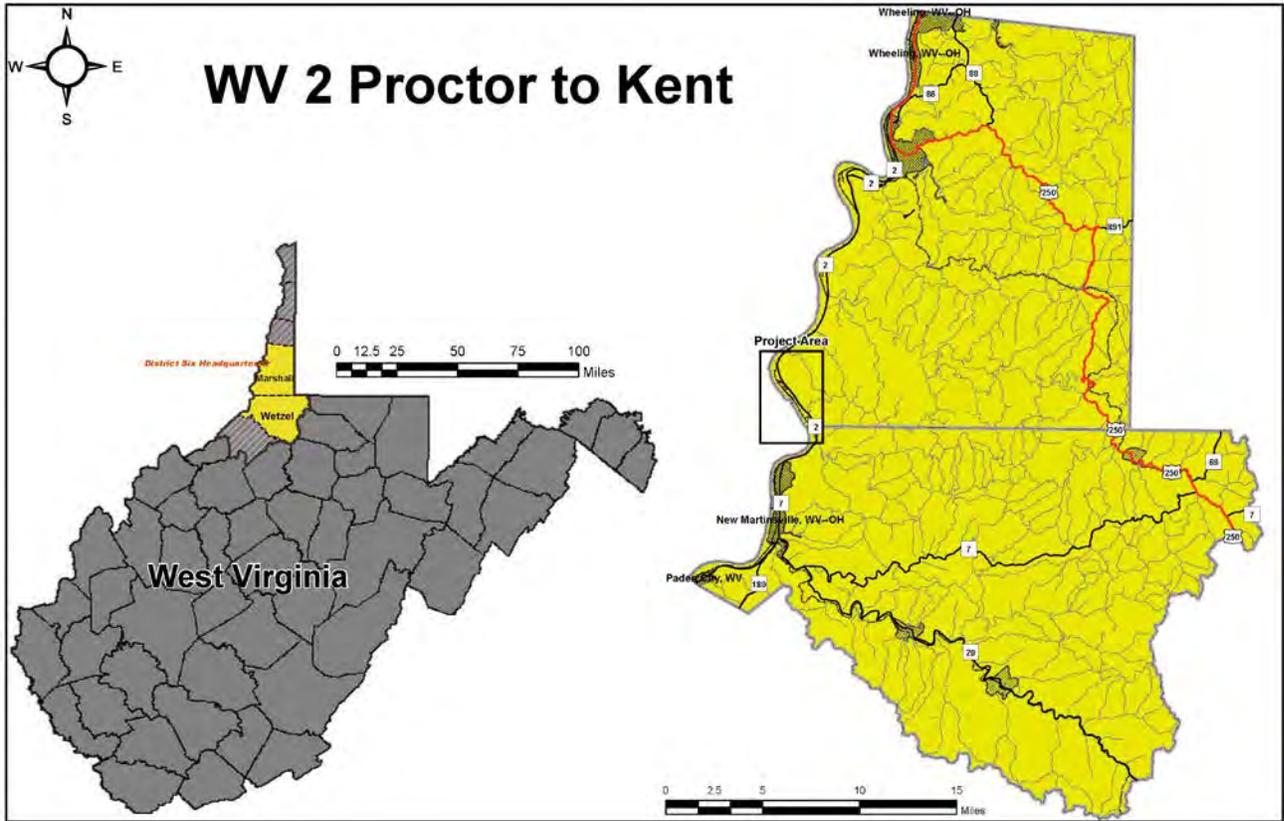
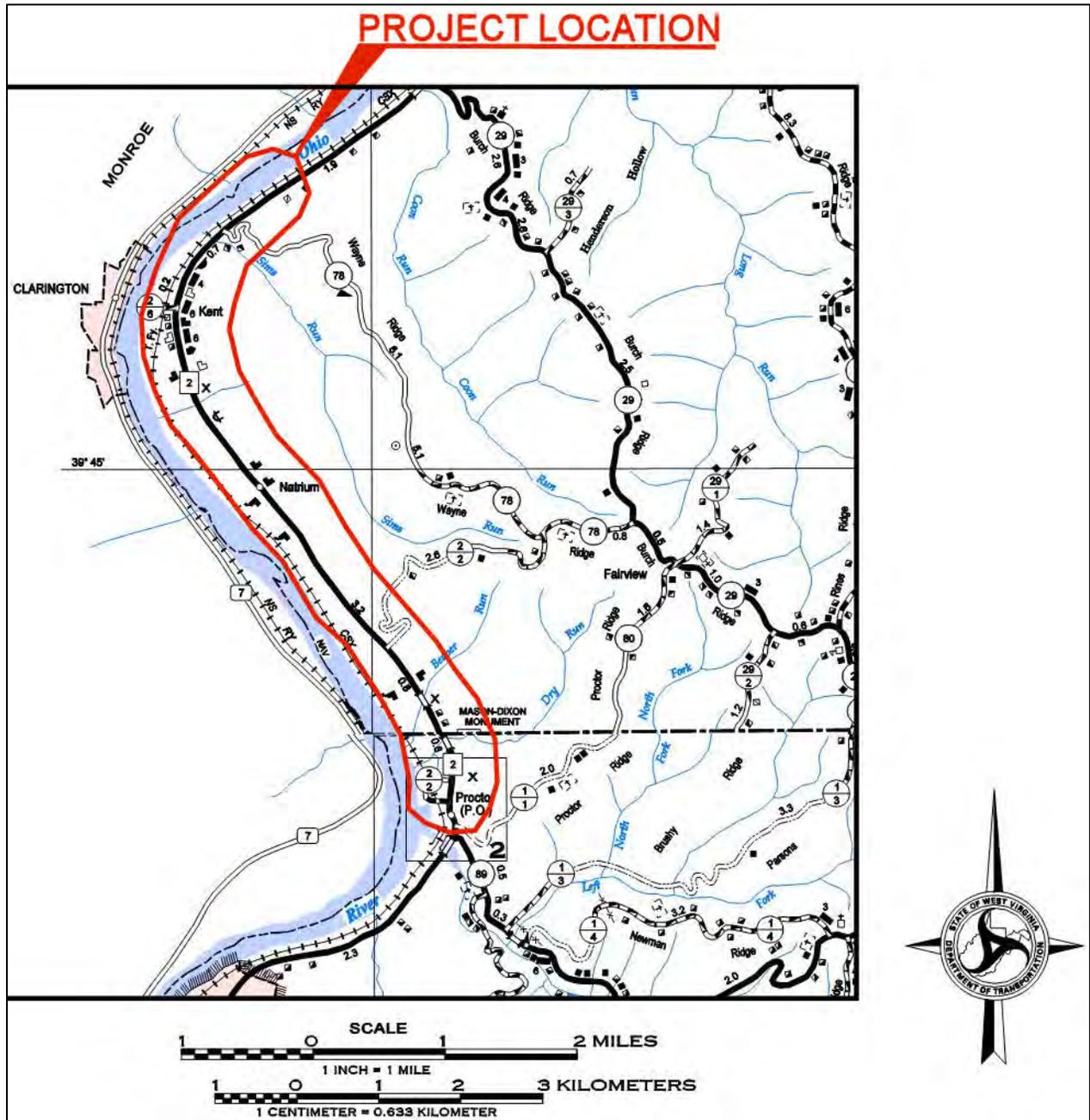


Figure 1-2: Project Location



## 1.4 Project Funding

Funding for this section of WV 2 was included in the 2017 “Roads to Prosperity Highway Program”. A portion of the funding for this program was included in a \$1.6 billion referendum, which permitted the sale of general obligation bonds. The referendum passed under a special election held October 7, 2017. The West Virginia Legislature then passed a bill on December 4, 2017, authorizing the sale of the bonds. This project is listed in the Fiscal Years (FY) 2016-2021 West Virginia Statewide Transportation Improvement Program (STIP) Amendment #15 dated December 4, 2017 with State Project Number

U326 2 01166 00 and Federal Project Number NFA2317003D. The project is also listed in the FY 2018-2021 Belmont-Ohio-Marshall Transportation Improvement Program (TIP).

## 1.5 Project Need

### 1.5.1 Background

West Virginia Route 2 (WV 2) is a state highway, which provides a continuous link between Huntington located in the southwestern part of the state and Chester located in the northern panhandle. The alignment typically parallels the Ohio River for most of its length. The segment from Parkersburg to Wheeling is the primary overland link between the cities on the West Virginia side of the River. The highway has been periodically widened from 2-lanes to 4-lanes when financing has become available. Currently, WV 2 has been continuously widened to 4-lane highway from Franklin, Marshall County, to I-70 in Wheeling, Ohio County. There are two more projects which will continue the 4-lanes south to the Marshall/Wetzel County line in Proctor, West Virginia.

The WV 2 Proctor to Kent project serves the Upper Ohio Valley Region and the project area is characterized by industrial development which developed around the chemical, steel, and coal facilities. There are three industrial complexes within the project area that serve the chemical and shale gas industries. These industries have historically generated commercial and employee traffic. The shale gas industry is a relatively recent development in the project area and has resulted in increased commercial vehicle traffic accessing the numerous well heads and gas processing facilities located throughout the Northern Panhandle. An additional benefit of the proposed project would allow the Covestro LLC (formerly Bayer Corporation), Axiall (formerly PPG), and Blue Racer Midstream (formerly Dominion) plants to maximize the developable land available near them, which as a result will help boost economic development within the project vicinity. Additionally, the security at the Covestro, Axiall, and Blue Racer Midstream plants would be enhanced by limiting the access to their properties.

Community Leaders in the Upper Ohio Valley have been advocating a continuous 4-lane highway from Parkersburg to Wheeling for many years, but funding has not been available to complete the construction. With the legislative passage of the Go-Bond Authorization, the projects from Proctor to Kent and Kent to Franklin are now funded and will be constructed in the very near future.

### 1.5.2 Traffic Volume Capacity

This 5.25-mile segment of WV 2 from Proctor to Kent had an annual average daily traffic (AADT) of 4,900 vehicles per day (vpd) in 2012, which is projected to increase to 6,300 vpd in the design year of 2032. According to U.S. Census population estimates, the annual growth rate for Marshall and Wetzel Counties declined between 2010 and 2014 (-0.4 %). Due to the decline in population, it is anticipated that traffic volumes have also decreased during the same time period. Due to current trends it was determined that there has not been a significant increase in traffic along the corridor over the last six years.

These traffic volumes were used to estimate Level of Service (LOS), a qualitative measure of highway traffic conditions, as identified in the 2010 Highway Capacity Manual (HCM). Individual levels of service characterize conditions in terms of speed, travel time, freedom to maneuver, traffic interruptions, and

comfort, convenience and safety. Six LOSs are defined and given letter designations from A to F, with LOS A representing free flow conditions and LOS F representing severe congestion and/or time delays. Typically, a minimum LOS D is considered acceptable in urban areas and LOS C is considered acceptable in rural areas.

The existing year design-hour volume of 684 vehicles per hour (vph) and the proposed design-hour volume of 880 vph both correlate to LOS D for WV 2 between Proctor and Kent. Once WV 2 is widened to four lanes, the level of service increases to LOS A. This increase in level of service is a result of the improved capacity of a four-lane highway, which is further improved by wider shoulders and improved access management from the reduction of driveways.

### 1.5.3 Traffic Safety

Existing WV 2 is a rural two-lane roadway with variable width shoulders, which are typically narrow and in some cases non-existent. Immediately to the south of the project limits, within the area of the WV 2 – WV 89 Intersection and the Proctor Creek Bridge, there is a short section of four-lane highway. Several miles to the north of this project, WV 2 has a continuous four-lane typical section from Franklin to Wheeling. The design for the Kent to Franklin section just to the north of this project has been completed but is not yet constructed.

The project area is characterized by the chemical and gas processing plants located along the roadway. Each of these facilities contributes multiple driveways, which provide access for commercial vehicles and plant workers. These facilities also contribute to the truck traffic along the corridor. The plant workers cause significant peaks in traffic flow during shift changes.

Accident data was sampled for the three-year period from 2013 to 2016. This data reflected 34 accidents with 17 of those resulting in injuries. There were no reported fatalities over this period. The accident rate was below the statewide average for a similar type facility, however the injury rate was double the statewide average. **Table 1-1** shows the basic accident statistics.

**Table 1-1: Accident Statistics**

| Date Range: 01/01/13 to 12/31/15 |       | Total Days: 1094 |     |                      |       |           |                    |                     |                    |                    |                   |
|----------------------------------|-------|------------------|-----|----------------------|-------|-----------|--------------------|---------------------|--------------------|--------------------|-------------------|
| Highway Section<br>County        | Route | Milepost         |     | Length<br>(In Miles) | ADT   | Accidents | Accident<br>Rate * | Injury<br>Accidents | Injury<br>Accident | Fatal<br>Accidents | Fatal<br>Accident |
|                                  |       | Begin            | End |                      |       |           |                    |                     |                    |                    |                   |
| Marshall & Wetzel                | WV 2  | -                | -   | 3.51                 | 4,900 | 34        | 180.7              | 17                  | 90.4               | 0                  | 0.0               |
| <i>Statewide Average</i>         |       |                  |     |                      |       |           | <i>199.0</i>       |                     | <i>42.0</i>        |                    | <i>1.4</i>        |

\* Rates are per Hundred Million Vehicle Miles

Source: WVDOH

The predominate collision type is single vehicle, which accounted for 47 percent of the accidents. Most of these crashes involved an impact with a fixed object. Both sides of the roadway are lined with utility poles, which are located within the 10-foot wide clear zone. Three of the single vehicle accidents involved striking an animal. The other collision types included: rear-end at 24 percent, and right-angle at

18 percent. The rear-end and right-angle crashes could be attributed to the number of plant entrances and driveways located along the length project.

These types of accidents are consistent with a two-lane rural highway. There are large fields located around each of the chemical plants that attract deer, turkey, and geese. The single vehicle accidents could be reduced by a four-lane typical section and wider shoulders. The rear-end and right-angle crashes could be reduced by providing access management along the new WV 2 road alignment. This could be accomplished by providing well marked intersections to access to the industries.

#### 1.5.4 Traffic Operations

The project area has no major intersections within the project limits. WV 89 is located just to the south of this project and is the closest intersection within proximity to the project. The traffic operations along WV 2 are characterized by three major plant entrances and associated access driveways. There are traffic signals located at the main entrances of Covestro and Axiall. These signals were constructed to provide safer, more convenient access to the plant entrances. They are especially needed during shift changes to allow workers to egress the sites without waiting in long queues. Over 24 hours the traffic stream on WV 2 includes 13 percent trucks. A significant portion of these trucks are accessing the industrial areas within the project limits, which causes traffic conflicts and slows the overall traffic stream. Providing a four-lane highway with reduced access points will significantly improve the traffic operation characteristics of WV 2.

#### 1.5.5 Project Need

The WV 2 project has the following needs:

1. Improve traffic volume capacity.
2. Enhance safety by providing operational improvements to reduce crash rates by widening the roadway and reducing the number of at-grade access points and the traffic conflicts associated with multiple at-grade intersections.

Thus, a relocated and widened WV 2 would alleviate traffic congestion and enhance safety along WV 2.

#### 1.5.6 Project Purpose

Based on these transportation needs, WVDOH developed the following project purpose statement:

*The purpose of the proposed project is to increase system capacity and enhance safety through operational improvements.*

## CHAPTER 2. ALTERNATIVES

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Four build alternatives: Alternative 1, Alternative 2, Alternative 3, and Alternative 1A in addition to the No Build alternative were evaluated in this environmental assessment. Each alternative was evaluated according to its ability to meet the purpose and need of the proposed project. A fifth option to widen the existing roadway was considered early in the process, and subsequently discarded because it would not meet the purpose and need for the project. Widening existing WV 2 would not meet these requirements, because it severs the plant properties and does not reduce the number of at-grade access points, which will not help reduce crash rates.

The four build alternatives for the project were developed to decrease the number of access points along the roadway, to provide a safer roadway with increased traffic capacity, and to avoid or mitigate impacts along the project. Personnel from the industrial plants in the area expressed their concerns about the current location of WV-2 being in close proximity to their facilities. Their recommendation is to relocate the alignment of WV-2 to the east – between the plant facilities and the hillside. This location allows the construction of a single access point, which would be easier to control from a security standpoint. It would also provide some separation of the plants from the roadway, which currently severs their facilities.

Because of the unique parameters associated with the nature of the study area, options for new location alternatives are limited to a small corridor. Alternative 1 is located along the foot of the hillside to the east of the Ohio River CSX Railroad tracks which are located parallel to the project along the Ohio River. Each subsequent alternative was located progressively further into the hillside. Alternative 2 was developed to analyze a larger buffer area between the industrial plants and the roadway. Alternative 3 was developed to avoid the newly constructed supply pipelines and truck offloading facilities, which support the Blue Racer facility. Alternative 1A, the Preferred Alternative was developed to maintain the overall features of Alternative 1 but was adjusted to avoid and minimize impacts to the historic green barn property and the Blue Racer facilities. All four build alternatives utilize a 4-lane typical section, with a 14-foot wide paved median. The shoulders are 10 feet wide with 8 feet of pavement. The four build alternatives are illustrated on **Figures 2-1, 2-2, and 2-3**. The 2018 Design Report describing the alternatives in detail is provided in **Appendix A**.

All four build alternatives meet the purpose and need of the projects by increasing the capacity of WV 2, and by enhancing safety by reducing the number of driveways and access points to the mainline highway and providing wider shoulders and additional roadside clear area.

Figure 2-1: WV 2 Design Study Alternatives, Sheet 1 of 3

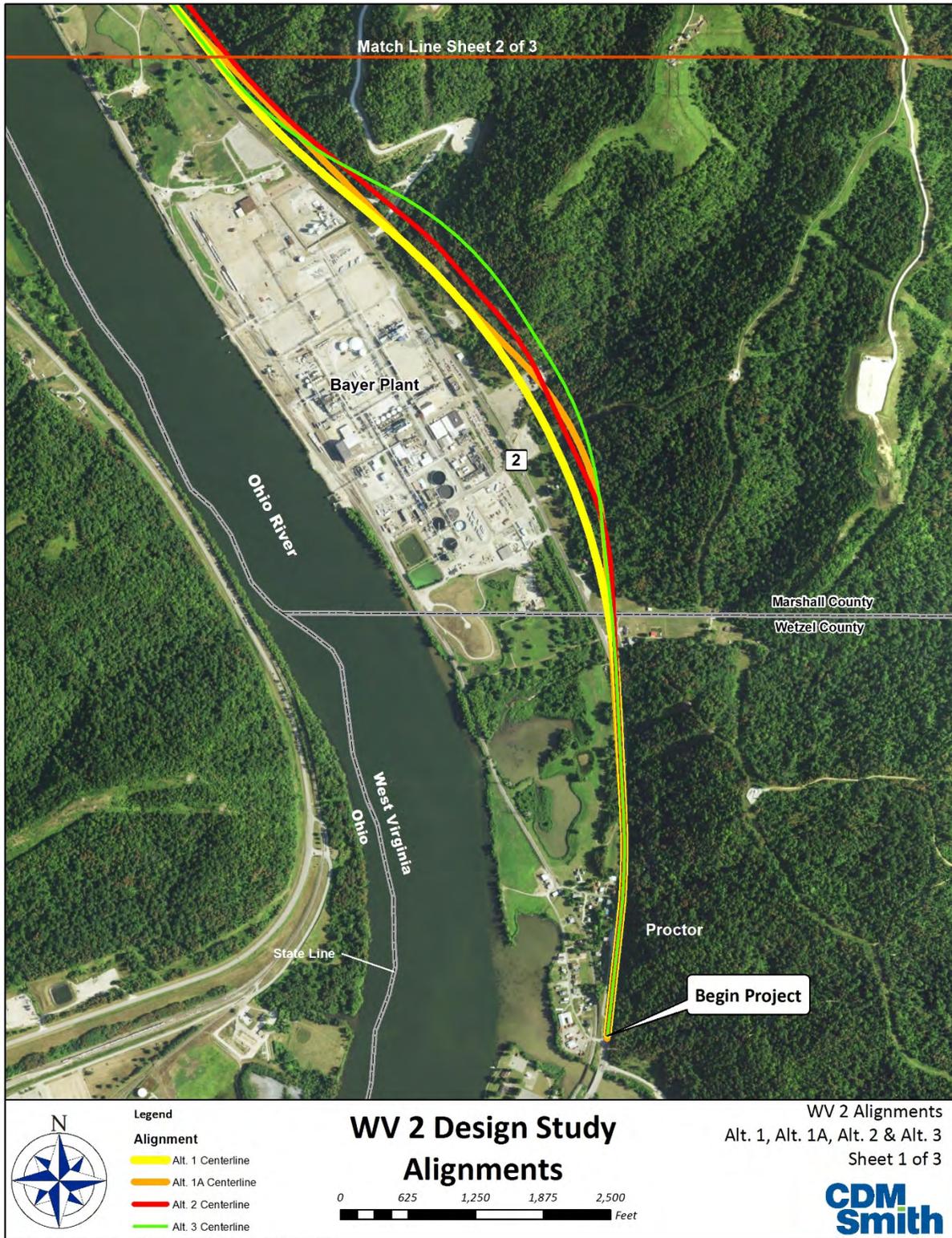


Figure 2-2: WV 2 Design Study Alternatives, Sheet 2 of 3

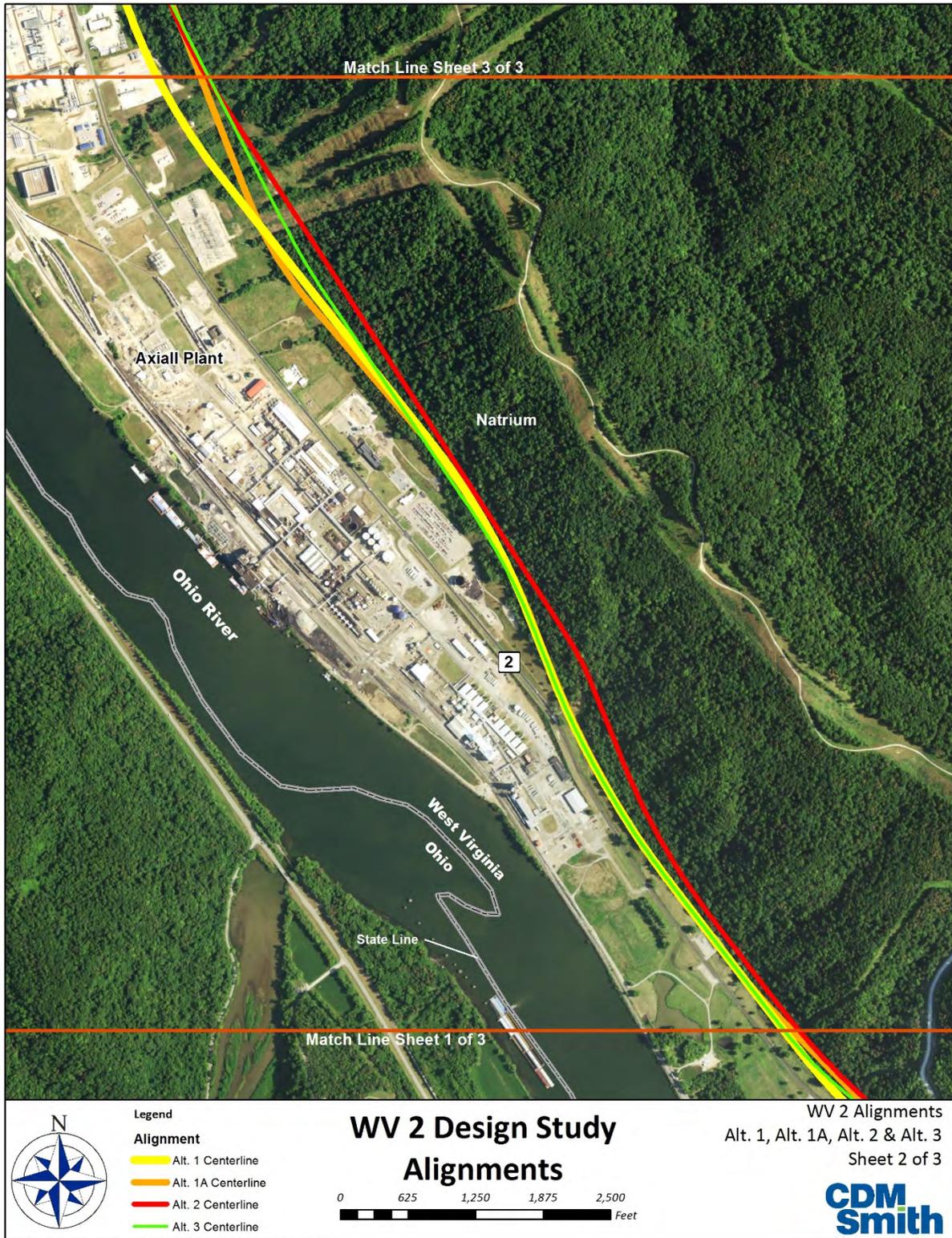
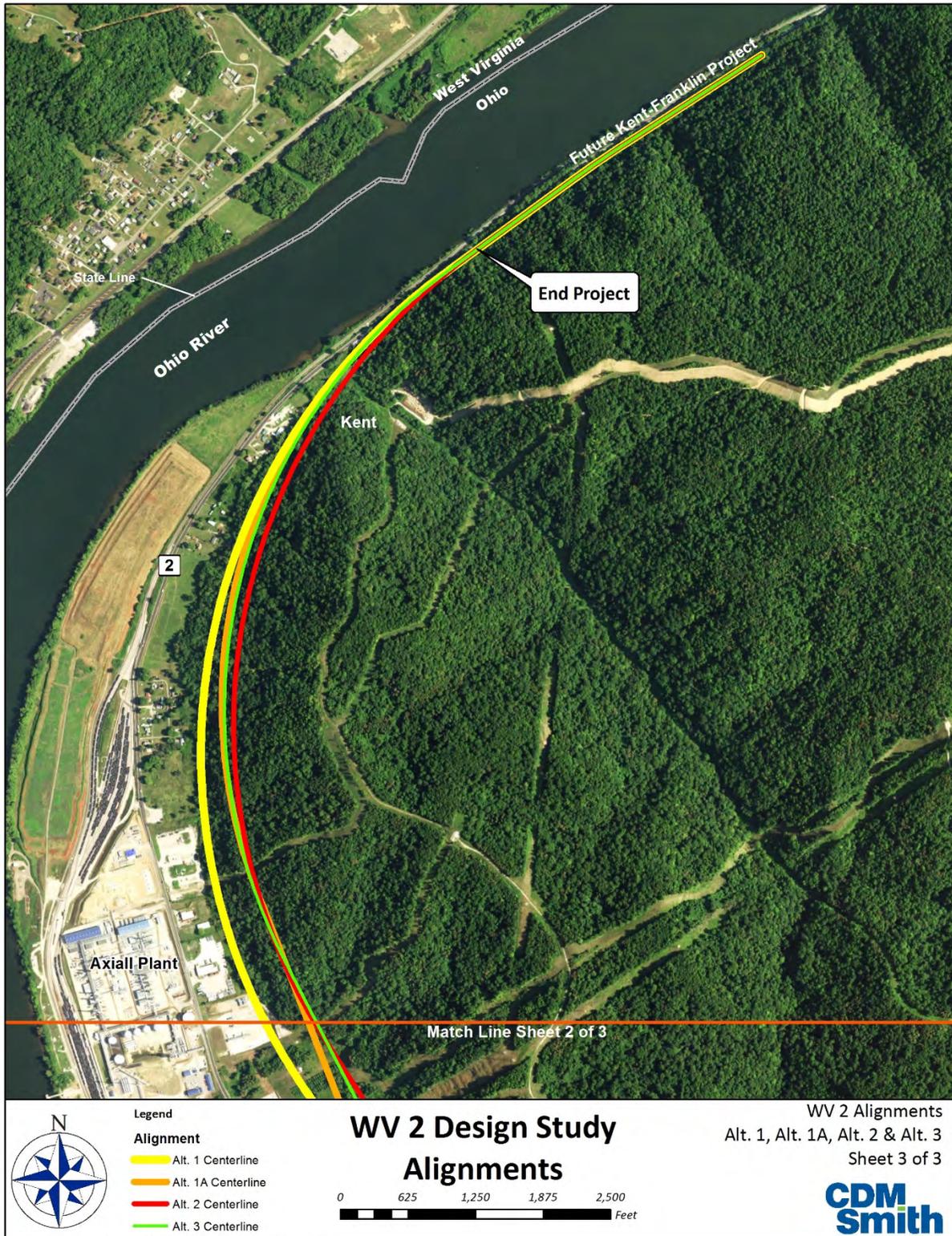




Figure 2-3: WV 2 Design Study Alternatives, Sheet 3 of 3



## 2.1 Alternative 1

Alternative 1 begins at the southern end of the project limits at the existing four-lane section in Proctor, just south of the Marshall County line. A curve to the west is introduced to move the alignment away from the steep hillside located to the east. Because of the slope of the hillside, any impact would result in a high cut. The tangent alignment continues to Dry Run where a curve to the east places the alignment along the foot of the hillside. The alignment in this area is located between residences at Dry Run and the Mason Dixon Monument. This curve continues through the Bayer property past the Bayer Heritage Federal Credit Union up to CR 2/2, which is an access to Axiall's brine wells and to several gas well pads located at the top of the hill. A short section of tangent roadway follows, which runs parallel to the existing roadway. A new curve to the east and a reverse curve to the west align the roadway behind the Axiall facilities. Finally, a long curve to the east aligns the roadway with the project to the north (see **Figure 2-3**). This alignment impacts a portion of a historic property boundary (MR-0144, the green barn property), residences at Dry Run, the Bayer Heritage Credit Union, the Blue Racer supply gas lines, and the Axiall brine well infrastructure.

Alternative 1 meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

## 2.2 Alternative 2

Alternative 2 was developed to maximize the separation between the chemical facilities and the roadway. This separation was obtained by pushing the alignment higher up on the hillside. The general configuration is similar to Alternative 1 but located further to the east and at a higher profile grade. This alignment impacts the residences at Dry Run, the Bayer Heritage Credit Union, the CR 2/2 Access Road, and the Blue Racer supply gas lines (see **Figure 2-3**).

Alternative 2 meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

## 2.3 Alternative 3

Alternative 3 was developed to avoid properties such as the Bayer Heritage Federal Credit Union and the Dominion Gas (now Blue Racer Mid-Stream) processing area and gas lines. The alignment was pushed east, which is further into the hillside. The profile grade was also raised even higher to mitigate the elevated grade. The overall alignment is similar to Alternatives 1 and 2. This alignment impacts the Dry Run Residences, and the brine well access located at CR 2/2 (see **Figure 2-3**).

Alternative 3 meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

## 2.4 Alternative 1A – The Preferred Alternative

Alternative 1A was developed to primarily maintain the features of Alternative 1 but has been shifted to avoid and minimize impacts to the green barn historic boundary and the encroachment on the pipelines and valve complex near the Blue Racer Plan (see **Figure 2-4**). The horizontal curves and vertical profile for Alternative 1A have been adjusted near these features to minimize the overall impacts. This alignment impacts the Bayer Heritage Credit Union and a portion of the brine piping infrastructure at the Axiall plant. Alternative 1A has the least amount of costs and overall impacts.

The Preferred Alternative, Alternative 1A meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.



## 2.5 No Build Alternative

Under the No Build Alternative, the proposed widening and relocation of a portion of WV 2 from Proctor to Kent will not be constructed. Future traffic growth related to the anticipated increase in industrial development will create substantial delays and high congestion on this portion of WV 2. Operational improvements will not be made, thus not improving safety. Thus, the No Build Alternative does not meet the purpose and need to increase system capacity and enhance safety.

## 2.6 Comparison of Alternatives

All four build alternatives meet the purpose and need of the projects by increasing the capacity of WV 2, and by enhancing safety by reducing the number of driveways and access points to the mainline highway and providing wider shoulders and additional roadside clear area.

### 2.6.1 Overview

The four build alternatives are located within a corridor that is bounded between the Ohio River, which the CSX Railroad line runs adjacent to, and the steep hillside located east of existing WV 2. Each of the alternatives will consist of four 12-foot travel lanes, with a 14-foot flush median, four-foot inside shoulders and eight-foot outside shoulders. The four build alternatives are all similar in length, approximately 5.3 to 5.9 miles in length. Alternative 1A is the least expensive with a cost of \$58.5 million and Alternative 3 is the most expensive at \$89.3 million. Alternative 1 would have the most impacts to wetlands (4.19 acres), while Alternative 1A would impact the least wetlands (3.03 acres). Alternative 2 has the greatest impacts to streams (3,321 linear feet) and Alternative 1A would have the least amount of impacts to streams (1,913 linear feet). Alternative 2 would have the greatest impact to forested lands (273.34 acres) while Alternative 1A will impact the least amount of forested lands (138.91 acres). Alternatives 1 and 3 would have the most residential relocations at 9 and Alternatives 2 and 1A have the least at 5. Alternative 1 would impact one historic resource, the green barn property, while Alternatives 1A, 2, and 3 would not impact any historic resources. The comparison of the four build alternatives is summarized in **Table 2-1**.

Alternative 1 would avoid the towers that feed the transformer station located at the northern end of the Axiall plant; whereas Alternative 2 would require them to be relocated. Alternatives 1, 2 and 3 would impact the Axiall Brine Well Infrastructure. Alternative 1A would not impact the electrical towers or the Axiall Brine Well Infrastructure. The Blue Racer Midstream Gas Plant is being fed with several gas lines which were recently constructed or are under construction. These lines have not been located, because they were under construction during this evaluation. Plans for the widened and relocated WV 2 were provided to the gas company to show the proposed roadway alignment. These lines will have to be located during the design phase of the proposed project. There will be some electrical lines impacted at the northern end of the project, which will likely need to be relocated.

CSX Railroad tracks are located parallel to the project, but well outside any construction limits except at the very northern end of the project. In this area, the construction limits are located adjacent to the CSX Railroad right of way. Other than the residential areas at Proctor, Dry Run and Kent, most of the property within the project area is owned by either by Covestro, Axiall or Blue Racer Midstream.

As indicated in **Table 2-1**, impacts are very similar between the four build alternatives.

**Table 2-1: Alternatives Analysis Evaluation/Cost Matrix**

| Evaluation Factor                                       | Alternative 1  | Alternative 2  | Alternative 3  | Alternative 1A Preferred Alternative   |
|---|--|--|--|--|
| <b>Engineering</b>                                      |  |  |  |  |
| Prelim. Length of WV 2 Improvements (miles)             | 5.8 miles  | 5.8 miles  | 5.9 miles  | 5.3 miles  |
| Roadway Configuration                                   | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders | 4 (12' Lanes)<br>14' Flush Median<br>4' Inside Shoulders<br>8' Outside Paved Shoulders |
| Estimated earthwork excavation (cubic yards)            | 2,813,849  | 4,605,846  | 6,183,857  | 3,059,351  |
| <b>Natural Environment</b>                              |  |  |  |  |
| Stream Impacts (linear feet)                            | 2,023  | 3,321  | 2,759  | 1,993  |
| Wetlands (acres)  | 4.19   | 4.12   | 4.01   | 3.03   |
| Floodplains (acres)                                     | 10.07  | 10.02  | 10.91  | 5.59   |
| T&E Species   | 0  | 0  | 0  | 0  |
| <b>Human Environment</b>                                |  |  |  |  |
| Forested Land (acres)                                   | 152.21   | 273.34   | 221.57   | 174.61   |
| Historic Resources                                      | 1  | None   | None   | None   |
| Archaeological Sites                                    | 1  | No adverse effect  | No adverse effect  | None   |
| Cemetery  | None   | None   | None   | None   |
| Industrial Facilities (e.g. Chemical Plant)             | 2 - Axiall Brine Well Infrastructure <sup>1</sup><br>Blue Racer Valve Cluster          | 1 - Axiall Brine Well Infrastructure <sup>1</sup>                                      | 1 - Axiall Brine Well Infrastructure <sup>1</sup>                                      | 1-Axiall Brine Piping Infrastructure   |
| Commercial Facilities (e.g. Businesses)                 | 1 – Bayer Heritage Credit Union  | 1 – Bayer Heritage Credit Union  | None   | 1 – Bayer Heritage Credit Union  |
| Residential Displacements                               | 9  | 5  | 9  | 5  |
| Environmental Justice Populations                       | None   | None   | None   | None   |
| Noise <sup>2</sup>                                      | Yes  | Yes  | Yes  | Yes  |
| Air   | No   | No   | No   | No   |
| Prime Farmland/Farmland of Statewide Importance (acres) | 6.21/121.38  | 6.07/88.48   | 4.41/102.22  | 2.97/76.52   |
| Section 4(f)/6(f) Properties                            | 0  | 0  | 0  | 0  |
| <b>Physical Impacts</b>                                 |  |  |  |  |
| Hazard Waste Sites                                      | None   | None   | None   | None   |
| Public Utility Conflicts                                | Gas pipelines feeding the Blue Racer Fractionation Plant                               | Gas pipelines feeding the Blue Racer Fractionation Plant                               | Electrical tower   | None   |

| Evaluation Factor  | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 1A Preferred Alternative |
|--|---------------|---------------|---------------|--------------------------------------|
| <b>Financial / Costs</b>   |               |               |               |                                      |
| Estimated Construction Costs (Excluding utility relocation and right of way acquisition) | \$60,100,000  | \$77,900,000  | \$89,300,000  | \$58,494,312                         |

<sup>1</sup> The brine wells are used to retrieve brine water from the earth as a “raw material” which is then used in chemical production.

<sup>2</sup> Noise modeling indicated the 2032 Build scenario would impact several existing receptors; however, those receptors are slated for relocation due to encroachment on the right-of-way.

### 2.6.2 Recommended Preferred Alternative

All four build alternatives have similar impact characteristics and equally meet the purpose and need of the project. The recommended Preferred Alternative for this project is Alternative 1A. Alternative 1A has the least overall impacts and construction costs.

## 2.7 Public and Stakeholder Involvement

Public outreach for the proposed WV 2 Proctor to Kent project included coordination with resource agencies and two public meetings. The first public workshop was held at New Martinsville Elementary School on November 2, 2017. The purpose of the meeting was to answer questions and listen to ideas or concerns about the WV 2 Proctor to Kent project. In total, 30 people attended the workshop. The meeting handout, the sign-in sheet, and comments received are included as **Appendix B**. A summary of the 13 comments received is provided below.

A total of 13 comments were received, six comment forms were submitted at the November 2, 2017 public workshop, three comments were submitted via the U.S. Postal Service, and four comments were received via the website. Of the six comments received at the public workshop, one respondent expressed his appreciation for those providing answers at the workshop and two others expressed their support of the project. Another had comments on houses that were missing on the maps presented and a desire for better advertising of future meetings. One respondent requested as much notice as possible so that Bayer Heritage Credit Union could plan accordingly. Three respondents support either Alternative 1 or Alternative 2.

The three comments received via the U.S. Postal Service were from the Cain family, who have owned and occupied property near Dry Run and the Marshall-Wetzel County line for many years. Respondents requested consideration for alignments at the Marshall-Wetzel County line to move west to avoid impacts to properties, including three long standing houses. Respondents including those who have lived there for over 60 years, stated how the properties have a family history, being in the family for over 80 years. One respondent offered information as to why it would be acceptable to move the Mason-Dixon Monument and the gas house to accommodate a more western alignment.

The four comments received via the website expressed concerns about the project. Respondents’ concerns included cost and use of money on other projects, concerns over Wetzel and Tyler County road improvements, eminent domain for certain properties, the loss of land, and road maintenance. One

respondent expressed support for Alternative 1 with concerns for the additional earthwork needed for Alternatives 2 and 3. Another suggested moving the alignment west, near Dry Run, to save three houses there.

During the project development process, WVDOH considered comments from the agencies, public and project stakeholders and made refinements to the alternatives to avoid and minimize impacts to both the human and natural environment.

An informal public workshop will be scheduled and advertised following the approval of the EA.



# CHAPTER 3. AFFECTED ENVIRONMENT & MITIGATION

The National Environmental Policy Act (NEPA) requires Federal Agencies to evaluate many categories of potential social, economic and natural environmental impacts for all Reasonable Alternatives under consideration for a proposed project. This chapter provides a description of the current conditions in the study area, and a description of impacts that could be expected for the human and natural environment, with the proposed project. Both negative and beneficial impacts can occur as a result of implementing transportation improvements. This chapter will discuss the negative and beneficial impacts associated with Alternatives 1, 2, 3, and the Preferred Alternative, Alternative 1A. Alternative 1A was chosen as the Preferred Alternative because it meets the purpose and need of the project while having the least amount of natural environment and human environment impacts.

## 3.1 Socioeconomics

### 3.1.1 Demographics

The proposed project area is located within U.S. Census Tracts 209 and 304 in Wetzel and Marshall Counties, respectively. As shown in **Table 3-1**, although the population within the state of West Virginia has increased overall from 2000 to 2014, the population within the general project area has decreased, particularly in the Wetzel County Census Tract covering the project area. The developed land within the study area consists mostly of factory and industrial buildings. In addition to the factories and industry buildings within the three plant complexes. There are two small communities of few single-family residences at the southern end of the corridor in Proctor, as well as at the northern end of the corridor in Kent.

**Table 3-1: Population and Growth Rate, 2000, 2010, and 2014**

| Total Population              | Location      |                 |               |                                   |                                 |
|-------------------------------|---------------|-----------------|---------------|-----------------------------------|---------------------------------|
|                               | West Virginia | Marshall County | Wetzel County | Census Tract 209, Marshall County | Census Tract 304, Wetzel County |
| 2000                          | 1,808,344     | 35,519          | 17,693        | 5,675                             | 3,205                           |
| 2010                          | 1,852,994     | 33,107          | 16,583        | 5,299                             | 3,045                           |
| 2014                          | 1,853,881     | 32,716          | 16,314        | 5,477                             | 2,936                           |
| <b>Growth Rate: 2000-2014</b> | <b>2.52%</b>  | <b>-7.89%</b>   | <b>-7.79%</b> | <b>-3.49%</b>                     | <b>-8.39%</b>                   |

*Source: U.S. Census Bureau, 2000 Census; U.S. Census Bureau, 2010 Census; U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, Table S0101*

As demonstrated in **Table 3-2** the population age in the project area is higher than in West Virginia overall; significantly more of the population is over the age of 64 in the Wetzel County Census Tract covering the project area. Approximately half of the project area’s population has achieved a high school degree as their highest level of educational attainment, compared to 41 percent in the state overall. The majority of the project area’s population is employed in service occupations. For more information about employment by industry, please see Section 3.1.3. The unemployment rate within the Marshall County Census Tract covering the project area is higher than in the state and counties overall; however,

the unemployment rate in the Wetzel County Census Tract is nearly one-third that of the state’s overall unemployment rate.

The median home values are greater in the project area than in the two counties, although less than the state overall. The median household income in the Marshall County Census Tract is slightly higher than in the state and county overall; however, the income in the Wetzel County Census Tract is lower than in the state and county as a whole.

**Table 3-2: Demographic Data for Proposed Project Location, 2014**

|  | Location      |                 |               |                                   |                                 |
|--|---------------|-----------------|---------------|-----------------------------------|---------------------------------|
|  | West Virginia | Marshall County | Wetzel County | Census Tract 209, Marshall County | Census Tract 304, Wetzel County |
| <b>Age (%)</b>                                   |               |                 |               |                                   |                                 |
| Under 5  | 5.6           | 5.2             | 5.2           | 4.7                               | 3.3                             |
| Over 64  | 16.8          | 18.3            | 20.5          | 17.0                              | 27.3                            |
| <b>Median Age (years)</b>                        | 41.6          | 44.1            | 45.5          | 43.4                              | 45.5                            |
| <b>Educational Attainment (%)</b>                |               |                 |               |                                   |                                 |
| Less than high school graduate                   | 15.6          | 11.1            | 16.9          | 13.0                              | 22.3                            |
| High school graduate                             | 40.9          | 47.2            | 48.9          | 52.3                              | 52.5                            |
| Some college or associate's degree               | 24.8          | 25.8            | 23.9          | 25.3                              | 19.3                            |
| Bachelor's degree                                | 11.6          | 10.7            | 6.0           | 6.6                               | 3.5                             |
| Graduate or professional degree                  | 7.2           | 5.2             | 4.2           | 2.8                               | 2.4                             |
| <b>Occupation (%)</b>                            |               |                 |               |                                   |                                 |
| Management, business, science and arts           | 31.5          | 27.6            | 22.7          | 18.8                              | 11.3                            |
| Service  | 18.9          | 22.0            | 23.0          | 25.0                              | 27.4                            |
| Sales and office                                 | 24.3          | 21.9            | 18.5          | 19.6                              | 13.8                            |
| Natural resources, construction, and maintenance | 12.2          | 14.6            | 19.7          | 19.5                              | 27.2                            |
| Production, transportation and material moving   | 13.1          | 13.9            | 16.1          | 17.1                              | 20.3                            |
| <b>Unemployment Rate (%)</b>                     | 8.2           | 7.7             | 8.0           | 10.0                              | 2.7                             |
| <b>Median Income (\$)</b>                        | 22,148        | 23,324          | 21,054        | 22,380                            | 18,190                          |
| <b>Median Home Value (\$)</b>                    | 120,500       | 96,500          | 85,000        | 100,400                           | 92,900                          |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, Tables S0601, S2301, S2405, S2506

The proposed project would serve to improve access and safety concerns along the existing WV 2. The developed land within the study area consists mostly of factory and industrial buildings. In addition to the factories and industry buildings, there are two small residential communities located at the southern end of the study area in Proctor, as well as at the northern end of the study area in Kent; a few scattered residential properties are located along the project corridor.

Larger communities including New Martinsdale and Hannibal are located to the south of the study area and Moundsville and Glen Dale are located to the north of the study area. Residents located along the

Ohio River must travel along WV 2 to access community services. The proposed improvements to WV 2 will facilitate more efficient and safer travel along this corridor that connects the residents with places of employment and community services.

Between five and nine residential relocations are anticipated to be impacted under the four build alternative options. The Preferred Alternative would impact seven structures within the study area. Of the seven structures, five would be residential impacts and one is a commercial property, the Bayer Heritage Credit Union and one barn would be relocated. A table listing the number of structures estimated to be impacted by the four build alternatives are shown in **Table 3-3** below.

**Table 3-3: Estimated Structures to Be Acquired by Alternative**

| Structure                                      | No Build | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 1A Preferred Alternative |
|--|----------|---------------|---------------|---------------|--------------------------------------|
| Residential                                    | 0        | 9             | 5             | 9             | 5                                    |
| Other (shed, garage, foundation)               | 0        | 9             | 7             | 5             | 0                                    |
| Commercial                                     | 0        | 2             | 2             | 1             | 1                                    |
| Barn   | 0        | 1             | 1             | 1             | 1                                    |
| Brine Well                                     | 0        | 1             | 1             | 1             | 0                                    |
| Fraction Plant Valves and Product Loading Area | 0        | 1             | 0             | 0             | 0                                    |
| <b>TOTAL</b>                                   |          | <b>23</b>     | <b>16</b>     | <b>17</b>     | <b>7</b>                             |

### 3.1.2 Environmental Justice

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that each Federal agency, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment to identify and avoid “disproportionately high and adverse” effects on minority and low-income populations. Disproportionate impacts are defined as, a project that predominately impacts a minority or low-income population group or, the impact is “more severe” than that experienced by non-minority or non-low-income populations.

Council on Environmental Quality (CEQ) guidance defines “minority” as non-white or Hispanic and defines the population of an affected area as a minority population when the total minority percentage in the affected area exceeds 50 percent or “is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.” Low-income populations, according to the CEQ guidance, are identified based on poverty thresholds used by the U.S. Census Bureau.

The developed land within the study area consists mostly of factory and industrial buildings. In addition to the factories and industry buildings within the three industrial plant complexes, there are a few scattered single-family residences along the project corridor and two small communities located at the southern end of the study area in Proctor, as well as at the northern end of the study area in Kent.

As shown in **Figure 1-2**, the majority of the project area is located in Marshall County. The two Census Tracts that include the project area have a total minority population of 1.9 percent (Census Tract 209 in Marshall County) and 1.1 percent (Census Tract 304 in Wetzel County), which are significantly lower than the state as a whole (7.3 percent) and lower than Wetzel (2.1 percent) and Marshall (3.0 percent) Counties (see **Table 3-4**). Thus, the proposed project is not anticipated to disproportionately affect minority populations.

The poverty rate in the Marshall County Census Tract is 11.4 percent, which is lower than in the state of West Virginia (18.1 percent) and Wetzel (20.2 percent) and Marshall (15.1%) Counties. However, the poverty rate in the Wetzel County Census Tract is 24.6 percent. This is higher than both the state and county overall. As mentioned previously and shown in **Figure 1-2**, only a small portion of the study area is located in Wetzel County. Of the five residential relocations associated with the Preferred Alternative, two are located in Marshall County and three are located in Wetzel County. The relocations in Wetzel County are not low-income households. Although the portion of the study area located in Wetzel County has the potential to contain households that are below the poverty level, the proposed project does not have the potential to disproportionately affect low-income populations.

**Table 3-4: Environmental Justice Demographic Data for Proposed Project Location**

| Parameter                              | Location      |                 |               |  |  |
|--|---------------|-----------------|---------------|--|--|
|  | West Virginia | Marshall County | Wetzel County | Census Tract 209, Marshall County <sup>2</sup> | Census Tract 304, Wetzel County <sup>2</sup> |
| Total Population                       | 1,853,881     | 32,716          | 16,315        | 5,477  | 2,936  |
| Total minority population <sup>1</sup> | 7.3%          | 3.0%            | 2.1%          | 1.9%   | 1.1%   |
| Population below poverty level         | 18.1%         | 15.1%           | 20.2%         | 11.4%  | 24.6%  |

<sup>1</sup> Persons not “white alone, not Hispanic or Latino”

<sup>2</sup> The smallest geographic unit available for income data is the census tract

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, Tables S0101, S0601

According to FHWA definitions, there is the possibility for low-income populations to be located within the study area. EO 12898 requires that the proposed project be reviewed to determine if there are disproportionately high or adverse effects on minority or low-income populations. The goal is to achieve a fair distribution of benefits and burdens to all communities impacted by the proposed alternatives, while giving the populations within the project area access to the transportation decision-making process. The alternatives were reviewed to determine whether disproportionate patterns or concentrations of adverse impacts would occur in areas with Environmental Justice populations when compared to impacts that would occur in other areas impacted by the project.

The No Build Alternative will have no adverse impacts on any segment of the population, including minorities and low-income persons. No relocations would occur. However, the potential benefits of the build alternatives such as traffic congestion relief and safety enhancements would be lost.

Environmental Justice populations will share the potential benefits of the selection of the build alternative as there will be traffic congestion relief resulting in reduced travel times and enhanced safety by providing operational improvements to reduce crash rates by widening the roadway and the

reduction of the traffic conflicts associated with multiple at-grade intersections. Under the four Build alternatives, residential relocations range from five to nine residences. A table listing all the number of structures estimated to be impacted for the four Build alternatives are shown in **Table 3-3** above. While the proposed project could impact low-income households, it is not anticipated to have an adverse impact on residents within the general project area. All of the four build alternatives will affect Environmental Justice populations in a similar manner to the general population.

Low-income, minority and other community members will have further chances to comment on the project through the public hearing process and public comment period during the review of this EA.

Environmental Justice populations would experience beneficial and adverse effects similar to those of the overall population. No Environmental Justice populations would bear a disproportionate impact from the project.

### 3.1.3 Economics

As shown in **Table 3-2** above, the majority of workers in the project area are in service or natural resources, construction and maintenance occupations (accounting for 44.5 percent and 54.6 percent of employees in the Wetzel and Marshall Census Tracts, respectively). By industry, as demonstrated in **Table 3-5**, the highest proportion of employees in the project area work in the educational services, health care and social assistance fields, followed by the construction field and the professional, scientific and management, and administrative and waste management services field in the Marshall County Census Tract. In addition to the industries located within the study area, many of employment centers are located outside of the study area in the communities including New Martinsdale and Hannibal, located to the south and Moundsville and Glen Dale located to the north of the study area. The operational and safety improvements of the existing WV 2 will improve commuter safety for those using WV 2 to commute back and forth to their places of employment.

The vast majority of workers are private wage and salary employees, although a greater proportion of employees are self-employed in the Marshall County Census Tract than in the counties or state overall.

**Table 3-5: Economic Demographic Data**

| Parameter  | Location      |                 |               |   |   |
|--|---------------|-----------------|---------------|---|---|
|  | West Virginia | Marshall County | Wetzel County | Census Tract 209, Marshall County (includes project area) | Census Tract 304, Wetzel County (includes project area) |
| <b>Industry</b>  |               |                 |               |   |   |
| Agriculture, forestry, fishing and hunting, and mining | 5.3%          | 6.4%            | 5.7%          | 9.8%  | 9.9%  |
| Construction   | 6.3%          | 7.3%            | 11.4%         | 10.7%   | 13.9%   |
| Manufacturing  | 8.2%          | 7.1%            | 9.7%          | 8.4%  | 6.1%  |
| Wholesale trade  | 2.2%          | 2.1%            | 0.8%          | 0.9%  | 0.8%  |
| Retail trade   | 12.6%         | 12.2%           | 10.5%         | 8.3%  | 6.8%  |
| Transportation and warehousing, and utilities          | 5.4%          | 4.9%            | 7.4%          | 7.5%  | 9.4%  |

| Parameter  | Location      |                 |               |   |   |
|--|---------------|-----------------|---------------|---|---|
|  | West Virginia | Marshall County | Wetzel County | Census Tract 209, Marshall County (includes project area) | Census Tract 304, Wetzel County (includes project area) |
| Information  | 1.7%          | 1.9%            | 1.2%          | 2.8%  | 1.3%  |
| Finance and insurance, and real estate and rental and leasing                              | 4.2%          | 4.1%            | 3.2%          | 5.3%  | 1.1%  |
| Professional, scientific, and management, and administrative and waste management services | 7.7%          | 7.3%            | 6.2%          | 13.5%   | 7.9%  |
| Educational services, and health care and social assistance                                | 26.5%         | 26.9%           | 27.1%         | 19.8%   | 23.4%   |
| Arts, entertainment, and recreation, and accommodation and food services                   | 9.0%          | 9.2%            | 6.8%          | 5.8%  | 7.8%  |
| Other services, except public administration   | 4.3%          | 4.8%            | 4.5%          | 2.7%  | 6.8%  |
| Public administration  | 6.6%          | 5.8%            | 5.6%          | 4.5%  | 4.8%  |
| <b>Class of Worker</b>   |               |                 |               |   |   |
| Private wage and salary workers  | 76.1%         | 81.5%           | 79.2%         | 84.8%   | 83.7%   |
| Government workers   | 19.2%         | 14.4%           | 17.9%         | 8.6%  | 16.0%   |
| Self-employed in own not incorporated business workers                                     | 4.5%          | 4.1%            | 2.7%          | 6.6%  | 0.4%  |
| Unpaid family workers  | 0.1%          | 0.0%            | 0.2%          | 0.0%  | 0.0%  |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, Table DP03

The Belomar Regional Council (Belomar) is a planning council covering Ohio, Marshall, and Wetzel Counties in West Virginia and Belmont County in Ohio. The U.S. Economic Development Administration (EDA) designated the three West Virginia counties as Economic Development Districts (EDD), and charged Belomar with guiding the area’s economic development. According to Belomar’s Comprehensive Economic Development Strategy (CEDS) 2015 Update, recent job growth in the region can be attributed to increases in the oil and gas industries. Employment in the natural resources and mining sector nearly doubled from 2004 to 2013 in Wetzel and Marshall Counties (from 1,213 and 33 workers in 2004 to 2,262 and 119 workers in 2013 in Wetzel and Marshall Counties, respectively).<sup>1</sup>

According to the West Virginia Department of Commerce, the top employers in Wetzel and Marshall Counties are:

- Marshall County Coal Company (formerly McElroy Coal Company)
- TeleTech Customer Care Management Inc.
- Ohio Power Company
- Mound View Health Care, Inc.
- Wal-Mart Associates, Inc.
- Axiall Corporation (formerly PPG Industries, Inc.)

<sup>1</sup> Region X, Belomar Regional Council, 2015, Comprehensive Economic Development Strategy 2015 Update, p. 13

- Reynolds Memorial Hospital, Inc.
- Covestro, LLC (formerly Bayer MaterialScience, LLC)
- West Virginia Department of Highways
- Mentor Management, Inc., Db
- Wetzel County Hospital
- Genesis HealthCare LLC (formerly SunHealth Specialty Services, Inc.)
- Wetzel County Board of Education<sup>2</sup>

Two of the top employers – Axiall Corporation and Covestro, LLC are located within the project area. The proposed project would enhance safety and access to their facilities, as well as other commercial establishments within the project area, thereby benefiting the region. In addition, other employment centers are located outside of the study area in New Martinsdale and Moundsville. The proposed improvements to WV 2 will improve operations and provide a safer facility to allow more efficient and safer travel along this corridor that connects the residents with places of employment.

### 3.1.4 Community Facilities and Services

Community facilities and services include amenities such as educational facilities, commercial facilities, health care, social services, religious institutions, recreational resources, and public safety (police, fire and emergency medical).

No community facility or service is located within the project area. The closest school to the proposed project area is New Martinsville Elementary School, located approximately 3.2 miles away, along WV 2 in New Martinsville, Wetzel County. Wetzel County Hospital, which offers 24-hour emergency care, is the closest medical facility to the project area – approximately 3.5 miles south of the project limits. The Wetzel County Department of Health and Human Resources, which administers public social service programs, is located in New Martinsville, approximately 2.5 miles from the project location. The closest church is located across the river in Clarington, Ohio, and the closest park, Lewis Wetzel Park, is in New Martinsville, nearly 3.2 miles away. The Grandview Fire Department and the Marshall County Sherriff's Office cover the Marshall County portion of the study area. The New Martinsville Fire Department and the New Martinsville Police Department cover the Wetzel County portion of the project area. No police or fire stations are located within the project area.

The proposed project would not create an additional demand for community facilities and services nor interfere with delivery of such services. The proposed project will add additional capacity and improve the safety of the existing WV 2, thus improving access to these community services and facilities in nearby towns located outside of the study area. The proposed project would improve the safety and accessibility of WV 2, thereby improving emergency response times for emergency vehicles as well as enhance access for emergency services to the study area and the surrounding communities.

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<sup>2</sup> West Virginia Department of Commerce, Marshall County Community Profile. Accessed: <http://www.wvcommerce.org/business/siteselector/communityprofiles/county/marshall/25/default.aspx>; West Virginia Department of Commerce, Wetzel County Community Profile. Accessed: <http://www.wvcommerce.org/business/siteselector/communityprofiles/county/wetzel/52/default.aspx>

### 3.1.5 Relocations and Displacements

All relocation activities would follow the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act), which ensures prompt and equitable relocation of residences, businesses, farms, and non-profit organizations. No resident shall be displaced until comparable replacement housing – determined to be decent, safe and sanitary – has been offered or provided.

The proposed realignment of WV 2 would result in the acquisition of new right-of-way and temporary easements. **Table 3-6** demonstrates the acreage required for right-of-way and easements for each alternative. Alternative 1A would require the least amount of right-of-way acquisition.

**Table 3-6: Right-of-way and Temporary Easement Acquisitions**

| Alternative                          | Total Acreage | Total Acreage ROW | Total Acreage for Temporary Structure Removal Easements (TSRE) |
|--------------------------------------|---------------|-------------------|--|
| No Build                             | 0             | 0                 | 0  |
| Alternative 1                        | 1,773         | 211               | 0  |
| Alternative 2                        | 1,485         | 292               | 0.20   |
| Alternative 3                        | 1,485         | 278               | 0  |
| Alternative 1A Preferred Alternative | 1,740         | 199               | 0.24   |

An effort to minimize required relocations was made during the development of each alternative. **Table 3-7** lists the number of potential relocations for each alternative. The right-of-way acquisition would result in the required relocation of two commercial properties for both Alternatives 1 and 2. Alternatives 1 and 3 would impact nine residences while Alternative 2 would impact five residences. Alternative 1A, the Preferred Alternative will impact five residences and one commercial property, the Bayer Heritage Credit Union.

**Table 3-7: Potential Relocations**

|             | No Build Alternative | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 1A Preferred Alternative |
|-------------|----------------------|---------------|---------------|---------------|--------------------------------------|
| Commercial  | 0                    | 2             | 2             | 1             | 1 – credit union                     |
| Residential | 0                    | 9             | 5             | 9             | 5                                    |

### 3.2 Land Use and Land Cover

Land cover describes the physical land type such as forest, water, farmland, or impervious surfaces. Land use describes how the land is used such as commercial, residential, and recreational uses. This section describes existing land cover and land use in the vicinity of the proposed project.



### 3.2.1 Land Cover

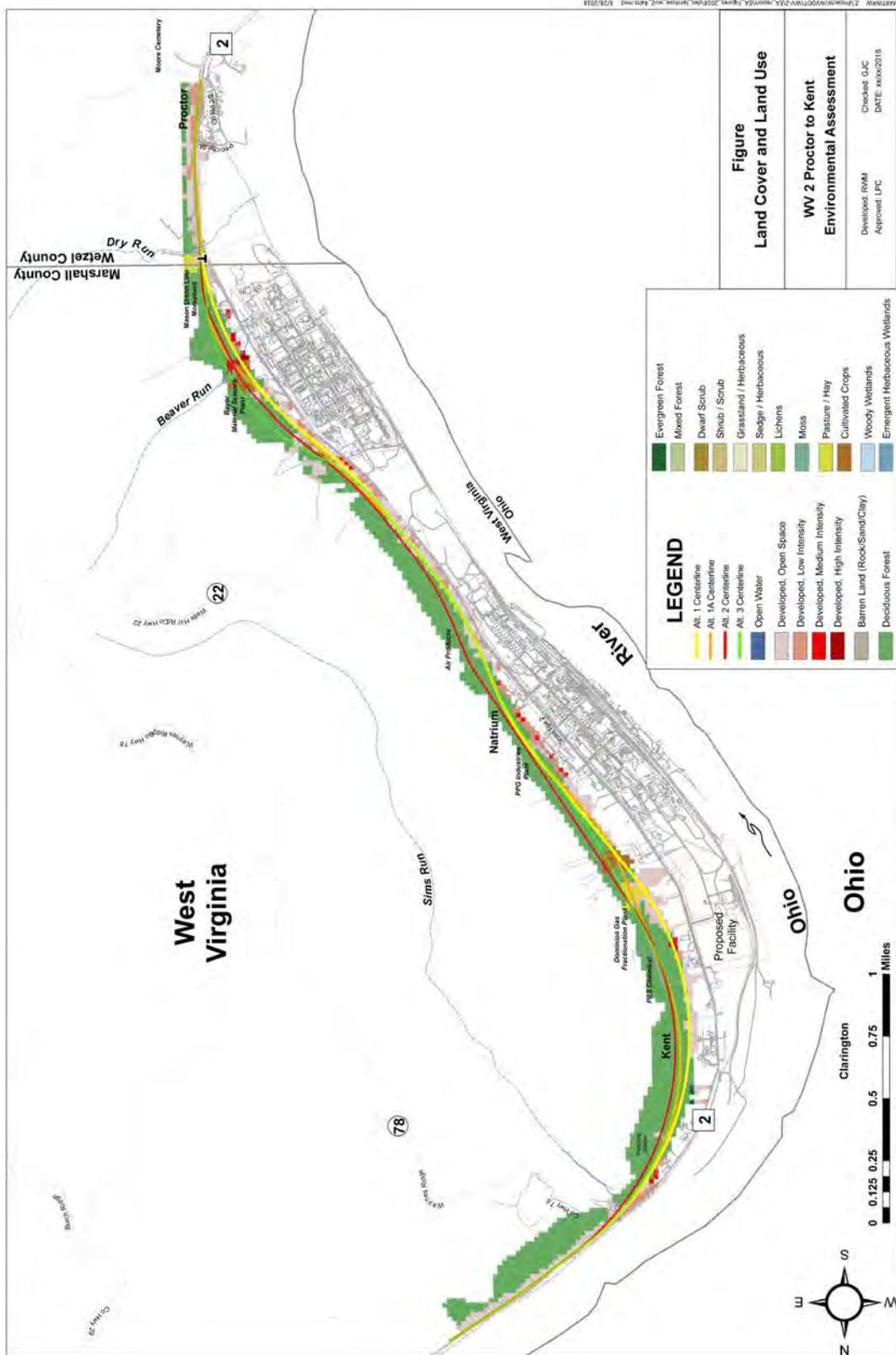
The project area parallels the east bank of the Ohio River, separated from the river primarily by CSX Railroad tracks and industrial uses. The land cover in the project area is dominated by deciduous forest land with some developed land. The developed land is a mix of developed open space and low and medium intensity land uses with some isolated pastures and cultivated crops. There are also two tributaries, Dry Run and Beaver Run, to the Ohio River located just north of Proctor.

### 3.2.2 Land Use

The developed area within the study area consists mostly of factory/industrial type buildings, parking lots, and undeveloped grass areas. The Mason Dixon Line is also located within the project area and is designated by a monument (MR-0037-0109) near the intersection of WV 2 and Dry Run. This monument is located at the southern end of the project and marks the county line between Wetzel and Marshall Counties. The sprawling Covestro Plant anchors the southern section of the project area. North of the Covestro plant is the Axiall Natrium Wildlife Management Area, maintained by Axiall Corporation. The Axiall Corporation Plant is located north of the wildlife management area. North of Axiall Corporation is the Blue Racer Midstream Gas Fractionation Plant. In addition to the factories and industry buildings within the three plant complexes, there are a few single-family residences at the southern end of the corridor in Proctor, as well as at the northern end of the corridor in Kent, most notably the Sims House (MR-0058).

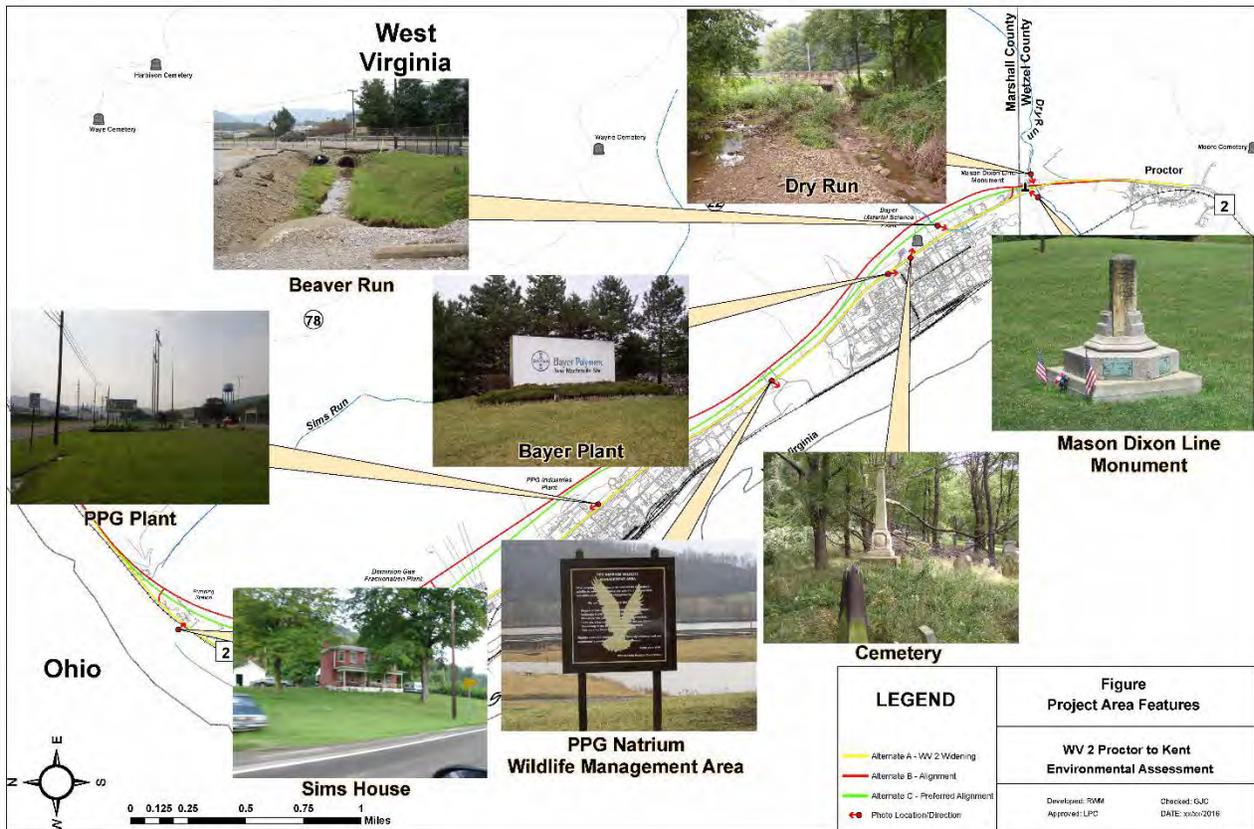
**Figure 3-1** shows the general land cover and land use in the vicinity of the project. **Figure 3-2** shows some of the more prominent land uses in the corridor.

Figure 3-1: Land Cover and Land Use



Source: United States Geological Survey (USGS)

Figure 3-2: Project Area Features



### 3.3 Farmland and Soils

According to the NRCS Web Soil Survey, the proposed project would occur within the following soil map units:

- Brookside silt loam
- Chagrín-Melvin complex
- Culleoka-Dormont-Peabody complex
- Lakin-Urban land complex
- Sensabaugh silt loam
- Skidmore gravelly loam
- Udorthents-Urban land complex
- Huntington silt loam
- Vandalia silty clay loam

The majority (approximately 95 percent) of the project area has a low to moderate corrosion rating for concrete or is classified as Udorthents-Urban land, which describes previously disturbed urban areas linked to the development of the existing roadway.

The proposed project would not significantly or adversely impact soils within the project area beyond the construction footprint.

The Farmland Protection Policy Act is a public law that is intended to minimize the unnecessary and irreversible conversion of farmland to nonagricultural uses. The Act defines farmlands by soil types and characteristics, whether the area is currently being used as cropland or not. Prime farmlands are “lands that have the best combination of physical and chemical properties for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion” (Farmland Protection Policy Act, USC 4201). Farmlands of statewide importance are lands other than prime farmlands that are important for crop production at a state, regional, or local level, as determined by the state.

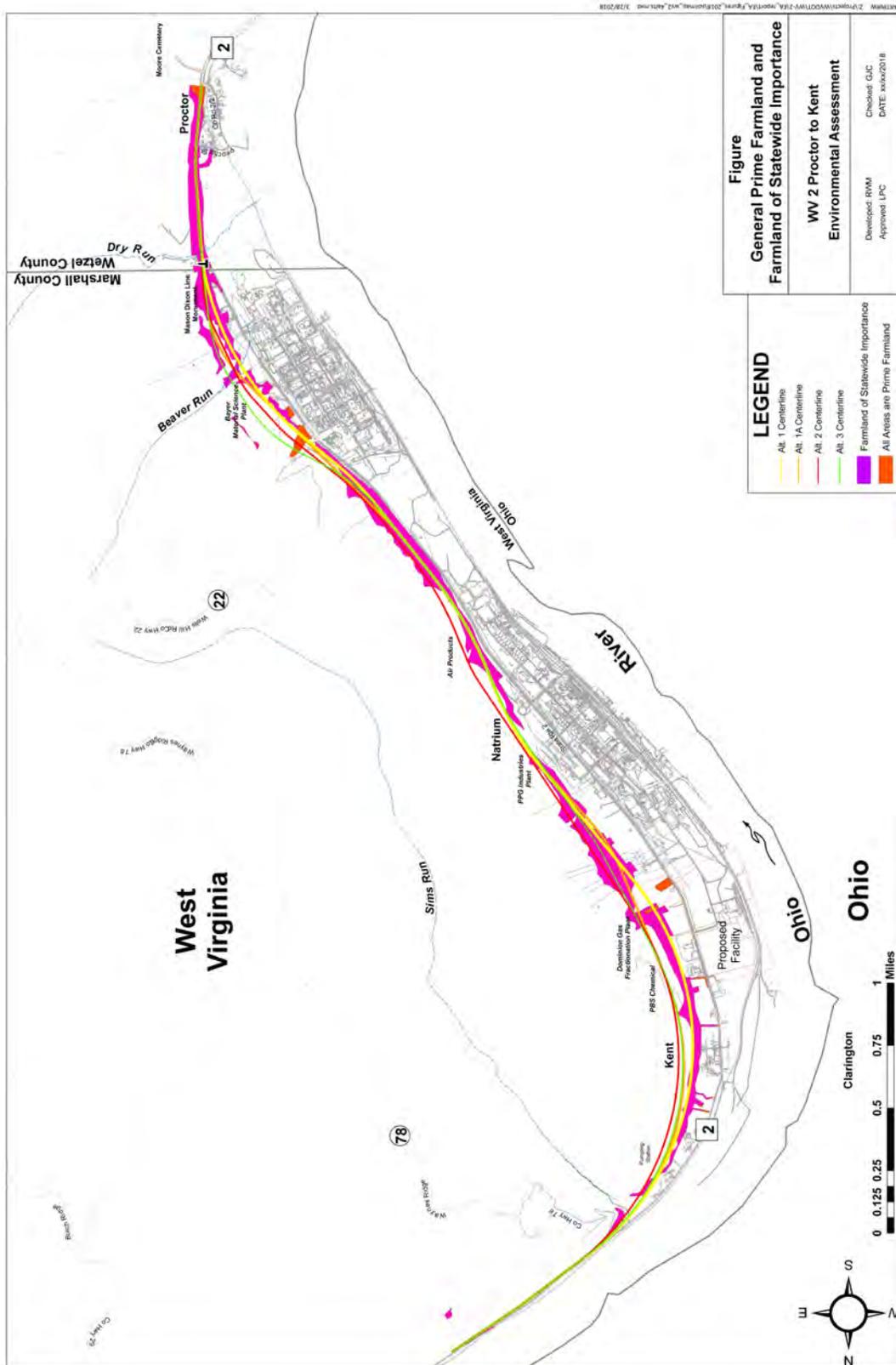
The Natural Resources Conservation Service (NRCS) Form AD 1006 was completed for the four build alternatives (**Appendix C**). The farmland assessment score for each alternative is 20 points (Part VI of Form) and would result in a total score less than 160 points. According to 7 CFR 658.4 (c)(2), sites that receive a score less than 160 points (Part VII of Form) receive minimal level of consideration for protection under the Act. Therefore, all the build alternatives would result in minimal impacts to prime farmland. **Table 3-8** lists the prime farmland and farmland of statewide importance by alternative. The general extent of the prime farmland and farmland of statewide importance is shown in **Figure 3-3**. Farmland of statewide importance exists along much of the proposed project corridor while prime farmland exists in a few isolated areas.

**Table 3-8: Prime Farmland and Farmland of Statewide Importance Impacts**

|  | Prime Farmland (acres) | Farmland of Statewide Importance (acres) |
|--|------------------------|--|
| No Build                               | 0                      | 0  |
| Alternative 1                          | 6.21                   | 121.38                                   |
| Alternative 2                          | 6.07                   | 88.48                                    |
| Alternative 3                          | 4.41                   | 102.22                                   |
| Alternative 1A – Preferred Alternative | 2.97                   | 76.52                                    |

Source: NRCS

Figure 3-3: General Prime Farmland and Farmland of Statewide Importance



Source: Natural Resources Conservation Service (NRCS)

## 3.4 Cultural Resources

### 3.4.1 Historic Resources

This section describes the results of a cultural historic survey performed as part of the proposed project. The survey area is located in Wetzel and Marshall Counties, West Virginia. Documentation of coordination with the State Historic Preservation Office (SHPO) is provided in **Appendix D**.

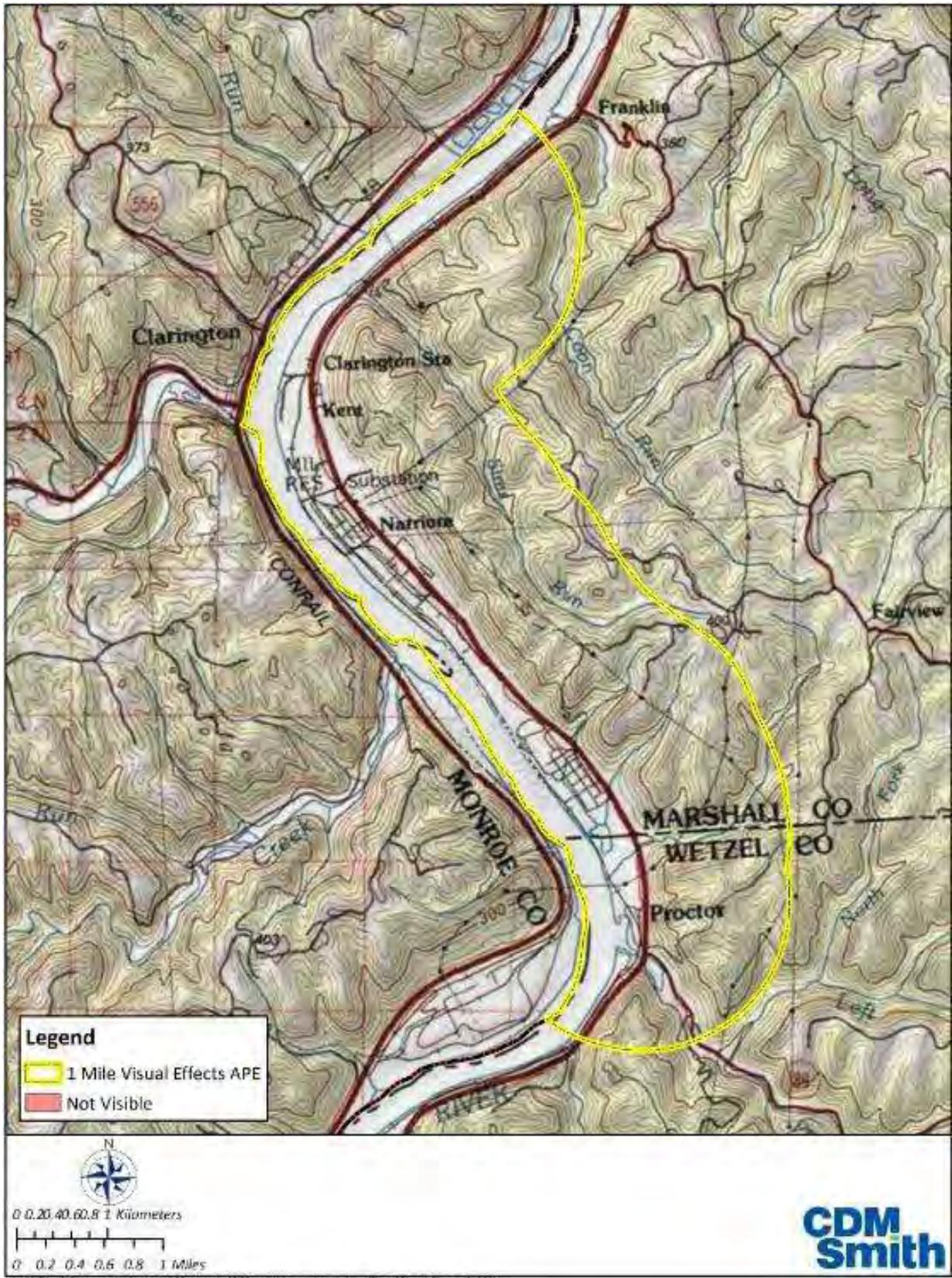
The cultural historic research was conducted in compliance with provisions of the National Historic Preservation Act of 1966 (P.L. 89-665; 80 Stat.915, 16 U.S.C. 470 et seq), NEPA (P.L. 910190; 83 Stat. 852, 42 U.S.C. 4321 et seq), Procedures of the Advisory Council on Historic Preservation (36CFR800), and EO 11593, Protection and Enhancement of the Cultural Environment (16 U.S.C. 470; Supp. 1, 1971). The survey methodology and the report format conform to the *Guidelines for Cultural Historic Surveys and Technical Reports*.

#### 3.4.1.1 Area of Potential Effects

The area of potential effects (APE) of the proposed road relocation project was designated pursuant to 36 CFR 800. 16 (d) which is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.”

The APE for this project was established during discussions with environmental personnel from the WVDOH. The cultural historic APE was defined as those structures that fell within the proposed right of way for the proposed Alternatives and any resources that were visible from the project area which did not extend beyond the river. **Figure 3-4** illustrates the historic APE.

Figure 3-4: Historic Area of Potential Effect



3.4.1.2 Evaluation Criteria

Once identified, each historic resource was evaluated for significance under the historic context and the National Register of Historic Places (NRHP) criteria for evaluation. These criteria state that to be listed on the NRHP a property must possess “the quality of significance in American history, architecture, archaeology, engineering, and culture...” This quality can occur “...in districts, sites, buildings, structures, and objects” (NPS 1997 from CFR 36 Part 60). Also, a property typically must be at least 50 years of age for consideration. Each surveyed resource was evaluated for its individual eligibility.

A proposed project may have an effect (impact) on historic properties if it alters characteristics of the property that qualify the property for inclusion in the NRHP. These effects may be visual, audible, use, setting or atmospheric. The assessment of the effects of the proposed project, in coordination with the SHPO, on historic properties results in the following determination:

- No Effect – the proposed project will not affect historic properties;
- No Adverse Effect – the proposed project will have an effect on historic properties but the effect will not be harmful; or
- Adverse Effect – the proposed project will have a harmful effect on historic properties.

3.4.1.3 Summary of Survey

Sixty-eight (68) new sites were located during the survey: WZ-0106 – WZ-0146 and MR-0144 – MR-0170. Eleven (11) previously recorded sites were also visited during the survey: WZ-0007, MR-0037-0109, MR-0057, MR-0058, MR-0059, MR-0060, MR-0061, MR-0062, MR-0063, MR-0004, and WZ-0028. MR-0004 is no longer extant. No resources within the study area were determined as significant resources to qualify as a historic district.

Table 3-9 lists the recommended eligible properties and Figure 3-5 illustrates their locations. Following Table 3-9, each eligible property is reviewed in regard to the applicable criteria and a description of their proposed NRHP boundary. Historic properties can be determined eligible for listing on the NRHP under four separate criteria (Table 3-9).

Table 3-9: Recommended NRHP Eligible Properties

| Field Number | Property Type | Status    | Eligibility Criteria | Determination of Effects  |
|--------------|---------------|-----------|----------------------|---|
| WZ-0007      | Residence     | Fair      | Yes C                | No adverse effect   |
| WZ-0028      | Light         | Good      | Yes* A               | No adverse effect   |
| WZ-0136      | Bridge        | Good      | Yes* A               | No adverse effect   |
| WZ-0140      | Bridge        | Good      | Yes* A               | No adverse effect   |
| MR-0037-0109 | Monument      | Excellent | Yes C                | No adverse effect <sup>1</sup>  |
| MR-0058      | Residence     | Good      | Yes C                | No adverse effect   |
| MR-0144      | Outbuildings  | Excellent | Yes A & C            | Adverse effect – Visual (Alternative 1)<br>No adverse effect (Alternatives 1A, 2 & 3) |

Source: National Register of Historic Places (NRHP). Note: \* denotes recommended as a contributing resource, not individually eligible. The remaining documented resources are not recommended as eligible. <sup>1</sup>MR-0037-0109 is located adjacent to Alternatives 1 and 2 and will be noted on construction plans to not be disturbed.

Criterion Definitions (from NPS 1977, CFR 36 Part 60)

A = [Properties] that are associated with events that have made a significant contribution to the broad patterns of our history.

B = [Properties] that are associated with the lives of persons significant in our past.



*C = [Properties] that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.*

*D = [Properties] that have yielded, or may be likely to yield, information important in prehistory or history.*

**WZ-0007.** WZ-0007 is recommended eligible under Criterion C. WZ-0007 is a one and half story, three bay, log building topped with a side gable roof covered in new metal, located on the west side of WV 2. This structure also referred as the “Hanes House” is an excellent example of an early-nineteenth century log residence.

Proposed National Register Boundary Determinations – Based upon the criteria by which the property is recommended eligible for listing and its current surroundings, a boundary including the residence footprint and yard area is proposed. The boundary would extend east to the WV 2 right of way, north and south to the edge of the residential yard, and west to the railroad right-of-way. The total area within the National Register Boundary is 1,457 square feet.

**WZ-0028.** WZ-0028 is the Proctor Landing Light. It is located midway between Haynes Run and Proctor Creek and is the last upstream light under the United States Coast Guard’s Huntington District jurisdiction. As an integral part of the river navigation system, WZ-0028 is recommended as a contributing resource to a multiple resource listing that is recommended eligible under Criterion A for its association with river navigation.

Proposed National Register Boundary Determinations – Based upon the criteria by which the property is recommended eligible for listing and its current surroundings, a boundary including the structure footprint and extending out 15 feet in all directions is proposed.

**WZ-0136.** WZ-0136 is a railroad bridge. The resource is recommended as a contributing resource to the Baltimore & Ohio Railroad. It is eligible under Criterion A for its association with transportation.

Proposed National Register Boundary Determinations – Based upon the criteria by which the property is recommended eligible for listing and its current surroundings, a boundary including the structure footprint is proposed.

**WZ-0140.** WZ-0140 is a railroad bridge, retaining wall, and culvert system. The resource is recommended as a contributing resource to the Baltimore & Ohio Railroad. It is eligible under Criterion A for its association with transportation.

Proposed National Register Boundary Determinations – Based upon the criteria by which the property is recommended eligible for listing and its current surroundings, a boundary including the structure footprint is proposed.

**MR-0037-0109.** MR-0037-0109 is recommended eligible under Criterion C. MR-0037-0109 is an obelisk that was first erected in 1846 and moved in 1931 to make way for improvements to WV 2. The monument is located at the Wetzel and Marshall County line and is believed to mark the Mason Dixon Line due to a sign located to the side of the monument that describes the Mason Dixon Line. However, the Mason Dixon Line ends in the southwest corner of Pennsylvania, which is relatively far from the site. The Mason Dixon Line was surveyed between 1763 and 1767 by Charles Mason and Jeremiah Dixon in

the resolution of a border dispute involving Maryland, Pennsylvania, and Delaware in Colonial America. Later it became known as the border between the North and South during the Civil War. Lettering inscribed on the MR-0037-0109 monument describe the county names. This is an excellent example of a mid-nineteenth century commemorative resource.

Proposed National Register Boundary Determinations – Based upon the criteria by which the property is recommended eligible for listing and its current surroundings, a boundary including the monument footprint and extending out 15 feet in all directions is proposed.

**MR-0058.** MR-0058 is recommended eligible under Criterion C. Referred to as the “Sims House”, the two story, brick farmhouse, residence is an excellent example of a mid-nineteenth century, vernacular interpretation of the Greek Revival style residence in a rural setting in Marshall County. The site is located south of the Sims Run near the community of Kent. It retains a high level of integrity of materials, location, feeling, workmanship and design.

Proposed National Register Boundary Determinations – Based upon the criteria by which the property is determined eligible for listing and its current surroundings, a boundary including the residence footprint and yard area is proposed. The boundary would extend east to the WV 2 right of way, north to the shared driveway with an adjoining property, west and south to the edge of the residential yard. The total area within the National Register Boundary is 31,478 square feet.

**MR-0144.** MR-0144, referred to as the “green barn property”, consists of two barns, a silo, a bridge, and culvert system. MR-0144 is recommended eligible under Criterion A. The resource is an excellent example of agricultural outbuildings belonging to a farmstead related to the production of corn in rural Marshall County. It retains a high level of integrity of materials, location, feeling, workmanship and design.

Proposed National Register Boundary – Based upon the criteria by which the property is determined eligible for listing and its current surroundings, a boundary including the building footprint is proposed. The total area within the National Register Boundary is 4.0 acres.

**Table 3-10: Historic Impacts by Alternative**

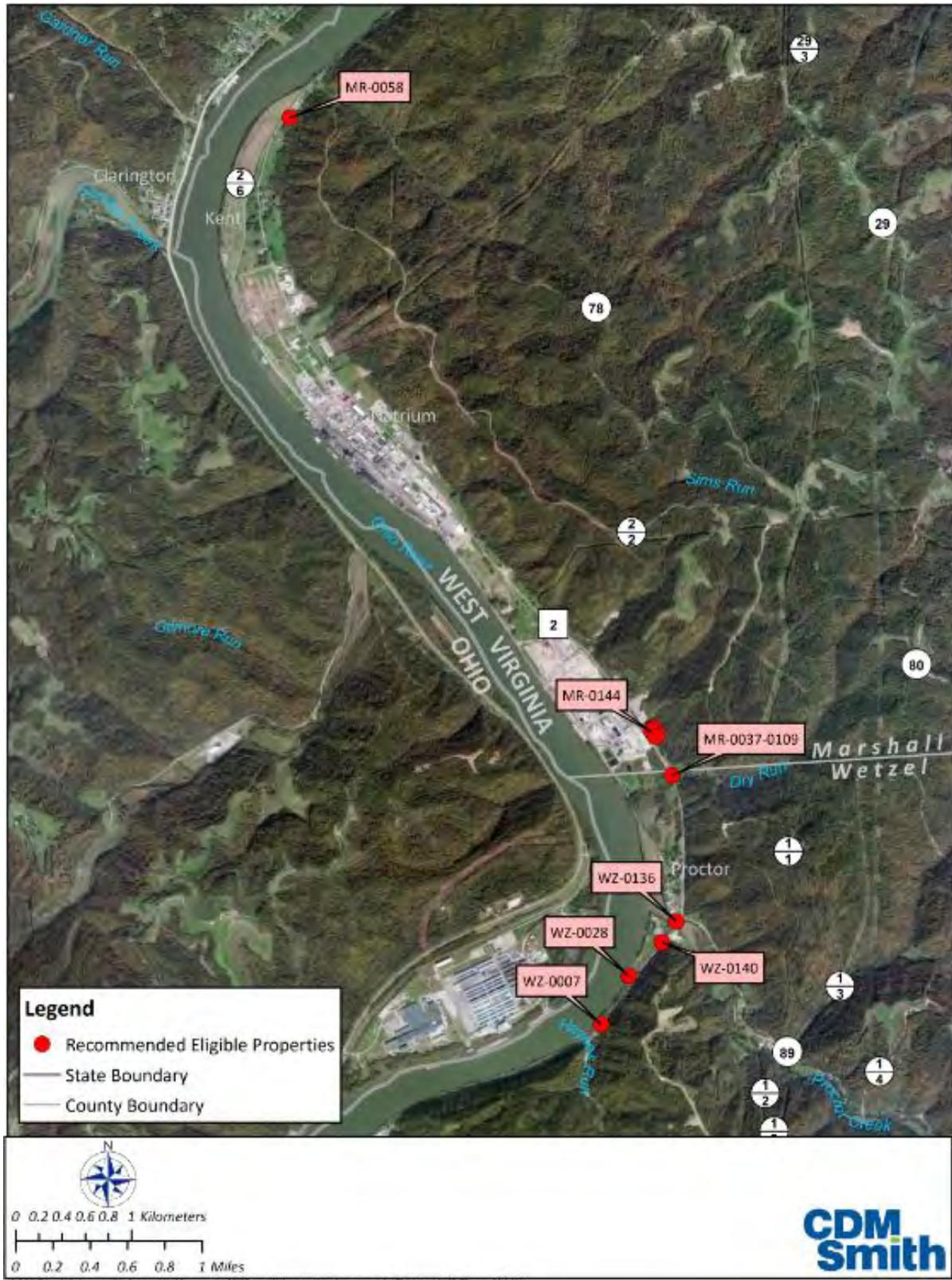
|  | Historic Properties Impacted |
|--|------------------------------|
| No Build                               | None                         |
| Alternative 1                          | MR-0144                      |
| Alternative 2                          | None                         |
| Alternative 3                          | None                         |
| Alternative 1A – Preferred Alternative | None                         |

MR-0037-0109 is currently located along existing WV 2. The proposed new roadway would not introduce any new elements that would diminish the qualities that make the MR-0037-0109 significant. The viewshed would not be drastically altered from its current situation. The monument is not directly affected but does sit adjacent to the three of the four proposed: Alternatives 1, 2, and 1A. The location

of the resource will be noted on plans with instructions that it is not to be disturbed. This results in a determination of No Adverse Effect.

Alternative 1 would take a portion of the property that is recommended to be included within the national register boundary of MR-0144. There are no physical impacts to the resource, however the project would have a visual impact. Thus, it would have an adverse effect upon this resource.

Figure 3-5: Locations of Recommended Eligible Properties Per NHRP Criteria



Source: NHRP

### 3.4.2 Archaeological Resources

This section describes the results of a Phase I Archaeological Survey for the alignments of WV 2, from Proctor to Kent, in Wetzel and Marshall Counties, West Virginia. Documentation of coordination with the SHPO is provided in Appendix D.

The archaeological research was conducted in compliance with provisions of the National Historic Preservation Act of 1966 (P.L. 89-665; 80 Stat.915, 16 U.S.C. 470 et seq), the National Environmental Policy Act of 1969 (P.L. 910190; 83 Stat. 852, 42 U.S.C. 4321 et seq), Procedures of the Advisory Council on Historic Preservation (36CFR800), and Executive Order 11593, Protection and Enhancement of the Cultural Environment (16 U.S.C. 470; Supp. 1, 1971). The survey methodology and the report format conform to the *Guidelines for Phase I, II, and III Archaeological Investigations and Technical Reports* (Trader 2001).

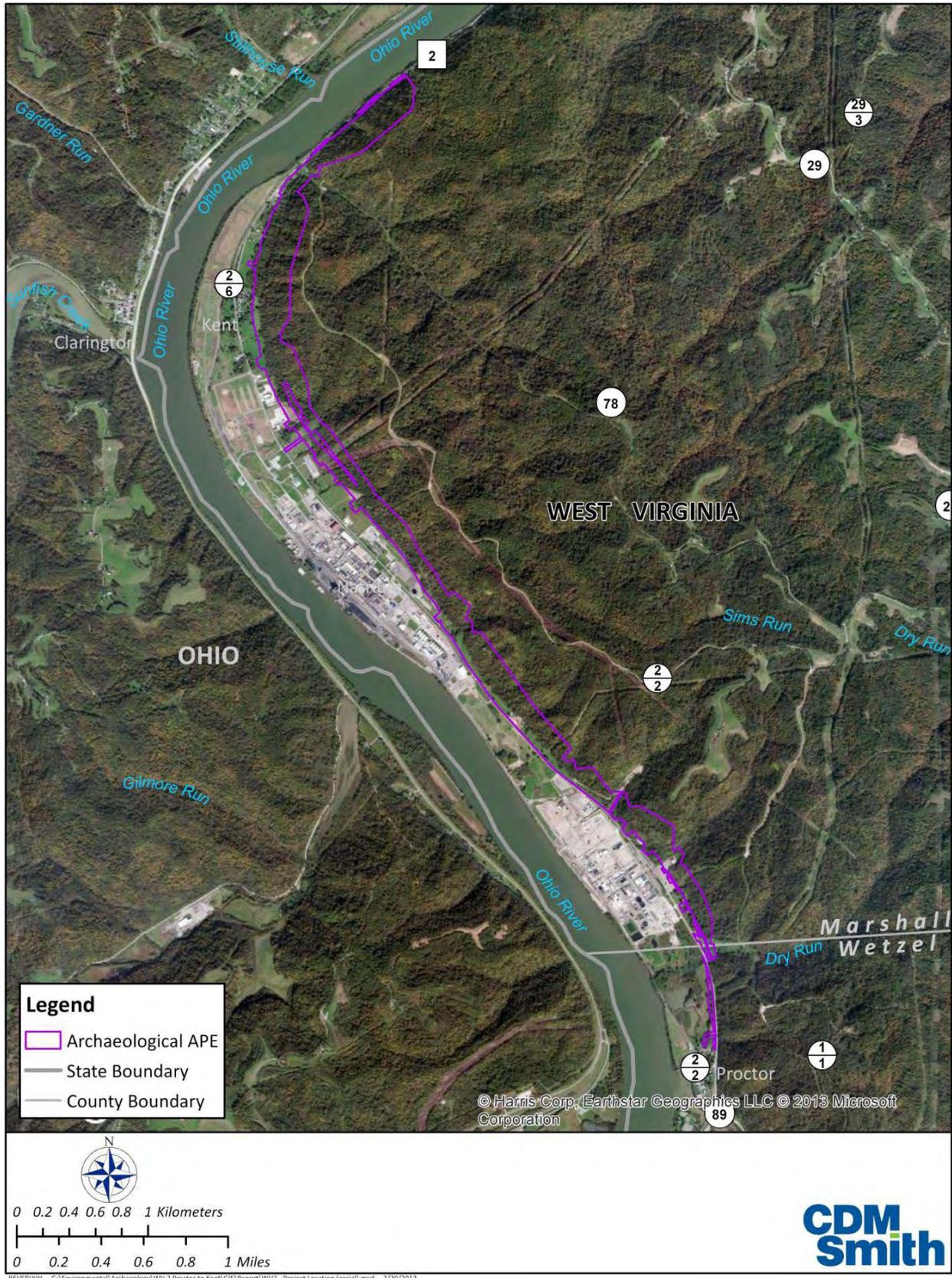
#### 3.4.2.1 Phase I Archaeological APE

The Phase I Archaeological APE is illustrated in **Figure 3-6**. It is defined as the combined proposed right of way, proposed temporary construction easement, and the proposed temporary structure removal easement of the Alternatives. All archaeological activity was limited to this area. The total area examined is 394.49 acres.

The Phase I investigations located four archaeological sites that are associated with above ground historic resources that date in occupation from the late 19<sup>th</sup> to the mid-20<sup>th</sup> century. No features or buried deposits were found at any of the four sites. Archaeologically, none of the sites yielded or are likely to yield information important in prehistory or history, thus none of the sites are considered potentially eligible for listing on the National Register of Historic Places (NRHP) according to Criterion D. None of the sites meet the applicable for Criteria A or B. One site had an associated structure (that meets Criterion C and may be eligible for nomination to the NRHP).

Construction of the Preferred Alternative, Alternative 1A would not impact any of the identified archaeological resources within the study area. Alternative 1 would destroy the archaeological portion of Site 46MR197.

Figure 3-6: Archaeological APE (aerial)



### 3.5 Section 4(f) Resources

In accordance with Section 4(f) of the United States Department of Transportation Act of 1966 (49 U.S. Code [U.S.C], Section 303) and the Federal Aid Highway Act of 1968 (23 U.S.C., Section 138), the Secretary of Transportation may not approve the use of land from any publicly owned park, recreation area, or wildlife and waterfowl refuge, or any historic site unless a determination is made that there is no feasible and prudent alternative to the use of land from the property and the action includes all possible planning to minimize harm to the property resulting from such use. There are no recreational Section 4(f) properties located within the study area.

As noted in Section 3.4, there are historic properties located within the study area. Impacts to historic properties were identified with Alternative 1. No historic Section 4(f) properties will be impacted by Alternative 1A, the Preferred Alternative.

Alternative 1A, the Preferred Alternative, does not impact any Section 4(f) resources.

### 3.6 Section 6(f) Resources

The Land and Water Conservation Fund Act (LWCFA), commonly referred to as Section 6(f), requires that the conversion of lands or facilities acquired with LWCFA funds be coordinated with the Department of the Interior. There are no Section 6(f) resources located within the footprint of the proposed alternatives.

### 3.7 Air Quality

#### 3.7.1 Attainment Status

The Clean Air Act (CAA) of 1970 requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants that cause adverse effects to public health and the environment. The EPA has established NAAQS for six common air pollutants: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead (Pb). Geographic regions are classified into one of three air quality categories. Areas that meet the established numerical standards for these pollutants are considered in “attainment” of the NAAQS. Areas where concentrations of criteria pollutants exceed the levels set by the federal standards are “nonattainment” areas. Areas that have previously exceeded the criteria pollutant levels but since attained the standard are called “maintenance” areas.

The proposed project is located in Wetzel and Marshall Counties in West Virginia. Wetzel County is in attainment of all NAAQS. Marshall County is designated as a nonattainment area for the 2010 1-hour SO<sub>2</sub> standard and a maintenance area for the 1997 annual PM<sub>2.5</sub> standard. It is considered in attainment of all other NAAQS<sup>3</sup>.

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<sup>3</sup> EPA. 2016. Green Book: West Virginia Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Accessed on November 29, 2016 at: [https://www3.epa.gov/airquality/greenbook/anayo\\_wv.html](https://www3.epa.gov/airquality/greenbook/anayo_wv.html).

### 3.7.2 Transportation Conformity

Approval, funding, or implementation of FHWA projects are subject to the transportation conformity regulations under the Clean Air Act (CAA) (40 Code of Federal Regulations [CFR] 93 Subpart A). Each metropolitan planning area is required to develop an official metropolitan transportation plan pursuant to 23 CFR Part 450. If a potential project is included in a transportation plan and transportation improvement program (TIP) that conform to the state air quality implementation plan (SIP) and the CAA amendments, then the project is already included in the emission budgets developed for the region. Thus, a unique, regional analysis of project emissions would not be required; however, analysis regarding possible localized impacts is still required. The Metropolitan Planning Organization (MPO) for the study area, Belomar Regional Council, is responsible for transportation planning and determining regional conformity.

Transportation conformity applies to nonattainment and maintenance areas. Since the project area is in maintenance for the 1997 PM<sub>2.5</sub> standard and is designated as nonattainment of the 2010 1-hour SO<sub>2</sub> standard, transportation conformity regulations apply<sup>4</sup>.

This project was included in the 2040 Long Range Transportation Plan (2016) prepared by the Belomar Regional Council<sup>5</sup>. The EPA determined that emissions from mobile sources are insignificant for transportation conformity in the region and waived the emissions analysis requirement for PM<sub>2.5</sub> for the long-range transportation plans and TIP. Qualitative regional conformity, including an interagency consultation process, fiscal constraints, latest planning assumptions, and public involvement, was satisfied for the 2040 Transportation Plan.

The proposed project involves widening and the relocation of a rural two-lane arterial roadway to a four-lane divided highway from Proctor to Kent. This will provide a safe convenient highway with increased traffic capacity. WV DOT estimated an AADT increase from 4,900 in 2012 to 6,300 in 2032, with approximately 13 percent of the AADT estimated to be trucks<sup>6</sup>.

Projects in PM<sub>2.5</sub> nonattainment or maintenance areas that have a significant number of diesel vehicles, are anticipated to significantly increase the number of diesel vehicles, and change the LOS of an intersection to D, E, or F are required to conduct a hotspot analysis (40 CFR 93.123). Projects that involve bus and rail terminals are often subject to this requirement due to increase in diesel use. Facilities with an AADT greater than 125,000, eight percent or more of that AADT as diesel trucks, is considered to be significant (71 FR 12468). The AADT of this project is less than 125,000 and the project is not expected to cause a significant increase in the number of diesel vehicles or adversely affect intersections. Therefore, a PM<sub>2.5</sub> hotspot analysis is not required.

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<sup>4</sup> West Virginia Department of Environmental Protection (WVDEP). 2016. SO<sub>2</sub> Nonattainment Areas. Accessed on November 29, 2016 at: <http://www.dep.wv.gov/daq/planning/NAAQS/Pages/SO2-Nonattainment-Areas.aspx>.

<sup>5</sup> Bel-O-Mar Regional Council. 2016. Belmont-Ohio-Marshall Counties Transportation Plan for 2040. June. Accessed on November 29, 2016 at: <http://www.belomar.org/wordpress/wp-content/uploads/2016/07/bomts-lrp-2040-final-document.pdf>.

<sup>6</sup> G. Graley. 2011. Memorandum to Dirar Ahmad on State Project U352-2-11.65 Protcor-Natrium Rd. Marshall & Wetzel Counties. October 19.



### 3.7.2.1 South Coast Air Quality Management District v. EPA, Case No. 15-1115

On February 16, 2018, the District of Columbia Circuit Court vacated portions of the *2008 Ozone NAAQS SIP Requirements Rule* concerning the ozone National Ambient Air Quality Standards (NAAQS). These portions of the *2008 Ozone NAAQS SIP Requirements Rule* addressed implementation requirements for the 2008 ozone NAAQS as well as the anti-backsliding requirements associated with the revocation of the 1997 ozone NAAQS.

In accordance with FHWA's April 23, 2018 memorandum "Interim Guidance on Conformity Requirements for the 1997 Ozone NAAQS", based on the information in EPA's Greenbook, all routine planning and project development actions may proceed throughout the country, except for the following actions within the identified areas should be considered "on-hold":

- New Metropolitan Long Range Plans and Transportation Improvement Programs (TIP), updates and amendments that include the addition of a project that is not exempt from transportation conformity may not proceed until transportation conformity with the 1997 ozone NAAQS is determined.
- Statewide Transportation Improvement Program (STIP) approvals and amendments that include TIPs or non-exempt projects from the 82 identified areas may not proceed, unless the TIP or project is determined to conform with the 1997 ozone NAAQS or is limited to projects that are exempt from transportation conformity.
- Within the 82 identified areas, NEPA approvals for FHWA/FTA projects (40 CFR 93.101) may not proceed unless the existing Metropolitan Plan and TIP include the project. For projects that already completed NEPA, there is no need to delay further action.

According to guidance from FHWA, NEPA approvals may proceed as normal for projects that are included in the applicable STIP/TIP documents prior to April 23, 2018. The WV 2 Proctor to Kent project is currently in the Belmont-Ohio Marshall Transportation Study (BOMTS) MPO's TIP FY 2018-2021 and WVDOH STIP FY 2016-2021 Amendment 15. Therefore, this project is not subject to approval of the required updated air quality analysis.

### 3.7.3 Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources (e.g., cars, trucks, and construction equipment), non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories, refineries, and power plants). EPA has also recognized emissions of air toxics from mobile sources as a potential environmental and health concern. The interim guidance released by FHWA dated February 2007 requires discussion of Mobile Source Air Toxics (MSATs) in NEPA documents. The guidance was last updated in October 2016.

The proposed project involves widening and relocation of a state highway. The design year AADT for the state highway is projected to be less than 140,000 to 150,000 vehicles per day which, according to FHWA MSAT guidance, is considered to be a project "with low potential MSAT effects and therefore only requires a qualitative analysis. The analysis is presented below.

For each alternative in this EA, the amount of MSAT emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. VMT is calculated by multiplying the AADT by the project length. The AADT is anticipated to be the same between the No Build and the three Build Alternatives. The corridor length would be the same for No Build and the three Build Alternatives (5.28 miles), so the VMT for No Build and the three Build Alternatives would be similar. Because the estimated VMT under the three Build Alternatives are nearly the same, varying by less than four percent, it is expected there would be no appreciable difference in overall MSAT emissions among the future alternatives.

Speed may increase due to additional capacity increasing the efficiency of the transportation network for any of the Build Alternatives. According to the EPA's MOVES2014 model, emissions of all of the priority MSAT decrease as speed increases. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent between 2010 and 2050<sup>7</sup>. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the project area are likely to be lower in the future in nearly all cases. Further discussion on MSAT emissions is included in **Appendix E**.

### 3.7.4 Construction Emissions

Heavy construction equipment, including excavators, scrapers, graders, rollers, compactors, and pavers, may be used to clear and grub, excavate, grade, and pave for construction of new roadways. Contractors would be responsible for maintaining, repairing, and adjusting all construction equipment to keep them in full satisfactory condition to minimize pollutant emissions. Equipment emissions may be reduced by using newer, lower-emitting equipment, retrofitting older equipment engines, and controlling activity.

## 3.8 Noise

The WV 2 Expansion Noise Study (CDM Smith, 2013) provided as **Appendix F**, documents the evaluation of existing ambient noise levels at six noise monitoring locations and predicts loudest-hour equivalent traffic noise levels at 48 noise sensitive receptors under the existing (2012 traffic conditions), no build (estimated 2032 traffic), and build (estimated 2032 traffic) scenarios. Detailed maps showing the location of the six monitoring locations and the 48 noise sensitive receptors are located in **Appendix F**.

A review of the original noise study (West Virginia 2 Expansion Noise Study; CDM Smith, 2013) was conducted to determine the potential for additional noise impacts associated with the introduction of Alternative 1A, the Preferred Alternative, which was developed to avoid impact to a historic resource. The Addendum to WV 2 Expansion Noise Study; CDM Smith 2013 (CDM Smith, 2018) supplies information to supplement the previous reports findings and is provided in Appendix F.

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<sup>7</sup> Federal Highway Administration (FHWA). 2016. Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. October 18. Accessed on November 29, 2016 at: [http://www.fhwa.dot.gov/environment/air\\_quality/air\\_toxics/policy\\_and\\_guidance/msat/2016msat.pdf](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/2016msat.pdf).

The noise levels for the proposed conditions were modeled using average daily traffic levels for 2012 and 2032 provided by WVDOH. The 48 noise receptors are spread throughout the length of the corridor, with residential receptors located predominately in the northern and southern parts of the study area, while the middle of the study area is mainly comprised of commercial receptors. In total, noise modeling indicated that nine receptors within the project area approach or exceed the NAC by 2012 traffic conditions and two additional receptors that would approach or exceed the NAC by 2032 traffic conditions in the No Build scenario. However, the impacted receptors were reduced to five impacts for the Build scenario. **Table 3-10** summarizes traffic noise impacts by scenario.

**Table 3-10: Traffic Noise Impacts by Scenario**

| Scenario                    | Impacted Receptors per 23 CFR 772 | Description*  |
|-----------------------------|-----------------------------------|---|
| 2012 Existing Conditions    | 9                                 | 9 Category B (Residential)                              |
| 2032 No Build               | 11                                | 11 Category B (Residential)                             |
| 2032 Build (Alternative 1A) | 5                                 | R-6, R-7, R-43, R-44, and R-45 Category B (Residential) |

\* Noise modeling indicated the 2032 Build scenario would impact several existing receptors; however, those receptors are slated for relocation due to encroachment on the right-of-way.

As stated above, the Build Scenario identified four receptors that approach or exceed the NAC, with one receptor having a substantial increase over existing noise levels. The impacted receptors include R-6, R-7, R-43, R-44, and R-45 for Alternative 1A, the Preferred Alternative (shown in **Figure 3-7**). R7 exceeds the NAC and has a substantial increase from existing noise levels. **Table 3-11** summarizes traffic noise impacts for the proposed project.

**Table 3-11: Traffic Noise Impacts for the Build Scenario**

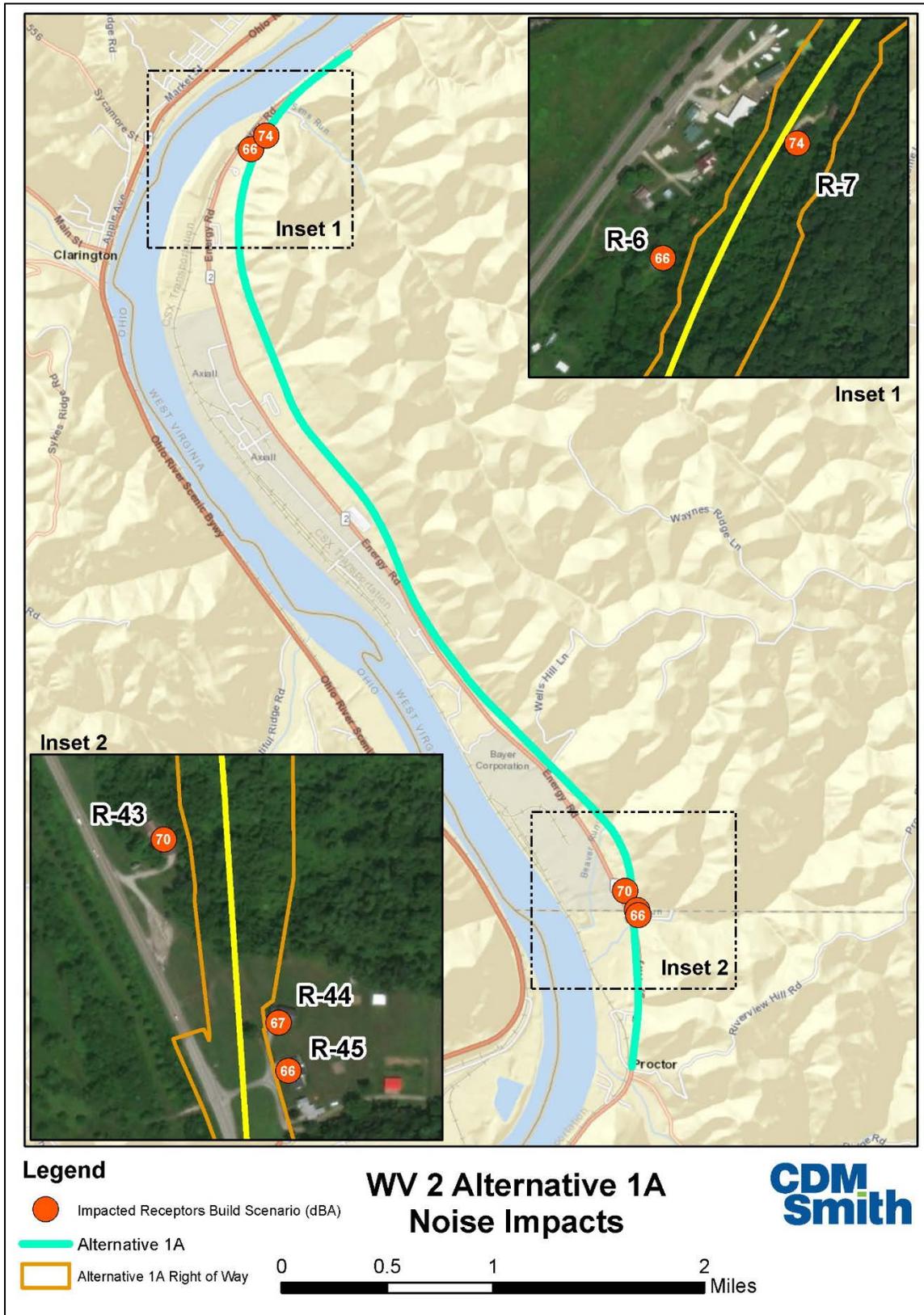
| Receptor | Existing 2012 (dBA) | No Build 2032 (dBA) | Build 2032 (dBA) | Substantial Increase Build | Mitigation   |
|----------|---------------------|---------------------|------------------|----------------------------|--|
| R-6      | 57                  | 58                  | 66               | 9                          | Roadway has been moved approximately 40ft away from the receiver and will reduce noise levels in this area.                                    |
| R-7      | 55                  | 56                  | 74               | 19                         | Receptor to be relocated due to ROW impacts.   |
| R-43     | 60                  | 61                  | 70               | 10                         | Roadway has been moved approximately 85ft away from the receiver and will reduce noise levels in this area.                                    |
| R-44     | 57                  | 59                  | 67               | 10                         | Noise mitigation does not seem feasible due to the property requiring direct access to proposed roadway limiting shielding from traffic noise. |
| R-45     | 58                  | 60                  | 66               | 8                          | Noise mitigation does not seem feasible due to the property requiring direct access to proposed roadway limiting shielding from traffic noise. |

The project area is primarily industrial with a few scattered residential areas. Receptors R-7 will be considered a relocation and would not require any mitigation for noise. The proposed alignment has been relocated farther away from Receptors R-6 and R-43. In reviewing the Build Scenario model, the NAC Category B (Residential) is exceeded at 66 dBA which is approximately 120 to 132 feet from the centerline of the roadway. R-6 is approximately 160 feet and R-43 is approximately 165 feet from the centerline of the relocated alignment. This should reduce the noise levels for these receptors below the impact level of 66 dBA.

After reviewing the location, topography, access points, and features for receptors R-44 and R-45, it was determined that noise mitigation would not be feasible due to fact that the receptors would require direct access the roadway facility would limit the effectiveness of a noise barrier. Due to these facts, no abatement measures have been recommended for the proposed project.

Construction noise impacts would occur due to the close proximity of numerous noise-sensitive receptors to project construction activities. The noise study recommends that all reasonable efforts be made to minimize exposure of noise-sensitive areas to construction noise impacts.

Figure 3-7: Alternative 1A Noise Impacts



### 3.9 Geology

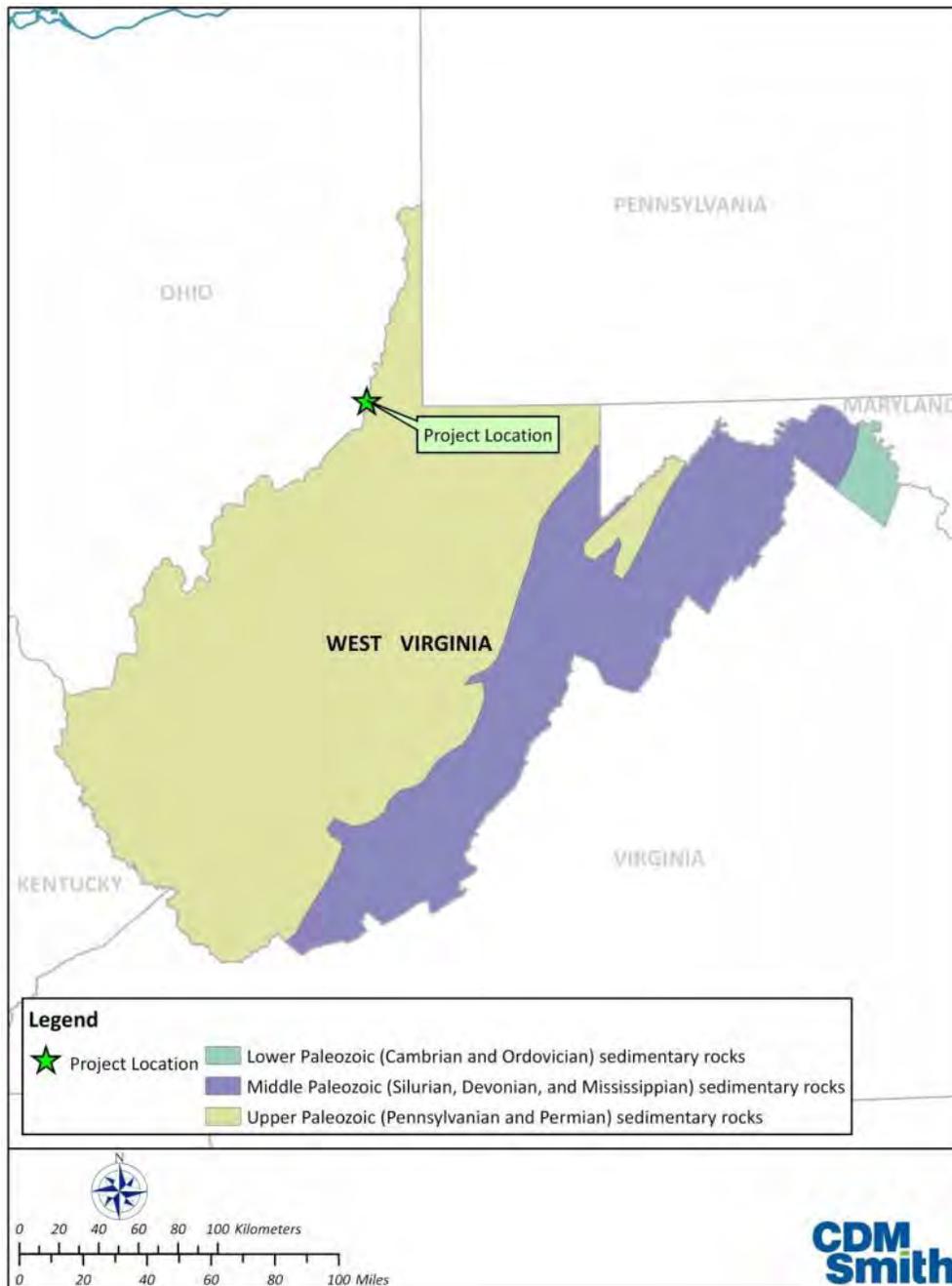
The geology of the proposed project area dates to the Upper Paleozoic – Pennsylvanian/Permian era, as shown in **Figure 3-8**, which is characterized by interbedded red clay and olive yellow shale; acid, gray and brown siltstone; sandstone; coal; and limestone. The exposed bedrock is part of the Dunkard Group and is sedimentary in origin. The United States Geological Survey’s (USGS) *Groundwater Quality in West Virginia, 1993-2008* report<sup>8</sup>, describes the rocks within the area as having been highly dissected by stream erosion.

Per the West Virginia Geological and Economic Survey (WVGES) and West Virginia Bureau of Public Health, there are no known karst topography within or adjacent to the project area. According to the USGS and the WVGES, there are no known fault lines within or adjacent to the project area. Thus, the proposed project would not significantly or adversely impact the geology of the proposed project area beyond the immediate construction area.

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<sup>8</sup> Chambers, D.B., Kozar, M.D., White, J.S., and Paybins, K.S., 2012, Groundwater quality in West Virginia, 1993–2008: U.S. Geological Survey Scientific Investigations Report 2012–5186, p. 3

Figure 3-8: Project Area Geology



Source: NRCS

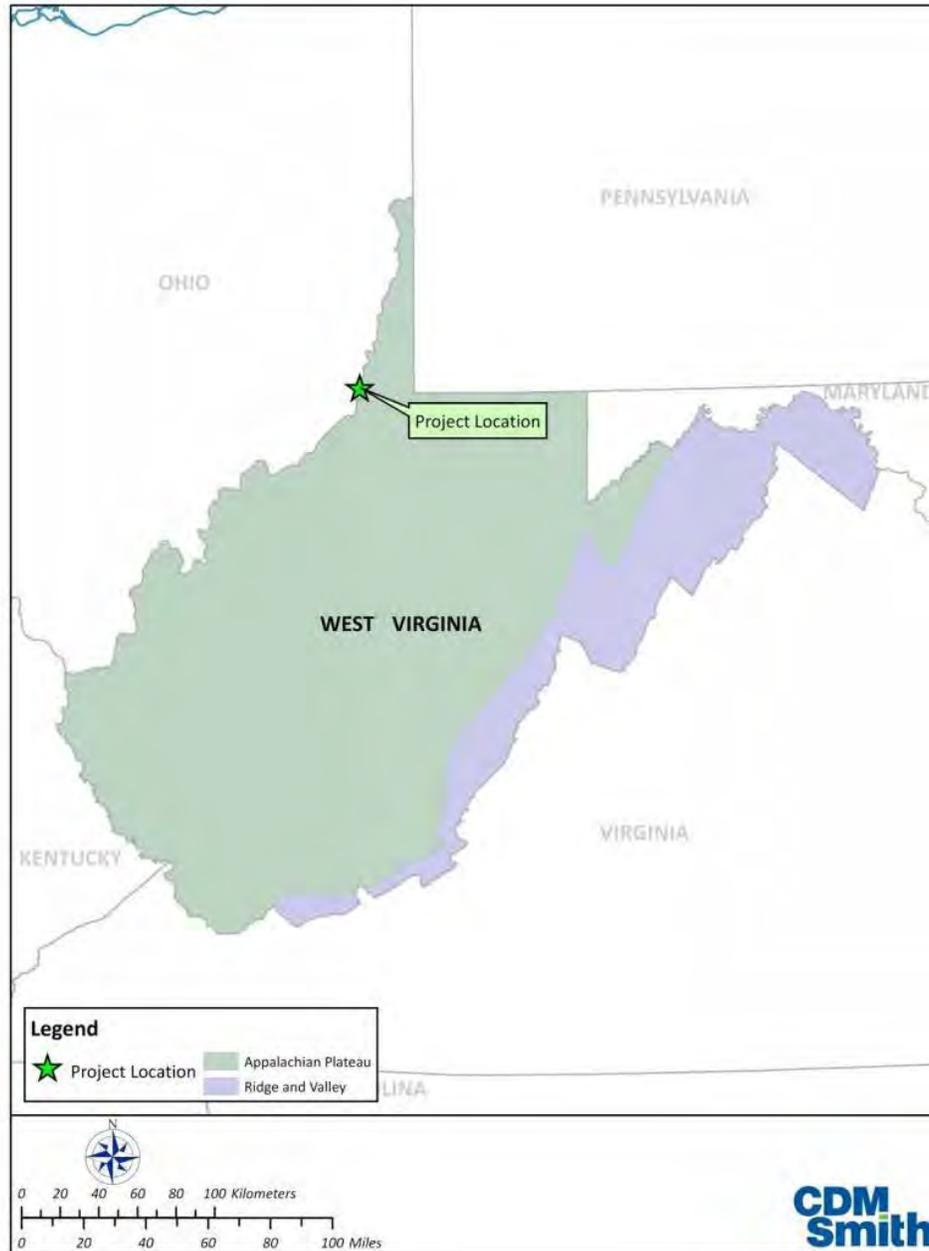
### 3.10 Groundwater

According to the EPA, there are no sole source aquifers within the state of West Virginia.<sup>9</sup> However, two aquifer types, unconsolidated alluvial deposits and sedimentary bedrock aquifers, underlie most of the

<sup>9</sup> U.S. EPA, National Sole Source Aquifer GIS Layer, Updated July 7, 2016, <http://catalog.data.gov/dataset/national-sole-source-aquifer-gis-layer>

state.<sup>10</sup> The project area is located above an alluvial aquifer, associated with the Ohio River, and is also located within the Appalachian Plateaus physiographic province, as shown in **Figure 3-9**. Groundwater flow within the region is controlled, in part, by the river valley, and is characterized by short flow paths.<sup>11</sup>

**Figure 3-9: Groundwater Availability**



Source: EPA

<sup>10</sup> Chambers, D.B., Kozar, M.D., White, J.S., and Paybins, K.S., 2012, Groundwater quality in West Virginia, 1993–2008: U.S. Geological Survey Scientific Investigations Report 2012–5186, p. 3

<sup>11</sup> USGS, 2014, Appalachian Plateaus Groundwater Availability, Info Sheet.



The project area consists of moderately well to excessively well drained soils, which indicates that internal free water occurrence is moderately deep to very deep below the surface. In fact, the depth-to-water table ranges from approximately 20 to more than 80 inches below the surface. As a result, the proposed project is not anticipated to significantly impact groundwater in the area. Best management practices regarding potential stormwater runoff and erosion would be employed during construction activities in order to minimize any potential temporary impacts.

### 3.11 Streams and Wetlands

A stream and wetland assessment and delineation were conducted for the project area in accordance with the West Virginia Stream and Wetland Valuation Metric (SWVM) and is summarized in the Stream and Wetland Technical Report, which is included in the project file and available for review upon request. Site visits were conducted in October 2012 and again in August/September 2016 due to a change in the proposed alignment. The proposed project site runs directly adjacent to the existing WV 2 along the Ohio River in the northern portion of West Virginia. The proposed alternatives are located adjacent to the existing WV 2 roadway, primarily in areas that have been previously disturbed by industrial or residential activities. In areas where WV 2 is proposed to be relocated, the proposed alignments are located up to 850 feet to the east of the existing roadway.

A total of two wetland systems, Riverine and Palustrine, and three wetland classes were observed within the project area during the site visits. In addition, several high-gradient ephemeral streams were identified. West Virginia requires the use of the SWVM for evaluating mitigation banks, in-lieu fee projects, as well as the U.S. Army Corps of Engineering (USACE) Section 404 applications proposing impacts to water resources of the United States. The proposed project is anticipated to impact streams and wetlands; therefore, use of the SWVM is applicable.

A desktop delineation identified 11 likely stream and wetland areas. Of these wetland areas, seven are associated with stream channels. Three of these, Dry Run, Beaver Run, and Sims Run, are named tributaries of the Ohio River; whereas the remaining four are un-named tributaries. The majority of these stream systems are slope wetlands consisting of channels that run down the slopes of hills to the east of WV 2 before becoming slow-moving, low-gradient systems within the Ohio River floodplain. In addition to the seven stream systems, the desktop delineation located a small man-made pond and three palustrine wetlands.

Field investigations conducted October 2012 and August/September 2016 were used to confirm the presence or absence of wetland areas or streams identified or missed by the desktop delineation. A total of 17 field delineated streams, wetlands, and one pond were identified and assessed. Of the 17 water features, three are perennial streams, two are intermittent streams, four are ephemeral streams, one is a man-made pond, and seven are vegetated wetlands. **Figures 3-10, 3-11, and 3-12** illustrate their locations in the study area. **Table 3-12** lists the stream, wetland, and pond classifications and potential impacts within the study area.

During field investigations in 2016, the project area was under drought conditions resulting in abnormal hydrologic conditions (e.g. some perennial streams running dry). In addition, signs of stress (e.g. defoliation) and mortality to vegetation was present in portions of the project corridor where a chlorine

leak occurred from a rail car at the Axiall Corporation plan in August 2016. Biological and water chemistry sampling could not take place for several streams where no flow was observed including one perennial stream Beaver Run (Stream 3), the four ephemeral streams (Streams 1, 5, 6, and 7) and the two intermittent streams (Streams 4 and 9). Chemical and biological indicator values for the streams are summarized in the **Table 3-12** below:

**Table 3-12: Chemical and Biological Indicators of Sampled Streams from 2016 Field Assessment**

| Stream                           | Chemical Indicators         |                 |                 |                                  | Biological Indicators |                                    |
|----------------------------------|-----------------------------|-----------------|-----------------|----------------------------------|-----------------------|------------------------------------|
|                                  | Specific Conductivity Value | pH Value        | DO* Value       | SWVM Chemical Indicator Subtotal | WVSCI*                | SWVM Biological Indicator Subtotal |
| Dry Run (Stream 2), perennial    | 80                          | 80              | 30              | 0.95                             | 51.53                 | 0.4153                             |
| Beaver Run (Stream 3), perennial | 70 <sup>1</sup>             | 80 <sup>1</sup> | 10 <sup>1</sup> | 0.80 <sup>1</sup>                | N/A – Dry             | N/A – Dry                          |
| Sims Run (Stream 8), perennial   | 70                          | 80              | 30              | 0.90                             | 52.76                 | 0.4276                             |
| Stream 4, intermittent           | 30 <sup>1</sup>             | 80 <sup>1</sup> | 30 <sup>1</sup> | 0.7                              | N/A – Dry             | N/A – Dry                          |
| Stream 9, intermittent           | 85 <sup>1</sup>             | 45 <sup>1</sup> | 30 <sup>1</sup> | 0.8                              | N/A – Dry             | N/A – Dry                          |
| Stream 1, ephemeral              | 85 <sup>2</sup>             | 45 <sup>2</sup> | 30 <sup>2</sup> | 0.8                              | N/A – Dry             | N/A – Dry                          |
| Stream 5, ephemeral              | 85 <sup>2</sup>             | 45 <sup>2</sup> | 30 <sup>2</sup> | 0.8                              | N/A – Dry             | N/A – Dry                          |
| Stream 6, ephemeral              | 85 <sup>2</sup>             | 45 <sup>2</sup> | 30 <sup>2</sup> | 0.8                              | N/A – Dry             | N/A – Dry                          |
| Stream 7, ephemeral              | 85 <sup>2</sup>             | 45 <sup>2</sup> | 30 <sup>2</sup> | 0.8                              | N/A – Dry             | N/A – Dry                          |

\*Acronyms: Dissolved Oxygen (DO), West Virginia Stream Condition Index (WVSCI)

<sup>1</sup>As instructed by USACE – Huntington District, standard values were used for Chemical Indicators of ephemeral streams when no water was present.

<sup>2</sup>Obtained during the 2012 initial assessment when flow was present.

Overall, the quality of the habitat condition of the streams within the project area can be characterized as Poor to Marginal according to bank stability and vegetative projection. Characteristics of substrates and channel flow however, were in the range of Suboptimal. The SWVM chemical indicators were between 0.7 and 0.9 for the nine streams.

Of the seven vegetated wetlands found in the project area, four are palustrine emergent wetlands with persistent vegetation (PEM1), one is a palustrine scrub-shrub wetland with broad-leaved deciduous trees (PSS1), and two are primarily palustrine forested wetlands with broad-leaved deciduous trees (PFO1). A summary of each wetland follows:

- Wetland 1 is a small (0.014 acres) PEM1 wetland located near the southern limit of the project area and is supplied by runoff down the hillslopes to the east.
- Wetland 2 is a small (0.049 acres) PEM1 wetland similar to Wetland 1 that is supplied by runoff down the hillslopes to the east.
- Wetland 3 is a small (0.106 acres) PEM1 wetland located in a small depression within a larger landscape and collects water from Wetland 4 and hillslopes to the east.
- Wetland 4 is a small (0.199 acres) PSS1 wetland with a small ephemeral stream located within. Small portions of Wetland 4 are better characterized as emergent (PEM1), with small pockets of sparse woody vegetation located in the northern areas.

- Wetland 5 is a (0.395 acres) PEM1 wetland located to the west of and draining into ephemeral Stream 6. The wetland consists of a narrow depression that runs along the bottom of a steep hillside to the east.
- Wetland 6 is a 0.18 acres PFO1 wetland associated with the braided downstream portion of ephemeral Stream 7.
- Wetland 7 is a 4 acre PFO1/PEM1 wetland located in the Sims Run floodplain.

Figure 3-10: Stream and Wetland Locations, Sheet 1 of 3

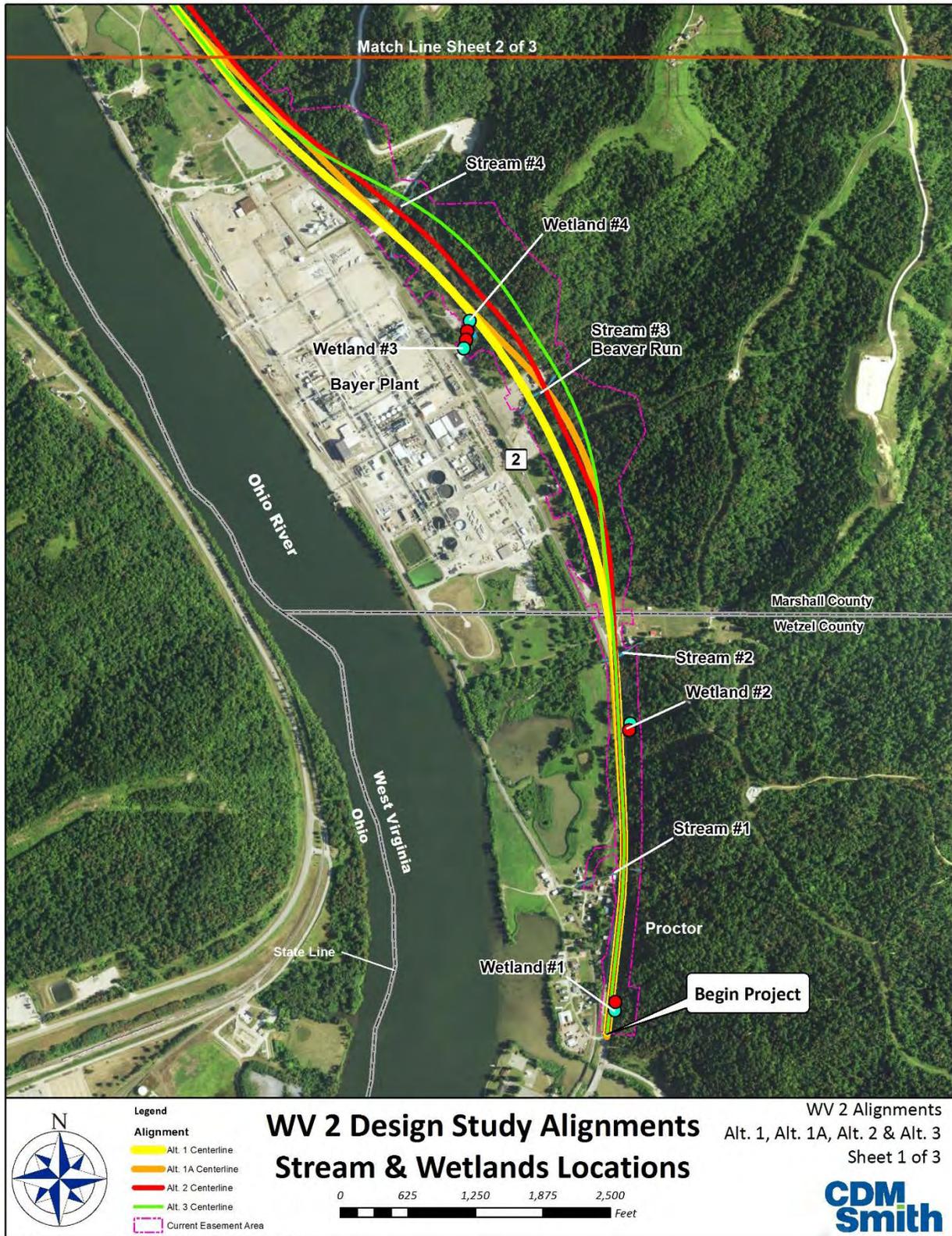


Figure 3-11: Stream and Wetland Locations, Sheet 2 of 3

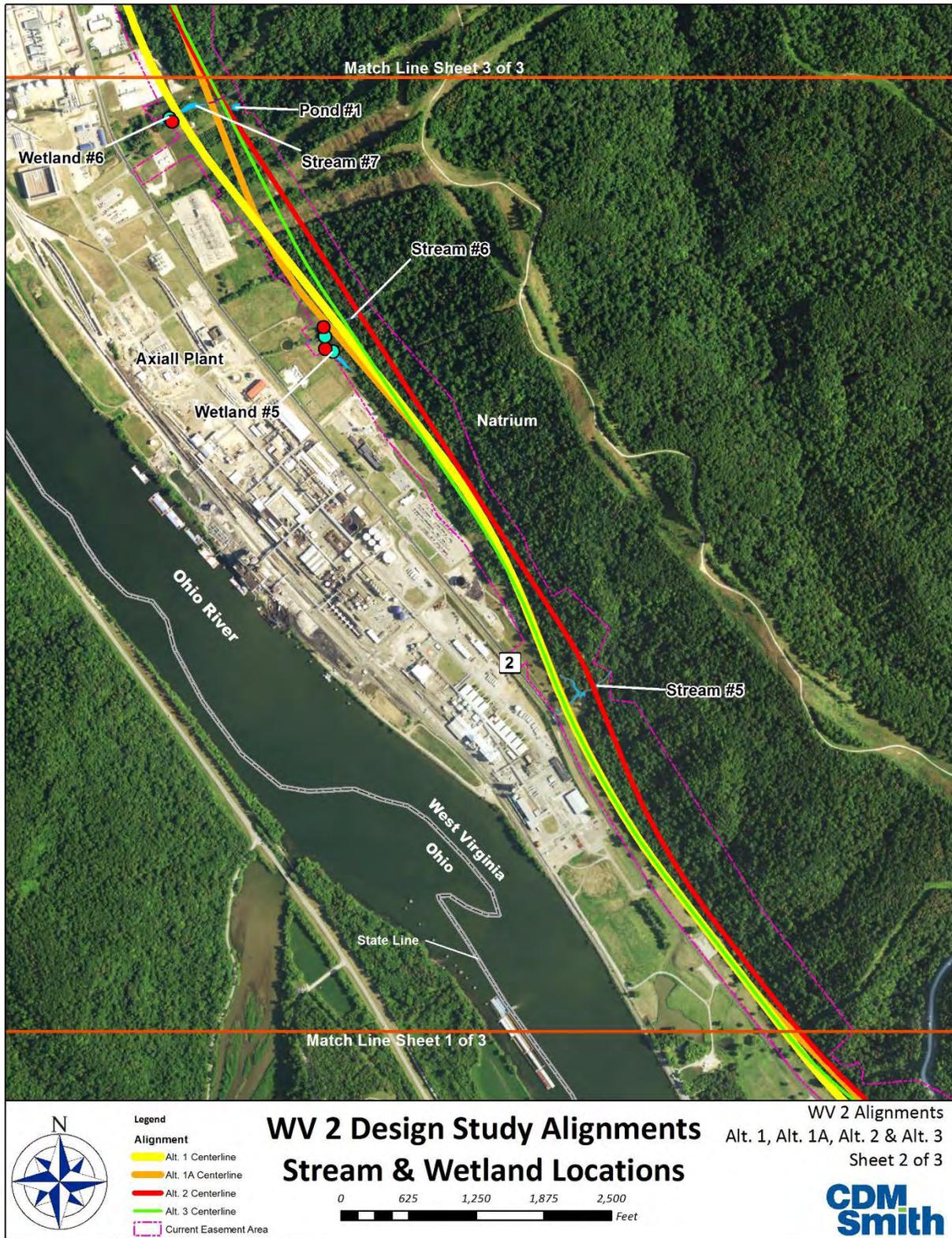
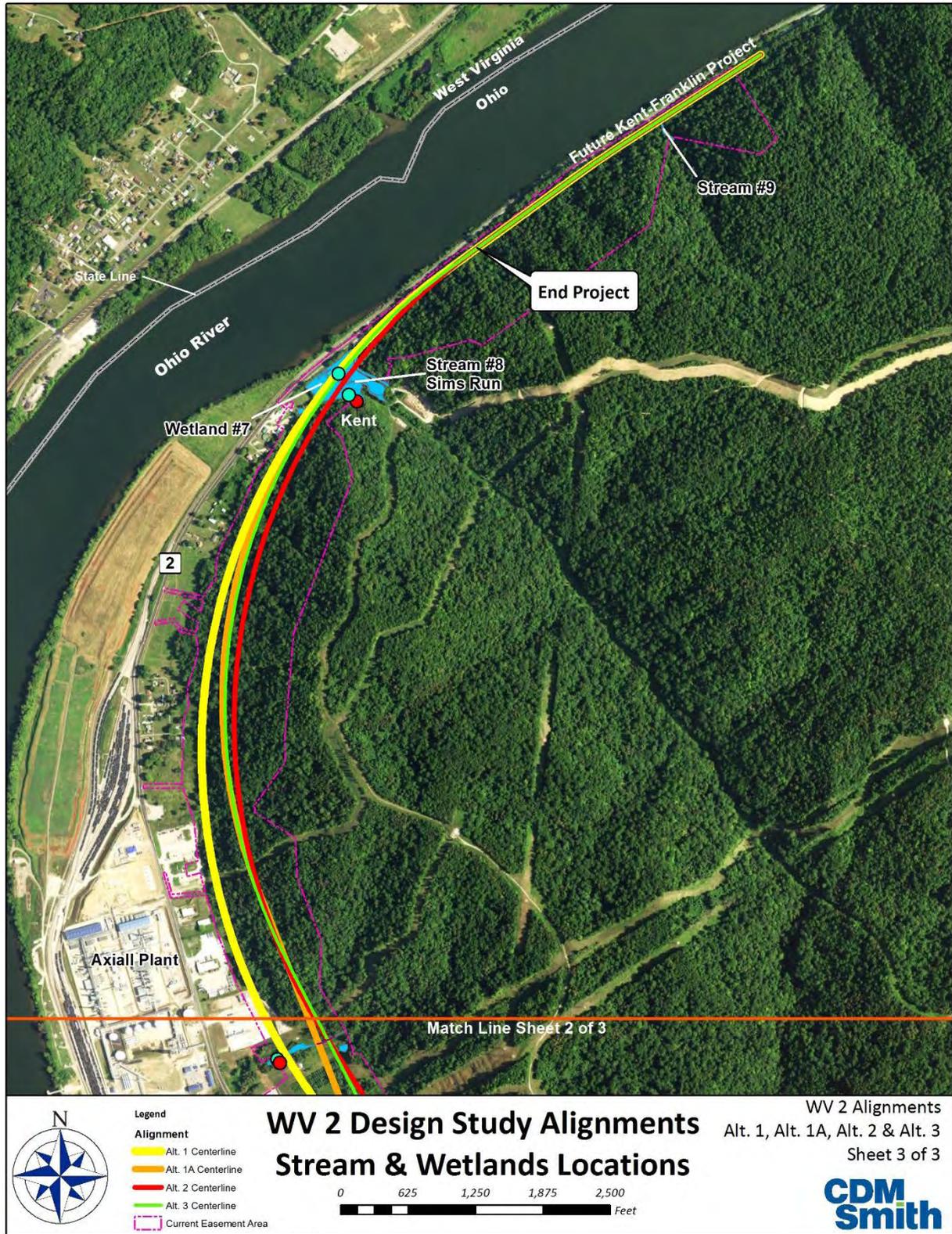


Figure 3-12: Stream and Wetland Locations, Sheet 3 of 3



Stream delineations included field identification of the stream channel, sufficient measurements of the stream channel, and photographs of the stream within the project area; this information is included in the project file and available for review upon request. As summarized in **Table 3-13**, four ephemeral streams, three perennial streams, and two intermittent streams were identified and delineated within the study area. Seven wetlands and one pond were also observed in the project area. Alternative 2 has the highest impacts to streams at 3,321 linear feet and Alternative 1A had the least at 1,994 linear feet. Wetland impacts are similar across the four Build alternatives from 3 to 4 acres. Mitigation for wetland and stream impacts will be handled by paying into the West Virginia Department of Environmental Protection In Lieu Fee program.

**Table 3-13: Potential Stream and Wetland Impacts**

|                                     | Classification         | Alt. 1       | Alt. 2       | Alt. 3       | Alt. 1A      |
|-------------------------------------|------------------------|--------------|--------------|--------------|--------------|
| <b>Stream Impacts (linear feet)</b> |                        |              |              |              |              |
| 1                                   | Ephemeral Stream       | 225          | 240          | 226          | 155          |
| 2 – Dry Run                         | Lower Perennial Stream | 208          | 208          | 200          | 277          |
| 3 - Beaver Run                      | Lower Perennial Stream | 394          | 525          | 341          | 302          |
| 4                                   | Intermittent Stream    | 370          | 671          | 478          | 295          |
| 5                                   | Ephemeral Stream       | 195          | 717          | 334          | 357          |
| 6                                   | Ephemeral Stream       | 386          | 286          | 422          | 262          |
| 7                                   | Ephemeral Stream       | 0            | 271          | 288          | 136          |
| 8 – Sims Run                        | Lower Perennial Stream | 245          | 403          | 300          | 209          |
| 9                                   | Intermittent Stream    | 0            | 0            | 170          | 0            |
|                                     | <b>Total</b>           | <b>2,023</b> | <b>3,321</b> | <b>2,759</b> | <b>1,993</b> |
| <b>Wetland Impacts (acres)</b>      |                        |              |              |              |              |
| 1                                   | PEM1                   | 0.014        | 0.014        | 0.014        | 0.016        |
| 2                                   | PEM1                   | 0.049        | 0.049        | 0.049        | 0.049        |
| 3                                   | PEM1                   | 0.106        | 0.000        | 0.000        | 0            |
| 4                                   | PSS1                   | 0.199        | 0.000        | 0.000        | 0.197        |
| 5                                   | PEM1                   | 0.395        | 0.000        | 0.354        | 0.291        |
| 6                                   | PFO1                   | 0.179        | 0.000        | 0.043        | 0.016        |
| 7                                   | PEM1/PFO1              | 3.243        | 3.958        | 3.454        | 2.464        |
|                                     | <b>Total</b>           | <b>4.19</b>  | <b>4.023</b> | <b>3.913</b> | <b>3.033</b> |
| <b>Other Waters</b>                 |                        |              |              |              |              |
| Pond 1                              | PUBHx                  | 0.000        | 0.097        | 0.097        | 0.0          |
|                                     | <b>Total</b>           | <b>0.000</b> | <b>0.097</b> | <b>0.097</b> | <b>0.0</b>   |

Note: PEM1 (Palustrine Emergent Wetland), PSS1 (Palustrine Scrub Wetland), and PFO1 (Palustrine Forested Wetland)

### 3.12 Floodplains

All Federal agencies are directed to avoid, to the extent possible, long-and short-term adverse impacts associated with the modification of floodplains. Federal agencies should also avoid direct or indirect support of floodplain development if a practicable alternative is feasible. The Federal Emergency Management Agency (FEMA) regulates development in and around FEMA-established floodplains for many areas of the country through Flood Insurance Studies (FIS) and their associated Flood Insurance Rate Maps (FIRMs). Special Flood Hazard Areas (SFHAs) are designated as high-risk flood zones, labeled

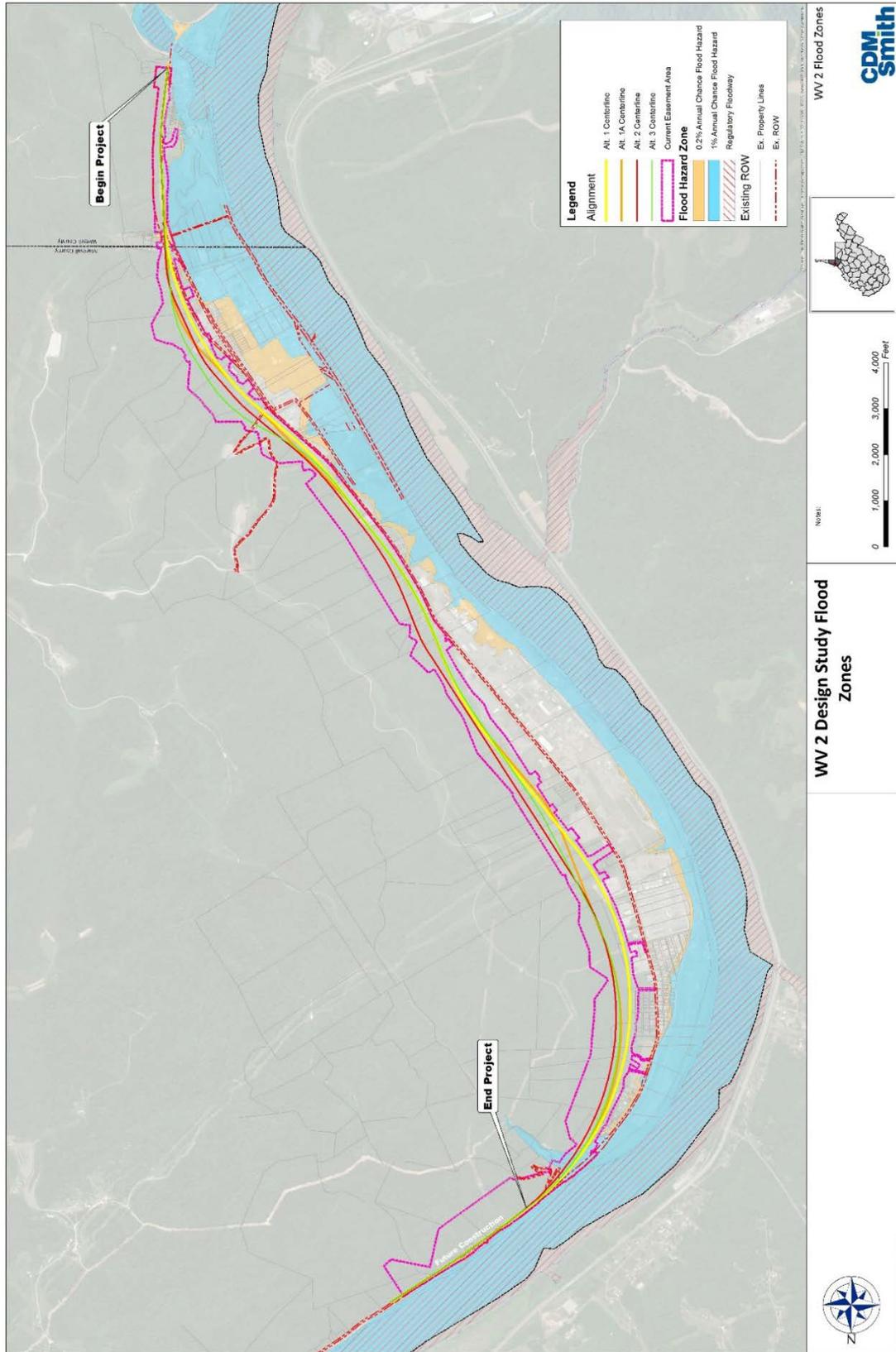
as A, AE, V, and VE, where the one-percent annual chance flood can occur, also known as the 100-year flood zone. Agencies must determine that there is no practicable alternative before taking any action that would encroach on a 100-year floodplain (7 CFR 650.25).

Floodplains in the project area generally follow the Ohio River, as shown in **Figure 3-13**. Although most of the project area is outside of the SFHA, there are three small sections that intersect the 100-year flood zone. The four Build alternatives were designed to minimize the impact to floodplains to the furthest extent possible; however, impacts to floodplains from relocating the highway are unavoidable. Impacts per alternative to the 100-year flood zone are: Alternative 1 – 10.07 acres, Alternative 2 – 10.02 acres, Alternative 3 – 10.91 acres, and Alternative 1A – 5.59 acres.

During final design and prior to construction, WVDOH will coordinate with the Wetzel and Marshall County Floodplain Coordinators, as appropriate. During construction, impacts to floodplains will be mitigated by using appropriate erosion and sedimentation control measures. Post-construction mitigation measures for base floodplain encroachments may include committing to special flood-related design criteria, elevating facilities above base flood level where feasible, and locating non-conforming structures and facilities out of the floodplain. In addition, appropriate stormwater controls will be installed. Design of these controls will occur during road widening design.



Figure 3-13: Flood Zones



### 3.13 Terrestrial Vegetation and Wildlife

The project area includes a variety of wildlife habitats. The majority of the area includes large industrial plants. The remaining areas are mostly residential and undeveloped. Habitats contain steep slopes surrounded by a mixed deciduous hardwood forest. Most of the forested habitat occurs on the eastern side of the project area and the existing WV 2. Generally, habitats in the project area consist of lawns, hardwood dominated woodlands, streams and drainages, perched wetlands, a few ponds, areas of fields and woodland edges, residential areas, industrial areas, and recently disturbed land. A summary of the terrestrial vegetation and wildlife in the project area is available in the *Wildlife Report*; this information is included in the project file and available for review upon request.

During the stream and wetland fieldwork, incidental observations of wildlife were recorded. These observations were made by identifying animals, signs of animals, and vocalizations of animals. In addition to these observations, mist netting of bats with emphasis on *Myotis sodalis* (Indiana bat) and *Myotis septentrionalis* (Northern long-eared bat) occurred along the same route from August 5-10, 2011 and again August 7-8, 2017.

The hardwood forests along WV 2 provide excellent habitat for a wide range of wildlife species. Nesting birds include downy woodpecker, eastern towhee, hermit thrush, red-eyed vireo, and tufted titmouse. Other common bird species include American crow, black-capped chickadee, blue jay, cardinal, northern flicker, red-tailed hawk, and white-eyed vireo. Along the edge habitat areas and grass maintained areas American kestrel, Carolina wren, eastern bluebird, eastern phoebe, mockingbird, mourning dove, and white-throated sparrow were observed. Birds common in the residential and commercial areas include American robin, blue jay, song sparrow, red-winged blackbird, and mourning dove. Belted kingfisher and common yellowthroat were identified in the Sims Run area. Mammals such as white tail deer, eastern cottontail, gray squirrel, Virginia opossum, and raccoon use hardwood forest and mixed pine and hardwood forest habitats. Mammals common to forest edge habitats including maintained areas include eastern cottontail rabbit and various species of mice, voles, and shrews. Sightings or evidence (e.g., tracks) were noted for the following species of mammals: eastern chipmunk, eastern cottontail, eastern gray squirrel, house mouse, northern raccoon, and Virginia opossum. Bats were also identified and are discussed later. Amphibians observed included frogs (i.e., American bullfrog, American toad, green frog, northern leopard frog, pickerel frog, and wood frog) in some of the habitats within the project area. Fish (i.e., bluegill, bluntnose minnow, central stoneroller, creek chub, and mosquitofish) were also observed in some of the creeks within the project area. One reptile, an eastern box turtle, was observed in the wetlands area referred to as Wetland 5 discussed previously in the Streams and Wetlands section of this EA.

The U.S. Fish and Wildlife Service (USFWS) identifies Birds of Conservation Concern (BCC) by county. For Wetzel County there are 9 BCC and for Marshall County there are 5 BCC. None of these 14 BCC species were identified in the project area.

**Table 3-14** includes the Federally listed species for Marshall County and Wetzel County. No listed species were identified within the project area during the stream and wetland assessment fieldwork of October 2012 or in August/September 2016.

**Table 3-14: Federally listed species for Wetzel and Marshall County, West Virginia<sup>1</sup>**

| Common Name             | Scientific Name               | Federal Protected Status <sup>2</sup> | County           |
|-------------------------|-------------------------------|---------------------------------------|------------------|
| Indiana Bat             | <i>Myotis sodalis</i>         | Endangered                            | Marshall, Wetzel |
| Northern long-eared bat | <i>Myotis septentrionalis</i> | Threatened                            | Marshall, Wetzel |
| Clubshell               | <i>Pleurobema clava</i>       | Endangered                            | Wetzel           |
| Fanshell                | <i>Cyprogenia stegaria</i>    | Endangered                            | Marshall, Wetzel |
| Pink Mucket             | <i>Lampsilis abrupta</i>      | Endangered                            | Marshall, Wetzel |
| Sheepnose Mussel        | <i>Plethobasus cyphus</i>     | Endangered                            | Marshall, Wetzel |
| Snuffbox Mussel         | <i>Epioblasma triquetra</i>   | Endangered                            | Marshall, Wetzel |

<sup>1</sup> It should be noted that a very small portion and percentage of this project is in Wetzel County.

<sup>2</sup> USFWS, IPaC for Wetzel and Marshall Counties, WV, December 8, 2017.

The snuffbox mussel is listed for Fish Creek for Marshall County, which is located over three miles north of the project area. The clubshell, fanshell, pink mucket, and sheepnose mussel are listed for the Ohio River, and are also located outside the project area (WVDNR 2013). Non federally-listed mussels may be present in the study area.

Five northern long-eared bats (not federally listed at the time of this survey) were captured at three locations during the federally protected bat surveys conducted in August of 2011. According to the USFWS, there are no known northern long-eared bat hibernacula on or near the project area (email correspondence from Liz Stout, USFWS to Murray Wade, CDM Smith, December 15, 2016). If a known, occupied roost tree was located within the project area, limitations would be placed on clearing trees within a fourth-mile of the known, occupied roost tree.

In 2017, summer bat mist netting surveys for the project area following the “2017 Range-wide Indiana Bat Summer Survey Guidelines” (USFWS, 2017). Mist net surveys were conducted at nine sites, three nets per site for two nights each for a total of 54 net nights of survey effort. Captures for the survey yielded a total of 11 bats comprised of two species. Bat species captured included six eastern red bats and five big brown bats. No threatened or endangered bat species were captured during the survey efforts. The results of the mist net surveys are consistent with the previous findings in 2011, in that it is not likely that the proposed project will adversely affect the Indiana bat or northern long-eared bat populations in the area. The results of the mist net surveys have been coordinated with USFWS. The USFWS Concurrence Form dated April 6, 2018 is included in **Appendix G**.

### 3.14 Hazardous Materials

#### 3.14.1 Registered Hazardous Waste Sites

There are a number of EPA registered hazardous waste sites that generate and store various quantities of waste in the project area. These are listed below in **Table 3-15** and shown on **Figure 3-14**. None of the listed hazardous waste sites will be impacted by the build alternatives.

**Table 3-15: Hazardous Waste Generators, Proctor, West Virginia**

| Site Name                                      | City        |
|--|-------------|
| Blue Racer Natrium LLC                         | Proctor, WV |
| Covestro LLC                                   | Proctor, WV |
| CSX Transportation Inc.                        | Proctor, WV |
| Eagle Natrium LLC                              | Proctor, WV |
| Elementis Specialties – New Martinsville Plant | Proctor, WV |
| Grandview Doolin PSD – Doolin Tank             | Proctor, WV |
| Trans Tech Logistics                           | Proctor, WV |

Source: <https://rcrainfo.epa.gov/rcrainfoweb/action/modules/hd> (accessed 12-20-2017)

### 3.14.2 Nearest Superfund Site

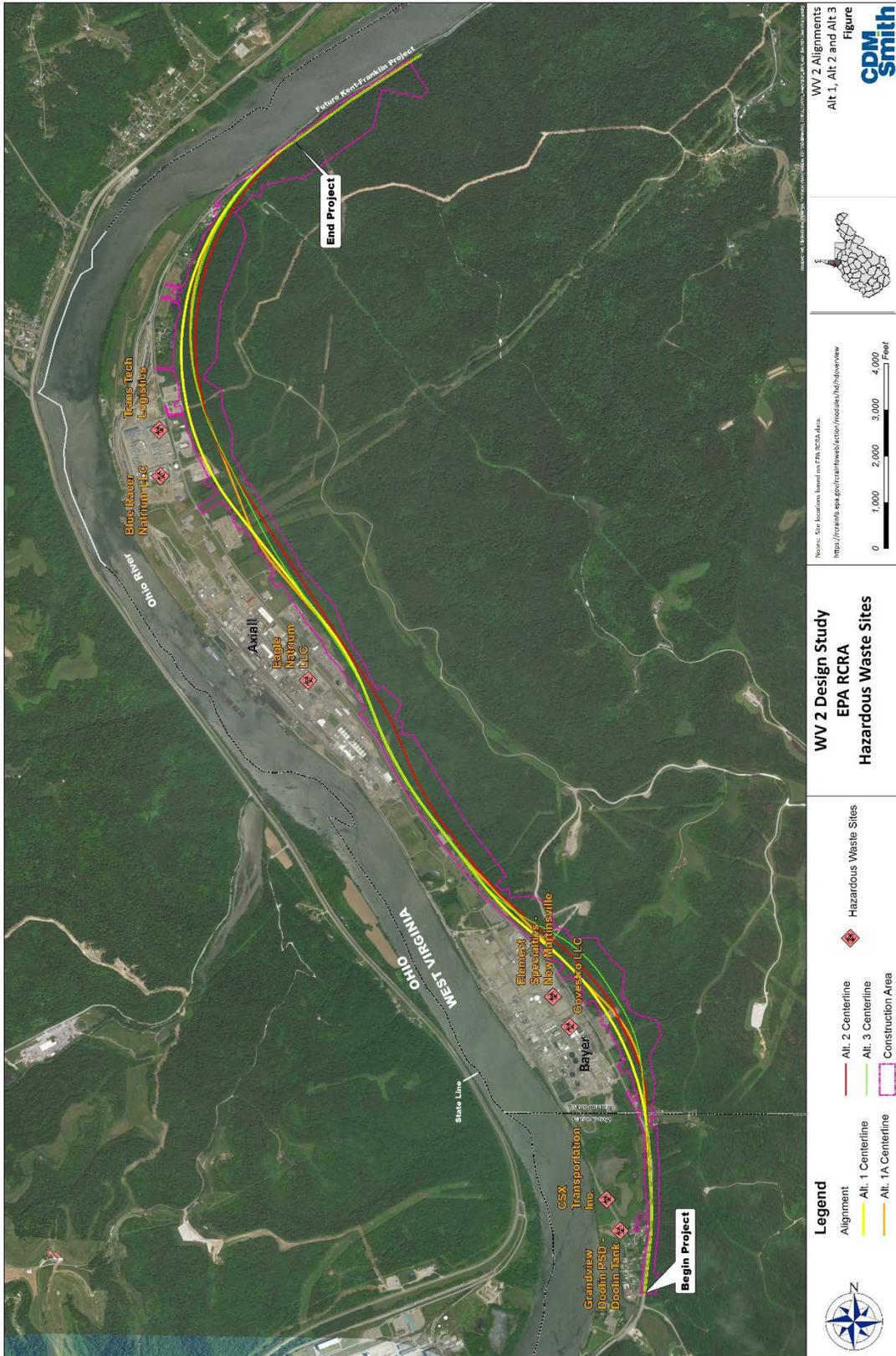
According to the EPA website, the Hanlin-Allied-Olin Site is the nearest Superfund site to the project area is located over 10 miles to the north, just south of Moundville, West Virginia.

### 3.14.3 Implementation of Hazardous Materials Contingency Plan

The Contractor shall develop a Hazardous Materials Contingency Plan (HMCP) to include standard construction measures required by federal, state, and local policies for hazardous materials, removal of onsite debris, and confirmation of presence of pipelines on-site. At a minimum, this plan would include the following:

- If contaminated soils or other hazardous materials are encountered during any soil moving operation during construction (e.g., trenching, excavation, grading), construction shall be halted and the HMCP implemented.
- Instruct workers on recognition and reporting of materials that may be hazardous.
- Minimize delays by continuing performance of the work in areas not affected by hazardous materials operations.
- Identify and contact subcontractors and licensed personnel qualified to undertake storage, removal, transportation, disposal, and other remedial work required by, and in accordance with, laws and regulations.
- Forward to engineer, copies of reports, permits, receipts, and other documentation related to remedial work.
- Notify such agencies as are required to be notified by laws and regulations within the time stipulated by such laws and regulations.
- File requests for adjustments to contract time and contract price due to the finding of hazardous materials in the work site in accordance with conditions of contract.

Figure 3-14: Hazardous Waste Sites



Source: USEPA

### 3.15 Energy

Energy expenditures are required during the construction of any highway or infrastructure project. Energy is also used by vehicular traffic using the highway, varying based on roadway profile, the alignment, grade, traffic density, and other factors.

The no build Alternative may increase fuel consumption over the 20 year analysis period due to increased traffic delay; energy use would be slightly higher than current levels. It is anticipated that the proposed project may actually decrease the amount of energy used since it would reduce traffic congestion and travel times. This is considered a positive impact and no mitigation is proposed. Tangentially, the project completes the last segment of WV 2 to be upgraded from a two to four-lane highway, providing a continuous four-lane highway from the Marcellus Shale Gas region, a new energy source, to a planned fractionation plant and a potential ethane cracking facility south of I-70.

During construction, energy use would increase due to the use of fossil fuels to power construction equipment. This short term increase would be offset by the improved movement of traffic after the project is constructed.

### 3.16 Secondary and Cumulative Impacts

This section examines secondary and cumulative impacts. Secondary impacts are caused by an action but occur later in time or further removed in distance. Cumulative impacts are evaluated by considering how the consequences of an action affect the environment in light of other past, present, and reasonably foreseeable future actions.

#### 3.16.1 Secondary Impacts

Overall, WV 2 is an important resource that impacts the regional economy and its future. While relocating and widening this stretch WV 2 would improve traffic operations, it is not anticipated to induce additional development beyond background growth already expected to occur in the region. The proposed relocation of WV 2 in Alternative 1A, the Preferred Alternative, will consolidate access for two of the three chemical plants in the study area into a single intersection. This will allow for improved security for each of these plants. The Preferred Alternative will also maximize the developable land available to the three chemical plants allowing for expansion adjacent to their existing facilities.

#### 3.16.2 Cumulative Impacts

##### 3.16.2.1 Defining Cumulative Impacts

Cumulative effects analyses are an important element of the environmental documentation and approval process and are required by NEPA. The CEQ defines cumulative effects as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (40 CFR 1508.7). Cumulative effects are defined under NEPA as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR Section 1508.7).

Cumulative impact analysis is defined temporally and geographically and these definitions differ based on the specifics of each project. For the three build alternatives, the timeframe for cumulative projects aligns with the 20-year horizon design year. Given the role that WV 2 plays in regional mobility, and thus the economic development and prosperity of the region, the geographic scope of the cumulative analysis considers regional plans for development.

### 3.16.2.2 Cumulative Projects Considered

The project area falls within the boundaries of the Belomar Regional Council, an interstate regional planning and development council of governments whose service area includes Ohio, Marshall, and Wetzel Counties in West Virginia and Belmont County in Ohio. The U.S. Economic Development Administration has also designated Belomar as an Economic Development District (EDD) for economic development planning. Belomar develops and administers the Comprehensive Economic Development Strategy (CEDS) for the EDD. The CEDS identifies the economic and development needs of the region and guides its economic development strategy.

Belomar's EDD is located in the northern panhandle of West Virginia and is bordered by Pennsylvania to the east and Ohio to the west. The District's close proximity to Wheeling and Pittsburgh, and regional proximity to the cities of New York, Philadelphia, Washington, D.C, Cleveland, and Columbus, connects it to many markets. In 2015, the Belomar Regional Council updated its regional CEDS. The plan notes, "in the major manufacturing counties of Belmont, Marshall, and Ohio, loss of jobs in the manufacturing sector has been substantial in the last decade, with declines of 39 percent, 38 percent, and 23 percent respectively. Wetzel County sector employment declined by two percent... [Manufacturing] sector employment in the Belomar region has decreased from 5,026 to 3,392 jobs, a decline of 33 percent [in the last 10 years]." However, some accomplishments in the manufacturing sector have occurred, including the Axiall Natrium chemical plant in Marshall County, which manufactures caustic soda, calcium hypochlorite, and muriatic acid and employs about 500 people. The company was formed in 2013 through the merger of the Georgia Gulf Corporation and the chemical commodities business of PPG Industries.

However, as manufacturing has fallen, the CEDS plan update notes, "Much of the recent job growth in the region has been in one sector, natural resources and mining, primarily due to increases in the oil and gas industries. In September 2013 (the most recent data available), there were 5,264 workers in the natural resources and mining sector in the Belomar counties, an increase of nearly 1,300 from September 2012. With Belomar as a leading coal producing area and a significant and rapidly expanding source of oil and gas, all counties have shown significant growth in the last several years. The West Virginia University – Bureau of Business and Economic Research (WVU BBER) reports that while coal production is generally down throughout West Virginia, the decrease has been much more modest in the Belomar region than in the southern part of the state, partly from increased exports of the type of coal produced here. Dominion Resources developed a nearly \$500 million natural gas processing facility along WV 2 and the Ohio River near Natrium, located in southern Marshall County within the proposed project corridor. Blue Racer Midstream (a partnership between Dominion and Caiman Energy) now owns the plant, which began operating in 2013. In 2014, additional construction doubled the processing capacity at the plant. In addition, other regional accomplishments in the natural resources and mining sector include:

- **AES Drilling Fluids.** In 2012, Fluids Management, a division of Texas-based AES Drilling Fluids opened a \$2 million facility in the North Benwood Industrial Park in Marshall County. The new facility employs about 17 full-time workers to make and recondition a synthetic oil-based fluid used by companies drilling for natural gas.
- **Chevron.** In the last few years, Chevron has acquired lease rights and active natural gas operations in Marshall and Ohio counties. Its drilling and fracking operations in Marshall County currently includes 52 oil and natural gas wells.
- **CNX Gas Corporation.** CNX Gas Corporation, a subsidiary of Consol Energy, drilled nine wells in northern West Virginia in 2011, representing an estimated \$45 million investment.
- **Consol Energy.** Consol invested \$200 million for capital improvements at the Shoemaker and McElroy Mines. An underground conveyor system replaced the old rail system. In the last few years, the company estimates it invested over \$1 billion in its five West Virginia mines prior to selling them to Murray Energy in 2013. Consol is now focusing on natural gas and plans to invest about \$14 billion in West Virginia over the next ten years.
- **Dominion Transmission.** In 2012, Dominion Transmission, the natural gas transportation subsidiary of Dominion Resources completed its Appalachian Gateway Project, which included 44 miles of pipeline in Marshall County, West Virginia and Greene County, Pennsylvania. The company will transport natural gas to markets in the eastern United States. The project also included two new gas compressor stations in Wetzel and Marshall Counties.
- **Gastar Exploration.** Gastar Exploration continues to put natural gas wells into production. In April 2014, the company stated they had 50 wells producing, with most of the activity in northern West Virginia. By the end of the third quarter, Gastar had ten Marcellus wells in Marshall County in various stages of drilling. In 2015, Gastar also brought its second Utica well drilled in Marshall County online.
- **MarkWest Energy Partners.** Denver-based MarkWest expanded its Majorsville gas processing plant in eastern Marshall County by adding a new cryogenic processing facility in 2013. MarkWest also brought its second large scale de-ethanizer online at the Majorsville complex and has plans to increase its refining capacity. At its Mobley complex in Wetzel County, in early 2015, the company increased its natural gas processing capacity to 720 million cubic feet per day.
- **Rice Energy.** In early 2014, Rice Energy estimated it would invest about \$300 million in Belmont County, with a goal of drilling 700 gas wells. Ohio Department of Natural Resources records for the first quarter of 2015 show that Rice Energy's Blue Thunder operation in Belmont County included several of the most productive wells in the state over that three-month period. Through mid-2015, Rice Energy and other producers continue to acquire land in the region.
- **Williams Energy.** A subsidiary of Oklahoma-based Williams Partners, Williams Energy is developing a site in Marshall County which will be the location of the Williams Energy Oak Grove natural gas processing plant, part of a nearly \$4.5 billion investment in the county by the company. Williams also added a second fractionator to the Moundsville fractionation plant and



will be expanding operations at the Fort Beeler processing plant, both in Marshall County. The company estimates it will create 100 new permanent jobs in Marshall County and will eventually have 250 full-time workers at the facilities.

The Belomar Regional Council also serves as the area's designated metropolitan planning organization (MPO) for the Wheeling urbanized area and as such is responsible for maintaining a continuing, comprehensive and cooperative transportation planning process for Ohio, Marshall and Belmont Counties. The long range transportation plan is prepared with input from stakeholders and citizens and in cooperation with the FHWA, Federal Transit Administration, West Virginia Department of Transportation, West Virginia Division of Public Transit, Ohio Department of Transportation, and local jurisdictions.

The previous long range transportation plan, the *Transportation Plan for 2035*, identified six major projects in close proximity to the proposed project corridor. They include:

- Add a center turn lane on WV 2 from the intersection of 6th Street to US 250.
- Upgrade WV 2 to four-lanes from 0.12 miles south of CR 29 to 0.35 miles south of CR 27.
- Upgrade WV 2 to four-lanes from 0.18 miles south of CR 78 to 0.12 miles south of CR 29.
- Intersection improvements at US 250 and Jefferson Avenue Intersection.
- Upgrade County Line Bridge (CR 5) to two lanes.
- Upgrade Rude Bridge (CR 5) to two lanes.

Recent growth in natural resources and mining, driven by deep well drilling to recover natural gas in the Marcellus and Utica Shale, presents tremendous opportunities for economic expansion in the region. However, this economic opportunity must be balanced with the need to minimize the negative impacts of hydraulic fracturing. The current transportation plan, the *Transportation Plan for 2040*, notes, "the fracking process has created many roadway maintenance and safety concerns. In addition, there are concerns regarding well fires, ground water contamination, fracking waste disposal and potential for earthquakes." From a transportation perspective, the safe and efficient movement of goods through, into and out of the region is critical in sustaining and attracting economic activity. Towards that end, the *Transportation Plan for 2040* identified a number of goals and objectives for the region related to land use, freight, and highway safety with the overarching goal of improving the region's economic competitiveness. Some of the more relevant strategies are listed below:

- Identify the existing and future development areas and address transportation needs.
- Develop transportation projects that enhance existing developments and promote future growth
- Optimize the use of existing networks to accommodate both existing and new developments.
- Identify projects that facilitate efficient freight movement to, from and through the area.

### 3.16.2.3 Cumulative Impact Analysis

The proposed project would lead to minor additional right-of-way acquisition and conversion of undeveloped lands to a transportation use.

The preferred alternative is expected to contribute to incremental impacts when considered alongside overall cumulative effects of past and future actions. While it may result in conversion of land use, the proposed project would have an overall positive impact on the regional economy by improving

connectivity and safety. Considered alongside other planned developments and transportation projects, impacts should be limited. The preferred alternative is consistent with the MPO's long range transportation plan for the area.

As with any project that involves change, the proposed project would have the potential to contribute to positive and negative environmental effects within the study corridor. However, this project would provide benefits in terms of regional mobility, which in turn would help support economic growth.

## CHAPTER 4. REFERENCES

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The following Technical Reports were prepared for this project and have been used in the development of this EA:

- Design Report WV 2 Proctor to Kent, June 2018
- Custom Soil Resource Report for Marshall County, West Virginia, and Wetzel County, West Virginia, January 2012
- Cultural Historic Survey for the Proposed Upgrade to WV Route 2 from Proctor to Kent in Wetzel and Marshall Counties, West Virginia, October 2013, updated September 2014
- West Virginia 2 Expansion Noise Study, 2013
- Addendum to the West Virginia 2 Expansion Noise Study, May 2018
- West Virginia State Route 2 Proctor to Kent Project Stream and Wetland Technical Report, February 2013, updated July 2017
- West Virginia State Route 2 Proctor to Kent Project Wildlife Report, February 2013, revised December 2017
- Mist Net Survey Report, West Virginia Department of Transportation, WV State Route 2 Proctor to Kent Project, January 2013
- Report for a Summer Mist Net Survey for the Federally Endangered Indiana Bat (*Myotis Sodalis*) for the Proposed WV State Route 2 Proctor to Kent Project, Marshall and Wetzel Counties, West Virginia, November 2017
- Phase I Archaeological Survey of WV-2 Alternative 1, and Alternative 2, from Proctor to Kent, in Wetzel and Marshall Counties, West Virginia, March 2013, Revised July 2013, Second Revision October 2013, Third Revision December 2013

Other sources and databases used in the development of this document include:

- Statewide Transportation Improvement Program FY 2014-2019. WVDOT, Amendment 23, June 2015.
- US Census Bureau data. Available online through American Fact Finder (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).
- Region X, Belomar Regional Council, 2015, Comprehensive Economic Development Strategy 2015 Update, p. 13.
- West Virginia Department of Commerce, Marshall County Community Profile. Accessed: <http://www.wvcommerce.org/business/siteselector/communityprofiles/county/marshall/25/default.aspx>,
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June 2018

West Virginia 2

ENVIRONMENTAL  
ASSESSMENT  
APPENDICES

Prepared for:



**CDM  
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# APPENDIX A – DESIGN REPORT

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# WV-2 PROCTOR TO KENT

## Design Report



PREPARED BY:



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

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## 1 SUMMARY

The WV-2 Design Report presents the background and rationale for developing feasible alternates for a four-lane rural arterial facility from the existing four-lane at Proctor to the proposed four-lane north of Kent. WV-2 has a functional classification of rural arterial and is part of the National Highway System. The route links Huntington to Chester and is the primary route along the Ohio Valley in West Virginia. This project includes providing an Environmental Assessment and a Design Report. There are four alternative alignments being considered for this project. The first alternative was developed to be generally located at the foot of the hills along the project. The second alternative pushed the alignment further into the hillside, to maximize developable property. The third was developed to eliminate impacts to the Bayer Credit Union and reduce impacts to the recently constructed shale gas infrastructure. The preferred alternate (Alternate 1A) is a combination of Alternate 1, which is located at the foot of the hill through the southern half of the project and a modified Alternate 3, which is located on a higher grade and at the side of the hill on the northern half. These alternates are compared based upon a cost and impact basis.

## 2 PROJECT DESCRIPTION

WV-2 is a rural two-lane arterial that will be upgraded to a four-lane divided highway from Proctor to Kent. This project is one of many on WV-2 that will provide a safe, convenient highway with increased traffic capacity from I-77 in Parkersburg to Hancock County in the Northern Panhandle.

The project begins at the existing four-lane segment just north of the intersection of WV-89 in Proctor and ends at the proposed four-lane located just north of Kent. The project is approximately 5 miles long.

There are two chemical plants located within the project, which have a major impact on the proposed WV-2 improvements, Covestro LLC (formerly, Bayer Material Science LLC) and Westlake Chemical Corp's (formerly Axiall) Natrium Plant. These plants each have approximately 600 employees and have a major economic and traffic impact in this area of the Upper Ohio Valley. Both plants have extensive infrastructure located along and crossing WV-2. Personnel from these plants have expressed their concerns about the current location of WV-2 being in close proximity to their facilities. Their recommendation is to relocate the alignment of WV-2 to the east of between the plant facilities and the hillside. This location would allow the construction of a single access point, which would be easier to control from a security standpoint. It would also provide some separation from the roadway, which currently severs their facilities.

A natural gas processing and fractionation plant owned by Blue Racer Midstream Company north of the Westlake Chemical Natrium Plant on approximately 95 acres. This plant currently consists of two recently constructed cryogenic natural gas processing plants, each of which has 200 MMcf/d of processing capacity. (Natrium I) became fully operational in May 2013. (Natrium II) became fully operational in April 2014. Most of the complex plant is located west of existing WV-2. A truck load-out facility is located east of the existing roadway and located in such proximity to the proposed roadway alignment. The presence of Marcellus and Utica shale formations in the vicinity of WV-2 continues to have a major impact on the traffic volume and composition. There are several gas wells, which have been drilled on the river ridge located above WV-2. CR 2/2, which in the past was a seldom used

gravel roadway has now been paved to access at least one of the gas wells. The area between Proctor and Kent has been considered for several new gas processing facilities including fractionation plants and ethane crackers. Shell Corporation originally considered the project area, but selected a site in Pennsylvania for its Ethane Cracker. This area could be a candidate for other companies to consider.

Proctor and Kent are the two primary residential areas located within the project limits. Both of these communities are relatively small. The only non-plant related business is a Waste Trucking Company (Solid Waste Services of WV, Inc.) located just south of the project limits in Proctor.

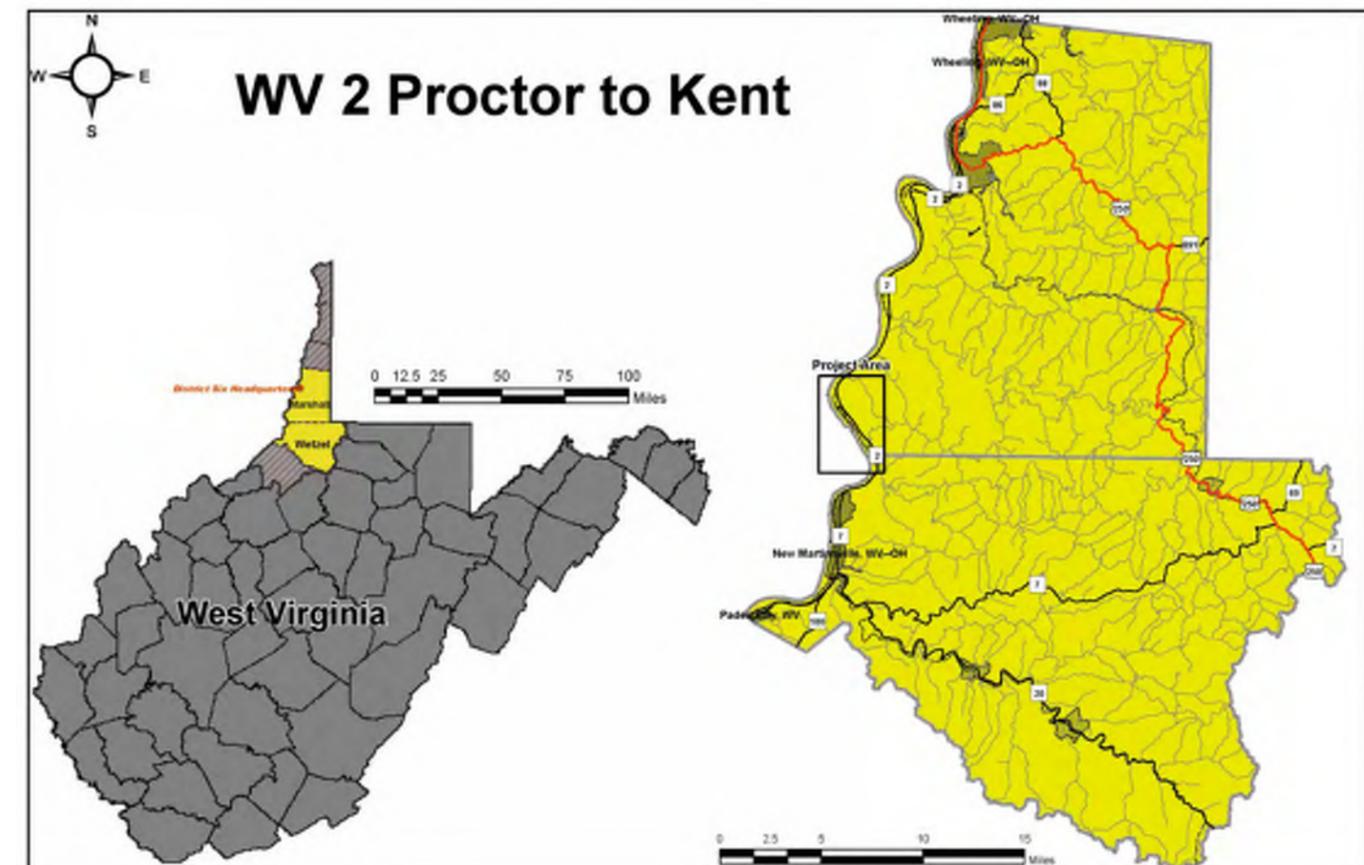
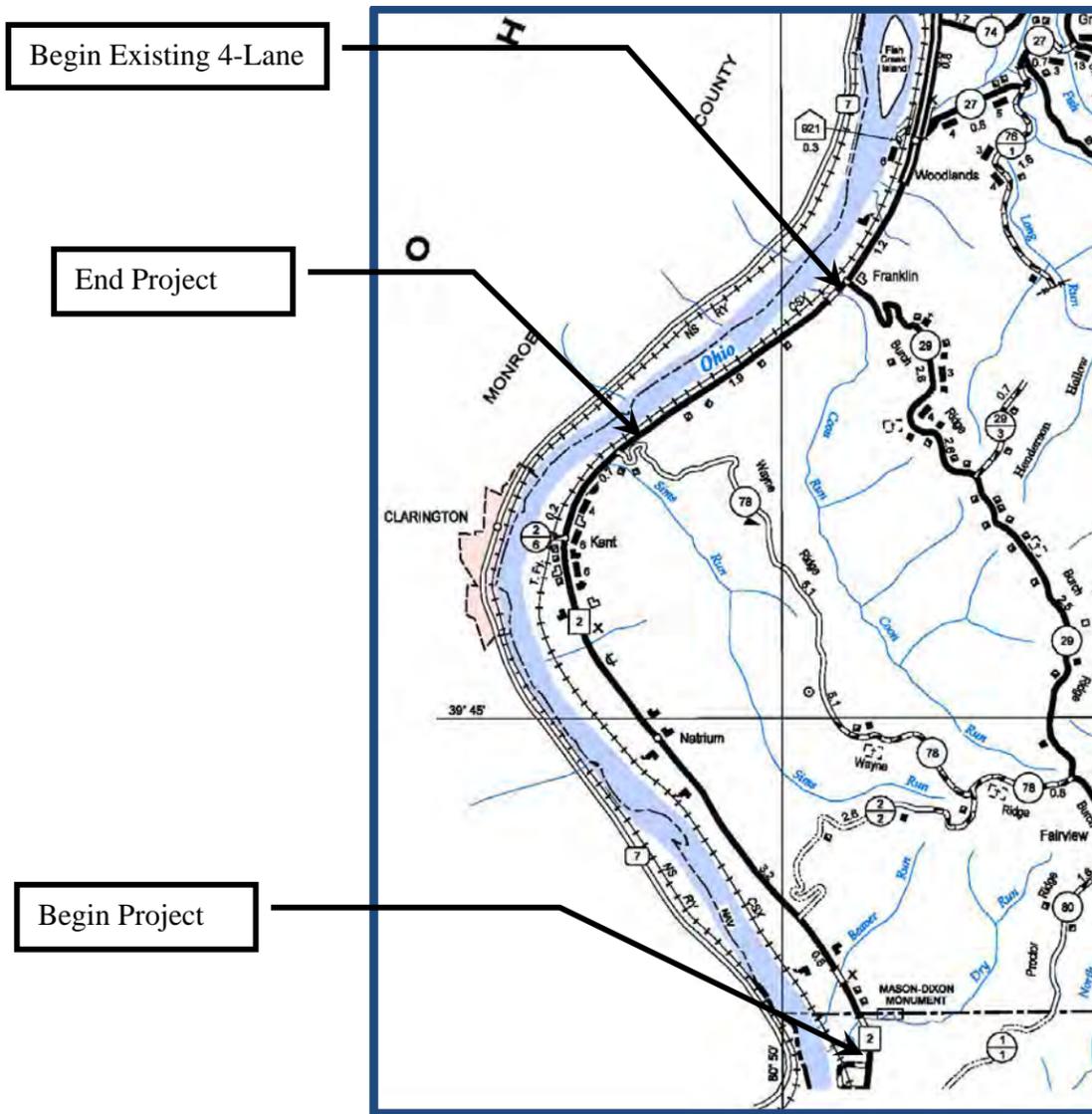


Figure 2-1  
Vicinity Map

## 3 TYPICAL SECTION

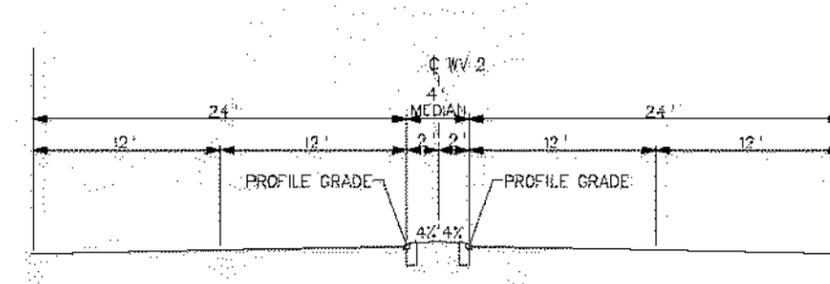
### 3.1 Existing Typical Section

WV-2 is a two lane highway with 12-foot lanes and variable width shoulders through the limits of this project. Immediately to the south there is a four-lane bridge and a short section of four-lane highway, a new bridge design is under construction. Several miles to the north of this project WV-2 has a continuous four lane typical section from Franklin to Wheeling. The next project to be constructed is the Kent to Franklin section. This project will complete the continuous four-lane to Wheeling.

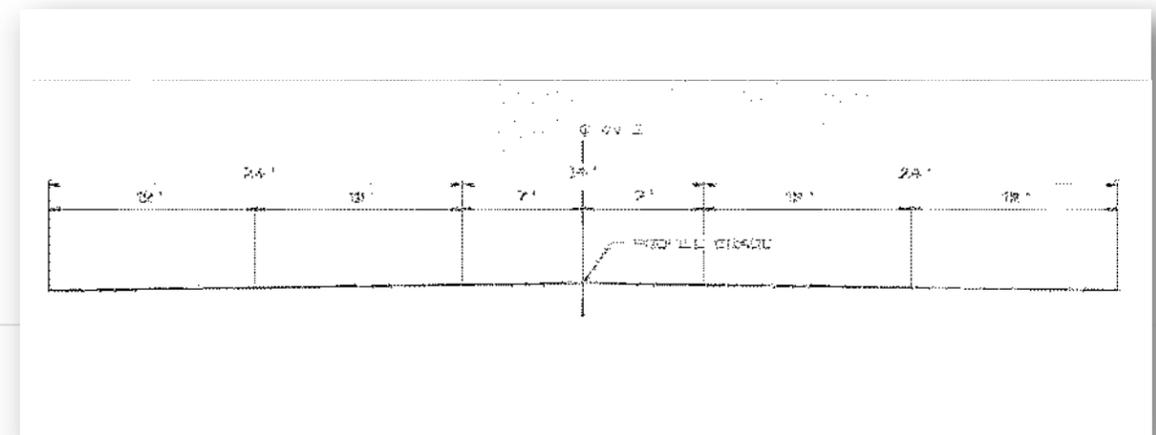


**Figure 3-1  
Project Location Map**

This project will have a 14-foot wide continuous center turn-lane. This configuration minimizes the footprint of the proposed construction, while meeting design requirements. At the south end of the project the median width transitions to match the existing 4-foot width. The typical section on the newly reconstructed bridge at Proctor has a 14-foot wide median. Because of the nature of the adjacent industrial complexes, this section of WV-2 is not expected to support any future retail or residential development, which means access can be limited to those points, which serve the plants and access existing county roads.



**Figure 3-2  
Existing Four-Lane Typical Section at Proctor**

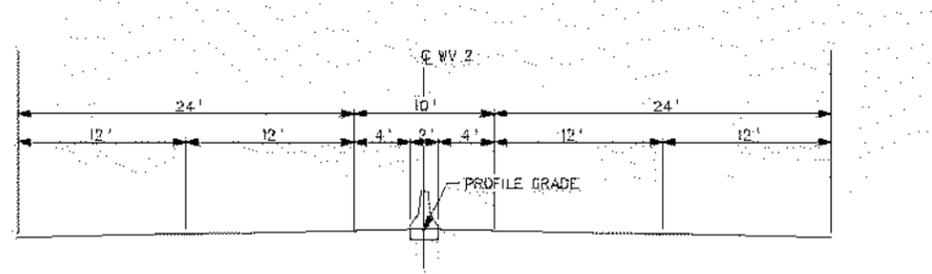


**Figure 3-3  
Proposed Four-Lane Section**

### 3.2 Proposed Typical Sections

WV-2 will be constructed as a four-lane divided highway. The design requirements include 12-foot wide lanes, and 10-foot wide shoulders with 8 feet paved. The clear zone has a minimum width of 30 feet. Additional design criteria are contained in Appendix A. The median configuration varies through the project to meet the differing conditions of the project. The project will connect to a 4-foot wide median section at Proctor, and a 10-foot wide median to match the Kent to Franklin typical section. These typical sections apply generally to both alternative alignments and are located similarly along the alignment.

Towards the end of the project the median transitions back to a 10-foot wide median with median barrier to match the Kent to Franklin typical section.



**Figure 3-4**  
**10-Foot Wide Median Typical Section**

#### 4 ALIGNMENT ALTERNATIVES

Four alignment alternatives were considered for this project, the preferred one has been developed taking in consideration the impact of the existing facilities and minimizing the construction cost. The four alternatives were developed along the hillside away from the existing WV-2 route to serve the main goals of the project. These goals included maximizing the developable land available to the plants, which will help boost economic development within the project limits, to enhance plant security by limiting the access to their property, and enhancing safety, by consolidating the plant entrances to reduce access along WV-2. Accordingly, widening existing WV-2 was not an option because it does not meet these requirements.

The basic alignment for Alternate 1 is at the foot of the hill. Alternate 2 is located further into the hill. Alternative 3 was located further into the hill and on a higher vertical alignment. Alternative 1A is a refinement of Alternate 1 on the south end of the project, and Alternative 3 at the north end.

##### 4.1 Alternate 1

Alternate 1 was developed based upon input from the management at Covestro LLC and Westlake Chemical. A version of this alignment through the Covestro LLC property was developed by their personnel. The basic alignment runs along the foot of the hill. This alternative allows existing WV-2 to remain as a frontage or plant access road, which will allow the plant accesses to be consolidated to a single intersection. Covestro LLC and Westlake Chemical promoted this alignment, because it will enhance the security of each of their plants.

Alternative 1 begins at the southern end of the project limits at the existing four-lane in Proctor, just south of the Marshall County line. A curve to the west is introduced to move the alignment away from the steep hillside located to the east. The tangent alignment continues to Dry Run where a curve to the east places the alignment along the foot of the hillside, the alignment in this area is located between residences at Dry Run and the Mason Dixon Monument. This curve continues through the Covestro LLC property past the Bayer Credit Union up to CR 2/2. A short section of tangent roadway follows, which is parallel to the existing roadway. A new curve to the east and a reverse curve to the west align the roadway behind the PPG facilities. Finally, a long curve to the east aligns the roadway

with the project to the north. This Alternative meets the purpose and need of the project but was not preferable because this Alignment Alternative impacts some of the existing facilities.

The vertical alignment was developed based upon a 60 mph design speed utilizing minimum k values of 136 for sag curves and 151 for crest.

**Table 1:**  
**Alignment 1 Curve Summary**

| Curve No. | Radius (ft) | Spiral Length (ft) | Superelevation Rate<br>emax = 8% |
|-----------|-------------|--------------------|----------------------------------|
| 1         | 6000        | 108                | 2.7                              |
| 2         | 6000        | 108                | 2.7                              |
| 3         | 6000        | 108                | 2.7                              |
| 4         | 8000        | 84                 | 2.1                              |
| 5         | 7000        | 108                | 2.7                              |
| 6         | 5500        | 120                | 3.0                              |

##### 4.2 Alternate 2

Alternate 2 was developed to maximize the amount of land available for development and increase the separation between the chemical facilities and WV-2. The basic curve configuration is similar to Alternate 1. The radii of the curves were decreased, and the tangents extended to move the alignment to the east.

The vertical alignment was developed based upon a 60 mph design speed utilizing minimum k values of 136 for sag curves and 151 for crest.

**Table 2:**  
**Alignment 2 Curve Summary**

| Curve No. | Radius (ft) | Spiral Length (ft) | Superelevation Rate<br>emax = 8% |
|-----------|-------------|--------------------|----------------------------------|
| 1         | 5850        | 115                | 2.8                              |
| 2         | 2320        | 250                | 6.0                              |
| 3         | 2320        | 250                | 6.0                              |
| 4         | 2320        | 250                | 6.0                              |
| 5         | 6350        | 105                | 2.6                              |
| 6         | 6350        | 105                | 2.6                              |
| 7         | 2320        | 250                | 6.0                              |
| 8         | 5420        | 120                | 3.0                              |

4.3 Alternate 3

Alternate 3 was developed to avoid properties such as the Bayer Heritage Federal Credit Union and the Dominion Gas (now Blue Racer Mid-Stream) processing area and Natural gas lines. The alignment was pushed east, which is further into the hillside. The profile grade was also raised even higher to mitigate the elevated grade. The overall alignment is similar to Alternatives 1 and 2. This alignment impacts the Dry Run Residences, and the brine well access located at CR 2/2. Alternative 3 meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

**Table 3:  
Alignment 2 Curve Summary**

| Curve No. | Radius (ft) | Spiral Length (ft) | Superelevation Rate<br>emax = 8% |
|-----------|-------------|--------------------|----------------------------------|
| 1         | 6000        | 108                | 2.8                              |
| 2         | 11500       | 0                  | 2.0                              |
| 3         | 2960        | 345                | 5.0                              |
| 4         | 2960        | 345                | 5.0                              |
| 5         | 3890        | 275                | 2.6                              |
| 6         | 8000        | 84                 | 2.6                              |
| 7         | 6000        | 108                | 2.6                              |
| 8         | 5420        | 210                | 3.0                              |
| 9         | 5040        | 220                | 3.0                              |

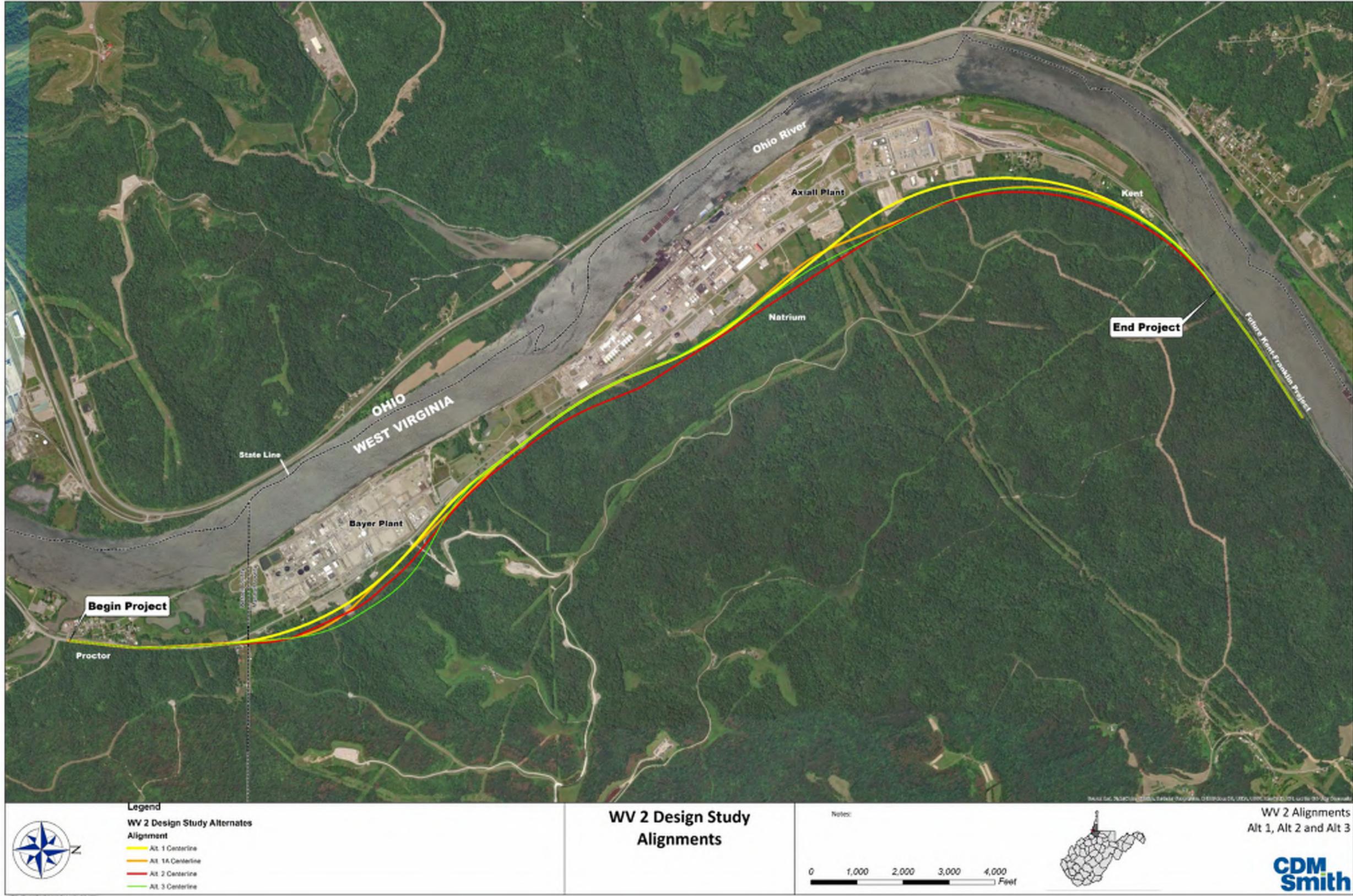
4.4 Alternate 1A (PREFERRED)

Alternative 1A was developed to primarily maintain the features of Alternative 1 but has been shifted to avoid and minimize impacts to the green barn historic boundary and other existing facilities and for the encroachment on the pipelines and valve complex near the Blue Racer Plant. The horizontal curves and vertical profile for Alternative 1A have been adjusted near these features to minimize the overall impacts. This alignment would relocate the Bayer Heritage Credit Union and a portion of the brine piping infrastructure at the Westlake Plant. Alternative 1A has the least amount of costs and overall impacts. The Preferred Alternative, Alternative 1A meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

**Table 4:  
Alignment 1A Curve Summary**

| Curve No. | Radius (ft) | Spiral Length (ft) | Superelevation Rate<br>emax = 8% |
|-----------|-------------|--------------------|----------------------------------|
| 1         | 4500        | 234                | 3.4                              |
| 2         | 2650        | 372                | 5.4                              |
| 3         | 6000        | 180                | 2.6                              |
| 4         | 8000        | 176                | 2.2                              |
| 5         | 6000        | 180                | 2.6                              |
| 6         | 3500        | 290                | 4.2                              |
| 7         | 4950        | 221                | 3.2                              |





## 5 ACCESS POINTS

### 5.1 Proctor Access

Proctor has 2 existing access points, one at WV-89, and the other at Charles Street, which is located approximately ¼ mile north. The improvements to WV-2, which include wider shoulders and a wider median, cause Charles Street to exceed grade criterion. The longitudinal slope exceeds 20%. Additionally there is a sight distance issue caused by the steep grade. To remedy this substandard geometry, an alternate access is recommended. This access will tie into Charles Street at the existing Wells Street intersection. The Proctor Access will be constructed with geometry that meets AASHTO requirements for maximum grade and sight distance. Because of the narrow median width, the intersection with WV-2 will be a right-in and right-out. There is left turn access from the south located at the WV-89 Intersection.

### 5.2 Covestro LLC Access

The Covestro LLC access will be configured to provide a connection from the new roadway over to existing WV-2. This intersection and access will be designed to handle a WB-50 truck. Left turn access will be provided at this location.

### 5.3 CR 22 Access

This county road has recently been upgraded with paving to access Marcellus Gas Wells located on the ridge tops east of this project. This roadway also accesses brine wells, which feed to the Westlake Chemical Plant. For the proposed WV 2 alignment Alternative 1A, an overpass will be built over CR 22 access, no proposed access from Alternative 1A to CR 22 access.

### 5.4 Blue Racer Access

The Blue Racer access will be configured to provide a connection from the proposed roadway over to existing WV-2. This intersection and access will be designed to handle a WB-50 truck. Left turn access will be provided at this location.

### 5.5 Kent Access

The Kent access will be configured to provide a connection from the new roadway over to existing WV-2. This intersection and access will be designed to handle a WB-50 truck. Left turn access will be provided at this location.

### 5.6 CR 78

This county road is seldom used. It does provide access to gas line infrastructure located in the general Sims Run area. This intersection will be designed as a right-in right-out, because the median width will be narrowing in this area, and a low anticipated traffic volume.

## 6 Temporary Traffic Control

The temporary traffic control for either of the alternates will consist of maintaining two-lane two-way traffic on the existing roadway while the majority of the project is being constructed. Traffic will then be routed on the newly completed roadway and completing the connections to each end of the project.

## 7 Utilities

The location of the alternative alignments along the hill eliminates most of the utility impacts that would be experienced when compared to widening existing WV-2. Figure 10-1 shows the extensive overhead utilities shown along the roadway. At the south end of the project some electric poles will need to be relocated. There is a transformer station near the Bayer Plant, which will not be directly impacted, but the property will be affected by fill. In the vicinity of CR 2/2 there is brine well piping owned by PPG, which will need to be relocated, because of the cut slope. In the vicinity of the northern end of the PPG plant the alignments are located next to a transformer station. Alternate 1 misses the towers that feed the station; whereas Alternate 2 will cause them to be relocated. The Dominion Gas Plant area is being fed with several gas lines which were recently constructed or are under construction. These lines have not been located, because they were under construction. Nevertheless, plans were provided to the gas company to show the roadway alignment. These lines will have to be located during the design phase. There will be some electrical lines impacted at the north end of the project, which will likely need to be relocated. CSX Railroad is located parallel to the project, but well outside any construction limits except at the very northern end of the project. In this area, the construction limits are located adjacent to the Railroad Right-of-Way.

## 8 Right-of-Way

The right-of-way acquisition areas for each alternate are shown in Appendix D. Other than the residential areas at Proctor, Dry Run and Kent, most of the property is owned by either by Covestro LLC or and Westlake Chemical. Separate documentation for Environmental Assessment has been submitted to address environmental concerns.

## 9 Alternate Recommendation

The recommended Alternate for this project is Alternate 1A has the least overall impacts and construction costs. It carries a much cheaper cost, \$58.5 million versus \$60.1 million for Alternate 1, \$77.9 million for Alternate 2, and 89.3 million for Alternate 3. Alternate 1A is the shortest Alternate 5.3 miles, and Alternative 1A has the least overall impacts.



**Figure 9-1:**  
Looking South at Existing WV-2

# APPENDIX A

## DESIGN CRITERIA



Looking North near the Beginning of the Project

**\*WV 2**  
**Proctor to Natrium**  
**State Project No. U352-2-11.65 00**  
**Design Criteria**

## 1 WV 2 Upgrade

Functional Classification – Rural Arterial (AASHTO pg. 7-1)

Design Level of Service - 'B' Reasonably Free Flow (AASHTO pg. 2-66, Table 2-4 and pg. 2-67, Table 2-5)

Design Speed Minimum Design Speed 60 mph - Rolling Terrain (AASHTO pg. 7-2)

No Design Exceptions Identified

## 2 Horizontal Geometry

Minimum Radius of Curvature = 1200' (AASHTO pg. 3-47, Table 3-10b)

Minimum Radius w/o Superelevation = 11,500' (AASHTO pg. 3-47, Table 3-10b)

## 3 Vertical Geometry

Stopping Sight Distance for Crest Vertical Curves = 570' (AASHTO pg. 3-155, Table 3-34 & pg. 7-3, Table 7-1)

Minimum 'K' Vertical Crest = 151 (AASHTO pg. 3-155, Table 3-34)

Minimum 'K' Vertical Sag = 136 (AASHTO pg. 3-161, Table 3-36)

Minimum Grade = 0.30% (Absolute) (AASHTO pg. 3-119)

Minimum Grade = 0.50% (Desirable)

Maximum Grade = 4% (AASHTO pg. 7-4, Table 7-2)

Minimum Vertical Clearance to Structures = 16 feet w/ 6" allowance for Overlay (AASHTO pgs. 7-6 thru 7-7, WVDOT DD-601)

Minimum Vertical Clearance to Pedestrian Overpass = 17' (AASHTO pg. 7-7, WVDOT DD-601)

## 4 Typical Section

Lane Widths (DHV>400) = 12 feet (AASHTO pg. 7-5, Table 7-3, WVDOT DD-601)

Continuous Left Turn Lane Width = 12 feet (AASHTO pg. 7-30 thru 7-34)

Median (Type V) = 2 feet with 4' Inside Paved Shoulders (AASHTO pg. 8-8)

Usable (Paved) Outside Shoulders = 8 feet (AASHTO pg. 7-5, Table 7-3 and pg. 7-13, WVDOT DD-601)

Shoulder Total Width w/o Guardrail = 10 feet (AASHTO pg. 7-5, Table 7-3, WVDOT DD-601)

Shoulder Total Width w/ Guardrail = 12.3 feet (WVDOT DD-601)

Raised Median Width including Left Turn Lane = 18' [12' Left Turn Lane] and [6' Medial Separator] (AASHTO pg. 4-35 & 7-30 thru 7-31)

Travel Lane Cross-Slope = 2% (AASHTO pg. 7-13, WVDOT DD-601)

Shoulder Cross Slope = 4% (WVDOT DD-601)

Maximum Allowable Breakover (Outside Shoulder) = 3% (High-Side Superelevation) (WVDOT DD-601)

Maximum Allowable Breakover (Inside Shoulder) = 6% (WVDOT DD-601)

Clear Zone Distance (D<sub>HV</sub>>1500) = 30' (AASHTO Roadside Design Guide 2011, Chapter 3, pg. 3-3; Table 3-1)

Roadside (Foreslope) = 1V:6H (AASHTO Roadside Design Guide 2011, Chapter 3, pg. 3-6; Figure 3-2)

Roadside (Ditch) Width = 4' Flat Bottom

Roadside (Backslope) = 1V:3H (AASHTO Roadside Design Guide 2011, Chapter 3, pg. 3-10; Figure 3-7)

Horizontal Clearance to Obstacles = 10 feet (AASHTO Roadside Design Guide 2011, Chapter 4)

## 5 Intersection Sight Distance (60 mph Design Speed)

Passenger Car = 665 feet (AASHTO pg. 9-38 Table 9-6)

SU = 840 (AASHTO pg. 9-39 Figure 9-17)

Combination = 1040 (AASHTO pg. 9-39 Figure 9-17) Recommended for Bayer and PPG access roadways.

## 6 Superelevation

Maximum Superelevation Rate = 8.0% (AASHTO pg. 3-47, Table 3-10b)

Maximum Relative Gradient = 0.45% x 1.5 (4-Lane) = 0.60% (AASHTO pg. 3-61, Table 3-15, and pg. 3-62 Table 3-16)

**\*WV 2**  
**Proctor to Natrium**  
**State Project No. U352-2-11.65 00**  
**Design Criteria**

## 7 Design Vehicles

From Arterial to Local Road = SU [Case C2] ([WVDOT DD-621](#))

From Arterial to Industrial Plants = WB-50 [Case B] ([WVDOT DD-621](#))

## 8 Control Access

Left Turn Access at Bayer, PPG, and Kent

Right in – Right Out at Proctor Access, CR 2/2 and CR 78.

## 9 Structures

Full Width for Approach Roadway ([AASHTO pg. 7-6 & WVDOT DD-604](#))

## 10 Bridge Design Loading

HL93 using AASHTO LRFD Bridge Design Specifications ([WVDOT DD-601](#))

## APPENDIX B

### Alternative Analysis Matrix



Looking South Towards Bayer

**West Virginia Department of Transportation**

Division of Highways  
 WV 2 Improvement Project  
 Proctor to Kent  
 State Project No. U352-2-11.66 00  
 Federal Project No. NH-0002(528)D  
 Date: October 2013



**WV-2 Alignment Alternative Evaluation/Cost Matrix From Proctor to Kent**

| Impact Category   | Study Alignment 1   | Study Alignment 2   | Study Alignment 3   | Study Alignment 1A  |        |
|---|---|---|---|---|--------|
| <b>Engineering</b>                                      |   |   |   |   |        |
| Prelim. Length of WV-2 Improvements                     | Feet  | 30,725  | 30,430  | 31,210  | 27,984 |
|   | Miles   | 5.82  | 5.76  | 5.91  | 5.30   |
| Roadway Configuration (Refer to Attached Drawings)      | 4 (12' Lanes) - 14' Flush Median - 4' Inside Shoulders - 8' Outside Paved Shoulders   | 4 (12' Lanes) - 14' Flush Median - 4' Inside Shoulders - 8' Outside Paved Shoulders   | 4 (12' Lanes) - 14' Flush Median - 4' Inside Shoulders - 8' Outside Paved Shoulders   | 4 (12' Lanes) - 14' Flush Median - 4' Inside Shoulders - 8' Outside Paved Shoulders   |        |
| Horizontal Geometry (Minimum Radius Used)               | 5500  | 2320  | 2960  | 2650  |        |
| <b>Financial / Costs</b>                                |   |   |   |   |        |
| Estimated Construction Costs (Refer to Attached Sheets) | \$60,100,000  | \$72,119,311  | \$82,701,836  | \$58,494,312  |        |
| <b>Traffic Operations</b>                               |   |   |   |   |        |
| Number of Local Roadways Severed                        | None  | None  | None  | None  |        |
| Safety Constraints / Impacts                            | Improves safety, and eliminates multiple access points from industrial plants. Provides efficient means of controlling flow potential loss.                                       | Improves safety, and eliminates multiple access points from industrial plants. Provides efficient means of controlling flow potential loss. | Improves safety, and eliminates multiple access points from industrial plants. Provides efficient means of controlling flow potential loss. | Improves safety, and eliminates multiple access points from industrial plants. Provides efficient means of controlling flow potential loss. |        |
| <b>Human Environment</b>                                |   |   |   |   |        |
| Historic Resource Impacts                               | Mason-Dixon Line Monument is in close proximity to roadway disturb limits. Protective measures may be required. This alignment impacts a portion of a historic property boundary. | Mason-Dixon Line Monument is in close proximity to roadway disturb limits. Protective measures may be required.                             | Mason-Dixon Line Monument is in close proximity to roadway disturb limits. Protective measures may be required.                             | Mason-Dixon Line Monument is in close proximity to roadway disturb limits. Protective measures may be required.                             |        |
| Cemetery Impacts  | None (A retaining wall may be required during the final design and subsurface investigation phase)  | None  | None  | None  |        |
| Industrial Facilities Impacts (e.g. Chemical Plant)     | Impacts to Bayer Corp., PPG and the Natural Gas Processing Facility and gas lines to the facility.  | Impacts to Bayer Corp., PPG gas lines to the Natural Gas Processing Facility.   | Impacts to Bayer Corp. and PPG.   | Portion of the brine piping infrastructure at the Axiall plant  |        |
| Commercial Facilities Impacts (e.g. Businesses)         | Impacts to Credit Union. A retaining wall may reduce the impacts to the Credit Union.   | Takes Credit Union Building   | None  | Takes Credit Union Building   |        |
| Residential Displacement (# houses)                     | 9 Residences  | 5 Residences  | 9 Residences  | 5 Residences  |        |
| <b>Physical Impacts</b>                                 |   |   |   |   |        |
| Potential Hazard Waste Site(s)                          | No impact to known Hazard Waste Site  | No impact to known Hazard Waste Site  | No impact to known Hazard Waste Site  | No impact to known Hazard Waste Site  |        |
| Major (Public) Utility Conflicts / Impacts              | Gas pipelines feeding the Blue Racer Fractionation Plant  | Gas pipelines feeding the Blue Racer Fractionation Plant  | Potential impacts to electrical tower   | None  |        |
| Major (Private) Utility Conflicts / Impacts             | Requires Relocation of PPG Brine Well Infrastructure  | Requires Relocation of PPG Brine Well Infrastructure  | Requires Relocation of PPG Brine Well Infrastructure  | Requires Relocation of PPG Brine Well Infrastructure  |        |





# APPENDIX C

## Alternative Cost Estimates



Looking East from existing WV-2 towards Brine Pipeline



| WV-2 STUDY ALTERNATE 1                    |   |                    |      |            |               |
|---|---|--------------------|------|------------|---------------|
| ITEM NO.                                  | DESCRIPTION   | ESTIMATED QUANTITY | UNIT | UNIT PRICE | TOTAL         |
| <b>ROADWAY</b>                            |   |                    |      |            |               |
| 204001-000                                | CLEARING AND GRUBBING (APPROX 175 ACRES)              | 1                  | LS   | \$ 875,000 | \$ 875,000    |
| 204001-000                                | MOBILIZATION  | 1                  | LS   | \$ 300,000 | \$ 300,000    |
| 207001-001                                | UNCLASSIFIED EXCAVATION                               | 2,813,849          | CY   | \$ 6.00    | \$ 16,883,094 |
| 207002-000                                | SUBGRADE  | 44,379             | CY   | \$ 35      | \$ 1,553,265  |
| 311006-001                                | OPEN GRADED FREE DRAINING BASE COURSE                 | 22,189             | CY   | \$ 100     | \$ 2,218,900  |
| 606029-001                                | FREE DRAINING BASE TRENCH                             | 61,448             | LF   | \$ 16      | \$ 983,168    |
| 401 ITEMS                                 | SUPERPAVE HMA (12" THICKNESS)                         | 175,741            | TON  | \$ 105     | \$ 18,452,805 |
| <b>MAJOR DRAINAGE( PIPES&gt; 24")</b>     |   |                    |      |            |               |
| 601002-001                                | CLASS B CONCRETE (PIPE WING WALLS)                    | 100                | CY   | \$ 600     | \$ 60,000     |
| 604 ITEMS                                 | 96 INCH PIPE  | 460                | FT   | \$ 850     | \$ 391,000    |
| 604 ITEMS                                 | 72 INCH PIPE  | 360                | FT   | \$ 915     | \$ 329,400    |
| 604 ITEMS                                 | 66 INCH PIPE  | 360                | FT   | \$ 350     | \$ 126,000    |
| 604 ITEMS                                 | 60 INCH PIPE  | 1,134              | FT   | \$ 250     | \$ 283,500    |
| 604 ITEMS                                 | 48 INCH PIPE  | 368                | FT   | \$ 250     | \$ 92,000     |
| 604 ITEMS                                 | 42 INCH PIPE  | 410                | FT   | \$ 250     | \$ 102,500    |
| 604 ITEMS                                 | 36 and 30 INCH PIPE                                   | 405                | FT   | \$ 250     | \$ 101,250    |
| N/A                                       | 6'X6' RCBC  | 78                 | FT   | \$ 1,000   | \$ 78,000     |
| N/A                                       | 20'X7' RCBC (Dry Run)                                 | 138                | FT   | \$ 4,000   | \$ 552,000    |
| N/A                                       | 12'X8' RCBC (Sims Run)                                | 162                | FT   | \$ 2,000   | \$ 324,000    |
| <b>MINOR DRAINAGE (PIPES &lt; 24")</b>    |   |                    |      |            |               |
| 604-ITEMS                                 | MINOR DRAINAGE PIPES                                  | 1                  | LS   | \$ 70,000  | \$ 70,000     |
| 605-ITEMS                                 | DRAINAGE INLETS                                       | 70                 | EA.  | \$ 1,500   | \$ 105,000    |
| 606-ITEMS                                 | UNDERDRAIN & PIPE INSTALLATION                        | 1,000              | FT   | \$ 15      | \$ 15,000     |
| 607001-001                                | TYPE 1 GUARDRAIL - CLASS I                            | 31,150             | FT   | \$ 12      | \$ 373,800    |
| 607065-001                                | FLARED END TERMINAL                                   | 62                 | EA.  | \$ 750     | \$ 46,500     |
| 608002-001                                | RIGHT OF WAY FENCE, FARM FIELD TYPE                   | 61,448             | FT   | \$ 4       | \$ 245,792    |
| 610 ITEMS                                 | MEDIAN, TYPE V  | 2,400              | LF   | \$ 60      | \$ 144,000    |
| 633-ITEMS                                 | DUMPED ROCK GUTTER (INCLUDES PIPE OUTLETS)            | 1                  | LS   | \$ 200,000 | \$ 200,000    |
| 636-ITEMS                                 | MAINTENANCE OF TRAFFIC                                | 1                  | LS   | \$ 200,000 | \$ 200,000    |
| 637-ITEMS                                 | WATER FOR DUST PALLIATIVE                             | 610                | MGAL | \$ 8       | \$ 4,880      |
| 638-ITEMS                                 | PROJECT, RIGHT-OF-WAY, SURVEY MARKERS                 | 1                  | LS   | \$ 25,000  | \$ 25,000     |
| 639-ITEMS                                 | CONSTRUCTION LAYOUT STAKES                            | 1                  | LS   | \$ 100,000 | \$ 100,000    |
| 640-ITEMS                                 | FIELD OFFICE AND STORAGE BUILDING                     | 1                  | LS   | \$ 45,000  | \$ 45,000     |
| 642-ITEMS                                 | TEMPORARY PROJECT WATER POLLUTION CONTROL             | 1                  | LS   | \$ 500,000 | \$ 500,000    |
| 652-ITEMS                                 | SEEDING AND MULCHING (APPROX. 120 ACRES)              | 1                  | LS   | \$ 120,000 | \$ 120,000    |
| 655-ITEMS                                 | MATTING   | 1                  | LS   | \$ 20,000  | \$ 20,000     |
| 660-ITEMS                                 | TRAFFIC SIGNALS                                       | 1                  | LS   | \$ 100,000 | \$ 100,000    |
| <b>SIGNING &amp; PAVEMENT MARKINGS</b>    |   |                    |      |            |               |
| 657-ITEMS                                 | ROADSIDE MOUNTED SIGN SUPPORTS                        | 1                  | LS   | \$ 50,000  | \$ 50,000     |
| 661-ITEMS                                 | TRAFFIC SIGNS AND DELINEATORS                         | 1                  | LS   | \$ 75,000  | \$ 75,000     |
| 663-ITEMS                                 | MISCELLANEOUS PAVEMENT MARKINGS                       | 35                 | MI   | \$ 300     | \$ 10,500     |
| <b>STRUCTURES</b>                         |   |                    |      |            |               |
|   | VEHICULAR UNDERPASS                                   | 96                 | LF   | \$ 2,000   | \$ 192,000    |
|   | RETAINING WALL  | 1,000              | SF   | \$ 80      | \$ 80,000     |
| <b>UTILITIES AND PROPERTY ACQUISITION</b> |   |                    |      |            |               |
|   | PROJECT (TO BE PROVIDED BY THE WVDOH AT A LATER DATE) | 1                  | LS   | \$ -       | \$ -          |
| SUBTOTAL                                  |   |                    |      |            | \$ 46,428,354 |
| 20% E&C                                   |   |                    |      |            | 9,285,671     |
| TOTAL                                     |   |                    |      |            | \$ 55,714,025 |



| WV-2 STUDY ALTERNATE 2                    |   |                    |      |              |               |
|---|---|--------------------|------|--------------|---------------|
| ITEM NO.                                  | DESCRIPTION   | ESTIMATED QUANTITY | UNIT | UNIT PRICE   | TOTAL         |
| <b>ROADWAY</b>                            |   |                    |      |              |               |
| 204001-000                                | CLEARING AND GRUBBING (APPROX. 228 ACRES)             | 1                  | LS   | \$ 1,140,000 | \$ 1,140,000  |
| 204001-000                                | MOBILIZATION  | 1                  | LS   | \$ 300,000   | \$ 300,000    |
| 207001-001                                | UNCLASSIFIED EXCAVATION                               | 4,605,846          | CY   | \$ 6.00      | \$ 27,635,076 |
| 207002-000                                | SUBGRADE  | 43,947             | CY   | \$ 35        | \$ 1,538,145  |
| 311006-001                                | OPEN GRADED FREE DRAINING BASE COURSE                 | 21,974             | CY   | \$ 100       | \$ 2,197,400  |
| 606029-001                                | FREE DRAINING BASE TRENCH                             | 60,850             | LF   | \$ 16        | \$ 973,600    |
| 401 ITEMS                                 | SUPERPAVE HMA (12" THICKNESS)                         | 174,031            | TON  | \$ 105       | \$ 18,273,255 |
| <b>MAJOR DRAINAGE( PIPES&gt; 24")</b>     |   |                    |      |              |               |
| 601002-001                                | CLASS B CONCRETE (PIPE WINGWALLS)                     | 100                | CY   | \$ 600       | \$ 60,000     |
| 604 ITEMS                                 | 96 INCH PIPE  | 890                | FT   | \$ 850       | \$ 756,500    |
| 604 ITEMS                                 | 72 INCH PIPE  | 550                | FT   | \$ 915       | \$ 503,250    |
| 604 ITEMS                                 | 66 INCH PIPE  | 720                | FT   | \$ 350       | \$ 252,000    |
| 604 ITEMS                                 | 60 INCH PIPE  | 1,478              | FT   | \$ 250       | \$ 369,500    |
| 604 ITEMS                                 | 48 INCH PIPE  | 344                | FT   | \$ 250       | \$ 86,000     |
| 604 ITEMS                                 | 42 INCH PIPE  | 500                | FT   | \$ 250       | \$ 125,000    |
| 604 ITEMS                                 | 36 and 30 INCH PIPE                                   | 600                | FT   | \$ 250       | \$ 150,000    |
| N/A                                       | 6'X6' RCBC  | 78                 | FT   | \$ 1,000     | \$ 78,000     |
| N/A                                       | 20'X7' RCBC (Dry Run)                                 | 138                | FT   | \$ 4,000     | \$ 552,000    |
| N/A                                       | 12'X8' RCBC (Sims Run)                                | 318                | FT   | \$ 2,000     | \$ 636,000    |
| <b>MINOR DRAINAGE (PIPES &lt; 24")</b>    |   |                    |      |              |               |
| 604-ITEMS                                 | MINOR DRAINAGE PIPES                                  | 1                  | LS   | \$ 300,000   | \$ 300,000    |
| 605-ITEMS                                 | DRAINAGE INLETS                                       | 70                 | EA.  | \$ 1,500     | \$ 105,000    |
| 606-ITEMS                                 | UNDERDRAIN & PIPE INSTALLATION                        | 1,000              | FT   | \$ 15        | \$ 15,000     |
| 607001-001                                | TYPE 1 GUARDRAIL - CLASS I                            | 32,900             | FT   | \$ 12        | \$ 394,800    |
| 607065-001                                | FLARED END TERMINAL                                   | 62                 | EA.  | \$ 1,000     | \$ 62,000     |
| 608002-001                                | RIGHT OF WAY FENCE, FARM FIELD TYPE                   | 60,850             | FT   | \$ 4         | \$ 243,400    |
| 610 ITEMS                                 | MEDIAN, TYPE V  | 2,400              | LF   | \$ 60        | \$ 144,000    |
| 633-ITEMS                                 | DUMPED ROCK GUTTER (INCLUDES PIPE OUTLETS)            | 1                  | LS   | \$ 200,000   | \$ 200,000    |
| 636-ITEMS                                 | MAINTENANCE OF TRAFFIC                                | 1                  | LS   | \$ 200,000   | \$ 200,000    |
| 637-ITEMS                                 | WATER FOR DUST PALLIATIVE                             | 1,300              | MGAL | \$ 10        | \$ 13,000     |
| 638-ITEMS                                 | PROJECT, RIGHT-OF-WAY, SURVEY MARKERS                 | 1                  | LS   | \$ 50,000    | \$ 50,000     |
| 639-ITEMS                                 | CONSTRUCTION LAYOUT STAKES                            | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| 640-ITEMS                                 | FIELD OFFICE AND STORAGE BUILDING                     | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| 642-ITEMS                                 | TEMPORARY PROJECT WATER POLLUTION CONTROL             | 1                  | LS   | \$ 500,000   | \$ 500,000    |
| 652-ITEMS                                 | SEEDING AND MULCHING (APPROX. 174 ACRES)              | 1                  | LS   | \$ 174,000   | \$ 174,000    |
| 655-ITEMS                                 | MATTING   | 1                  | LS   | \$ 40,000    | \$ 40,000     |
| <b>SIGNING &amp; PAVEMENT MARKINGS</b>    |   |                    |      |              |               |
| 657-ITEMS                                 | ROADSIDE MOUNTED SIGN SUPPORTS                        | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| 661-ITEMS                                 | TRAFFIC SIGNS AND DELINEATORS                         | 1                  | LS   | \$ 150,000   | \$ 150,000    |
| 663-ITEMS                                 | MISCELLANEOUS PAVEMENT MARKINGS                       | 35                 | MI   | \$ 300       | \$ 10,500     |
| 660-ITEMS                                 | TRAFFIC SIGNALS                                       | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| <b>STRUCTURES</b>                         |   |                    |      |              |               |
|   | VEHICULAR UNDERPASS                                   | 464                | LF   | \$ 3,000     | \$ 1,392,000  |
|   | RETAINING WALL  | 1,000              | SF   | \$ 80        | \$ 80,000.00  |
| <b>UTILITIES AND PROPERTY ACQUISITION</b> |   |                    |      |              |               |
|   | PROJECT (TO BE PROVIDED BY THE WVDOH AT A LATER DATE) | 1                  | LS   | \$ -         | \$ -          |
| SUBTOTAL                                  |   |                    |      |              | \$ 60,099,426 |
| 20% E&C                                   |   |                    |      |              | 12,019,885    |
| TOTAL                                     |   |                    |      |              | \$ 72,119,311 |





| WV-2 STUDY ALTERNATE 3                    |   |                    |      |              |               |
|---|---|--------------------|------|--------------|---------------|
| ITEM NO.                                  | DESCRIPTION   | ESTIMATED QUANTITY | UNIT | UNIT PRICE   | TOTAL         |
| <b>ROADWAY</b>                            |   |                    |      |              |               |
| 204001-000                                | CLEARING AND GRUBBING (APPROX. 232 ACRES)             | 1                  | LS   | \$ 1,160,000 | \$ 1,160,000  |
| 204001-000                                | MOBILIZATION  | 1                  | LS   | \$ 300,000   | \$ 300,000    |
| 207001-001                                | UNCLASSIFIED EXCAVATION                               | 6,183,857          | CY   | \$ 6.00      | \$ 37,103,142 |
| 207002-000                                | SUBGRADE  | 45,078             | CY   | \$ 35        | \$ 1,577,730  |
| 311006-001                                | OPEN GRADED FREE DRAINING BASE COURSE                 | 22,539             | CY   | \$ 100       | \$ 2,253,900  |
| 606029-001                                | FREE DRAINING BASE TRENCH                             | 62,416             | LF   | \$ 16        | \$ 998,656    |
| 401 ITEMS                                 | SUPERPAVE HMA (12" THICKNESS)                         | 178,510            | TON  | \$ 105       | \$ 18,743,550 |
| <b>MAJOR DRAINAGE( PIPES&gt; 24")</b>     |   |                    |      |              |               |
| 601002-001                                | CLASS B CONCRETE (PIPE WINGWALLS)                     | 100                | CY   | \$ 600       | \$ 60,000     |
| 604 ITEMS                                 | 96 INCH PIPE  | 478                | FT   | \$ 850       | \$ 406,300    |
| 604 ITEMS                                 | 72 INCH PIPE  | 507                | FT   | \$ 915       | \$ 463,905    |
| 604 ITEMS                                 | 66 INCH PIPE  | 345                | FT   | \$ 350       | \$ 120,750    |
| 604 ITEMS                                 | 60 INCH PIPE  | 1,519              | FT   | \$ 250       | \$ 379,750    |
| 604 ITEMS                                 | 48 INCH PIPE  | 414                | FT   | \$ 250       | \$ 103,500    |
| 604 ITEMS                                 | 42 INCH PIPE  | 315                | FT   | \$ 250       | \$ 78,750     |
| 604 ITEMS                                 | 36 and 30 INCH PIPE                                   | 182                | FT   | \$ 250       | \$ 45,500     |
| N/A                                       | 6'X6' RCBC  | 78                 | FT   | \$ 1,000     | \$ 78,000     |
| N/A                                       | 20'X7' RCBC (Dry Run)                                 | 162                | FT   | \$ 4,000     | \$ 648,000    |
| N/A                                       | 12'X8' RCBC (Sims Run)                                | 195                | FT   | \$ 2,000     | \$ 390,000    |
| <b>MINOR DRAINAGE (PIPES &lt; 24")</b>    |   |                    |      |              |               |
| 604-ITEMS                                 | MINOR DRAINAGE PIPES                                  | 1                  | LS   | \$ 300,000   | \$ 300,000    |
| 605-ITEMS                                 | DRAINAGE INLETS                                       | 70                 | EA.  | \$ 1,500     | \$ 105,000    |
| 606-ITEMS                                 | UNDERDRAIN & PIPE INSTALLATION                        | 1,000              | FT   | \$ 15        | \$ 15,000     |
| 607001-001                                | TYPE 1 GUARDRAIL - CLASS I                            | 37,300             | FT   | \$ 12        | \$ 447,600    |
| 607065-001                                | FLARED END TERMINAL                                   | 64                 | EA.  | \$ 1,000     | \$ 64,000     |
| 608002-001                                | RIGHT OF WAY FENCE, FARM FIELD TYPE                   | 62,416             | FT   | \$ 4         | \$ 249,664    |
| 610 ITEMS                                 | MEDIAN, TYPE V  | 2,400              | LF   | \$ 60        | \$ 144,000    |
| 633-ITEMS                                 | DUMPED ROCK GUTTER (INCLUDES PIPE OUTLETS)            | 1                  | LS   | \$ 200,000   | \$ 200,000    |
| 636-ITEMS                                 | MAINTENANCE OF TRAFFIC                                | 1                  | LS   | \$ 200,000   | \$ 200,000    |
| 637-ITEMS                                 | WATER FOR DUST PALLIATIVE                             | 1,300              | MGAL | \$ 10        | \$ 13,000     |
| 638-ITEMS                                 | PROJECT, RIGHT-OF-WAY, SURVEY MARKERS                 | 1                  | LS   | \$ 50,000    | \$ 50,000     |
| 639-ITEMS                                 | CONSTRUCTION LAYOUT STAKES                            | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| 640-ITEMS                                 | FIELD OFFICE AND STORAGE BUILDING                     | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| 642-ITEMS                                 | TEMPORARY PROJECT WATER POLLUTION CONTROL             | 1                  | LS   | \$ 500,000   | \$ 500,000    |
| 652-ITEMS                                 | SEEDING AND MULCHING (APPROX. 177 ACRES)              | 1                  | LS   | \$ 177,000   | \$ 177,000    |
| 655-ITEMS                                 | MATTING   | 1                  | LS   | \$ 40,000    | \$ 40,000     |
| <b>SIGNING &amp; PAVEMENT MARKINGS</b>    |   |                    |      |              |               |
| 657-ITEMS                                 | ROADSIDE MOUNTED SIGN SUPPORTS                        | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| 661-ITEMS                                 | TRAFFIC SIGNS AND DELINEATORS                         | 1                  | LS   | \$ 150,000   | \$ 150,000    |
| 663-ITEMS                                 | MISCELLANEOUS PAVEMENT MARKINGS                       | 35                 | MI   | \$ 300       | \$ 10,500     |
| 660-ITEMS                                 | TRAFFIC SIGNALS                                       | 1                  | LS   | \$ 100,000   | \$ 100,000    |
| <b>STRUCTURES</b>                         |   |                    |      |              |               |
|   | VEHICULAR UNDERPASS                                   | 287                | LF   | \$ 3,000     | \$ 861,000    |
|   | RETAINING WALL  | 1,000              | SF   | \$ 80        | \$ 80,000.00  |
| <b>UTILITIES AND PROPERTY ACQUISITION</b> |   |                    |      |              |               |
|   | PROJECT (TO BE PROVIDED BY THE WVDOH AT A LATER DATE) | 1                  | LS   | \$ -         | \$ -          |
| SUBTOTAL                                  |   |                    |      |              | \$ 68,918,197 |
| 20% E&C                                   |   |                    |      |              | 13,783,639    |
| TOTAL                                     |   |                    |      |              | \$ 82,701,836 |



| WV-2 STUDY ALTERNATE 1A                   |   |                    |      |            |               |
|---|---|--------------------|------|------------|---------------|
| ITEM NO.                                  | DESCRIPTION   | ESTIMATED QUANTITY | UNIT | UNIT PRICE | TOTAL         |
| <b>ROADWAY</b>                            |   |                    |      |            |               |
| 204001-000                                | CLEARING AND GRUBBING                                 | 1                  | LS   | \$ 875,000 | \$ 875,000    |
| 204001-000                                | MOBILIZATION  | 1                  | LS   | \$ 300,000 | \$ 300,000    |
| 207001-001                                | UNCLASSIFIED EXCAVATION                               | 3,200,000          | CY   | \$ 6.00    | \$ 19,200,000 |
| 207002-000                                | SUBGRADE  | 44,379             | CY   | \$ 35      | \$ 1,553,265  |
| 311006-001                                | OPEN GRADED FREE DRAINING BASE COURSE                 | 22,189             | CY   | \$ 100     | \$ 2,218,900  |
| 606029-001                                | FREE DRAINING BASE TRENCH                             | 61,448             | LF   | \$ 16      | \$ 983,168    |
| 401 ITEMS                                 | SUPERPAVE HMA (12" THICKNESS)                         | 175,741            | TON  | \$ 105     | \$ 18,452,805 |
| <b>MAJOR DRAINAGE( PIPES&gt; 24")</b>     |   |                    |      |            |               |
| 601002-001                                | CLASS B CONCRETE (PIPE WING WALLS)                    | 100                | CY   | \$ 600     | \$ 60,000     |
| 604 ITEMS                                 | 96 INCH PIPE  | 460                | FT   | \$ 850     | \$ 391,000    |
| 604 ITEMS                                 | 72 INCH PIPE  | 360                | FT   | \$ 915     | \$ 329,400    |
| 604 ITEMS                                 | 66 INCH PIPE  | 360                | FT   | \$ 350     | \$ 126,000    |
| 604 ITEMS                                 | 60 INCH PIPE  | 1,134              | FT   | \$ 250     | \$ 283,500    |
| 604 ITEMS                                 | 48 INCH PIPE  | 368                | FT   | \$ 250     | \$ 92,000     |
| 604 ITEMS                                 | 42 INCH PIPE  | 410                | FT   | \$ 250     | \$ 102,500    |
| 604 ITEMS                                 | 36 and 30 INCH PIPE                                   | 405                | FT   | \$ 250     | \$ 101,250    |
| N/A                                       | 6'X6' RCBC  | 78                 | FT   | \$ 1,000   | \$ 78,000     |
| N/A                                       | 20'X7' RCBC (Dry Run)                                 | 138                | FT   | \$ 4,000   | \$ 552,000    |
| N/A                                       | 12'X8' RCBC (Sims Run)                                | 162                | FT   | \$ 2,000   | \$ 324,000    |
| <b>MINOR DRAINAGE (PIPES &lt; 24")</b>    |   |                    |      |            |               |
| 604-ITEMS                                 | MINOR DRAINAGE PIPES                                  | 1                  | LS   | \$ 70,000  | \$ 70,000     |
| 605-ITEMS                                 | DRAINAGE INLETS                                       | 70                 | EA.  | \$ 1,500   | \$ 105,000    |
| 606-ITEMS                                 | UNDERDRAIN & PIPE INSTALLATION                        | 1,000              | FT   | \$ 15      | \$ 15,000     |
| 607001-001                                | TYPE 1 GUARDRAIL - CLASS I                            | 31,150             | FT   | \$ 12      | \$ 373,800    |
| 607065-001                                | FLARED END TERMINAL                                   | 62                 | EA.  | \$ 750     | \$ 46,500     |
| 608002-001                                | RIGHT OF WAY FENCE, FARM FIELD TYPE                   | 61,448             | FT   | \$ 4       | \$ 245,792    |
| 610 ITEMS                                 | MEDIAN, TYPE V  | 2,400              | LF   | \$ 60      | \$ 144,000    |
| 633-ITEMS                                 | DUMPED ROCK GUTTER (INCLUDES PIPE OUTLETS)            | 1                  | LS   | \$ 200,000 | \$ 200,000    |
| 636-ITEMS                                 | MAINTENANCE OF TRAFFIC                                | 1                  | LS   | \$ 200,000 | \$ 200,000    |
| 637-ITEMS                                 | WATER FOR DUST PALLIATIVE                             | 610                | MGAL | \$ 8       | \$ 4,880      |
| 638-ITEMS                                 | PROJECT, RIGHT-OF-WAY, SURVEY MARKERS                 | 1                  | LS   | \$ 25,000  | \$ 25,000     |
| 639-ITEMS                                 | CONSTRUCTION LAYOUT STAKES                            | 1                  | LS   | \$ 100,000 | \$ 100,000    |
| 640-ITEMS                                 | FIELD OFFICE AND STORAGE BUILDING                     | 1                  | LS   | \$ 45,000  | \$ 45,000     |
| 642-ITEMS                                 | TEMPORARY PROJECT WATER POLLUTION CONTROL             | 1                  | LS   | \$ 500,000 | \$ 500,000    |
| 652-ITEMS                                 | SEEDING AND MULCHING (APPROX. 120 ACRES)              | 1                  | LS   | \$ 120,000 | \$ 120,000    |
| 655-ITEMS                                 | MATTING   | 1                  | LS   | \$ 20,000  | \$ 20,000     |
| 660-ITEMS                                 | TRAFFIC SIGNALS                                       | 1                  | LS   | \$ 100,000 | \$ 100,000    |
| <b>SIGNING &amp; PAVEMENT MARKINGS</b>    |   |                    |      |            |               |
| 657-ITEMS                                 | ROADSIDE MOUNTED SIGN SUPPORTS                        | 1                  | LS   | \$ 50,000  | \$ 50,000     |
| 661-ITEMS                                 | TRAFFIC SIGNS AND DELINEATORS                         | 1                  | LS   | \$ 75,000  | \$ 75,000     |
| 663-ITEMS                                 | MISCELLANEOUS PAVEMENT MARKINGS                       | 35                 | MI   | \$ 300     | \$ 10,500     |
| <b>STRUCTURES</b>                         |   |                    |      |            |               |
|   | VEHICULAR UNDERPASS                                   | 96                 | LF   | \$ 2,000   | \$ 192,000    |
|   | RETAINING WALL  | 1,000              | SF   | \$ 80      | \$ 80,000     |
| <b>UTILITIES AND PROPERTY ACQUISITION</b> |   |                    |      |            |               |
|   | PROJECT (TO BE PROVIDED BY THE WVDOH AT A LATER DATE) | 1                  | LS   | \$ -       | \$ -          |
| SUBTOTAL                                  |   |                    |      |            | \$ 48,745,260 |
| 20% E&C                                   |   |                    |      |            | 9,749,052     |
| TOTAL                                     |   |                    |      |            | \$ 58,494,312 |



# APPENDIX D

## Right-of-Way Acquisition Tables



| <b>ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)</b> |                      |             |                            |           |                    |           |                     |           |  |
|---|----------------------|-------------|----------------------------|-----------|--------------------|-----------|---------------------|-----------|--|
|   | <b>PARCEL TOTALS</b> |             |                            |           |                    |           |                     |           |  |
| <b>PARCEL NUMBER</b>  | <b>AREA</b>          | <b>AREA</b> | <b>ALT 1 (R/W and PDE)</b> |           | <b>ALT 1 (TCE)</b> |           | <b>ALT 1 (TSRE)</b> |           |  |
|   | <b>SF</b>            | <b>AC</b>   | <b>SF</b>                  | <b>AC</b> | <b>SF</b>          | <b>AC</b> | <b>SF</b>           | <b>AC</b> |  |
| 1   | 4,709                | 0.11        | 0                          | 0.00      |                    |           |                     |           |  |
| 2   | 4,743                | 0.11        | 0                          | 0.00      |                    |           |                     |           |  |
| 3   | 1,435                | 0.03        | 0                          | 0.00      |                    |           |                     |           |  |
| 4   | 13,082               | 0.30        | 425                        | 0.01      |                    |           |                     |           |  |
| 5   | 5,498,770            | 126.23      | 171,878                    | 3.95      |                    |           |                     |           |  |
| 6   | 3,101                | 0.07        | 0                          | 0.00      |                    |           |                     |           |  |
| 7   | 1,732                | 0.04        | 0                          | 0.00      |                    |           |                     |           |  |
| 8   | 9,493                | 0.22        | 2,184                      | 0.05      |                    |           |                     |           |  |
| 9   | 4,463                | 0.10        | 1,616                      | 0.04      |                    |           |                     |           |  |
| 10  | 5,649                | 0.13        | 3,279                      | 0.08      |                    |           |                     |           |  |
| 11  | 6,945                | 0.16        | 1,785                      | 0.04      |                    |           |                     |           |  |
| 12  | 2,769                | 0.06        | 2,769                      | 0.06      |                    |           |                     |           |  |
| 13  | 12,992               | 0.30        | 12,992                     | 0.30      |                    |           |                     |           |  |
| 14  | 6,129                | 0.14        | 5,391                      | 0.12      |                    |           |                     |           |  |
| 15  | 5,774                | 0.13        | 5,774                      | 0.13      |                    |           |                     |           |  |
| 16  | 6,426                | 0.15        | 6,426                      | 0.15      |                    |           |                     |           |  |
| 17  | 8,545                | 0.20        | 6,759                      | 0.16      |                    |           |                     |           |  |
| 18  | 9,309                | 0.21        | 6,712                      | 0.15      |                    |           |                     |           |  |
| 19  | 9,511                | 0.22        | 7,507                      | 0.17      |                    |           |                     |           |  |
| 20  | 10,113               | 0.23        | 10,113                     | 0.23      |                    |           |                     |           |  |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS |        |                     |      |             |      |              |      |
|------------------|---------------|--------|---------------------|------|-------------|------|--------------|------|
|                  | AREA          | AREA   | ALT 1 (R/W and PDE) |      | ALT 1 (TCE) |      | ALT 1 (TSRE) |      |
|                  | SF            | AC     | SF                  | AC   | SF          | AC   | SF           | AC   |
| 21               | 10,146        | 0.23   | 9,465               | 0.22 |             |      |              |      |
| 22               | 10,123        | 0.23   | 6,855               | 0.16 |             |      |              |      |
| 23               | 10,089        | 0.23   | 4,120               | 0.09 |             |      |              |      |
| 24               | 10,054        | 0.23   | 2,477               | 0.06 |             |      |              |      |
| 25               | 20,653        | 0.47   | 3,192               | 0.07 |             |      |              |      |
| 26               | 97,866        | 2.25   | 0                   | 0.00 | 0           | 0.00 | 0            | 0.00 |
| 27               | 71,939        | 1.65   | 7,682               | 0.18 | 0           | 0.00 | 0            | 0.00 |
| 28               | 387,226       | 8.89   | 40,145              | 0.92 |             |      |              |      |
| 29               | 1,843,354     | 42.32  | 245,195             | 5.63 |             |      |              |      |
| 30               | 39,112        | 0.90   | 905                 | 0.02 |             |      |              |      |
| 31               | 138,887       | 3.19   | 16,367              | 0.38 | 32,938      | 0.76 |              |      |
| 32               | 161,700       | 3.71   | 4,756               | 0.11 | 0           | 0.00 |              |      |
| 33               | 5,113,843     | 117.40 | 139,410             | 3.20 | 9,157       | 0.21 |              |      |
| 34               | 6,002         | 0.14   | 6,002               | 0.14 |             |      |              |      |
| 35               | 1,500,694     | 34.45  | 194,264             | 4.46 | 31,827      | 0.73 |              |      |
| 36               | 81,221        | 1.86   | 42,024              | 0.96 |             |      |              |      |
| 37               | 916,448       | 21.04  | 324,204             | 7.44 | 35,743      | 0.82 |              |      |
| 38               | 40,131        | 0.92   | 15,318              | 0.35 |             |      |              |      |
| 39               | 1,336,773     | 30.69  | 81,351              | 1.87 | 7,968       | 0.18 |              |      |
| 40               | 2,644,267     | 60.70  | 399,993             | 9.18 | 858         | 0.02 |              |      |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS |        |                     |       |             |      |              |    |
|------------------|---------------|--------|---------------------|-------|-------------|------|--------------|----|
|                  | AREA          | AREA   | ALT 1 (R/W and PDE) |       | ALT 1 (TCE) |      | ALT 1 (TSRE) |    |
|                  | SF            | AC     | SF                  | AC    | SF          | AC   | SF           | AC |
| 41               | 2,481,889     | 56.98  | 452,879             | 10.40 |             |      |              |    |
| 42               | 3,429,086     | 78.72  | 293,787             | 6.74  |             |      |              |    |
| 43               | 66,035        | 1.52   | 55,874              | 1.28  |             |      |              |    |
| 44               | 20,216        | 0.46   | 18,719              | 0.43  |             |      |              |    |
| 45               | 8,838         | 0.20   | 8,391               | 0.19  |             |      |              |    |
| 46               | 2,291,016     | 52.59  | 130,566             | 3.00  |             |      |              |    |
| 47               | 924,806       | 21.23  | 184,435             | 4.23  |             |      |              |    |
| 48               | 52,136        | 1.20   | 37,166              | 0.85  |             |      |              |    |
| 49               | 2,095,470     | 48.11  | 143,306             | 3.29  |             |      |              |    |
| 50               | 2,938,006     | 67.45  | 111,847             | 2.57  |             |      |              |    |
| 51               | 135,564       | 3.11   | 23,666              | 0.54  |             |      |              |    |
| 52               | 184,985       | 4.25   | 22,564              | 0.52  |             |      |              |    |
| 53               | 944,413       | 21.68  | 117,813             | 2.70  |             |      |              |    |
| 54               | 10,398,684    | 238.72 | 938,253             | 21.54 | 21,961      | 0.50 |              |    |
| 55               | 8,542,531     | 196.11 | 323,120             | 7.42  | 49,340      | 1.13 |              |    |
| 56               | 556,987       | 12.79  | 48,960              | 1.12  | 3,520       | 0.08 |              |    |
| 57               | 1,036,919     | 23.80  | 115,644             | 2.65  | 6,452       | 0.15 |              |    |
| 58               | 780,968       | 17.93  | 77,480              | 1.78  | 6,246       | 0.14 |              |    |
| 59               | 543,174       | 12.47  | 59,213              | 1.36  |             |      |              |    |
| 60               | 1,599,113     | 36.71  | 157,327             | 3.61  | 24,767      | 0.57 |              |    |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS |        | ALT 1 (R/W and PDE) |      | ALT 1 (TCE) |      | ALT 1 (TSRE) |    |
|------------------|---------------|--------|---------------------|------|-------------|------|--------------|----|
|                  | AREA          | AREA   | SF                  | AC   | SF          | AC   | SF           | AC |
|                  | SF            | AC     |                     |      |             |      |              |    |
| 61               | 1,532,888     | 35.19  | 132,799             | 3.05 |             |      |              |    |
| 62               | 1,976,887     | 45.38  | 132,432             | 3.04 | 28,940      | 0.66 |              |    |
| 63               | 63,861        | 1.47   | 9,748               | 0.22 |             |      |              |    |
| 64               | 60,475        | 1.39   | 6,739               | 0.15 |             |      |              |    |
| 65               | 128,379       | 2.95   | 21,595              | 0.50 |             |      |              |    |
| 66               | 260,801       | 5.99   | 165,383             | 3.80 |             |      |              |    |
| 67               | 141,883       | 3.26   | 54,180              | 1.24 |             |      |              |    |
| 68               | 176,345       | 4.05   | 112,679             | 2.59 | 34,624      | 0.79 |              |    |
| 69               | 5,407,808     | 124.15 | 346,065             | 7.94 |             |      |              |    |
| 70               | 19,426        | 0.45   | 10,662              | 0.24 |             |      |              |    |
| 71               | 4,702         | 0.11   | 1,989               | 0.05 |             |      |              |    |
| 72               | 9,454         | 0.22   | 3,843               | 0.09 |             |      |              |    |
| 73               | 9,702         | 0.22   | 3,727               | 0.09 |             |      |              |    |
| 74               | 9,430         | 0.22   | 3,459               | 0.08 |             |      |              |    |
| 75               | 14,690        | 0.34   | 4,732               | 0.11 |             |      |              |    |
| 76               | 14,581        | 0.33   | 1,728               | 0.04 |             |      |              |    |
| 77               | 9,756         | 0.22   | 0                   | 0.00 |             |      |              |    |
| 78               | 52,714        | 1.21   | 52,714              | 1.21 |             |      |              |    |
| 79               | 29,558        | 0.68   | 29,558              | 0.68 |             |      |              |    |
| 80               | 363,364       | 8.34   | 153,451             | 3.52 |             |      |              |    |



**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS |       | ALT 1 (R/W and PDE) |       | ALT 1 (TCE) |      | ALT 1 (TSRE) |      |   |
|------------------|---------------|-------|---------------------|-------|-------------|------|--------------|------|---|
|                  | AREA          | AREA  | SF                  | AC    | SF          | AC   | SF           | AC   |   |
|                  | SF            | AC    |                     |       |             |      |              |      |   |
| 81               | 824,249       | 18.92 | 91,539              | 2.10  | 9,360       | 0.21 |              |      |   |
| 82               | 1,014,140     | 23.28 | 143,266             | 3.29  | 11,197      | 0.26 |              |      |   |
| 83               | 1,146,201     | 26.31 | 200,026             | 4.59  |             |      |              |      |   |
| 84               | 42,449        | 0.97  | 23,328              | 0.54  |             |      |              |      |   |
| 85               | 69,061        | 1.59  | 49,458              | 1.14  |             |      |              |      |   |
| 86               | 28,862        | 0.66  | 28,862              | 0.66  |             |      |              |      |   |
| 87               | 16,528        | 0.38  | 2,933               | 0.07  |             |      |              |      |   |
| 88               | 108,338       | 2.49  | 59,436              | 1.36  | 8,089       | 0.19 |              |      |   |
| 89               | 971,619       | 22.31 | 109,788             | 2.52  |             |      |              |      |   |
| 90               | 228,503       | 5.25  | 105,408             | 2.42  |             |      |              |      |   |
| 91               | 75,939        | 1.74  | 75,939              | 1.74  |             |      |              |      |   |
| 92               | 91,844        | 2.11  | 91,844              | 2.11  |             |      |              |      |   |
| 93               | 30,062        | 0.69  | 30,062              | 0.69  |             |      |              |      |   |
| 94               | 18,578        | 0.43  | 18,578              | 0.43  |             |      |              |      |   |
| 95               | 1,680,923     | 38.59 | 708,987             | 16.28 |             |      |              |      |   |
| 96               | 1,403,388     | 32.22 | 1,027,638           | 23.59 |             |      |              |      |   |
| 97               | 0             |       | 0                   |       |             |      |              |      |   |
| 98               | 23,582        | 0.54  | 23,582              | 0.54  |             |      |              |      |   |
| 99               | 28,830        | 0.66  | 28,830              | 0.66  |             |      |              |      |   |
| 100              |               |       |                     |       |             |      |              |      |   |
| 101              |               |       |                     |       |             |      |              |      |   |
| 102              | 18,618        | 0.43  | 0                   | 0.00  | 1,284       | 0.03 |              |      |   |
| 103              | 11,710        | 0.27  | 0                   | 0.00  | 0           | 0.00 | 0            | 0.00 |   |
| TOTAL            | 77,217,181    | 1,773 | 9,177,329           | 211   | 324,270     | 7    | 0            | 0    | 0 |

| <b>ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)</b> |             |           |                            |           |                    |           |                     |           |  |
|---|-------------|-----------|----------------------------|-----------|--------------------|-----------|---------------------|-----------|--|
| <b>PARCEL TOTALS</b>  |             |           |                            |           |                    |           |                     |           |  |
| <b>NEW PARCEL NUMBER</b>  | <b>AREA</b> |           | <b>ALT 2 (R/W and PDE)</b> |           | <b>ALT 2 (TCE)</b> |           | <b>ALT 2 (TSRE)</b> |           |  |
|   | <b>SF</b>   | <b>AC</b> | <b>SF</b>                  | <b>AC</b> | <b>SF</b>          | <b>AC</b> | <b>SF</b>           | <b>AC</b> |  |
| 1   | 4,709       | 0.11      | 0                          | 0.00      |                    |           |                     |           |  |
| 2   | 4,562       | 0.10      | 0                          | 0.00      |                    |           |                     |           |  |
| 3   | 1,435       | 0.03      | 0                          | 0.00      |                    |           |                     |           |  |
| 4   | 12,907      | 0.30      | 425                        | 0.01      |                    |           |                     |           |  |
| 5   | 1,533,818   | 35.21     | 218,233                    | 5.01      |                    |           |                     |           |  |
| 6   | 7,755       | 0.18      | 0                          | 0.00      |                    |           |                     |           |  |
| 7   | 6,713       | 0.15      | 0                          | 0.00      |                    |           |                     |           |  |
| 8   | 9,493       | 0.22      | 2,518                      | 0.06      |                    |           |                     |           |  |
| 9   | 4,463       | 0.10      | 1,707                      | 0.04      |                    |           |                     |           |  |
| 10  | 5,851       | 0.13      | 3,327                      | 0.08      |                    |           |                     |           |  |
| 11  | 6,954       | 0.16      | 1,621                      | 0.04      |                    |           |                     |           |  |
| 15  | 5,765       | 0.13      | 5,115                      | 0.12      |                    |           |                     |           |  |
| 16  | 6,426       | 0.15      | 4,387                      | 0.10      |                    |           |                     |           |  |
| 17  | 8,539       | 0.20      | 3,659                      | 0.08      |                    |           |                     |           |  |
| 18  | 9,309       | 0.21      | 2,931                      | 0.07      |                    |           |                     |           |  |
| 19  | 10,718      | 0.25      | 5,659                      | 0.13      |                    |           |                     |           |  |
| 20  | 10,113      | 0.23      | 10,113                     | 0.23      |                    |           |                     |           |  |

| <b>ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)</b> |             |           |                            |           |                    |           |                     |           |  |
|---|-------------|-----------|----------------------------|-----------|--------------------|-----------|---------------------|-----------|--|
| <b>PARCEL TOTALS</b>  |             |           |                            |           |                    |           |                     |           |  |
| <b>NEW PARCEL NUMBER</b>  | <b>AREA</b> |           | <b>ALT 2 (R/W and PDE)</b> |           | <b>ALT 2 (TCE)</b> |           | <b>ALT 2 (TSRE)</b> |           |  |
|   | <b>SF</b>   | <b>AC</b> | <b>SF</b>                  | <b>AC</b> | <b>SF</b>          | <b>AC</b> | <b>SF</b>           | <b>AC</b> |  |
| 21  | 10,155      | 0.23      | 5,033                      | 0.12      |                    |           |                     |           |  |
| 22  | 10,116      | 0.23      | 2,576                      | 0.06      |                    |           |                     |           |  |
| 23  | 10,089      | 0.23      | 649                        | 0.01      |                    |           |                     |           |  |
| 26  | 23,705      | 0.54      | 3,651                      | 0.08      | 7,454              | 0.17      |                     |           |  |
| 27  | 72,174      | 1.66      | 18,888                     | 0.43      | 0                  | 0.00      | 8,580               | 0.20      |  |
| 28  | 387,704     | 8.90      | 73,013                     | 1.68      |                    |           |                     |           |  |
| 29  | 1,854,160   | 42.57     | 345,357                    | 7.93      | 1,960              | 0.04      |                     |           |  |
| 31  | 169,965     | 3.90      | 2,224                      | 0.05      | 8,883              | 0.20      |                     |           |  |
| 33  | 5,117,506   | 117.48    | 270,064                    | 6.20      | 24,959             | 0.57      |                     |           |  |
| 34  | 6,116       | 0.14      | 2,971                      | 0.07      | 225                | 0.01      |                     |           |  |
| 35  | 1,501,450   | 34.47     | 328,361                    | 7.54      | 38,616             | 0.89      |                     |           |  |
| 37  | 925,264     | 21.24     | 461,584                    | 10.60     |                    |           |                     |           |  |
| 39  | 1,365,742   | 31.35     | 173,125                    | 3.97      | 7,231              | 0.17      |                     |           |  |
| 40  | 2,735,980   | 62.81     | 525,597                    | 12.07     |                    |           |                     |           |  |

| <b>ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)</b> |                      |             |                            |           |                    |           |                     |           |  |
|---|----------------------|-------------|----------------------------|-----------|--------------------|-----------|---------------------|-----------|--|
|   | <b>PARCEL TOTALS</b> |             |                            |           |                    |           |                     |           |  |
| <b>NEW PARCEL NUMBER</b>  | <b>AREA</b>          | <b>AREA</b> | <b>ALT 2 (R/W and PDE)</b> |           | <b>ALT 2 (TCE)</b> |           | <b>ALT 2 (TSRE)</b> |           |  |
|   | <b>SF</b>            | <b>AC</b>   | <b>SF</b>                  | <b>AC</b> | <b>SF</b>          | <b>AC</b> | <b>SF</b>           | <b>AC</b> |  |
| 41  | 2,495,184            | 57.28       | 615,245                    | 14.12     | 21,493             | 0.49      |                     |           |  |
| 42  | 2,500,530            | 57.40       | 580,269                    | 13.32     | 20,243             | 0.46      |                     |           |  |
| 43  | 65,979               | 1.51        | 32,206                     | 0.74      |                    |           |                     |           |  |
| 44  | 20,170               | 0.46        | 10,067                     | 0.23      |                    |           |                     |           |  |
| 45  | 8,814                | 0.20        | 4,498                      | 0.10      |                    |           |                     |           |  |
| 46  | 1,872,329            | 42.98       | 299,951                    | 6.89      | 9,380              | 0.22      |                     |           |  |
| 47  | 503,790              | 11.57       | 334,830                    | 7.69      | 22,343             | 0.51      |                     |           |  |
| 48  | 52,136               | 1.20        | 25,572                     | 0.59      |                    |           |                     |           |  |
| 49  | 1,650,155            | 37.88       | 275,326                    | 6.32      |                    |           |                     |           |  |
| 50  | 2,494,639            | 57.27       | 225,636                    | 5.18      |                    |           |                     |           |  |
| 51  | 135,563              | 3.11        | 61,587                     | 1.41      |                    |           |                     |           |  |
| 52  | 184,840              | 4.24        | 56,562                     | 1.30      |                    |           |                     |           |  |
| 53  | 361,396              | 8.30        | 185,919                    | 4.27      | 14,523             | 0.33      |                     |           |  |
| 54  | 8,505,813            | 195.27      | 1,256,024                  | 28.83     |                    |           |                     |           |  |
| 55  | 6,854,470            | 157.36      | 363,517                    | 8.35      | 7,936              | 0.18      |                     |           |  |
| 56  | 558,344              | 12.82       | 63,355                     | 1.45      | 5,991              | 0.14      |                     |           |  |
| 57  | 1,037,983            | 23.83       | 122,596                    | 2.81      |                    |           |                     |           |  |
| 58  | 778,017              | 17.86       | 72,822                     | 1.67      |                    |           |                     |           |  |
| 59  | 545,942              | 12.53       | 57,902                     | 1.33      |                    |           |                     |           |  |
| 60  | 1,600,939            | 36.75       | 173,424                    | 3.98      |                    |           |                     |           |  |

| <b>ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)</b> |                   |              |                            |            |                    |           |                     |           |          |
|---|-------------------|--------------|----------------------------|------------|--------------------|-----------|---------------------|-----------|----------|
| <b>PARCEL TOTALS</b>  |                   |              |                            |            |                    |           |                     |           |          |
| <b>NEW PARCEL NUMBER</b>  | <b>AREA</b>       |              | <b>ALT 2 (R/W and PDE)</b> |            | <b>ALT 2 (TCE)</b> |           | <b>ALT 2 (TSRE)</b> |           |          |
|   | <b>SF</b>         | <b>AC</b>    | <b>SF</b>                  | <b>AC</b>  | <b>SF</b>          | <b>AC</b> | <b>SF</b>           | <b>AC</b> |          |
| 61  | 1,545,912         | 35.49        | 235,926                    | 5.42       | 18,250             | 0.42      |                     |           |          |
| 62  | 1,205,988         | 27.69        | 156,163                    | 3.58       | 4,954              | 0.11      |                     |           |          |
| 67  | 141,883           | 3.26         | 3,197                      | 0.07       |                    |           |                     |           |          |
| 68  | 176,345           | 4.05         | 29,853                     | 0.69       | 15,550             | 0.36      |                     |           |          |
| 69  | 5,407,790         | 124.15       | 1,759,971                  | 40.40      |                    |           |                     |           |          |
| 78  | 31,108            | 0.71         | 31,108                     | 0.71       |                    |           |                     |           |          |
| 80  | 363,758           | 8.35         | 141,050                    | 3.24       |                    |           |                     |           |          |
| 81  | 824,399           | 18.93        | 152,998                    | 3.51       |                    |           |                     |           |          |
| 82  | 1,013,765         | 23.27        | 323,582                    | 7.43       | 11,709             | 0.27      |                     |           |          |
| 83  | 1,146,201         | 26.31        | 478,194                    | 10.98      |                    |           |                     |           |          |
| 85  | 69,061            | 1.59         | 47,514                     | 1.09       |                    |           |                     |           |          |
| 86  | 28,862            | 0.66         | 2,424                      | 0.06       |                    |           |                     |           |          |
| 88  | 108,338           | 2.49         | 16,478                     | 0.38       | 32,397             | 0.74      |                     |           |          |
| 89  | 971,619           | 22.31        | 233,462                    | 5.36       |                    |           |                     |           |          |
| 90  | 228,503           | 5.25         | 206,929                    | 4.75       | 846                | 0.02      |                     |           |          |
| 91  | 75,689            | 1.74         | 75,689                     | 1.74       |                    |           |                     |           |          |
| 92  | 91,844            | 2.11         | 46,588                     | 1.07       |                    |           |                     |           |          |
| 93  | 30,062            | 0.69         | 27,602                     | 0.63       |                    |           |                     |           |          |
| 94  | 18,578            | 0.43         | 18,578                     | 0.43       |                    |           |                     |           |          |
| 95  | 1,659,828         | 38.10        | 699,593                    | 16.06      |                    |           |                     |           |          |
| 96  | 1,403,389         | 32.22        | 671,536                    | 15.42      |                    |           |                     |           |          |
| 98  | 23,582            | 0.54         | 23,582                     | 0.54       |                    |           |                     |           |          |
| 99  | 28,830            | 0.66         | 28,830                     | 0.66       |                    |           |                     |           |          |
| 102   | 18,618            | 0.43         | 0                          | 0.00       | 1,838              | 0.04      |                     |           |          |
| 103   | 11,710            | 0.27         | 0                          | 0.00       | 0                  | 0.00      |                     |           |          |
|   |                   |              |                            |            |                    |           |                     |           |          |
| <b>TOTAL</b>  | <b>64,692,350</b> | <b>1,485</b> | <b>12,700,943</b>          | <b>292</b> | <b>276,781</b>     | <b>6</b>  | <b>8,580</b>        | <b>0</b>  | <b>0</b> |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND  
TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)**

| NEW PARCEL NUMBER | PARCEL TOTALS |       |                     |      |             |    |              |    |
|-------------------|---------------|-------|---------------------|------|-------------|----|--------------|----|
|                   | AREA          | AREA  | ALT 3 (R/W and PDE) |      | ALT 3 (TCE) |    | ALT 3 (TSRE) |    |
|                   | SF            | AC    | SF                  | AC   | SF          | AC | SF           | AC |
| 1                 | 4,709         | 0.11  | 0                   | 0.00 |             |    |              |    |
| 2                 | 4,562         | 0.10  | 0                   | 0.00 |             |    |              |    |
| 3                 | 1,435         | 0.03  | 0                   | 0.00 |             |    |              |    |
| 4                 | 12,907        | 0.30  | 424                 | 0.01 |             |    |              |    |
| 5                 | 1,533,818     | 35.21 | 185,015             | 4.25 |             |    |              |    |
| 6                 | 7,755         | 0.18  | 0                   | 0.00 |             |    |              |    |
| 7                 | 6,713         | 0.15  | 0                   | 0.00 |             |    |              |    |
| 8                 | 9,493         | 0.22  | 2,518               | 0.06 |             |    |              |    |
| 9                 | 4,463         | 0.10  | 1,707               | 0.04 |             |    |              |    |
| 10                | 5,851         | 0.13  | 3,326               | 0.08 |             |    |              |    |
| 11                | 6,954         | 0.16  | 2,009               | 0.05 |             |    |              |    |
| 15                | 5,765         | 0.13  | 5,765               | 0.13 |             |    |              |    |
| 16                | 6,426         | 0.15  | 6,426               | 0.15 |             |    |              |    |
| 17                | 8,539         | 0.20  | 5,888               | 0.14 |             |    |              |    |
| 18                | 9,309         | 0.21  | 1,874               | 0.04 |             |    |              |    |
| 19                | 10,718        | 0.25  | 10,718              | 0.25 |             |    |              |    |
| 20                | 10,113        | 0.23  | 10,113              | 0.23 |             |    |              |    |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND  
TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)**

| NEW PARCEL NUMBER | PARCEL TOTALS |        |                     |       |             |      |              |      |
|-------------------|---------------|--------|---------------------|-------|-------------|------|--------------|------|
|                   | AREA          | AREA   | ALT 3 (R/W and PDE) |       | ALT 3 (TCE) |      | ALT 3 (TSRE) |      |
|                   | SF            | AC     | SF                  | AC    | SF          | AC   | SF           | AC   |
| 21                | 10,155        | 0.23   | 10,155              | 0.23  |             |      |              |      |
| 22                | 10,116        | 0.23   | 7,540               | 0.17  |             |      |              |      |
| 23                | 10,089        | 0.23   | 855                 | 0.02  |             |      |              |      |
| 26                | 23,705        | 0.54   | 1,698               | 0.04  | 0           | 0.00 |              |      |
| 27                | 72,174        | 1.66   | 16,519              | 0.38  | 0           | 0.00 | 0            | 0.00 |
| 28                | 387,704       | 8.90   | 62,728              | 1.44  |             |      |              |      |
| 29                | 1,854,160     | 42.57  | 336,652             | 7.73  | 1,959       | 0.04 |              |      |
| 31                | 169,965       | 3.90   | 0                   | 0.00  | 8,883       | 0.20 |              |      |
| 33                | 5,117,506     | 117.48 | 311,695             | 7.16  | 21,623      | 0.50 |              |      |
| 34                | 6,116         | 0.14   | 0                   | 0.00  | 0           | 0.00 |              |      |
| 35                | 1,501,450     | 34.47  | 330,116             | 7.58  | 32,563      | 0.75 |              |      |
| 37                | 925,264       | 21.24  | 491,167             | 11.28 |             |      |              |      |
| 39                | 1,365,742     | 31.35  | 237,107             | 5.44  | 0           | 0.00 |              |      |
| 40                | 2,735,980     | 62.81  | 501,715             | 11.52 | 7,971       | 0.18 |              |      |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND  
TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)**

| NEW PARCEL NUMBER | PARCEL TOTALS |        |                     |       |             |      |              |    |
|-------------------|---------------|--------|---------------------|-------|-------------|------|--------------|----|
|                   | AREA          | AREA   | ALT 3 (R/W and PDE) |       | ALT 3 (TCE) |      | ALT 3 (TSRE) |    |
|                   | SF            | AC     | SF                  | AC    | SF          | AC   | SF           | AC |
| 41                | 2,495,184     | 57.28  | 494,298             | 11.35 | 5,297       | 0.12 |              |    |
| 42                | 2,500,530     | 57.40  | 249,693             | 5.73  | 8,506       | 0.20 |              |    |
| 43                | 65,979        | 1.51   | 59,002              | 1.35  |             |      |              |    |
| 44                | 20,170        | 0.46   | 19,472              | 0.45  |             |      |              |    |
| 45                | 8,814         | 0.20   | 8,629               | 0.20  |             |      |              |    |
| 46                | 1,872,329     | 42.98  | 135,102             | 3.10  | 0           | 0.00 |              |    |
| 47                | 503,790       | 11.57  | 161,642             | 3.71  | 0           | 0.00 |              |    |
| 48                | 52,136        | 1.20   | 30,768              | 0.71  |             |      |              |    |
| 49                | 1,650,155     | 37.88  | 130,201             | 2.99  |             |      |              |    |
| 50                | 2,494,639     | 57.27  | 108,487             | 2.49  |             |      |              |    |
| 51                | 135,563       | 3.11   | 27,920              | 0.64  |             |      |              |    |
| 52                | 184,840       | 4.24   | 28,201              | 0.65  |             |      |              |    |
| 53                | 361,396       | 8.30   | 117,033             | 2.69  | 0           | 0.00 |              |    |
| 54                | 8,505,813     | 195.27 | 940,092             | 21.58 |             |      |              |    |
| 55                | 6,854,470     | 157.36 | 447,665             | 10.28 | 0           | 0.00 |              |    |
| 56                | 558,344       | 12.82  | 82,747              | 1.90  | 0           | 0.00 |              |    |
| 57                | 1,037,983     | 23.83  | 170,880             | 3.92  |             |      |              |    |
| 58                | 778,017       | 17.86  | 99,211              | 2.28  |             |      |              |    |
| 59                | 545,942       | 12.53  | 72,898              | 1.67  |             |      |              |    |
| 60                | 1,600,939     | 36.75  | 206,041             | 4.73  |             |      |              |    |



**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND  
TEMPORARY STRUCTURE REMOVAL EASEMENTS (TSRE)**

| NEW PARCEL NUMBER | PARCEL TOTALS     |              | ALT 3 (R/W and PDE) |            | ALT 3 (TCE)    |          | ALT 3 (TSRE) |          |          |
|-------------------|-------------------|--------------|---------------------|------------|----------------|----------|--------------|----------|----------|
|                   | AREA              | AREA         | SF                  | AC         | SF             | AC       | SF           | AC       |          |
|                   | SF                | AC           | SF                  | AC         | SF             | AC       | SF           | AC       |          |
| 61                | 1,545,912         | 35.49        | 376,790             | 8.65       | 2,965          | 0.07     |              |          |          |
| 62                | 1,205,988         | 27.69        | 194,495             | 4.46       | 3,842          | 0.09     |              |          |          |
| 67                | 141,883           | 3.26         | 0                   | 0.00       |                |          |              |          |          |
| 68                | 176,345           | 4.05         | 0                   | 0.00       | 0              | 0.00     |              |          |          |
| 69                | 5,407,790         | 124.15       | 1,518,408           | 34.86      | 12,344         |          |              |          |          |
| 78                | 31,108            | 0.71         | 0                   | 0.00       |                |          |              |          |          |
| 80                | 363,758           | 8.35         | 145,525             | 3.34       |                |          |              |          |          |
| 81                | 824,399           | 18.93        | 110,708             | 2.54       |                |          |              |          |          |
| 82                | 1,013,765         | 23.27        | 236,368             | 5.43       | 8,864          | 0.20     |              |          |          |
| 83                | 1,146,201         | 26.31        | 323,245             | 7.42       |                |          |              |          |          |
| 85                | 69,061            | 1.59         | 69,061              | 1.59       |                |          |              |          |          |
| 86                | 28,862            | 0.66         | 28,862              | 0.66       |                |          |              |          |          |
| 88                | 108,338           | 2.49         | 410,400             | 9.42       | 17,716         | 0.41     |              |          |          |
| 89                | 971,619           | 22.31        | 211,275             | 4.85       |                |          |              |          |          |
| 90                | 228,503           | 5.25         | 211,535             | 4.86       | 0              | 0.00     |              |          |          |
| 91                | 75,689            | 1.74         | 0                   | 0.00       |                |          |              |          |          |
| 92                | 91,844            | 2.11         | 91,844              | 2.11       |                |          |              |          |          |
| 93                | 30,062            | 0.69         | 30,062              | 0.69       |                |          |              |          |          |
| 94                | 18,578            | 0.43         | 18,578              | 0.43       |                |          |              |          |          |
| 95                | 1,659,828         | 38.10        | 837,024             | 19.22      |                |          |              |          |          |
| 96                | 1,403,389         | 32.22        | 1,094,206           | 25.12      |                |          |              |          |          |
| 98                | 23,582            | 0.54         | 23,582              | 0.54       |                |          |              |          |          |
| 99                | 28,830            | 0.66         | 28,830              | 0.66       |                |          |              |          |          |
| 102               | 18,618            | 0.43         | 0                   | 0.00       | 0              | 0.00     |              |          |          |
| 103               | 11,710            | 0.27         | 0                   | 0.00       | 0              | 0.00     |              |          |          |
| <b>TOTAL</b>      | <b>64,692,350</b> | <b>1,485</b> | <b>12,094,510</b>   | <b>278</b> | <b>132,533</b> | <b>3</b> | <b>0</b>     | <b>0</b> | <b>0</b> |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS    |               |                      |            |              |    |              |    |
|------------------|------------------|---------------|----------------------|------------|--------------|----|--------------|----|
|                  | AREA             | AREA          | ALT 1A (R/W and PDE) |            | ALT 1A (TCE) |    | ALT 1 (TSRE) |    |
|                  | SF               | AC            | SF                   | AC         | SF           | AC | SF           | AC |
| <b>1</b>         | 4,709            | 0.11          | 0.00                 | 0.00       |              |    |              |    |
| <b>2</b>         | 4,743            | 0.11          | 0.00                 | 0.00       |              |    |              |    |
| <b>3</b>         | 1,435            | 0.03          | 0.00                 | 0.00       |              |    |              |    |
| <b>4</b>         | 13,082           | 0.30          | 425                  | 0.01       |              |    |              |    |
| <b>5</b>         | 5,498,770        | 126.23        | 152,7                | 3.50       |              |    |              |    |
| <b>6</b>         | 3,101            | 0.07          | 0.00                 | 0.00       |              |    |              |    |
| <b>7</b>         | 1,732            | 0.04          | 0.00                 | 0.00       |              |    |              |    |
| <b>8</b>         | 9,493            | 0.22          | 4,143                | 0.10       |              |    |              |    |
| <b>9</b>         | 4,463            | 0.10          | 2,184                | 0.05       |              |    |              |    |
| <b>10</b>        | 5,649            | 0.13          | 3,636                | 0.08       |              |    |              |    |
| <b>11</b>        | 6,945            | 0.16          | 2,239                | 0.05       |              |    |              |    |
| <b>12</b>        | 2,769            | 0.06          | 607                  | 0.01       |              |    |              |    |
| <b>13</b>        | 12,992           | 0.30          | 5001                 | 0.11       |              |    |              |    |
| <b>14</b>        | 6,129            | 0.14          | 5,461                | 0.13       |              |    |              |    |
| <b>15</b>        | 5,774            | 0.13          | 5,774                | 0.13       |              |    |              |    |
| <b>16</b>        | 6,426            | 0.15          | 6,426                | 0.15       |              |    |              |    |
| <b>17</b>        | 8,545            | 0.20          | 5,681                | 0.13       |              |    |              |    |
| <b>18</b>        | 9,309            | 0.21          | 5,205                | 0.11       |              |    |              |    |
| <b>19</b>        | 9,511            | 0.22          | 4,553                | 0.10       |              |    |              |    |
| <b>20</b>        | 10,113           | 0.23          | 5,994                | 0.14       |              |    |              |    |
|                  | <b>5,625,690</b> | <b>129.14</b> | <b>210,119</b>       | <b>4.8</b> |              |    |              |    |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS     |              |                      |             |              |    |               |    |
|------------------|-------------------|--------------|----------------------|-------------|--------------|----|---------------|----|
|                  | AREA              | AREA         | ALT 1A (R/W and PDE) |             | ALT 1A (TCE) |    | ALT 1A (TSRE) |    |
|                  | SF                | AC           | SF                   | AC          | SF           | AC | SF            | AC |
| <b>21</b>        | 10,146            | 0.23         | 4,776                | 0.11        |              |    |               |    |
| <b>22</b>        | 10,123            | 0.23         | 3,512                | 0.08        |              |    |               |    |
| <b>23</b>        | 10,089            | 0.23         | 53                   | 0.00        |              |    |               |    |
| <b>24</b>        | 10,054            | 0.23         | 0.00                 | 0.00        |              |    |               |    |
| <b>25</b>        | 20,653            | 0.47         | 0.00                 | 0.00        |              |    |               |    |
| <b>26</b>        | 97,866            | 2.25         | 0.00                 | 0.00        |              |    |               |    |
| <b>27</b>        | 71,939            | 1.65         | 10,527               | 0.24        |              |    |               |    |
| <b>28</b>        | 387,226           | 8.89         | 53,745               | 1.23        |              |    |               |    |
| <b>29</b>        | 1,843,354         | 42.32        | 364,715              | 8.37        |              |    |               |    |
| <b>30</b>        | 39,112            | 0.90         | 0.00                 | 0.00        |              |    |               |    |
| <b>31</b>        | 138,887           | 3.19         | 425                  | 0.01        |              |    |               |    |
| <b>32</b>        | 161,700           | 3.71         | 0.00                 | 0.00        |              |    |               |    |
| <b>33</b>        | 5,113,843         | 117.40       | 251,402              | 5.80        |              |    |               |    |
| <b>34</b>        | 6,002             | 0.14         | 1,561                | 0.04        |              |    |               |    |
| <b>35</b>        | 1,500,694         | 34.45        | 210,284              | 4.83        |              |    |               |    |
| <b>36</b>        | 81,221            | 1.86         | 11,518               | 0.26        |              |    |               |    |
| <b>37</b>        | 916,448           | 21.04        | 263,041              | 6.04        |              |    |               |    |
| <b>38</b>        | 40,131            | 0.92         | 9,523                | 0.22        |              |    |               |    |
| <b>39</b>        | 1,336,773         | 30.69        | 60,536               | 1.39        |              |    |               |    |
| <b>40</b>        | 2,644,267         | 60.70        | 424,546              | 9.75        |              |    |               |    |
|                  | <b>14,440,528</b> | <b>331.5</b> | <b>1,670,164</b>     | <b>38.3</b> |              |    |               |    |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS     |               |                      |              |              |    |               |    |
|------------------|-------------------|---------------|----------------------|--------------|--------------|----|---------------|----|
|                  | AREA              | AREA          | ALT 1A (R/W and PDE) |              | ALT 1A (TCE) |    | ALT 1A (TSRE) |    |
|                  | SF                | AC            | SF                   | AC           | SF           | AC | SF            | AC |
| <b>41</b>        | 2,481,889         | 56.98         | 440,250              | 10.11        |              |    |               |    |
| <b>42</b>        | 3,429,086         | 78.72         | 193,200              | 4.44         |              |    |               |    |
| <b>43</b>        | 66,035            | 1.52          | 51,557               | 1.18         |              |    |               |    |
| <b>44</b>        | 20,216            | 0.46          | 20,215               | 0.46         |              |    |               |    |
| <b>45</b>        | 8,838             | 0.20          | 8,837                | 0.20         |              |    |               |    |
| <b>46</b>        | 2,291,016         | 52.59         | 114,691              | 2.63         |              |    |               |    |
| <b>47</b>        | 924,806           | 21.23         | 149,098              | 3.43         |              |    |               |    |
| <b>48</b>        | 52,136            | 1.20          | 30,700               | 0.71         |              |    |               |    |
| <b>49</b>        | 2,095,470         | 48.11         | 141,463              | 3.25         |              |    |               |    |
| <b>50</b>        | 2,938,006         | 67.45         | 122,550              | 2.81         |              |    |               |    |
| <b>51</b>        | 135,564           | 3.11          | 27,775               | 0.64         |              |    |               |    |
| <b>52</b>        | 184,985           | 4.25          | 28,842               | 0.66         |              |    |               |    |
| <b>53</b>        | 944,413           | 21.68         | 107,713              | 2.47         |              |    |               |    |
| <b>54</b>        | 10,398,684        | 238.72        | 749,233              | 17.20        |              |    |               |    |
| <b>55</b>        | 8,542,531         | 196.11        | 278,286              | 6.34         |              |    |               |    |
| <b>56</b>        | 556,987           | 12.79         | 39,314               | 0.90         |              |    |               |    |
| <b>57</b>        | 1,036,919         | 23.80         | 93,818               | 2.15         |              |    |               |    |
| <b>58</b>        | 780,968           | 17.93         | 66,186               | 1.52         |              |    |               |    |
| <b>59</b>        | 543,174           | 12.47         | 53,075               | 1.22         |              |    |               |    |
| <b>60</b>        | 1,599,113         | 36.71         | 154,458              | 3.54         |              |    |               |    |
|                  | <b>39,030,836</b> | <b>896.03</b> | <b>2,871,261</b>     | <b>65.86</b> |              |    |               |    |

| PARCEL NUMBER | PARCEL TOTALS |        |                     |        |              |    |               |    |
|---------------|---------------|--------|---------------------|--------|--------------|----|---------------|----|
|               | AREA          | AREA   | ALT 1A (RW and PDE) |        | ALT 1A (TCE) |    | ALT 1A (TSRE) |    |
|               | SF            | AC     | SF                  | AC     | SF           | AC | SF            | AC |
| <b>61</b>     | 1,532,888     | 35.19  | 144,938             | 3.28   |              |    |               |    |
| <b>62</b>     | 1,976,887     | 45.38  | 150,715             | 3.46   |              |    |               |    |
| <b>63</b>     | 63,861        | 1.47   | 0.00                | 0.00   |              |    |               |    |
| <b>64</b>     | 60,475        | 1.39   | 0.00                | 0.00   |              |    |               |    |
| <b>65</b>     | 128,379       | 2.95   | 0.00                | 0.00   |              |    |               |    |
| <b>66</b>     | 260,801       | 5.99   | 0.00                | 0.00   |              |    |               |    |
| <b>67</b>     | 141,883       | 3.26   | 0.00                | 0.00   |              |    |               |    |
| <b>68</b>     | 176,345       | 4.05   | 0.00                | 0.00   |              |    |               |    |
| <b>69</b>     | 5,407,808     | 124.15 | 1,323,23            | 30.404 |              |    |               |    |
| <b>70</b>     | 19,426        | 0.45   | 0.00                | 0.00   |              |    |               |    |
| <b>71</b>     | 4,702         | 0.11   | 0.00                | 0.00   |              |    |               |    |
| <b>72</b>     | 9,454         | 0.22   | 0.00                | 0.00   |              |    |               |    |
| <b>73</b>     | 9,702         | 0.22   | 0.00                | 0.00   |              |    |               |    |
| <b>74</b>     | 9,430         | 0.22   | 0.00                | 0.00   |              |    |               |    |
| <b>75</b>     | 14,690        | 0.34   | 0.00                | 0.00   |              |    |               |    |
| <b>76</b>     | 14,581        | 0.33   | 0.00                | 0.00   |              |    |               |    |
| <b>77</b>     | 9,756         | 0.22   | 0.00                | 0.00   |              |    |               |    |
| <b>78</b>     | 52,714        | 1.21   | 0.00                | 0.00   |              |    |               |    |
| <b>79</b>     | 29,558        | 0.68   | 0.00                | 0.00   |              |    |               |    |
| <b>80</b>     | 363,364       | 8.34   | 137,608             | 3.16   |              |    |               |    |
|               | 10,286,704    | 236.17 | 1,756,492           | 51.39  |              |    |               |    |

**ACQUISITION TABLE - INCLUDES TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND TEMPORARY  
STRUCTURE REMOVAL EASEMENTS (TSRE)**

| PARCEL<br>NUMBER | PARCEL TOTALS     |              |                      |            |              |    |               |    |
|------------------|-------------------|--------------|----------------------|------------|--------------|----|---------------|----|
|                  | AREA              | AREA         | ALT 1A (R/W and PDE) |            | ALT 1A (TCE) |    | ALT 1A (TSRE) |    |
|                  | S                 | AC           | SF                   | AC         | SF           | AC | SF            | AC |
| <b>81</b>        | 824,249           | 18.92        | 75,211               | 1.73       |              |    |               |    |
| <b>82</b>        | 1,014,140         | 23.28        | 157,853              | 3.60       |              |    |               |    |
| <b>83</b>        | 1,146,201         | 26.31        | 225,504              | 5.18       |              |    |               |    |
| <b>84</b>        | 42,449            | 0.97         | 1,289                | 0.03       |              |    |               |    |
| <b>85</b>        | 69,061            | 1.59         | 68,931               | 1.58       |              |    |               |    |
| <b>86</b>        | 28,862            | 0.66         | 18,091               | 0.42       |              |    |               |    |
| <b>87</b>        | 16,528            | 0.38         | 0.00                 | 0.00       |              |    |               |    |
| <b>88</b>        | 108,338           | 2.49         | 30,243               | 0.7        |              |    |               |    |
| <b>89</b>        | 971,619           | 22.31        | 97,125               | 2.23       |              |    |               |    |
| <b>90</b>        | 228,503           | 5.25         | 149,530              | 3.43       |              |    |               |    |
| <b>91</b>        | 75,939            | 1.74         | 74,789               | 1.72       |              |    |               |    |
| <b>92</b>        | 91,844            | 2.11         | 10,933               | 0.25       |              |    |               |    |
| <b>93</b>        | 30,062            | 0.69         | 24,883               | 0.57       |              |    |               |    |
| <b>94</b>        | 18,578            | 0.43         | 18,421               | 0.42       |              |    |               |    |
| <b>95</b>        | 1,680,923         | 38.59        | 0.00                 | 0.00       |              |    |               |    |
| <b>96</b>        | 1,403,388         | 32.22        | 230,372              | 5.29       |              |    |               |    |
| <b>97</b>        | 0                 |              | 0.00                 |            |              |    |               |    |
| <b>98</b>        | 23,582            | 0.54         | 0.00                 | 0.00       |              |    |               |    |
| <b>99</b>        | 28,830            | 0.66         | 0.00                 | 0.00       |              |    |               |    |
| <b>100</b>       |                   |              |                      |            |              |    |               |    |
| <b>101</b>       |                   |              |                      |            |              |    |               |    |
| <b>102</b>       | 18,618            | 0.43         | 0.00                 | 0.00       |              |    |               |    |
| <b>103</b>       | 11,710            | 0.27         | 0.00                 | 0.00       |              |    |               |    |
| <b>TOTAL</b>     | <b>77,217,181</b> | <b>1,773</b> | <b>7,691,211</b>     | <b>177</b> |              |    |               |    |

# APPENDIX B – PUBLIC INVOLVEMENT SUMMARY

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# Welcome!

## WV 2 Proctor to Kent Informational Workshop Public Meeting State Project: U352-2-11.66 00 Federal Project: NH-0002(528)D



***Thursday, November 2, 2017 / 4:00PM to 7:00PM  
New Martinsville Elementary School,  
20 East Benjamin Drive, New Martinsville, WV 26155***

The West Virginia Division of Highways (WVDOH) is conducting an Informational Public Workshop for the WV 2 Proctor to Kent project. The purpose of this meeting is to answer questions and listen to ideas or concern about the proposed project. This meeting also complies with the public involvement requirements of the *National Environmental Policy Act (NEPA)* and Section 106 of the *National Historic Preservation Act*.





**WV-2 Alignment Alternative Evaluation/Cost Matrix From Proctor to Kent**

| Impact Category   |             | Study Alignment 1   | Study Alignment 2  | Study Alignment 3  |
|---|-------------|---|--|--|
| <b>Engineering</b>                                      |             |   |  |  |
| Prelim. Length of WV-2 Improvements                     | Miles       | 5.8   | 5.8  | 5.9  |
| Roadway Configuration (Refer to Attached Drawings)      |             | 4 (12' Lanes) - 14' Flush Median - 4' Inside Shoulders - 8' Outside Paved Shoulders   | 4 (12' Lanes) - 14' Flush Median - 4' Inside Shoulders - 8' Outside Paved Shoulders  | 4 (12' Lanes) - 14' Flush Median - 4' Inside Shoulders - 8' Outside Paved Shoulders  |
| Estimated earthwork excavation                          | cubic yards | 2,813,849   | 4,605,846  | 6,183,857  |
| <b>Traffic Operations</b>                               |             |   |  |  |
| Description of Alternatives                             |             | Alternative 1 runs along the foot of the hill. This alternative allows existing WV 2 to remain as a frontage or plant access road, which will allow the plant accesses to be consolidated into a single intersection. | Alternative 2 was developed to maximize the amount of land available for development. The basic configuration is similar to Alternative 1, with adjustments to move the alignment to the east. | Alternative 3 was developed to avoid key properties and gas lines. Alternative 3 includes a higher vertical alignment on the hillside, to the east of Alternatives 1 and 2.          |
| <b>Human Environment</b>                                |             |   |  |  |
| Estimated Areas of Impact (total forested)              | acres       | 152.21  | 273.34   | 221.57   |
| Historic Resource Impacts                               |             | Mason-Dixon Line Monument is in close proximity to roadway disturb limits. Protective measures may be required.   | Mason-Dixon Line Monument is in close proximity to roadway disturb limits. Protective measures may be required.  | Mason-Dixon Line Monument is in close proximity to roadway disturb limits. Protective measures may be required.  |
| Cemetery Impacts  |             | None (A retaining wall may be required during the final design and subsurface investigation phase)  | None   | None   |
| Industrial Facilities Impacts (e.g. Chemical Plant)     |             | Impacts to Bayer Corp. , PPG and the Natural Gas Processing Facility and gas lines to the facility.   | Impacts to Bayer Corp. , PPG gas lines to the Natural Gas Processing Facility.   | Impacts to Bayer Corp. and PPG.  |
| Commercial Facilities Impacts (e.g. Businesses)         |             | Impacts to Credit Union. A retaining wall may reduce the impacts to the Credit Union.   | Takes Credit Union Building  | None   |
| Residential Displacement (# houses)                     |             | 3 Residences  | 4 Residences   | 4 Residences   |
| <b>Physical Impacts</b>                                 |             |   |  |  |
| Potential Hazard Waste Site(s)                          |             | No impact to known Hazard Waste Site  | No impact to known Hazard Waste Site   | No impact to known Hazard Waste Site   |
| Major (Public) Utility Conflicts / Impacts              |             | Impacts to gas pipelines  | Impacts to gas pipelines   | Potential impacts to electrical tower  |
| Major (Private) Utility Conflicts / Impacts             |             | Requires Relocation of PPG Brine Well Infrastructure. The brine wells are used to retrieve brine water from the earth as a "raw material" which is then used in chemical production.                                  | Requires Relocation of PPG Brine Well Infrastructure. The brine wells are used to retrieve brine water from the earth as a "raw material" which is then used in chemical production.           | Requires Relocation of PPG Brine Well Infrastructure. The brine wells are used to retrieve brine water from the earth as a "raw material" which is then used in chemical production. |
| <b>Financial / Costs</b>                                |             |   |  |  |
| Estimated Construction Costs (Refer to Attached Sheets) |             | \$60,100,000  | \$77,900,000   | \$89,300,000   |

## Purpose and Need

The WV 2 Proctor to Kent project has the following needs: (1) Improve traffic volume capacity. (2) Enhance safety by eliminating multiple at-grade access points and the traffic conflicts associated with multiple at-grade intersections. (3) Support continued growth and economic development in the project area. Thus, a relocated and widened WV 2 will alleviate traffic, improve regional accessibility and facilitate continued growth and economic development in the project area. Based on these transportation needs, WVDOH developed the following project purpose statement: The purpose of the proposed project is to increase system capacity and enhance safety and facilitate growth in accordance with regional and local land use planning.

## Alternatives

Besides a no-build alternative, WVDOH has developed three alternatives to improve traffic problems on WV 2. Based on these alternatives, WVDOH is currently developing an environmental assessment NEPA document to identify potential impacts of the project. Preliminary engineering studies have been completed and detailed design studies are underway. The alternatives currently developed are discussed briefly below. Differences for each alternative are provided in the previous Alternative/Cost Matrix.

**Alternative 1** runs along the foot of the hill. Alternative 1 allows the existing WV 2 to remain as a frontage or plant access road, which allows the plant accesses to be consolidated into a single intersection. Estimated construction cost is \$60.1 million (excluding utility relocation and right of way acquisition).

**Alternative 2** was developed to maximize the amount of land available for development. The configuration is similar to Alternative 1, with adjustments to move the alignment onto the hillside. Estimated construction cost is \$77.9 million (excluding utility relocation and right of way acquisition).

**Alternative 3** was developed to avoid key properties (e.g., Bayer Heritage Federal Credit Union) and a recently installed natural gas line serving the Sodium Extraction and Fractionation Processing Plant. The configuration includes a higher alignment on the hillside to the east of Alternatives 1 and 2. Estimated construction cost is \$89.3 million (excluding utility relocation and right of way acquisition).

## **Tentative Project Schedule**

|  |                         |
|--|-------------------------|
| <b>Informational Workshop Public Meeting</b>     | <b>November 2, 2017</b> |
| <b>Comments Due</b>                              | <b>December 4, 2017</b> |
| <b>Environmental Assessment Approved by FHWA</b> | <b>January 2018</b>     |
| <b>Informal Workshop/Public Hearing</b>          | <b>February 2018</b>    |
| <b>Comments Due</b>                              | <b>March 2018</b>       |
| <b>Final Environmental Clearance</b>             | <b>April 2018</b>       |
| <b>GO Bond Construction</b>                      | <b>April 2020</b>       |

*Note: Above dates are tentative and subject to change.*

***Comments following tonight's meeting are due on  
December 4, 2017.***

*Comments Accepted via Regular mail by writing to:*

**Mr. RJ Scites, P.E.**

**Director, Engineering Division**

**West Virginia Department of Transportation**

**1334 Smith Street**

**Charleston, WV 25301**

***Thank you for attending our meeting! Your interest in the project is greatly appreciated.***

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE:

**DATE: Thursday, November 2, 2017**  
**LOCATION: New Martinsville Elementary School**  
**SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING**  
**PROJECT: WV 2 – Proctor to Kent**  
**State Project # U352-2-11.66 00**  
**Federal Project # NH-0002(528)D**

**COMMENTS DUE BY Monday, December 4, 2017**

Please consider the following comments:

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(Please print the following information)

NAME:

ADDRESS:

ORGANIZATION (IF ANY):

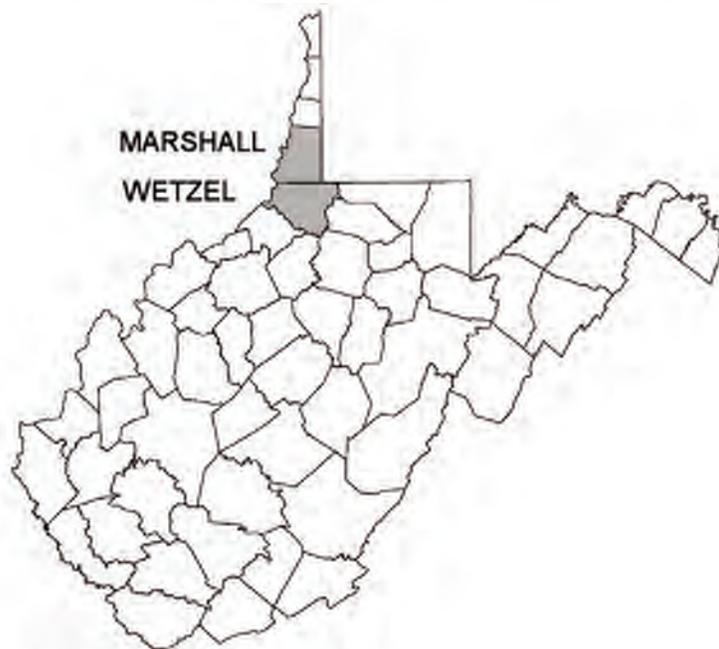
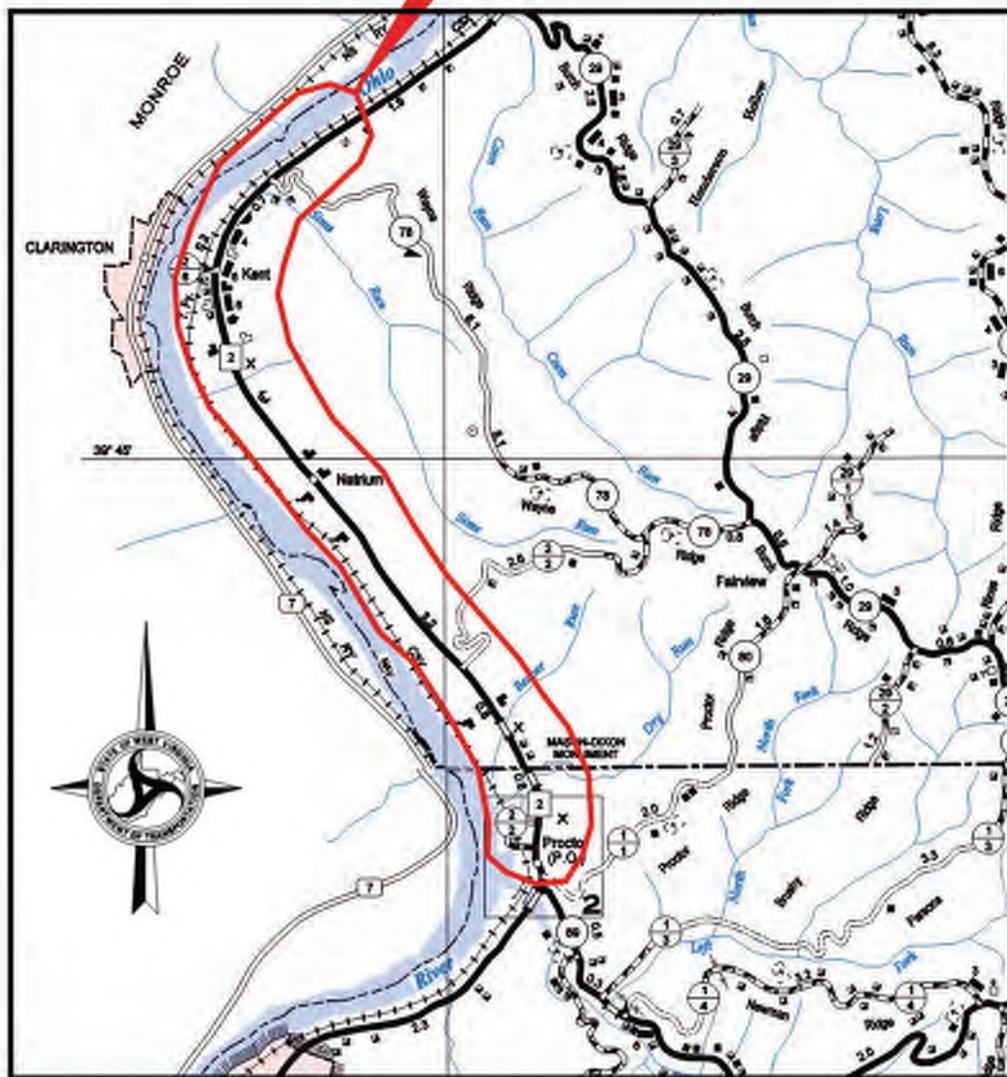
How did you hear about the Informational Workshop Public Meeting?

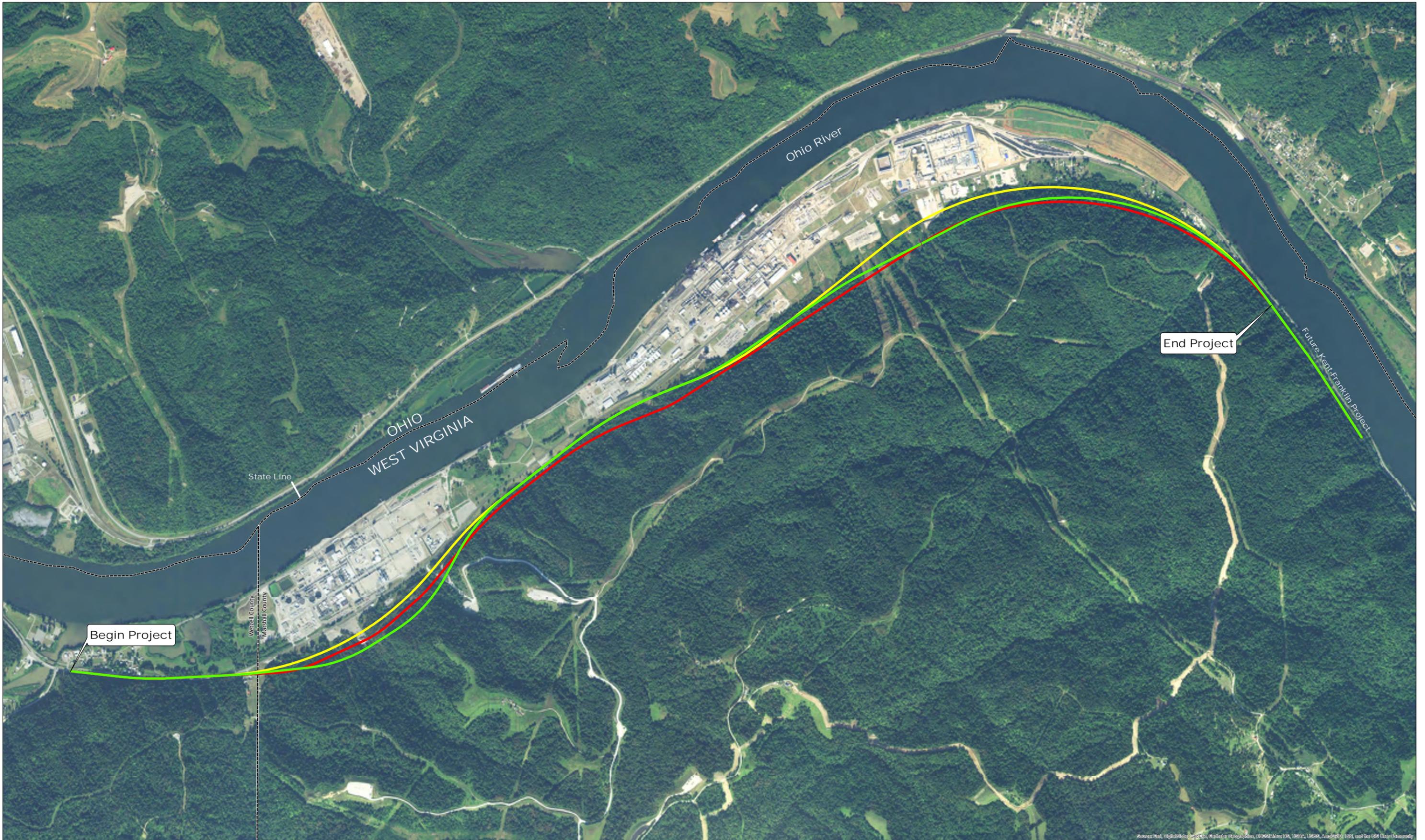
Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

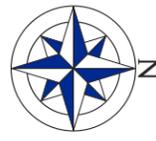
Under Engineering Projects, Open, and then click WV 2 – Proctor to Kent

## PROJECT LOCATION





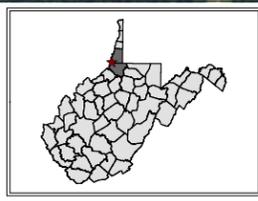
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Legend**  
 WV2 Alignment Alts  
 Alignment  
 1  
 2  
 3

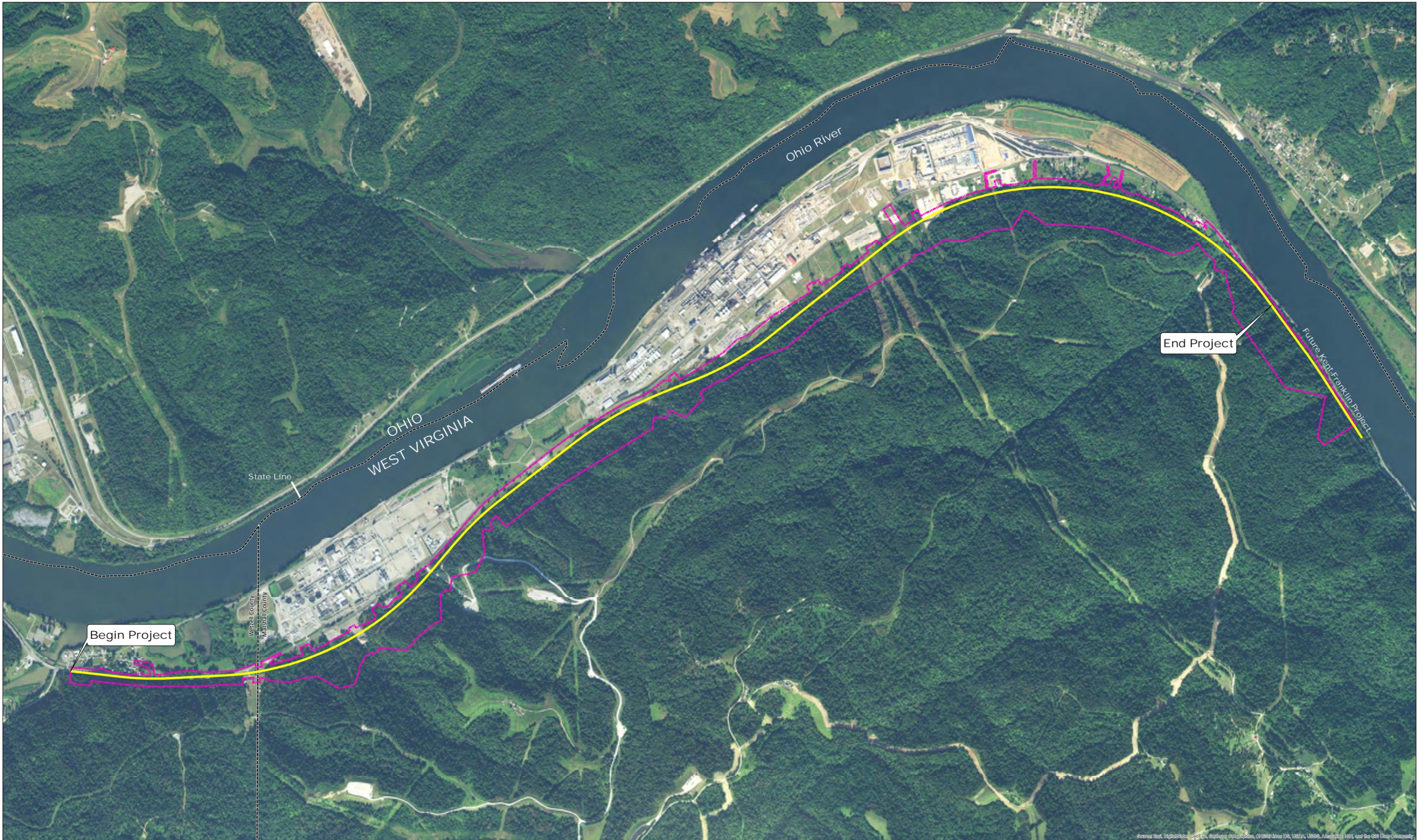
## WV 2 Design Study Alignments

Notes:

WV 2 Alignments  
Alt 1, Alt 2 and Alt 3





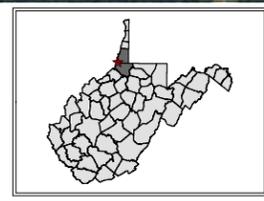
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**  
**WV2 Alignment Alts**  
**Alignment**  
 1  
 Construction Area

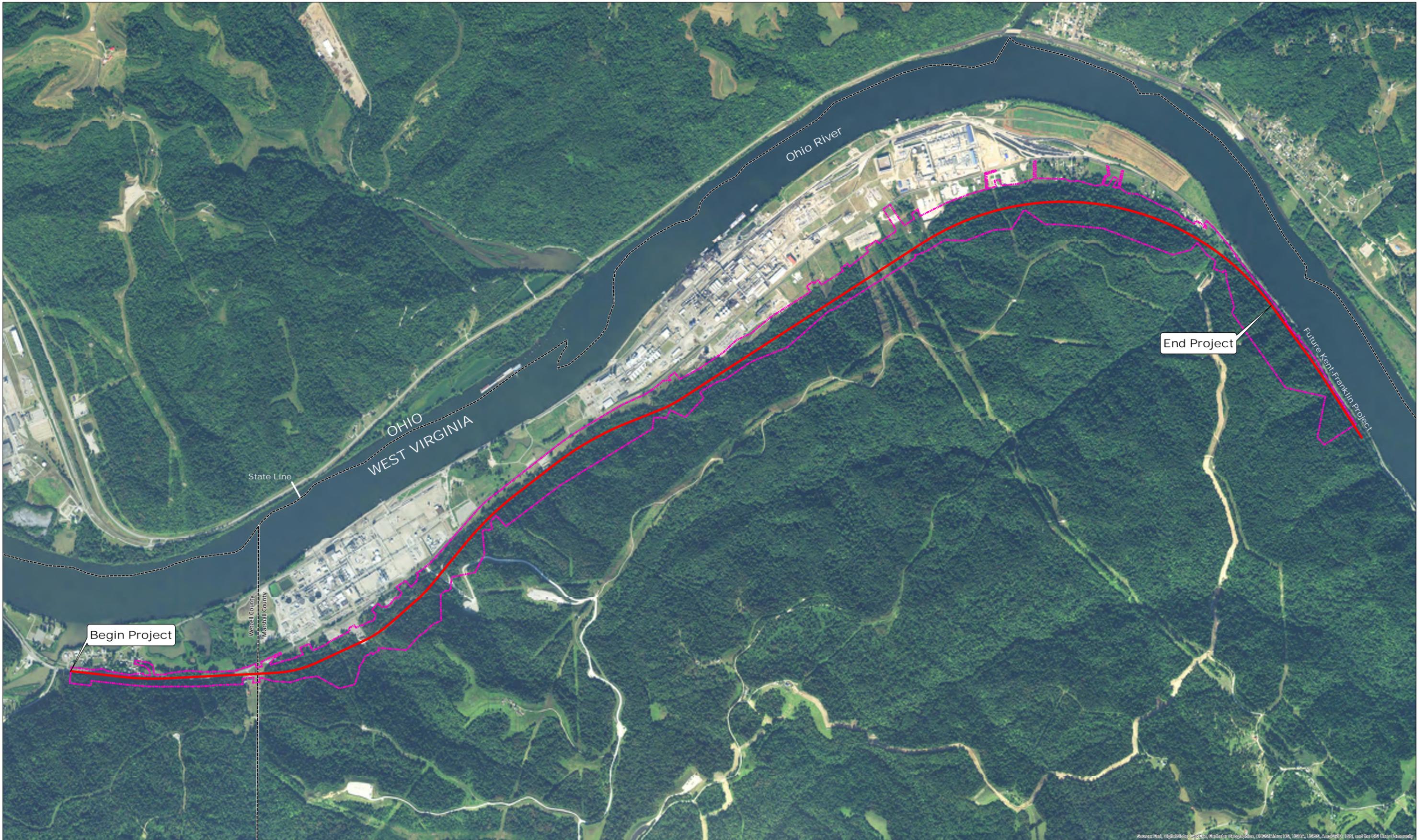
## WV 2 Design Study Alignment 1

Notes:

0 1,000 2,000 3,000 4,000 Feet

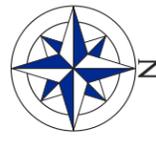


WV 2 Alignments  
Alt 1

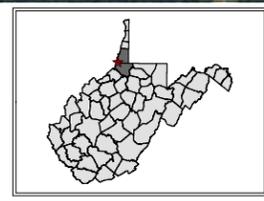
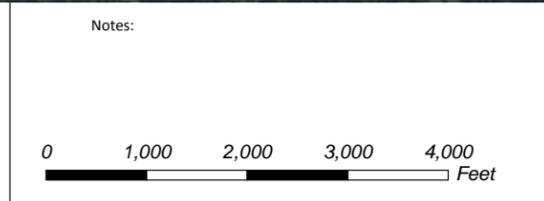


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**  
**WV2 Alignment Alts**  
**Alignment**  
 2  
 Construction Area



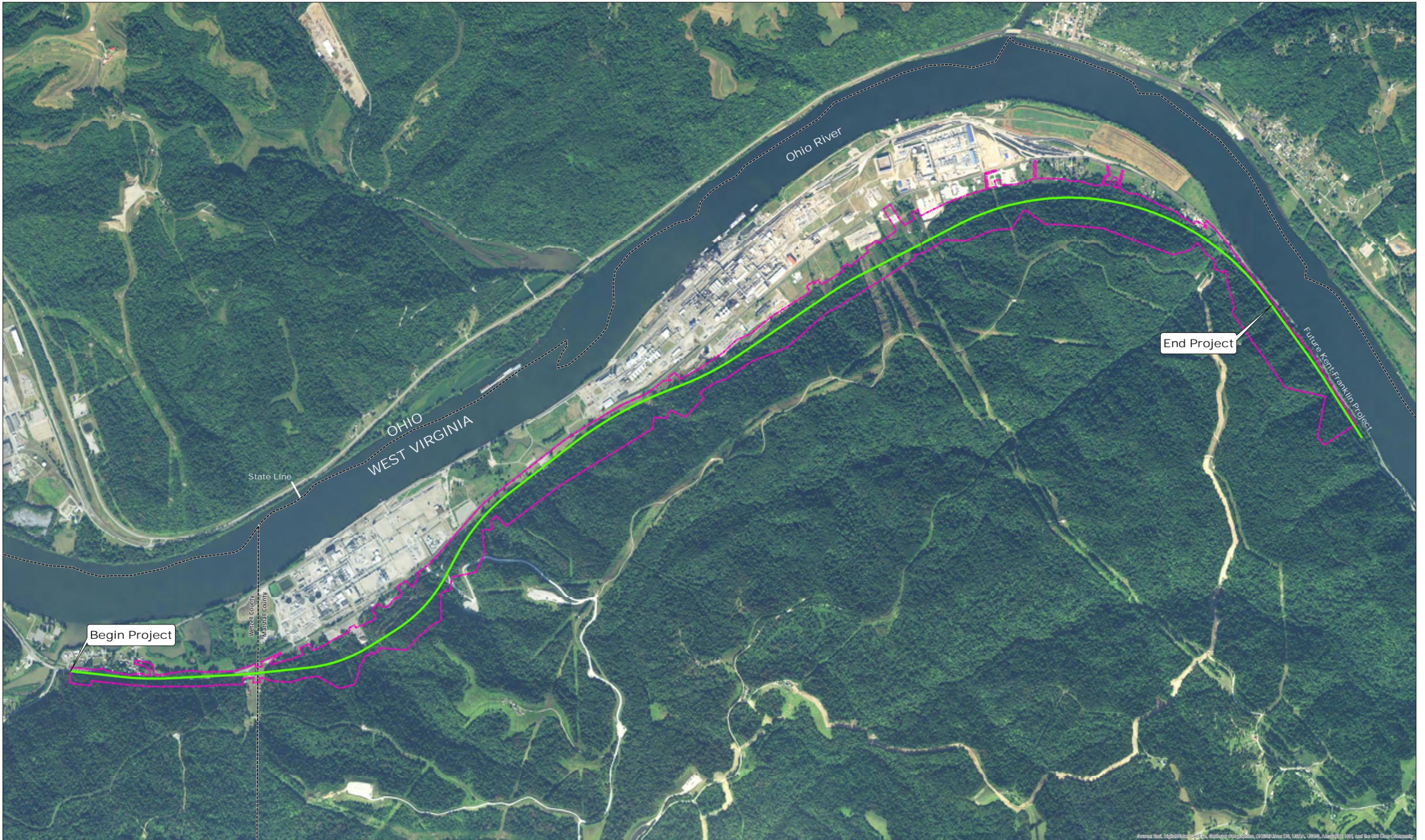
## WV 2 Design Study Alignment 2



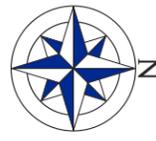
WV 2 Alignments  
Alt 2





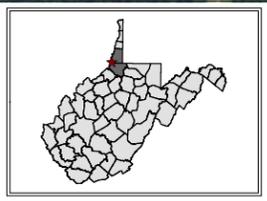
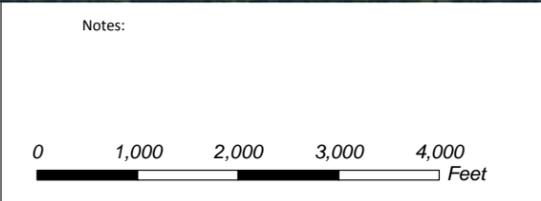


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Legend**  
**WV2 Alignment Alts**  
**Alignment**  
 3  
 Construction Area

### WV 2 Design Study Alignment 3



WV 2 Alignments  
 Alt 3



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

INFORMATIONAL WORKSHOP PUBLIC MEETING  
ATTENDANCE SHEET

PROJECT: WV 2 - Proctor to Kent  
State Project: U352-2-11.66  
Federal Project: NH-0002(528)D

DATE: Thursday, November 2, 2017

LOCATION: New Martinsville Elementary School  
20 E. Benjamin Drive  
New Martinsville, WV  
Wetzel County

PLEASE PRINT

| <u>NAME</u>          | <u>ORGANIZATION/ADDRESS/EMAIL</u>   |
|----------------------|-------------------------------------|
| 1. Lauren Matthews   | Wetzel Chronicle                    |
| 2. JOE WARD          |                                     |
| 3. John Hopkins      | happy1937@gmail.com<br>RT2/I68      |
| 4. MICHAEL ARICK     | 17954 Energy RD<br>PROCTOR WV 26055 |
| 5. MARK WOODYEAR     | WESTLAKE CHEMICAL                   |
| 6. Don Morris        | doglmorris@yahoo.com                |
| 7. CARL MACE         | carlomace4444@yahoo.com             |
| 8. Don Shenefiel     | RT2 & I68 Authority                 |
| 9. Eric Peters       | WV RT. 2 / I. 68 Authority          |
| 10. LOGAN HASSLE     |                                     |
| 11. Ann Elliott      |                                     |
| 12. Christy McDowell | 451 Sun Lane, New Martinsville      |
| 13. FRED BRUNNER     | RT2/I68 AUTHORITY                   |
| 14. MIKE PRICE       | McKinley Assoc                      |

NAMEORGANIZATION/ADDRESS/EMAIL

15. Christina Schessler M<sup>c</sup>Kinley & Assoc.
16. CHARLES RACER BAYER HFCU
17. Wayne Weber " " " "
18. Chris West Lochner
19. Steve Anton Thistledeew Farm
20. Robert Burrow Bayer HFCU
21. Ron Rush BAYER HERITAGE CREDIT UNION
22. Iris R. Isaacs 6<sup>th</sup> Ward Council
23. James Isaacs NewMan
24. Sonya D. Hollis Wetzel County Schools
25. ~~Adam Kuttig~~
26. EVAN R. WATHAM
27. Paul S. Clements
28. Don Aeeick @ dfarrick@yahoo.com
29. Jennie Kottitsberger
30. Rob Kottitsberger robrotkottitsberger@yahoo.com
30. Bob & Miller (-304-242-3910) bob.miller.jr@frontier.com
32. \_\_\_\_\_
33. \_\_\_\_\_
34. \_\_\_\_\_
35. \_\_\_\_\_
36. \_\_\_\_\_
37. \_\_\_\_\_
38. \_\_\_\_\_

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE:

DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 - Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

MR. RJ SCITES, P.E.)

THANK YOU FOR HAVING THIS INFORMATIONAL WORKSHOP THIS EVENING.

THE DIFFERENT AREAS OF THIS PROJECT INCLUDING WV DOT EMPLOYEES, MEMBERS OF THE DESIGN GROUP, ETC. WERE VERY RECEPTIVE TO MY MANY QUESTIONS

AND ANSWERS ALL TO MY COMPLETE SATISFACTION. PLEASE FEEL FREE

TO CONTACT ME (304-242-3910 HOME OFFICE / OR AT bob.miller.jr@frontier.com

IF I MAY BE OF ANY HELP MOVING THIS PROJECT TO COMPLETION.

BEST REGARDS  
Bob Miller Jr

11-2-2017

(Please print the following information)

NAME: BOB A. MILLER, JR.

ADDRESS: 207 MARWIN DRIVE / WHEELING, WV 26003-9623

ORGANIZATION (IF ANY): MARSHALL COUNTY COMMISSIONER [PRESIDENT]

How did you hear about the Informational Workshop Public Meeting?

WV DOT NOTIFIED THE MARSHALL COUNTY COMMISSIONER OFFICE THANK YOU

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 - Proctor to Kent

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE:

DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 – Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

I AM IN FAVOR OF THIS PROJECT.

~~WV 2~~

would prefer Alt 1 or 2

(Please print the following information)

NAME: CHARLES RACER

ADDRESS: 121 WASHINGTON ST. PADEMA CITY WV 26159

ORGANIZATION (IF ANY): BAYER HERITAGE FEDERAL CREDIT UNION

How did you hear about the Informational Workshop Public Meeting?

CHARLES CLEMENTS

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 – Proctor to Kent

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE:

DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 - Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

Missing two houses on the maps

- Arrick house north of two story house (Don Cam) (Marshall County)
- Richmond house behind the Rothkeisberger house  
(map shows a garage)
- Better advertisement of future meetings
- Drawings need updated missing items

(Please print the following information)

NAME: Don Arrick

ADDRESS: 62 Helen St. New Martinsville, WV 26155 - very close to Mason Dixon line

ORGANIZATION (IF ANY):

How did you hear about the Informational Workshop Public Meeting?

TV

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 - Proctor to Kent

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE:

DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 - Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

We would like as much  
notice as possible to plan  
our facility ~~at~~ "adjustment".  
Alternative ~~1~~<sup>1022</sup> would be our preference.

(Please print the following information)

NAME:

Robert H. Surran, CEO Bayer HFCU

ADDRESS:

17612 Energy Rd, Proctor, WV 26050

ORGANIZATION (IF ANY):

Bayer HFCU

How did you hear about the Informational Workshop Public Meeting?

Charles Clemens

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 - Proctor to Kent

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE:

DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 – Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

I support the extension of the four lane from Proctor to Kent. This will help develop the plants and hopefully encourage expansions and possibly new plants. Even though I am older I am hopeful for improvement in jobs for my home town.

(Please print the following information)

NAME: IRIS R. ISAACS

ADDRESS: 1279 North State Rt 2, New Martinsville, WV 26155

ORGANIZATION (IF ANY): 6<sup>th</sup> Ward Council, New Martinsville

How did you hear about the Informational Workshop Public Meeting?

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 – Proctor to Kent



Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE: 11-2-17

DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 – Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

I SUPPORT ALTERNATIVE 1 OR 2

(Please print the following information)

NAME: Ron Rush

ADDRESS: 2163 DRY RUN RD  
SISTERSVILLE, WV 26175

ORGANIZATION (IF ANY): BAYER HERITAGE CREDITS UNION

How did you hear about the Informational Workshop Public Meeting?

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 – Proctor to Kent

|                |   |
|----------------|---|
| _Title         |   |
| FirstName      | Brian   |
| LastName       | Powell  |
| Organization   |   |
| Email          | <a href="mailto:bpowell@bitmapped.net">bpowell@bitmapped.net</a>  |
| MailingAddress | 3292 University Ave Apt 603   |
| City           | Morgantown  |
| State          | WV  |
| ZipCode        | 26505   |
| Comments       | <p>I support Alignment 1. It's the lowest cost and has the least number of impacts. Aside from their highest initial cost, I'm concerned that the additional earthwork required for Alignments 2 and 3 may make them more likely to have issues with slippage which would require future additional work.</p> <p>DOH's job is to provide an efficient transportation network, not to produce developable land. I'd much rather see money saved on this project and used to pay for more improvements elsewhere than on producing more developable land that might some day benefit a private company.</p> |
| CommentType    | Online  |

Created at 11/3/2017 11:54 AM by

Last modified at 11/3/2017 11:54 AM by

Title

FirstName Bruce

LastName Sivert

Organization

Email

MailingAddress 6 Holland Lane

City New Martinsville

State WV

ZipCode 26155

Comments Wow, Wetzel County is going to get a 4 Lane from Proctor to the Marshall County line. A distance of about a 1000 feet, but you have to drive on a cow path to get to it. I voted against the stupid road bond, because I knew that Wetzel and Tyler Counties would get the shaft when it came to any road improvement projects. I guess we don't pay any taxes on fuel. This is why I buy in Ohio, and have done so for years. You get tired of calling the DOH in New Martinsville, and hear the same answer today as you heard years ago-we don't have any money. But, my taxes pay for a vehicle to drive back and forth to work everyday. Look at route 2 through New Martinsville and south to Friendly in Tyler County. Your 4 Lane will do absolutely no good for Wetzel or Tyler County. Drove Route 2 to the Mitchell Plant for almost 40 years. Since Wetzel and Tyler County never receive much highway funding, very little road maintenance is being done. My neighbor mowed the weeds on Dutch Run. It's sad. This is why I cross the bridge to route 7 to go north or south. By the time a four Lane gets built through Wetzel and Tyler Counties-automobiles will be extinct.

CommentType Online

Created at 11/8/2017 11:10 PM by  
Last modified at 11/8/2017 11:10 PM by

|                |   |
|----------------|---|
| _Title         |   |
| FirstName      | Robert  |
| LastName       | Rothlisberger   |
| Organization   |   |
| Email          | <a href="mailto:robrothlisberger@yahoo.com">robrothlisberger@yahoo.com</a>  |
| MailingAddress | 10 Neubauer Drive   |
| City           | New Martinsville  |
| State          | WV  |
| ZipCode        | 26155   |
| Comments       | <p>I do not feel moving the southern segment (Dry Run/Mason Dixon line area) of the WV2-Proctor to Kent proposed road farther west by approximately 30 yds would cause any major engineering problems Or negatively impact industrial development in the area.</p> <p>If the plans of the proposed road segment were to be move west, the three houses at Dry Run would not be lost via imminent domain.</p> <p>Respectfully submitted,<br/>Rob Rothlisberger</p> |
| CommentType    | Online  |

Created at 12/3/2017 1:12 PM by  
Last modified at 12/3/2017 1:12 PM by

Title

FirstName Steve

LastName Conlon

Organization Mtn Craft Shop Co., Thistledew Farm Inc

Email

MailingAddress 7901 Proctor Creek Rd

City Proctor

State WV

ZipCode

Comments I have paid attention to the actions of the Rt2/68 committee since 1980  
 I have been active in the road situation in Wetzel/Marshall since the gas guys arrived in 2007  
 I talk to people continually about roads since everyone has an opinion.  
 I ask locals and my customers, "do you have any trouble getting from Proctor to Kent?". As of today, no one has said "yes".  
 I attended the meeting at New Martinsville where Gus Suwaid encouraged people to embrace the Proctor/Kent Project. I found it interesting that an engineer would get political. When an engineer looks at the ADT of around 6000/day and looks at that nice solid existing road and compares that to Alternatives 1-3, I think he or she would conclude that spending \$60-80, having to use some eminent domain, perching the new road against or on the hillside and consuming 200 acres just doesn't make sense.  
 We can very inexpensively improve this section of Rt2. Turning lanes, jersey barriers in center, light change indicators. This project appears to be a huge Christmas present for the corporations impacted. The case can't be made that this project increases areas for development when the project consumes 200 acres and is paid for by taxpayers who are borrowing money to do it. We end up with a road which will require more maintenance than our existing roads. Wetzel County residents have many Rt2 concerns. Proctor to Kent ain't one of them.  
 I haven't even touched on the carbon footprint of making this change.....  
 Thank you.

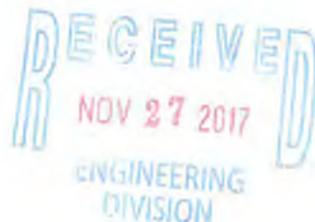
PS For the past five years I have begged my legislators to raise fuel taxes, fees etc so we could avoid the DOH situation we are in today.

CommentType Online

Created at 12/4/2017 10:55 AM by  
 Last modified at 12/4/2017 10:55 AM by

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE: 11/20/17



DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 - Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

Please re consider proposed road alignments of Proctor - Kent so as not to affect the residences in the Mustard - Voted County line. It is possible to move proposed alignments west so as not to affect these properties.

(Please print the following information)

NAME: JOHN E. CAIN

ADDRESS: 220 E. Thistle Ct. New Martinsville, WV 26155

ORGANIZATION (IF ANY):

How did you hear about the Informational Workshop Public Meeting?

- we did not, due to limited amount of homes affected,

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Residents should have been notified by personal contact, phone contact, or certified mail.

John E. Cain  
PO Box 1220  
New Martinsville, WV 26155

FITTSBURGH PA 153

21 NOV 2017 PM 7 1



Mr. R. J. Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith St.  
Charleston WV 25301

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE: 11/25/17



DATE: Thursday, November 2, 2017  
LOCATION: New Martinsville Elementary School  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2 - Proctor to Kent  
State Project # U352-2-11.66 00  
Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

I am writing in regards to section at Dry Run by Mason Dixon marker. We were not notified about first meeting. Should have been. We believe there is plenty of land west of our property to relocate a fence line without us losing our property. I have lived here for 52 years of sixty years I have been alive. My parents are 85 + sixty years back

(Please print the following information)

NAME: Don Cain

ADDRESS: 27 Dry Run Road  
Proctor WV 26055

ORGANIZATION (IF ANY):

How did you hear about the Informational Workshop Public Meeting?

Didn't hear about it. Someone should have contacted us about it. (Don't contact PPP / Bazer Bazer credit Union)

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 - Proctor to Kent



and have lived here since 1956. My  
Mom was born in the house 300 yards  
up the Run where there were several  
This property has been in her family  
for her entire life. The Mason/Dixon  
Monument used to be located some 100  
to 150 yards from present day location  
(moved around 1934)  
The only significance of this monument  
is it can be located on the line  
Mason/Dixon, stopped surveying near  
Core wv. They were halted by Indians  
Told if they cross Dunkirk Creek in Monroeville  
County they would be killed. This is the only place  
Monument that can't be moved. This monument (at Proctor)  
can be located anywhere on that line. The  
Gas House that is located at Dry Run  
has 2" Regulator that feeds Bayer a  
very small amount of gas. This can be  
moved to the West very easily and not  
much cost. In closing I would like  
to talk to you in person. You  
should give the small # of families  
the same amount of gas as credits  
or vacuum  
Comparisons

(Don, Cora Page 2)  
11/25/17

Donald Cain  
27 Dry Run Road  
Proctor WV 26055

PITTSBURGH PA 150

27 NOV 2017 PM 8 L



Mr. RT Scites P E  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia  
25301

25301-143434



Mr. RJ Scites, P.E.  
 Director, Engineering Division  
 West Virginia Division of Highways  
 1334 Smith Street  
 Charleston, West Virginia 25301

DATE:



DATE: Thursday, November 2, 2017  
 LOCATION: New Martinsville Elementary School  
 SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
 PROJECT: WV 2 - Proctor to Kent  
 State Project # U352-2-11.66 00  
 Federal Project # NH-0002(528)D

COMMENTS DUE BY Monday, December 4, 2017

Please consider the following comments:

1. Please leave our 3 Houses alone. There at Dry Run, go a little to the west, this will by-pass us. Our son lives North of us - 29 years - We have been here 6 1/2 years on the South of our house, our nephew. When Paul & I built this house, he was 27 years of age, I was 23 years. Now he is 59 1/2 years & I am 85 years in 6 days - Dec. 2<sup>nd</sup> We are too old to start over, it is nice having family close by, Safe Today. Thank you

(Please print the following information)

NAME: PAUL AND DONNA JO CAIN MR. AND MRS. 61 1/2 years

ADDRESS: 29 DRY RUN ROAD - PROCTOR, WV 26055

ORGANIZATION (IF ANY): FAMILY

How did you hear about the Informational Workshop Public Meeting? - We didn't.

Project Information and Comment Sheets

Can be found online at our WVDOH Website at <http://go.wv.gov/dotcomment>.

Under Engineering Projects, Open, and then click WV 2 - Proctor to Kent

P.S. We would like to meet with you all. Please let us know.

RECEIVED  
NOV 29 2017  
ENGINEERING  
DIVISION

Nov. 26, 2017

Mr. R. J. Scites, P.E.  
District, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

A Little History:

In the early 1930's, my Parents, Robert Ed. Sadie Dohren bought this property from Davaline's oil Company, they had a pump station here. They quit Ed sold it, I guess in the depression, to my parents.

We, Paul & I, were married in April 6<sup>th</sup>, 1956. We bought a lot from my parents & built our house we live in now. We improved over the years, built a garage, sun room, and bought more ground as it became available & when we had the money.

We raised three sons here & our oldest son built his home in 1987, and raised 3 children also, next door.

As I mentioned before, Paul is 89 & I am, we will be 85 in 6 days, God willing, we will appreciate all you can do for us.

Thank you  
Mr. & Mrs. Paul Cain & Family  
29 Sky Run Road  
Proctor, WV 26055

Mr. Paul E. Cain  
29 Ivy Run Rd.  
Proctor, WV 26055-4278

C

PETTSBORO, PA 19380

27 NOV 2017 PM 2 1



Mr. R. F. Scites, P. E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 South Street  
Martinsburg, West Virginia 26101

25301-143439

## APPENDIX C – NRCS FORM AD 10006

---

**FARMLAND CONVERSION IMPACT RATING**

|   |  |  |                                |                                   |  |           |
|---|--|--|--------------------------------|-----------------------------------|--|-----------|
| <b>PART I</b> (To be completed by Federal Agency)   |  | Date Of Land Evaluation Request <b>March 29</b>              |                                |                                   |  |           |
| Name of Project <b>WV 2 Improvements</b>  |  | Federal Agency Involved <b>USDOT/WVDOH</b>                   |                                |                                   |  |           |
| Proposed Land Use <b>Transportation</b>   |  | County and State <b>Marshall and Wetzel Counties, WV</b>     |                                |                                   |  |           |
| <b>PART II</b> (To be completed by NRCS)  |  | Date Request Received By<br>NRCS                             |                                | Person Completing Form:           |  |           |
| Does the site contain Prime, Unique, Statewide or Local Important Farmland?<br><i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>      |  | YES<br><input type="checkbox"/>                              | NO<br><input type="checkbox"/> | Acres Irrigated                   | Average Farm Size                      |           |
| Major Crop(s)   | Farmable Land In Govt. Jurisdiction<br>Acres:            % | Amount of Farmland As Defined in FPPA<br>Acres:            % |                                |                                   |  |           |
| Name of Land Evaluation System Used   | Name of State or Local Site Assessment System              | Date Land Evaluation Returned by NRCS                        |                                |                                   |  |           |
| <b>PART III</b> (To be completed by Federal Agency)   |  | Alternative Site Rating                                      |                                |                                   |  |           |
|   |  | Site A   | Site B                         | Site C                            | Site D                                 |           |
| A. Total Acres To Be Converted Directly   |  | <b>199</b>   | <b>211</b>                     | <b>292</b>                        | <b>278</b>                             |           |
| B. Total Acres To Be Converted Indirectly   |  | <b>0</b>   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               |           |
| C. Total Acres In Site  |  |  |                                |                                   |  |           |
| <b>PART IV</b> (To be completed by NRCS) Land Evaluation Information  |  |  |                                |                                   |  |           |
| A. Total Acres Prime And Unique Farmland  |  |  |                                |                                   |  |           |
| B. Total Acres Statewide Important or Local Important Farmland  |  |  |                                |                                   |  |           |
| C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted   |  |  |                                |                                   |  |           |
| D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value  |  |  |                                |                                   |  |           |
| <b>PART V</b> (To be completed by NRCS) Land Evaluation Criterion<br>Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)                                  |  |  |                                |                                   |  |           |
| <b>PART VI</b> (To be completed by Federal Agency) Site Assessment Criteria<br><i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i> |  | <b>Maximum Points</b>  | Site A                         | Site B                            | Site C                                 | Site D    |
| 1. Area In Non-urban Use  |  | (15)   | <b>5</b>                       | <b>5</b>                          | <b>5</b>                               | <b>5</b>  |
| 2. Perimeter In Non-urban Use   |  | (10)   | <b>5</b>                       | <b>5</b>                          | <b>5</b>                               | <b>5</b>  |
| 3. Percent Of Site Being Farmed   |  | (20)   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| 4. Protection Provided By State and Local Government  |  | (20)   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| 5. Distance From Urban Built-up Area  |  | (15)   | <b>5</b>                       | <b>5</b>                          | <b>5</b>                               | <b>5</b>  |
| 6. Distance To Urban Support Services   |  | (15)   | <b>5</b>                       | <b>5</b>                          | <b>5</b>                               | <b>5</b>  |
| 7. Size Of Present Farm Unit Compared To Average  |  | (10)   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| 8. Creation Of Non-farmable Farmland  |  | (10)   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| 9. Availability Of Farm Support Services  |  | (5)  | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| 10. On-Farm Investments   |  | (20)   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| 11. Effects Of Conversion On Farm Support Services  |  | (10)   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| 12. Compatibility With Existing Agricultural Use  |  | (10)   | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| TOTAL SITE ASSESSMENT POINTS  |  | <b>160</b>   | <b>20</b>                      | <b>20</b>                         | <b>20</b>                              | <b>20</b> |
| <b>PART VII</b> (To be completed by Federal Agency)   |  |  |                                |                                   |  |           |
| Relative Value Of Farmland (From Part V)  |  | 100  | <b>0</b>                       | <b>0</b>                          | <b>0</b>                               | <b>0</b>  |
| Total Site Assessment (From Part VI above or local site assessment)   |  | 160  | <b>20</b>                      | <b>20</b>                         | <b>20</b>                              | <b>20</b> |
| <b>TOTAL POINTS (Total of above 2 lines)</b>  |  | <b>260</b>   | <b>20</b>                      | <b>20</b>                         | <b>20</b>                              | <b>20</b> |
| Site Selected: <b>Site A</b>  |  | Date Of Selection <b>3/1/18</b>                              |                                | Was A Local Site Assessment Used? |  |           |
|   |  |  |                                | YES <input type="checkbox"/>      | NO <input checked="" type="checkbox"/> |           |
| Reason For Selection:<br><b>Site A has the least relocation impacts and has the least impacts to natural resouces, including streams and wetlands.</b>                      |  |  |                                |                                   |  |           |
| Name of Federal agency representative completing this form: <b>CDM Smith</b>  |  |  |                                |                                   | Date: <b>3/29/18</b>                   |           |

## STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at [http://offices.usda.gov/scripts/ndISAPI.dll/oip\\_public/USA\\_map](http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map), or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

## INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

*(For Federal Agency)*

**Part I:** When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

**Part III:** When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

**Part VI:** Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

**Part VII:** In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.



# APPENDIX D – CULTURAL RESOURCES

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## CORRESPONDENCE



RECEIVED  
SEP 05 2013  
ENGINEERING DIVISION  
WV DOH

The Culture Center  
1900 Kanawha Blvd., E.  
Charleston, WV 25305-0300

Randall Reid-Smith, Commissioner

Phone 304.558.0220 • www.wvculture.org

Fax 304.558.2779 • TDD 304.558.3562

IBCA Member

August 29, 2013

Mr. Ben L. Hark  
WVDOH  
1900 Kanawha Blvd., E  
Building Five, Room 110  
Charleston, WV 25305-0430

Re: WV 2 – Proctor to Kent; State Project No. 3.5 2-2-11.66 00; Federal Project No. NH-0002(528)D  
FR#: 13-879-Multi

Dear Mr. Hark:

We have reviewed the cultural resource survey reports that were submitted for the above mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

Archaeological Resources:

We have reviewed the report titled Phase I Archaeological Survey of WV-2 Alternate 1, and Alternate 2, from Proctor to Kent, in Marshall and Wetzel Counties, West Virginia. According to the report, the proposed Area of Potential Effect (APE) for direct effect underwent systematic survey, during which four new archaeological sites were identified. However, the report does not present a complete description of the survey results. While a brief section of the report (4.1.4 Field Conditions) provides very general conditions observed in the proposed APE, the report does not include a section that describes observations made in portions of the APE where sites were not documented. Federal and state guidelines indicate that technical reports should contain all results of field investigations, not just the positive results. Descriptions of the soils in non-site areas, the overall number of shovel probes excavated, whether soils were disturbed or intact are important to gaining an overall understanding of an area. Please submit a revised report that includes a section describing the observations made in the portions of the proposed APE where sites were not discovered. We will provide further comment upon receipt of the revised report.

Architectural Resources:

We cannot complete our review with the provided information. While we concur with the majority of the consultant's findings, it is our opinion that the Proctor Landing Light (WZ-0028) may be eligible for inclusion in the National Register of Historic Places as part of a multiple resource listing. According to the 1989 *Ohio River Navigation Light Survey*, there are 65 similar structures along the West Virginia side of the Ohio River that date to as early as 1950. In addition, it is our opinion that the community of Kent (resources MR-0155 through MR-0165) may be eligible for inclusion in the National Register as a rural historic district. Therefore, we request that an assessment of effect be conducted for resource WZ-0028, as well as resources MR-0155 through MR-0165.

Also, we do not concur with the consultant's opinion that resources WZ-0136 and WZ-0140 are not eligible for inclusion in the National Register of Historic Places. It is our opinion that these resources are eligible for inclusion in the National Register as contributing resources to the Baltimore & Ohio Railroad, which is eligible under Criteria A for Transportation. Therefore, we request that an assessment of effect be conducted for these resources, as well.

August 29, 2013  
Mr. Hark  
FR#: 13-879-Multi  
Page 2

In addition, we concur with the consultant's opinion that resources WZ-0007, MR-0037-0109, MR-0058, and MR-0144 are eligible for inclusion in the National Register of Historic Places. However, it is our opinion that the structures and outbuildings associated with resource MR-0144 (the secondary barn/wagon shed, silo, bridge, and culvert system) may also be eligible for inclusion in the National Register as part of a historic farmstead. We also concur with the consultant's opinion that the proposed project is unlikely to introduce any new visual elements that would diminish the qualities that make resources WZ-0007, MR-0037-0109, MR-0058, and MR-0144 significant and/or eligible for inclusion in the National Register. However, any direct impact to these resources should be avoided. Please indicate *in writing* whether the proposed project will have a direct impact on any of these resources, including the structures and outbuildings associated with resource MR-0144.

For future projects of this scale, please include a large foldout map depicting all resources and where they are in relation to one another. In addition, many of the Historic Property Inventory (HPI) forms are marked as having no additions and/or alterations, while the photographs and written descriptions clearly indicate otherwise. In the future, please ensure that the HPI forms are marked appropriately and that any additions and/or alterations (including vinyl siding and replacement windows) are described in the correct section. Also, large rural properties with multiple resources and outbuildings (i.e., MR-0162) are potential historic farmsteads, and it is imperative that the total number of acres is recorded. In the future, please be sure to include the total number of acres for such properties in the appropriate section of the HPI form.

We will provide further comments upon receipt of the requested information.

Public Comments

In addition, 36 CFR 800.2(d)(1), 800.2(d)(2), 800.3(e), 800.6(a)(4) all stress the importance of public comment during the Section 106 review process. If you have already completed this aspect of the requirements under Section 106, please provide written documentation of that along with any comments you have received.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the review process, please contact Lora A. Lamarre-DeMott, Senior Archaeologist, or Michael Kyme, Structural Historian, at (304) 558-0240.*

Sincerely,



Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/LAL/MLK



**The Culture Center**  
1900 Kanawha Blvd., E.  
Charleston, WV 25305-0300

**Randall Reid-Smith, Commissioner**

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EEO/AA Employer

February 4, 2014

Mr. Ben L. Hark  
WVDOH  
1900 Kanawha Blvd., E  
Building Five, Room 110  
Charleston, WV 25305-0430

Re: WV 2 – Proctor to Kent; State Project No. U32-2-11.66 00;  
Federal Project No. NH-0002(528)D  
FR#: 13-879-Multi-1

Dear Mr. Hark:

We have reviewed the revised Phase I archaeological survey report that was submitted for the above mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

Archaeological Resources:

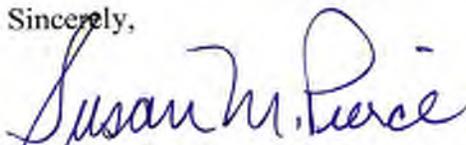
Thank you for submitting the revised report, which now satisfactorily documents the Phase I survey conducted for the above referenced project. The report states that four new archaeological sites, 46MR193, 46MR194, 46MR195 and 46MR197, were documented during the course of the field work. Sites 46MR193 and 46MR197 consist of historic period artifact scatters associated with extant farmsteads. Site 46MR194 is a multicomponent site of historic period artifacts intermixed with those dating to the prehistoric period associated with the foundation remains of a homestead or outbuilding. Site 46MR195 is a low density scatter of historic period artifacts lacking any apparent structural association. The historic period artifacts suggest that occupations date from the late 19<sup>th</sup> through mid-20<sup>th</sup> centuries. However, the lack of diagnostic artifacts limits the ability to associate material remains with a more specific time period. The prehistoric component at 46MR194 also lacks diagnostic artifacts. In addition, none of the sites produced evidence suggesting the presence of subsurface features. As well, they all show evidence of previous disturbance and lack integrity. As a result, we concur that sites 46MR193, 46MR194, 46MR195 and 46MR197 are not eligible for inclusion in the National Register of Historic Places. We also concur that no further archaeological work is necessary for the currently proposed project.

Architectural Resources:

In our previous correspondence dated August 29, 2013, we requested that an assessment of effect be conducted for resources WZ-0028, WZ-0136, and WZ-0140. We also requested that an assessment of effect be conducted for resources MR-0155 through MR-0165, which may be eligible for inclusion in the National Register of Historic Places as a historic district. In addition, we requested a written statement indicating whether the proposed project will have a direct impact on any of the resources associated with MR-0144 (the secondary barn/wagon shed, silo, bridge, and culvert system). At this time, we reiterate our request for the aforementioned information. Please see our previous correspondence for additional details. We will provide further comment upon receipt of the requested information.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the review process, please contact Lora A. Lamarre-DeMott, Senior Archaeologist, or Michael Kyne, Structural Historian, at (304) 558-0240.*

Sincerely,



Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/LLD/MLK



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EEO/AA Employer



Mr. Ben L. Hark  
WV Division of Highways, Engineering Division  
1334 Smith Street  
Charleston, WV 25301

Re: WV 2 – Proctor to Kent; State Project No. U352-2-11.66 00;  
Federal Project No. NH-0002 (528) D  
FR#: 13-879-Multi-4

Dear Mr. Hark:

We have received your letter of January 16, 2015 regarding the WV-2 Proctor to Kent Project. Thank you for the clarification to questions raised in our December 11, 2014 letter to your office.

We have reviewed the above mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

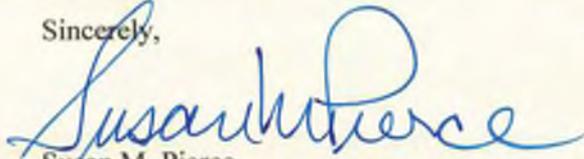
1. The location of the Hanes House (WZ-0007), Proctor Landing Light (WZ-0028), and the two railroad bridges (WZ-0316 & WZ-0140) in relation to the project limits is acknowledged.
2. Acknowledgement is duly noted.
3. Revised figures for the Sims Farmhouse (MR-0058) National Register boundary are acknowledged.
4. The justification to rescind the Kent Rural Historic District (MR-0155 – MR-065) eligibility reassessment is accepted and acknowledged.
5. The grammatical corrections for the agricultural outbuildings collection (MR-0144) are acknowledged.
6. Corrections to the typographical errors on pages 6-4, 6-30, 6-125, and 6-156 are acknowledged.
7. No further comment is necessary.
8. The edited description of the Area of Potential Effect (APE) to more clearly convey the extent of the APE is acknowledged. The APE revision precludes the need to contact the Ohio Historic Preservation Office.
9. We concur with the recommendations that are presented in Table 6.1 "Summary of Previously Documented Properties within view of the APE" (p. 6-11), Table 6.2 "Summary of Newly Documented Properties within view of the APE" (pp. 6-32-35), and Table 7-1 "Eligibility

Recommendations" (p. 7-1). In addition, we concur with the effects determinations for those resources that are listed in the table (p.3) in your January 16<sup>th</sup> letter, namely the Hanes House (WZ-0007), the Proctor Landing Light (WZ-0028), the two railroad bridges (WZ-0136 and WZ-0140), the Mason-Dixon Line Monument (NR-0037-0109), the Sims Farmhouse (MR-0058) will not be adversely effected by the proposed project. Lastly, we concur that the Alternate 1 design proposal will have an adverse effect on the outbuildings collection (MR-0144), and while design Alternate 2 will have an effect on the resource, we concur that the effect will not be adverse.

Finally, on page 7-9 of the revised *Cultural Historic Survey for the Proposed Upgrade to WV Route 2 from Proctor to Kent in Wetzel and Marshall Counties, WV*, avoidance of those NRHP-eligible (both individually eligible and contributing to an historic district) resources is recommended. We concur with the consultant's recommendation that the design alternatives that avoid historic resources are preferable.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the review process, please contact Jeffrey S. Smith, Structural Historian, at (304) 558-0240.*

Sincerely,



Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/JSS



*The Culture Center*  
1900 Kanawha Blvd., E.  
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**Randall Reid-Smith, Commissioner**

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EEO/AA Employer

Mr. Ben L. Hark  
WV Division of Highways, Engineering Division  
1334 Smith Street  
Charleston, WV 25301

Re: WV 2 – Proctor to Kent;  
State Project No. U352-2-11.66 00;  
Federal Project No. NFA-2317(003)D  
FR#: 13-879-Multi-5

Dear Mr. Hark:

We have reviewed the additional information submitted for the above-mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

We previously reviewed this project and provided comments most recently in a letter dated February 17, 2015. Since those previous comments, Preferred Alternative 1 for the WV 2, Proctor to Kent – GO BOND 1 project has been shifted further to the east of its initial design proposal. This shift moves the proposed right-of-way into the hillside and further from a previously documented barn.

We have reviewed the submitted information and concur that the unnamed barn (MR-0144) remains eligible for the National Register of Historic Places. We agree that because the proposed project has been shifted farther away from the unnamed barn and will no longer take property associated with the barn, that the proposed project will not adversely affect the barn. No further consultation is necessary regarding this architectural resource; however, we do ask that you contact our office if your project should change.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, at (304) 558-0240.*

Sincerely,

Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/BMR



# APPENDIX E – AIR QUALITY REPORT

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## Air Quality Report

### 1.1 Attainment Status

The Clean Air Act (CAA) of 1970 requires the EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants that cause adverse effects to public health and the environment. The EPA has established NAAQS for six common air pollutants: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead (Pb). Geographic regions are classified into one of three air quality categories. Areas that meet the established numerical standards for these pollutants are considered in “attainment” of the NAAQS. Areas where concentrations of criteria pollutants exceed the levels set by the federal standards are “nonattainment” areas. Areas that have previously exceeded the criteria pollutant levels but since attained the standard are called “maintenance” areas.

The proposed project is located in Marshall and Wetzel counties in WV. Wetzel County is in attainment of all NAAQS. Marshall County is designated as a nonattainment area for the 2010 1-hour SO<sub>2</sub> standard and a maintenance area for the 1997 annual PM<sub>2.5</sub> standard. It is considered in attainment of all other NAAQS<sup>1</sup>.

### 1.2 Transportation Conformity

Approval, funding, or implementation of FHWA projects are subject to the transportation conformity regulations under the CAA (40 Code of Federal Regulations [CFR] 93 Subpart A). Each metropolitan planning area is required to develop an official metropolitan transportation plan pursuant to 23 CFR Part 450. If a potential project is included in a transportation plan and transportation improvement program (TIP) that conform to the state air quality implementation plan (SIP) and the CAA Amendments, then the project is already included in the emission budgets developed for the region. Thus, a unique, regional analysis of project emissions would not be required; however, analysis regarding possible localized impacts is still required. The Metropolitan Planning Organization (MPO) for the study area, Bel-O-Mar Regional Council, is responsible for transportation planning and determining regional conformity.

Transportation conformity applies to nonattainment and maintenance areas. Since the study area is in maintenance for the 1997 PM<sub>2.5</sub> standard and is designated as nonattainment of the 2010 1-hour SO<sub>2</sub> standard, transportation conformity regulations apply<sup>2</sup>.

This project was included in the 2040 Long Range Transportation Plan (2016) prepared by the Bel-O-Mar Regional Council<sup>3</sup>. The EPA determined that emissions from mobile sources are insignificant for transportation conformity in the region and waived the emissions analysis requirement for PM<sub>2.5</sub> for the long-range transportation plans and TIP. Qualitative regional conformity, including an interagency

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<sup>1</sup> EPA. 2016. Green Book: West Virginia Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Accessed on November 29, 2016 at: [https://www3.epa.gov/airquality/greenbook/anayo\\_wv.html](https://www3.epa.gov/airquality/greenbook/anayo_wv.html).

<sup>2</sup> West Virginia Department of Environmental Protection (WVDEP). 2016. SO<sub>2</sub> Nonattainment Areas. Accessed on November 29, 2016 at: <http://www.dep.wv.gov/daq/planning/NAAQS/Pages/SO2-Nonattainment-Areas.aspx>.

<sup>3</sup> Bel-O-Mar Regional Council. 2016. Belmont-Ohio-Marshall Counties Transportation Plan for 2040. June. Accessed on November 29, 2016 at: <http://www.belomar.org/wordpress/wp-content/uploads/2016/07/bomts-lrp-2040-final-document.pdf>.

consultation process, fiscal constraints, latest planning assumptions, and public involvement, was satisfied for the 2040 Transportation Plan.

The proposed project upgrades a rural two-lane arterial roadway to a four-lane divided highway from Proctor to Kent. This will provide a safe convenient highway with increased traffic capacity. WVDOT estimated an average daily traffic (ADT) increase from 4,900 in 2012 to 6,300 in 2032, with approximately 13 percent of the ADT estimated to be trucks<sup>4</sup>.

Projects in PM<sub>2.5</sub> nonattainment or maintenance areas that have a significant number of diesel vehicles, are anticipated to significantly increase the number of diesel vehicles, and change the LOS of an intersection to D, E, or F are required to conduct a hotspot analysis (40 CFR 93.123). Projects that involve bus and rail terminals are often subject to this requirement due to increase in diesel use. Facilities with an AADT greater than 125,000, 8 percent or more of that AADT as diesel trucks, is considered to be significant (71 FR 12468). The AADT of this project is less than 125,000 and the project is not expected to cause a significant increase in the number of diesel vehicles or adversely affect intersections. Therefore, a PM<sub>2.5</sub> hotspot analysis is not required.

### 1.3 Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources (e.g., cars, trucks, and construction equipment), non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories, refineries, and power plants). EPA has also recognized emissions of air toxics from mobile sources as a potential environmental and health concern. The interim guidance released by FHWA dated February 2007 requires discussion of Mobile Source Air Toxics (MSATs) in National Environmental Policy Act (NEPA) documents. The guidance was updated in September 2009, December 2012, and October 2016.

The current guidance on MSATs is FHWA's Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, released on October 18, 2016. This guidance advises on when and how to analyze MSATs in the NEPA process for highway projects. This guidance is interim because MSAT science is still evolving. Currently, there are limitations on tools and techniques for evaluating potential project-level health risks from MSAT exposure. FHWA regularly updates the guidance based on new scientific data.

The proposed project involves widening and relocation of a state highway. The design year ADT for the state highway is projected to be less than 140,000 to 150,000 vehicles per day which, according to FHWA MSAT guidance, is considered to be a project "with low potential MSAT effects and therefore only requires a qualitative analysis. The analysis is presented below.

For each alternative in this EA, the amount of MSAT emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. VMT is calculated by multiplying the ADT by the project length. The ADT is anticipated to be the same between

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<sup>4</sup> G. Graley. 2011. Memorandum to Dirar Ahmad on State Project U352-2-11.65 Protcor-Natrium Rd. Marshall & Wetzel Counties. October 19.

the No Build and Build Alternatives. The corridor length would be the same for No Build and Widening the Existing WV2 Alternatives (5.28 miles) so the VMT for No Build and the Widening the Existing WV2 Alternatives would be similar. Because the estimated VMT under the two Build Alternatives are nearly the same, varying by less than four percent, it is expected there would be no appreciable difference in overall MSAT emissions among the future alternatives.

Speed may increase due to additional capacity increasing the efficiency of the transportation network for either of the Build Alternatives. According to the EPA's MOVES2014 model, emissions of all of the priority MSAT decrease as speed increases. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent between 2010 and 2050<sup>5</sup>. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

MSAT science is still evolving and the available technical tools do not enable prediction of the project-specific health impacts of the emission changes associated with the alternatives evaluated in the EA. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22) regarding incomplete or unavailable information.

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. As the lead authority for administering the Clean Air Act and its amendments, EPA has specific statutory obligations with respect to hazardous air pollutants and MSAT and is continually assessing human health effects, exposures and risks posed by air pollutants. Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). A number of HEI studies are summarized in Appendix D of FHWA's Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are: cancer in humans in occupational settings, cancer in animals, and irritation to the respiratory tract, including the exacerbation of asthma.

The methodologies for forecasting health impacts include emissions modeling, dispersion modeling, exposure modeling, and then final determination of health impacts. Each step in the process builds on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments,

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<sup>5</sup> Federal Highway Administration (FHWA). 2016. Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. October 18. Accessed on November 29, 2016 at: [http://www.fhwa.dot.gov/environment/air\\_quality/air\\_toxics/policy\\_and\\_guidance/msat/2016msat.pdf](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/2016msat.pdf).

particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that timeframe, since such information is unavailable. It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways, to determine the portion of time that people are exposed at a specific location, and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds and, in particular, for diesel PM.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the CAA to determine whether more stringent controls are required to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable. Because of the limitations in the methodologies for forecasting health impacts, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts.

## 1.4 Construction Emissions

Heavy construction equipment, including excavators, scrapers, graders, rollers, compactors, and pavers, may be used to clear and grub, excavate, grade, and pave for construction of new roadways. Contractors would be responsible for maintaining, repairing, and adjusting all construction equipment to keep them in full satisfactory condition to minimize pollutant emissions. Equipment emissions may be reduced by using newer, lower-emitting equipment, retrofitting older equipment engines, and controlling activity.

# APPENDIX F – NOISE REPORT

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DRAFT REPORT

**West Virginia 2 Expansion**  
Noise Study



West Virginia  
Department of Transportation  
Division of Highways

January 2013



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# Section 1

## Introduction

This section describes the proposed project.

### 1.1 Project Description

Realignment and widening of West Virginia Route 2 (WV-2) between Proctor and Kent, West Virginia is proposed. The project begins just north of the intersection of Proctor Creek Road (County Route 89) in Proctor, Wetzel County, WV and ends just north of Kent, WV in Marshall County. Proctor and Kent, WV are the two primary residential areas located within the project limits. Both of these communities are relatively small. The existing WV-2 is a rural two-lane arterial.

There are two chemical plants located within the project area, which have a major impact on the proposed WV-2 improvements - PPG Industries and Bayer Corporation. These plants each have approximately 600 employees and have a major economic and traffic impact in this area of the Upper Ohio Valley. Both of these plants have extensive infrastructure located along and crossing WV-2. Personnel from these plants have expressed their concerns about the current location of WV-2 being in close proximity to their facilities. Their recommendation is to relocate WV-2 to the east, between the plant facilities and the hillside. This location would allow the construction of a single access point, which would be easier to control from a security standpoint. It would also provide some separation from the roadway, which currently disconnects their facilities.

The proposed WV-2 would be constructed as a four-lane highway, located along the hillside (east of the current location). These alignments have been endorsed by both of the chemical plants located along the existing WV-2. These alignments allow existing WV-2 to become a frontage road. Access to the new WV-2 would be provided by only two or three intersections, enhancing safety and capacity. Additionally, these alignments allow the construction of a median barrier wall, which would also limit access conflicts and potential median-crossing accidents. Details of the proposed alignments can be found in "Alternative Alignment Analysis WV-2 Proctor to Natrium & Natrium to Kent" (WSA 2005).

### 1.2 Statement of Compliance

This analysis will follow Federal Highway Administration (FHWA) Regulation 23 CFR 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise" and the West Virginia Department of Transportation (WVDOH) "Noise Policy", July 13, 2011.

According to FHWA and WVDOH, there are three types of projects:

**Type I Project** - Noise abatement accomplished in conjunction with a construction or reconstruction project on a section of federal-aid highway, as designated in 23 CFR Part 772.

**Type II Project** - Noise abatement on an existing section of a federal-aid highway which does not include construction or reconstruction, as designated in 23 CFR Part 772.

**Type III Project** - A Federal or Federal-aid highway project that does not meet the classifications of a Type I or Type II project, as designated in 23 CFR Part 772.

The proposed project is designated as a Type I project due to the following:

- Construction of a roadway along new location
- Increase in the number of lanes

### 1.3 Date of Public Knowledge

The Date of Public Knowledge or the date of approval of the final environmental document for this project will be the date of approval of the ongoing EA document.

The criteria for determining when undeveloped land is “permitted” for development will be the approval date of a building permit for an individual lot. After the Date of Public Knowledge for the project, federal and state governments are no longer responsible for providing noise abatement measures for new development within the noise impact area of the proposed highway project. It is the responsibility of local governments and private landowners to ensure that noise compatible designs are used for development permitted after the Date of Public Knowledge.

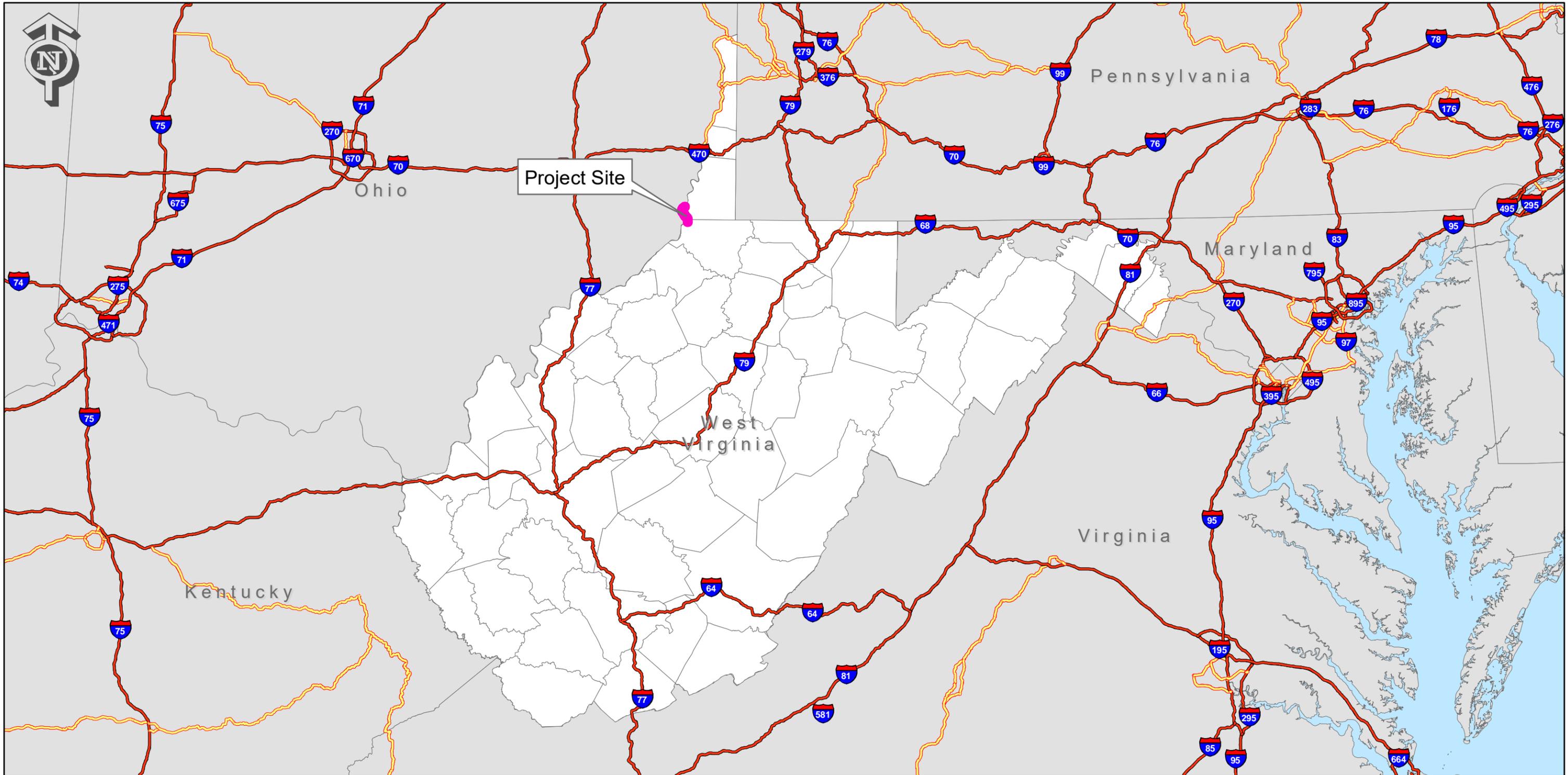
The state and federal policy applies only to developed land and to undeveloped land for which development is permitted before the project Date of Public Knowledge. Mitigation measures studied in this report are evaluated for locations to developed and undeveloped land permitted prior to the date of public knowledge.

# West Virginia 2 Expansion EA

## Marshall County

### Figure 1-1

#### Project Location



## Section 2

# Basic Noise Concepts

This section describes basic noise terminology and concepts and applicable regulations.

## 2.1 Fundamentals of Noise

Noise can be defined as unwanted sound. Traffic noise (or any noise) can disrupt normal activities when the noise reaches certain levels and when noises are distinctly louder than the typical ambient noise environment. Sound is commonly represented by the dimensionless units of “decibels”, represented by the abbreviation “dB”. Sound from highway traffic is primarily generated from tire-pavement interaction, vehicle exhaust, and engines. Vehicle traffic sounds are generally considered to be unwanted, or noise, to most people.

The magnitude of noise or the deviation from the ambient is usually described by sound pressure. The magnitude of noise is usually described by a ratio of its sound pressure to a reference sound pressure, which is usually twenty micro-Pascals (20 Pa). A logarithmic scale is used to relate sound pressure to a common reference pressure, yielding the Sound Pressure Level (SPL). SPL is measured in dimensionless units of decibels (dB) and are modified by frequency response of human hearing or weighting. Three weightings have been established for measuring sound pressure: A, B, and C. The commonly accepted limits of human hearing to detect sound magnitudes are between the threshold of hearing at 0 decibels and the threshold of pain at 140 decibels. **Figure 2-1** shows some examples of common noise sources and their sound levels.

Sound occurs over a wide range of frequencies. Sound frequencies are represented in units of Hertz (Hz), which correspond to the number of vibrations per second of a given tone. The commonly accepted audible frequency is between 20 Hz and 20,000 Hz, and human hearing is most sensitive to the frequencies between 1,000 Hz and 6,000 Hz.

The A-weighted scale is commonly used in highway traffic noise studies because it falls within the most sensitive human ear frequency (1,000 Hz to 6,000 Hz). Sound levels that are measured using the A-weighted scale are often expressed as dB(A). All noise levels in this TNA will be expressed in dB(A).

A key concept in evaluating potential noise impacts is the perceived effect of incremental increases in existing noise levels. The relationships between changes in sound levels, loudness, and acoustic energy are presented in **Table 2-1**. For example, the table shows that an increase of 3 dB(A) is barely perceptible, an increase of 5 dBA is noticeable, and that a 10 dB(A) increase would be perceived by someone to be a doubling of the noise level (loudness).

| COMMON SOUND/NOISE LEVELS |     |                             |
|---------------------------|-----|-----------------------------|
| Outdoor                   | dBA | Indoor                      |
|                           | 110 | Rock band at 5 meters       |
| Jet flyover at 300 meters |     |                             |
| Pneumatic hammer          | 100 | Subway train                |
| Gas lawn mower at 1 meter |     |                             |
|                           | 90  | Food blender at 1 meter     |
|                           |     |                             |
| Downtown (large city)     | 80  | Garbage disposal at 1 meter |
|                           |     | Shouting at 1 meter         |
| Lawn mower at 30 meters   | 70  | Vacuum cleaner at 3 meters  |
| Commercial area           |     | Normal speech at 1 meter    |
| Air conditioning unit     | 60  | Clothes dryer at 1 meter    |
| Babbling brook            |     | Large business office       |
| Quiet urban (daytime)     | 50  | Dishwasher (next room)      |
|                           |     |                             |
| Quiet urban (nighttime)   | 40  | Library                     |
|                           |     |                             |
|                           | 30  |                             |
|                           |     |                             |
|                           | 20  |                             |
|                           |     |                             |
|                           | 10  |                             |
|                           |     | Threshold of hearing        |
|                           | 0   |                             |

Source: FHWA

Figure 2-1 Common Sound/Noise Levels

**Table 2-1 Relationships between changes in Sound Levels, Loudness, and Acoustic Energy**

| Sound Level Change | Change in Loudness<br>1,2 | Relative Change in<br>Acoustic Energy 3 |
|--------------------|---------------------------|---|
| +30 dB(A)          | Eight Times as Loud       | 1,000                                   |
| +20 dB(A)          | Four Times as Loud        | 100                                     |
| +10 dB(A)          | Twice as Loud             | 10                                      |
| +5 dB(A)           | Readily Perceptible       | ~3                                      |
| +3 dB(A)           | Barely Perceptible        | 2                                       |
| 0 dB(A)            | No Change                 | 0                                       |
| -3 dB(A)           | Barely Perceptible        | 1 / 2                                   |
| -5 dB(A)           | Readily Perceptible       | ~1 / 3                                  |
| -10 dB(A)          | Half as Loud              | 1 / 10                                  |
| -20 dB(A)          | 1/4 as Loud               | 1 / 100                                 |
| -30 dB(A)          | 1/8 as Loud               | 1 / 1000                                |

Source: FHWA 2011

Note:

<sup>1</sup> Loudness pertains only to the perceived magnitude of a sound or sounds. Loudness does not describe the tonal qualities of one or more sounds. Two sounds can have the same sound level magnitudes, and can sound “just as loud”, and be distinguishable because of differing tones (frequencies).

<sup>2</sup> Relative to the loudness of an initial sound level. E.g. the loudness of a 63 dB(A) sound would be barely perceptible from the loudness of a 60 dB(A) sound. An 80 dB(A) sound would generally be perceived as four times as loud as a 60 dB(A) sound.

<sup>3</sup> Relative to the acoustic energy of an initial sound level. E.g. a sound level of 63 dB(A) has twice the acoustic energy as an initial sound level of 60 dB(A). A sound level of 80 dB(A) has 100 times the acoustic energy as 60 dB(A).

The degree of disturbance or annoyance of unwanted sound depends essentially on three things:

1. The amount and nature of intruding noise;
2. The relationship between the ambient noise and the intruding noise; and
3. The type of activity occurring when the intruding noise is heard.

In considering the first of these three factors, it is important to note that individuals have different hearing sensitivity to noise. Loud noises bother some more than others and some individuals become angered if an unwanted noise persists. The time patterns of noise also enter into a person’s judgment of whether or not a noise is objectionable. For example, noises occurring during sleeping hours are usually considered to be more objectionable than the same noises in the daytime.

With regard to the second factor, individuals tend to judge the annoyance of an unwanted sound in terms of its relationship to noise from other sources (ambient noise). The blowing of a car horn at night, when ambient noise levels are approximately 45 dB(A), would generally be much more objectionable than the blowing of a car horn in the afternoon, when ambient noise levels might be 55 dB(A).

Over a period of time, individuals tend to accept the noises that intrude into their daily lives, particularly if the noises occur at predicted intervals and are expected. Attempts have been made

to regulate many types of noises including airplane noise, factory noise, railroad noise, and highway traffic noise. In relation to highway traffic noise, methods of analysis and control have developed rapidly over the past few years.

Noise levels in this analysis are based on an  $L_{eq}$  descriptor. The  $L_{eq}$  descriptor, or equivalent sound level, refers to the steady-state (constant sound) A-weighted sound level, which contains the same acoustic energy as the actual time-varying sound levels during the same time period. In other words, the fluctuating sound levels of the traffic noise over a period of time are represented in terms of a constant noise level with the same energy content. For this analysis, the time period used corresponds with the loudest hour.

## 2.2 Traffic Noise and Propagation

The level of highway traffic noise depends on three things:

1. the volume of the traffic;
2. the speed of the traffic; and
3. the number of trucks in the flow of traffic.

Highway traffic noise is never constant. The noise level is always changing with the number, type, speed, and type of the vehicles which produce the noise as well as the driving habits of the vehicle operator. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater numbers of trucks. Vehicle noise is a combination of the noises produced by the engine, exhaust, and tires. The loudness of traffic noise can also be increased by defective mufflers or other faulty equipment on vehicles. Any condition (such as a steep incline) that causes heavy laboring of motor vehicle engines will also increase traffic noise levels. In addition, there are other more complicated factors that affect the loudness of traffic noise. For example, as a person moves away from a highway, traffic noise levels are reduced by distance, terrain and vegetation, as well as natural and manmade obstacles. **Figure 2-2** shows the effect of traffic volume, speed and trucks on noise.

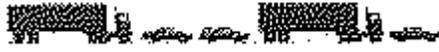
Noise emanating from a roadway can follow four paths to reach nearby receptors (**Figure 2-3**):

1. Direct Path: The noise follows a straight path from the source to the receptor.
2. Diffracted Path: The noise follows a path from the source to the top of a barrier and then is bent down toward the receptor.
3. Reflected path: The noise is bounced off of a barrier and concerns only the receptor on the opposite side of the roadway from the barrier.
4. Transmitted Path: The noise is transmitted directly through the barrier.

Thus, a wall, building, earth berm, hill, or other type of solid structure or terrain feature, if large enough, can serve as a partial sound barrier and can provide some reduction at receptors in the “shadow zone” created by the barrier. For maximum effect, the barrier must break the line of sight between the noise source and the receptor.



### How Traffic Volume Affects Traffic Noise

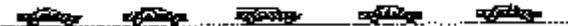
 2000 vehicles per hour sounds twice as loud as

 200 vehicles per hour

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### How Speed Affects Traffic Noise

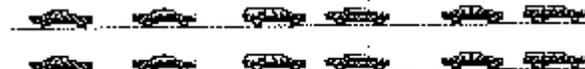
 Traffic at 65 miles per hour sounds twice as loud as

 traffic at 30 miles per hour

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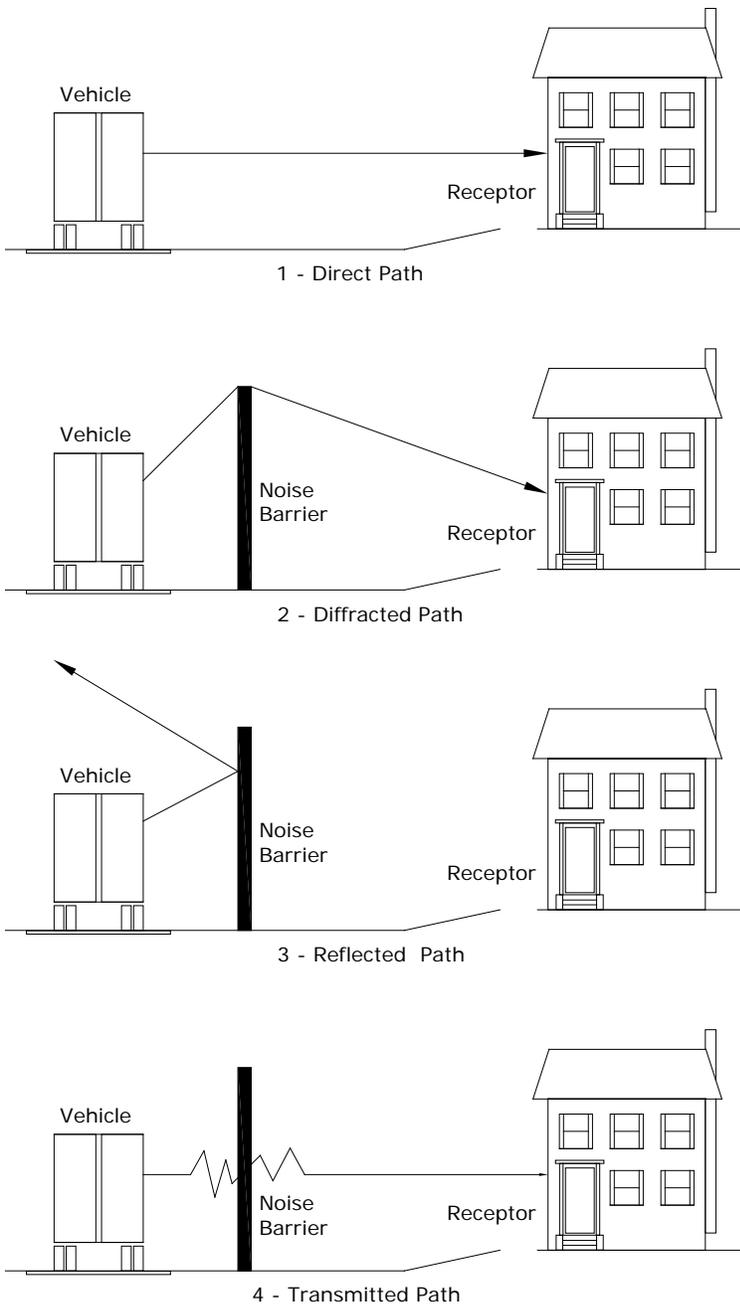
### How Trucks Affect Traffic Noise

 One truck at 55 miles per hour sounds as loud as

 12 cars at 55 miles per hour

Source: FHWA 2010

Figure 2-2 Effect of Traffic Volume, Speed, and Trucks on Noise



Source: FHWA

**Figure 2-3 Different Paths Followed by Noise**

In some cases, refracted traffic noise transmission can be more annoying than direct transmission because the occurrence are generally inconsistent and introduce exposure to sounds that are disparately different than customary. This refraction is typically caused by wind and temperature gradients.

## 2.2 Highway Noise Regulations

To determine if highway noise levels are compatible with various land uses, FHWA and WVDOH have developed noise abatement criteria (NAC) and procedures to be used in the planning and design of highways. These abatement criteria and procedures are in accordance with Title 23 CFR Part 772 and WVDOH's Noise Policy. A summary of the current FHWA NAC for various land uses is presented in **Table 2-2**.

**Table 2-2 Noise Abatement Criteria Hourly A-Weighted Sound Level in Decibels (dB(A))**

| Activity Category | Activity Leq(h) (dBA) | Evaluation Location | Activity Description  |
|-------------------|-----------------------|---------------------|---|
| A                 | 57                    | Exterior            | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.   |
| B <sup>1</sup>    | 67                    | Exterior            | Residential   |
| C <sup>1</sup>    | 67                    | Exterior            | Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. |
| D                 | 52                    | Interior            | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.  |
| E <sup>1</sup>    | 72                    | Exterior            | Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.  |
| F                 | NA                    | NA                  | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, ship yards, utilities (water resources, water treatment, electrical), and warehousing.   |
| G                 | NA                    | NA                  | Undeveloped lands that are not permitted for development.   |

Source: 23 CFR Part 772

Note: <sup>1</sup> Includes undeveloped lands permitted for this activity category.

A receptor is defined as a discrete or representative location of a noise sensitive areas, for any of the land uses listed in **Table 2-2**. Traffic noise impact occurs when predicted levels “approach” the NAC (within 1 dBA of NAC) or when predicted traffic noise levels “substantially” exceed the existing noise level. Based on WVDOH noise policy, a 15 dB(A) increase of future predicted noise levels above existing noise levels is considered a “substantial increase”.

When a traffic noise impact occurs, noise abatement measures must be considered. A noise abatement measure is any positive action taken to reduce the impact of traffic noise on an activity area. For the areas where impacts are identified, methods of noise abatement are evaluated to determine the feasibility and reasonableness of their implementation. Feasibility is primarily concerned with the acoustical and engineering ability and limitations of a noise abatement measure. Feasibility evaluation is based on many factors, including topography, availability of space, drainage, presence of other noise sources, safety, and maintenance requirements. Reasonableness is a more subjective criterion than feasibility.

## Section 3

# Ambient Noise Levels

This section describes the noise monitoring procedure and measured noise levels in the project area.

### 3.1 Noise Monitoring Procedure

The initial step in a noise analysis involves measuring ambient noise levels at various locations throughout the project area. Noise from natural and mechanical sources and human activity typically constitute the ambient noise in an area. The purpose of the ambient noise level information is to quantify the existing acoustic environment and provide a baseline for assessing the impact of future noise levels on the receptors in the vicinity of the proposed action resulting from increased traffic and the new roadway alignment. Field measurements will also assist in evaluating the level of noise reduction that may be provided by existing elements such as fences and scattered vegetation that cannot be precisely modeled by the computer. This information will be an important consideration in the determination of noise impacts and the evaluation of any associated noise abatement measures for the project. No interior noise level measurements were performed.

Noise levels were measured at 6 locations within the project study area, as shown in **Figure 3-1**. Outdoor measurements were taken using a Type 1# SoundPro DL sound level meter between Thursday November 8, 2012 and Sunday November 11, 2012. The noise meter was placed 5 feet above the ground level. Noise levels were measured for 20 minutes at each location, and the equivalent steady-state sound level ( $L_{eq}$ ) was collected for each site logged in one minute intervals. One minute data log is important to determine any aberrant noise events at each site.

### 3.2 Noise Monitoring Results

A summary of measured noise levels are provided in **Table 3-1**. Measured noise levels ranged from 43.7 dB(A) to 62.7 dB(A). Summary of output from the noise meter at each monitoring location is included in **Appendix A**. Meteorological data collected in Woodsfield, OH, approximately 14 miles east of the project area shows calm winds and no precipitation during the monitoring period. Although this meteorological station is located at a higher elevation (1,180 feet) than the project site (approximately 650 feet), this was the closest meteorological station with readily available data (Weather Underground 2012). A summary of meteorological data from the monitoring periods are presented in **Table 3-2**. Traffic data was not collected concurrently with the noise measurements.

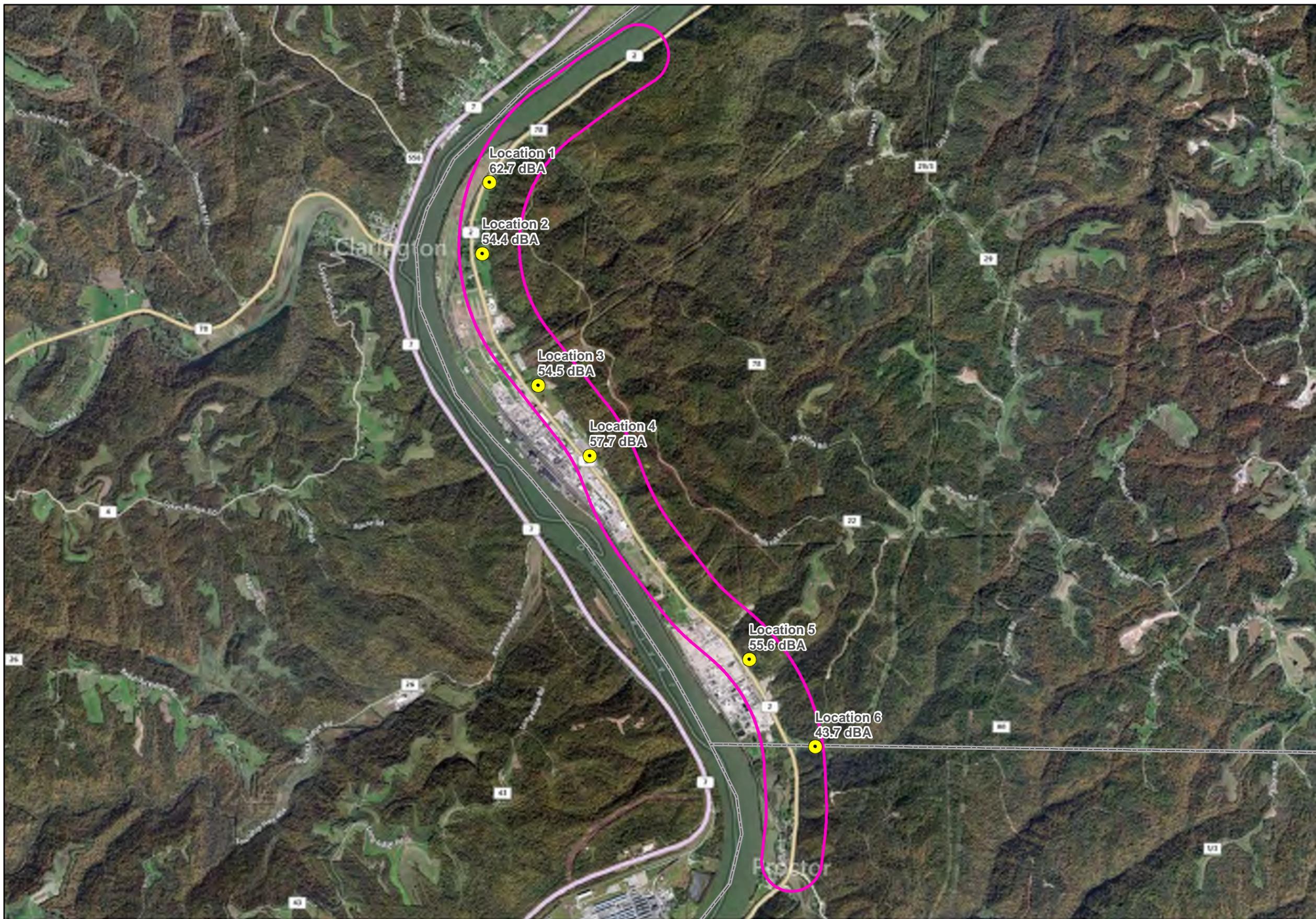
# West Virginia 2 Expansion EA

## Field Measurements

Figure 3-1

### Legend

-  Data Collection Site
-  Project Area Boundary
-  County Boundary



**Table 3-1 Measured Noise Levels**

| Monitoring Location | Monitored Period     | Land Use              | L <sub>eq</sub> (dB(A)) |
|---------------------|----------------------|-----------------------|-------------------------|
| 1                   | 11/11/12 16:37-16:57 | Residential           | 62.7                    |
| 2                   | 11/11/12 16:03-16:23 | Residential           | 54.4                    |
| 3                   | 11/11/12 15:05-15:25 | Industrial/Commercial | 54.5                    |
| 4                   | 11/09/12 12:05-12:25 | Industrial/Commercial | 57.7                    |
| 5                   | 11/08/12 15:07-15:27 | Industrial/Commercial | 55.6                    |
| 6                   | 11/08/12 11:35-11:55 | Residential           | 43.7                    |

**Table 3-2 Meteorological Data during Monitoring**

| Monitoring Location | Temperature (°F) | Dew Point (°F) | Wind Direction | Wind Speed (mph) | Relative Humidity (%) | Precipitation (in) |
|---------------------|------------------|----------------|----------------|------------------|-----------------------|--------------------|
| 1                   | 70               | 30             | ESE            | 2                | 22                    | 0                  |
| 2                   | 70               | 32             | E              | 5                | 23                    | 0                  |
| 3                   | 70               | 32             | SE             | 4                | 24                    | 0                  |
| 4                   | 50               | 33             | SSE            | 5                | 54                    | 0                  |
| 5                   | 45               | 30             | SW             | 5                | 54                    | 0                  |
| 6                   | 38               | 28             | N              | 3                | 67                    | 0                  |

Source: Station ID MOH035 Ohio Department of Transportation Monroe County Garage, Woodsfield, OH (Weather Underground 2012)

Note: This is the closest station to the project area with readily available data.

## Section 4

# Noise Analysis

This section describes the noise analysis procedure and results.

### 4.1 Noise Analysis Procedure

FHWA's Traffic Noise Model Version 2.5 (TNM2.5) traffic noise prediction and analysis software is capable of predicting highway traffic noise. Released in April 2004, TNM2.5 is the latest version currently available and is the required noise analysis software on all federal-aid highway projects. TNM2.5 predicts noise levels at receptor location based on vehicle volume, speed, fleet mix, distance to receiver, and area terrain.

The traffic noise scenarios evaluated in this analysis include the following:

- Existing (2012) loudest-hour noise levels;
- Design year (2032) No Build loudest-hour noise levels; and
- Design year (2032) Build loudest-hour noise levels.

Average daily traffic (ADT) of 4,900 and 6,300 for 2012 and 2032, respectively, provided by the WV DOT were used (Graley 2011). It was assumed that loudest-hour noise level would occur during peak traffic hour and that peak traffic hour volume is approximately 13% of ADT. Based on provided data, it was estimated that vehicle distribution for auto, medium trucks, and heavy trucks were 84%, 8%, and 8%, respectively. Table 4-1 shows the modeled traffic volumes on WV-2.

**Table 4-1 Modeled WV-2 Traffic Volume**

| Vehicle Type | Distribution | 2012 Peak Hour Traffic Volume | 2032 Peak Hour Traffic Volume |
|--------------|--------------|-------------------------------|-------------------------------|
| Auto         | 84%          | 535                           | 688                           |
| Medium Truck | 8%           | 51                            | 66                            |
| Heavy Truck  | 8%           | 51                            | 66                            |

Note: Presented traffic volumes are total volumes (i.e. all lanes) for WV-2.

Receptors in the model were placed at every residence and industrial/commercial property within the project area.

### 4.2 Model Validation

Modeled noise levels for the existing conditions were compared against monitored noise levels presented in Section 3.2 to evaluate the accuracy of the model setup. Modeled receptors closest to the monitoring locations at similar distances from the existing highway were chosen for this evaluation. **Table 4-2** compares monitored noise levels and the representative modeled noise

levels. Monitoring location number 5 was not included in the evaluation as there was no representative modeled receptor.

**Table 4-2 Measured and Modeled Noise Levels**

| Monitoring Location | Measured $L_{eq}$ (dB(A)) | Representative Modeled Receptor | Modeled $L_{eq}$ (dB(A)) | Difference (dB(A)) |
|---------------------|---------------------------|---------------------------------|--------------------------|--------------------|
| 1                   | 62.7                      | Receiver 9                      | 63.8                     | -1.1               |
| 2                   | 54.4                      | Receiver 30                     | 54.3                     | 0.1                |
| 3                   | 54.5                      | Receiver 35                     | 55.9                     | -1.4               |
| 4                   | 57.7                      | Receiver 38                     | 58                       | -0.3               |
| 6                   | 43.7                      | Receiver 48                     | 44.7                     | -1                 |

Note: Monitoring location #5 was not included in this evaluation because there was no representative modeled receptor.

All monitored noise levels were within +/- 3 dB(A), which is a threshold typically used to validate models. The measured noise levels are lower than modeled noise levels most likely because measurements were taken during non-peak traffic period and peak-hour traffic was used in the model.

### 4.3 Predicted Noise Levels

Noise levels were predicted for existing (2012) and design year (2032) loudest-hour traffic volumes at 48 receptor locations that represent existing land uses. They are numbered in numeric order beginning with "Receiver 1." Predicted noise levels for the No Build and Build scenarios were calculated and compared to the existing conditions noise levels at all modeled receptors. The magnitude of the predicted noise levels and their increase over existing levels determines if a noise impact occurs (i.e. approaching FHWA NAC or substantial increase in noise level). The predicted noise levels and noise impacts in each scenario are shown in **Appendix B**.

It was estimated that the modeled residential receptors currently experience noise levels between 45 and 70 dB(A). Their levels in 2032 are expected to be 46 to 71 dB(A) if no change is made to the existing highway design and 51 to 74 dB(A) for the proposed highway alignment and design. Impacted residences in the 2032 Build scenario are expected to be different from current locations of impact because the highway would be moving to the hillside. Most receptors that are predicted to be impacted in the 2032 Build scenario are those slated to be relocated due to encroachment of the right-of-way. The study area is primarily industrial with few scattered residential, so there would not be enough receptors benefitting from noise abatement measures, and therefore, no abatement measures are recommended.



## Section 5

### Construction Noise

The major construction activities for this project are expected to be earth removal, hauling, grading, and paving. Temporary and localized construction noise impacts will likely occur as a result of these activities. Temporary speech interference for passersby and individuals living or working near the project can be expected. Noise levels in the project area will be increased during construction. The sound levels resulting from construction activities at nearby noise-sensitive receivers will be a function of the types of equipment utilized, the duration of the activities, and the distances between construction activities and nearby land uses. Default sound levels from construction equipment used in FHWA's Roadway Construction Noise Model (RCNM) are shown in **Table 5-1**.

If meeting the project schedule requires that earth removal, grading, hauling, and/or paving must occur during evening, nighttime, and/or weekend hours in the vicinity of residences, the Contractor shall notify WVDOH as soon as possible. In such instances, all reasonable attempts shall be made to notify and to make appropriate arrangements for the mitigation of the predicted construction noise impacts upon the affected property owners and/or residents.

Low-cost and easily implemented construction noise control measures should be incorporated into the project plans and specifications to the extent possible. These measures include, but are not limited to, work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of "tail gate banging," ambient-sensitive backup alarms, construction noise complaint mechanisms, and consistent and transparent community communication.

**Table 5-1 FHWA RCNM Default Noise Emission Reference Levels and Usage Factors**

| Equipment Description           | Impact Device? | Acoustical Use Factor | Spec 721.560 Lmax @ 50ft (dB(A), slow) | Actual Measured Lmax @ 50 ft (dB(A), slow) |
|---------------------------------|----------------|-----------------------|--|--|
| Auger Drill Rig                 | No             | 20%                   | 85                                     | 84   |
| Backhoe                         | No             | 40%                   | 80                                     | 78   |
| Boring Jack Power Unit          | No             | 50%                   | 80                                     | 83   |
| Chain Saw                       | No             | 20%                   | 85                                     | 84   |
| Clam Shovel (dropping)          | Yes            | 20%                   | 93                                     | 87   |
| Compactor (ground)              | No             | 20%                   | 80                                     | 83   |
| Compressor (air)                | No             | 40%                   | 80                                     | 78   |
| Concrete Mixer Truck            | No             | 40%                   | 85                                     | 79   |
| Concrete Pump Truck             | No             | 20%                   | 82                                     | 81   |
| Concrete Saw                    | No             | 20%                   | 90                                     | 90   |
| Crane                           | No             | 16%                   | 85                                     | 81   |
| Dozer                           | No             | 40%                   | 85                                     | 82   |
| Drill Rig Truck                 | No             | 20%                   | 84                                     | 79   |
| Drum Mixer                      | No             | 50%                   | 80                                     | 80   |
| Dump Truck                      | No             | 40%                   | 84                                     | 76   |
| Excavator                       | No             | 40%                   | 85                                     | 81   |
| Flat Bed Truck                  | No             | 40%                   | 84                                     | 74   |
| Front End Loader                | No             | 40%                   | 80                                     | 79   |
| Generator                       | No             | 50%                   | 82                                     | 81   |
| Generator (<25KVA, VMS signs)   | No             | 50%                   | 70                                     | 73   |
| Gradall                         | No             | 40%                   | 85                                     | 83   |
| Grader                          | No             | 40%                   | 85                                     | N/A  |
| Grapple (on backhoe)            | No             | 40%                   | 85                                     | 87   |
| Horizontal Boring Hydr. Jack    | No             | 25%                   | 80                                     | 82   |
| Hydra Break Ram                 | Yes            | 10%                   | 90                                     | N/A  |
| Impact Pile Driver              | Yes            | 20%                   | 95                                     | 101  |
| Jackhammer                      | Yes            | 20%                   | 85                                     | 89   |
| Man Lift                        | No             | 20%                   | 85                                     | 75   |
| Mounted Impact Hammer (hoe ram) | Yes            | 20%                   | 90                                     | 90   |
| Pavement Scarifier              | No             | 20%                   | 85                                     | 90   |
| Paver                           | No             | 50%                   | 85                                     | 77   |
| Pickup Truck                    | No             | 40%                   | 55                                     | 75   |
| Pneumatic Tools                 | No             | 50%                   | 85                                     | 85   |
| Pumps                           | No             | 50%                   | 77                                     | 81   |
| Rock Drill                      | No             | 20%                   | 85                                     | 81   |
| Roller                          | No             | 20%                   | 85                                     | 80   |
| Scraper                         | No             | 40%                   | 85                                     | 84   |
| Shears (on backhoe)             | No             | 40%                   | 85                                     | 96   |
| Tractor                         | No             | 40%                   | 84                                     | N/A  |
| Vibratory Concrete Mixer        | No             | 20%                   | 80                                     | 80   |
| Vibratory Pile Driver           | No             | 20%                   | 95                                     | 101  |
| Warning Horn                    | No             | 5%                    | 85                                     | 83   |
| Welder/Torch                    | No             | 40%                   | 73                                     | 74   |

Source: USDOT 2006

## Section 6

### Conclusions

This report documents the evaluation of existing ambient noise levels at six noise monitoring locations and the assessment of predicted loudest-hour equivalent existing, No Build, and Build condition traffic noise levels and traffic noise impacts at 48 noise sensitive receptor locations in the vicinity of the project. Ten of the modeled receptors must be relocated due to the new alignment of the highway, and four of those receptors were predicted to be substantially impacted in 2023 Build scenario in their current location. Only one other receptor is expected to be impacted substantially; therefore, no abatement measures would be reasonable for this proposed project. Any subsequent project design changes may require a reevaluation of the noise impacts and abatement measures.

A copy of this traffic noise analysis will be provided to local officials to ensure, to the maximum extent possible, future developments are planned, designed, and programmed in a manner that will avoid traffic noise impacts.

Construction noise impacts, some of them potentially extreme, will occur due to the close proximity of numerous noise-sensitive receptors to project construction activities. It is the recommendation of this report that all reasonable efforts should be made to minimize exposure of noise-sensitive areas to construction noise impacts. The contractor shall notify WVDOH if construction activities are required in the vicinity of one or more residential neighborhoods.

## Section 7

### References

1. 23 CFR 772. *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.
2. Federal Highway Administration (FHWA). 2010. *Highway Traffic Noise Analysis and Abatement Guidance*. December. Available at: <http://www.fhwa.dot.gov/environment/htnoise.htm>. Accessed on: March 23, 2010.
3. Federal Highway Administration (FHWA). 2011. *Highway Traffic Noise Website*. Available at: [http://www.fhwa.dot.gov/environment/noise/regulations\\_and\\_guidance/analysis\\_and\\_abatement\\_guidance/revguidance.pdf](http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf). Accessed on: December 24, 2012.
4. U.S. Department of Transportation (USDOT). 2006. *Construction Noise Handbook*. Available at: [http://www.fhwa.dot.gov/environment/noise/construction\\_noise/handbook/](http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/). Accessed on: December 24, 2012.
5. West Virginia Division of Highways (WVDOH). 2011. *Noise Policy*.
6. G. Graley. 2011. *Memorandum to Dirar Ahmad on State Project U352-2-11.65 Proctor-Natrium Rd. Marshall & Wetzel Counties*. October 19.
7. Wilbur Smith Associates (WSA). 2005. *Alternative Alignment analysis WV-2 Proctor to Natrium & Natrium to Kent, Wetzel & Marshall Counties, West Virginia*. February 23.

# Appendix A

## Noise Monitoring Data

# West Virginia 2

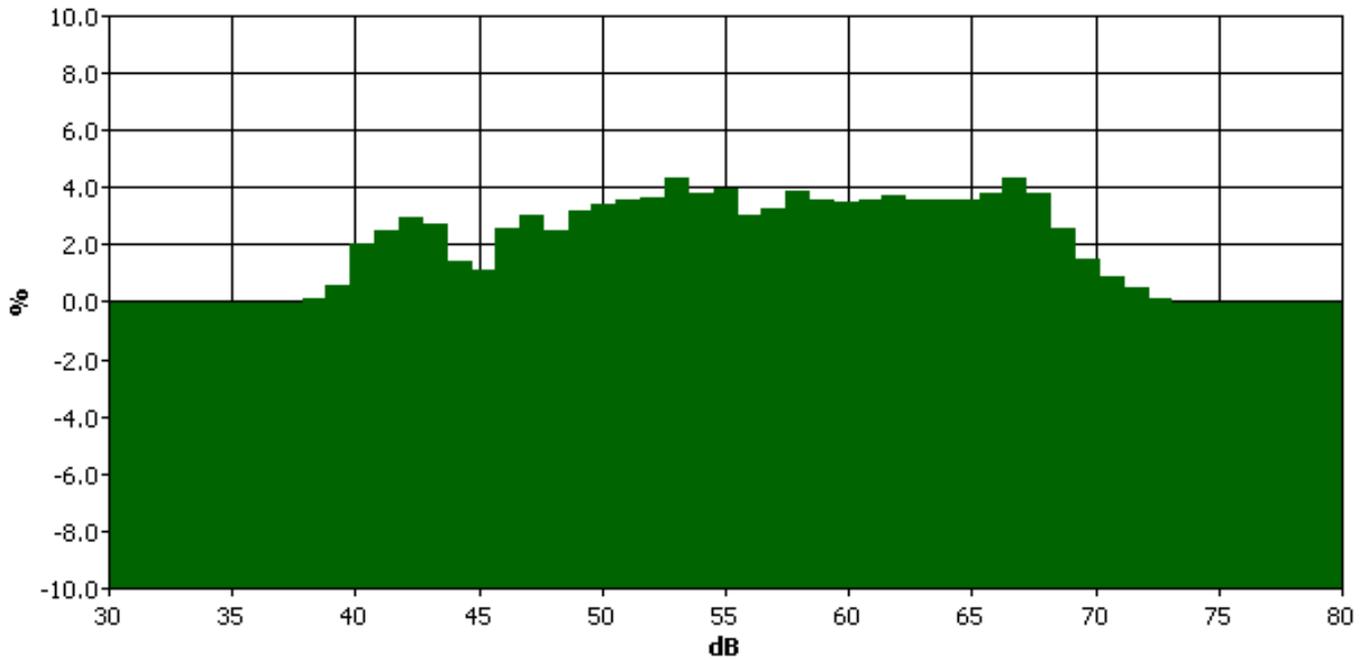
## Information Panel

Name WV2 Site 1  
Start Time Sunday, November 11, 2012 16:37:00  
Stop Time Sunday, November 11, 2012 16:57:00  
Device Model Type SoundPro DL  
Comments

## General Data Panel

| <u>Description</u> | <u>Meter</u> | <u>Value</u> | <u>Description</u> | <u>Meter</u> | <u>Value</u> |
|--------------------|--------------|--------------|--------------------|--------------|--------------|
| Leq                | 1            | 62.7 dB      | Exchange Rate      | 1            | 3 dB         |
| Weighting          | 1            | A            | Response           | 1            | SLOW         |
| Bandwidth          | 1            | 1/3          | Exchange Rate      | 2            | 5 dB         |
| Weighting          | 2            | C            | Response           | 2            | FAST         |

## Statistics Chart



# West Virginia 2

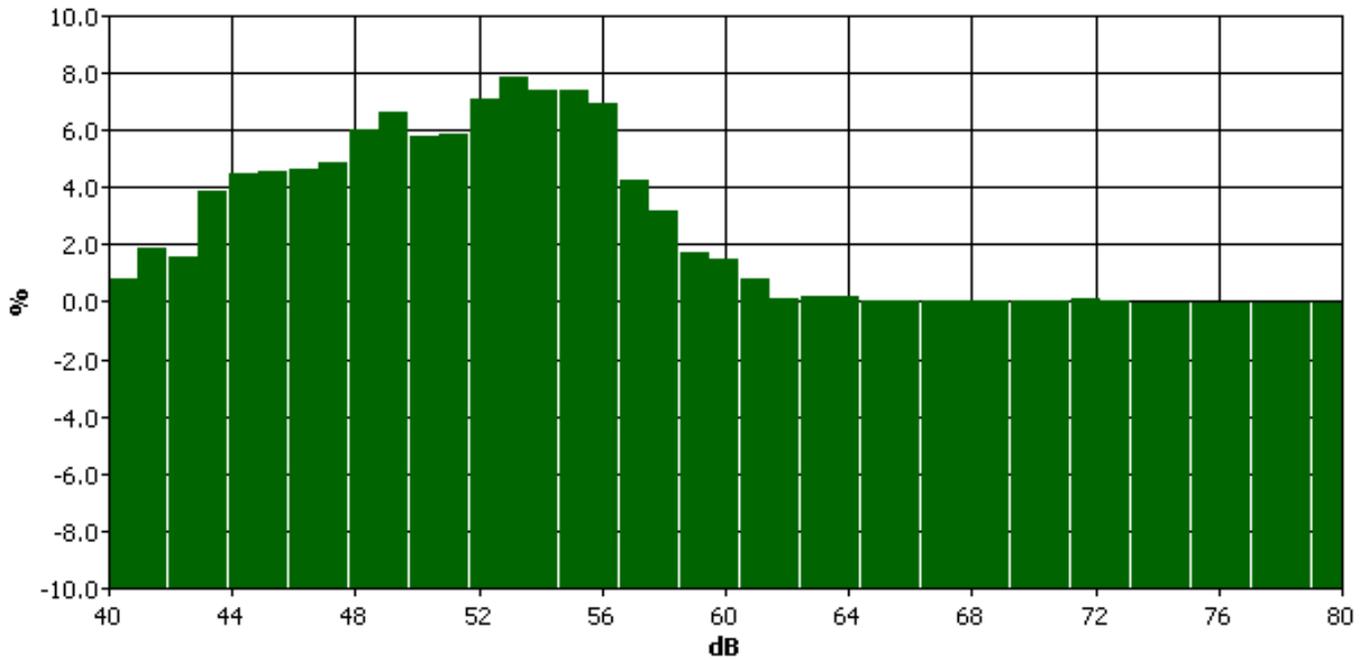
## Information Panel

Name WV2 Site 2  
Start Time Sunday, November 11, 2012 16:03:00  
Stop Time Sunday, November 11, 2012 16:23:00  
Device Model Type SoundPro DL  
Comments

## General Data Panel

| <u>Description</u> | <u>Meter</u> | <u>Value</u> | <u>Description</u> | <u>Meter</u> | <u>Value</u> |
|--------------------|--------------|--------------|--------------------|--------------|--------------|
| Leq                | 1            | 54.4 dB      | Exchange Rate      | 1            | 3 dB         |
| Weighting          | 1            | A            | Response           | 1            | SLOW         |
| Bandwidth          | 1            | 1/3          | Exchange Rate      | 2            | 5 dB         |
| Weighting          | 2            | C            | Response           | 2            | FAST         |

## Statistics Chart



# West Virginia 2

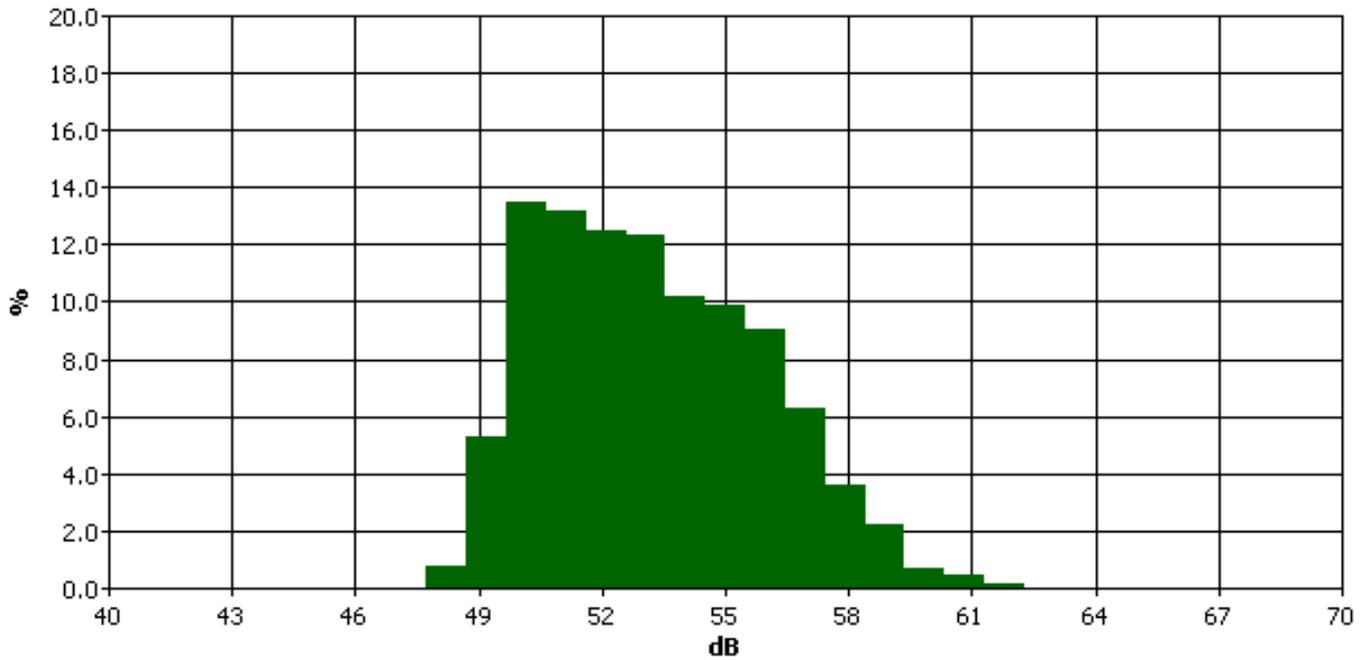
## Information Panel

Name WV2 Site 3  
Start Time Sunday, November 11, 2012 15:05:00  
Stop Time Sunday, November 11, 2012 15:25:00  
Device Model Type SoundPro DL  
Comments

## General Data Panel

| <u>Description</u> | <u>Meter</u> | <u>Value</u> | <u>Description</u> | <u>Meter</u> | <u>Value</u> |
|--------------------|--------------|--------------|--------------------|--------------|--------------|
| Leq                | 1            | 54.5 dB      | Exchange Rate      | 1            | 3 dB         |
| Weighting          | 1            | A            | Response           | 1            | SLOW         |
| Bandwidth          | 1            | 1/3          | Exchange Rate      | 2            | 5 dB         |
| Weighting          | 2            | C            | Response           | 2            | FAST         |

## Statistics Chart





# West Virginia 2

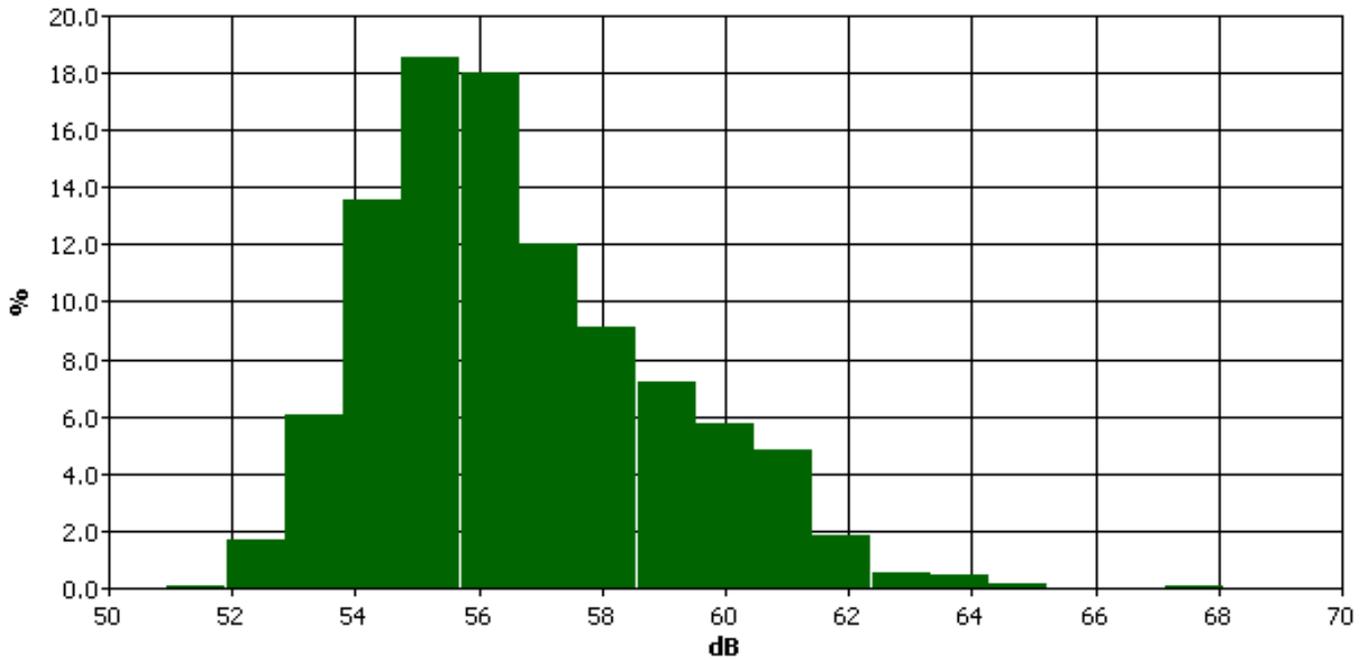
## Information Panel

Name WV2 Site 4  
Start Time Friday, November 09, 2012 12:05:00  
Stop Time Friday, November 09, 2012 12:25:00  
Device Model Type SoundPro DL  
Comments

## General Data Panel

| <u>Description</u> | <u>Meter</u> | <u>Value</u> | <u>Description</u> | <u>Meter</u> | <u>Value</u> |
|--------------------|--------------|--------------|--------------------|--------------|--------------|
| Leq                | 1            | 57.7 dB      | Exchange Rate      | 1            | 3 dB         |
| Weighting          | 1            | A            | Response           | 1            | SLOW         |
| Bandwidth          | 1            | 1/3          | Exchange Rate      | 2            | 5 dB         |
| Weighting          | 2            | C            | Response           | 2            | FAST         |

## Statistics Chart



# West Virginia 2

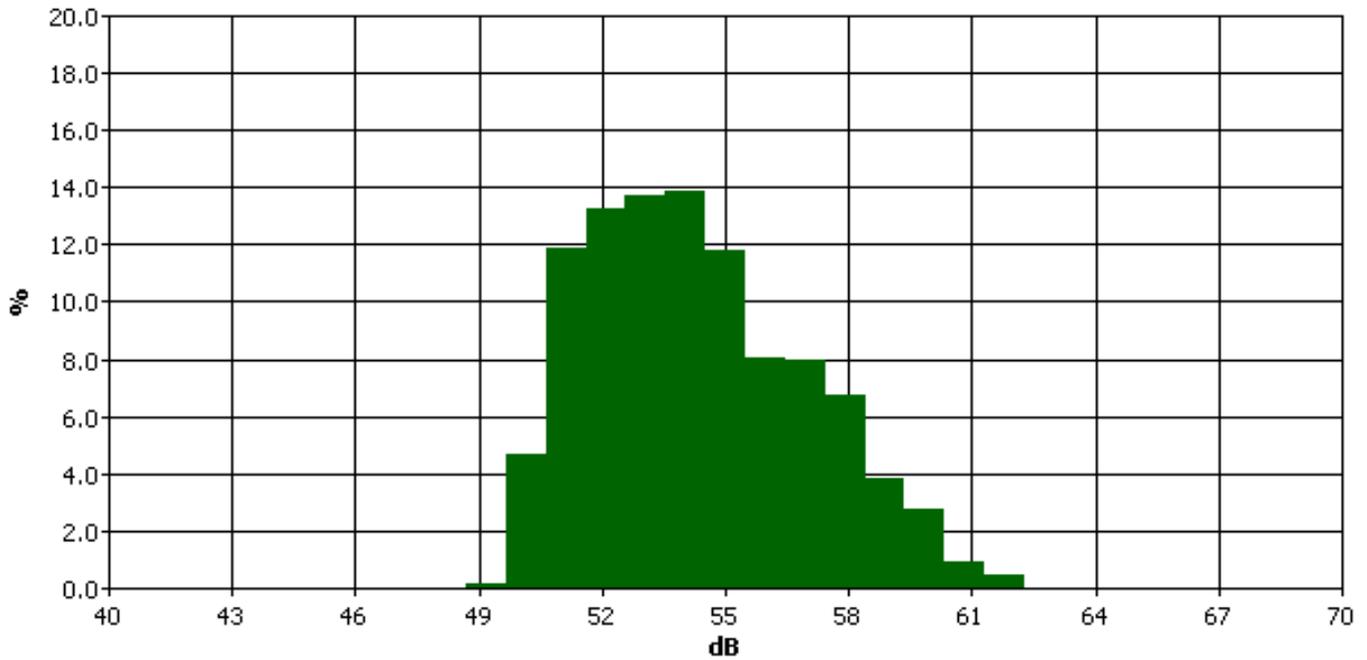
## Information Panel

Name WV2 Site 5  
Start Time Thursday, November 08, 2012 15:07:00  
Stop Time Thursday, November 08, 2012 15:27:00  
Device Model Type SoundPro DL  
Comments

## General Data Panel

| <u>Description</u> | <u>Meter</u> | <u>Value</u> | <u>Description</u> | <u>Meter</u> | <u>Value</u> |
|--------------------|--------------|--------------|--------------------|--------------|--------------|
| Leq                | 1            | 55.6 dB      | Exchange Rate      | 1            | 3 dB         |
| Weighting          | 1            | A            | Response           | 1            | SLOW         |
| Bandwidth          | 1            | 1/3          | Exchange Rate      | 2            | 5 dB         |
| Weighting          | 2            | C            | Response           | 2            | FAST         |

## Statistics Chart



# West Virginia 2

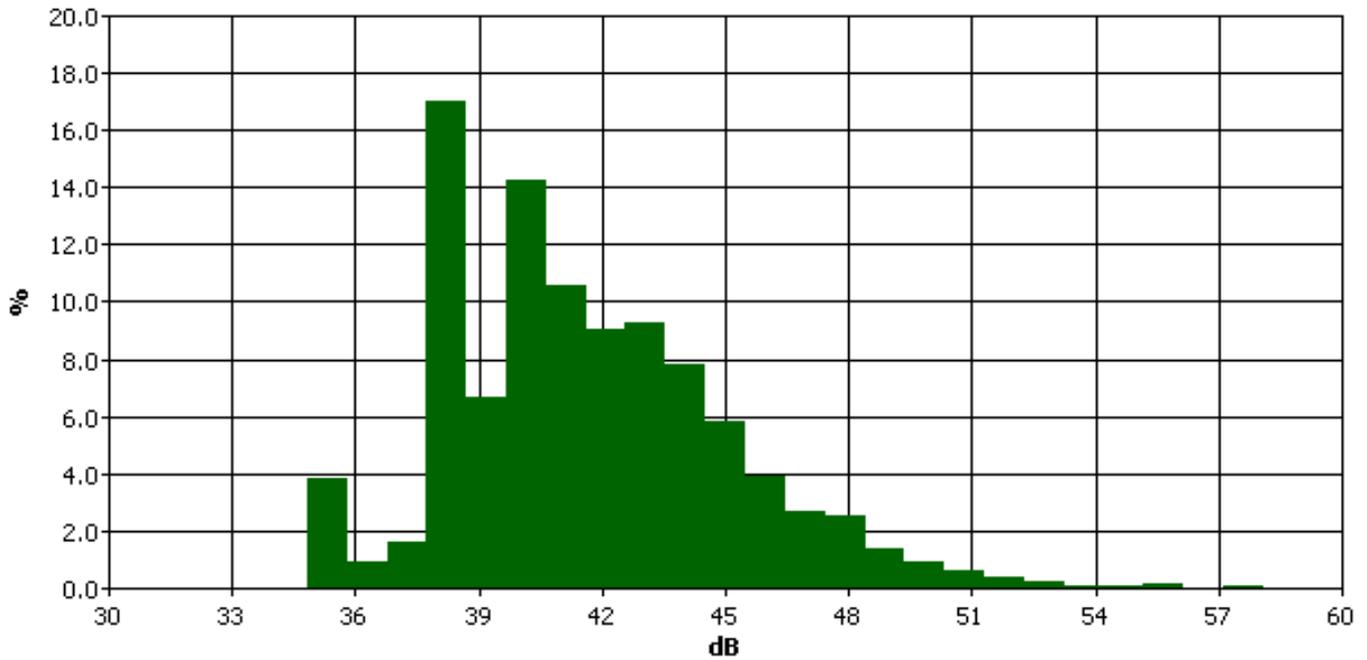
## Information Panel

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Start Time Thursday, November 08, 2012 11:35:00  
Stop Time Thursday, November 08, 2012 11:55:00  
Device Model Type SoundPro DL  
Comments

## General Data Panel

| <u>Description</u> | <u>Meter</u> | <u>Value</u> | <u>Description</u> | <u>Meter</u> | <u>Value</u> |
|--------------------|--------------|--------------|--------------------|--------------|--------------|
| Leq                | 1            | 43.7 dB      | Exchange Rate      | 1            | 3 dB         |
| Weighting          | 1            | A            | Response           | 1            | SLOW         |
| Bandwidth          | 1            | 1/3          | Exchange Rate      | 2            | 5 dB         |
| Weighting          | 2            | C            | Response           | 2            | FAST         |

## Statistics Chart



## Appendix B

### Noise Analysis Results

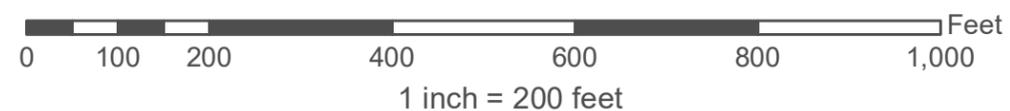
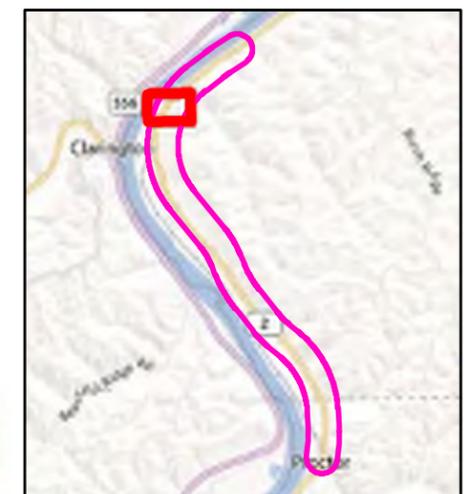
# West Virginia 2 Expansion

Noise Study Area  
2012 Existing  
Noise Results

Figure - B1

### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



# West Virginia 2 Expansion

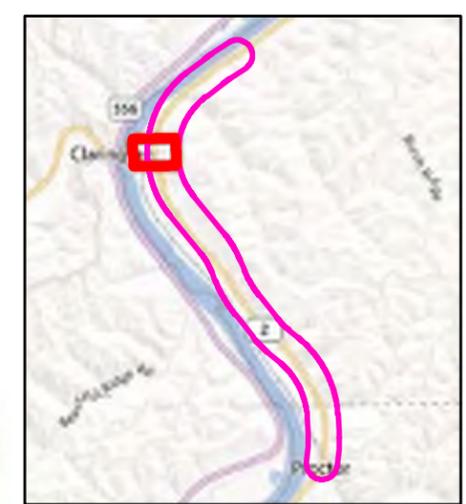
## Noise Study Area 2012 Existing Noise Results

Figure - B2



### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- County Boundary



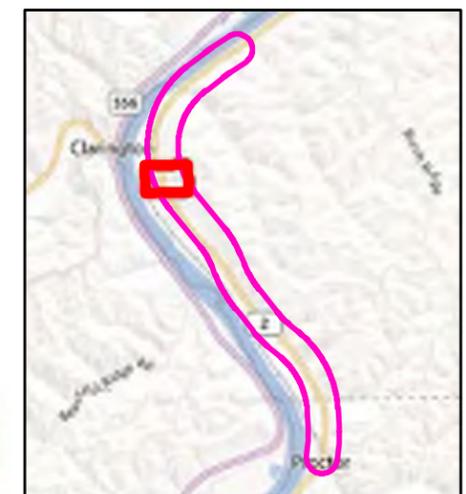
# West Virginia 2 Expansion

Noise Study Area  
2012 Existing  
Noise Results

Figure - B3

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



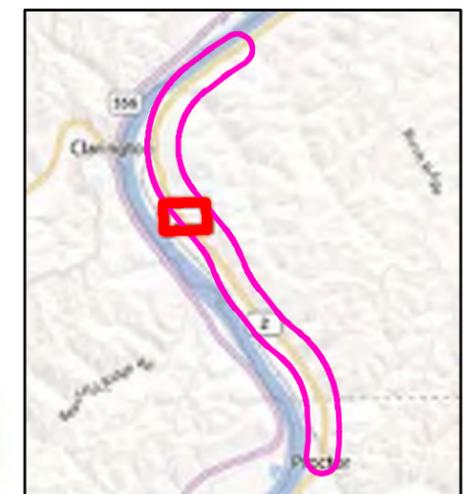
# West Virginia 2 Expansion

Noise Study Area  
2012 Existing  
Noise Results

Figure - B4

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary





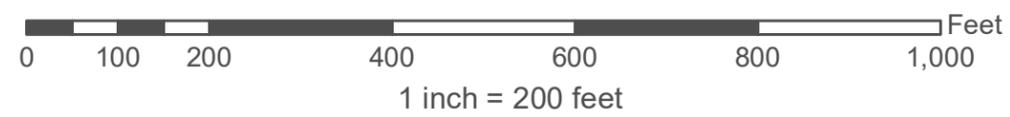
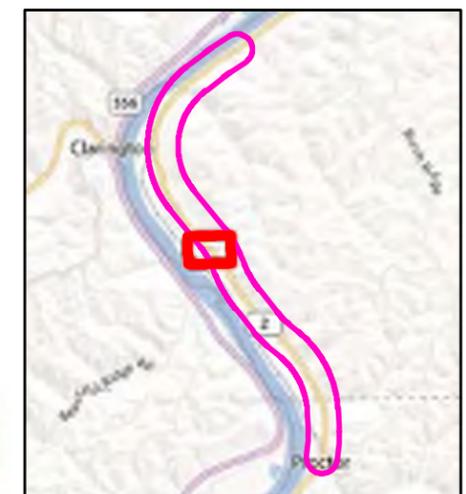
# West Virginia 2 Expansion

Noise Study Area  
2012 Existing  
Noise Results

Figure - B5

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



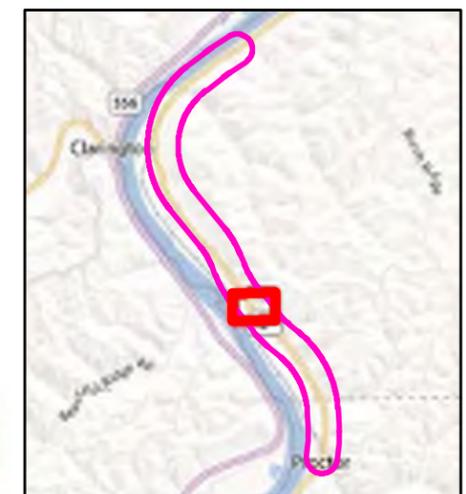
# West Virginia 2 Expansion

Noise Study Area  
2012 Existing  
Noise Results

Figure - B6

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



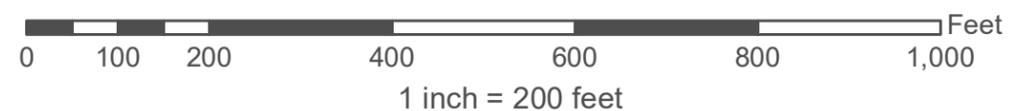
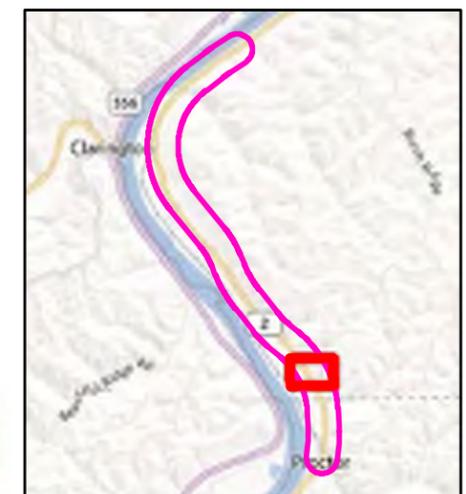
# West Virginia 2 Expansion

Noise Study Area  
2012 Existing  
Noise Results

Figure - B7

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



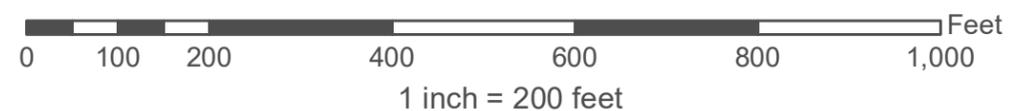
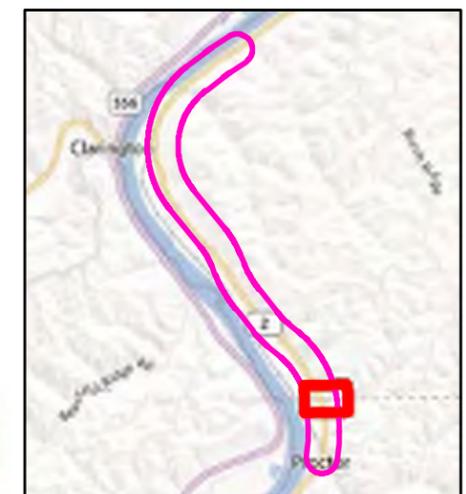
# West Virginia 2 Expansion

Noise Study Area  
2012 Existing  
Noise Results

Figure - B8

### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



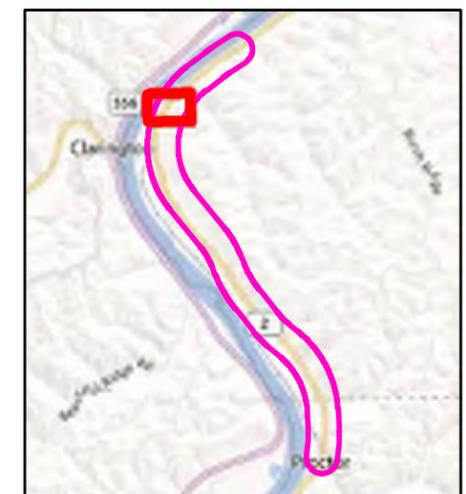
# West Virginia 2 Expansion

Noise Study Area  
2032 No Build  
Noise Results

Figure - B9

### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



# West Virginia 2 Expansion

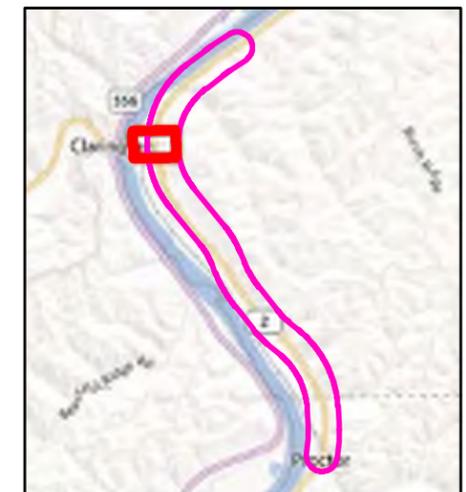
Noise Study Area  
2032 No Build  
Noise Results

Figure - B10



### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



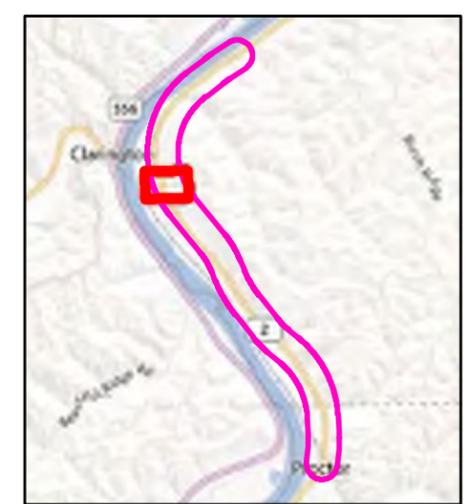
# West Virginia 2 Expansion

Noise Study Area  
2032 No Build  
Noise Results

Figure - B11

### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



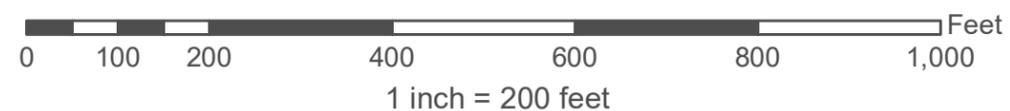
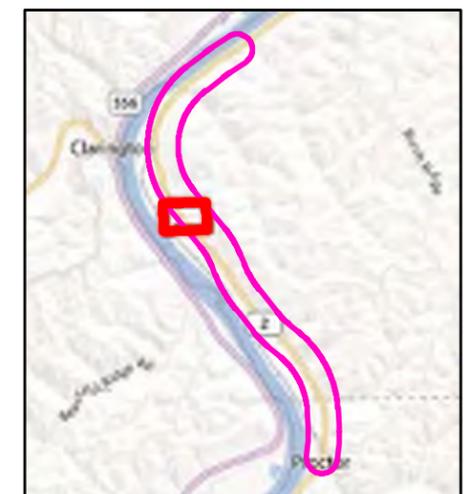
# West Virginia 2 Expansion

Noise Study Area  
2032 No Build  
Noise Results

Figure - B12

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary





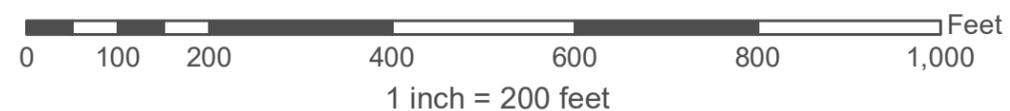
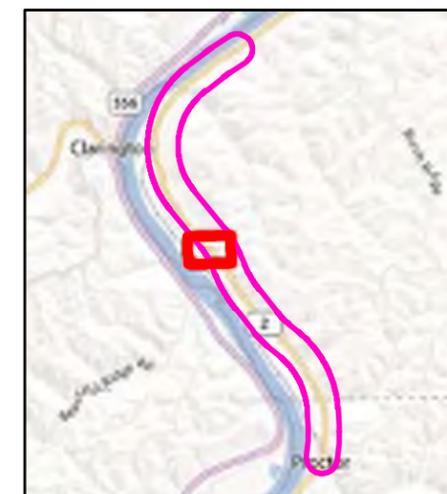
# West Virginia 2 Expansion

## Noise Study Area 2032 No Build Noise Results

Figure - B13

### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



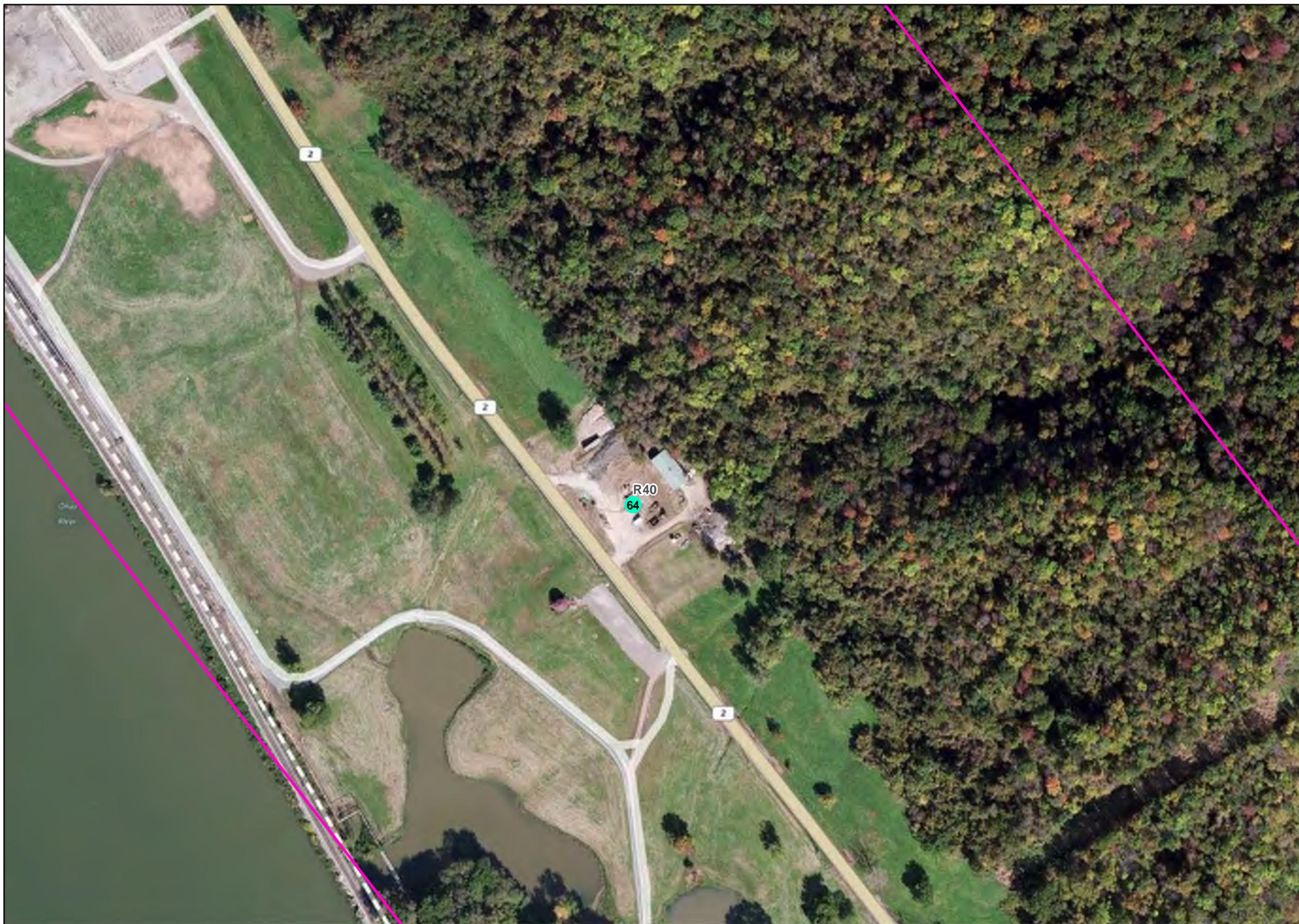
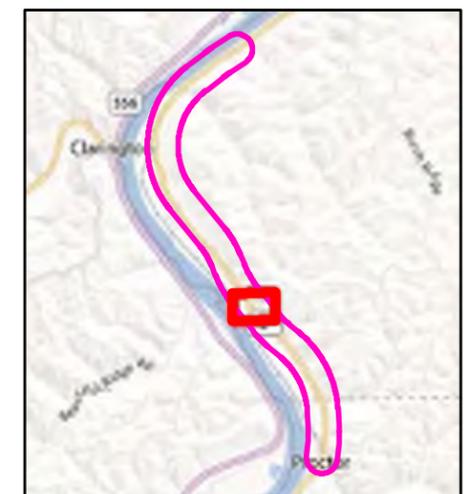
# West Virginia 2 Expansion

Noise Study Area  
2032 No Build  
Noise Results

Figure - B14

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



# West Virginia 2 Expansion

Noise Study Area  
2032 No Build  
Noise Results

Figure - B15

### Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



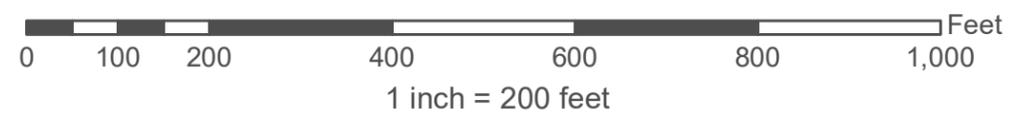
# West Virginia 2 Expansion

Noise Study Area  
2032 No Build  
Noise Results

Figure - B16

## Legend

- Not Impacted Receptor
- Impacted Receptor
- Project Area Boundary
- ⊕ County Boundary



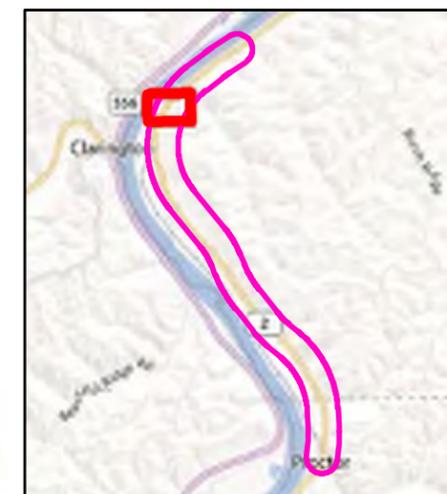
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B17

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary



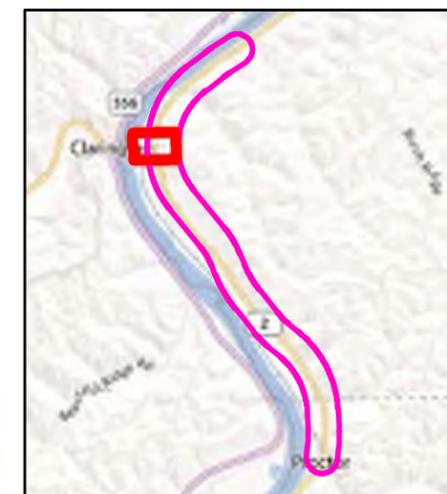
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B18

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary



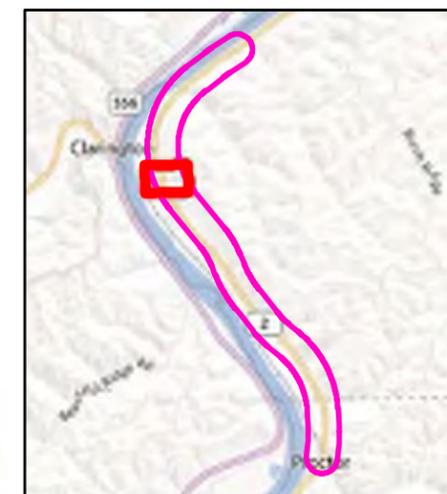
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B19

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary



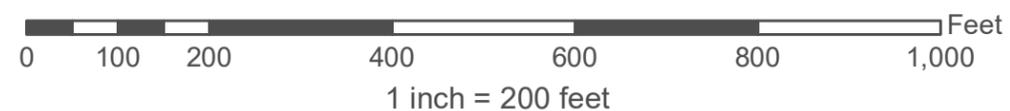
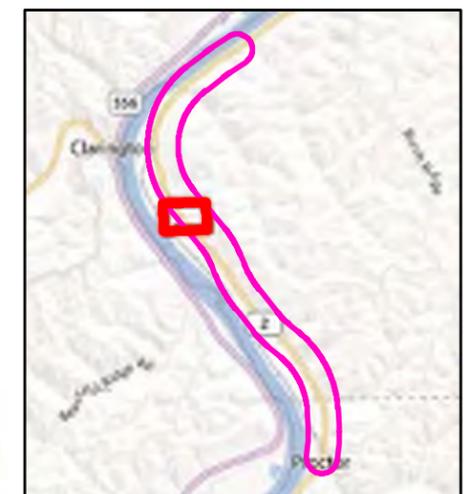
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B20

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary





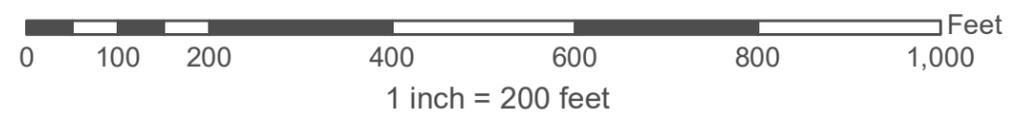
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B21

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary



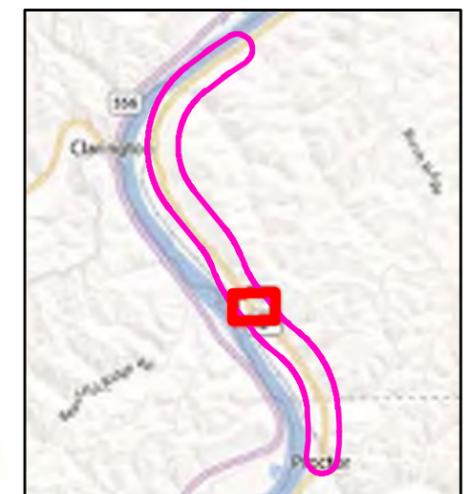
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B22

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary



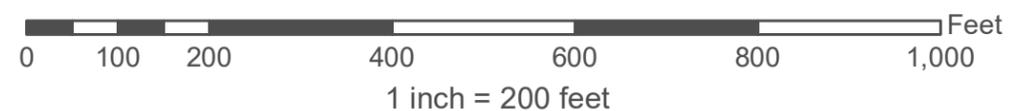
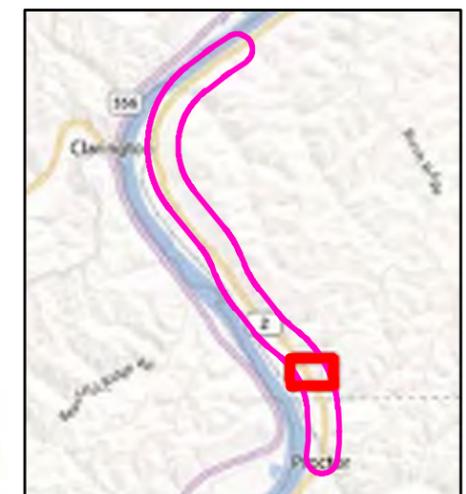
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B23

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary



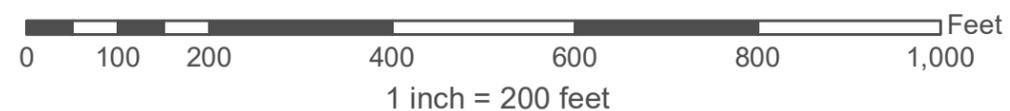
# West Virginia 2 Expansion

Noise Study Area  
2032 Build  
Noise Results

Figure - B24

## Legend

- Not Impacted Receptor
- Receptor Subject to Relocation
- Proposed Road Centerline
- Project Area Boundary
- ⊕ County Boundary



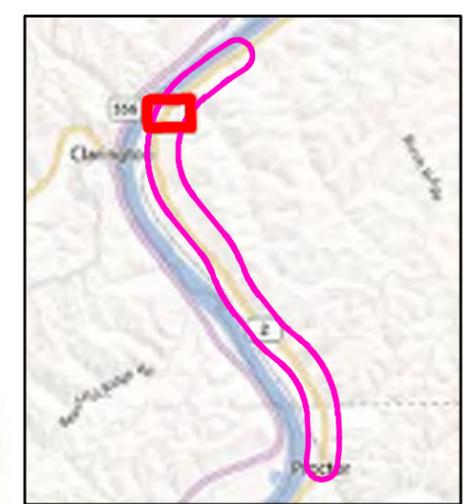
# West Virginia 2 Expansion

Noise Study Area  
NAC Categories

Figure - B25

### Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary



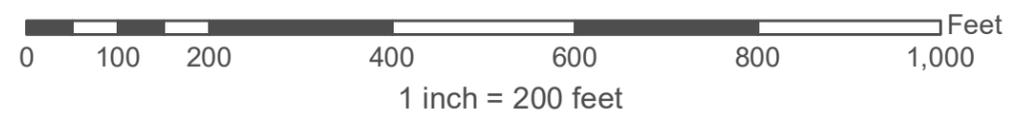
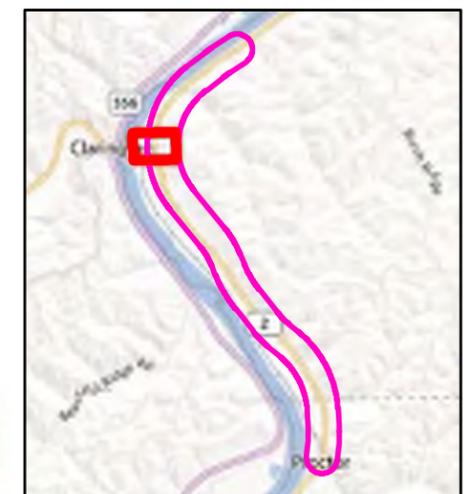
# West Virginia 2 Expansion

## Noise Study Area NAC Categories

Figure - B26

### Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary



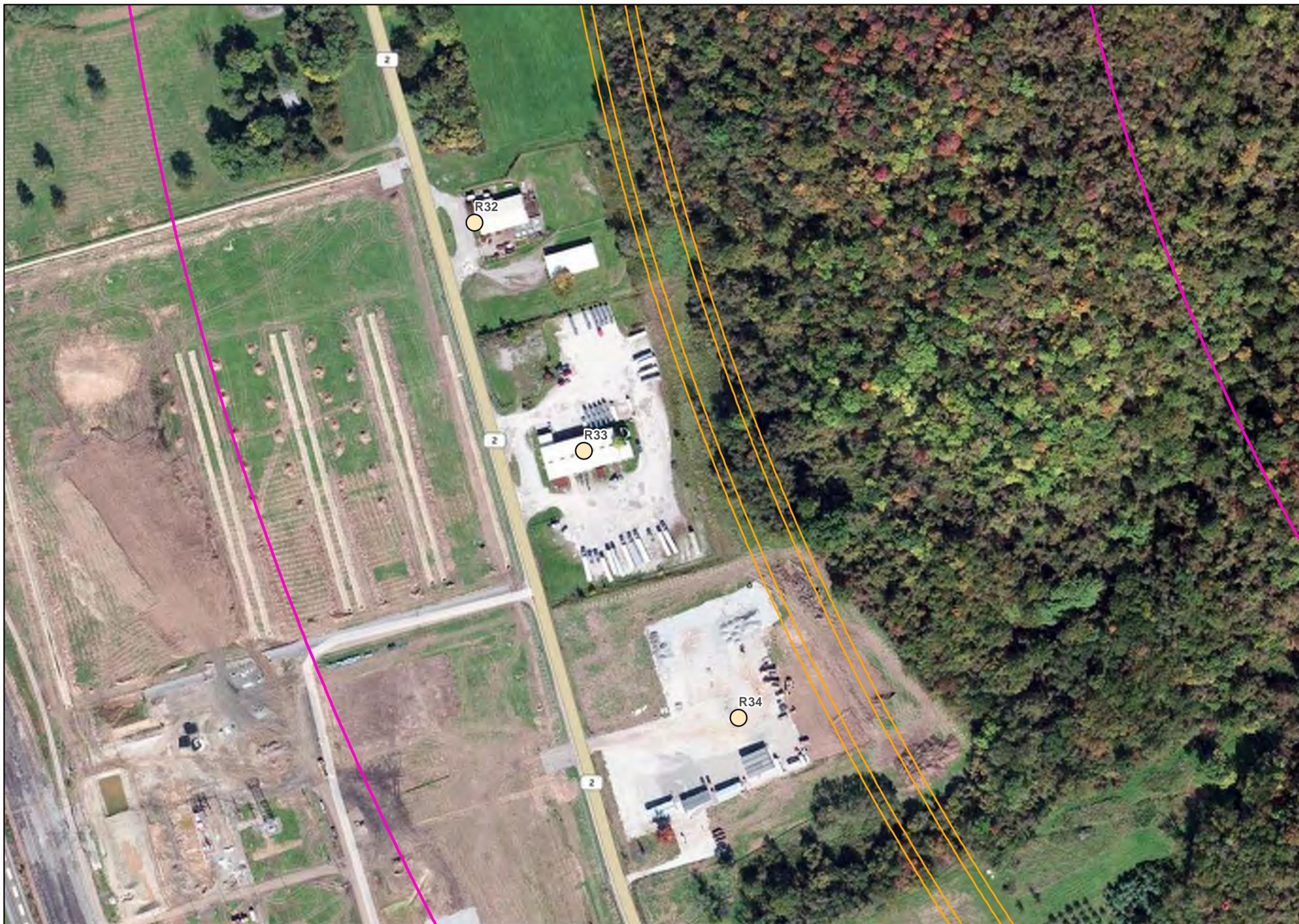
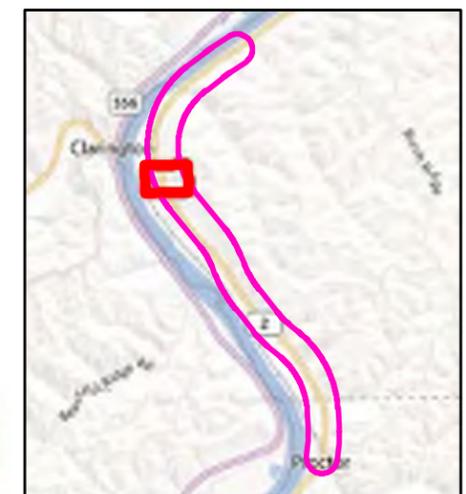
# West Virginia 2 Expansion

## Noise Study Area NAC Categories

Figure - B27

### Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary



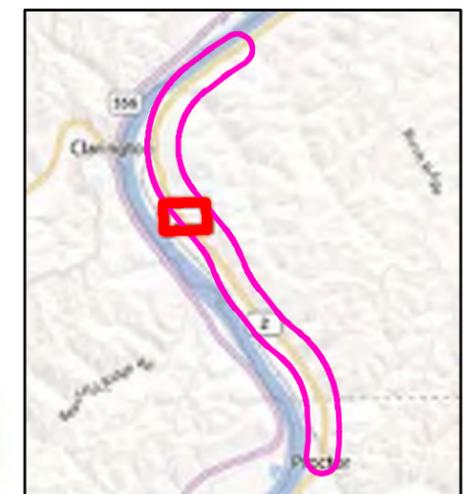
# West Virginia 2 Expansion

## Noise Study Area NAC Categories

Figure - B28

### Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary





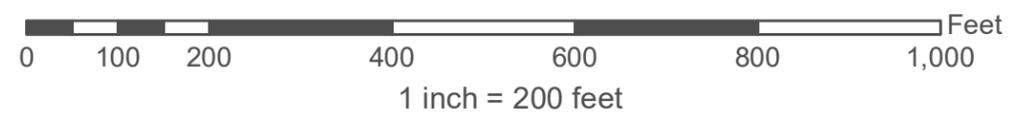
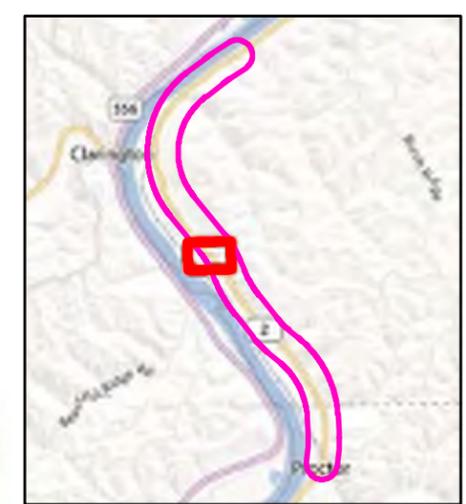
# West Virginia 2 Expansion

## Noise Study Area NAC Categories

Figure - B29

### Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary



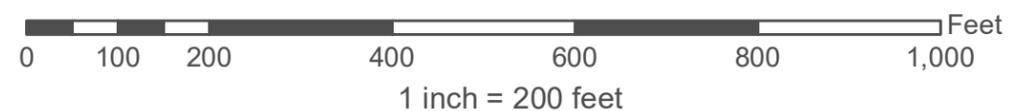
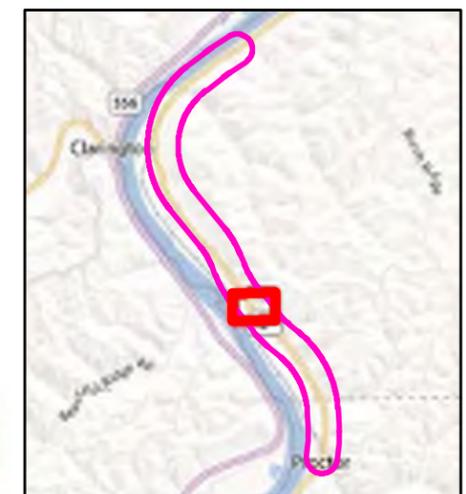
# West Virginia 2 Expansion

Noise Study Area  
NAC Categories

Figure - B30

## Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary



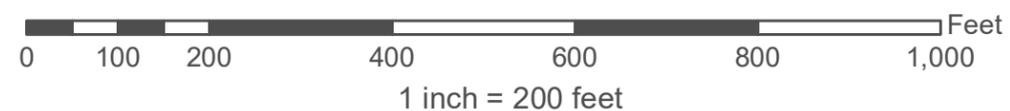
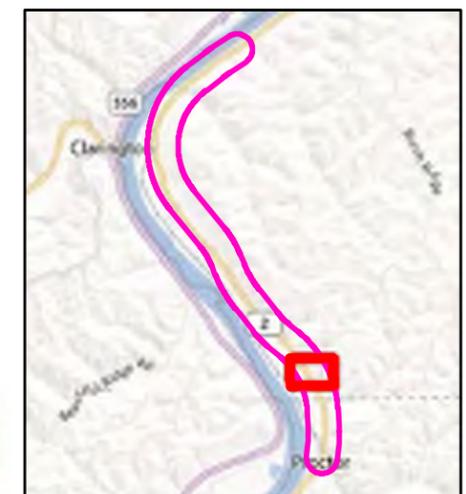
# West Virginia 2 Expansion

## Noise Study Area NAC Categories

Figure - B31

### Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary



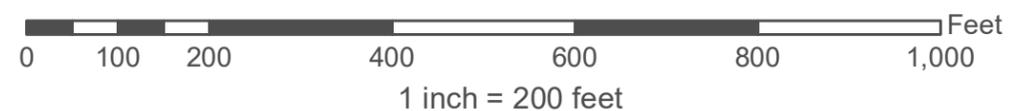
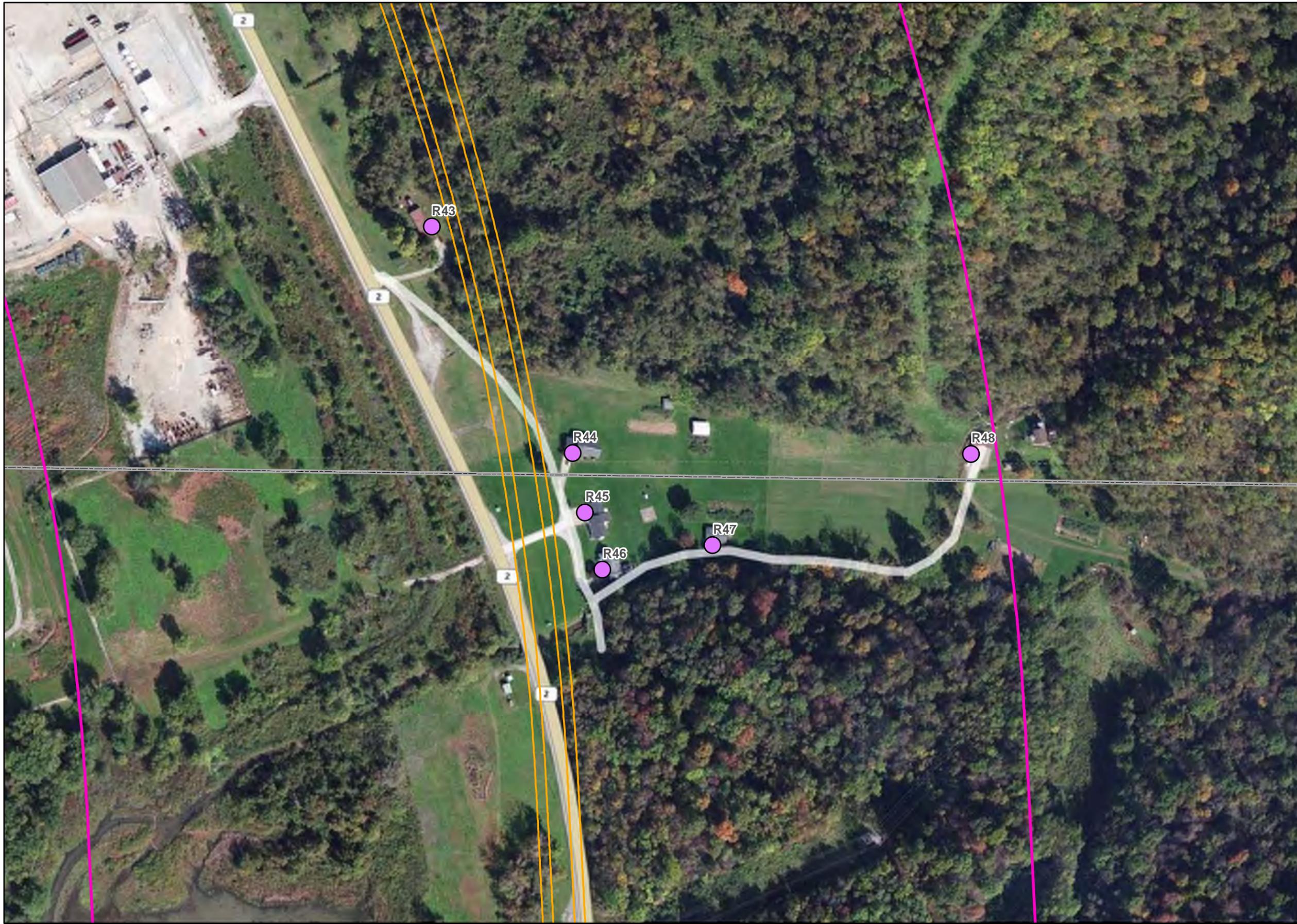
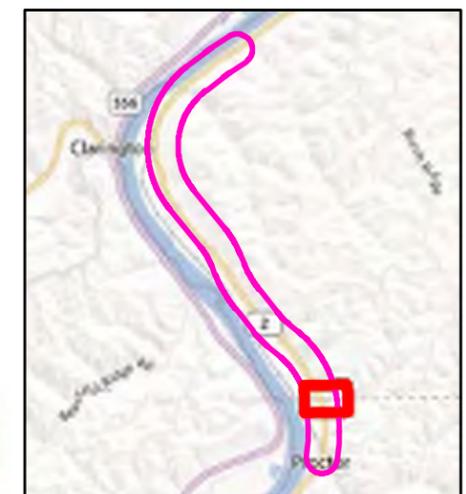
# West Virginia 2 Expansion

## Noise Study Area NAC Categories

Figure - B32

### Legend

-  Residential
-  Industrial
-  Proposed Road Centerline
-  Project Area Boundary
-  County Boundary





June 2018

# West Virginia 2 Expansion

## Noise Study – Addendum

Prepared for:



**CDM  
Smith**

---

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## Addendum Introduction

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This document is an addendum to the West Virginia 2 Expansion Noise Study (CDM Smith, 2013). The following sections present information to supplement sections *4.3 Predicted Noise Levels* and *6.0 Conclusion* in the above referenced report. A new section *4.4 Traffic Noise Abatement* has been added. The original 2013 noise study, referenced above, modeled and compared the Existing, No Build, and the Build (Alternative 1) scenarios.

To avoid impacts to a historic resource, minor shifts in the preferred alignment (Alternative 1) were required, resulting in a new alternative, Alternative 1A, the Preferred Alternative. A review of the original 2013 noise study was conducted using the current WVDOH Highway Traffic Noise Policy, effective July 13, 2011, to determine the potential for additional noise impacts associated with those shifts and determine if additional studies would be required.

After reviewing Alternative 1A, the roadway appears to have been shifted farther away from two of the five impacted noise receptors. One impacted receptor has been determined as a relocation due to right of way acquisition requirements. The remaining two receptors are considered to still be impacted and noise mitigation was evaluated for these receptors. Due to these factors, a revision to the TNM model used in West Virginia 2 Expansion Noise Study (CDM Smith, 2013) did not seem warranted.

### Changes to 2013 WV 2 Noise Study

The following sections replace the same numbered sections in the West Virginia 2 Expansion Noise Study (CDM Smith, 2013).

#### 4.3 Predicted Noise Levels

The noise levels for the proposed conditions were modeled using average daily traffic numbers for 2012 and 2032 provided by WVDOH. According to U.S. Census population estimates, the annual growth rate for Marshall and Wetzel Counties declined between 2010 and 2014 (-0.4 %). Due to the decline in population, it is anticipated that traffic volumes have also decreased during the same time period. Due to current trends it was determined that there has not been a significant increase in traffic along the corridor over the last six years.

There are 48 noise receptors spread throughout the length of the corridor, with residential receptors located predominately in the northern and southern parts of the study area, while the middle of the study area is mainly comprised of commercial receptors. In total, noise modeling indicated that nine receptors within the project area approach or exceed the NAC by 2012 traffic conditions and two additional receptors that would be approach or exceed the NAC by 2032 traffic conditions in the No Build scenario. However, the impacted receptors were reduced to five for the Build scenario, Alternative 1A (see **Appendix A of this Addendum** for the TNM results for all receptors). **Table 4-1** summarizes traffic noise impacts by scenario.



**Table 4-1: Traffic Noise Impacts by Scenario**

| Scenario                    | Impacted Receptors per 23 CFR 772 | Description*  |
|-----------------------------|-----------------------------------|---|
| 2012 Existing Conditions    | 9                                 | 9 Category B (Residential)                              |
| 2032 No Build               | 11                                | 11 Category B (Residential)                             |
| 2032 Build (Alternative 1A) | 5                                 | R-6, R-7, R-43, R-44, and R-45 Category B (Residential) |

\* Noise modeling indicated the 2032 Build scenario would impact several existing receptors; however, those receptors are slated for relocation due to encroachment on the right of way.

As stated above, the Build scenario identified four receptors that approach or exceed the NAC, with one receptor having a substantial increase over existing noise levels. The impacted receptors include R-6, R-7, R-43, R-44, and R-45 for Alternative 1A, the Preferred Alternative (shown in **Figure 4-1**). R7 exceeds the NAC and has a substantial increase from existing noise levels. **Table 4-2** summarizes traffic noise impacts for the proposed project.

**Table 4-2: Traffic Noise Impacts for the Build Scenario**

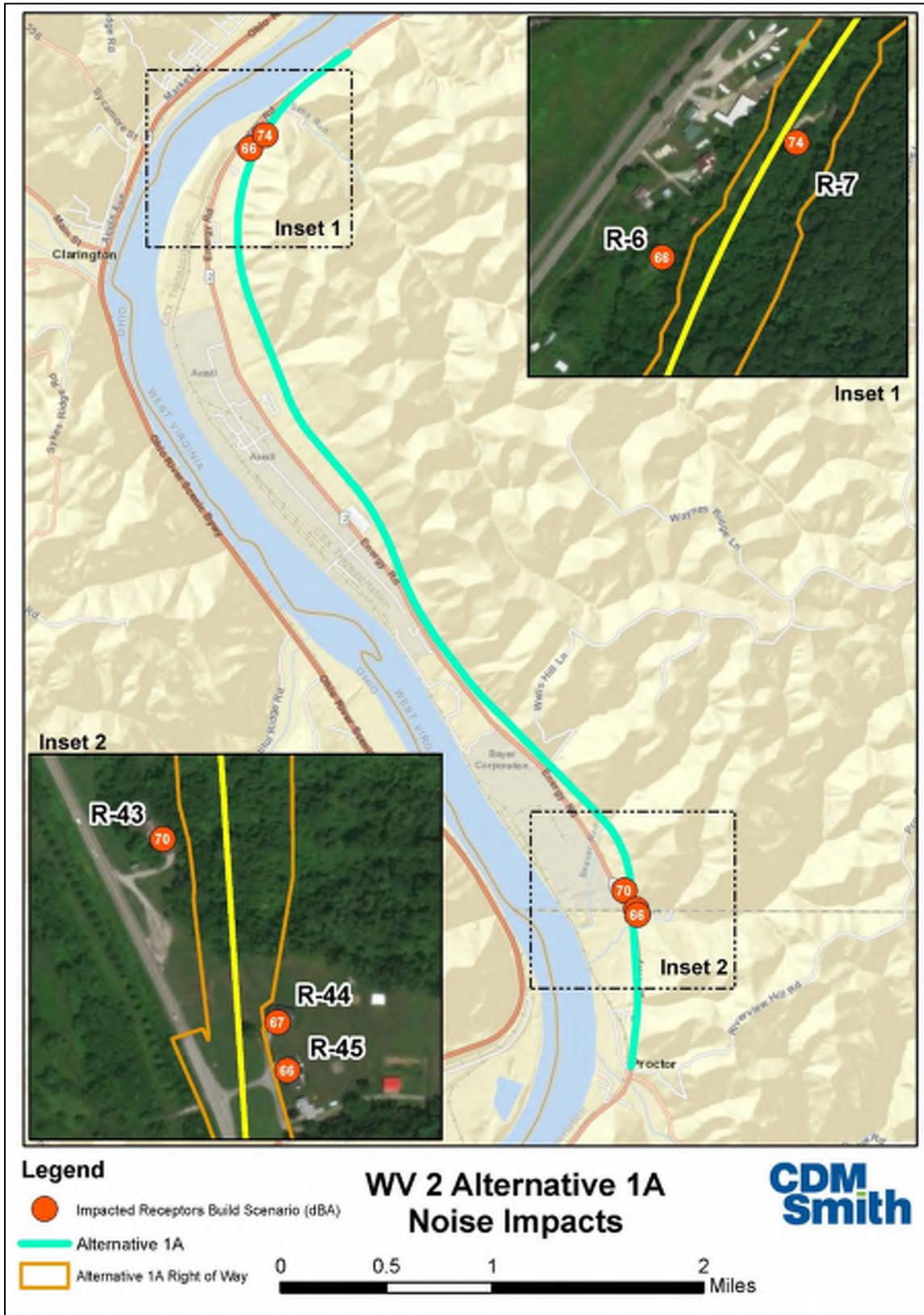
| Receptor | Existing 2012 (dBA) | No Build 2032 (dBA) | Build 2032 (dBA) | Substantial Increase Build | Mitigation   |
|----------|---------------------|---------------------|------------------|----------------------------|--|
| R-6      | 57                  | 58                  | 66               | 9                          | Roadway has been moved approximately 40 ft away from the receiver and will reduce noise levels in this area.                                   |
| R-7      | 55                  | 56                  | 74               | 19                         | Receptor to be relocated due to ROW impacts.   |
| R-43     | 60                  | 61                  | 70               | 10                         | Roadway has been moved approximately 85 ft away from the receiver and will reduce noise levels in this area.                                   |
| R-44     | 57                  | 59                  | 67               | 10                         | Noise mitigation does not seem feasible due to the property requiring direct access to proposed roadway limiting shielding from traffic noise. |
| R-45     | 58                  | 60                  | 66               | 8                          | Noise mitigation does not seem feasible due to the property requiring direct access to proposed roadway limiting shielding from traffic noise. |

#### 4.4 Traffic Noise Abatement

The project area is primarily industrial with a few scattered residential areas at the northern and southern portions of the study area. Receptor R-7 is considered a relocation and would not require any mitigation for noise. The preferred alternative, Alternative 1A has been shifted farther away from Receptors R-6 and R-43. In reviewing the Build scenario model, the NAC Category B (Residential) is exceeded at 66 dBA which is approximately 120 to 132 feet from the centerline of the roadway. R-6 is approximately 160 feet and R-43 is approximately 165 feet from the centerline of the Alternative 1A. This should reduce the noise levels for these receptors below the impact level of 66 dBA.

After reviewing the location, topography, access points, and features for receptors R-44 and R-45, it was determined that noise mitigation would not be feasible due to fact that the receptors would require direct access to the roadway facility which would limit the effectiveness of a noise barrier. Due to this, no abatement measures have been recommended for the proposed project.

Figure 4-1: Alternative 1A Noise Impacts



## 6.0 Conclusion

This addendum documents the evaluation of existing ambient noise levels at six noise monitoring locations and the assessment of predicted loudest-hour equivalent Existing, No Build, and Build (Alternative 1A) condition traffic noise levels and traffic noise impacts at 48 noise sensitive receptor locations in the vicinity of the project. Ten of the modeled receptors would be relocated due to the new alignment of the highway. The Build scenario identified four receptors that approach or exceed the NAC and one receptor that has a substantial increase over existing noise levels. Alternative 1A, the Preferred Alternative, would impact receptors R-6, R-7, R-43, R-44, and R-45 (shown in **Figure 4-1**). R7 exceeds the NAC and has a substantial increase from existing noise levels.

It was determined that noise mitigation would not be feasible for receptors R-44 and R-45 due to fact that the receptors would require direct access to the roadway facility which would limit the effectiveness of a noise barrier. Due to this, no abatement measures have been recommended for the proposed project.

A copy of this traffic noise analysis will be provided to local officials to ensure, to the maximum extent possible, future developments are planned, designed, and programmed in a manner that will avoid traffic noise impacts.

Construction noise impacts, some of them potentially extreme, will occur due to the close proximity of numerous noise-sensitive receptors to project construction activities. It is the recommendation of this report that all efforts should be made to minimize exposure of noise-sensitive areas to construction noise impacts. The contractor shall notify WVDOH if construction activities are required in the vicinity of one or more residential neighborhoods.

## APPENDIX A – Traffic Noise Modeling Results

| Receiver Name | Receiver ID | Dwelling Units | NAC Category | NAC Level | Exist     | NoBuild   | Change | Build     | Change2 |
|---------------|-------------|----------------|--------------|-----------|-----------|-----------|--------|-----------|---------|
| Receiver1     | 1           | 1              | B            | 67        | <b>66</b> | <b>67</b> | 1      | 61        | -6      |
| Receiver2     | 2           | 1              | B            | 67        | <b>66</b> | <b>67</b> | 1      | 60        | -7      |
| Receiver3     | 3           | 1              | F            | --        | 60        | 61        | 1      | 63        | 3       |
| Receiver4     | 4           | 1              | B            | 67        | 64        | 65        | 1      | 59        | -4      |
| Receiver5     | 5           | 1              | B            | 67        | 60        | 61        | 1      | 63        | 3       |
| Receiver6     | 6           | 1              | B            | 67        | 57        | 58        | 1      | <b>66</b> | 9       |
| Receiver7     | 7           | 1              | B            | 67        | 55        | 56        | 1      | <b>74</b> | 19      |
| Receiver8     | 8           | 1              | B            | 67        | 54        | 55        | 1      | 63        | 9       |
| Receiver9     | 9           | 1              | F            | --        | 64        | 65        | 1      | 55        | -9      |
| Receiver10    | 10          | 1              | B            | 67        | <b>67</b> | <b>68</b> | 1      | 53        | -14     |
| Receiver11    | 11          | 1              | B            | 67        | <b>70</b> | <b>71</b> | 1      | 53        | -17     |
| Receiver12    | 12          | 1              | B            | 67        | 57        | 58        | 1      | 54        | -3      |
| Receiver13    | 13          | 1              | B            | 67        | 60        | 61        | 1      | 52        | -8      |
| Receiver14    | 14          | 1              | B            | 67        | <b>69</b> | <b>70</b> | 1      | 53        | -16     |
| Receiver15    | 15          | 1              | B            | 67        | 65        | <b>66</b> | 1      | 53        | -11     |
| Receiver16    | 16          | 1              | B            | 67        | 60        | 61        | 1      | 54        | -6      |
| Receiver17    | 17          | 1              | B            | 67        | 64        | 65        | 1      | 54        | -10     |
| Receiver18    | 18          | 1              | B            | 67        | <b>66</b> | <b>67</b> | 1      | 53        | -13     |
| Receiver19    | 19          | 1              | F            | --        | 60        | 62        | 1      | 54        | -6      |
| Receiver20    | 20          | 1              | B            | 67        | 56        | 57        | 1      | 54        | -2      |
| Receiver21    | 21          | 1              | B            | 67        | 56        | 57        | 1      | 54        | -2      |
| Receiver22    | 22          | 1              | B            | 67        | 58        | 59        | 1      | 55        | -2      |
| Receiver23    | 23          | 1              | B            | 67        | <b>66</b> | <b>67</b> | 1      | 54        | -12     |
| Receiver24    | 24          | 1              | B            | 67        | <b>69</b> | <b>70</b> | 1      | 54        | -16     |
| Receiver25    | 25          | 1              | B            | 67        | 63        | 64        | 1      | 54        | -9      |
| Receiver26    | 26          | 1              | B            | 67        | 60        | 61        | 1      | 55        | -6      |
| Receiver27    | 27          | 1              | B            | 67        | <b>66</b> | <b>67</b> | 1      | 53        | -14     |
| Receiver28    | 28          | 1              | B            | 67        | 65        | <b>66</b> | 1      | 53        | -12     |
| Receiver29    | 29          | 1              | B            | 67        | 54        | 55        | 1      | 57        | 3       |
| Receiver30    | 30          | 1              | B            | 67        | 54        | 55        | 1      | 57        | 2       |
| Receiver31    | 31          | 1              | F            | --        | 72        | 73        | 1      | 52        | -20     |
| Receiver32    | 32          | 1              | F            | --        | 66        | 67        | 1      | 55        | -11     |
| Receiver33    | 33          | 1              | F            | --        | 60        | 61        | 1      | 57        | -3      |
| Receiver34    | 34          | 1              | F            | --        | 55        | 56        | 1      | 59        | 5       |
| Receiver35    | 35          | 1              | F            | --        | 56        | 57        | 1      | 55        | -1      |
| Receiver36    | 36          | 1              | F            | --        | 61        | 62        | 1      | 52        | -9      |
| Receiver37    | 37          | 1              | F            | --        | 61        | 63        | 1      | 51        | -10     |
| Receiver38    | 38          | 1              | F            | --        | 58        | 59        | 1      | 52        | -6      |
| Receiver39    | 39          | 1              | F            | --        | 60        | 61        | 1      | 54        | -6      |
| Receiver40    | 40          | 1              | F            | --        | 63        | 64        | 1      | 63        | 0       |

| Receiver Name | Receiver ID | Dwelling Units | NAC Category | NAC Level | Exist | NoBuild | Change | Build     | Change2 |
|---------------|-------------|----------------|--------------|-----------|-------|---------|--------|-----------|---------|
| Receiver41    | 41          | 1              | F            | --        | 52    | 53      | 1      | 61        | 9       |
| Receiver42    | 42          | 1              | F            | --        | 60    | 61      | 1      | 60        | 0       |
| Receiver43    | 43          | 1              | B            | 67        | 60    | 61      | 1      | <b>70</b> | 10      |
| Receiver44    | 44          | 1              | B            | 67        | 57    | 59      | 1      | <b>67</b> | 10      |
| Receiver45    | 45          | 1              | B            | 67        | 58    | 60      | 1      | <b>66</b> | 8       |
| Receiver46    | 46          | 1              | B            | 67        | 59    | 60      | 1      | 65        | 6       |
| Receiver47    | 47          | 1              | B            | 67        | 52    | 54      | 1      | 57        | 4       |
| Receiver48    | 48          | 1              | B            | 67        | 45    | 46      | 1      | 51        | 6       |

# APPENDIX G – AGENCY CORRESPONDENCE

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# United States Department of the Interior

## FISH AND WILDLIFE SERVICE



West Virginia Field Office  
90 Vance Drive  
Elkins, WV 26241

April 9, 2019

Mr. Ben Hark  
West Virginia Department of Transportation  
1334 Smith Street  
Charleston, West Virginia 25301

Re: WV State Route 2 Proctor to Kent, Marshall and Wetzel Counties, West Virginia  
(FWS File #: 2017-I-0860)

Dear Mr. Hark:

This responds to your April 2, 2019, request for information regarding the proposed WV State Route 2 Proctor to Kent, Marshall and Wetzel Counties, West Virginia. These comments are provided pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Based previous correspondence to this office on the proposed project, we determined that two federally listed species could occur within the range of the proposed project that may be affected by the construction and operation of the proposed project, the endangered Indiana bat (*Myotis sodalis*), and the threatened northern long-eared bat (*M. septentrionalis*) (NLEB).

A mist net survey was conducted in August 2017. A mist net report was provided to this office on December 14, 2017. No federally listed bats were captured during the survey. We concurred with this report on April 6, 2018.

Surveys are considered current for 5 years (the summer they are completed and the following four summer seasons). In this case, the survey will expire on May 15, 2022. If a significant amendment is proposed to change or expand this project, or if timber will be removed after that date, a new survey may be necessary and this office should be contacted.

No other federally listed species are anticipated to occur within the vicinity of the proposed project. Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this determination may be reconsidered.



Mr. Ben Hark  
April 9, 2019

2

If you have any questions regarding this letter, please contact Liz Stout of my staff at (304) 636-6586, ext. 15, or at the letterhead address.

Sincerely,

A handwritten signature in blue ink, appearing to read "John E. Schmidt". The signature is fluid and cursive, with a large loop at the beginning and a long tail.

John E. Schmidt  
Field Supervisor



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

West Virginia Field Office  
694 Beverly Pike  
Elkins, West Virginia 26241

### Concurrence Form for Myotis Bat Survey Reports

Contact Name: Grant Maltba

Email Address or Fax Number: grant@apogee-environmental.com

FWS File #: 2017-I-0860 **All future correspondence should clearly reference this FWS File #.**

Project: WV State Route 2 Proctor to Kent, Marshall and Wetzel Counties, WV

The U.S. Fish and Wildlife Service (Service) has reviewed the report on the bat **mist net** survey conducted in the proposed project area and submitted on December 14, 2017. The survey followed the protocol outlined in the current Range-wide Indiana Bat Summer Survey Guidelines. These Guidelines are acceptable to address the endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*) (NLEB). These comments are provided pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) The survey covered 8.4 acres kilometers of potential bat habitat and was conducted at 9 net sites from 8/7/2017 to 8/8/2017. No Indiana bats were captured.

0 NLEB were captured and 0 were tracked during this survey.

Surveys are considered current for 5 years (the summer they are completed and the following four summer seasons). In this case, the survey will expire on May 15, 2022. If a significant amendment is proposed to change or expand this project, or if timber will be removed after that date, a new survey may be necessary and the Service should be contacted.

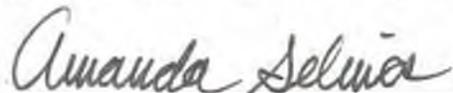
The area was surveyed for caves and abandoned mine portals and none were found in the project area.

Based on the information provided to us, the Service has concluded that no Indiana bats or NLEB are expected to be adversely affected by the project. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If there is a Federal nexus for the project (e.g., Federal funding provided, Federal permits required to construct), no tree clearing or any project construction activities on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the Federal action agency, is completed. Section 7 consultation is not complete until the Federal action agency submits a determination of effects to this

office, the Service concurs with the Federal action agency's determination. If there is no Federal nexus associated with this project, then no further coordination with this office is required.

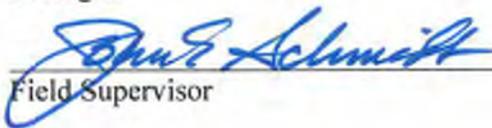
Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this determination may be reconsidered.

If you have any questions regarding these comments, please contact the biologist listed below at (304) 636-6586 or at the letterhead address.



Date: 4/3/2018

Biologist



Date: 4/6/18

Field Supervisor



RECEIVED  
MAY 04 2018  
ENGINEERING  
DIVISION

**DIVISION OF NATURAL RESOURCES**

Wildlife Resources Section  
Elkins Operations Center  
738 Ward Rd., PO Box 67  
Elkins, WV 26241  
Telephone 304-637-0245  
Fax 304-637-0250

Stephen S. McDaniel  
Director

April 30, 2018

Mr. Ben Hark  
Division of Highways  
Engineering Division  
1334 Smith Street  
Charleston, WV 25301

Dear Mr. Hark:

We have reviewed Natural Heritage Program files for information on rare, threatened and endangered (RTE) species and natural trout streams for the areas of the proposed highway projects:

|    |   |  |
|----|---|--|
| RE | State Project S327-62-19.55<br>Federal Project STP-0062(817)D<br>Point Pleasant 6 <sup>th</sup> Street Bridge<br>Mason County | There are no known occurrences of any RTE species or natural trout streams within the project area.  |
| SB | State Project 36-33-1.76, 2.22<br>Allegheny Mountain Curves<br>Pendleton County   | There are no known occurrences of any RTE species or natural trout streams at the project sites; however this project falls within Virginia big-eared bat habitat buffers, and within the critical habitat buffer for the Indiana bat. |
| SB | State Project U331-7-35.35<br>Federal Project CMAQ-0007(247)D<br>WV 7 & CR 857<br>Monongalia County                           | There are no known occurrences of any RTE species or natural trout streams within the project area.  |
| NM | State Project E339-901/13-U07.17 00<br>Federal Project FEMA-4331(020)<br>Fike Drive Bridge<br>Preston County                  | There are no known occurrences of any RTE species or natural trout streams at the project site; however this project falls within a habitat buffer for the Virginia big-eared bat.   |
| ?  | State Project U354-2-23.11 07<br>WV 2 Parkersburg to St. Mary's Road<br>BOND PROJECT<br>Wood County                           | There are no known occurrences of any RTE species or natural trout streams within the project area.  |

|    |  |  |
|----|--|--|
| RC | State Project 24-7-1.90<br>Big Sandy Pipe Replacement<br>McDowell County   | There are no known occurrences of any RTE species or natural trout streams within the project area.  |
| SB | State Project S310-15-12.73<br>Federal Project STP-0015(109)D<br>Paint Creek Arch<br>Fayette County                    | There are no known occurrences of any RTE species or natural trout streams at the project site; however this project falls within habitat buffers for the Indiana bat.   |
| SB | State Project S310-15-13.61<br>Federal Project STP-0015(106)D<br>Milburn Bridge<br>Fayette County                      | There are no known occurrences of any RTE species or natural trout streams at the project site; however this project falls within habitat buffers for the Indiana bat.   |
| TB | State Project 28-20-11.40<br>TURNPINKE BOND WAVE 2<br>Princeton Overhead Bridge<br>Mercer County                       | There are no known occurrences of any RTE species or natural trout streams within the project area.  |
| SM | State Project S341-3-0.77<br>Federal Project STP-0003(241)D<br>Marsh Fork Bridge Project<br>Raleigh County             | There are no known occurrences of any RTE species or natural trout streams at the project site; however this project falls within a habitat buffer for the Indiana bat. A mussel survey is required prior to any in-stream work. |
| TC | State Project U352-2-11.66 00<br>Federal Project NH-0002(528)D<br>WV 2 Proctor to Kent<br>Marshall and Wetzel Counties | There are no known occurrences of any RTE species or natural trout streams within the project area.  |

The Wildlife Resources Section knows of no surveys that have been conducted in these areas for rare species or rare species habitat. Consequently, this response is based on information currently available and should not be considered a comprehensive survey of the areas under review.

Thank you for your inquiry, and should you have any questions please feel free to contact me at the above number, extension 2048.

APR 30 2018

Sincerely,



Barbara Sargent  
Environmental Resources Specialist  
Environmental Coordination  
Operations Unit

**From:** Cummings, Traci L  
**To:** [Alison Rogers](#); [Hark, Ben L](#); [Mullins, Sondra L](#); [Demott, Rodney C](#); [Balderson, Lisa L](#)  
**Cc:** [Clegg, Larry P](#); [Goodin, Krista R](#)  
**Subject:** Fw: State Project U352-2-1.66 00/ WV2 Proctor to Kent Widening, Wetzel County, West Virginia  
**Date:** Thursday, May 17, 2018 10:48:42 AM

---

FYI

---

**From:** Kimberly Penrod <kpenrod@delawarenation.com>  
**Sent:** Thursday, May 17, 2018 9:37:34 AM  
**To:** Cummings, Traci L  
**Subject:** RE: State Project U352-2-1.66 00/ WV2 Proctor to Kent Widening, Wetzel County, West Virginia

Traci,

The protection of our tribal cultural resources and tribal trust resources will take all of us working together.

We look forward to working with you and your agency.

With the information you have submitted we can concur at present with this proposed plan.

As with any new project, we never know what may come to light until work begins.

The Delaware Nation asks that you keep us up to date on the progress of this project and if any discoveries arise please contact us immediately.

Our department is trying to go as paper free as possible. If it is at all feasible for your office to send email correspondence we would greatly appreciate.

Please update your files to reflect my contact information below.

If you need anything additional from me please do not hesitate to contact me.

*Respectfully,*

*Kim Penrod*

*Delaware Nation*

*Director, Cultural Resources/106*

*Archives, Library and Museum*

*31064 State Highway 281*

*PO Box 825*

*Anadarko, OK 73005*

*(405)-247-2448 Ext. 1403 Office*

*(405)-924-9485 Cell*

*[kpenrod@delawarenation.com](mailto:kpenrod@delawarenation.com)*

*Unless someone like you cares a whole awful lot, nothing is going to get better. It's not. ~Dr. Seuss*

CONFIDENTIALITY NOTE:

This e-mail (including attachments) may be privileged and is confidential information covered by the Electronic Communications Privacy Act 18 U.S.C. 2510-2521 and any other applicable law, and is intended only for the use of the individual or entity named herein. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any retention, dissemination, distribution or copying of this communication is strictly prohibited. Although this e-mail and any attachments are believed to be free of any virus or other defect that might affect any computer system in to which it is received and opened, it is the responsibility of the recipient to ensure that it is virus free and no responsibility is accepted by Delaware Nation or the author hereof in any way from its use. If you have received this communication in error, please immediately notify us by return e-mail. Thank you.

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This e-mail (including attachments) may be privileged and is confidential information covered by the Electronic Communications Privacy Act 18 U.S.C. 2510-2521 and any other applicable law, and is intended only for the use of the individual or entity named herein. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any retention, dissemination, distribution or copying of this communication is strictly prohibited. Although this e-mail and any attachments are believed to be free of any virus or other defect that might affect any computer system in to which it is received and opened, it is the responsibility of the recipient to ensure that it is virus free and no responsibility is accepted by Delaware Nation or the author hereof in any way from its use. If you have received this communication in error, please immediately notify us by return e-mail. Thank you.

Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, South Carolina 29730

Office 803-328-2427  
Fax 803-328-5791



June 5, 2018

Attention: Ben L. Hark  
West Virginia Department of Transportation  
1900 Kanawha Boulevard East, Building 5, Room 110  
Charleston, West Virginia 25305-0430

| Re. THPO #  | TCNS # | Project Description                           |
|-------------|--------|---|
| 2018-1052-1 |        | WV 2 Proctor to Kent Widening – Wetzel County |

Dear Mr. Hark,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail [caitlinh@ccppcrafts.com](mailto:caitlinh@ccppcrafts.com).

Sincerely,

Wenonah G. Haire  
Tribal Historic Preservation Officer



# APPENDIX B – AUGUST 2018 PUBLIC MEETING

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## SUMMARY & COMMENTS



## WEST VIRGINIA 2 – PROCTOR TO KENT PROJECT

### WEST VIRGINIA 2 – PROCTOR TO KENT | WETZEL AND MARSHALL COUNTIES STATE PROJECT U352-2-11.66 00, FEDERAL PROJECT NH-0002(528)D PUBLIC MEETING | THURSDAY, AUGUST 16, 2018

#### PUBLIC MEETING SUMMARY

The West Virginia Division of Highways (WVDOH) hosted an open-house public meeting on Thursday, August 16, 2018 for the West Virginia 2 – Proctor to Kent project. The meeting was held at the New Martinsville Public Library in New Martinsville, WV from 4:00PM to 7:00PM. The meeting was advertised in the local newspaper. Meeting flyers were also distributed to local schools, area businesses, and restaurants. The meeting was attended by 33 members of the public.

The approved West Virginia 2 – Proctor to Kent Environmental Assessment and maps of the preferred alternative were on display and members of the public were invited to view the maps and talk with WVDOH and consultant staff in attendance. WVDOH District 6 Right of Way staff were also in attendance to answer questions about the WVDOH right of way acquisition process. Meeting attendees were invited to provide written comments during the meeting or via mail or email during the 30-day comment period that ended September 17<sup>th</sup>. A total of 23 comments were submitted during the comment period. All of the comments are included as an attachment.

The public meeting flyer and handouts are also provided as attachments.

#### ATTACHMENTS

- Sign In Sheets
- Comments
- Meeting Flyer
- Meeting Handout

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

INFORMATIONAL WORKSHOP PUBLIC MEETING  
ATTENDANCE SHEET

PROJECT: WV 2 Proctor to Kent  
State Project: U352-2-11.66  
Federal Project: NH-0002(528)D

DATE: Thursday, August 16, 2018

LOCATION: New Martinsville Public Library  
New Martinsville, WV  
Wetzel County

PLEASE PRINT

| <u>NAME</u>                        | <u>ORGANIZATION/ADDRESS/EMAIL</u> |
|------------------------------------|-----------------------------------|
| 1. Ray Litman                      |                                   |
| 2. Lindsay Cain                    |                                   |
| 3. Brenda Botzow                   | Bayer Heritage FCU                |
| 4. Ed PARSONS                      | Wetzel/Tyler New                  |
| 5. Wayne Weber                     | Bayer Heritage FCU                |
| 6. Barbara Wade                    | 123 Wanda Lane                    |
| 7. Dolbert L Wade                  | 123 Wanda Lane                    |
| 8. DONNA PALMER                    | DONNA.L.PALMER@WV.GOV             |
| 9. SHARON KAUFMAN                  | SKAUFMAN23@Hotmail.com            |
| 10. Don Shenetie                   | 121 2+168 Seichority              |
| 11. Roy & Darlene yoho             | Proctor WV                        |
| 12. ERNIE ALLEN                    | NEW MARTINSVILLE                  |
| 13. Harry, Connie + Latasha Midcap | Proctor, WV                       |
| 14. FRED BRUNNEL                   | Momosville, WV                    |

NAME

ORGANIZATION/ADDRESS/EMAIL

- 15. Don Cain
- 16. Charles Clements      WV-2/I-68      WVSenate
- 17. Eric Peters      Tyler Co. EDA      ericpeters.toda@frontier.com
- 18. Steve Coulon      T. Histed Farm
- 19. BOB MILLER - MARSHALL COUNTY COMMISSIONER      bob.miller.jr@frontier.com  
(PLASISLOT)      304-242-3910
- 20. Jennifer Roth-Wisberger      Wetzel Co.
- 21. Tracy Roth-Wisberger      wetzel co
- 22. Paul E. Cain      29 Gray Run Rd - Proctor WV
- 23. Laura J. Cain      " " " "
- 24. Don Arrick      darrick@yahoo.com
- 25. Mike Arrick      17954 ENERGY RD Proctor
- 26. Martha Arrick      " " " "
- 27. Julia Palmer      Kent
- 28. Jacquelyn Palmer
- 29. John E. Cain
- 30. Sandra Casto      CASTOS1234@GMAIL.COM
- 31. \_\_\_\_\_
- 32. \_\_\_\_\_
- 33. \_\_\_\_\_
- 34. \_\_\_\_\_
- 35. \_\_\_\_\_
- 36. \_\_\_\_\_
- 37. \_\_\_\_\_
- 38. \_\_\_\_\_

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AUG 23 2018  
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DIVISION



**DIVISION OF NATURAL RESOURCES**

Wildlife Resources Section  
Elkins Operations Center  
738 Ward Rd., PO Box 67  
Elkins, WV 26241  
Telephone 304-637-0245  
Fax 304-637-0250

**Stephen S. McDaniel**  
Director

August 20, 2018

R.J. Scites, Director of Engineering  
Division of Highways  
1334 Smith Street  
Charleston, WV 25301

Dear Director Scites:

State Project: U352-2-11.66 00  
Federal Project: NFA-2317(003) D  
WV 2 Proctor to Kent Widening  
Wetzel and Marshall County

The West Virginia Division of Natural Resources (WVDNR) Wildlife Resources Section (WRS) has reviewed the Environmental Assessment (EA) U352-2-11.66 for the proposed West Virginia State Route 2 upgrade and relocation of 5.25 miles from Proctor in Wetzel County to Kent in Marshall County. The EA reports that the preferred alternative will impact 3.03 acres of wetlands and 1,913 linear feet of stream and increase the amount of impervious service area of the watershed.

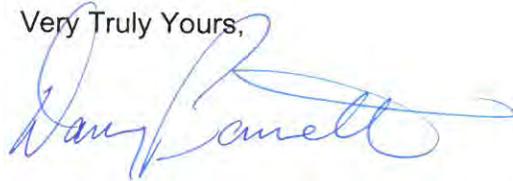
The EA states that the preferred alternative will cause the least amount of impact to the regulated 100 year floodplain and the project managers have incorporated improved roadway designs to reduce existing storm water drainage problems to help prevent future problems from the increased impervious surface.

Impacts to waters of the United States (WOUS) will occur due to replacement of and/or extensions of existing roadway drainage ditches, drainage pipes, and culverts. The EA contained data on chemical and biological parameters but did not contain data on the physical

habitat of the channels that may be potentially impacted. The EPA RBP is the standard methodology used in West Virginia to determine habitat quality. It is a quick but relatively robust methodology and probably should have been included in the EA so that the public would have a better understanding of the potential environmental impacts of the proposed project. The Ohio River is a significant high quality fishery within the immediate vicinity of the project. While impacts to the Ohio River resulting from the proposed project are highly unlikely, given the significance of the resource the EA should have at least acknowledge that the Ohio River is within the area of potential impacts.

WVDNR looks forward to working with the DOH on this project as it moves forward into the Clean Water Act permitting phase. If you have any questions concerning our comments please contact Anne Wakeford of my staff at the Elkins Operations Center at 304-637-0245 or email at [Anne.M.Wakeford@wv.gov](mailto:Anne.M.Wakeford@wv.gov).

Very Truly Yours,



Danny Bennett  
Natural Resource Program Manager 1  
Coordination Unit

RECEIVED  
AUG 21 2018  
ENGINEERING  
DIVISION



August 13, 2018

**The Culture Center**  
1900 Kanawha Blvd., E.  
Charleston, WV 25305-0300

**Randall Reid-Smith, Commissioner**

Phone 304.558.0220 • www.wvculture.org  
Fax 304.558.2779 • TDD 304.558.3562

EEQ/AA Employer

Mr. Ben L. Hark  
WV Division of Highways, Engineering Division  
1334 Smith Street  
Charleston, WV 25301

Re: WV 2 – Proctor to Kent;  
State Project No. U352-2-11.66 00;  
Federal Project No. NFA-2317(003)D  
FR#: 13-879-Multi-6

Dear Mr. Hark:

We have reviewed the *West Virginia 2 – Proctor to Kent Environmental Assessment* that was prepared for the above-referenced project. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR § 800: “Protection of Historic Properties,” we submit our comments.

Architectural Resources:

We have reviewed the submitted information and remain in concurrence with our earlier reviews in which we determined that resources MR-0037-0109; MR-0058; MR-0144; WZ-007; WZ-0028; WZ-0136; and WZ-0140 are eligible for the National Register of Historic Places. While it was determined that Alternative 1 would result in a visual adverse effect to resource MR-0144, in our most recent review letter, dated March 15, 2018, revisions to the route for Alternative 1A avoided the adverse effect. We also remain in concurrence that no other resources eligible for or listed in the National Register will be affected by the proposed project with preferred Alternative 1A. No further consultation is necessary regarding this architectural resource; however, we do ask that you contact our office if your project should change.

Consulting Parties/Public Comments:

We understand that an informational public meeting regarding the proposed project will be held at the New Martinsville Public Library in New Martinsville on August 16, 2018. Comments are due by September 17, 2018. Please forward any comments that you receive to this office. If you receive no comments by the deadline, please indicate that *in writing* to this office.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, at (304) 558-0240.*

Sincerely,

Susan M. Pierce  
Deputy State Historic Preservation Officer

SMP/BMR



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

September 17, 2018

Mr. Jason Workman  
Director, Program Development  
Federal Highway Administration  
West Virginia Division  
154 Court Street  
Charleston, WV 25301

Subject: WV 2 Proctor to Kent Environmental Assessment, Wetzel and Marshal Counties, WV  
August 2018

Dear Mr. Workman:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Council on Environmental Quality regulations 40 CFR Parts 1500-1508, the U.S. Environmental Protection Agency (EPA), has reviewed the Environmental Assessment (EA) for the WV 2 Proctor to Kent Project. The proposed improvements include the upgrade of WV 2 from a rural two-lane arterial to a four-lane divided highway. The preferred alternative, 1A, is approximately 5.3 miles long, impacts 3.03 acres of wetlands, 5.59 acres floodplain, 1,913 linear feet of stream, 173.61 acres of forest and has five residential displacements. Based on our review, we have concerns related to the level of information provided in the EA and the identification, avoidance and minimization of impacts to the natural and human environment. Please see the attached technical enclosure for detailed comments.

Thank you for the opportunity to provide comments on this EA. For any questions or assistance EPA can provide, please contact Ms. Barbara Okorn ([okorn.barbara@epa.gov](mailto:okorn.barbara@epa.gov), 215-814-3330).

Sincerely,

A handwritten signature in black ink, appearing to read "Barbara Rudnick".

Barbara Rudnick  
NEPA Team Leader  
Office of Environmental Programs

Enclosure



**Technical Comments**  
WV 2 Proctor to Kent Widening EA

- We suggest that additional information be provided to support the project purpose and need. This discussion should also describe the logical termini for this project, existing traffic capacity and projected data.
- We suggest additional detail be provided explaining the reasons for dismissing the widening alternative. Additional opportunities to widen the existing road to minimize impacts should be considered.
- Page 3-26 mentions methods that may reduce construction air emissions. We suggest these methods and other current best management practices be implemented.
- EPA recommends early consideration of potential mitigation options to ensure that the proposed mitigation plan is in line with the 2008 Mitigation Rule and that mitigation provided is the most ecologically preferable option. Page 3-39 states that mitigation for stream and wetland impacts will be handled by paying into the In-Lieu Fee Program. All practicable measures to avoid and minimize adverse impacts to aquatic resources should be implemented before suggesting mitigation.
- It appears that the field work for aquatic resources included more data collection than is presented in the EA and appendices. We suggest that additional description be provided for aquatic resources within the EA and appendices. Please include a narrative describing the functions of the potentially impacted resources and supplement this with information that appears to have been collected, such as RBP, HGM, SWVM calculations, photographs, etc. From the information provided in Table 3-12, much of the sampling could not be conducted due to dry conditions. We recommend discussion of the sampling and any implications dry conditions may have, including to RBP and SWVM calculations.
- There is no detailed information regarding terrestrial resources. Please provide additional discussion.
- Please discuss how the project complies with Executive Order 11988 related to floodplain management.
- Stormwater management should address existing and new roadway design and incorporate current best management practices. Also, stormwater management facilities should not be located in aquatic habitats. We suggest opportunities to improve fish and wildlife passage at culverts and other stream crossings be investigated. Measures could include bridges, natural bottom culverts, over-sized culverts, etc.
- We suggest this project comply with EO 13751 Safeguarding the Nation from the Impacts of Invasive Species. It would be helpful if the study included any plans for invasive species monitoring or eradication.

- We suggest the EA consider EO 13045 Protection of Children from Environmental Health Risks and Safety Risks.
- We suggest the project team closely coordinate with the public on design and construction impacts as the project moves forward.
- We suggest the project team consider Federal Highway's handbook for supporting pollinators. It would be helpful if the study discussed any opportunities to plant species attractive to pollinators.
- Page 3-42 mentions Birds of Conservation Concern but states that they were not identified in the project area. We recommend the document discuss the species, their habitat and how this determination was made.
- The secondary and cumulative impacts analysis does not address impacts to environmental resources. Please evaluate secondary and cumulative impacts to aquatic and terrestrial resources. This should include loss of wetland functions, habitat fragmentation, water quality, etc.
- The preferred alternative will have 3,059,351 cubic yards of earthwork excavation. Please explain how this waste will be handled and disposed. We recommend the document state that no material will be placed in wetlands or waterways.



WV 2 – PROCTOR TO KENT | COMMENT SHEET

Mr. RJ SCITES, P.E.  
DIRECTOR, ENGINEERING DIVISION  
WEST VIRGINIA DIVISION OF HIGHWAYS  
1334 SMITH STREET  
CHARLESTON, WEST VIRGINIA 25301

DATE: 8-16-18

DATE: THURSDAY, AUGUST 16, 2018  
LOCATION: NEW MARTINSVILLE PUBLIC LIBRARY  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2—PROCTOR TO KENT  
STATE PROJECT NO. U352-2-11.66 00  
FEDERAL PROJECT NO. NH-0002(528)D

COMMENTS DUE BY: MONDAY, SEPTEMBER 17, 2018

PLEASE CONSIDER THE FOLLOWING COMMENTS:

We would like to be notified when the decision has been made to ~~assign~~ assign the bid. Also, we would like to be keep in the loop as each step occurs. Any additional communication would be appreciated. We have a lot of planning to do.

(PLEASE PRINT THE FOLLOWING INFORMATION):

NAME: Robert Burrow, CEO BHFCU  
ADDRESS: 17612 Energy Road, Proctor WV 26055  
EMAIL:  
ORGANIZATION (IF ANY): bobburrow@bhayerhfcu.com

HOW DID YOU HEAR ABOUT THE INFORMATIONAL WORKSHOP PUBLIC MEETING?

Letter to Charlie Lacer, President BHFCU

PROJECT INFORMATION AND COMMENT SHEETS CAN BE FOUND ONLINE AT THE WVDOH WEBSITE [HTTP://GO.WV.GOV/DOTCOMMENT](http://go.wv.gov/dotcomment). CLICK ON THE BLUE TAB "ENGINEERING PROJECTS", THEN CLICK "OPEN", THEN CLICK ON "WV 2—PROCTOR TO KENT".  
COMPLETED COMMENT FORMS MAY BE HANDED TO A WVDOH OFFICIAL TONIGHT, SUBMITTED VIA THE WVDOH WEBSITE, OR MAILED TO THE ADDRESS ABOVE.



WV 2 – PROCTOR TO KENT | COMMENT SHEET

MR. RJ SCITES, P.E.  
DIRECTOR, ENGINEERING DIVISION  
WEST VIRGINIA DIVISION OF HIGHWAYS  
1334 SMITH STREET  
CHARLESTON, WEST VIRGINIA 25301

DATE: Th / 8-16-2018

DATE: THURSDAY, AUGUST 16, 2018  
LOCATION: NEW MARTINSVILLE PUBLIC LIBRARY  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2—PROCTOR TO KENT  
STATE PROJECT NO. U352-2-11.66 00  
FEDERAL PROJECT NO. NH-0002(528)D

COMMENTS DUE BY: MONDAY, SEPTEMBER 17, 2018

PLEASE CONSIDER THE FOLLOWING COMMENTS:

THANK YOU FOR THIS EVENT. I HAD SOME PIPELINE  
QUESTIONS RELATED TO THE BLUE RACKER PLANT & GOT THEM  
ANSWERS!

Best regards,  
Bob Miller Jr.  
~~Marsh~~

(PLEASE PRINT THE FOLLOWING INFORMATION):

NAME: Bob Miller / MARSHALL COUNTY Commissioner (Assistant)

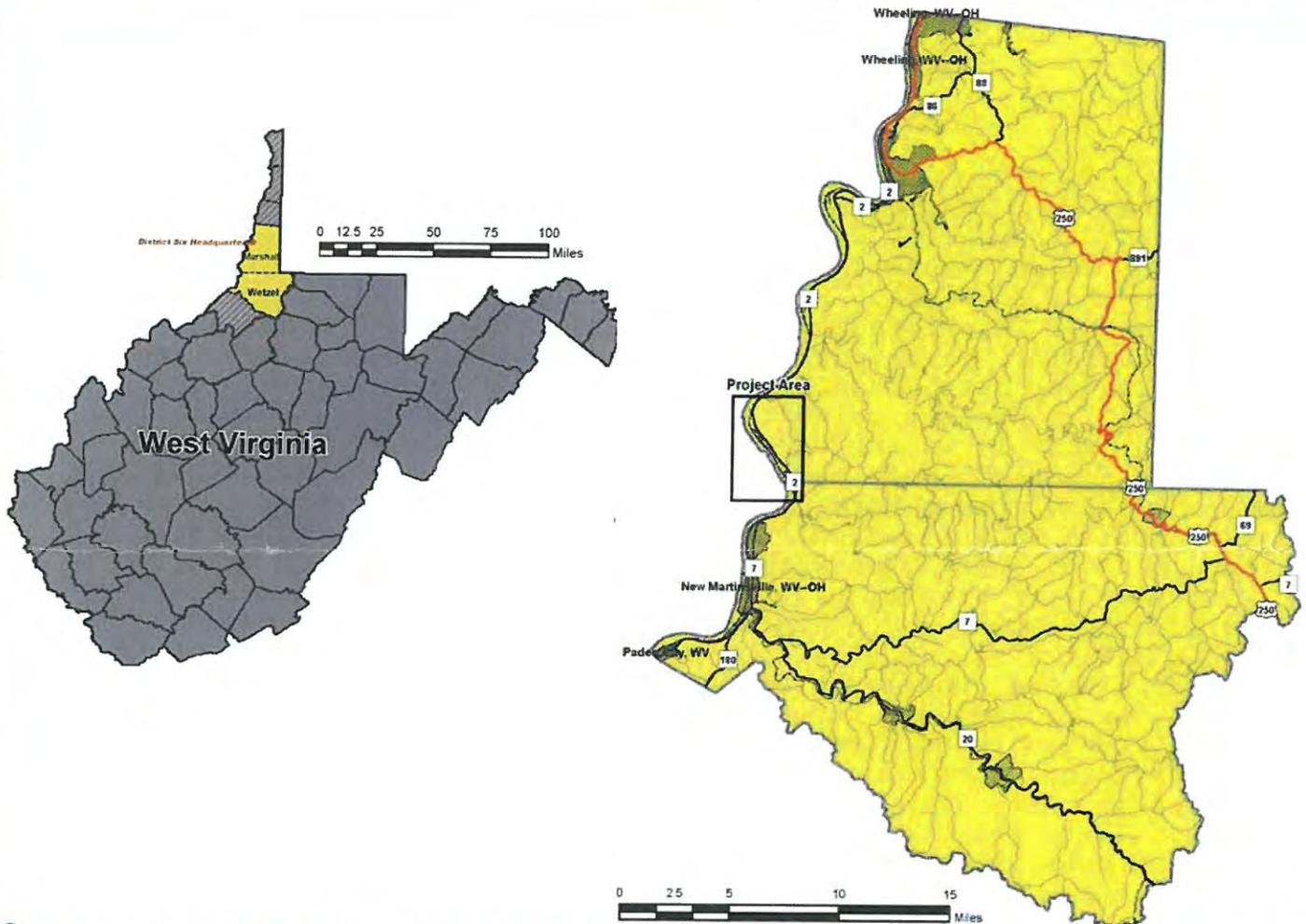
ADDRESS: 207 MARWIN DRIVE / WHEELING, WV 26003-9623

EMAIL: bob.miller.jr@frontier.com

ORGANIZATION (IF ANY): MC COMMISSION

HOW DID YOU HEAR ABOUT THE INFORMATIONAL WORKSHOP PUBLIC MEETING? was mailed a notice.

PROJECT INFORMATION AND COMMENT SHEETS CAN BE FOUND ONLINE AT THE WVDOH WEBSITE  
[HTTP://GO.WV.GOV/DOTCOMMENT](http://go.wv.gov/dotcomment). CLICK ON THE BLUE TAB "ENGINEERING PROJECTS", THEN CLICK "OPEN", THEN  
CLICK ON "WV 2—PROCTOR TO KENT".  
  
COMPLETED COMMENT FORMS MAY BE HANDED TO A WVDOH OFFICIAL TONIGHT, SUBMITTED VIA THE WVDOH  
WEBSITE, OR MAILED TO THE ADDRESS ABOVE.



### TO COMMENT ON THE PROJECT

Comments can be submitted at the meeting or mailed to:

**Mr. RJ Scites, P.E.**  
**Director, Engineering Division**  
**West Virginia Division of Highways**  
**1334 Smith Street**  
**Charleston, West Virginia 25301**

Comments may also be submitted via our website at:

**<http://go.wv.gov/dotcomment>**

Click on the blue tab "Engineering Projects",  
 then click "Open", then click on "WV 2—Proctor to Kent"

***Comments are due Monday, September 17, 2018***

*Upon request, WVDOH will provide reasonable accommodations including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in our services, programs and activities. Please contact us at (304) 558-3931. Persons with hearing or speech impairments can reach all state agencies by calling (800) 982-8772 (voice to TDD) or (800) 982-8771 (TDD to voice), toll free.*



# WEST VIRGINIA 2—PROCTOR TO KENT PROJECT

## INFORMATIONAL WORKSHOP PUBLIC MEETING

THURSDAY, AUGUST 16, 2018

4:00PM TO 7:00PM

NEW MARTINSVILLE PUBLIC LIBRARY

160 WASHINGTON STREET, NEW MARTINSVILLE, WEST VIRGINIA

STATE PROJECT U352-2-11.66 00, FEDERAL PROJECT NH-0002(528)D

WETZEL AND MARSHALL COUNTIES, WV

RECEIVED  
SEP 17 2018  
ENGINEERING  
DIVISION

Join the West Virginia Division of Highways (WVDOH) on **Thursday, August 16, 2018** at the New Martinsville Public Library in New Martinsville, WV for an informational workshop public meeting to make available the approved **West Virginia 2—Proctor to Kent Environmental Assessment**. WVDOH and consulting staff will be available to answer questions and explain project details. There will be no formal presentation, however project maps and copies of the Environmental Assessment will be available for your review. The Environmental Assessment is also available online at <https://transportation.wv.gov/highways/engineering/comment/WV2ProctorToKent/Pages/default.aspx>. You are encouraged to examine the Environmental Assessment and discuss the project with members of the study team. This meeting complies with the public involvement requirements of the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act.

### PROJECT SUMMARY

The preferred alternative upgrades and relocates a 5.25-mile portion of West Virginia State Route 2 (WV 2) beginning approximately ½ mile south of the Marshall County Line in Proctor to approximately ¼ mile south of Marshall County Route 78 just north of Sims Run in Kent. The proposed improvements include the upgrade of WV 2 from a rural two-lane arterial to a four-lane divided highway. The project configuration has been shifted to avoid and minimize impacts to a historic property boundary and industrial properties, including the adjustment of the horizontal curves and vertical profile. The estimated construction cost of the preferred alternative is \$58.5 million and does not include final design, right-of-way, or utility relocations.

### TENTATIVE PROJECT SCHEDULE

|  |                    |
|--|--------------------|
| Environmental Assessment (EA) Approved   | July 16, 2018      |
| Public Information Meeting               | August 16, 2018    |
| Comments Due                             | September 17, 2018 |
| Finding of No Significant Impact (FONSI) | November 2018      |
| Go Bond Construction                     | 2020               |



As far as I am concerned-a four lane road is a huge waste of money-that will benefit nobody. I retired from McElroy Mine Prep Plant in 2004 and drove to the area across from the Mitchell Power Plant for over 35 years. A four lane at Proctor will be about 1/2 mile total for Wetzel County. By the time they get a four lane through Wetzel & Tyler Counties, automobiles will be extinct. We are the two forgotten Counties of Northern WV when it comes to any road Maint. DOH can't maintain the roads now. Drive up Paden Fork road. It probably is the worst maintained road in WV, and is a so called "connector" route between 180 and route 2. I live on Dutch Run road off of Paden Fork road, and since they spent over two years putting in a pipeline, and tearing up the road, which is so rutted out and over grown with weeds, a cow couldn't walk on it.

In April, I seen a guy on TV, I think he said he was an engineer for the WVDOH, and he was getting ready to retire. He was talking about a slip on American Ridge-I seriously doubted he even knew where Wetzel was-let alone American Ridge road.

Oh, we did get new guard rails-woohoo, although there was nothing wrong with the ones they changed out. Route 2 through Wetzel & Tyler County is A big JOKE. No wonder I pass so many Vehicles on route 7 in Ohio with the familiar green & white license plates. There are 6 or 7 highway bridges across the Ohio River between Moundsville, and New Cumberland, a distance of about 48 miles, between Moundsville and Parkersburg a distance of about 78 miles, you have 2 bridges-the HMS Rust Bucket at New Martinsville, and a 4 lane bridge to no where at St. Mary's. Why does the DOH keep wasting money?????? The New Martinsville Bridge opened in 1962, and they erected gigantic light poles on the 4 lane after 50 years. WHY??? What is going to be next????

The contractors must be getting rich off the State.

Why this information was sent to me-is beyond me, as it doesn't affect me one way or another. I go across the bridge to go north or south anyway.

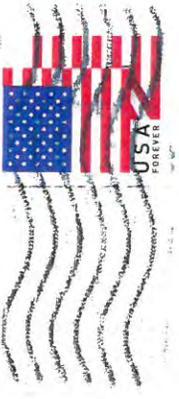
This our DOH at its best. They put a few new culverts in on Dutch Run Road, but never pull the ditches. Water runs down the road instead of the ditches. Maybe they can borrow a couple of mowers off OHIO, so they can mow th weeds. I guess they can't use weed eaters.

*Bruce Sweet*

*P.S. You can drop this in file 13.*



Mr Bruce Sivert  
6 Holland Ln  
New Martinsville, WV 26155



CHARLESTON WV 250

15 SEP 2018 PM 21

Mr. RJ Scites, P.E.  
Director, Engineering Division  
WV Division of Highways  
1334 Smith Street  
Charleston, WV 25301

25301-143434





WV 2 – PROCTOR TO KENT | COMMENT SHEET

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia 25301

DATE: Sept, 10, 2018

RECEIVED  
SEP 13 2018  
ENGINEERING  
DIVISION

DATE: THURSDAY, AUGUST 16, 2018  
LOCATION: NEW MARTINSVILLE PUBLIC LIBRARY  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2—PROCTOR TO KENT  
STATE PROJECT NO. U352-2-11.66 00  
FEDERAL PROJECT NO. NH-0002(528)D

COMMENTS DUE BY: MONDAY, SEPTEMBER 17, 2018

PLEASE CONSIDER THE FOLLOWING COMMENTS:

See attached:

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(PLEASE PRINT THE FOLLOWING INFORMATION):

NAME: DON CAIN  
ADDRESS: 27 Dry Run Road  
EMAIL: doncain41@gmail.com  
ORGANIZATION (IF ANY):

HOW DID YOU HEAR ABOUT THE INFORMATIONAL WORKSHOP PUBLIC MEETING?

PROJECT INFORMATION AND COMMENT SHEETS CAN BE FOUND ONLINE AT THE WVDOH WEBSITE  
[HTTP://GO.WV.GOV/DOTCOMMENT](http://go.wv.gov/dotcomment). CLICK ON THE BLUE TAB "ENGINEERING PROJECTS", THEN CLICK "OPEN", THEN  
CLICK ON "WV 2—PROCTOR TO KENT".  
COMPLETED COMMENT FORMS MAY BE HANDED TO A WVDOH OFFICIAL TONIGHT, SUBMITTED VIA THE WVDOH  
WEBSITE, OR MAILED TO THE ADDRESS ABOVE.

①

My name is Don Cain and my house is located on the Wetzel/Marshall County line. The planned expansion of Route 2 to a four lane highway is very close to my house. Besides ruining the value of my home, the road noise from traffic going up the proposed bank will be very loud.

I built this house in 1989 and have lived here at Dry Run for 51 years out of the 62 years of my life. My parents live next door to me - they are 86 and 90. This road is of a great heartache to all of us being so close to our homes. It is so important for me to continue living here to watch after two of the greatest people I know.

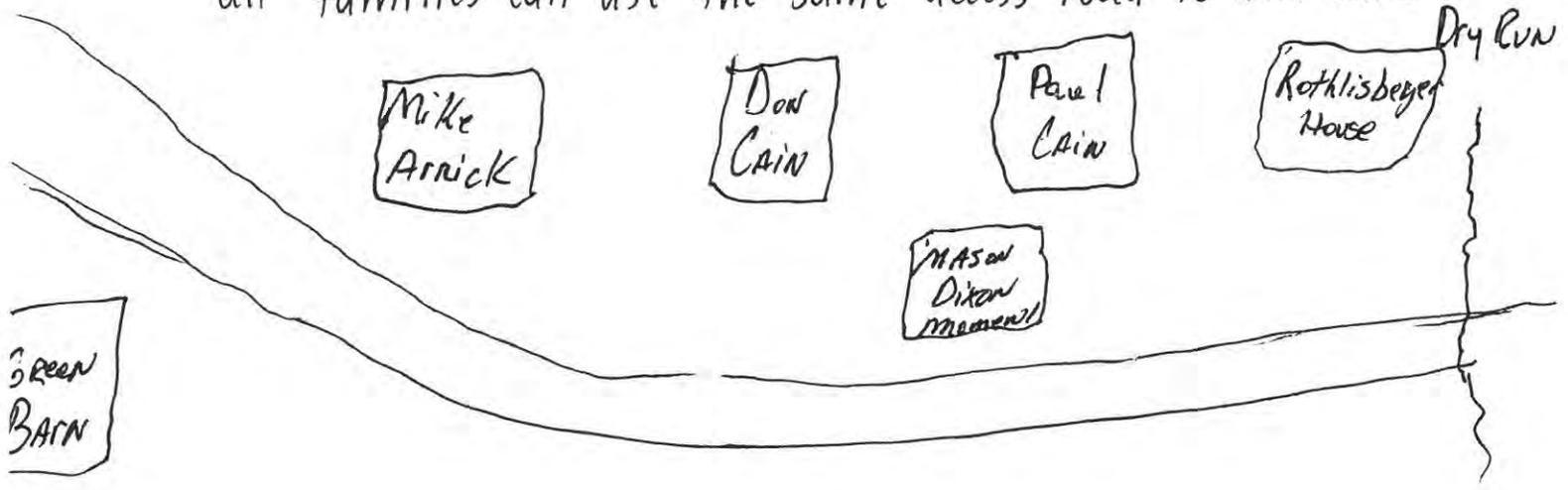
I am asking you to please consider these changes to your Route 2 project:

① Move the Gas Regulator Building at Dry Run West.

-Moving this building will allow you to move Route 2 further West.

Instead of taking the road up over the hill behind my property, you can go past the Arrick House (the next house North)

and go up over the hill. We would also like to see <sup>(2)</sup> the Mason Dixon Monument moved to the East side of the new Route 2 four lane. Many people stop to view the monument daily. We believe moving the monument East will be safer for tourists, as well as provide more room for us. \* By moving the road to the provided sketch, all families can use the same access road to new Rt. 2.



<sup>(2)</sup> The next thing I would like to address is the 100 year old barn that carries a lot of value - meaning the road has been changed for it. I would like to think a family that is almost 100 years old would have as much value. I don't understand how you can uproot a family who has lived here at Dry Run for generations for a barn that has only gained historical significance for the sake of this road project.

③ The new Route 2 access for us living at Dry Run is potentially dangerous. The new entrance to our property is to be located on the North side of the Dry Run Bridge → which I understand will be a large culvert. I feel the line of sight south will be too small of a distance for safe entrance across three lanes of traffic. Not to mention in the winter time it will require you to brake over top of the culvert which will freeze before the rest of the road - leading to accidents. I would like to see this moved to a safer location.

④ There is an existing culvert on Route 2 - North of the Mason Dixon Monument. This is a low place where rain water drains from behind my Parent's Property - I have pictures. This culvert needs to be extended under the new Route 2 so when we have large storms, water can drain from the existing properties.

Please consider these changes for the livelihood of my family.

Thank you for your time and consideration.

Donald  
Carr

Don Cain  
27 Dry Run Rd  
Proctor WV 26055

PITTSBURGH PA L50

11 SEP 2010 10:51



Shirley J. ...  
#001

Mr. RJ Scites, P.E.  
Director Engineering Division  
West Virginia Division Highways  
1334 Smith Street  
Charleston West Virginia 25301

25301-143434



Cecelia Lynn Palmer  
123 Russell Drive  
Proctor, WV. 26055  
Marshall County Resident  
[ceceliapalmer@aol.com](mailto:ceceliapalmer@aol.com)  
Cell: 304-639-1370  
[Cecelia.L.Palmer@wv.gov](mailto:Cecelia.L.Palmer@wv.gov)  
Work: 304-843-4067, ext. 167

RECEIVED  
SEP 13 2018  
ENGINEERING  
DIVISION

Sunday, 09 September 2018

Re: WV 2-Proctor to Kent Expansion

Mr. RJ Scites, P.E.  
Director, Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, West Virginia. 25301

Mr. Scites,

This letter is in reference of the Public Meeting held on Thursday, 16 August 2018, regarding the West Virginia 2-Proctor to Kent Expansion project. I know that I will be losing my house and the better part of the five acres, if not all of it, on which it sits. This meeting—the only one for which I received any type of notification about—only confirmed what I have already known for the past five years. I am not asking you to reconsider and change the design of the roadway. I spent an extensive amount of time reviewing the plans as they were presented. The plan chosen is sound and logical. I will give you that as it will serve the needs of the many—those residing at the Marshall-Wetzel County line, travelers, plant traffic, and so forth—while sacrificing only a small few—one of whom is me and my own.

I have many concerns for the future well-being of myself and my family. However, I will get to those concerns in due course. For the next few paragraphs, I want you to know just exactly what I am forfeiting. I do not have a lot, but what I do have is mine. For good or bad, it belongs to me, is paid for, and this is all I have known since my parents moved in on the first parcel of land when I was but a year or two old.

I want to tell you what I am going to lose. What you are not going to be able to replace in its entirety. I will never be able to watch or cry out to our family of red-tailed hawks as they soar overhead teaching their young to fly. I will never have the evening joys of the wee bats, and their young, flying about and dive-bombing me and members of my family as the sun sets. I will

never be blessed with crickets, praying mantis, walking sticks, bumblebee months, Monarch butterflies, tree frogs, toads, newts, salamanders, spiders that grow to the size of tarantulas, and so many others of the vast insect and amphibian world. We have toads that come each year and know us, climbing on our feet and into our hands.

I will lose seeing so many forms of wildlife—some have come and gone, while others have settled in and stayed. I will not be able to share them with my family anymore. In my lifetime—as I will be turning fifty in January 2019—my land has hosted pheasant, grouse, red foxes, bobcats, black bear, pileated woodpecker, in addition to the standards of deer, turkey, squirrels, ground hogs, rabbit, and the list goes on.

When you come and raze my home to the ground, I am going to lose more than just a house and property. I will be losing Christmas pine trees that my father and I planted over forty years ago. I will be losing twenty plus year old lilac bushes that were Mother's Day gifts from my daughter to both me and my mother. I will be losing a small ever flowing rill on my property that has never run fully dry in all my known memory. The water may only trickle on the hottest of summers or the coldest of winters, but it still flows. As difficult as it is to traverse my driveway, during the cold, winter months, I will miss the challenge of the glacier this little rill makes on my hillside drive. It truly does behave as a glacier, sometimes forming ice eight inches thick. It is a hardship, but it is mine and I will miss it. I will miss the taste of my water as it comes from my well. I could go on, but I believe you are getting the point.

Now to address my concerns. When you take my home—even though you will be purchasing, you are still taking it—you are dislodging not just myself, but others as well. My daughter and my son-in-law reside with me. For approximately three months out of the year, my sister and niece reside with me, with my brother-in-law spending about a month. Why, you may wonder? First, my sister and her family live in California. Second, I swore to both my parents before their respective deaths that I would always provide a home for my sister and her family when they return to West Virginia each year. My home shelters a total of six.

While attending the meeting, I asked many questions. Some I received straight answers, whereas others were answered in shades of grey. I asked how you would determine the worth of my home and property. I was told it would be comparable to homes in the surrounding area. Well, now, considering at this point there are only about seven properties at the Kent sign, on the bend of WV-2, and just north of the sign, I doubt that is going to work. And, somehow, I sincerely doubt you are going to pay what some of the home / property in the micro-community of Kent was paid by the various plant companies. I expressed this thought. For my effort, I received the comment that three comparable homes within the surrounding area—that area extending out to encompass Marshall and Wetzel Counties—would be used.



So, I addressed my concern about the cost of homes in Marshall County and how the costs of homes have increased steadily over the past three years with the influx of the pipelines. Again, asking about how I am going to be compensated for my home and land, while reminding the gentlemen, with whom I spoke, that housing costs and availability will become even more difficult once the Ethane Cracker plant takes root. At some point, during the course, of this exchange, I was advised that you [collectively representing the State] would chose three homes for me to pick from and that is where I will be moved to. Seriously? Are we even going to go there?

I am nearing fifty years old. I must think about my future. How long will it take for an ambulance to get to me at my home and then to a hospital? I must think about what kind of road conditions I will have to endure when we have those very bad winters. I will be incurring new forms of debt that I have never had before, like public water, a possible gas bill, or home association fees—a fee for the privilege of residing somewhere! I do not have to pay for flood insurance and I sure as hell do not have any desire to live near any form of heavy flowing water! How long will I have to sort through fifty years of **my life** and all that has been accumulated. And, then, there are all the miscellany inherited from my parents, grandparents, and great-grandparents that are tucked away in nooks, crannies, and the niches of my home. And, let us not forget the multitude of personal items belonging to my sister and her family that I maintain on their behalf for when they return to West Virginia.

With this move, I am thinking ahead. I am thinking about my future well-being. I am worrying about what I will be able to take with me and what I must leave behind for the scavengers to pick over. I have spent my life thinking I would live and die on land that once belonged to my great-grandfather. But, this tranquility of thought has been destroyed. So, when I move to the next location, I have no intentions of ever having to move from my home again. And, like my mother and maternal grandfather, I plan to die at peace in my own bed in my own home. At present, I live in the best location with the best of all worlds...direct access to a main thoroughfare, ten miles to New Martinsville and sixteen miles to Moundsville, where I work and conduct all aspects of business and doctoring. I am rural enough that I am not constrained by the same rules that govern life in a town or suburb of a town. When I want to have a bonfire until 3:00 a.m., I can do that. If I want to play my Celtic music loud outside in the summer, I can do that. If I want to stand out in the summer rain and shower, I can do that. And, when I want to stand naked under the fullness of the moon, whether it be summer or winter, there is no rule to tell me nay, nor any neighbor to be offended. I highly doubt I will have these freedoms when relocated. Or, am I remiss in that assumption?

In closing, I want to remind you of something. I have resigned myself to the fact that I will never be able to pass my land on to my daughter and future grandchildren. I will never again be

Cecelia Lynn Palmer  
WV 2—Proctor to Kent  
Expansion  
Page 4 of 4

able to stand on my land and point to various animals, plants, insects and tell my grandchildren about them, as I will be cheated of that sharing. I will never be able to stand barefoot upon the land, feeling grounded and kinship to my great-grandfather, a man I loved very much. Knowing that I am the fourth generation and my daughter the fifth generation to grow upon the lands and knowing that I will never again be able to share the true treasures of my land with my family, grieves my soul. I am losing more than just a house. I am losing my heritage and I think you [being the collective you—everyone involved in these decisions of relocation] should take this into consideration. You cannot give me, nor fully replace, all that I am truly losing.

Respectfully submitted,



Cecelia Lynn Palmer

Cecilia L. Palmer  
123 Russell Drive  
Practor, WV 26055

PITTSBURGH PA 150

11 SEP 2018 PM 5 L

Thinking of  
D



Mr. R.J. Sites  
Director, Engineering Division  
West Virginia Division of Highway  
1334 Smith Street  
Charleston, WV 25301

25301-143434



West Virginia Route 2 – Proctor to Kent (Comment Sheet)



The following are my comments concerning the property in southern Marshall County owned by Donald and Martha Arrick

The proposed plan to widen WV Route 2 at the Wetzel and Marshall County Lines shows the new highway going behind the property owned by Donald and Martha Arrick. This will result in old WV Route 2 being approximately 250 feet in front of their property and the new WV Route 2 being approximately 200 feet behind their property. In addition, the state is wanting to purchase some property from them to the south of where their house currently sits to build and exit ramp from the new WV Route 2 to the existing old WV Route 2. This proposed arrangement will have their house blocked on three sides, old WV Route 2 in the front, new WV Route 2 to the back and an exit ramp from new WV Route 2 to old WV Route 2 to the side. How can you expect someone to live in their house when it is blocked on three sides by roads? Would you want to live in a house that is blocked on three sides by roads?

Also, I have the following concerns with the above proposed plan:

- 1) This plan will significantly devalue my remaining property. There will be less acreage and it would not be attractive to any buyer. Property value would plummet.
- 2) There would be loss revenue on my part due to the fact I presently have a Lamar advertising billboard on this property.
- 3) Existing driveway would be non-existent and a new drive way would need to be constructed.
- 4) The noise level from the existing route 2, new route 2 and the exit ramp will be unbearable.
- 5) I will be concerned with slips and drainage issues once the new road and exit ramp are constructed.

I think the WVDOH needs to make a fair offer in purchasing this property. In doing so, the existing road plan may be able to be shifted a little farther to the west and not be so close to the existing properties of Don Cain and Paul and Donna Cain.

*Comment received 9/14/18 from  
Arrick, 62 Helin St, New Martinsville WV  
26155*

Aarick  
62 Helm St.  
New Martinsville, WV  
26155

**FLAT RATE ENVELOPE**

ONE RATE \* ANY WEIGHT\*

APPLY PRIORITY MAIL POSTAGE HERE



1004



25301

U.S. POSTAGE PAID  
PM 2-DAY  
PROCTOR, WV  
26095  
SEP 12, 18  
AMOUNT

**\$9.70**

R2305M1 45469-05

West Virginia Division of Highways  
1334 Smith Street  
Charleston, WV 25301  
Engineering Division  
Project # W352-2-11.6600

EXPECTED DELIVERY DAY: 09/14/2018

**USPS SIGNATURE TRACKING NUMBER**

EP14H July 2013 Outer Dimension: 10 x 5



WV 2 – PROCTOR TO KENT | COMMENT SHEET

MR. RJ SCITES, P.E.  
DIRECTOR, ENGINEERING DIVISION  
WEST VIRGINIA DIVISION OF HIGHWAYS  
1334 SMITH STREET  
CHARLESTON, WEST VIRGINIA 25301

DATE: Sept 10, 2018

DATE: THURSDAY, AUGUST 16, 2018  
LOCATION: NEW MARTINSVILLE PUBLIC LIBRARY  
SUBJECT: INFORMATIONAL WORKSHOP PUBLIC MEETING  
PROJECT: WV 2—PROCTOR TO KENT  
STATE PROJECT NO. U352-2-11.66 00  
FEDERAL PROJECT NO. NH-0002(528)D

RECEIVED  
SEP 17 2018  
ENGINEERING DIVISION

COMMENTS DUE BY: MONDAY, SEPTEMBER 17, 2018

PLEASE CONSIDER THE FOLLOWING COMMENTS:

*Please head over note to you, enclosed. Thanks  
The State Route #2 to 4 lanes in front of us. Stay on rd  
Near Route 2 as is rd pass on north of our Son's Low House just  
to the wide spot rd up over the hill north of the (Crick's)  
House. Move the Mason/Region marker to the East, closer  
to Low House, it has been moved many times but has always  
been on the East side of Route #2 -*

(PLEASE PRINT THE FOLLOWING INFORMATION):

NAME: *MR. and MRS. PAUL (DONNA Jo) Cain*  
ADDRESS: *29 DRY RUN ROAD PROCTOR, WV 26055*  
EMAIL: *—*  
ORGANIZATION (IF ANY): *- Family*

HOW DID YOU HEAR ABOUT THE INFORMATIONAL WORKSHOP PUBLIC MEETING? *First we heard about the meeting in the Wefel Chorus. Second, we received a notice about the meeting from the State. Third we had phone calls about the meeting from friends.*

PROJECT INFORMATION AND COMMENT SHEETS CAN BE FOUND ONLINE AT THE WVDOH WEBSITE  
[HTTP://GO.WV.GOV/DOTCOMMENT](http://go.wv.gov/dotcomment). CLICK ON THE BLUE TAB "ENGINEERING PROJECTS", THEN CLICK "OPEN", THEN  
CLICK ON "WV 2—PROCTOR TO KENT".  
COMPLETED COMMENT FORMS MAY BE HANDED TO A WVDOH OFFICIAL TONIGHT, SUBMITTED VIA THE WVDOH  
WEBSITE, OR MAILED TO THE ADDRESS ABOVE.

From Mr & Mrs Paul (Donna Jo) Cain

September 12, 2018

Dear Mr. R. J. Sites

Our names are Paul & Donna Jo Cain. <sup>we</sup> live at 29 Dry Run Road, Proctor, WV 26055, near the Mason/Dry Run line in front. My husband Paul is 90 years of age & I will be 86 Dec. 2<sup>nd</sup>. We built our home 62+ years ago & have lived here since, raising 3 sons, one of which has lived next door for 30+ years. He now does our mowing (lawn work) repair on the inside of our house, any break down we have, late night trips to the emergency room (Wetz. Co. Hosp.) etc. We really depend on him as he lives close. His name is Don Cain - 27 Dry Run Road, Proctor, WV 26055. My husband Paul had cancer surgery in Morgantown, WV in July, now is getting radiation at Wheeling Hospital for 6 weeks, 5 days a week. You see, we depend on Don full time. Now we are back to the "New" Route #2 - four lanes, from here to Kent. The way it is planned, Don will have to move his house back & move completely. A few alterations to the planned route will leave him next door. I am not dictating to you, just suggesting a small change for the new route in front of us. Coming down the hill south of the Dry Run Bridge, swing to the west a few feet, north on old Route #2 to just beyond Don's house in a wide flat area & then north up over the hill above Arucks House leaving Don - our 3 houses at Dry Run intact so Don can take care, as he has been doing of us, in our late years.

Paul & Donna Jo Cain

Thank you & God Bless you

Mr. & Mrs. Paul E. Cain  
29 Dry Run Rd.  
Proctor, WV 26055-4278



PITTSBURGH PA 150

12 SEP 2010 PM 01

*Thinking of*  
*you*



*Mr. R. J. Scites, P. E.*  
*Director, Engineering Div.*  
*West Virginia Div. of Highways*  
*1334 Smith St.*  
*Charleston, West Virginia 25301*

25301-143434



John E. Cain  
220 E. Thistle Court  
New Martinsville, WV 26155

Monday, September 17, 2018

Mr. R. J. Scites, P.E.  
Directory, Engineering Division  
West Virginia Division of Highways  
1334 South St  
Charleston, WV 25301

Dear Mr. Scites,

I am writing, this letter in response to the West Virginia Route 2 project in the Dry Run area at the Marshall/Wetzel County line. I am in the opinion that the proposed route will devalue my parent's property (Paul and Donna Jo Cain) and that of Donald Cain and Robert Rothlisberger. In allowing the meter house of Columbia Gas to remain in its present location with the proposed route, why not move it 100 to 150 feet west to allow use of right of way property that state owns on the west side of present route 2. This would allow placement west of proposed highway, thus allowing us to enjoy our almost heaven property as my parents have the last 63 years.

Respectfully submitted,

John E. Cain



**JOHN E. CAIN DDS  
P.O. BOX 567  
MONROE COUNTY CLINIC  
AIRPORT ROAD  
WOODSFIELD, OH 43793  
(740) 472-1662  
FAX: (740) 472-2088**

**FAX COVER SHEET**

PLEASE DELIVER THE FOLLOWING DOCUMENT(S) AS SOON AS POSSIBLE:

TO: *RJ Scites, PE*  
COMPANY: *WV Division of Highways Engineering Division*  
FAX #: *304-558-1512*  
TELEPHONE #: *304-558-2885*  
DATE SENT: *9-17-18*  
TIME SENT: *10:25*  
NUMBERS OF PAGES INCLUDING COVER SHEET: *2*  
COMMENTS TO RECEIVER:

The information contained in this facsimile message is privileged and confidential information intended only for the sole use of the individual or entity names above. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the above address via the United States Postal Service. Thank you.

\_Title  
FirstName Donny  
LastName Arrick  
Organization  
Email [dfarrick@yahoo.com](mailto:dfarrick@yahoo.com)  
MailingAddress 62 Helen Street  
City New Martinsville  
State WV  
ZipCode 26155  
Comments West Virginia Route 2 - Proctor to Kent Comments

The following are my comments concerning the property in southern Marshall County owned by my parents (Donald and Martha Arrick)

The proive posed plan to widen WV Route 2 at the Wetzel and Marshall County line shows the new highway going behind the property owned by Donald and Martha Arrick. This will result in old WV Route 2 being approximately 250 feet in front of their property and the new WV Route 2 being approximately 200 feet behind their property. In addition, the state is wanting to purchase some property from them to the south of where their house currently sits to build an exit ramp from the new WV Route 2 to existing old WV Route 2. This proposed arrangement will have their house blocked on three sides, old WV Route 2 in the front, new WV Route 2 to the back and an exit ramp from the new WV Route 2 to the old WV Route 2 to the south side. How can you expect someone to live in their house when it is blocked on three sides by roads? Would you want to live in a house that is blocked on three sides by roads?

Also, I have the following concerns with the above proposed plan:

- 1) This plan will significantly devalue their remaining property. There will be less acreage and it would not be attractive to any buyer. Property value will plummet.
- 2) There would be loss revenue on their part due to the fact that presently there is a Lamar advertising billboard on this property.
- 3) Existing driveway would be non-existent and a new drive way would need to be constructed.
- 4) Noise level from all three roads would be unbearable.
- 5) I would also be concerned with slips and drainage issues once the new road and exit ramp are constructed.
- 6) Access to the property during construction of new WV Route 2 and exit ramp would be a nightmare.

I think the WVDOH needs to make a FAIR offer in purchasing this property. In doing so, the exiting new road plan may be able to be shifted a little farther to the west and not be so close to the exiting properties of Don Cain and Paul and Donna Jo Cain.

Thanks

Donny Arrick

CommentType                      Online

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Created at 9/12/2018 11:00 AM by  
Last modified at 9/12/2018 11:00 AM by

\_Title

FirstName Robert

LastName Rothlisberger

Organization

Email [robrotlisberger@yahoo.com](mailto:robrotlisberger@yahoo.com)

MailingAddress 10 Neubauer Drive

City New Martinsville

State WV

ZipCode 26155

Comments I support the upgrading of WV 2

I am asking the state project manager to please consider relocating the Columbia gas building to the West so the angle of the proposed four lane can be changed to give the homes at Dry Run a larger buffer area from the four lane proposed.

If the current plans are executed, the property values of the homes will be greatly deprecated and our little piece of "almost heaven" will be no more.

Respectful submitted  
Rob Rothlisberger

CommentType Online

---

Created at 9/13/2018 5:20 PM by  
Last modified at 9/13/2018 5:20 PM by

\_Title

FirstName Andrea

LastName Cain

Organization

Email [andreacaindds@gmail.com](mailto:andreacaindds@gmail.com)

MailingAddress 27 Dry Run Road

City Proctor

State WV

ZipCode 26055

Comments

My name is Andrea Cain. I am the daughter of Donald Cain and the granddaughter of Paul and Donna Jo Cain. I am also the great-niece of the late Harry and Mary Lorentz Rothlisberger. We are a family of very strong, deep roots in Wetzel County. It is because of families like ours that communities continue to thrive and withstand the test of time. I grew up in Dry Run before I moved to Morgantown to attend West Virginia University. I've traveled many trips over the years to our residence in Dry Run. Returning home to Dry Run always brought peace to my heart and serenity to my life. Dry Run has made truly molded and shaped me into the individual I am today. Living next door to my grandparents and being a very close family, this has made a huge impression on my upbringing and has made Dry Run an irreplaceable and priceless home to my family. My great-grandfather, Robert W. Bohrer, purchased the property where our homes currently reside in the early 1930s. For roughly 90 years, Dry Run has been a huge part of our family and my life, as well as my grandmother, Donna Jo Cain, who was born in 1932 in the home where Jim and Karen Richmond reside in Dry Run. Growing up, my grandmother has fond memories of spending time in Dry Run with her family and siblings. My grandmother returned to Dry Run permanently when she and my grandfather married in 1956 and built their forever home. My Aunt and Uncle, Mary Lorentz and Harry Rothlisberger, had married and built their forever home years earlier in Dry Run. My great-grandfather gave these properties to his daughters, to my grandmother and her sister, so the land could remain in the family.

Paul and Donna Jo Cain have three sons, Don, John, and Joe Cain. All of which stayed in Wetzel County to raise their families. My grandfather, Paul Cain, is retired from PPG Industries. His sons, Don and Joe, followed their father's footsteps and currently work at Axiall, (formerly PPG Industries). John in a local dentist who practices family dentistry in the area. Paul and Donna Jo Cain are lifetime Mountaineer and Magnolia Blue Eagle fans. They rarely missed football games as all their sons played football at Magnolia High School, and all of their grandchildren graduated from Magnolia. When it came to be time to upgrade the bleachers at the high school football stadium, my grandparents were one of the first people to sign-up to donate for its restoration. They have always been part of their community and have a willingness to help others. My grandparents are now 90 and 85 years old, they are very independent for their age and have resided in Dry Run for almost 63 years. They still drive themselves wherever they want to go and work outside in the yard, being very active for their age. They have

made a home and a life being envious of in Dry Run, but their well-being, safety and home is a stake with the road expansion. Like John Cain, I am a Doctor of Dental Surgery. There have only been two dentists in the State of West Virginia from Proctor and BOTH grew up and resided in the Dry Run residence included to be subject to the road expansion. I currently reside in Morgantown to endure advanced training in hospital dentistry to better aid a transition to rural dentistry. I dream of the day when I can move home to Dry Run to serve the health and happiness of the people in my community. With tough times in West Virginia and communities failing to prosper, it is very important for me to return to the place I call home to provide a healthcare service. In recent years the economy and jobs available in West Virginia have declined, causing many dentists and physicians to leave my home State. It is healthcare professionals like myself who have strong family ties that CHOOSE to return home. This isn't always easy to do as times are changing. But you may see this pattern in other rural areas, and my family is one of those families with loyal county and community ties. My sister, Lindsay, is a teacher and resides in Dry Run. She chose to move back to our community and return to teach in the high school where she once attended. My brother, Justin, also returned home and works in the community, receiving training to work in the local plants. The grandchildren of the late Harry and Mary Lorentz Rothlisberger, one being an engineer and the other a pharmaceutical representative, have both returned to Wetzel County to raise their families, one of which is residing in Dry Run. Of all the children and grandchildren of Paul and Donna Jo Cain, nearly every single one reside in Dry Run/Wetzel County and work within the community, either in manufacturing, education, local businesses, pharmaceuticals, dentistry, and healthcare. As I stated earlier, we are a family of strong, deep roots. We are a family that provides so much to the community in which our home is threatened. It is with this letter that I write to express my family's strong opposition in the expansion of WV-Route 2 at Dry Run to include our residence. When reviewing the plans for road expansion, I cannot help but feel the State has failed to review every option for the expansion of Route 2. One being the current consideration for the road expansion. It was brought to my attention there is an inactive dairy farm with a green barn, labeled as the "green barn property," north of our residence in Dry Run that is currently within a short distance of Route 2. This green barn has solely gained subjective archaeological, not even historical, significance for the sake of being spared from the expansion. This supposed barn is being held above consideration for my entire family. I find this incredibly insulting as my family who has resided in Dry Run all of these years without knowledge of this supposed historical barn. This barn stands without any current significance or sign noting its history, but this is enough for the State to change their plans for accommodation. Upon my own investigation, I discovered documentation from Mr. Howard Beverly, who states that in his documentation that the green barn, labeled Site 46MR193 (MR-0144) has standing structures that do not meet applicable criteria for nomination for the National Register of Historic Places (NRHP). The structure is a nomination, NOT even a registration, which only meets one criteria. Mr. Beverly continues to explain in his documentation that the site did NOT reveal any archival or archeological research associating the site with a significant person or event in history. Only stating that the associated structure is an example of a barn used for the production

of CORN. Being a family with close ties to the area, we know this was once a dairy farm that has been inactive for many years, and it is not owned by a local family. This barn and its property was purchased by Bayer (now known as Coverstro) and has been used for storage for several years by the corporation. This supposed archeological site is not even registered within Marshall County as having any historical or archeological significance relating to person, time or place. The only significance declared by Mr. Beverly is only relating to corn. I strongly feel that this property should be immediately considered in the Route 2 expansion for the lack of necessary information to deem this property spared, especially when this fabrication of information has been expanded upon without the historical or archeological evidence to back its significance, and also since the structure is not owned by a local family, but a multi-million dollar company.

Additionally, within the Environmental Assessment manual provided, Table 3-9: Recommended NRHP Eligible Properties denotes MR-0144 is ONLY labeled as eligible (not registered), and SUGGESTS a 4.0 acre boundary, which is only valid if the structure is registered. This barn structure is in fact NOT registered. The Environmental Assessment manual further states that embarking within this 4.0 acre area would not physically impact the resource (green barn) but would have a "visual impact." I find it ridiculous to consider this structure that is not owned by its original family, but by a million dollar corporation, and put above family that has resided and owned a property for nearly 90 years based solely by a suggestion and not a true NRHP registration. Please follow link for reference: [http://craiky.com/wp-content/uploads/2017/08/vita\\_beverly.pdf](http://craiky.com/wp-content/uploads/2017/08/vita_beverly.pdf)

Touching on other options and considerations for the expansion of Route 2, there is an additional 50 feet west of the current Route 2 which needs to be considered in the expansion of Route 2. There is a gas regulator building at Dry Run that can be moved west of its current position. Moving this building will allow additional space to move Route 2 west of its current position. Additionally, my family has been hit the hardest with the plans for expansion, all of which include taking our property and our homes. The State should consider embarking on Columbia Gas and Coverstro. Expanding Route 2 west would be a mere inconvenience to Columbia Gas and Coverstro versus the complete heartbreak and devastation the expansion is going to cause my family. Other aspects of the road plan, the proposed access for Dry Run is incredibly dangerous. The new entrance would be located close to the Dry Run bridge, which will create great limitations to a direct view of South oncoming traffic and too dangerous to safely cross three lanes, especially during the winter months. This makes me incredibly sick to think about my elderly grandparents, my father and sister, and other members of my family as their safety will be most definitely jeopardized with your plan.

If anything upsets me the most with the State's plan for expansion is the fact that not a single representative has come to our home to discuss these plans which will ultimately affect our quality of life in a devastating way. We would appreciate a representative speaking to us in our homes, let alone showing us on our property the proposed plan. We are kind, good people, and the lack of consideration for our well-being of the State is truly heartbreaking. We have only received documentation in the mail and attended an incredibly disorganized meeting in August 2018 that held no real answers for our family. Besides the possibility of losing the only home I have ever known, I have a great fear for my grandparents. I worry that this road



expansion will greatly affect their health and quality of life. I truly worry the impact this will cause on their emotional and physical health, well-being, and the stress that the road expansion will cause on their life. There is something unsettling about the State choosing to uproot elderly individuals from their home of 63 years, let alone my home of 30 years. I worry my grandparents will not be able to live through this stress and heartbreak in their life. I also worry tremendously for their safety, as the road encroaching on their property, with vehicles and tractor-trailers traveling 55-60 MPH. There isn't much room for mistake, as my father's home will undoubtedly be at the greatest risk for accidents. The noise will be enough to disrupt the peace in their life, let alone trying to attempt crossing multiple lanes of traffic to live their daily life. Your plan has no safe alternative, respect, or consideration for the residents at Dry Run. And with this, I hope you can be accountable for any injuries or grievance this may cause my family.

With closing, I beg you spare the residents, the Cains and Rothlisbergers, as well as the Richmonds, from your plan to expand Route 2 at Dry Run, so we can live in peace and safely within our homes. I ask you consider expanding Route 2 further west and north, bypassing our homes and properties the best way possible. Please consider the utilizing the property owned by Covestro with the green barn that has absolutely no historical significance in any way, or plan to keep the route in its current position. There is little at stake outside of our family. Your plan is greatly affecting a whole family of nearly 90 years in one residence versus multi-million dollar industries in your plan. Please work with our family to make this possible. Please feel free to contact me at any time, email or phone. I would be happy to discuss my perspective and accommodate any questions: [andreacaindds@gmail.com](mailto:andreacaindds@gmail.com) or 304-771-0210

Sincerely,  
Andrea Cain

CommentType

Online

Created at 9/17/2018 1:20 AM by

Last modified at 9/17/2018 1:20 AM by

\_Title  
FirstName Robert  
LastName Parsons  
Organization  
Email  
MailingAddress  
City  
State WV  
ZipCode 26155  
Comments I find it unnecessary to expand to four lanes for a five mile stretch, especially considering that families will have to be uprooted.  
CommentType Online

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Created at 9/17/2018 7:57 AM by  
Last modified at 9/17/2018 7:57 AM by

\_Title  
FirstName Rachael  
LastName Cain  
Organization  
Email  
MailingAddress  
City  
State WV  
ZipCode  
Comments There is nothing wrong with the road or no need to expand. A family is going to be losing out on property if you do this. How about focusing on the railroad crossing in Brooklyn that delay emergency vehicles and many others up to several times a day. That would be more beneficial to our town this this little stretch of highway.  
CommentType Online

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Created at 9/17/2018 8:11 AM by  
Last modified at 9/17/2018 8:11 AM by

|                |   |
|----------------|---|
| _Title         |   |
| FirstName      | Brittany  |
| LastName       | McConnell   |
| Organization   |   |
| Email          |   |
| MailingAddress |   |
| City           | New Martinsville  |
| State          | WV  |
| ZipCode        |   |
| Comments       | Listen I know there had been talk about this road coming in for years but there are other routes you can take beside peoples homes. To you it's a highway that's not needed on let's make a 4 lane but why really why. That family has own that land for yrs upon years and now what they get some money thrown at them and now they have to uproot everything. No not right. Not to mention the madonna dixon monument that's there. I cant tell you how often I've seen people stop along the rode growing up seeing people taking pics reading it enjoying it. I'm gonna guess with the new road it's not going to be a stopping people a safe point. Find another way. Dont take those families houses. Dont take the memories they've had and further children would share. Just dont. |
| CommentType    | Online  |

Created at 9/17/2018 8:37 AM by  
Last modified at 9/17/2018 8:37 AM by

|                |  |
|----------------|--|
| _Title         |  |
| FirstName      | Babette  |
| LastName       | Boyd   |
| Organization   |  |
| Email          | <a href="mailto:Mybabette63@yahoo.com">Mybabette63@yahoo.com</a>   |
| MailingAddress | 601 Susan Street   |
| City           | New Martinsville   |
| State          | WV   |
| ZipCode        | 26155  |
| Comments       | <p>Dear West Virginia,</p> <p>What has happened to our beautiful state? New Martinsville as well as many other communities has been taken over by oil and greed. The truck traffic is ridiculous that goes through our small town. This Proctor widening project is a waste of our money. There needs to be a bypass around the town. The life of a beautiful woman was already taken at your Proctor bridge construction site, due to a collision with a commercial truck. These trucks need rerouted away from the community. I travel this road every day to work and there have been so many near misses due to the carelessness of these truck drivers and the speed they travel. They are not from our state and do not care about our state or the people here. Taking property away from a family that has been here for generations, that loves this state, that has worked hard their whole lives, that has maintained it with pride, is a slap in the face to them and all of us. The companies that are chiseling away at the beauty of our state are being catered to while the people of the community are being thrown aside. The traffic in town is so bad that it takes me 20 minutes to go 5 miles. Rerouting all of these trucks would be the best thing for our community.</p> <p>Sincerely,<br/>Babette</p> |
| CommentType    | Online   |

Created at 9/17/2018 8:37 AM by  
Last modified at 9/17/2018 8:37 AM by

\_Title  
FirstName Allison  
LastName Kidwell  
Organization  
Email [Allisonpaige32@yahoo.com](mailto:Allisonpaige32@yahoo.com)  
MailingAddress  
City  
State WV  
ZipCode  
Comments Please reconsider moving the Columbia gas building to the west so that you can create a larger area in front of homes on Dry Run Rd.  
Thank for for your consideration and understanding of wanting to keep our homes!  
CommentType Online

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Created at 9/17/2018 11:07 AM by  
Last modified at 9/17/2018 11:07 AM by

\_Title  
FirstName Stephen  
LastName Conlon  
Organization  
Email [nfashion@thistledewfarm.com](mailto:nfashion@thistledewfarm.com)  
MailingAddress 1586 Carpenter Ridge Rd.  
City New Martinsville  
State WV  
ZipCode 26155  
Comments To All Concerned:

I have driven this stretch of WV 2 for 45 years. I have never been a daily user, but our family and our two businesses have used it frequently for business and pleasure. Typically, we come down Proctor Creek Rd, Rt89, and then go north on Rt2. "Back in the day" when there were many more employees at Bayer and PPG, we would avoid using this stretch during shift changes. I do not know and did not see in your thorough info on this project, a comparison of employment numbers over the years at the facilities within this area. Never the less, nowadays we turn north on Rt 2, set the cruise control at 55-60 mph and easily and uneventfully get to Franklin. It really doesn't matter what time of day we travel. Generally, the four traffic signals are green, but sometimes we "hit" one. So, as users, our family and businesses are quite happy with this section of Rt 2.

When I attended the first public meeting on this project, I asked about the AADT for this area. The DOH employee responded that, in fact, the AADT was a bit low to justify the "need" to do this project.

Point by point:

Point 1: Low AADT

Point 2: The populations in Marshall and Wetzel County are decreasing

Point 3: The existing road is pretty good by WV standards for slope and curves

Point 4: The existing road is far away from the hillside so there are no encroachment issues such as slips or landslides.

Point 5: All the wildlife in the area come from the east since the factories block their west access.

Moving the road west puts it closer to the hillside and wildlife and will require a fencing System.

Point 6: Although Alternative 1A avoids buildings and structures of historical value, it takes out community assets such as the Cain residences and the Bayer Credit Union building. Why are we placing a higher value on historical structures which provide only intangible value vs assets which provide employment, housing and TAXES. Taking of assets by eminent domain is a serious move and to justify its' use the benefits to society should be immense and necessary.

Point 7: Beginning the project north of stream #4 eliminates all the impacts at the southern end of the project. There is adequate

room to widen the existing Rt2 from the Proctor bridge to stream#4. I have not seen any discussion on this option. I am not as familiar with the right of ways which will be required at the north end of this project. Your use of the word "relocation" rather than "taken by eminent domain" is interesting since you are not relocating these property owners.

Point 8: Although I don't place a higher value on the Bayer Credit Union than the Cain property, I have always appreciated the architecture and PLACEMENT of the credit union. A job well done. One of the big assumptions of this project is that it will boost economic development by opening up areas. There is a fixed amount of land in this project area and there will be less land available after this project consumes at least 174.9 acres.

Point 9: You state, "Community leaders have been advocating a continuous 4-lane highway from Parkersburg to Wheeling for many years." Some citizens have signs in their yards, "4 lanes all the way". This sounds great, but it is impossible to achieve in Wetzel and parts of Tyler Counties. Even if the Proctor-Kent project were completed, from Haines Run through New Martinsville through Paden City and through Sistersville will always be two lanes. In addition, there are unavoidable delays at New Martinsville Elementary School and the CSX crossing at the southern end of New Martinsville. A chain is only as good as it's weakest link.

Point 10: In 3.1.4 community facilities and services you state. "The Grandview Fire Dept and Marshall County Sheriff's Office cover this area..." Not terribly important but the Grandview FD is totally understaffed and doesn't respond to calls from this area. The Steelton and New Martinsville FD's typically respond to these calls.

Point 11: It appears that the cost for this project hover around \$100 million. However, it was recently reported that estimates for the I-70 projects were way low and the DOH is now scrambling to refigure those IMPORTANT projects. When combined with the Kent to Franklin project, what will be the combined costs of these two projects when they are let out for bid? Realistically \$150-200 million?

Point 12: It has been studied about how humans prefer to build new things rather than "bite the bullet" and repair the old. It's easier to get money for a new bridge than money to fix an old one. This project is an example of this tendency. Wetzel and Marshall Counties need millions and millions of repair work and here we are talking about a new, difficult to justify project. Take a ride on Fish Creek Rd. A beautiful watershed area but the road needs extensive rehabilitation.

Let's pull all these thoughts together:

For 6 or 7 years, I have been encouraging my representatives in Charleston to adequately fund the DOH. It's a simple math and business problem. We know the costs, we know the DOH income. It has been obvious that underfunding increases costs down the road. Increasing user fees and the fuel tax would have been a simple painless remedy. Legislators were worried about the impact of higher fees and ignored the impact of underfunding. Then we had a "Blue Ribbon Highway Board" started by Governor Tomblin. It made no progress. They searched for money but avoided the obvious solution of raising fees. Finally, user fees and the fuel taxes were raised but it was done primarily to provide collateral for issuing bonds for "The Roads to Prosperity" projects and it allowed the DOH to say, "no new taxes." The new taxes had been in place for a year, so they weren't



"new." Only 11% of voters voted in a special election and 80% of those voters approved the program. So 8% of registered voters believe in this hyped up "Roads to Prosperity " program. It is a huge gamble to borrow money to create jobs and roads in hopes that it brings WV the prosperity that has eluded us for 150 years.

After attending both meetings on this project, the first of which was well executed in an adequate facility and the second one which was a total disaster in terms of communicating with anyone, I wondered whether any of the engineers involved said, "the impact of this project and the benefits and the costs are questionable even if we could do it for free." Certainly, I can't argue that this project won't make this stretch of road safer. It will, but as you state, "the accident rate was below the statewide average." Half of the accidents are single vehicles hitting a fixed object. I could argue that the existing road could be improved w a jersey type barrier in the center and guardrails along the utility poles. I believe there is enough room for these improvements.

There are those who believe that this project will bring and allow significant economic development. However, since 2007 when the gas guys arrived, this area has seen unprecedented development using our so-called inadequate road system. From Franklin to Sistersville there are few remaining developable commercial sites. This project will not have any impact on development and will not change significantly the access to or time required to get to or through this area.

I encourage the DOH to "back burner" this project. Considering the costs, considering the environmental impact, considering the need to use eminent domain, considering the unguaranteed economic benefits, considering that we need millions of dollars to repair roads in District 6, considering that traffic and population in the area has decreased, I ask that the DOH not proceed with this project.

Remember, I come down Proctor Creek Rd, turn right on Rt2 and set my cruise at 55 and I'm in Franklin without any issues. It's a good solid road and it's away from the hillside where road integrity is much more expensive to maintain.

Thank you, Steve Conlon

CommentType

Online

Created at 9/17/2018 12:07 PM by  
Last modified at 9/17/2018 12:07 PM by

|                |  |
|----------------|--|
| _Title         |  |
| FirstName      | Katie  |
| LastName       | Haught   |
| Organization   |  |
| Email          |  |
| MailingAddress |  |
| City           |  |
| State          | WV   |
| ZipCode        |  |
| Comments       | We do not need a four lane road!!!!!!!!!!!!!! Spend tax dollars on something else! People are losing their family farms and homes by this project! My family used to own the big green barn that Covestro now owns and i know it will be devastating if it's torn down! STOP THE 4 LANE! |
| CommentType    | Online   |

Created at 9/17/2018 12:18 PM by  
Last modified at 9/17/2018 12:18 PM by

|                |   |
|----------------|---|
| _Title         |   |
| FirstName      | Jacqueline  |
| LastName       | Null  |
| Organization   |   |
| Email          | <a href="mailto:jaclyn.null@gmail.com">jaclyn.null@gmail.com</a>  |
| MailingAddress | 300 Washington Rd   |
| City           | pittsburgh  |
| State          | WV  |
| ZipCode        | 15216   |
| Comments       | Hello,<br><br>I am making my comment on behalf of a family/friend's home being taken away by this project. People should not be forced to give up what they have worked so hard for especially their homes. This is a heart wrenching process to occur and the project should deeply reconsider. Thank you for your time. |
| CommentType    | Online  |

Created at 9/17/2018 12:37 PM by  
Last modified at 9/17/2018 12:37 PM by

|                |  |
|----------------|--|
| _Title         |  |
| FirstName      | Matthew  |
| LastName       | Null   |
| Organization   |  |
| Email          | <a href="mailto:matthew.null@gmail.com">matthew.null@gmail.com</a>   |
| MailingAddress |  |
| City           |  |
| State          | WV   |
| ZipCode        | 26155  |
| Comments       | <p>I oppose the widening of Route 2 through Proctor, as it will dispossess families (some elderly and in ill-health) who have lived there for generations, all in the interests of hypothetical new manufacturing plants that may or may not ever come into existence. The state is gambling with the idea that this will lure business, and I don't see it turning out well for the taxpayer and the private citizen in the end.</p> <p>This project hurts these families and it will hurt the taxpayers; the state pays the bills, and only private corporations benefit. This is the ass-backwards ideology of West Virginia's current leaders. We won't tax corporations or put a severance tax on fracking; instead, we ask the private citizen to suffer in order to make commerce easy for the corporations. What do we get out of this? Very little.</p> |
| CommentType    | Online   |

Created at 9/17/2018 12:48 PM by  
Last modified at 9/17/2018 12:48 PM by

\_Title  
FirstName Anna  
LastName Berardinelli  
Organization  
Email [anna\\_berardinelli@hotmail.com](mailto:anna_berardinelli@hotmail.com)  
MailingAddress  
City  
State WV  
ZipCode 26155  
Comments My friends are about to lose two houses that have been in their family for generations and I just feel that it is completely unnecessary. They're on the property that's divided by the Mason Dixon line just north of New Martinsville. Please consider not forcing them out of their homes.  
CommentType Online

Created at 9/17/2018 2:54 PM by  
Last modified at 9/17/2018 2:54 PM by



# WEST VIRGINIA 2—PROCTOR TO KENT PROJECT

## INFORMATIONAL WORKSHOP PUBLIC MEETING

THURSDAY, AUGUST 16, 2018

4:00PM TO 7:00PM

NEW MARTINSVILLE PUBLIC LIBRARY

160 WASHINGTON STREET, NEW MARTINSVILLE, WEST VIRGINIA

STATE PROJECT U352-2-11.66 00, FEDERAL PROJECT NH-0002(528)D

WETZEL AND MARSHALL COUNTIES, WV

Join the West Virginia Division of Highways (WVDOT) on **Thursday, August 16, 2018** at the New Martinsville Public Library in New Martinsville, WV for an informational workshop public meeting to make available the approved **West Virginia 2—Proctor to Kent Environmental Assessment**. WVDOT and consulting staff will be available to answer questions and explain project details. There will be no formal presentation, however project maps and copies of the Environmental Assessment will be available for your review. The Environmental Assessment is also available online at <https://transportation.wv.gov/highways/engineering/comment/WV2ProctorToKent/Pages/default.aspx>. You are encouraged to examine the Environmental Assessment and discuss the project with members of the study team. This meeting complies with the public involvement requirements of the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act.

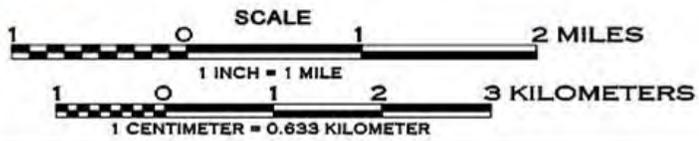
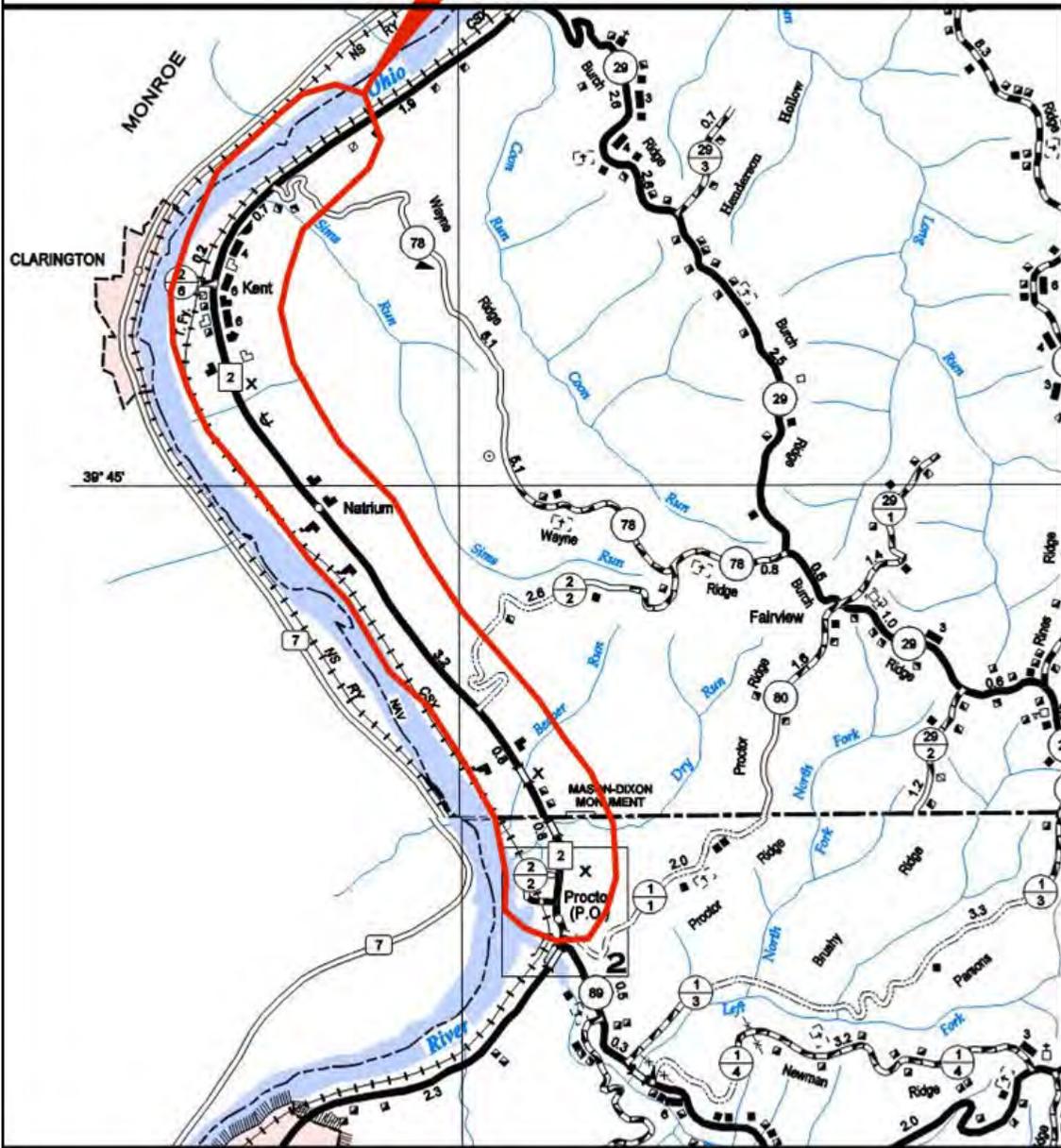
### PROJECT SUMMARY

The preferred alternative upgrades and relocates a 5.25-mile portion of West Virginia State Route 2 (WV 2) beginning approximately ½ mile south of the Marshall County Line in Proctor to approximately ¼ mile south of Marshall County Route 78 just north of Sims Run in Kent. The proposed improvements include the upgrade of WV 2 from a rural two-lane arterial to a four-lane divided highway. The project configuration has been shifted to avoid and minimize impacts to a historic property boundary and industrial properties, including the adjustment of the horizontal curves and vertical profile. The estimated construction cost of the preferred alternative is \$58.5 million and does not include final design, right-of-way, or utility relocations.

### TENTATIVE PROJECT SCHEDULE

|  |                    |
|--|--------------------|
| Environmental Assessment (EA) Approved   | July 16, 2018      |
| Public Information Meeting               | August 16, 2018    |
| Comments Due                             | September 17, 2018 |
| Finding of No Significant Impact (FONSI) | November 2018      |
| Go Bond Construction                     | 2020               |

# PROJECT LOCATION





## **TO COMMENT ON THE PROJECT**

Comments can be submitted at the meeting or mailed to:

**Mr. RJ Scites, P.E.**  
**Director, Engineering Division**  
**West Virginia Division of Highways**  
**1334 Smith Street**  
**Charleston, West Virginia 25301**

Comments may also be submitted via our website at:

**<http://go.wv.gov/dotcomment>**

Click on the blue tab “Engineering Projects”,  
then click “Open”, then click on “WV 2—Proctor to Kent”

***Comments are due Monday, September 17, 2018***

*Upon request, WVDOH will provide reasonable accommodations including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in our services, programs and activities. Please contact us at (304) 558-3931. Persons with hearing or speech impairments can reach all state agencies by calling (800) 982-8772 (voice to TDD) or (800) 982-8771 (TDD to voice), toll free.*



## PREFERRED ALTERNATIVE IMPACTS

| Impact Category   | Alternative 1A (Preferred)           |
|---|--------------------------------------|
| <b>Natural Environment</b>  |                                      |
| Stream Impacts (linear feet)  | 1,913                                |
| Wetlands (acres)  | 3.03                                 |
| Floodplains (acres)   | 5.59                                 |
| <b>Human Environment</b>  |                                      |
| Forested Land (acres)   | 174.61                               |
| Historic Resources  | None                                 |
| Archaeological Sites  | None                                 |
| Industrial Facilities (e.g. Chemical Plant)   | 1-Axiall Brine Piping Infrastructure |
| Commercial Facilities (e.g. Businesses)   | 1 – Bayer Heritage Credit Union      |
| Residential Displacements   | 5                                    |
| Noise <sup>1</sup>  | Yes                                  |
| Prime Farmland/ Farmland of Statewide Importance (acres)                                | 2.97/76.52                           |
| <b>Financial / Costs</b>  |                                      |
| Estimated Construction Cost (including utility relocation and right of way acquisition) | \$87,909,167                         |

<sup>1</sup> Noise modeling indicates the 2032 Build scenario impacts several existing receptors; however, those residential receptors are slated for relocation due to encroachment on the right-of-way.

Comments can be submitted at the meeting or mailed to:

**Mr. RJ Scites, P.E.**  
**Director, Engineering Division**  
**West Virginia Division of Highways**  
**1334 Smith Street**  
**Charleston, West Virginia 25301**

Comments may also be submitted via our website at:

<http://go.wv.gov/dotcomment>

Click on the blue tab “Engineering Projects”, then click “Open”, then click on “WV 2— Proctor to Kent”

**Comments are due Monday, September 17, 2018**

**Thank you for attending our meeting! Your interest in the project is greatly appreciated.**



**WEST VIRGINIA 2—PROCTOR TO KENT PROCTOR**  
**STATE PROJECT U352-2-11.66 00 | FEDERAL PROJECT NH-0002(528)D**  
**WETZEL AND MARSHALL COUNTIES, WEST VIRGINIA**

## PUBLIC MEETING

**THURSDAY, AUGUST 16, 2018**

### WELCOME!

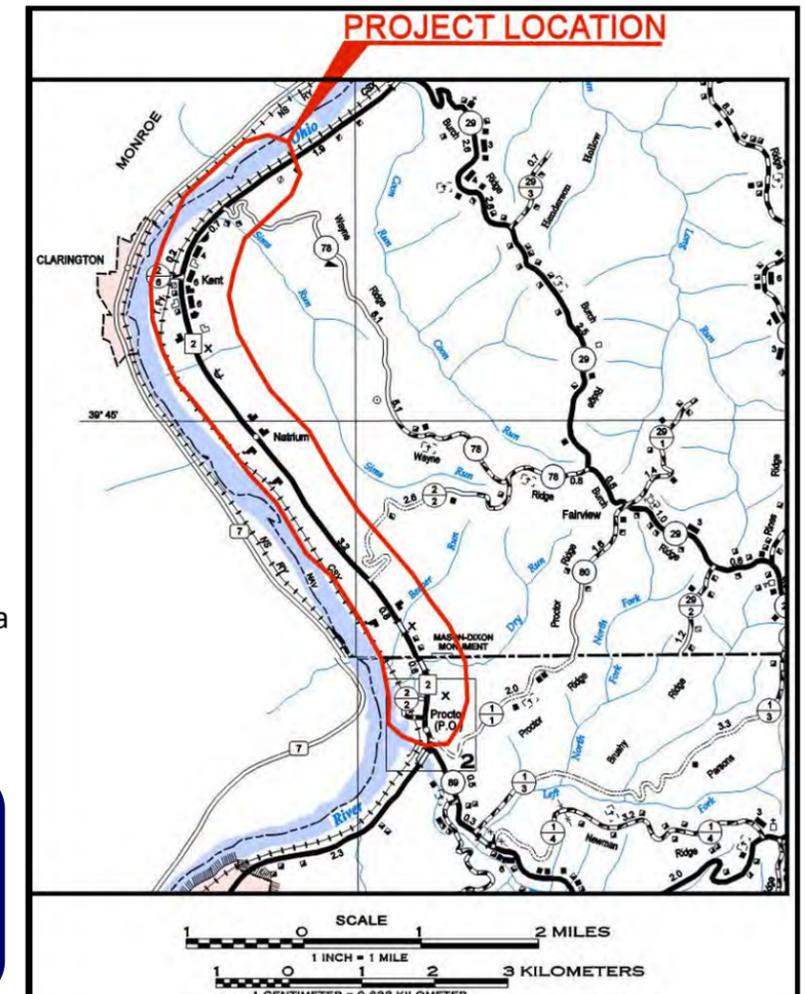
Welcome to the public meeting for the WV 2—Proctor to Kent project. The West Virginia Division of Highways (WVDOT) is conducting this public informational workshop to make available the approved West Virginia 2—Proctor to Kent Environmental Assessment. This meeting complies with the public involvement requirements of the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act.

### PROJECT DESCRIPTION

Preferred Alternative 1A upgrades and relocates a 5.25-mile portion of West Virginia State Route 2 (WV 2) beginning 0.47 of a mile south of the Marshall County Line in Proctor to 0.18 of a mile south of Marshall County Route 78 just north of Sims Run in Kent. The proposed improvements include the upgrade of WV 2 from a rural two-lane arterial to a four-lane divided highway. The project configuration has been shifted to avoid and minimize impacts to a historic property boundary and an industrial property, including the adjustment of the horizontal curves and vertical profile. The estimated construction cost of Alternative 1A is \$87.9 million including right-of-way acquisition and utility relocations.

The Alternative 1A meets the purpose and need by increasing the roadway capacity of WV 2 and improving safety by reducing the number of driveways and access points to the mainline highway. The wider paved shoulders and additional roadside clear area will also improve safety.

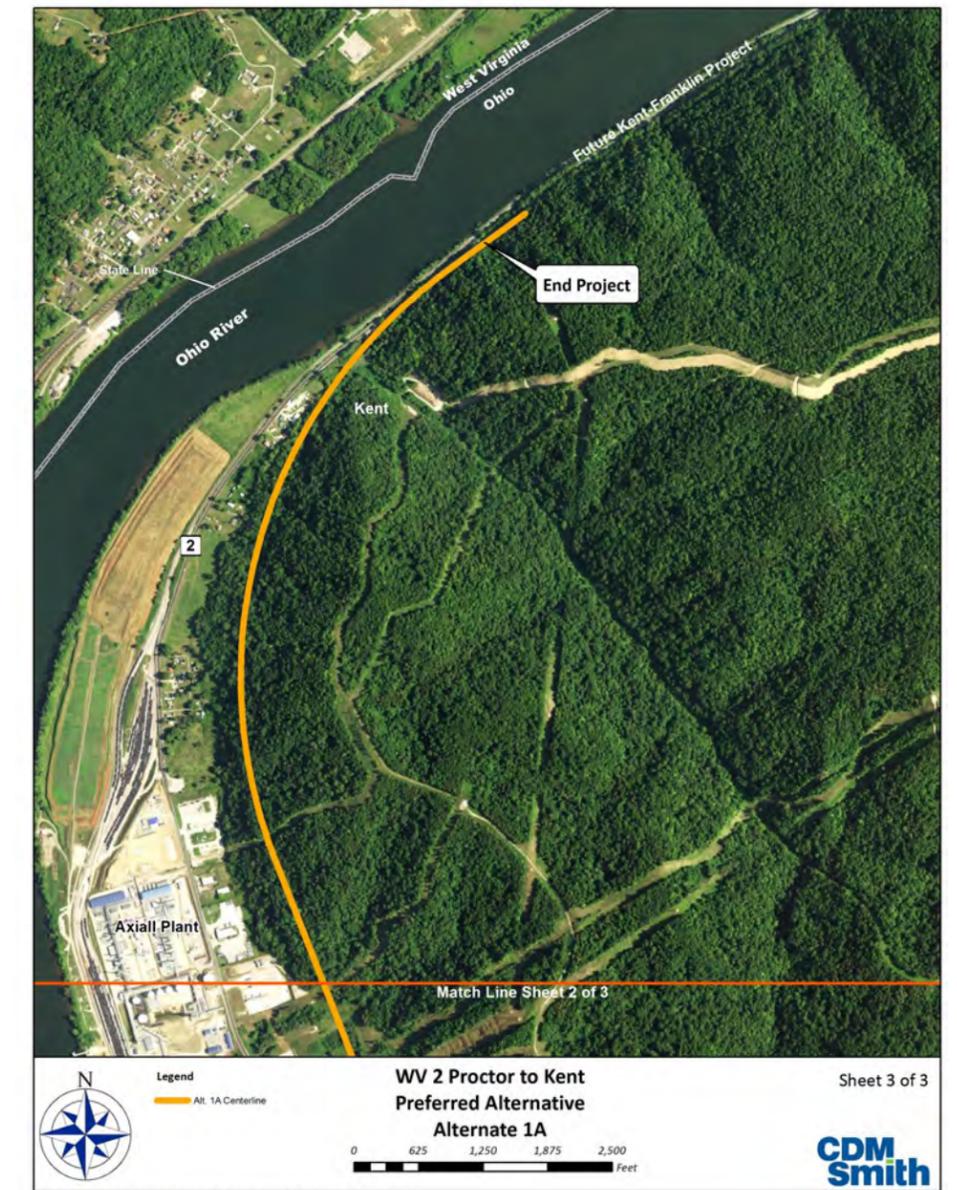
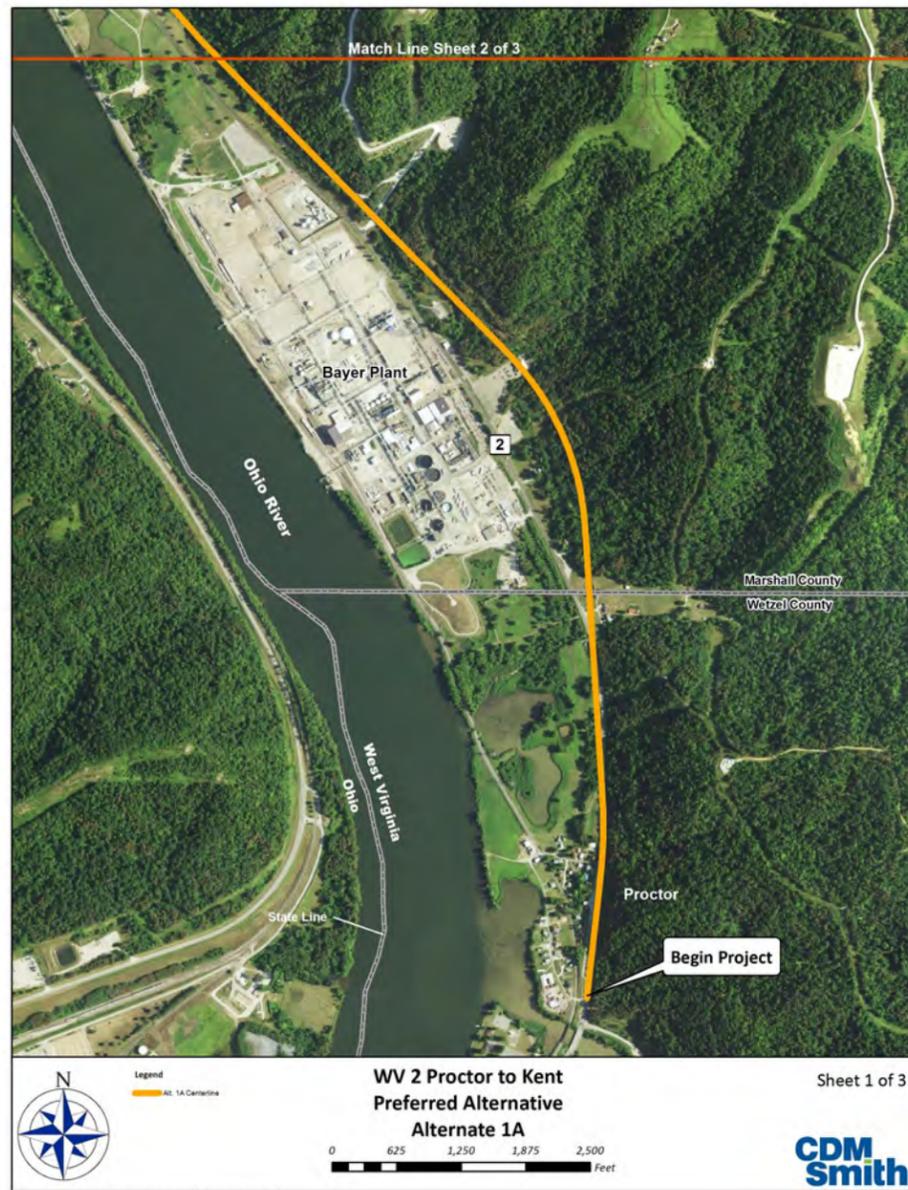
*The purpose of the proposed project is to increase system capacity and enhance safety through operational improvements.*





### TENTATIVE PROJECT SCHEDULE

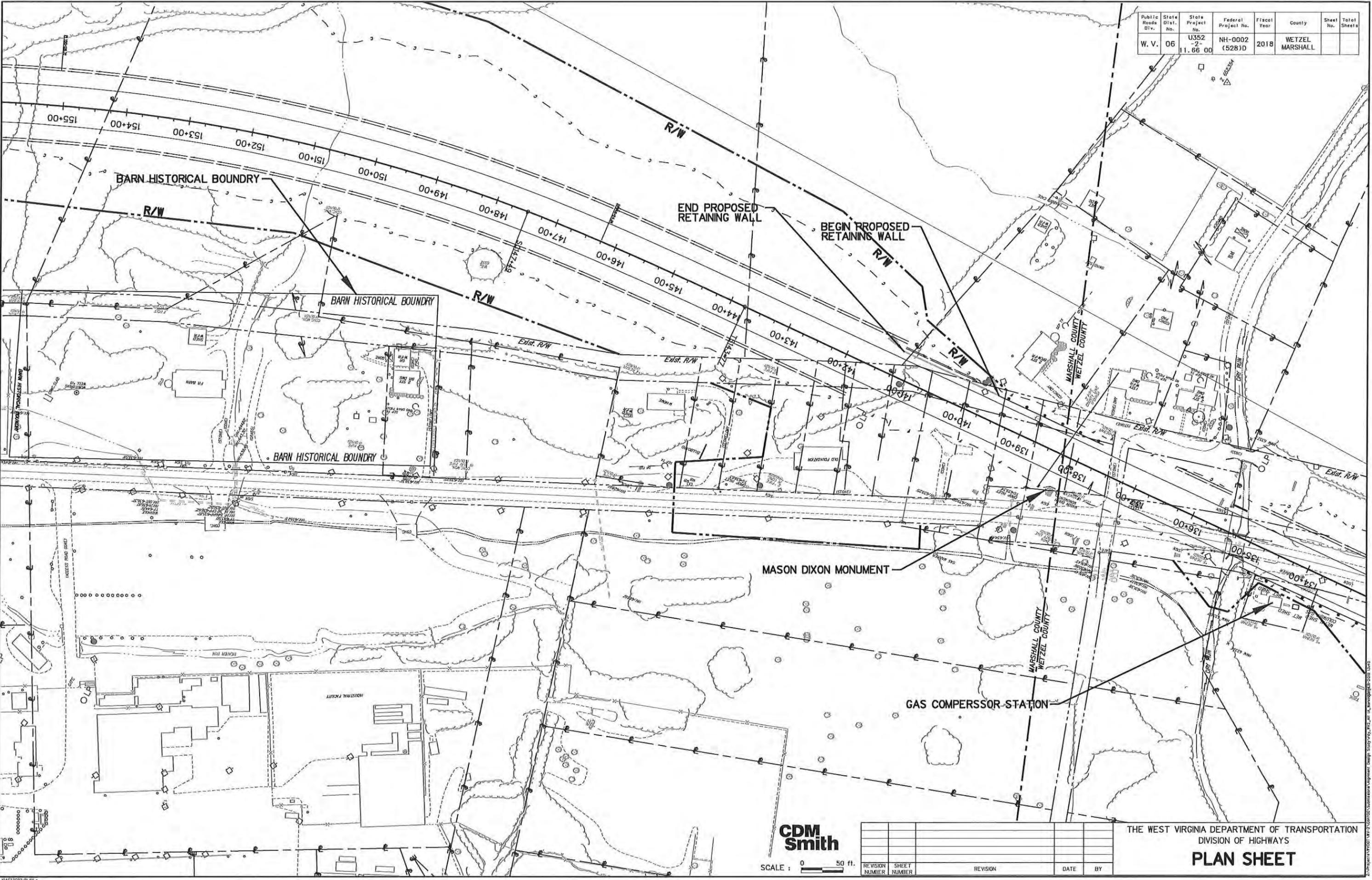
|  |                    |
|--|--------------------|
| Environmental Assessment (EA) Approved   | July 16, 2018      |
| Public Information Meeting               | August 16, 2018    |
| Comments Due                             | September 17, 2018 |
| Finding of No Significant Impact (FONSI) | November 2018      |
| GO Bond Construction                     | 2020               |



# APPENDIX C – PLAN SHEET

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|                   |                 |                   |                     |             |                 |           |              |
|-------------------|-----------------|-------------------|---------------------|-------------|-----------------|-----------|--------------|
| Public Roads Div. | State Dist. No. | State Project No. | Federal Project No. | Fiscal Year | County          | Sheet No. | Total Sheets |
| W. V.             | 06              | U352-2-11.66 00   | NH-0002 (528)D      | 2018        | WETZEL MARSHALL |           |              |



**CDM Smith**

SCALE : 0 50 ft.

| REVISION NUMBER | SHEET NUMBER | REVISION | DATE | BY |
|-----------------|--------------|----------|------|----|
|                 |              |          |      |    |
|                 |              |          |      |    |
|                 |              |          |      |    |
|                 |              |          |      |    |

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLAN SHEET**