Strategic Development Alternatives to Augment the Supply Chain: The I-73/-74 Corridor between Kenova and Prichard, WV

May 2019

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Introduction

The Marshall University Research Corporation's (MURC) Appalachian Transportation Institute (ATI), Center for Business and Economic Research (CBER), and Center for Environmental, Geotechnical and Applied Sciences (CEGAS) and the West Virginia Brownfields Assistance Center received funding through the Economic Development Administration (EDA) FY 2017 Economic Development Assistance Program (EDAP-2017) to enhance regional economic development opportunities along the I-73/-74 corridor in West Virginia. The primary aim of the project was to complete components for regional economic development planning within the focus area to increase economic competitiveness in the Huntington-Ashland MSA. Focusing upon sites adjacent to the corridor between the I-64 interchange (Exit 1) in Kenova, WV and the Heartland Intermodal Gateway in Prichard, WV, the partners sought to better understand the availability of sites for future development, analyze supply chain dynamics in the region, and develop marketing tools to assist in targeting firms to foster regional cluster development.

Background

In 1991, the United States Congress identified the need for a north-south highway corridor connecting northern Michigan to Myrtle Beach, SC, routed through North Carolina, Virginia, West Virginia, and Ohio. The I-73/-74 North–South Corridor was defined High Priority Corridor 5 by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).[1] Additions to the Corridor and detailed alignments were outlined as part of The National Highway System Designation Act (NHS) of 1995.[2] The West Virginia portion of this congressionally designated corridor is to serve as a multi-lane replacement of the existing U.S. Route 52 alignment, extending approximately 140 miles from Huntington to Bluefield, WV. In concert, regional stakeholders identified the need for a transportation hub to facilitate the transportation of goods along the Ohio River, Interstate 64, U.S. Route 52, and rail. A need to improve commodity flows was identified, and the Heartland Intermodal Gateway was a significant response.

The Heartland Intermodal Gateway provides regional businesses with a truck-to-rail transfer facility that establishes intermodal connections to the Port of Virginia in Hampton Roads, VA and with Chicago, IL, with connecting service to West Coast ports. The concept of the Heartland Intermodal Gateway (HIG) at Prichard was originally explored as part of the Heartland Corridor Double Stack initiative. Feasibility studies in 1999 and 2003 identified the Prichard site as a preferred location. Construction of HIG was made possible by a $12 million federal grant, more than $18 million in funding from the State of West Virginia, and contributions from Norfolk Southern (NS). The terminal officially opened in 2015.

HIG is comprised of approximately 100 acres located on the Norfolk Southern Heartland Corridor. It is bordered by the Big Sandy River with access to the planned I-73/-74 Corridor (currently U.S. Route 52) approximately 10 miles south of I-64 Exit 1 in Kenova, WV. HIG provides the region with an increased flow of goods between the East Coast, Midwest, and West Coast. The facility increases efficiency for large shipments which saves time and money and enhances the ability to compete and trade globally.

[1] Please see: https://www.congress.gov/bill/102nd-congress/house-bill/2950.

[2] Please see: https://www.fhwa.dot.gov/publications/publicroads/96spring/p96sp10.cfm.

Project Overview

Construction of the I-73/-74 corridor from Kenova to Prichard, WV will occur in close proximity to existing U.S. Route 52, providing numerous new economic development opportunities as critical infrastructure components are included in the planning and project development phases. Of critical importance to the overall success of this project are the identification and development of high-quality sites along (and in close proximity to) the projected corridor path that may be utilized for new and expanding business needs. These types of properties will be crucial for new business development and efforts to maximize site potential are needed as part of overall planning for regional business recruitment and expansion.

The research and analysis efforts for this project were broken down into four primary objectives:

1. Identification of suitable development sites along the corridor;
2. Evaluation of the identified sites;
3. Analysis related to the regional supply chain; and
4. Marketing materials to support recruitment strategies for a targeted number of sites.

Identification of Suitable Development Sites

The study team set out to identify existing, potential, and remediable sites for future development adjacent to or near the I-73/-74 corridor. Locations near the projected I-73/-74 corridor construction were chosen in an effort to minimize transportation costs of fill materials while maximizing future use of identified sites. Utilizing existing and primary GIS data including (but not limited to) aerial photography, topographic maps, utilities, transportation infrastructure mapping, and tax parcel data, the study team identified seven sites for analysis as part of the project. These sites include former coal shipping facilities and additional brownfield sites along the projected I-73/-74 corridor path, as well as other potential locations adjacent to proposed infrastructure development.

Evaluation of the Identified Properties

Each of the seven specific site evaluations include complete details on property conditions, utility infrastructure, site history, and related components. This information serves as primary data to support the development of site marketing packages. Information related to each of these parcels is provided in detail below.

Aeroplex Property

Site Details

The Aeroplex Property totals approximately 95 acres and is located immediately south of the Huntington Tri-State Airport. A portion of the site was used previously as a separate runway by the airport.

Property Contact and Ownership

The property is owned and marketed by the Tri-State Airport Authority. The site is also being marketed by American Electric Power (AEP) as a "Quality Site" for development.

Environmental Conditions

The property does not include any Recognized Environmental Conditions (RECs) that would warrant concern.

Brownfield Status

Based on current site use and past site history, this site, by EPA definition, is not considered a brownfield.

Soil and Geologic Summary

Soils consist primarily of Udorthent soils, or soils where the upper soil layer has been moved, filled, or graded, in the areas of the former runway. Native soils in the surrounding area consist of Gilpin-Upshur silt loams, classified as farmland of local or statewide importance, but not prime farmland. A soil map is provided in Attachment A.

The site is geologically located in the Appalachian Plateau physiographic province, underlain by Paleozoic – Pennsylvanian age strata. This strata is comprised of cyclic sequences of sandstone, shale, clay, coal, and limestone. A geologic map is provided as in Attachment B.

Site Preparation and Permitting

The site is not located within the 100-year floodplain, does not include any designated wetlands, and is not located along a high-quality stream. No uncommon permitting requirements are anticipated for future site development.

Utility Infrastructure Components and Associated Services

Utility Infrastructure

Natural gas, electric, water, sewer, and broadband services are available on the property.

Utility Characteristics

Natural gas is provided by Mountaineer Gas. A six-inch main gas line is located on the property. For natural gas users requiring more than 150 million cubic feet (Mcf) of gas, the cost is $12.656 per Mcf.

Three-phase electric lines are located on the property, provided by Appalachian Power, a Division of American Electric Power. For larger general

service with demands between 150 and 1,000 KW, on-peak demand rates are 6.043 $/KW, plus a monthly customer charge of $100.00.

Water is provided to this location by the Town of Kenova. A six-inch water main is located on the property. Water rates are $68.53 per 10,000 gallons for commercial users. Sewer is provided by the Town of Ceredo. A two-inch forced main line is located on the property. Sewer rates are $30.40 per 3,400 gallons used per month.

As reported on the December 31, 2017 FCC Form 477 fixed broadband deployment data report, the data transfer technologies that can be or are offered for business services to at least one location within the census block that the Aeroplex Property lies within are DOCSIS 3.0, Optical Carrier/Fiber to the end user, Asymmetric xDSL, ADSL2, ADSL2+, and Satellite. A list of providers and data transfer rates is provided in Attachment C.

Evaluation of Site Utility Infrastructure Improvements
No additional infrastructure improvements are needed at this location.

Transportation Infrastructure

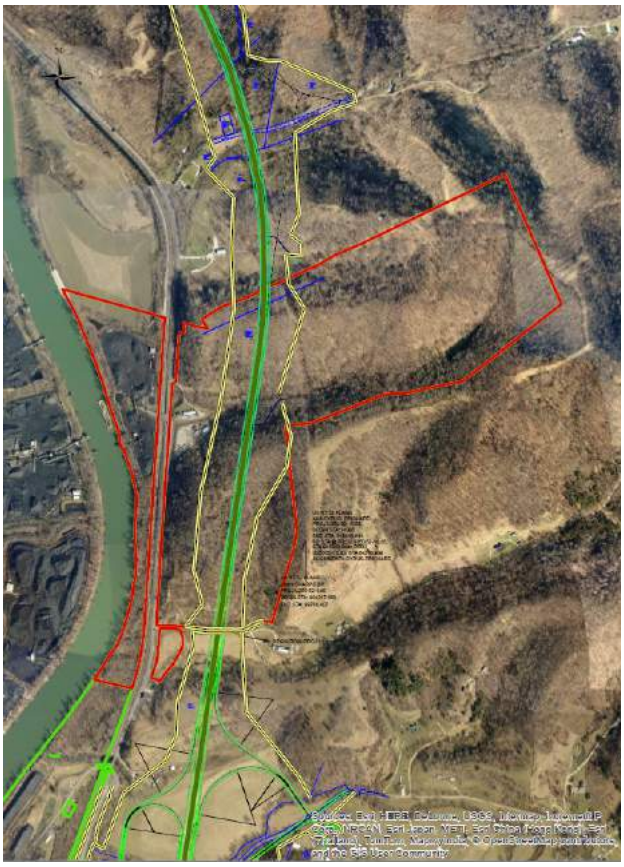
Nearest Interstate, Distance to Interstate, and Interstate Exit
Interstate 64 Exit 1 is 3.9 miles north of the site.

Nearest Commercial Airport
Huntington Tri-State Airport is adjacent to the Aeroplex Property.

Rail Access, Rail Provider, and Rail Siding
Rail service to the area is provided by Norfolk Southern but is not available on-site. The Heartland Intermodal Gateway facility is located 12.1 miles south of the site on U.S. Route 52.

Navigable Waterway, Access Point, and Barge Facilities
The Aeroplex property does not include waterway access.

Argus Property



Site Details

A Phase I Environmental Site Assessment (ESA) was conducted on the property located between the Norfolk Southern Railroad and the Big Sandy River in October of 2016 as part of the *Advantage Valley Site Planning Study*. Argus property acreage to the East of the Norfolk Southern Railroad and U.S. Route 52 were not included in this study. The Phase One ESA indicated the property was clear of vegetation in 1956, with no significant changes other than a small structure located on the northeast corner of the property. This area was generally used for farming activities. By the early 1990's, a coal loading facility was located on the property. Coal was loaded onto barges on the Big Sandy River. The coal loading facility still exists on the property; however, the facility was closed at the time of the Phase I ESA and remains closed to date. Multiple sediment ponds, coal loading structures including conveyor belt systems, buildings including a guard house, scale building, and maintenance shop, and coal storage areas are noted on the property. A copy of the Phase I ESA is available upon request.

Property Contact and Ownership

The property consists of five parcels, identified as Ceredo District (District 2), Map 15, Parcels 21.1, 22, 23, 24, and 26. Total acreage is approximately 144.35 acres. Argus Energy is the owner of the property.

Environmental Conditions

According to the Phase I ESA report, Recognized Environmental Conditions (RECs) identified included multiple above-ground storage tanks, multiple drums and containers, on-site electrical transformers, miscellaneous equipment, and stained soils. Various petroleum products were stored on-site, including diesel fuel and oil for equipment.

Based on the results of the Phase I ESA report, a Phase II ESA was conducted in August of 2017. Surface and subsurface soil samples were collected, along with surface water and groundwater samples to determine current site conditions. Sampling analysis included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and Target Analyte List (TAL) metals. Results indicate the presence of VOCs, SVOCs, and TAL metals in surface and subsurface soils, surface water, and groundwater. Contamination is noted across much of the property. Triad Engineering recommended the site be placed into the West Virginia Department of Environmental Protection's (WVDEP) Voluntary Remediation Program to further characterize the extent of contaminated soils and to evaluate human and ecological health risks of identified contaminants of concern. A copy of the Phase II ESA is available upon request.

Brownfield Status

Based on the Phase I ESA and Phase II ESA, the identified RECs and identified contamination makes this site, a brownfield by United States Environmental Protection Agency (EPA) definition. This designation is due to the known presence of multiple environmental contaminants to be present on the property.

Soil and Geologic Summary

Soils consist primarily of Udorthent soils, or soils where the upper soil layer has been moved, filled, or graded, in the areas of the coal loading facility complex. Soils underlying parts of the coal loading facility include Huntington silt loam and Cotaco loam, which are classified as prime farmland. The eastern section of the property includes multiple native soils, including Beech loam and Gilpin-Upshur silt loams complex units. Beech Loam is found on hillslopes, derived from fine-loamy colluvium from sedimentary rock, and is considered farmland of statewide importance. Gilpin-Upshur silt loam soils are found on hillslopes, derived from weathered sandstone and siltstone rock, and are mostly classified as farmland of statewide or local importance. A soil map is provided in Attachment A.

The site is geologically located in the Appalachian Plateau physiographic province, within Paleozoic – Pennsylvanian age strata. This strata is comprised of cyclic sequences of sandstone, shale, clay, coal, and limestone. The western portion of the site along the Big Sandy River consists of Cenozoic - Quaternary age alluvial deposits of sand, gravel, silt, and clay. A geologic map is provided in Attachment B.

Site Preparation and Permitting

The western section of the property including the coal loading facility will require reclamation as part of redevelopment. Argus Energy WV, LLC has a mining permit (Permit No. 0504187) for this site that has been inactive since November 2014.

The property immediately adjacent to the Big Sandy River is within the 100-year floodplain, and wetlands have also been identified. In these areas, applicable permitting will be required for development activities. Based on the *Advantage Valley Site Planning Study*, two buildings with 76,000 square feet of space, including parking and access, could conceptually be located in this area with earthwork occurring on the western part of the property occupied by the coal loading facility and not within the 100-year floodplain or wetland areas. For floodplain development, applicable permitting includes county-based permits. A copy of the current Wayne County Floodplain Ordinance is provided in Attachment D.

Utility Infrastructure Components and Associated Services

Utility Infrastructure

Natural gas, electric, water, and broadband services are available on or adjacent to the property. Sewer service is not available.

Utility Characteristics

Natural gas is provided by Consumers Gas Utility Company. A two-inch gas line provides gas service, capable of providing natural gas for light industry needs. For commercial gas users, the cost is $9.188 per Mcf for the first 1,000 Mcf used, and $7.188 per Mcf per additional 1,000 Mcf usage. There is also a monthly customer charge of $9.90.

Three-phase electric lines are located along U.S. Route 52 next to the property, provided by Appalachian Power, a Division of American Electric Power. For larger general service with demands between 150 and 1,000 KW, on-peak demand rates are 6.043 $/KW, plus a monthly customer charge of $100.00.

Water is provided to this location by the Town of Kenova. Water rates are $68.53 per 10,000 gallons for commercial users. Sewer service is not available.

As reported on the December 31, 2017 FCC Form 477 fixed broadband deployment data report, the data transfer technologies that can be or are offered for business services to at least one location within the census block the Argus Property lies within are DOCSIS 3.0 and Satellite. A list of providers and data transfer rates is provided in Attachment C.

Evaluation of Site Utility Infrastructure Improvements
The City of Kenova is in the process of upgrading their water line from Kenova to Prichard, providing additional capacity to the area. Sewer service will be required for future site development.

Transportation Infrastructure

Nearest Interstate, Distance to Interstate, and Interstate Exit
Interstate 64 - Exit 1 is 6.1 miles north of the site.

Nearest Commercial Airport
Huntington Tri-State Airport is located 7.6 miles from the site.

Rail Access, Rail Provider, and Rail Siding
Rail service to the area is provided by Norfolk Southern and is located immediately adjacent to the site. Rail siding is not available at this location. The Heartland Intermodal Gateway facility is located 7.1 miles south of the site on U.S. Route 52.

Navigable Waterway, Access Point, and Barge Facilities
The Argus property is located along the Big Sandy River at approximately Mile Marker 7. Based on Ohio River Navigation Charts dated January 2015, which includes navigable parts of the Big Sandy River, one commercial dock is located at this location (river mile marker 7.6), constructed of steel pipe tri-ties with a conveyor system.

Cyrus Property

Site Details

This area was generally used for farming activities prior to commercial development. Around 1991, a coal loading facility was located on the property. The coal loading facility still exists on the property and is used to load coal onto barges on the Big Sandy River. Multiple sediment ponds, coal loading structures including conveyor belt systems, buildings (guard house, scale building, office building, and maintenance shop), and coal storage areas are currently located on the property.

Property Contact and Ownership

Property ownership, according to the Wayne County Tax Assessor's office, is listed as LDH Energy. In recent months, property ownership was transferred. The current contact is Zeyit Aydinli, Chief Executive Officer, Ustore, Inc. Total acreage is approximately 115.55 acres.

Environmental Conditions

The coal loading facility is currently operational. Based on a recent field visit by CEGAS personnel, Recognized Environmental Conditions (RECs) identified include above-ground storage tanks, multiple drums and containers, on-site electrical transformers, and miscellaneous equipment.

Brownfield Status

Based on current site use and identified RECs, this site is a brownfield by EPA definition.

Soil and Geologic Summary

Soils consist primarily of Udorthent soils, or soils where the upper soil layer has been moved, filled, or graded, in the areas of the coal loading facility complex. Soils underlying the coal loading facility include Huntington silt loam, Cotaco loam, Guyan silt loam, and Kanawha loam, which are classified as prime farmland or farmland of statewide importance. A soil map is provided in Attachment A.

The site is geologically located in the Appalachian Plateau physiographic province. The site is along the Big Sandy River, and consists of Cenozoic - Quaternary age alluvial deposits of sand, gravel, silt and clay. A geologic map is provided in Attachment B.

Site Preparation and Permitting

The coal loading facility will require reclamation as part of redevelopment. Cyrus River Terminal LLC has an active mining permit (Permit No. 0500391) for this site. Disturbed acreage documented in this permit is 79 acres. This permit had an inactive status in June 2017, but has more recently been renewed, with a permit transfer occurring in October 2018.

The property immediately adjacent to the Big Sandy River is within the 100-year floodplain, and wetlands have also been identified. In these areas, applicable permitting will be required for development

activities. For floodplain development, applicable permitting includes county-based permitting requirements. A copy of the current Wayne County Floodplain Ordinance is provided in Attachment D.

The *Advantage Valley Site Planning Study* indicates, with earthwork occurring on parts of the property, multiple buildings totaling more than 600,000 square feet of space, with parking and access, could conceptually be located in this area. This conceptual layout does not include development within the 100-year floodplain or wetland areas.

Utility Infrastructure Components and Associated Services

Utility Infrastructure
Natural gas, electric, water, and broadband services are available on or adjacent to the property. Sewer service is not available.

Utility Characteristics
Natural gas is provided by Consumers Gas Utility Company. A two-inch gas line provides service to the site, capable of providing natural gas for light industry needs. For commercial gas users, the cost is $9.188 per Mcf for the first 1,000 Mcf used and $7.188 per Mcf per additional 1,000 Mcf usage. There is also a monthly customer charge of $9.90.

Three-phase electric lines are located along State Route 52 next to the property, provided by Appalachian Power, a Division of American Electric Power. For larger general service with demands between 150 and 1,000 KW, on-peak demand rates are 6.043 $/KW, plus a monthly customer charge of $100.00.

Water is provided to this location by the Town of Kenova. Water rates are $68.53 per 10,000 gallons for commercial users. Sewer service is not available.

As reported on the December 31, 2017 FCC Form 477 fixed broadband deployment data report, the data transfer technologies that can or are offered for business services to at least one location within the census block the Cyrus Property lies within are DOCSIS 3.0, Asymmetric xDSL, ADSL2, ADSL2+, and Satellite. A list of providers and data transfer rates is provided in Attachment C.

Evaluation of Site Utility Infrastructure Improvements
The City of Kenova is in the process of upgrading their water line from Kenova to Prichard, providing additional capacity to the area. Sewer infrastructure will be required as part of site development needs.

Transportation Infrastructure

Nearest Interstate, Distance to Interstate, and Interstate Exit
Interstate 64 - Exit 1 is 7.2 miles north of the site.

Nearest Commercial Airport
Huntington Tri-State Airport is located 8.7 miles from the site.

Rail Access, Rail Provider, and Rail Siding
Rail service to the area is provided by Norfolk Southern. Tracks are located along the eastern side of the property. No rail siding is available. The Heartland Intermodal Gateway facility is located 6.2 miles south of the site on U.S. Route 52.

Navigable Waterway, Access Point, and Barge Facilities
The Cyrus property is located along the Big Sandy River at approximately Mile Marker 8. Based on Ohio River Navigation Charts dated January 2015, which includes navigable parts of the Big Sandy River, one commercial dock is located on this property (river mile marker 8.5), constructed of steel pipe tri-ties with a conveyor system. This dock is currently used for coal transport.

Docks Creek Property

Site Details

This area consists of multiple land tracks totaling approximately 86 acres. Since the late 1980's, a coal loading facility has been located on the western section of the property between U.S. Route 52 and the Big Sandy River. Coal is loaded onto both rail and river barges. Multiple sediment ponds, coal loading structures, including conveyor belt systems, and coal storage areas are currently located on the property. The eastern section of the property includes residential and forestland.

Property Contact and Ownership

Property ownership includes multiple property owners, including Mountain State Fuels LLC, Donna May, Herma Davis, Mary Staley, Raymond Staley et. al.

Environmental Conditions

The coal loading facility is currently operational. Recognized Environmental Conditions (RECs) associated with coal loading facilities potentially include above-ground storage tanks, drums and containers, on-site electrical transformers, coal storage, and miscellaneous equipment.

Brownfield Status

Based on current site use and the potential for RECs, this site is estimated to be considered a brownfield by EPA definition.

Soil and Geologic Summary

Soils consist primarily of Udorthent soils, or soils where the upper soil layer has been moved, filled, or graded, in the areas of the coal loading facility complex, and along U.S. Route 52 and Norfolk Southern Railroad. Soils in the hilly area in the eastern section consist of Gilpen-Ezel complex and Gilpin-Upshur silt loams, classified as farmland of statewide importance, but not prime farmland. A soil map is provided in Attachment A.

The site is geologically located in the Appalachian Plateau physiographic province. Along the Big Sandy River, soils consist of Cenozoic - Quaternary age alluvial deposits of sand, gravel, silt and clay. Along the eastern end of the property, Paleozoic – Pennsylvanian age strata occurs. This strata is comprised of cyclic sequences of sandstone, shale, clay, coal, and limestone. A geologic map is provided in Attachment B.

Site Preparation and Permitting

The coal loading facility will require reclamation as part of redevelopment. Docks Creek LLC has an active mining permit (Permit No. 0506187) for this site. Disturbed acreage documented in this permit is 52.63 acres. This area is also within the 100-year floodplain. In these areas, applicable permitting will be required for development activities, including

county-based permitting for new developments. A copy of the current Wayne County Floodplain Ordinance is provided in Attachment D.

Utility Infrastructure Components and Associated Services

Utility Infrastructure
Natural gas, electric, water, sewer, and internet services are available on or adjacent to the property.

Utility Characteristics
Natural gas is provided by Consumers Gas Utility Company. A two-inch line provides natural gas service to the site, capable of providing natural gas for light industry needs. For natural gas users requiring more than 150 million cubic feet (Mcf) of gas, the cost is $12.656 per Mcf, plus a monthly customer charge of $676.95.

Three-phase electric lines are located on the property, provided by Appalachian Power, a Division of American Electric Power. For larger general service with demands between 150 and 1,000 KW, on-peak demand rates are 6.043 $/KW, plus a monthly customer charge of $100.00.

Water and sewer are provided to this location by the Town of Kenova. Water rates are $68.53 per 10,000 gallons for commercial users. Sewer rates are $14.59 per 1,000 gallons used per month (for the first 2,000 gallons), and $11.66 per 1,000 gallons thereafter.

As reported on the December 31, 2017 FCC Form 477 fixed broadband deployment data report, satellite is the only data transfer technology that can be or is offered for business services to at least one location within the census block that the Docks Creek Property lies within. A list of providers and data transfer rates is provided in Attachment C.

Evaluation of Site Utility Infrastructure Improvements
The City of Kenova is in the process of upgrading their water line from Kenova to Prichard, providing additional capacity to the area. Depending on the nature of development, broadband development may be needed in order to provide higher capacity and speeds.

Transportation Infrastructure

Nearest Interstate, Distance to Interstate, and Interstate Exit
Interstate 64 - Exit 1 is 4.6 miles north of the site.

Nearest Commercial Airport
Huntington Tri-State Airport is located 6.1 miles from the site.

Rail Access, Rail Provider, and Rail Siding
Rail service to the area is provided by Norfolk Southern. Rail siding is available on-site, currently used for coal car loading. The Heartland Intermodal Gateway facility is located 8.6 miles south of the site on U.S. Route 52.

Navigable Waterway, Access Point, and Barge Facilities
The Docks Creek property is located along the Big Sandy River, at approximately River Mile 6. Based on Ohio River Navigation Charts dated January 2015, which includes navigable parts of the Big Sandy River, two commercial docks are located at this location (river mile marker 6.1 and 6.3). Both docks are constructed of steel pipe tri-ties with cranes. Current commodities transferred at this location include coal, hydrogen nitrate, and slag.

River Trading and Kanawha River Terminal Property

Site Details

This location includes approximately 125 acres and has consisted of farmland and forestland for multiple decades. Farmland use has been mainly cattle, corn, and hay production. Cattle are not located on the property currently, however hay production continues on parts of the property.

Property Contact and Ownership

Property ownership is River Trading Company and Kanawha River Terminal (Tax Map Ceredo District 2, Map 15, Parcel 2 and 3).

Environmental Conditions

Based on past and current site use, the site is not expected to contain any significant levels of contamination.

Brownfield Status

Based on current and known past site use, this site is not considered a brownfield by EPA definition.

Soil and Geologic Summary

Soils along the Big Sandy River in the area used for farming include Huntington silt loam, Aston silt loam, Cotaco loam, and Guyan silt loam, which are classified as prime farmland or farmland of statewide importance. The section of the property east of U.S. Route 52 include soils from the Dekalb-Gilpin complex, Dormont-Latham complex, and Gilpin-Upshur silt loams, some of which are classified as local or statewide farmland of importance. Udorthent soils (soils where the upper layer has been moved, filled, or graded) occur along U.S. Route 52 and the Norfolk Southern Railroad. A soil map is provided in Attachment A.

The site is geologically located in the Appalachian Plateau physiographic province. The property along the Big Sandy River consists of Cenozoic - Quaternary age alluvial deposits of sand, gravel, silt, and clay. The hilly eastern section of the property east of U.S. Route 52 includes Paleozoic – Pennsylvanian age strata. This strata is comprised of cyclic sequences of sandstone, shale, clay, coal, and limestone. A geologic map is provided in Attachment B.

Site Preparation and Permitting

Portions of the property immediately adjacent to the Big Sandy River are within the 100-year floodplain. In these areas, applicable permitting will be required for development activities, including county-based permitting for new developments. A copy of the current Wayne County Floodplain Ordinance is provided in Attachment D.

Utility Infrastructure Components and Associated Services

Utility Infrastructure
Natural gas, electric, water, and internet services are available on or adjacent to the property. Sewer service is not available.

Utility Characteristics
Natural gas is provided by Consumers Gas Utility Company. A two-inch line provides natural gas service to the site, capable of providing natural gas for light industry needs. The cost for commercial gas users is $9.188 per Mcf for the first 1,000 Mcf used and $7.188 per Mcf per additional 1,000 Mcf usage. There is also a monthly customer charge of $9.90.

Three-phase electric lines are located along U.S. Route 52 next to the property, provided by Appalachian Power, a Division of American Electric Power. For larger general service with demands between 150 and 1,000 KW, on-peak demand rates are 6.043 $/KW, plus a monthly customer charge of $100.00.

Water is provided to this location by the Town of Kenova. Water rates are $68.53 per 10,000 gallons for commercial users. Sewer service is not available.

As reported on the December 31, 2017 FCC Form 477 fixed broadband deployment data report, the data transfer technologies that can be or are offered for business services to at least one location within the census block that the River Trading Company and Kanawha Terminal Property lay within are Asymmetric xDSL, ADSL2, ADSL2+, and Satellite. A list of providers and data transfer rates is provided in Attachment C.

Evaluation of Site Utility Infrastructure Improvements
The City of Kenova is in the process of upgrading their water line from Kenova to Prichard, providing additional capacity to the area. Sewer infrastructure will be required as part of site development needs.

Transportation Infrastructure

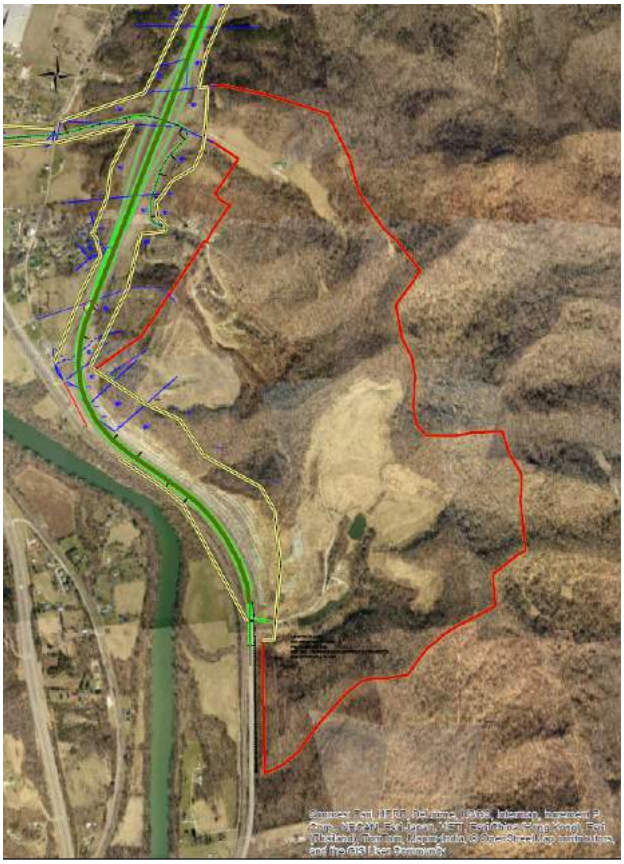
Nearest Interstate, Distance to Interstate, and Interstate Exit
Interstate 64 - Exit 1 is 7.7 miles north of the site.

Nearest Commercial Airport
Huntington Tri-State Airport is located 9.2 miles from the site.

Rail Access, Rail Provider, and Rail Siding
Rail service to the area is provided by Norfolk Southern. Tracks are located on the property, adjacent to current U.S. Route 52. Rail siding is not available. The Heartland Intermodal Gateway facility is located 5.6 miles south of the site on U.S. Route 52.

Navigable Waterway, Access Point, and Barge Facilities
The property is located along the Big Sandy River, at approximately River Mile marker 9. Based on Ohio River Navigation Charts dated January 2015, this area is the extent of dredging operations and navigable water. River docking facilities are not available. The closest dock is the Cyrus dock, located approximately ½-mile downstream.

Western Gate Industrial Park



Site Details

This location includes multiple properties. The southern section is the location of the former Prichard Landfill. This landfill includes two cells where waste was placed for several years. The cells, totaling approximately 36 acres, have been covered, and the landfill is closed. The northern section was used as a valley fill for soil and rock placement. These materials were generated during upgrading of U.S. Route 52, located immediately west of the property, from two-lane to four-lane. This area is currently used as a shooting range. The central sections of the property include open areas and forestland.

Property Contact and Ownership

The property consists of multiple parcels and owners, including Republic Services, Western Gate Land Development Corporation, Chester Curry et. al., and Donald Hazlett, totaling approximately 514 acres.

Environmental Conditions

The former Prichard Landfill is currently in a 30-year post-landfill closure program. There are approximately 10 years left in this closure program. During this period, leachate from the landfill cells must be monitored and collected for disposal. The integrity of the landfill caps must be maintained during this period. The remaining sections of property have no known environmental concerns.

Brownfield Status

Based on current site conditions and past site use as a landfill, the southern section of this property is considered a brownfield by EPA definition. The northern and central sections of the property are not considered brownfields.

Soil and Geologic Summary

Soils consist of Udorthent soils, or soils where the upper soil layer has been moved, filled, or graded, in the area of the former Prichard landfill and the existing shooting range. Native soils in the remaining areas include predominantly Dekalb-Gilpin complex, Dormont-Latham complex, and Latham-Gilpin complex units. These soils are considered farmland of statewide or local importance and are not classified as prime farmland. A soil map is provided in Attachment A.

The site is geologically located in the Appalachian Plateau physiographic province, within Paleozoic – Pennsylvanian age strata. This strata is comprised of cyclic sequences of sandstone, shale, clay, coal, and

limestone. A geologic map is provided in Attachment B.

Site Preparation and Permitting

The southern section of the property where the former Prichard Landfill is located includes closed landfill cells where new developments will be severely limited. Closeout of the 30-year closure monitoring program will also be required. The landfill is in the WVDEP's Landfill Closure Assistance Program. This program has funding set aside specifically to assist with final closure of the former landfill.

To increase flat land available on the southern section of the property next to U.S. Route 52, installation of a box culvert system will be required. These activities will require additional permitting, including Section 404 Clean Water Act permitting from the U.S. Army Corps of Engineers. By performing these activities, it is estimated that flat land in this area can be increased from approximately three acres to 10 acres.

Utility Infrastructure Components and Associated Services

Utility Infrastructure
Electric, water, and internet services are available on or adjacent to the property. Sewer services are not available. At this time, it has not been determined if natural gas service is available on-site.

Utility Characteristics
Natural gas is provided to the Prichard area by Mountaineer Gas. However, at this time, it has not been determined if Mountaineer Gas has service lines to this location. For natural gas users requiring more than 150 million cubic feet (Mcf) of gas, the cost is $12.656 per Mcf.

Three-phase electric lines are located along U.S. Route 52, generally adjacent to the western side of the property. Electric is provided by Appalachian Power, a Division of American Electric Power. For larger general service with demands between 150 and 1,000 KW, on-peak demand rates are 6.043 $/KW, plus a monthly customer charge of $100.00.

Water services are provided to this location by the Town of Kenova. Water rates are $68.53 per 10,000 gallons for commercial users. Sewer services are not currently available.

As reported on the December 31, 2017 FCC Form 477 fixed broadband deployment data report, the data transfer technologies that can be or are offered for business services to at least one location within the census block that the Western Gate Industrial Park Property lies within are DOCSIS 3.0, Asymmetric xDSL, ADSL2, ADSL2+, and Satellite. A list of providers and data transfer rates is provided in Attachment C.

Evaluation of Site Utility Infrastructure Improvements
The City of Kenova is in the process of upgrading their water line from Kenova to Prichard, providing additional capacity to the area. Sewer service, and potentially natural gas, will be required for future development.

Transportation Infrastructure

Nearest Interstate, Distance to Interstate, and Interstate Exit
Interstate 64 - Exit 1 is 14 miles north of the site.

Nearest Commercial Airport
Huntington Tri-State Airport is located 15.4 miles from the site.

Rail Access, Rail Provider, and Rail Siding
Rail service to the area is provided by Norfolk Southern, but is not available on-site. The Heartland Intermodal Gateway facility is located 2 miles south of the site on U.S. Route 52.

Navigable Waterway, Access Point, and Barge Facilities
The Western Gate property does not include waterway access.

Wilson Property

Site Details

A Phase I Environmental Site Assessment (ESA) was conducted on the property in May 2018 as part of the *Advantage Valley Site Planning Study*. The Phase I ESA indicated part of the site was likely used for agriculture (garden space), with the rest of the property forested, in 1955. A power line was noted on the property in the 1960s. The site was mostly cleared in the 1970s; however, little use of the property occurred. A small structure was located on the southwest corner of the site, with some large containers, but the purpose of the building and/or containers was not identified. Currently, the site is vacant, with no day-to-day use of the property. A copy of the Phase I ESA is available upon request.

Property Contact and Ownership

The property consists of four parcels, identified as Ceredo District (District 2), Map 4, Parcels 99, 100.1, 100.2, and 112.1. Total acreage is approximately 33.127 acres. Property ownership is Willis & Bernice Wilson (Estate), c/o Galyean Wilson.

Environmental Conditions

According to the Phase I ESA report, the only Recognized Environmental Condition (REC) identified was an area in the southern section of the site, approximately 40,000 square feet in size, that contains concrete and metal rubble associated with excavation activity during the 1980s. These materials are considered a REC, as their origin was not identified.

Brownfield Status

Based on the Phase I ESA, the identified REC (pile of concrete and metal) from unknown origin makes this site a brownfield by EPA definition. This designation is due to the potential for one or more environmental contaminants to be present on the property. However, the presence of any contaminants has not been determined.

Soil and Geologic Summary

Soils consist primarily of Udorthent soils, or soils where the upper soil layer has been moved, filled, or graded. Smaller areas of native soils are present, including Beech loam and Dekalb-Gilpin complex units. Beech Loam is found on hillslopes, derived from fine-loamy colluvium from sedimentary rock, and is considered farmland of statewide importance. Dekalb-Gilpin soils are found on hillslopes, derived from weathered sandstone rock, and is not classified as prime farmland. A soil map is provided in Attachment A.

The site is geologically located in the Appalachian Plateau physiographic province, within Paleozoic – Pennsylvanian age strata. This strata is comprised of cyclic sequences of sandstone, shale, clay, coal, and limestone. A geologic map is provided in Attachment B.

Site Preparation and Permitting

The southern part of the property can be used with minimal earthwork moving. According to the *Advantage Valley Site Planning Study*, a 14,000 square foot building with parking and access could be located in this area. With earthwork occurring in the central and northern part of the property (preliminary estimate of 85,000 cubic yards), more than 40,000 square feet of building space plus associated parking and access could be made available. The site is not located within the 100-year floodplain, does not include any designated wetlands, and is not located along a high-quality stream. No uncommon permitting requirements are anticipated for future site development.

Utility Infrastructure Components and Associated Services

Utility Infrastructure
Natural gas, electric, water, sewer, and broadband services are available on or adjacent to the property.

Utility Characteristics
Natural gas is provided by Mountaineer Gas. A two-inch gas line is located next to the property, along State Route 75. For natural gas users requiring more than 150 million cubic feet (Mcf) of gas, the cost is $12.656 per Mcf, plus a monthly customer charge of $676.95.

Three-phase electric lines are located along State Route 75 next to the property, provided by Appalachian Power, a Division of American Electric Power. For larger general service with demands between 150 and 1,000 KW, on-peak demand rates are 6.043 $/KW, plus a monthly customer charge of $100.00.

Water and sewer services are provided to this location by the Town of Kenova. Sewer rates are $14.59 per 1,000 gallons used per month (for the first 2,000 gallons), and $11.66 per 1,000 gallons thereafter. Water rates are $68.53 per 10,000 gallons for commercial users.

As reported on the December 31, 2017 FCC Form 477 fixed broadband deployment data report, the data transfer technologies that can be or are offered for business services to at least one location within the census block the Wilson Property lies within are DOCSIS 3.0, Optical Carrier/Fiber to the end user, Asymmetric xDSL, ADSL2, ADSL2+, and Satellite. See Appendix C for a list providers and data transfer rates.

Evaluation of Site Utility Infrastructure Improvements
The City of Kenova is in the process of upgrading their water line from Kenova to Prichard, providing additional capacity to the area.

Transportation Infrastructure

Nearest Interstate, Distance to Interstate and Interstate Exit
Interstate 64 - Exit 1 is 2.2 miles north of the site.

Nearest Commercial Airport
Huntington Tri-State Airport is located 3.7 miles from the site.

Rail Access, Rail Provider and Rail Siding
Rail service to the area is provided by Norfolk Southern, but is not available on-site. The Heartland Intermodal Gateway facility is located 11.7 miles south of the site on U.S. Route 52.

Navigable Waterway, Access Point and Barge Facilities
The Wilson property does not include waterway access.

Regional Supply Chain and Cluster Analysis

The goal of this component of the project is to identify industries that would either expand current concentrations or attract complementary ones through cluster development strategies. This objective is met through an analysis of the existing industry mix in the region to better illuminate current concentrations and the identification of complementary industries through the examination of supply chain opportunities.

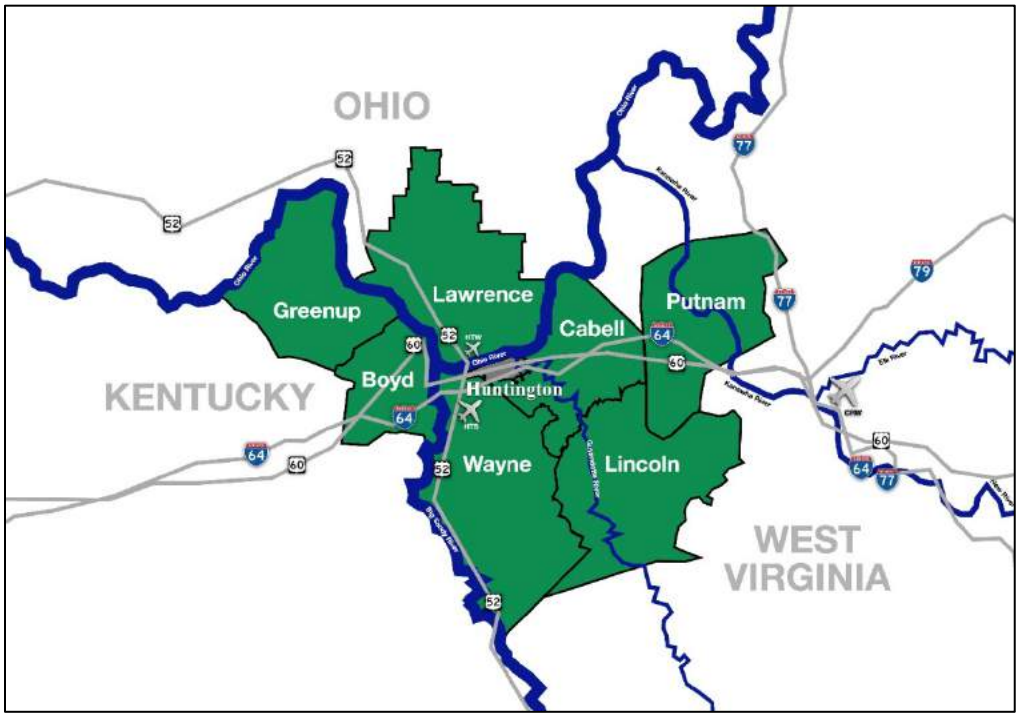
The analysis of the existing industry concentrations within the region provides a description of the most concentrated industry groups, as well as the largest industries in terms of employment. Identifying which business inputs these firms must secure from outside the study area isolates specialized opportunities for regional growth and development, particularly in niche industries and firm types that are absent within the study region. These gaps represent near-term targets to assist regional stakeholders in producing fully formed supply chain clusters within the region to maximize efficiency, derive competitive advantage, and further serve as a primary filter for recruitment efforts.

The section begins with a demographic overview of the study area, identifies the largest two-digit NAICS industries by employment, and presents the results of the industry cluster analysis. Analysis of the inputs for the major employers and concentrated industries then identifies the potential supply chain gaps that can serve as target industries for the region.

Overview of Regional Economy

The overview of the regional economy examines regional population, education, labor force and employment, income, and place of work for residents. Comparative breakdowns are included for Wayne County, WV (the geographic focus of the evaluated sites), the study area (congruent to the Huntington-Ashland, WV-KY-OH MSA), and the state of West Virginia. A map of the wider study region is provided in ***Figure 1***.

Figure 1. Map of Huntington-Ashland, WV-KY-OH MSA



Source: https://commons.wikimedia.org/wiki/File:Huntington_Metro.jpg

Population

The 2018 Wayne County population was 39,893, a 4.8% decrease since 2013. Although population has declined for both the Huntington-Ashland MSA and West Virginia during the same period, Wayne County is losing population at a faster rate than the MSA and West Virginia as they have lost 2.3% and 2.2%, respectively. Population is projected to continue to decline over the next five years, with Wayne County losing 3.4% of its residents, compared to a 1.5% decrease for the MSA and a 1.4% for the state. Of the 39,893 Wayne County residents, 11,776 (29.5%) reside in Huntington. The next two most populated zip codes are Wayne with 7,468 (18.7%) and Kenova with 6,424 (16.1%). Other zip codes with more than 5% of the population are Fort Gay, Prichard, Lavalette, and Genoa.

Table 1. Population Trends and Projections

	Wayne County, WV	Huntington-Ashland MSA	West Virginia
2013	41,806	370,016	1,852,333
2014	41,491	368,816	1,847,623
2015	41,187	367,100	1,839,767
2016	40,681	365,005	1,828,638
2017	40,153	362,790	1,815,858
2018	39,893	361,738	1,811,890
2019	39,582	360,474	1,806,057
2020	39,297	359,319	1,800,696
2021	39,035	358,259	1,795,776
2022	38,796	357,290	1,791,274
2023	38,577	356,407	1,787,165

Source: Emsi 2018.4 and US Census Bureau

Education

Educational attainment data shows that 9.1% of Wayne County residents possess a bachelor's degree, which is approximately 2% less than both the MSA and state. On a national level, 18.6% of United States residents hold a bachelor's degree. Forty percent of Wayne County residents hold a high school diploma, while 20.5% have not graduated from high school. The largest discrepancy in educational attainment when comparing the county to the MSA and state is the number of individuals having less than a ninth-grade education. Almost six percent of residents in the MSA and state have less than a ninth-grade education, compared to 10.4% within Wayne County.

Table 2. Educational Attainment

	Wayne County, WV	Huntington-Ashland MSA	West Virginia
Less than 9th Grade	10.4%	5.9%	5.9%
9th Grade to 12th Grade	10.1%	8.6%	9.2%
High School Diploma	40.9%	37.2%	40.6%
Some College	18.1%	20.9%	18.4%
Associate's Degree	7.2%	8.5%	6.6%
Bachelor's Degree	9.1%	11.0%	11.6%
Graduate Degree and Higher	5.3%	7.8%	7.7%

Source: Emsi 2018.4 and US Census Bureau

Labor Force and Employment

The working age population of Wayne County (ages 15 or older) constitutes 83.3% of the total population, which is similar to both the MSA and the state. However, it is significant to note that only 39.1% of the working age population is in the labor force, which is 2.2% below the MSA's labor force participation rate and 4.3% below the state's labor force participation rate. Of those in Wayne County's labor force, 837 individuals are unemployed, for an unemployment rate of 5.4%, compared to a 5.0% unemployment rate in the MSA and 4.6% unemployment rate in the state.

Table 3. 2018 Labor Force

	Wayne County, WV		Huntington-Ashland MSA		West Virginia	
Total Population	39,893		361,738		1,811,890	
Total Working Age Population	33,241	83.3%	298,433	82.5%	1,507,756	83.2%
Not in Labor Force (15 or older)	17,659	44.3%	149,008	41.2%	722,219	39.9%
Labor Force	15,582	39.1%	149,425	41.3%	785,537	43.4%
Employed	14,745	37.0%	141,903	39.2%	749,392	41.4%
Unemployed	837	2.1%	7,522	2.1%	36,145	2.0%
Unemployment Rate		5.4%		5.0%		4.6%

Source: Emsi 2018.4, State Labor Market Information, and the US Census Bureau

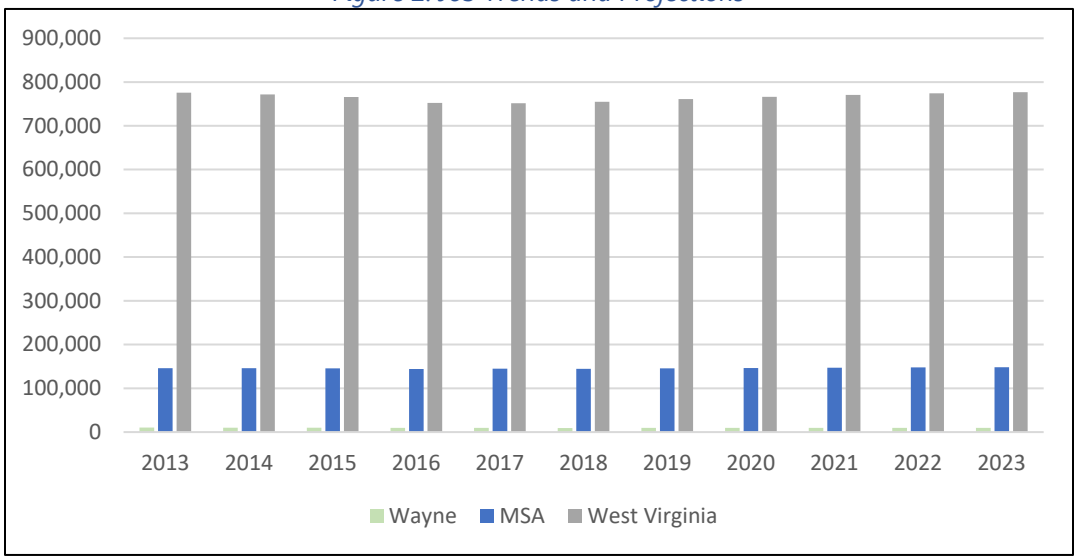
As shown in ***Table 4***, Wayne County has lost a significant number of jobs since 2013, with an overall decline of 11.5%. During the same period, 1.1% of jobs were lost in the MSA and 2.5% were lost in the state. Jobs in Wayne County are expected to increase by 2.9% over the next five years. Similarly, a 2.5% increase and a 2.8% increase have been projected for both the MSA and state, respectively.

Table 4. Job Trends and Projections

	Wayne County, WV	Huntington-Ashland MSA	West Virginia
2013	10,488	146,170	775,537
2014	10,132	146,054	771,649
2015	10,015	145,504	765,751
2016	9,445	144,205	752,200
2017	9,455	144,768	751,525
2018	9,410	144,555	755,016
2019	9,489	145,642	761,075
2020	9,554	146,529	766,145
2021	9,610	147,276	770,521
2022	9,660	147,928	774,384
2023	9,690	148,301	776,941

Source: Emsi 2018.4, State Labor Market Information, and the US Census Bureau

Figure 2. Job Trends and Projections



Source: Emsi 2018.4, State Labor Market Information and the US Census Bureau

Income and Earnings

Average wages and salaries in Wayne County are comparable to the MSA and state. However, the per capita personal income in the county is 17.8% less than in the MSA and 19.6% less than in the state. Similarly, the per capita net earnings in the county is 16.7% less in the county than in the MSA and 14.5% less than in the state. While per capita personal transfer receipts are lower than both the MSA and state, the data shows that transfer payments (income to individuals for which no current services are performed) are relied upon heavily in Wayne County.

Table 5. Job Trends and Projections

	Wayne County, WV	Huntington-Ashland MSA	West Virginia
Per Capita Personal Income	$30,956	$37,646	$38,479
Per Capita Net Earnings	$17,903	$20,934	$21,490
Per Capita Personal Transfer Receipts	$9,234	$11,048	$11,059
Total Employment	11,315	167,351	888,984
Average Wages and Salaries	$42,742	$42,985	$42,871

Source: Bureau of Economic Analysis, 2018

Place of Work versus Place of Residence

Census data from 2015 estimated Wayne County to have 14,070 residents who were part of the labor force. Of those, the data showed that 10,470 individuals, or 74.4%, were employed outside of the county. Only 3,600 individuals (25.6%) in the labor force were both living and working in Wayne County. Almost 40% of Wayne County workers are employed in neighboring Cabell County, home to Marshall University and multiple health care networks. The largest segment of Wayne County workers are the county's residents, with Cabell County, WV, Lawrence County, OH, and Boyd County, KY, following.

Table 6. Wane County, WV Job Inflow/Outflow

Living in Wayne County	14,070
Employed in Wayne County	9,371
Living and Employed in Wayne County	3,600
Living in Wayne County but Employed Outside	10,470
Employed in Wayne County but Living Outside	5,771

Source: U.S. Census Bureau, OnTheMap Application (2010-2015)

Table 7. Distribution of Wayne County Workers Employed Outside of the County

County of Work	Employees	Share
Cabell County, WV	5,473	38.9%
Wayne County, WV	3,600	25.6%
Kanawha County, WV	998	7.1%
Boyd County, KY	793	5.6%
Raleigh County, WV	334	2.4%
Putnam County, WV	285	2.0%
Lawrence County, OH	275	2.0%
Lawrence County, KY	188	1.3%
Logan County, WV	179	1.3%
Mingo County, WV	127	0.9%

Source: U.S. Census Bureau LEHD Origin-Destination Employment Statistics (2010-2015)

Table 8. Wayne County Workers

County of Residence	Employees	Share
Wayne County, WV	3,600	38.4%
Cabell County, WV	1,760	18.8%
Lawrence County, OH	747	8.0%
Boyd County, KY	525	5.6%
Kanawha County, WV	338	3.6%
Lawrence County, KY	307	3.3%
Putnam County, WV	221	2.4%
Mingo County, WV	199	2.1%
Lincoln County, WV	185	2.0%
Greenup County, KY	166	1.8%

Source: U.S. Census Bureau LEHD Origin-Destination Employment Statistics (2010-2015)

Peer Regions

For the purposes of this analysis, regional peer areas, defined here as metropolitan statistical areas (MSAs) within border states, were evaluated for comparison to the Huntington-Ashland MSA. Six significant MSAs were identified to be within a 200-mile radius of Huntington, WV. These include:

- Charleston, WV
- Cincinnati, OH
- Columbus, OH
- Lexington, KY
- Louisville, KY
- Pittsburgh, PA

Comparisons to these peer regions are provided in both the Regional Employer and Industry Cluster Identification sections.

Regional Employers

Study area employment patterns show significant levels of professional and service industry employment, led by the Health Care and Social Assistance industry. The location quotient[3] (LQ) for the four largest 2-digit NAICS industries indicates a higher than average concentration of those industry sectors. Health Care and Social Assistance and Government are the two major employment sectors. Employment in the region is largely made up of service industries, but Manufacturing (NAICS 31-33) contributes as well. This is illustrated in ***Table 9*** and ***Figure 3***.

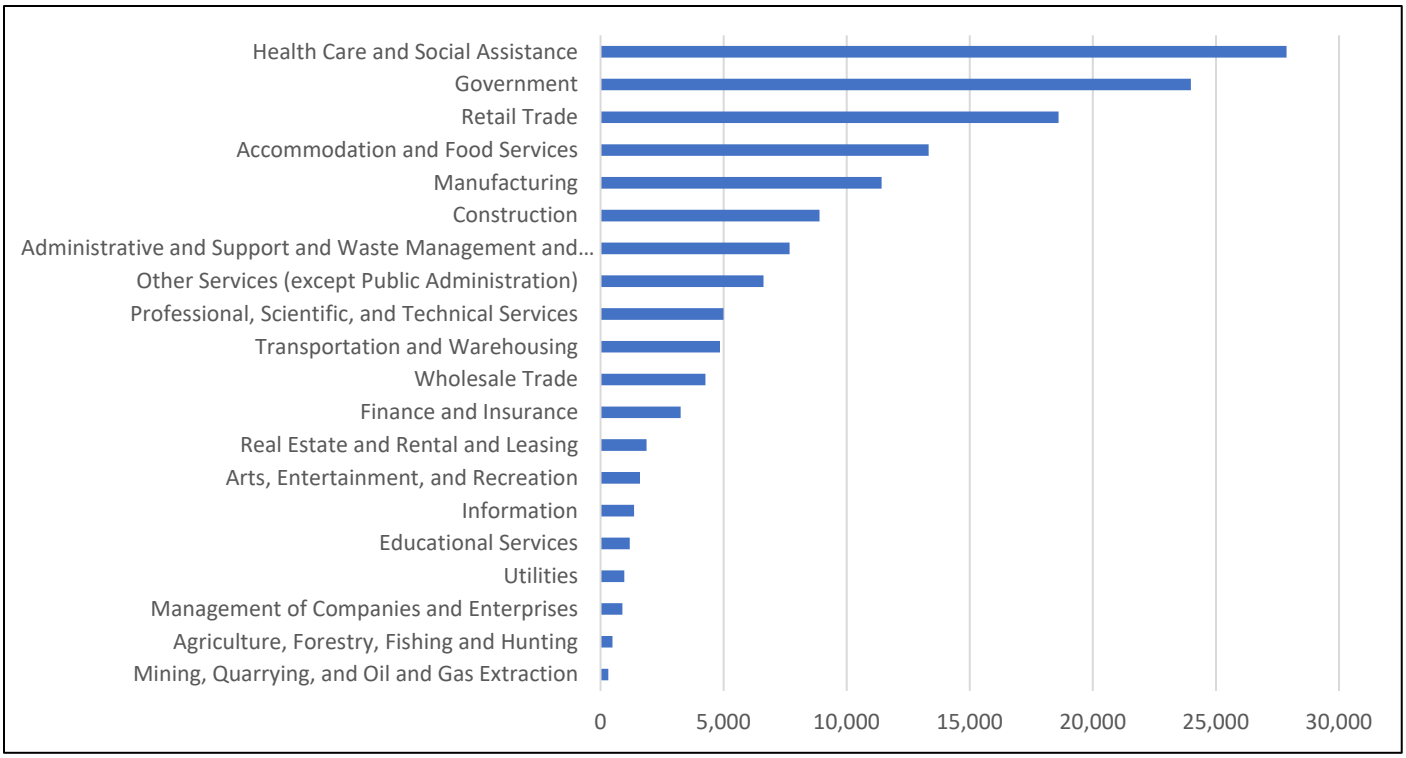
Table 9. Top Regional Industries by Employment and Employment Change

NAICS	Description	2013 Jobs	2018 Jobs	2013 - 2018 Change	2013 - 2018 % Change	2018 Location Quotient
62	**Health Care and Social Assistance**	26,595	27,894	1,299	5%	1.53
90	**Government**	24,407	24,065	(342)	(1%)	1.10
44-45	**Retail Trade**	18,938	18,910	(28)	(0%)	1.29
72	**Accommodation and Food Services**	12,507	13,363	856	7%	1.08
31-33	**Manufacturing**	12,076	11,413	(663)	(5%)	1.00

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

[3] Location quotient helps quantify the level of industrial concentration in comparison to other regions. For more discussion, please see: https://www.bea.gov/help/faq/478.

Figure 3. Top Regional Industries by 2-Digit NAICS Employment, 2018



Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Comparing the study region to the peer MSAs, we see a higher location quotient for Health Care and Social Assistance than the balance of the cohort group. While the sector has witnessed employment growth, its share of demand met by imports is the highest among the peer group. Please see ***Table 10*** for more detail.

Table 10. Peer Region Comparison – Healthcare and Social Assistance

Healthcare and Social Assistance (NAICS 62)	2013 Jobs	2018 Jobs	% Job Change 2013-18	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	26,595	27,894	5%	1.53	$1.92B	24.3%
Charleston, WV MSA	21,847	21,889	0%	1.38	$1.57B	16.3%
Cincinnati, OH-KY-IN MSA	143,246	151,989	6%	1.05	$11.44B	16.6%
Columbus, OH MSA	127,692	145,970	14%	1.02	$9.93B	15.9%
Lexington-Fayette, KY MSA	28,103	31,186	11%	0.83	$2.26B	18.0%
Louisville-Jefferson County KY-IN MSA	76,181	85,497	12%	0.98	$6.29B	14.5%
Pittsburgh, PA MSA	191,607	203,157	6%	1.31	$14.93	9.5%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

The number of jobs in the Government sector for the region was smaller than each of its peer MSAs but required a larger percentage of demand to be supplied from imports than the remainder of the cohort. Please see ***Table 11*** for additional detail.

Table 11. Peer Region Comparison – Government

Government (NAICS 90)	2013 Jobs	2018 Jobs	% Job Change 2013-18	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	24,407	24,065	(1%)	1.10	$1.631B	75.7%
Charleston, WV MSA	27,442	26,479	(4%)	1.40	$1.80B	69.3%
Cincinnati, OH-KY-IN MSA	130,251	135,221	4%	0.78	$10.05B	74.0%
Columbus, OH MSA	172,941	180,840	5%	1.06	$16.84B	54.2%
Lexington-Fayette, KY MSA	51,842	54,196	5%	1.21	$4.37B	68.0%
Louisville-Jefferson County KY-IN MSA	80,076	75,463	(6%)	0.73	$5.66B	70.5%
Pittsburgh, PA MSA	126,417	120,959	(4%)	0.66	$11.28B	71.0%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

While job growth in the Retail Trade sector was stagnant from 2013 to 2018, the region's location quotient for the sector was somewhat higher than its peers. The percentage of demand met by imports was on the higher end of the spectrum when analyzing the cohort. Please see ***Table 12*** for additional detail.

Table 12. Peer Region Comparison – Retail Trade

Retail Trade (NAICS 44-45)	2013 Jobs	2018 Jobs	% Job Change 2013-18	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	18,938	18,910	(0%)	1.29	$1.03B	58.8%
Charleston, WV MSA	14,922	13,893	(7%)	1.09	$0.8B	61.4%
Cincinnati, OH-KY-IN MSA	106,379	112,383	6%	0.97	$7.27B	40.8%
Columbus, OH MSA	104,280	109,090	5%	0.95	$7.57B	33.0%
Lexington-Fayette, KY MSA	29,070	30,836	6%	1.02	$1.71B	44.6%
Louisville-Jefferson County KY-IN MSA	62,688	68,264	9%	0.98	$3.84B	41.9%
Pittsburgh, PA MSA	130,573	126,956	(3%)	1.02	$8.33B	35.4%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Job growth and location quotient in Accommodation and Food Services were similar among most of the peer MSAs, but again the study region required a higher percentage of its demand to be met by imports. Please see ***Table 13*** for a detailed comparison.

Table 13. Peer Region Comparison – Accommodation and Food Services

Accommodation and Food Services (NAICS 72)	2013 Jobs	2018 Jobs	% Job Change 2013-18	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	12,507	13,363	7%	1.08	$0.38B	33.6%
Charleston, WV MSA	10,615	10,046	(5%)	0.93	$0.36B	21.7%
Cincinnati, OH-KY-IN MSA	91,120	101,620	12%	1.03	$3.32B	20.0%
Columbus, OH MSA	86,365	92,848	8%	0.95	$3.34B	16.7%
Lexington-Fayette, KY MSA	23,856	27,288	14%	1.07	$0.88B	11.5%
Louisville-Jefferson County KY-IN MSA	54,049	58,596	8%	0.99	$2B	15.8%
Pittsburgh, PA MSA	94,120	99,888	6%	0.95	$3.38B	27.3%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

The study region lost a higher percentage of jobs in the Manufacturing sector from 2013 to 2018 than all of its peer MSAs. All of the peer regions, except for the Pittsburgh, PA MSA, witnessed job growth over the study period. The only peer MSA that had a smaller Gross Regional Product or GRP[4] in the Manufacturing sector was the Charleston, WV MSA. This is illustrated in further detail in ***Table 14.***

Table 14. Peer Region Comparison – Manufacturing

Manufacturing (NAICS 31-33)	2013 Jobs	2018 Jobs	% Job Change 2013-18	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	12,076	11,413	(5%)	1.00	$2.65B	79.1%
Charleston, WV MSA	4,873	5,254	8%	0.53	$1.51B	79.7%
Cincinnati, OH-KY-IN MSA	107,448	118,887	11%	1.32	$23.87B	69.8%
Columbus, OH MSA	70,584	73,863	5%	0.83	$12.86B	77.3%
Lexington-Fayette, KY MSA	29,747	31,075	4%	1.33	$4.62B	85.8%
Louisville-Jefferson County KY-IN MSA	70,716	80,250	13%	1.48	$18.38B	79.7%
Pittsburgh, PA MSA	90,625	87,297	(4%)	0.91	$14.08B	77.5%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

[4] Like Gross Domestic Product or GDP at the national level, Gross Regional Product is a measure of the value of goods and services produced in a given area. Please see: https://www.bea.gov/resources/learning-center/what-to-know-gdp.

Industry Cluster Identification[5]

Regional industry clusters were identified based upon a suite of variables including earnings per worker, overall job growth, job growth regional competitiveness, job concentration, and contribution to gross regional product. Scores are assigned on a 100-point basis, but these figures do not serve as a benchmark against other regions. Instead, it only compares the relative performance of existing clusters to each other. Further, this analysis does not reflect the largest sectors, but rather those for which some degree of specialization exists. The top six industry clusters and their component industries are provided in ***Table 15.***

Study area employment levels for each of the six industry clusters identified in ***Table 15*** are illustrated in ***Table 16*** through ***Table 26***. Each table sorts the level of employment by county to aid in determining where the firms are concentrated. Figures accompany each cluster section to illustrate the past and projected employment in the study area, the state of West Virginia, and the United States from 2001 to 2028.

Cluster analysis identified six industry groupings with a concentrated presence inside the study area. Employment for four of those industry groupings (Oil and Gas Production and Transportation, Automotive, Upstream Chemical Products, and Construction Products and Services) are estimated to grow in the next five years. Employment for the Electric Power Generation and Transmission and Water Transportation groupings are expected to decline regionally.

[5] The clusters in this analysis are defined according to the methodology of Harvard Business School's U.S. Cluster Mapping Project. Source: U.S. Cluster Mapping (http://clustermapping.us), Institute for Strategy and Competitiveness, Harvard Business School.

Table 15. Regional Industry Clusters

Cluster	NAICS	Description	Jobs	Score
Oil and Gas Production and Transportation (5 industries)				**84**
	324110	Petroleum Refineries	763	100
	486210	Pipeline Transportation of Natural Gas	66	36
	211130	Natural Gas Extraction	100	30
	324199	All Other Petroleum and Coal Products Manufacturing	76	30
	213112	Support Activities for Oil and Gas Operations	48	22
Automotive (2 industries)				**65**
	336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	1,581	67
	336390	Other Motor Vehicle Parts Manufacturing	264	*
	336340	Motor Vehicle Brake System Manufacturing	56	21
Electric Power Generation and Transmission (1 industry)				**42**
	221112	Fossil Fuel Electric Power Generation	522	42
Water Transportation (3 industries)				**41**
	483211	Inland Water Freight Transportation	305	46
	488310	Port and Harbor Operations	90	34
	488390	Other Support Activities for Water Transportation	257	37
Upstream Chemical Products (3 industries)				**39**
	325110	Petrochemical Manufacturing	199	43
	325180	Other Basic Inorganic Chemical Manufacturing	24	22
	325194	Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing	20	22
Construction Products and Services (6 industries)				**38**
	221310	Water Supply and Irrigation Systems	106	24
	236210	Industrial Building Construction	51	13
	237120	Oil and Gas Pipeline and Related Structures Construction	901	48
	237130	Power and Communication Line and Related Structures Construction	175	22
	237990	Other Heavy and Civil Engineering Construction	117	19
	324121	Asphalt Paving Mixture and Block Manufacturing	21	22

Source: Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

* Added to sector for purposes of this analysis, not scored

Regional Oil and Gas Production and Transportation

Employment in the Regional Oil and Gas Production and Transportation sector is largely concentrated in Boyd County, KY, which represented 86.6% of study area employment in this sector in 2018. Study area employment in this sector is projected to grow by approximately 13% over the next five years. This sector is anticipated to grow more quickly in the region and for the state of WV than the nation through 2028. Please see ***Table 16*** and ***Figure 4*** for further detail. Regional Oil and Gas Production and Transportation has the second largest GRP and the third largest LQ in the cohort group, as illustrated in ***Table 17***.

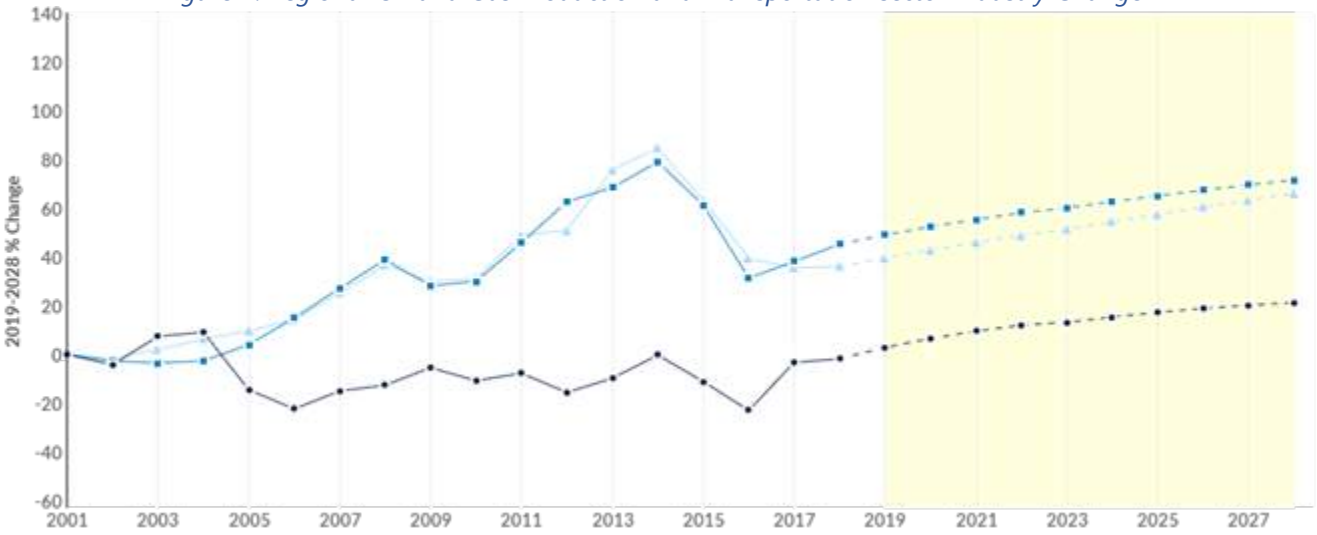
Table 16. Regional Oil and Gas Production and Transportation Sector[6] by County

County	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Boyd	763	864	782	681	879	901	953	994	1,027	1,054	1,067
Lincoln	80	76	70	73	61	61	61	61	61	62	63
Wayne	52	68	60	46	45	37	35	34	33	32	31
Cabell	42	33	25	24	22	19	17	15	14	13	13
Greenup	22	21	14	11	13	12	11	10	<10	<10	<10
Carter	0	0	0	0	<10	<10	<10	<10	<10	<10	<10
Lawrence	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Putnam	25	14	11	<10	<10	10	<10	<10	<10	<10	<10
Region	**985**	**1,076**	**961**	**835**	**1,020**	**1,040**	**1,077**	**1,104**	**1,135**	**1,161**	**1,174**

Source: Employment data and projections are derived through a combination of QCEW (Quarterly Census of Employment and Wages), County Business Patterns BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM) and long-term industry projections published by individual states.

[6] Modified to include existing Harvard Business School's U.S. Cluster Mapping Project sectors by cluster.

Figure 4. Regional Oil and Gas Production and Transportation sector Industry Change



Region	2019 Jobs	2028 Jobs	Change	% Change
Region	1,077	1,279	202	19%
West Virginia	6,841	8,137	1,296	19%
United States	408,558	470,284	61,726	15%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Table 17. Peer Region Comparison – Oil and Gas Production and Transportation

Oil and Gas Production and Transportation	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	1.72	$1.18B	73.3%
Charleston, WV MSA	2.12	$0.61B	68.7%
Cincinnati, OH-KY-IN MSA	0.08	$0.19B	96.5%
Columbus, OH MSA	0.17	$0.65B	87.8%
Lexington-Fayette, KY MSA	0.08	$0.03B	94.5%
Louisville-Jefferson County KY-IN MSA	0.04	$0.04B	97.4%
Pittsburgh, PA MSA	1.94	$3.89B	68.7%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Regional Automotive

Employment in the Regional Automotive sector is largely concentrated in Putnam County, WV, where nearly 84% of study area employment was concentrated in 2018. Study area employment in this sector is projected to grow by more than 9% over the next five years. Please see ***Table 18*** and ***Figure 5*** for further detail. ***Table 19*** provides additional detail comparing the Automotive sector with peer MSAs. While the study region has a high LQ, it is significantly lower than multiple peer MSAs and currently has a significantly smaller GRP. Of note are the significant employment gains for Wayne County, WV.

Table 18. Regional Automotive Sector[7] by County

County	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Putnam	1,226	1,229	1,327	1,491	1,568	1,600	1,653	1,692	1,722	1,744	1,747
Wayne	20	36	56	54	54	56	59	62	63	65	65
Cabell	0	0	0	0	0	0	0	0	0	0	0
Boyd	0	0	0	0	0	0	0	0	0	0	0
Greenup	21	<10	<10	0	0	0	0	0	0	0	0
Lawrence	<10	<10	0	0	0	0	0	0	0	0	0
Carter	<10	<10	<10	198	224	259	293	319	341	359	367
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Region	**1,267**	**1,265**	**1,383**	**1,743**	**1,845**	**1,916**	**2,005**	**2,073**	**2,126**	**2,168**	**2,180**

Source: Employment data and projections are derived through a combination of QCEW (Quarterly Census of Employment and Wages), County Business Patterns BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM) and long-term industry projections published by individual states.

[7] Modified to include existing Harvard Business School's U.S. Cluster Mapping Project sectors by cluster.

Figure 5. Regional Automotive Sector Industry Change

Region	2019 Jobs	2028 Jobs	Change	% Change
Region	1,916	2,276	190	12%
West Virginia	1,785	1,956	171	10%
United States	92,520	92,571	51	0%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed 2019

Table 19. Peer Region Comparison – Automotive

Automotive	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	2.08	$0.28B	96.1%
Charleston, WV MSA	1.48	$0.12B	90.7%
Cincinnati, OH-KY-IN MSA	1.61	$1.48B	79.7%
Columbus, OH MSA	1.99	$2.06B	73.4%
Lexington-Fayette, KY MSA	5.59	$1.71B	84.5%
Louisville-Jefferson County KY-IN MSA	4.71	$8.75B	81.5%
Pittsburgh, PA MSA	0.36	$0.32B	94.1%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Regional Fossil Fuel Electric Power Generation

Employment in the Regional Fossil Fuel Electric Power Generation sector is largely concentrated in Putnam County, WV with nearly 76% of the study area employment in this sector in 2018. Study area employment in this sector is projected to decline by nearly 14% over the next five years. Please see ***Table 20*** and ***Figure 6*** for further detail. The study region's Job LQ is significantly higher than its peer MSAs and supplies nearly 60% of its demand through imports. This is illustrated in more detail in ***Table 21***.

Table 20. Regional Fossil Fuel Electric Power Generation Sector[8] by County

County	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Putnam	505	545	371	397	406	396	378	363	349	337	329
Cabell	68	68	71	73	77	80	78	75	74	72	71
Lawrence	12	0	<10	39	39	40	42	44	46	47	48
Wayne	11	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Boyd	0	0	0	0	0	0	0	0	0	0	0
Greenup	0	0	0	0	0	0	0	0	0	0	0
Carter	0	0	0	0	0	0	0	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Region	**596**	**613**	**442**	**510**	**522**	**516**	**498**	**482**	**469**	**456**	**447**

Source: Employment data and projections are derived through a combination of QCEW (Quarterly Census of Employment and Wages), County Business Patterns BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM) and long-term industry projections published by individual states.

[8] Modified to include existing Harvard Business School's U.S. Cluster Mapping Project sectors by cluster.

Figure 6. Regional Fossil Fuel Electric Power Generation Sector Industry Change

Region	2019 Jobs	2028 Jobs	Change	% Change
Region	498	403	(95)	(19%)
West Virginia	2,700	2,353	(347)	(13%)
United States	90,454	85,141	(5,313)	(6%)

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Table 21. Peer Region Comparison – Electric Power Generation

	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	3.21	$0.30B	59.6%
Charleston, WV MSA	1.68	$0.19B	49.9%
Cincinnati, OH-KY-IN MSA	0.97	$0.74B	45.2%
Columbus, OH MSA	0.88	$0.73B	44.0%
Lexington-Fayette, KY MSA	0.35	$0.05B	90.0%
Louisville-Jefferson County KY-IN MSA	0.52	$0.29B	53.5%
Pittsburgh, PA MSA	1.21	$1.21B	28.6%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Regional Water Transportation

Employment in the Regional Water Transportation sector is largely concentrated in Lawrence County, OH and Boyd County, KY. Employment in the two counites combined represented 88.5% of regional employment in this sector in 2018. Study area employment in this sector is projected to decline by more than 8% over the next five years. Please see ***Table 22*** and ***Figure 7*** for further detail. As ***Table 23*** illustrates, the region has a significantly higher job location quotient than its peers.

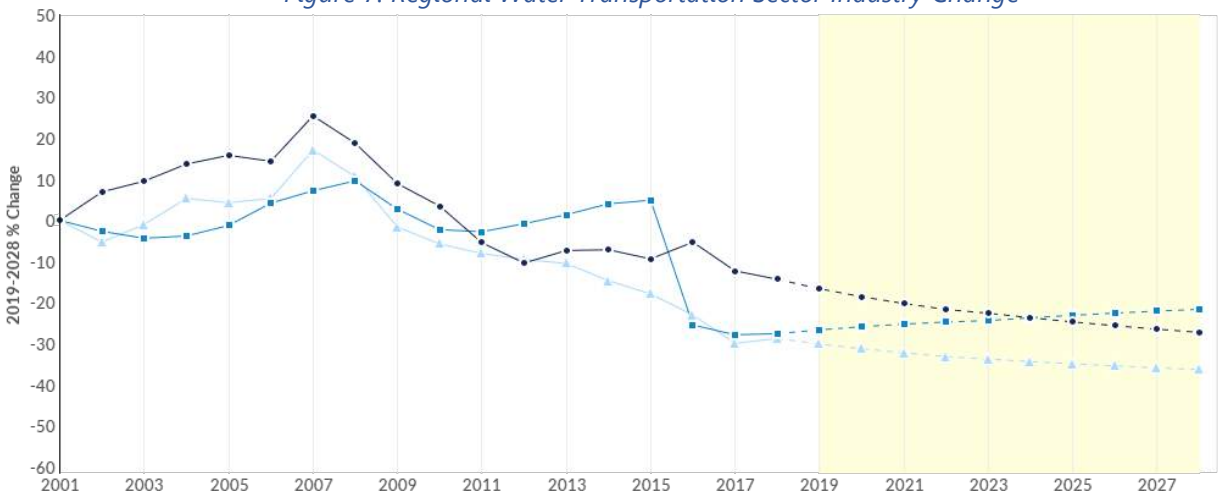
Table 22. Regional Water Transportation sector[9] by County

County	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Lawrence	377	385	360	335	265	256	233	213	196	182	172
Boyd	229	228	250	312	315	312	324	334	343	351	356
Wayne	89	88	78	72	79	74	66	60	54	49	46
Greenup	<10	<10	<10	<10	<10	<10	11	12	13	14	14
Carter	0	0	0	0	0	0	0	0	0	0	0
Cabell	0	0	0	0	0	0	0	0	0	0	0
Putnam	0	0	0	0	0	0	0	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Region	**696**	**701**	**688**	**719**	**660**	**642**	**634**	**619**	**607**	**596**	**589**

Source: Employment data and projections are derived through a combination of QCEW (Quarterly Census of Employment and Wages), County Business Patterns BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM) and long-term industry projections published by individual states.

[9] Modified to include existing Harvard Business School's U.S. Cluster Mapping Project sectors by cluster.

Figure 7. Regional Water Transportation Sector Industry Change



Region	2019 Jobs	2028 Jobs	Change	% Change
● Region	634	553	-81	-13%
● West Virginia	713	649	-64	-9%
● United States	37,160	39,688	2,528	7%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Table 23. Peer Region Comparison – Water Transportation

Water Transportation	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	2.57	$0.09B	84.5%
Charleston, WV MSA	1.43	$0.04B	80.4%
Cincinnati, OH-KY-IN MSA	0.32	$0.10B	80.8%
Columbus, OH MSA	0.01	$0.01B	94.3%
Lexington-Fayette, KY MSA	0.01	$0.00B	97.7%
Louisville-Jefferson County KY-IN MSA	1.86	$0.34B	65.4%
Pittsburgh, PA MSA	0.45	$0.13B	75.7%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Regional Upstream Chemical Products

Seventy percent of employment in the Regional Upstream Chemical Products sector in the region is located in Cabell County, WV. Study area employment in this sector is projected to grow by more than 7% over the next five years. Please see ***Table 24*** and ***Figure 8*** for further detail. The Charleston, WV MSA significantly outpaces its peer cohort in this sector. The MSA's job LQ is 9.58, with the second highest job LQ being 1.83 in the Louisville-Jefferson County, KY-IN MSA. The Charleston, WV MSA also has the lowest percentage of demand met by imports when compared to the remainder of the group. More detail can be found in ***Table 25***.

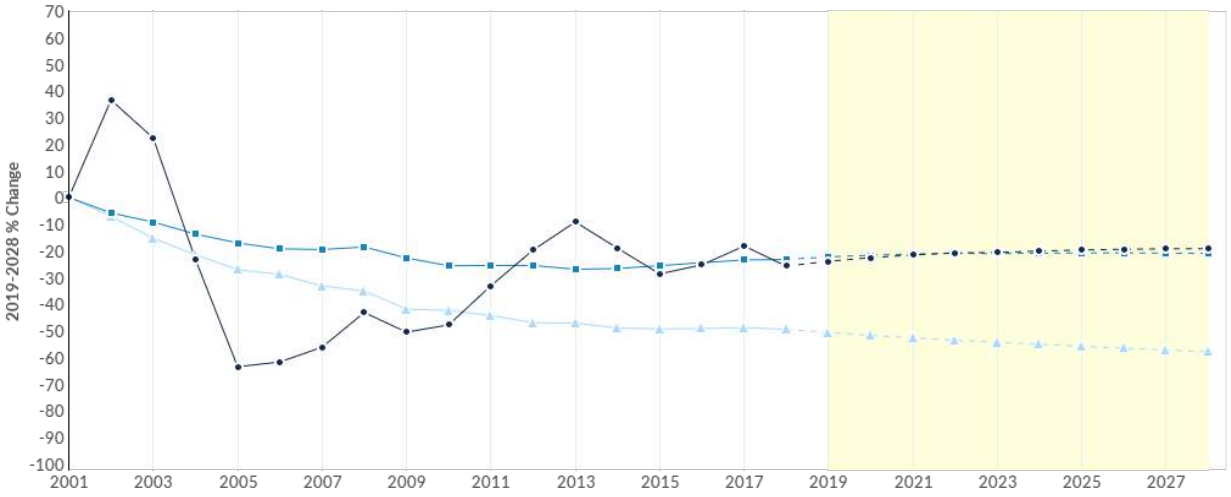
Table 24. Regional Upstream Chemical Products sector[10] by County

County	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cabell	149	138	204	202	192	172	174	175	176	176	176
Greenup	82	54	<10	<10	28	24	24	23	22	22	21
Putnam	65	71	0	0	0	0	0	0	0	0	0
Wayne	<10	<10	28	42	48	46	51	55	58	61	63
Boyd	0	0	0	0	0	0	0	0	0	0	0
Carter	0	0	0	0	0	0	0	0	0	0	0
Lawrence	0	0	0	0	0	0	0	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Region	**296**	**263**	**232**	**244**	**268**	**243**	**249**	**253**	**257**	**259**	**260**

Source: Employment data and projections are derived through a combination of QCEW (Quarterly Census of Employment and Wages), County Business Patterns BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM) and long-term industry projections published by individual states.

[10] Modified to include existing Harvard Business School's U.S. Cluster Mapping Project sectors by cluster.

Figure 8. Regional Upstream Chemical Products Sector Industry Change



Region	2019 Jobs	2028 Jobs	Change	% Change
● Region	249	264	15	6%
● West Virginia	1,576	1,345	-231	-15%
● United States	70,220	71,386	1,166	2%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Table 25. Peer Region Comparison – Upstream Chemical Products

Upstream Chemical Products	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	1.65	$0.20B	60.8%
Charleston, WV MSA	9.58	$0.94B	17.9%
Cincinnati, OH-KY-IN MSA	1.23	$0.88B	68.5%
Columbus, OH MSA	0.24	$0.14B	94.0%
Lexington-Fayette, KY MSA	0.00	$0.00B	99.8%
Louisville-Jefferson County KY-IN MSA	1.83	$0.46B	71.9%
Pittsburgh, PA MSA	0.61	$0.29B	92.3%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Regional Construction Products

Employment in the Regional Construction Products sector is largely concentrated in Putnam County, WV, Cabell County, WV, and Boyd County, KY, with more than 85% of study area employment concentrated in those three counties in 2018. Study area employment in this sector is projected to grow by nearly 24% over the next five years. Significant growth is forecast for Boyd County, KY, while both Lawrence County, OH and Lincoln County, WV are expected to lose jobs in the Construction sector. Please see ***Table 26*** and ***Figure 9*** for further detail. As illustrated in ***Table 27***, the study region has a significantly higher percentage of demand met by imports than its peer MSAs.

Table 26. Regional Construction Products and Services sector[11] by County

County	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Putnam	420	311	365	426	227	392	401	409	416	422	426
Cabell	283	290	330	338	383	442	481	513	541	565	580
Lawrence	268	196	157	81	78	81	73	67	62	58	55
Lincoln	110	103	92	134	137	65	58	53	49	45	43
Carter	105	69	70	39	60	55	56	56	57	57	57
Boyd	104	66	49	88	231	335	392	439	480	515	537
Greenup	14	18	<10	<10	<10	<10	<10	<10	<10	<10	<10
Wayne	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Region	**1,305**	**1,052**	**1,064**	**1,105**	**1,117**	**1,371**	**1,462**	**1,538**	**1,604**	**1,661**	**1,699**

Source: Employment data and projections are derived through a combination of QCEW (Quarterly Census of Employment and Wages), County Business Patterns BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM) and long-term industry projections published by individual states.

[11] Modified to include existing Harvard Business School's U.S. Cluster Mapping Project sectors by cluster.

Figure 9. Regional Construction Products and Services sector Industry Change

Region	2019 Jobs	2028 Jobs	Change	% Change
● Region	1,414	1,899	485	34%
● West Virginia	11,698	16,956	5,258	45%
● United States	747,753	898,157	150,404	20%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Table 27. Peer Region Comparison – Construction

Construction	Job Location Quotient	Industry GRP	% Demand Met by Imports
Huntington-Ashland WV-KY-OH MSA	1.58	$0.20B	60.4%
Charleston, WV MSA	2.57	$0.39B	31.6%
Cincinnati, OH-KY-IN MSA	0.81	$0.90B	35.4%
Columbus, OH MSA	0.89	$0.91B	42.2%
Lexington-Fayette, KY MSA	1.30	$0.25B	48.4%
Louisville-Jefferson County KY-IN MSA	1.02	$0.55B	34.7%
Pittsburgh, PA MSA	1.28	$2.11B	27.3%

Source: Emsi 2019.1; QCEW, Non-QCEW, Self-Employed

Industry Inputs

The five major employment two-digit NAICS sectors and the six industry clusters identified through this analysis require inputs from within the study region as well as inputs from outside the region to conduct business operations. These can include raw materials for manufacturing, transmission of power and utilities, and business services. To aid in identifying where supply chain gaps may occur within the study region, an understanding of the most significant inputs (in terms of imported purchases) that are not satisfied in region is necessary. This section details those inputs for the individual identified major employers and industry groupings.

Major Employer Imported Purchases

The five largest imported purchase industries for major employment two-digit NAICS sectors (62 - Health Care and Social Assistance; 90 – Government; 44 - Retail Trade; 72 - Accommodation and Food Services; 31 – Manufacturing) in the study area counties are presented in ***Table 28*** through ***Table 32***. Six-digit NAICS industries where there are significant imported purchases and opportunities to meet them regionally are highlighted.

As illustrated in ***Table 28***, more than $21 million in imported purchases within the In-Vitro Diagnostic Substance Manufacturing sector are made by the Regional Health Care and Social Assistance sector. This figure accounted for all purchases from the sector, suggesting no local capacity.

Table 28. Regional Health Care and Social Assistance Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
524126	Direct Property and Casualty Insurance Carriers	$4,529,618	8.8%	$47,186,709	91.2%	$51,716,327
551114	Corporate, Subsidiary, and Regional Managing Offices	$977,027	2.1%	$45,875,275	97.9%	$46,852,302
524114	Direct Health and Medical Insurance Carriers	$709,984	1.8%	$37,979,763	98.2%	$38,689,747
531210	Offices of Real Estate Agents and Brokers	$8,604,047	25.4%	$25,256,786	74.6%	$33,860,832
325413	In-Vitro Diagnostic Substance Manufacturing	$0	0.0%	$21,602,863	100.0%	$21,602,863

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

The Government sector made significant levels of purchases in Computer Systems Design Services; Data Processing, Hosting and Related Services; and Research and Development in the Physical, Engineering and Life Sciences sectors. Combined imported purchases for NAICS codes 541512, 518210, and 541715 were in excess of $50 million. Please see ***Table 29*** for more detail.

Table 29. Regional Government Imported Purchases[12]

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
524126	Direct Property and Casualty Insurance Carriers	$2,449,075	8.3%	$27,219,918	91.7%	$29,668,993
524114	Direct Health and Medical Insurance Carriers	$213,403	1.0%	$21,983,037	99.0%	$22,196,440
541512	Computer Systems Design Services	$2,932,867	11.9%	$21,753,239	88.1%	$24,686,106
518210	Data Processing, Hosting, and Related Services	$1,005,664	5.8%	$16,208,609	94.2%	$17,214,273
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	$7,161,621	31.0%	$15,962,769	69.0%	$23,124,390

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

[12] Imported purchases for the Government sector primarily include inputs from Federal, State, and Local Governments as well as Public Education institutions that are not easily relocated. Therefore, these inputs were excluded from the analysis to focus upon potential supply chain gaps that could more easily be added locally.

Table 30 illustrates, the Regional Retail Trade sector imports more than $22 million in purchases from the General Warehousing and Storage sector (NAICS 493110).

Table 30. Regional Retail Trade Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
551114	Corporate, Subsidiary, and Regional Managing Offices	$885,284	1.9%	$45,519,346	98.1%	$46,404,630
531210	Offices of Real Estate Agents and Brokers	$8,832,950	28.0%	$22,689,261	72.0%	$31,522,211
493110	General Warehousing and Storage	$8,762,288	28.3%	$22,210,055	71.7%	$30,972,343
531110	Lessors of Residential Buildings and Dwellings	$18,999,422	52.9%	$16,884,218	47.1%	$35,883,640
531390	Other Activities Related to Real Estate	$5,634,412	27.4%	$14,931,768	72.6%	$20,566,180

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

While significant out of region purchases were made by the Accommodation and Food Services sector, no individual NAICS code among the largest sector appears to provide a significant opportunity for expansion or relocation. Please see ***Table 31*** for more detail.

Table 31. Regional Accommodation and Food Services Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
551114	Corporate, Subsidiary, and Regional Managing Offices	$980,012	2.0%	$48,339,698	98.0%	$49,319,710
531210	Offices of Real Estate Agents and Brokers	$4,433,685	27.8%	$11,503,829	72.2%	$15,937,515
531110	Lessors of Residential Buildings and Dwellings	$9,608,880	53.0%	$8,533,872	47.0%	$18,142,752
531390	Other Activities Related to Real Estate	$2,822,418	27.1%	$7,575,756	72.9%	$10,398,174
312120	Breweries	$67,816	1.2%	$5,824,965	98.8%	$5,892,781

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

The Regional Manufacturing sector makes a substantial level of imported purchases from the Iron and Steel Mills and Ferroalloy Manufacturing sector (NAICS 331110), but also acquires nearly 45% of its demand regionally. Please see ***Table 32*** for additional information.

Table 32. Regional Manufacturing Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
211120	Crude Petroleum Extraction	$22,974,306	2.3%	$989,749,183	97.7%	$1,012,723,489
211130	Natural Gas Extraction	$35,114,866	11.5%	$270,880,999	88.5%	$305,995,866
551114	Corporate, Subsidiary, and Regional Managing Offices	$2,317,906	1.7%	$133,376,886	98.3%	$135,694,791
112000	Animal Production	$4,521,494	3.3%	$131,648,228	96.7%	$136,169,722
331110	Iron and Steel Mills and Ferroalloy Manufacturing	$76,347,067	44.3%	$95,808,361	55.7%	$172,155,428

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

Among the major employing industries, several six-digit NAICS industries represented significant imported purchases for the study area. Not considering crude petroleum and natural gas extraction (which is highly dependent on the geographic location of the raw material) the major inputs come from:

- 551114 - Corporate, Subsidiary, and Regional Managing Offices
- 112000 - Animal Production
- 331110 - Iron and Steel Mills and Ferroalloy Manufacturing
- 524126 - Direct Property and Casualty Insurance Carriers
- 524114 - Direct Health and Medical Insurance Carriers

While illustrative, these industries, particularly the corporate managing offices, service wide areas and are unlikely targets for relocation or establishment. However, a few industries identified appear to be potential targets for location and/or expansion. Among these we find:

- **331110 - Iron and Steel Mills and Ferroalloy Manufacturing**: $95,808,361 in imported purchases by the Manufacturing sector (It should be noted that significant in-region purchases are also made by the sector and expanding those regionally should be examined);
- **493110 – General Warehousing and Storage**: $22,210,055 in imported purchases by the Retail Trade sector;
- **325413 - In-Vitro Diagnostic Substance Manufacturing**: $21,602,863 in imported purchases by the Health Care and Social Assistance sector;
- **541512 - Computer Systems Design Services:** $21,753,239 in imported purchases by the Government sector;
- **518210 - Data Processing, Hosting, and Related Services**: $16,208,609 in imported purchases by the Government sector; and
- **541715 - Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology):** $15,962,769 in imported purchases by the Government sector.

Industry Cluster Imported Purchases

The five largest imported purchase industries for industry clusters in the study area counties are presented below. Much like the analysis related to imported purchases in the prior section, care was taken to remove the geographically dependent (extraction and pipelines) and corporate management activity inputs from the clustered industry imported purchases. These data are presented in ***Table 33*** through ***Table 38***. Six-digit NAICS industries where there are significant imported purchases and opportunities to meet them regionally are highlighted.

Table 33. Regional Oil and Gas Production and Transportation Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
484121	General Freight Trucking, Long-Distance, Truckload	$2,581,392	10.8%	$21,284,028	89.2%	$23,865,419
325110	Petrochemical Manufacturing	$4,898,914	20.6%	$18,857,007	79.4%	$23,755,921
325199	All Other Basic Organic Chemical Manufacturing	$0	0.0%	$14,663,562	100.0%	$14,663,562
493110	General Warehousing and Storage	$2,362,941	18.3%	$10,550,312	81.7%	$12,913,253
484122	General Freight Trucking, Long-Distance, Less Than Truckload	$555,287	5.1%	$10,345,469	94.9%	$10,900,756

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

Table 34. Regional Automotive Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
336370	Motor Vehicle Metal Stamping	$0	0.0%	$39,757,741	100.0%	$39,757,741
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	$0	0.0%	$26,939,591	100.0%	$26,939,591
331523	Nonferrous Metal Die-Casting Foundries	$79,436	0.3%	$26,228,450	99.7%	$26,307,887
333618	Other Engine Equipment Manufacturing	$0	0.0%	$24,736,062	100.0%	$24,736,062
332710	Machine Shops	$5,099,034	17.5%	$24,081,079	82.5%	$29,180,113

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

Table 35. Regional Electric Power Generation Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
541990	All Other Professional, Scientific, and Technical Services	$798,857	23.3%	$2,635,242	76.7%	$3,434,098
541110	Offices of Lawyers	$1,532,929	41.9%	$2,127,614	58.1%	$3,660,543
518210	Data Processing, Hosting, and Related Services	$66,783	4.2%	$1,530,301	95.8%	$1,597,083
221310	Water Supply and Irrigation Systems	$919,354	38.7%	$1,458,197	61.3%	$2,377,551
488510	Freight Transportation Arrangement	$1,164,308	44.7%	$1,438,195	55.3%	$2,602,504

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

Table 36. Regional Water Transportation Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
523920	Portfolio Management	$720,038	6.1%	$11,125,403	93.9%	$11,845,441
561510	Travel Agencies	$356,589	4.7%	$7,209,122	95.3%	$7,565,711
523120	Securities Brokerage	$1,320,148	16.3%	$6,793,603	83.7%	$8,113,751
336611	Ship Building and Repairing	$1,833,040	21.3%	$6,763,405	78.7%	$8,596,445
488510	Freight Transportation Arrangement	$652,115	9.9%	$5,903,070	90.1%	$6,555,185

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

Table 37. Regional Upstream Chemical Products Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
325199	All Other Basic Organic Chemical Manufacturing	$0	0.0%	$27,643,538	100.0%	$27,643,538
325193	Ethyl Alcohol Manufacturing	$0	0.0%	$6,409,284	100.0%	$6,409,284
325211	Plastics Material and Resin Manufacturing	$480,108	8.6%	$5,086,596	91.4%	$5,566,704
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	$97,672	4.7%	$1,984,837	95.3%	$2,082,509
424910	Farm Supplies Merchant Wholesalers	$163,927	7.9%	$1,909,442	92.1%	$2,073,370

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

Table 38. Regional Construction Products and Services Imported Purchases

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
444110	Home Centers	$1,952,725	34.0%	$3,782,893	66.0%	$5,735,618
444190	Other Building Material Dealers	$1,243,071	33.7%	$2,441,912	66.3%	$3,684,983
332322	Sheet Metal Work Manufacturing	$91,986	4.7%	$1,847,513	95.3%	$1,939,499
332312	Fabricated Structural Metal Manufacturing	$247,037	13.6%	$1,567,365	86.4%	$1,814,401
326199	All Other Plastics Product Manufacturing	$28,431	1.8%	$1,519,471	98.2%	$1,547,902

Source: Emsi's gravitational flows multi-regional social account matrix model (MR-SAM)

Among the industry clusters, several six-digit NAICS industries represented significant imported purchases for the study area and, as such, appear to be potential targets. These potential targets occur broadly in the manufacturing and transportation and logistics sectors. Among these we find:

- **325199 - All Other Basic Organic Chemical Manufacturing**: $42,307,100 in combined imported purchases by the Upstream Chemical Products and the Oil and Gas Production and Transportation clusters
- **336370 - Motor Vehicle Metal Stamping**: $39,757,741 in imported purchases by the Automotive cluster
- **336350 - Motor Vehicle Transmission and Power Train Parts Manufacturing**: $26,939,591 in imported purchases by the Automotive cluster
- **331523 - Nonferrous Metal Die-Casting Foundries**: $26,228,450 in imported purchases by the Automotive cluster
- **333618 - Other Engine Equipment Manufacturing**: $24,736,062 in imported purchases by the Automotive cluster
- **332710 - Machine Shops**: $24,081,079 in imported purchases by the Automotive cluster
- **484121 - General Freight Trucking, Long-Distance, Truckload**: $21,284,028 in imported purchases by the Oil and Gas Production and Transportation cluster
- **325110 - Petrochemical Manufacturing**: $18,857,007 in imported purchases by the Oil and Gas Production and Transportation cluster
- **493110 - General Warehousing and Storage**: $10,550,312 in imported purchases by the Oil and Gas Production and Transportation cluster
- **484122 - General Freight Trucking, Long-Distance, Less Than Truckload**: $10,345,469 in imported purchases by the Oil and Gas Production and Transportation cluster)

The estimated imported purchases made by the highlighted industries show that there are significant opportunities to fill gaps within the supply chain for existing clusters. This analysis indicates that considerable percentages and dollars leave the region in the cluster industries, particularly in the Oil and Gas Production and Transportation and Automotive sectors. Whether substantive changes can be made depend on a host of factors beyond the scope of this research, but nevertheless will impact the region's ability to recruit and/or expand local firms to accommodate the opportunities.

Development of Marketing Materials and Recruitment Strategies

The site information and industry data presented in this report were used to inform the development of a packet that can be used to market the seven identified sites.

When reviewing the sites as a whole, the predominant strength that emerged was the transportation assets available on-site or in close proximity to each site. Four of the seven sites have on-site rail access and three of the seven have on-site waterway access. All of the sites are within 16 miles of Interstate 64, the Huntington Tri-State airport, and the truck-to-rail transfer services at the Heartland Intermodal Gateway. Furthermore, the Cyrus Property and the River Trading and Kanawha River Terminal Property are near the planned I-73/-74 Whites Creek exit/entrance and the Western Gate Industrial Park Property is adjacent to the existing I-73/-74 Prichard exit/entrance.

Table 39. Site Transportation Asset Analysis

Site	Distance to I-64	Distance to Airport	Rail Access	Rail Siding	Waterway Access
Aeroplex	3.9 miles	Adjacent	No	12.1 miles	No
Argus	6.1 miles	7.6 miles	On-site	7.1 miles	On-site
Cyrus	7.2 miles	8.7 miles	On-site	6.2 miles	On-site
Docks Creek	4.6 miles	6.1 miles	On-site	On-site	2 On-site
River Trading	7.7 miles	9.2 miles	On-site	5.6 miles	0.5 miles
Western Gate	14 miles	15.4 miles	No	2 miles	No
Wilson	2.2 miles	3.7 miles	No	11.7 miles	No

Table 40. Wayne County Proximity to Major Markets

Within 250 Miles of:	Within 500 Miles of:
Columbus, OH	Atlanta, GA
Cincinnati, OH	Charlotte, NC
Indianapolis, IN	Chicago, IL
Lexington, KY	Cleveland, OH
Louisville, KY	Detroit, MI
	Nashville, TN
	Richmond, VA
	Washington, DC

The transportation assets of the identified sites fit well with several of the industries that were identified as potential targets through the industry cluster and input analysis in this study. Specifically, these industries are:

- **493110 - General Warehousing and Storage** (This industry surfaced in both the major employing industries analysis and the industry cluster analysis.)
- **484121 - General Freight Trucking, Long-Distance, Truckload**
- **484122 - General Freight Trucking, Long-Distance, Less Than Truckload**

The ability to move freight by air, water, rail, and road, as well as proximity to major markets, should be used as one of the unique selling propositions for the sites as they would be desirable characteristics to logistics, warehousing, distribution, and freight companies. As such, the theme "Logistically Logical" was used for the marketing packet. The packet can be found in Attachment E.

Successfully recruiting businesses to the identified sites will need to be a collaborative effort between several local, regional, and state entities. However, the Wayne County Economic Development Authority (WCEDA) should take the lead as the local economic development organization (EDO) to ensure that a priority focus is given to this initiative. The WCEDA should complete the following:

- Host a meeting with economic development colleagues from regional and state EDOs and key stakeholders to brief them on the findings of this report. The features and benefits of the identified sites, regional economy data, proposed industry clusters to target, and recommended marketing strategies should be presented and discussed. Garner support for the plan and identify specific action items for all parties. Invitations should be extended to the following, at a minimum:
    - Huntington Area Development Council (HADCO)
    - Advantage Valley
    - Region 2 Planning and Development Council
    - West Virginia Department of Commerce
    - American Electric Power
    - Norfolk Southern Corporation
    - Local and state elected officials
- List the identified sites on relevant site inventory pages, including:
    - HADCO Sites & Buildings
    - West Virginia Department of Commerce Sites and Buildings
    - American Electric Power West Virginia Sites
    - Appalachian Sky Sites
    - LoopNet
- Pursue ownership and development of the identified sites to increase their marketability by decreasing prospects' time and risk.
    - Prioritize the sites in order of potential economic impact to determine which one(s) should be purchased and developed first.
    - Identify and seek funding from grants and private investors to purchase the sites.
    - Complete environmental assessments and begin remediation on sites where necessary.
- Leverage site selection consultants and associations (e.g. Area Development, Site Selectors Guild, Site Selectors Magazine) to increase exposure of the properties by seeking funding to:
    - Hire a site selection consultant who can market the properties and generate leads.
    - Attend the organizations' annual meetings/conferences in order to network and learn best practices.
    - Purchase advertising space on association websites and/or publications.

Summary and Recommendations

This project combined an analysis of available industrial sites and the business makeup of the region surrounding the portion of the I-73/-74 Corridor between Kenova and Prichard, WV to produce information and tools to maximize related economic development. From these efforts, specific deliverables were developed including information for viable sites for further development, data related to industrial composition in the region, a list of potential industry targets for location/expansion initiatives, and a marketing package for use in a broader strategy to market the sites and region.

Initial background research identified seven sites for further evaluation. Among these were:

- The **Aeroplex Property** – Approximately 95 acres located immediately south of the Huntington Tri-State Airport that is not considered a brownfield.
- The **Argus Property** – A brownfield site consisting of five parcels totaling more than 144 acres.
- The **Cyrus Property** – A brownfield that has been commercially developed encompassing nearly 116 acres that includes coal loading structures and other buildings.
- The **Docks Creek Property** – A brownfield made up of multiple parcels totaling more than 86 acres with an operational coal loading facility.
- The **River Trading and Kanawha River Terminal Property** – Approximately 125 acres consisting of farmland and forestland that is not considered a brownfield.
- The **Western Gate Industrial Park** – that incorporates multiple parcels, one part of which is considered a brownfield because it is the location of the former Prichard Landfill, which is currently in a 30-year post-landfill closure program. The northern and central portions, currently including a shooting range, are not considered a brownfield.
- The **Wilson Property** – This vacant site with no day-to-day use of the property, is a potential brownfield as the presence of environmental contaminants has not been determined.

The data and analysis associated with the existing industrial makeup and concentration assists stakeholders and policymakers to better understand economic conditions in terms of employment and regional purchasing.

Regional employment patterns show significant levels of professional and service industry employment, led by the Health Care and Social Assistance industry (an industry observed to have grown over recent years and having a higher LQ than peer regions). Employment in the region is largely made up of service industries, but Manufacturing (NAICS 31-33) contributes as well. The study outlines industrial clusters of interest to be:

- Oil and Gas Production and Transportation;
- Automotive;
- Electric Power Generation and Transmission;
- Water Transportation;
- Upstream Chemical Products; and
- Construction Products and Services.

The examination of imported purchases for both major regional employers and industry clusters aided in the development of a targeted industry list, which though by no means comprehensive, does provides economic development professionals with a starting point to help existing firms operate more efficiently by targeting key components of their existing supply chain and can help build synergies for both firms and industry clusters alike. The study details individual six-digit NAICS code industries for targeting but broadly, transportation, Logistics and Warehousing, Basic Organic Chemical Manufacturing, and Motor Vehicle Engine and Parts Manufacturing appear to provide significant opportunities.

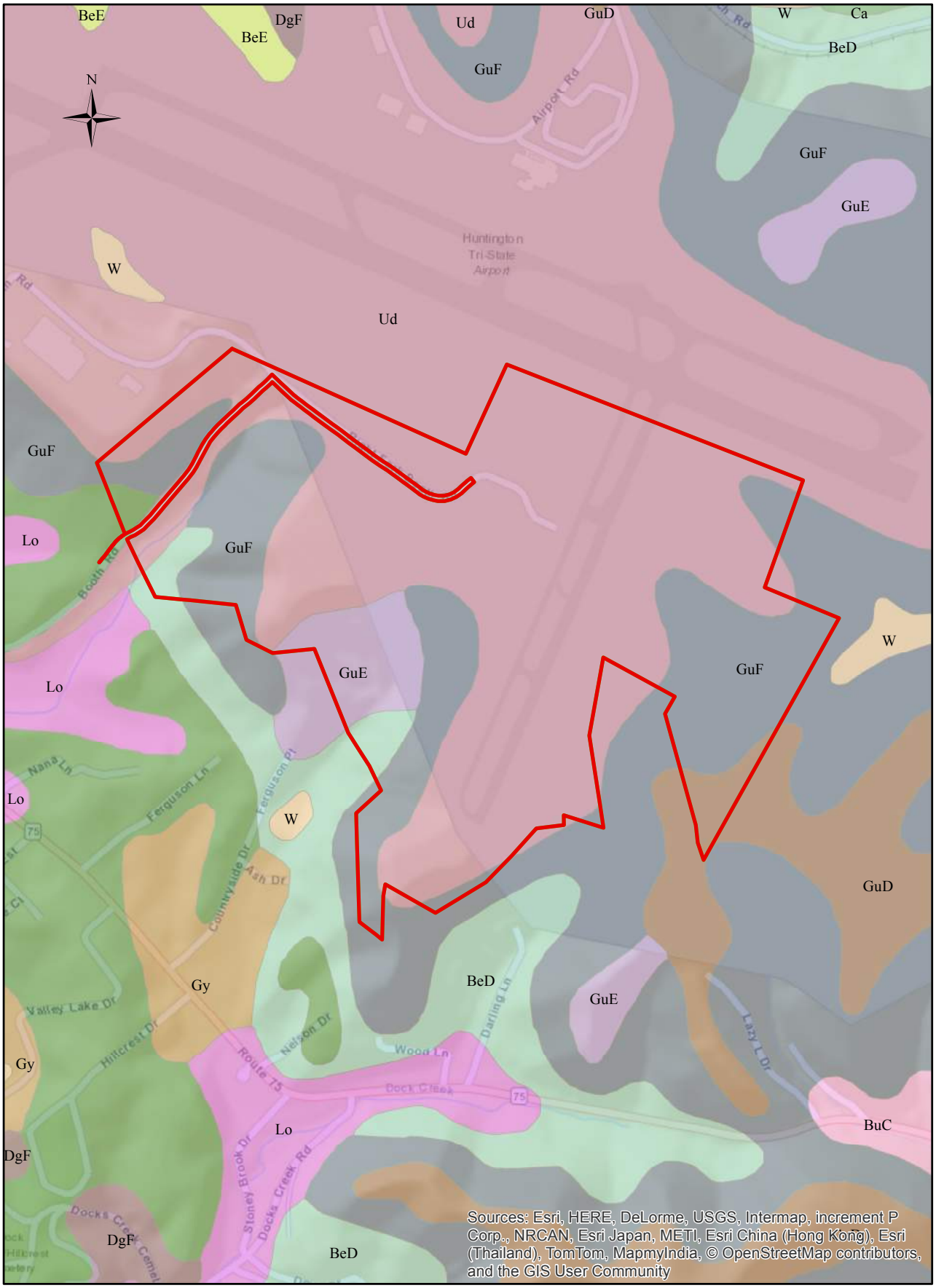
The site packets and marketing materials provide stakeholders with tangible information to take to firms and industry to illustrate the availability and viability of sites along the corridor as development of the infrastructure and related activities continue.

To maximize the utility from the research products developed through this project, the study team recommends additional work undertaken in future phases. Among these steps are:

- The identification of individual firms in targeted "supply chain gap" industries to discover:
    - Geographic location
    - Firm characteristics
    - Existing relationships with regional firms/corporate parents
- Establish cooperative agreements between local, state, and regional policy makers to assist future development efforts along the I-73/-74 corridor and incorporating infrastructure improvements associated with the Heartland Intermodal Gateway to maximize utility for existing and potential firms.
- Obtain funding for the purchase, remediation, and site preparation of one or more identified site locations to make them more attractive to businesses, including:
    - Phase I and Phase II Environmental Site Assessments, where needed
    - Conceptual site plans, where needed
    - Preliminary estimates of probable costs, where needed

Attachment A: Soil Maps

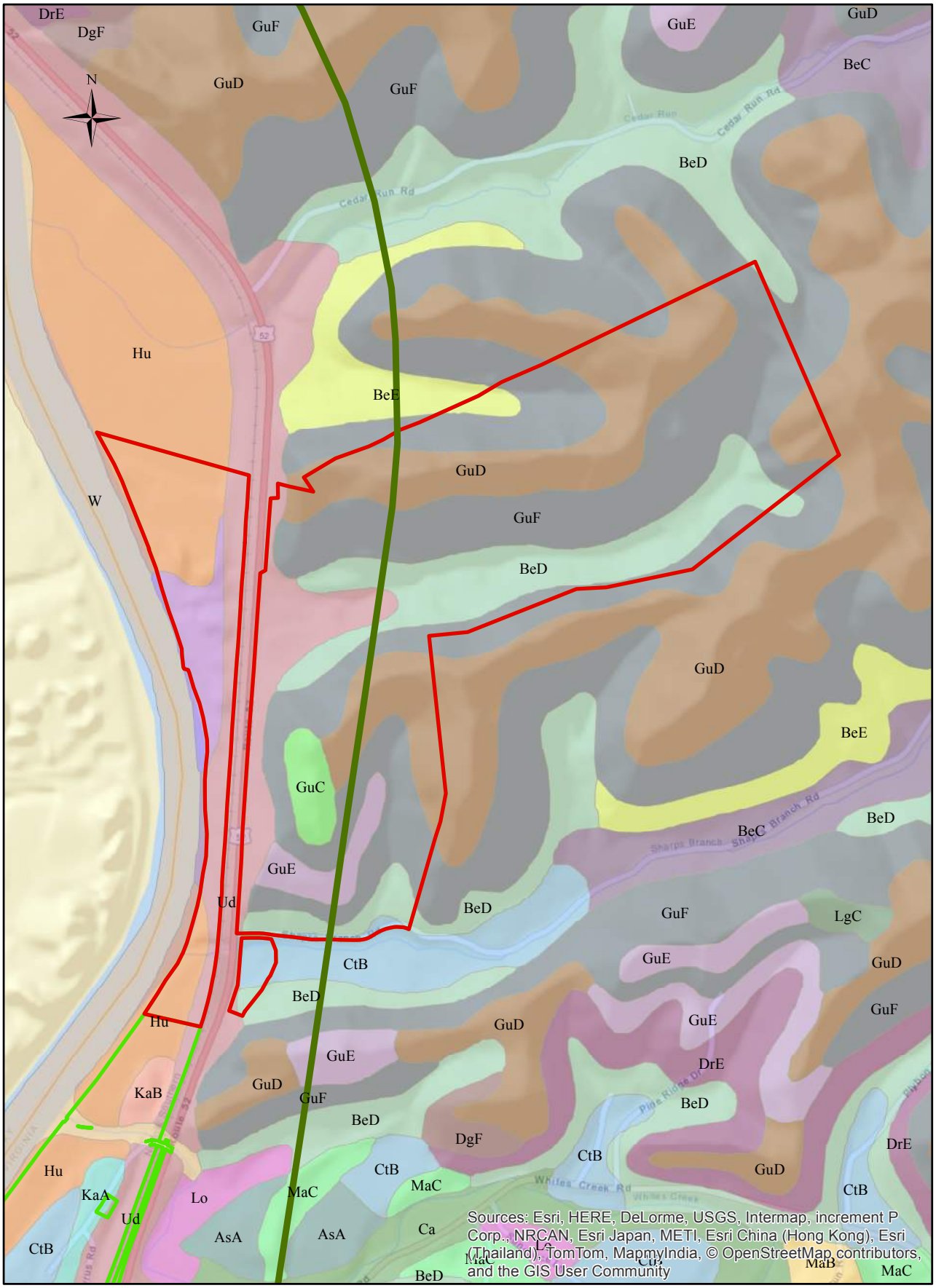
USGS Soil Series Data
Aeroplex Property



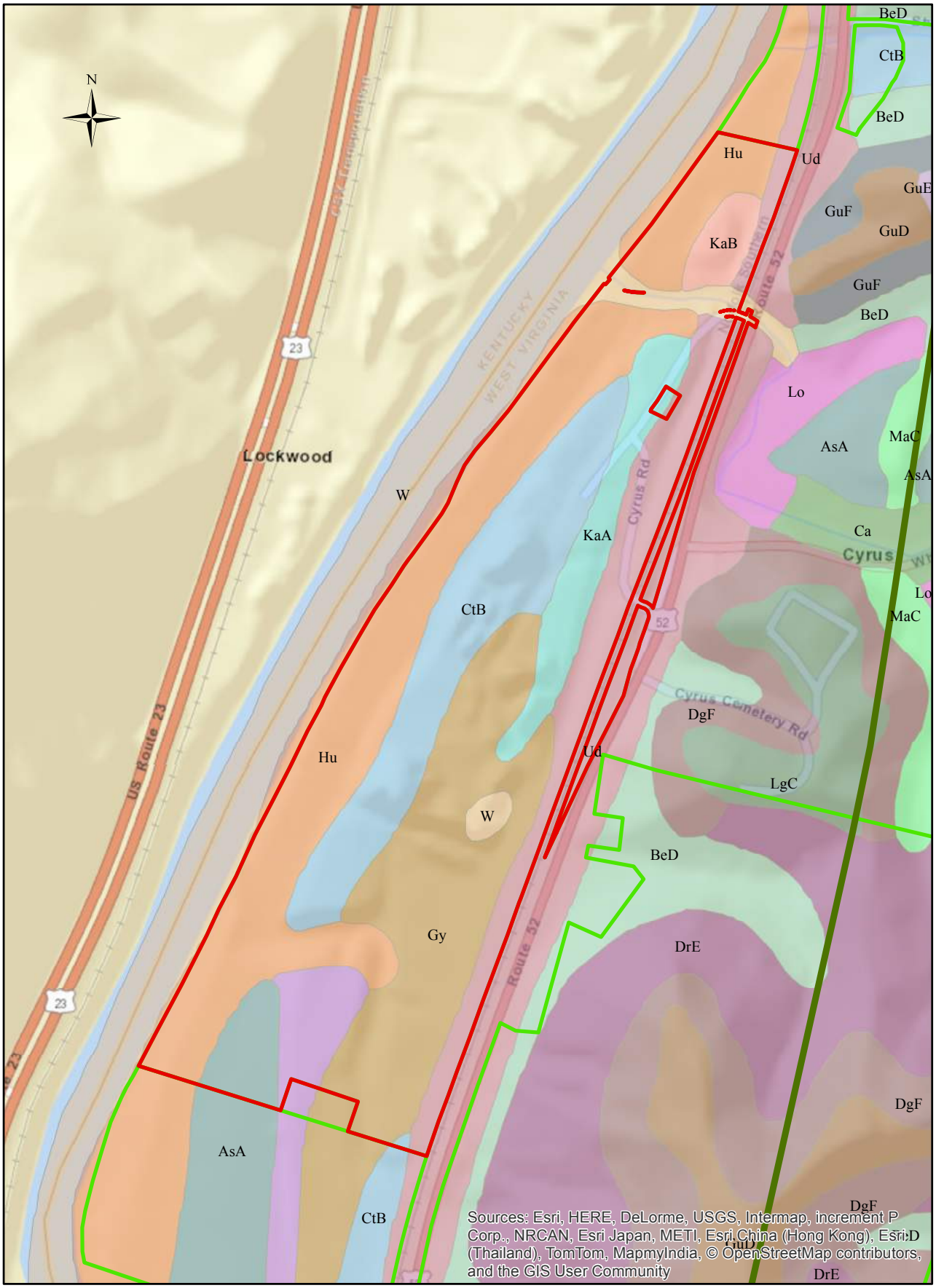
1,100 550 0 1,100 Feet

Legend
I73/74 Corridor
Final Properties
Site Highlighted

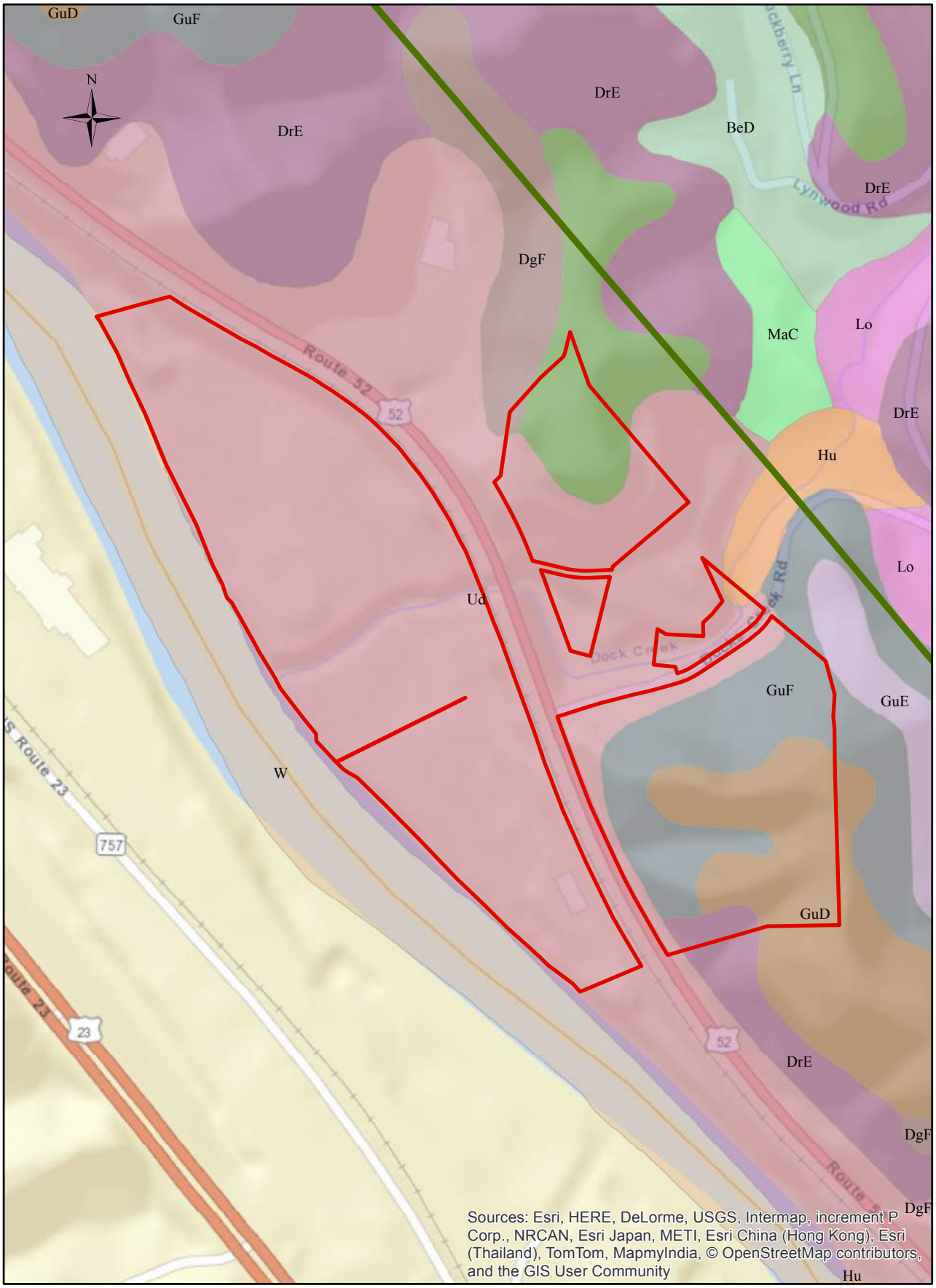
USGS Soil Series Data
Argus Property



USGS Soil Series Data
Cyrus Property



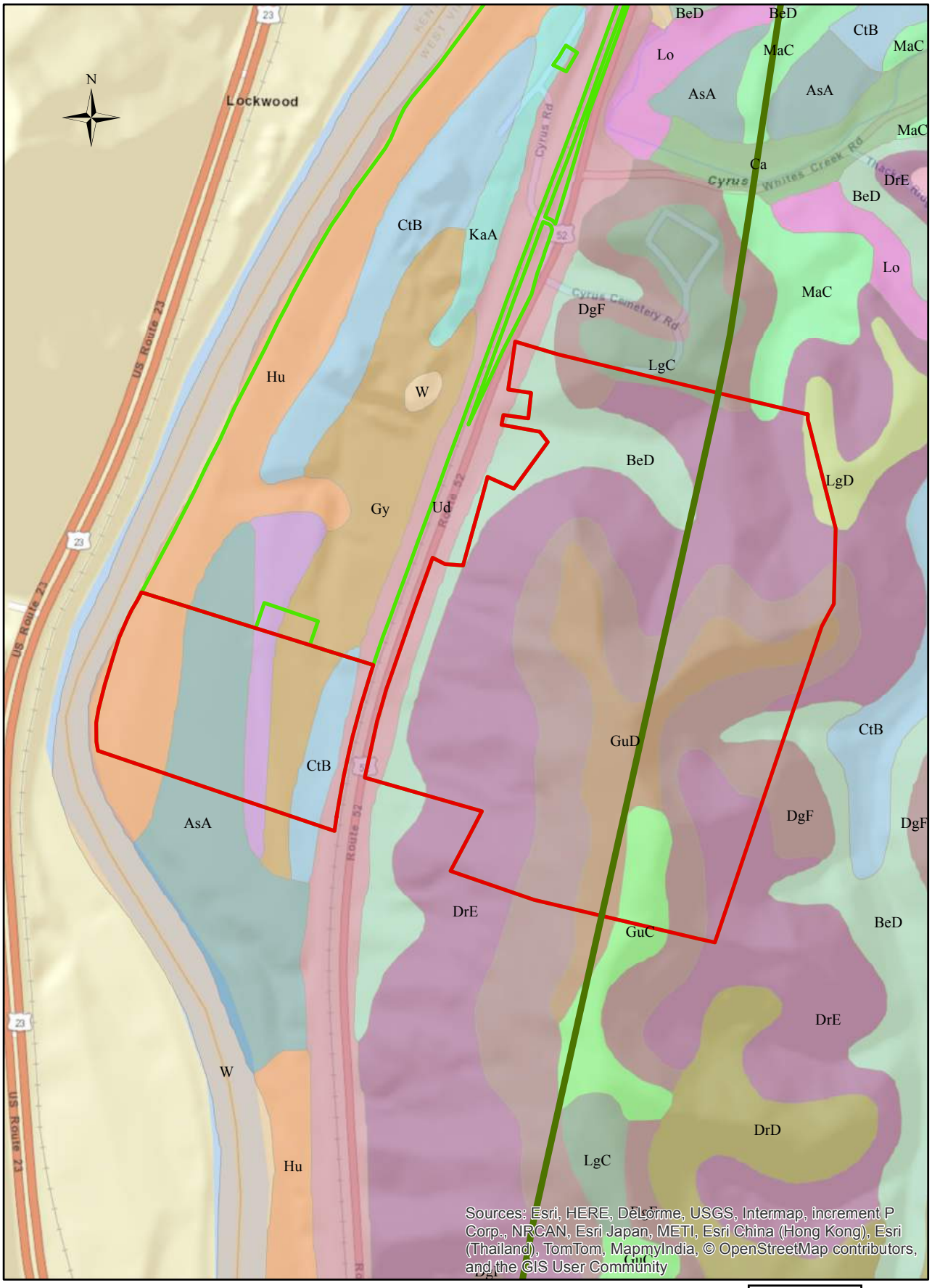
USGS Soil Series Data
Docks Creek Property



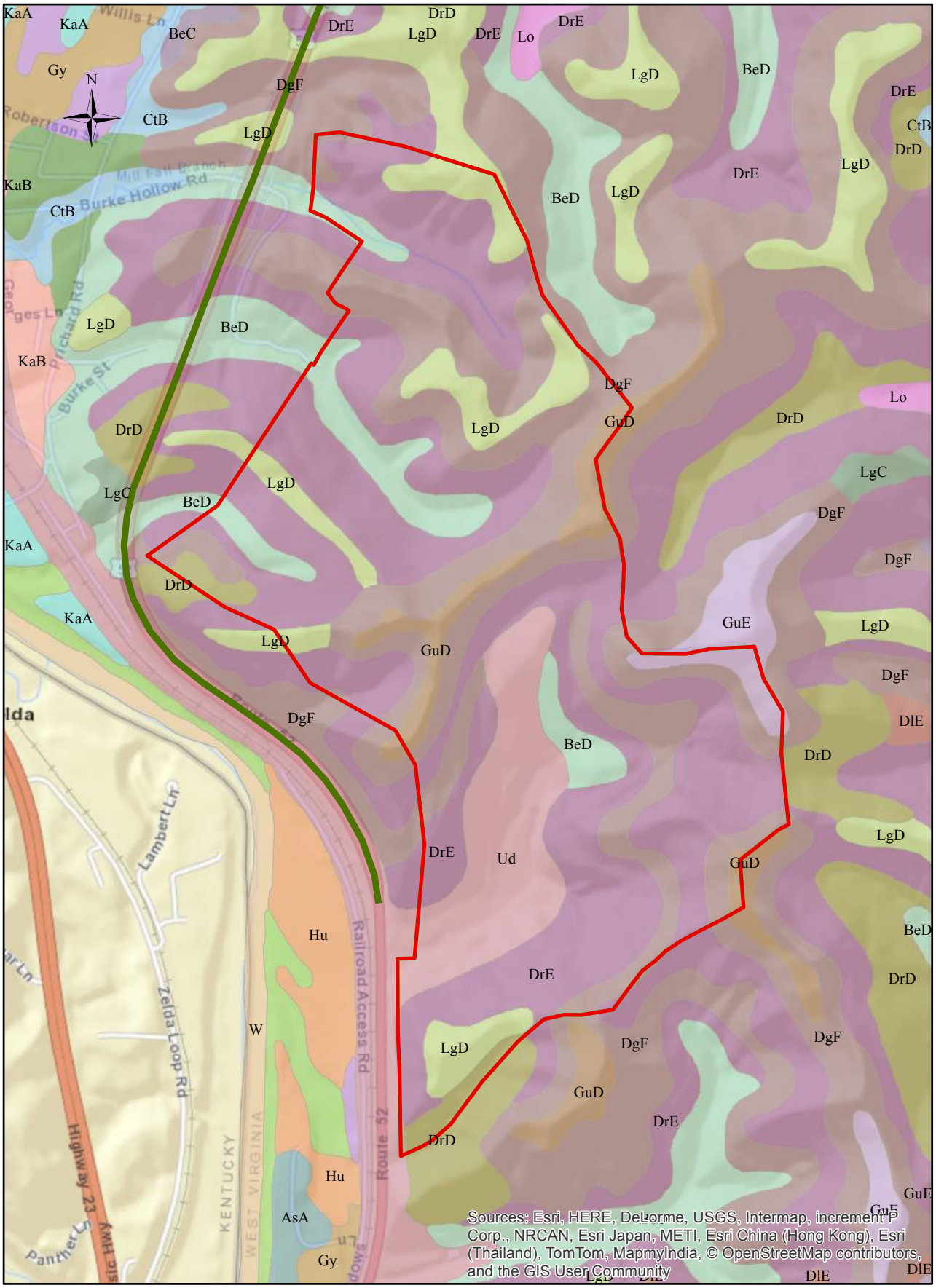
900 450 0 900 Feet

Legend
I73/74 Corridor
Final Properties
Site Highlighted

USGS Soil Series Data
River Trading Company and Kanawha River Terminal



USGS Soil Series Data
Western Gate Industrial Park



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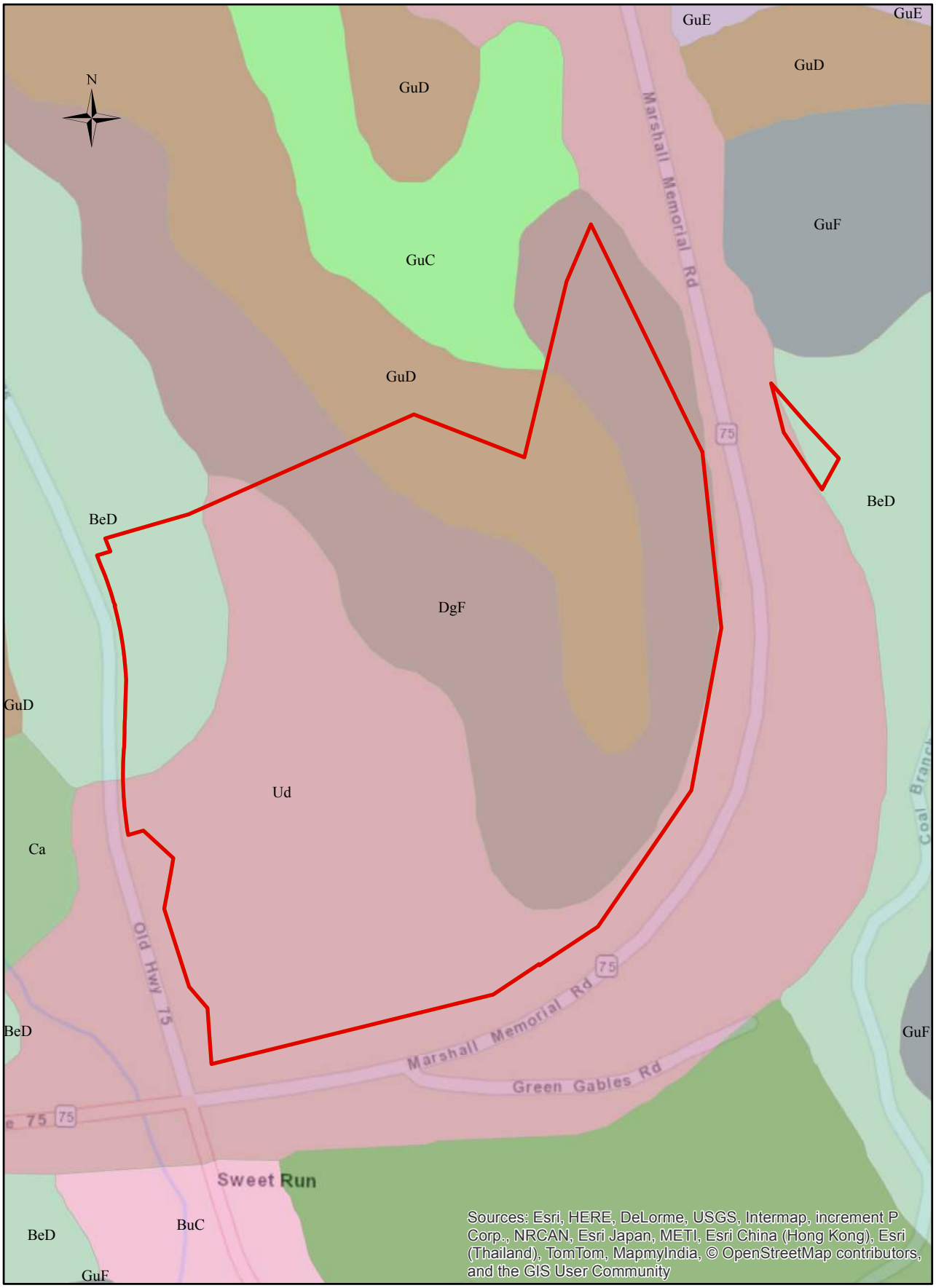
Legend
I73/74 Corridor
Final Properties
Site Highlighted

USGS Soil Series Data
Wilson Property

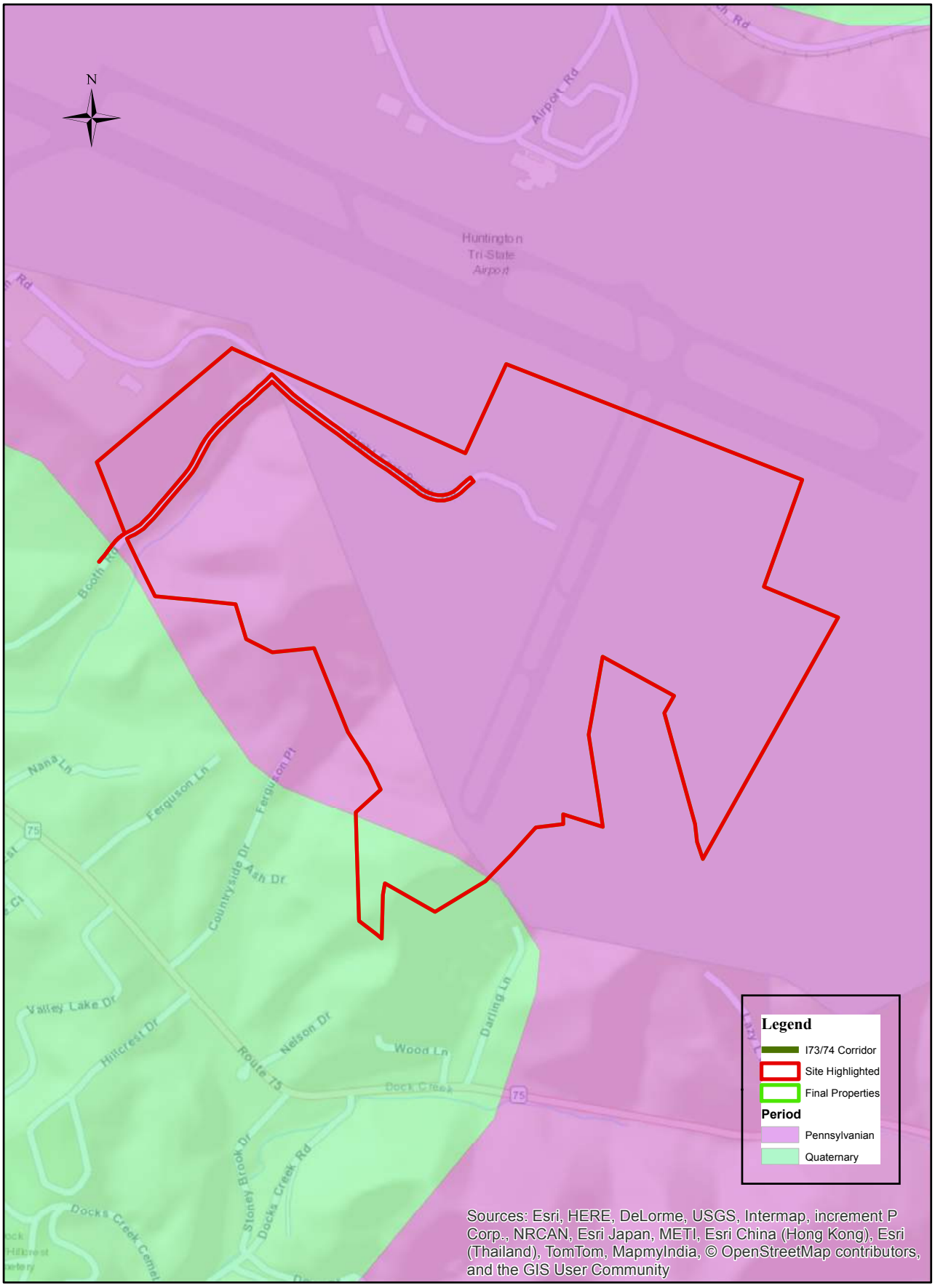


450 225 0 450 Feet

Legend
I73/74 Corridor
Final Properties
Site Highlighted

Attachment B: Geologic Maps

Geologic Map
Aeroplex Property



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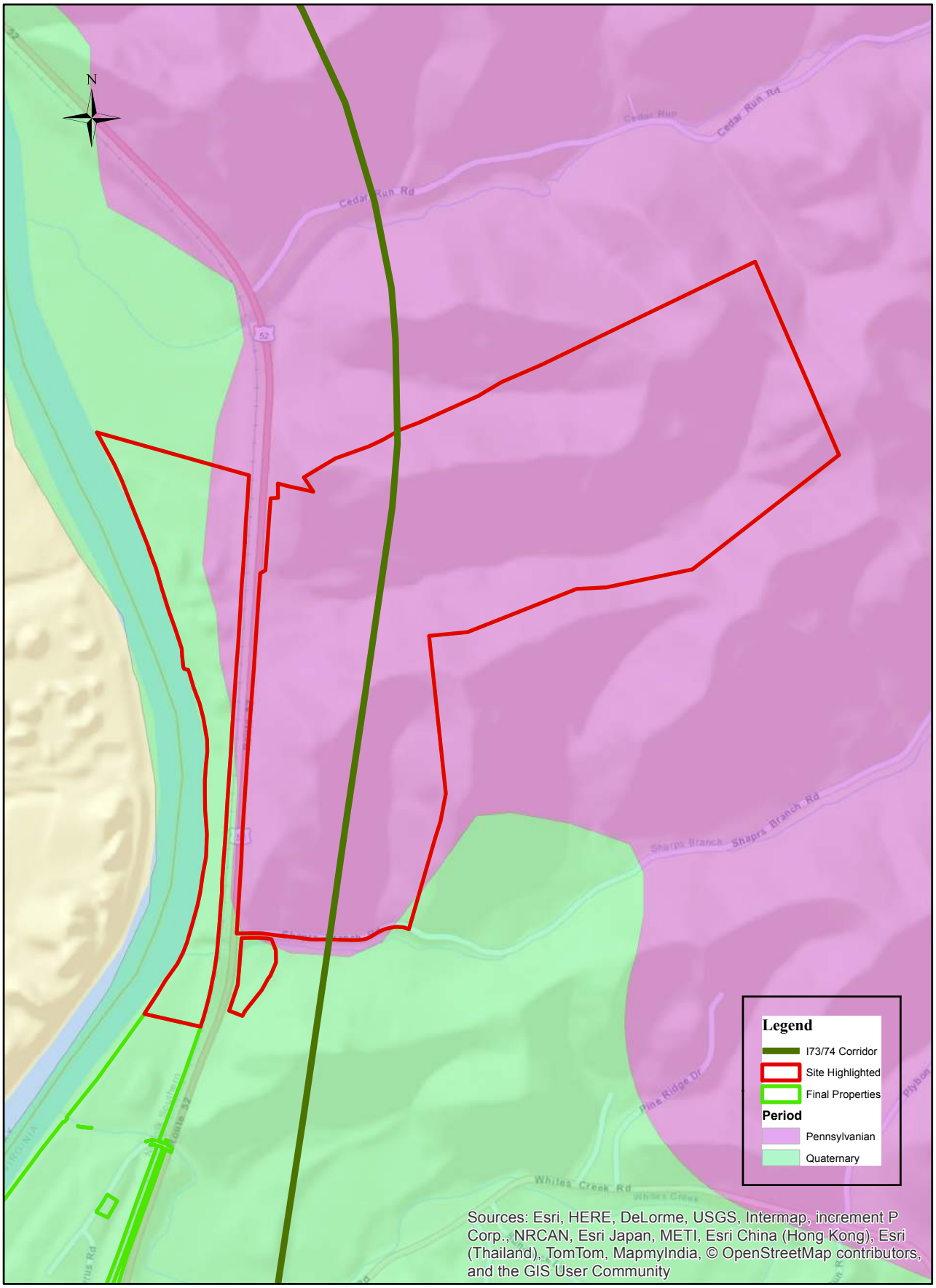
Geologic Map
Argus Property



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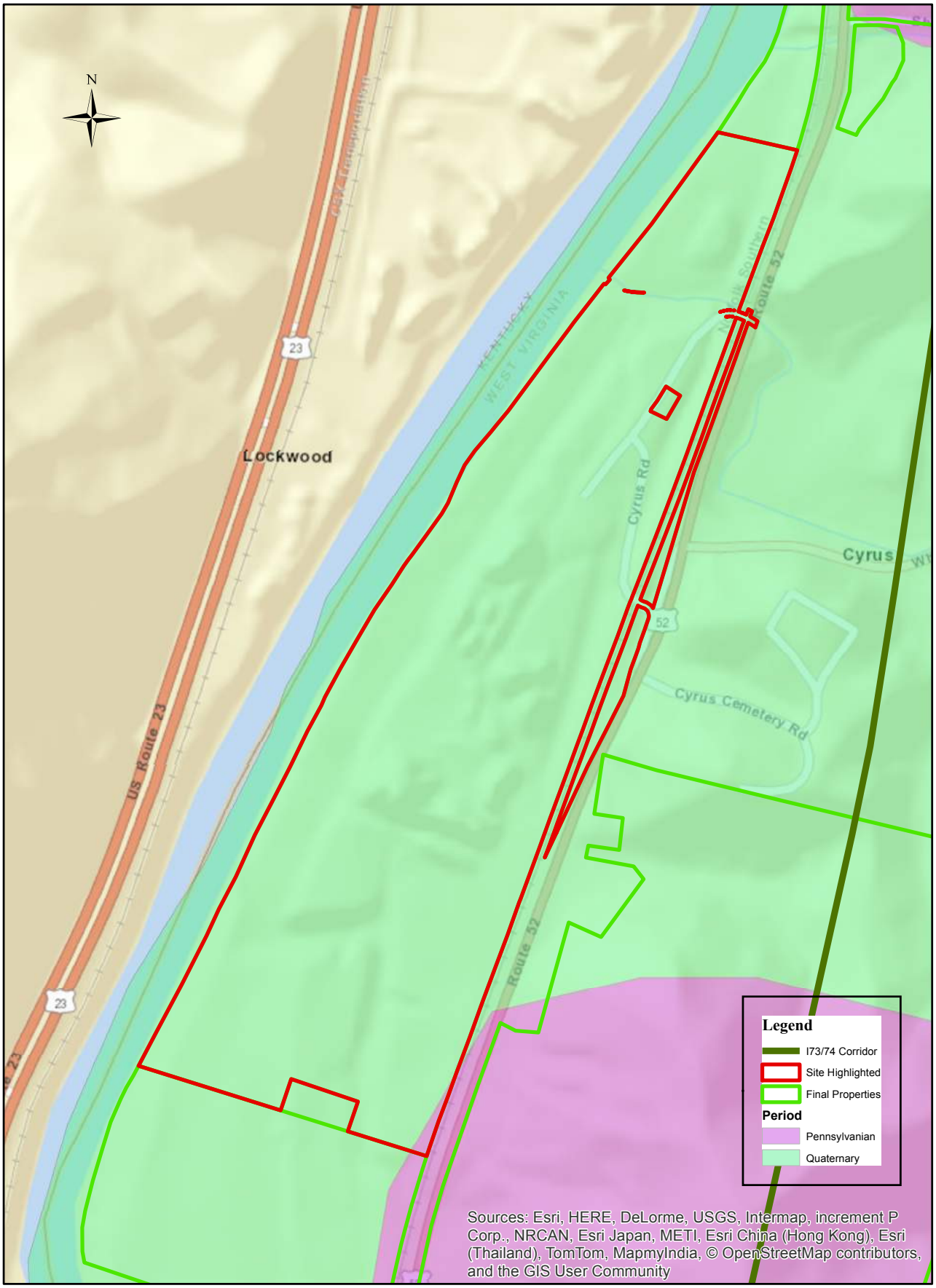
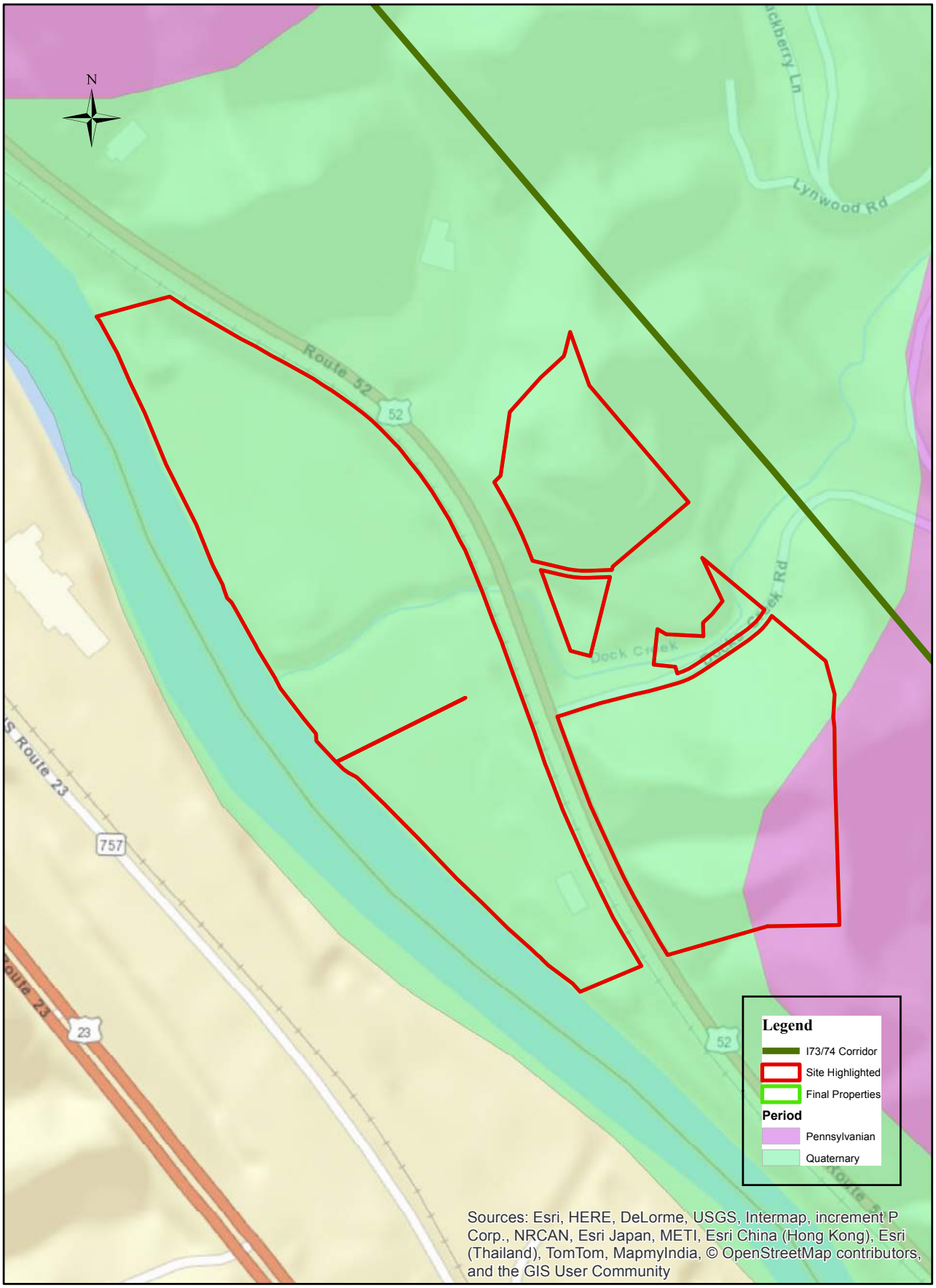
Geologic Map
Cyrus Property



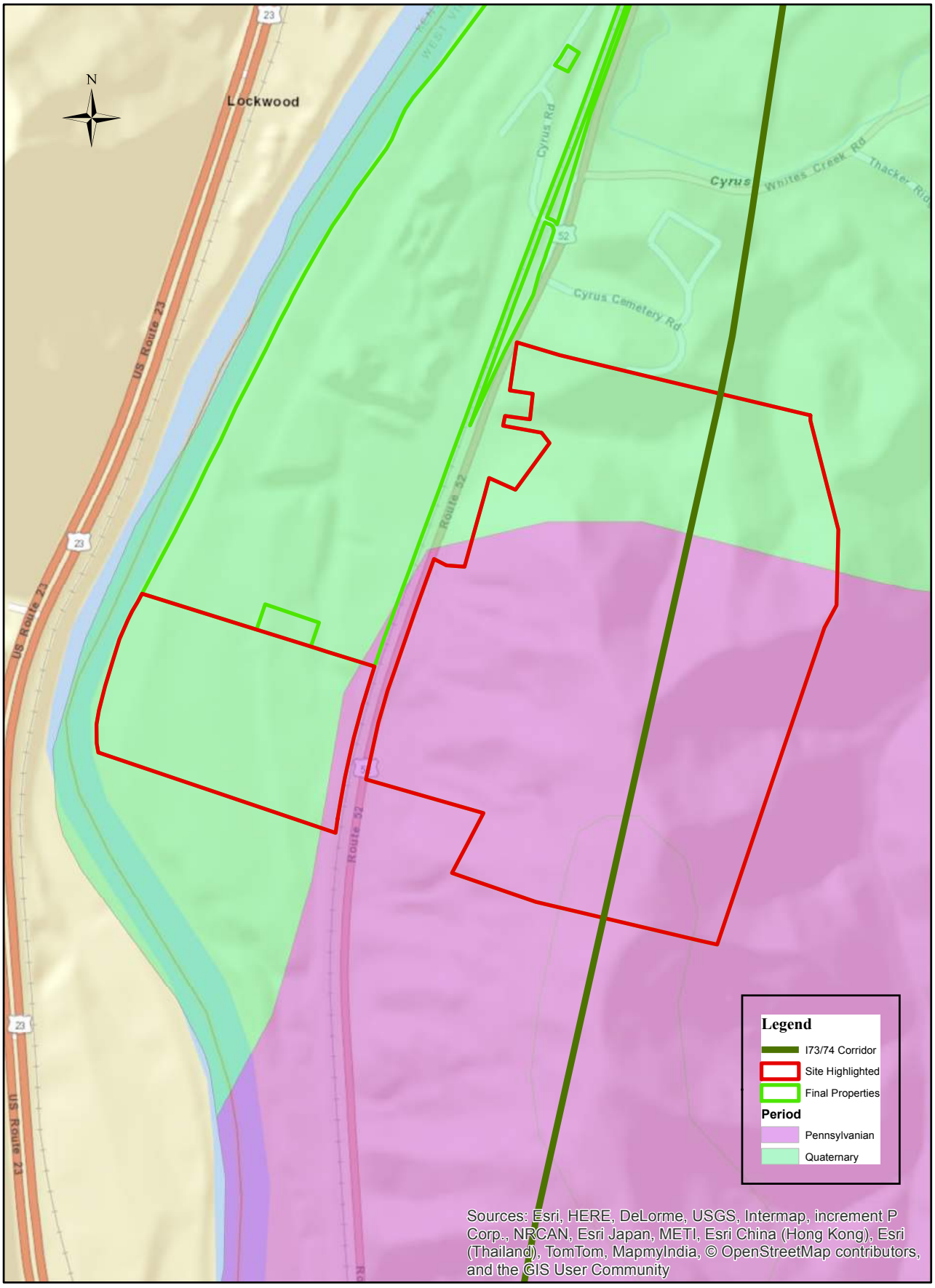
1,000 500 0 1,000 Feet

Geologic Map
Docks Creek Property



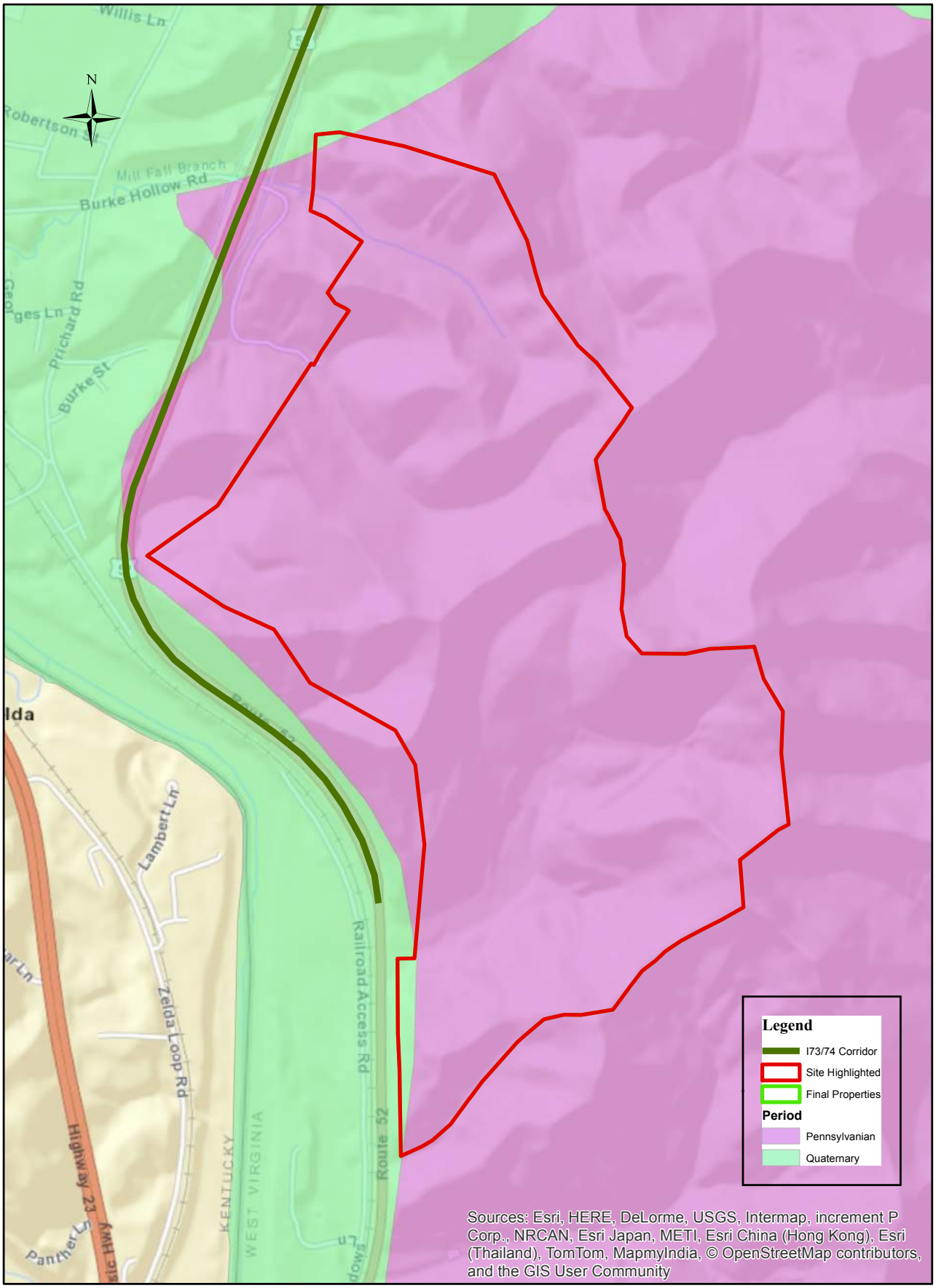
900 450 0 900 Feet

Geologic Map
River Trading Company and Kanawha River Terminal



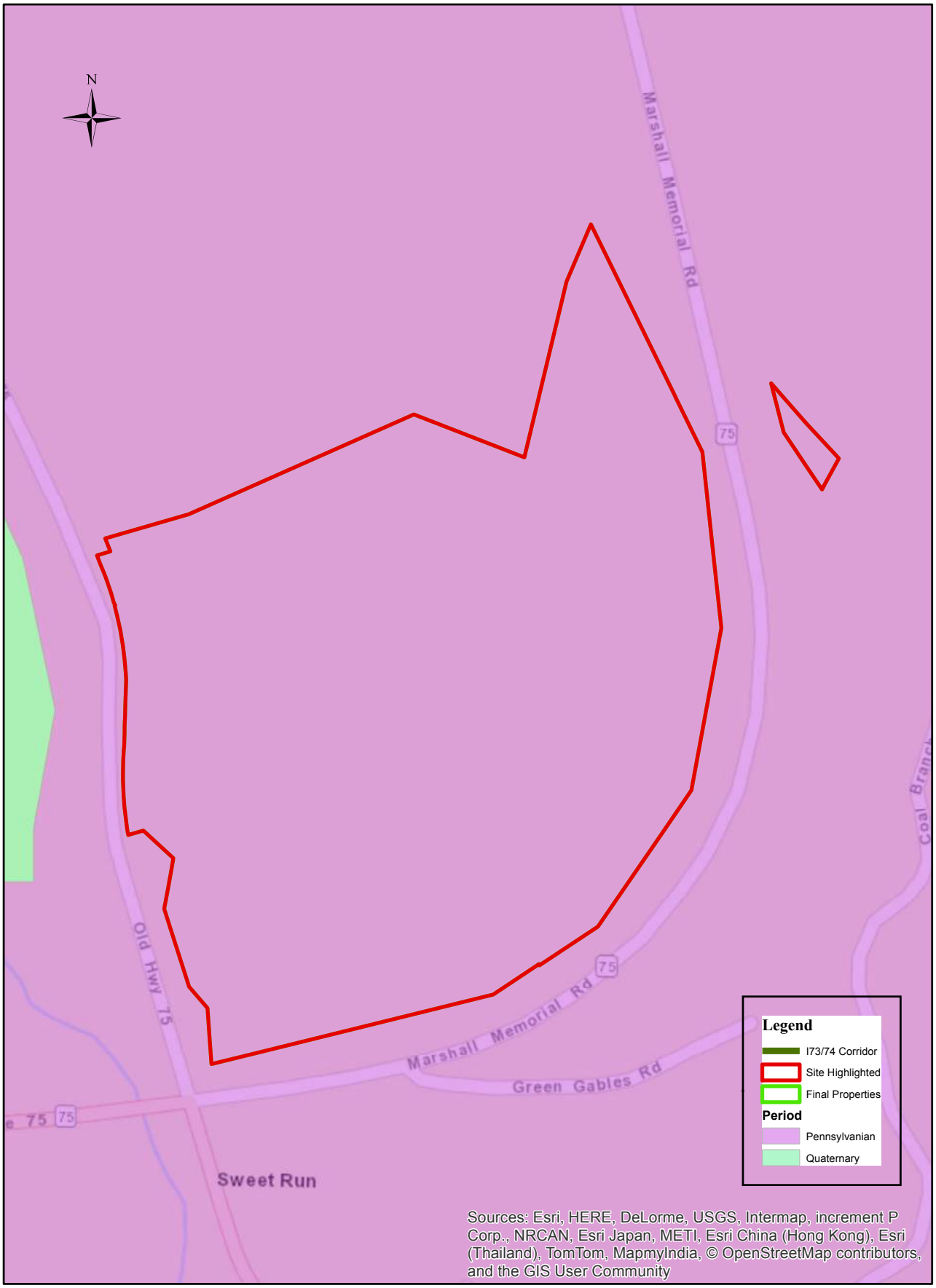
1,100 550 0 1,100 Feet

Geologic Map
Western Gate Industrial Park



1,750 875 0 1,750 Feet

Geologic Map
Wilson Property



450 225 0 450 Feet

Attachment C: Broadband Providers and Data Transfer Rates

Fixed Broadband Deployment Data from FCC Form 477

FCC Form 477 Overview

All facilities-based broadband providers are required to file data with the FCC twice a year (Form 477) on where they offer Internet access service at speeds exceeding 200 kbps in at least one direction. Fixed providers file lists of census blocks in which they can or do offer service to at least one location, with additional information about the service. A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block. Accordingly, a list of providers deployed in a census block does not necessarily reflect the number of choices available to any particular household or business location in that block, and the number of such providers in the census block does not purport to measure competition.

Data as of December 31, 2017

Aeroplex Property (census block: 540990204001095)

Provider	Technology of Transmission	MaxCIRDown (Mbps)[1]	MaxCIRUp (Mbps)[2]
Armstrong Utilities, Inc.	Cable Modem – DOCSIS 3.0	500	25
	Optical Carrier / Fiber to the end user	1000	1000
Frontier Communications Corporation	Asymmetric xDSL	0	0
	ADSL2, ADSL2+	0	0
GCI Communication Corp.	Satellite	0	0
ViaSat Inc	Satellite	0	0
HughesNet	Satellite	0	0

[1] **MaxCIRDown:** Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

[2] **MaxCIRUp:** Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

Wilson Property (census block: 540990204001034)

Provider	Technology of Transmission	MaxCIRDown (Mbps)[1]	MaxCIRUp (Mbps)[2]
Armstrong Utilities, Inc.	Cable Modem – DOCSIS 3.0	500	25
	Optical Carrier / Fiber to the end user	1000	1000
Frontier Communications Corporation	Asymmetric xDSL	0	0
	ADSL2, ADSL2+	0	0
GCI Communication Corp.	Satellite	0	0
ViaSat Inc	Satellite	0	0
HughesNet	Satellite	0	0
Skycasters	Satellite	2	1.3

[1] **MaxCIRDown:** Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

[2] **MaxCIRUp:** Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

Docks Creek Property (census block: 540990204002036)

Provider	Technology of Transmission	MaxCIRDown (Mbps)[1]	MaxCIRUp (Mbps)[2]
GCI Communication Corp.	Satellite	0	0
ViaSat Inc	Satellite	0	0
HughesNet	Satellite	0	0
Skycasters	Satellite	2	1.3

[1] **MaxCIRDown:** Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

[2] **MaxCIRUp:** Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

Argus Property (census block: 540990207001059)

Provider	Technology of Transmission	MaxCIRDown (Mbps)[1]	MaxCIRUp (Mbps)[2]
Lycom	Cable Modem – DOCSIS 3.0	200	10
GCI Communication Corp.	Satellite	0	0
ViaSat Inc	Satellite	0	0
HughesNet	Satellite	0	0
Skycasters	Satellite	2	1.3

[1] **MaxCIRDown:** Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

[2] **MaxCIRUp:** Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

Cyrus Property (census block: 540990207001055)

Provider	Technology of Transmission	MaxCIRDown (Mbps)[1]	MaxCIRUp (Mbps)[2]
Lycom	Cable Modem – DOCSIS 3.0	200	10
Frontier Communications Corporation	Asymmetric xDSL	0	0
	ADSL2, ADSL2+	0	0
GCI Communication Corp.	Satellite	0	0
ViaSat Inc	Satellite	0	0
HughesNet	Satellite	0	0
Skycasters	Satellite	2	1.3

[1] **MaxCIRDown:** Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

[2] **MaxCIRUp:** Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

River Trading Company and Kanawha Terminal (census block: 540990207001055)

Provider	Technology of Transmission	MaxCIRDown (Mbps)[1]	MaxCIRUp (Mbps)[2]
Frontier Communications Corporation	Asymmetric xDSL	0	0
	ADSL2, ADSL2+	0	0
GCI Communication Corp.	Satellite	0	0
ViaSat Inc	Satellite	0	0
HughesNet	Satellite	0	0
Skycasters	Satellite	2	1.3

[1] **MaxCIRDown:** Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

[2] **MaxCIRUp:** Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

Western Gate Industrial Park (census block: 540990207002027)

Provider	Technology of Transmission	MaxCIRDown (Mbps)[1]	MaxCIRUp (Mbps)[2]
Lycom	Cable Modem – DOCSIS 3.0	200	10
Frontier Communications Corporation	Asymmetric xDSL	0	0
	ADSL2, ADSL2+	0	0
GCI Communication Corp.	Satellite	0	0
ViaSat Inc	Satellite	0	0
HughesNet	Satellite	0	0
Skycasters	Satellite	2	1.3

[1] **MaxCIRDown:** Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

[2] **MaxCIRUp:** Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate).

Attachment D: Wayne County Floodplain Ordinance

WAYNE COUNTY FLOODPLAIN ORDINANCE

AN ORDINANCE ESTABLISHING THAT A FLOODPLAIN EXISTS AND REQUIRING ALL CONTRACTORS, PERSONS, PARTNERSHIPS, BUSINESSES, AND CORPORATIONS TO OBTAIN A PERMIT FOR DEVELOPMENT AND THE CONSTRUCTION, SUBSTANTIAL IMPROVEMENT, OR RELOCATION OF ANY BUILDING OR STRUCTURE; PROVIDING FOR CERTAIN MINIMUM STANDARDS FOR CONSTRUCTION WITHIN THE FLOODPLAIN AREA AND SETTING FORTH SPECIAL PROCEDURES FOR SUBMISSION AND APPROVAL OF PLANS; AND ESTABLISHING PENALTIES FOR ANY PERSON WHO FAILS TO COMPLY WITH THE REQUIREMENTS OR PROVISIONS OF THIS ORDINANCE.

AUTHORITY AND PURPOSE:

THE PROVISIONS OF THIS ORDINANCE HAVE BEEN PREPARED WITH THE INTENTION OF MEETING THE REQUIREMENTS OF SECTION 60.3 (d) OF THE NATIONAL FLOOD INSURANCE PROGRAM, THE NATIONAL FLOODPLAIN INSURANCE ACT OF 1968 (PUBLIC LAW 91-152) AMENDED BY THE CONGRESS OF THE UNITED STATES THROUGH THE 15TH OF FEBRUARY, 1975, WEST VIRGINIA CODE §7-1-3v, 7-1-3n and 7-I-3kk.

BE IT ENACTED AND ORDAINED by the Wayne County Commission on the 8th day of August, 2016 as follows

ARTICLE 1 – GENERAL PROVISIONS

Section 1.1 Intent

The intent of this Ordinance is to:

A. Promote the general health, welfare and safety of the Community.

B. Encourage the utilization of appropriate minimum construction practices in order to prevent or minimize flooding damage.

C. Minimize danger to public health and safety by protecting the water supply and sanitary sewage disposal in cooperation with the County Sanitarian, and to protect natural drainage.

D. Assure the County Assessor obtains information concerning improvement of real property as required by WV Code §11-3-3a.

E. Assure all County E-911 addresses are obtained and kept current to maintain the established emergency response dispatch systems.

F. Reduce financial burdens imposed on the residents, real property owners and its governmental units by preventing the unwise design and construction of development in areas subject to flooding.

Section 1.2 Abrogation and Greater Restrictions

This Floodplain Ordinance supersedes any ordinance currently in effect in flood prone areas. Any ordinance, however, shall remain in full force and effect to the extent that its provisions are more restrictive.

Section 1.3 Applicability

It shall be unlawful for any contractor, person, partnership, business, or corporation to undertake or cause to be undertaken, any development, new construction, substantial improvement, repair of substantial damage, other repairs or the placement or relocation of any structure (including manufactured homes) within Wayne County unless a permit application has been completed and a permit has been obtained from the Floodplain Administrator. In addition, where land is partially or fully in the Floodplain is to be developed, subdivided, utilized for a manufactured home park or subdivision or otherwise developed, a site plan with elevation data must be submitted to, and approved by, the Floodplain Administrator prior to any development.

Provision of all other codes, ordinances, and regulations shall be applicable insofar as they are consistent with the provisions of this Ordinance and the County's need to minimize the hazards and damage resulting from flooding.

Section 1.4 Matters not provided for specifically

Where conditions are encountered that are not specifically provided for herein, the Floodplain Administrator shall determine the applicability of the provisions of this Ordinance in accordance with its intent, and shall require the applicant to take appropriate measures pursuant to such determination.

ARTICLE II - INTERPRETATIONS AND DEFINITIONS

Section 2.1 Definitions

General

Unless specifically defined below, words and phrases used in this Ordinance shall be interpreted so as to give this Ordinance it's most reasonable application.

1. "Adjacent Property"

Adjacent Property includes any surface tract, regardless of whether such surface tract is entirely within Town of Fort Gay, so long as a portion of said surface tract is located within Town of Fort Gay, which shares an immediate and common boundary up or down stream to the property that is the subject of the application for Floodplain Permit. Adjacent property also includes all other property that may be affected by flooding.

2. "Adversely Affect Adjacent Properties"

To adversely affect a property the increase in the elevation of the 100-year base flood elevation must be more than 1 foot at any point. Stated conversely, if the effect is that the 100-year flood base flood elevation rises 1 foot or less the property is not "affected". This standard does not apply to the Floodway. If prior permit(s) has/have been approved in the same area of the Floodplain, the above definition would include the cumulative impact to the base flood elevation.

3. "Aggrieved Person or Entity"

Property owners or residents of or on land that may be adversely affected by flooding projections for the proposed development in the floodplain.

4. Appurtenant Structure

A structure on the same parcel of property as the principal structure and the use of which is incidental and used for storage only to the use of the principal structure. This does not include a gas or liquid storage tank.

5. Base Flood

Means the flood having a one percent (1%) chance of being equaled or exceeded in any given year.

6. Base Flood Elevation (BFE)

The water surface elevation of the base flood in relation to the datum specified on the County's Flood Insurance Rate Map. For the purposes of this Ordinance, the one hundred (100) year flood or 1% or greater chance of flooding in any given year. (see 100 year flood also)

7. Basement

Any area of the building having its floor sub grade (below ground level) **on all sides.**

8. Certificate of Compliance

A certification that the entire development, including the elevation of fill or the lowest floor of a structure is in compliance with all the provisions of this Ordinance.

9. Compensatory storage

An artificially excavated, hydraulically equivalent volume of storage within the special flood hazard area used to balance the loss of natural flood storage when artificial fill or structures are placed within the special flood hazard area.

10. Contractor – W.Va. Code §21-11-3(c)

A person who in any capacity for compensation, other than as an employee of another, undertakes, offers to undertake, purports to have the capacity to undertake, or submits a bid to construct, alter, repair, add to, subtract from, improve, move, wreck or demolish any building, highway, road, railroad, structure or excavation associated with a project, development or improvement, or to do any part thereof, including the erection of scaffolding or other structures or works in connection therewith, where the cost of undertaking is two thousand five hundred dollars or more. Contractor includes a construction manager who performs management and counseling services on a construction project for a professional fee.

Contractor does not include:

a. One who merely furnishes materials or supplies without fabricating or consuming them in the construction project;

b. A person who personally performs construction work on the site of real property which the person owns or leases whether for commercial or residential purposes;

c. A person who is licensed or registered as a professional and who functions under the control of any other licensing or regulatory board, whose primary business is real estate sales, appraisal, development, management and maintenance, who acting in his respective professional capacity and any employee of such professional, acting in the course of his employment, performs any work which may be considered to be performing contracting work;

d. A pest control operator licensed under the provisions of W.Va. Code §19-16A-7(a) to engage in the application of pesticides for hire, unless the operator also performs structural repairs exceeding one thousand dollars on property treated for insect pests; or

e. A corporation, limited liability corporation, partnership or sole proprietorship whose primary purpose is to prepare construction plans and specifications used by the contractors defined in this section and who employs a full time registered architect licensed to practice in this State or a registered professional engineer licensed to practice in this State. Contractor also does not include employees of such corporation, partnership or sole proprietorship.

11. Critical Facility

Any facility in which even a slight chance of flooding is too great a threat.

Typical critical facilities include hospitals, fire stations, police stations, storage of critical records, and similar facilities. These should be given special consideration when formulating regulatory alternatives and floodplain management plans. A critical facility should not be located in a special flood hazard area if at all possible. If a critical facility must be located in a special flood hazard area it should be provided a higher level of protection so that it can continue to function and provide services during a flood.

12. Development

Any man-made change to improved or unimproved real property, including but not limited to buildings or other structure, mining, dredging, filling, grading, paving, excavation or drilling operations, oil/gas well sites, pads, pits, retention ponds or storage of equipment or materials.

13. Flood

A general and temporary inundation of water in an area of normally dry land.

14. Flood Insurance Rate Map (FIRM)

The official map on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the risk premium zones applicable to Town of Fort Gay. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM)

15. Flood Insurance Study

The official report in which the Federal Emergency Management Agency has provided flood profiles, floodway information, and water surface elevations.

16. Floodplain

a) A relatively flat or low land area adjoining a river, stream, or watercourse which is subject to partial or complete inundation;

b) An area subject to the unusual and rapid accumulation or runoff of surface waters from any source.

17. Floodplain Administrator

The Floodplain Administrator shall be a resident of West Virginia and/or a person who has completed within one year of his appointment the State/FEMA sponsored NFIP Class 273 entitled "Managing Floodplain Development" and remain current with State required continuing education training pursuant to W.Va. Code § 15-5-20(a). In the absence of a formally appointed Floodplain Administrator the duties set forth in this Ordinance for the Floodplain Administrator shall be temporarily fulfilled by the President of the County Commission if within the County's jurisdiction or the Mayor.

18. Floodway

The channel of a river or other watercourse and the adjacent land area that must be reserved to discharge the base flood without increasing the water surface elevation of that flood more than one foot at any point.

19. Flood Proofing (NON-RESIDENTIAL ONLY)

Any combination of structural and non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to real property or improved real property, water and sanitary facilities, structures and its contents.

20. Freeboard

A factor of safety usually expressed in feet above a flood level or BFE for purposes of floodplain management. Freeboard tends to compensate for unknown factors that may contribute uncertainty to flood heights of any given flood and floodway condition, such as wave action, blockage at stream crossings, and increased runoff from urbanization of the watershed.

21. Highest Adjacent Grade (HAG)

The highest natural elevation of the ground surface immediately adjacent to the development or structure foundation. This is primarily used for purposes of insurance rating in approximated floodplains.

22. Historic Structure

Any structure that is:

(a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing in the National Register;

(b) Certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or,

(d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

(i) By an approved state program as determined by the Secretary of the Interior; or,
(ii) Directly by the Secretary of Interior in states without approved programs.

23. Interested Person or Party

"Interested Person or Party" to include (1) the applicant; (2) the owner(s) of the subject property; (3) at least one adult residing in any residence on the subject property at the time the Floodplain Permit Application is filed; (4) owners of any adjacent property; and (5) at least one adult residing in any residence on the adjacent property at the time the Floodplain Permit Application is filed.

24. Licensed Manufactured Home Dealer

A business licensed to sell manufactured homes in the State of West Virginia as set forth in the West Virginia Code.

25. Licensed Manufactured Home Installer

A contractor licensed to install manufactured homes in the State of West Virginia as set forth in the West Virginia Code.

26. Licensed Professional Surveyor

Any person licensed by the West Virginia State Board of Examiners of Land Surveyors to engage in the practice of land surveying as defined in the West Virginia Code.

27. Lowest Adjacent Grade (LAG)

Lowest natural elevation of the ground surface immediately adjacent to the proposed development or structure foundation. The primary use of the LAG is to determine whether the structure is located within a special flood hazard area by comparing it to the base flood elevation.

28. Lowest Floor

The lowest floor of the lowest enclosed area (including basement). An unfinished enclosure constructed with flood resistant materials as defined in FEMA Technical Bulletin 2-93 (FIA-TB-2) and usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; Provided, that such enclosure has proper flood openings and is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Ordinance.

29. Manufactured Home

A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

30. New Construction

Structures for which the start of construction as herein defined commenced on or after 09/18/1987 and including any subsequent improvements to such structures. Any construction started after effective date of this floodplain ordinance adopted by Wayne County and before the effective start date of this floodplain management ordinance is subject to the ordinance in effect at the time the ordinance was issued, provided the start of construction was within 180 days of permit issuance.

31. One-Hundred (100) Year Flood

A flood that has one chance in one-hundred or a one percent or greater chance of being equaled or exceeded in any given year. (See Base Flood Elevation also)

32. Person

Any individual or group of individuals, corporation, limited liability corporation, partnership, association or other entity, including State and Local governments and agencies.

33. Practice of Engineering

Any service or creative work, as described in West Virginia Code §30-13-1 et seq., the adequate performance of which requires engineering education, training and experience in the application of special knowledge of the mathematical, physical, and engineering sciences to such services or creative work as consultation, investigation, evaluation, planning and design of engineering works and systems; planning the use of land and water; teaching of advanced engineering subjects, engineering surveys and studies; and the review of construction for the purpose of assuring compliance with drawings and specifications any of which embraces such services or work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects and industrial or consumer products or equipment of a mechanical, electrical, hydraulic, pneumatic or thermal nature, insofar as they involve safeguarding life, health or property, and including such other professional services as may be necessary to the planning, progress and completion of any engineering services. Engineering surveys include all survey activities required to support the sound conception, planning, design, construction, maintenance and operation of engineered projects.

Any person who practices any branch of the profession of engineering or who, by verbal claim, sign, advertisement, letterhead, card or in any other way represents himself to be a Registered Professional Engineer, or by using another title implies that he is a Registered Professional Engineer or that he is registered under West Virginia Code, §30-13-1 et seq. or who holds himself out as able to perform, or who performs any engineering service or work or any other service designated by the practitioner which is recognized as engineering, is considered to practice or offer to practice engineering within the meaning and intent of West Virginia Code §30-13-1 et seq.

34. Principally Above Ground

Where at least 51 percent of the Actual Cash Value of a structure, less land value, is above ground. [44 Code of Federal Regulations §59.1]

35. Professional

Any "professional" including but not limited to a "contractor", "developer", "engineer", "architect", "hydrologist", "land surveyor", etc., acting in any capacity with respect to this Ordinance, must be licensed by the State of West

Virginia, when certification or licensure from the State of West Virginia is so required.

36. Reasonably Safe from Flooding

Means that during the base flood, water should not damage structures and any subsurface waters related to the base flood should not damage existing or proposed structures.

37. Recreational Vehicle

A vehicle which is:

a) built on a single chassis;

b) 400 square feet or less when measured at the largest horizontal projection;

c) designated to be self-propelled or permanently towable by a light duty truck. and

d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

38. Registered Professional Engineer

A person who has been duly registered or licensed as a registered professional engineer by the West Virginia State Board of Registration for Professional Engineers as required by W.Va. Code §30-13-13 et seq.

39. Remedy a Violation

To bring a structure or other development into compliance with the requirements of this Ordinance, or if full compliance is not possible, to reduce the adverse impact of the non-compliance to the greatest extent feasible.

40. Special Flood Hazard Area

The land in the Floodplain Area subject to a one percent or greater chance of flooding in any given year. Special flood hazard areas are designated by the Federal Emergency Management Agency in Flood Insurance Studies and on Flood Insurance Rate Maps as Zones A, AE, AO, A1-30, and A99. The term includes areas shown on other flood hazard maps that are specifically listed or otherwise described in this Ordinance.

41. Start of Construction

(The definition for start of construction is to be used only when calculating the starting time for expiration of a Floodplain Permit.)

The date the Floodplain Permit was issued, including Floodplain Permit for substantial improvement or repair of substantial damage provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within 180 days of the Floodplain Permit date. The actual start means either the first placement of permanent construction on a site, such as the pouring of slabs or footings, the installation of piles, the construction of columns, or any work beyond initial excavation, or the placement of a manufactured home on a foundation. Although a Floodplain Permit must be obtained prior to beginning, permanent construction does not include land preparation, such as clearing, grading and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For an alteration, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

42. State Coordinating Office

The West Virginia Division of Homeland Security and Emergency Management.

43. Stream

As defined in West Virginia Code §7-1-3u, any watercourse, whether natural or man-made, distinguishable by banks and a bed, regardless of its size, through which water flows continually or intermittently, regardless of its volume.

44. Structure

A walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

45. Subdivision

Development that includes a creation of individual land parcels for future sale. It does not include development where rights-of-way or easements are obtained and recorded.

46. Subject Property

"Subject property" includes the surface tract(s) upon which the proposed development is planned and for which the Floodplain Permit Application is submitted.

47. Substantial Damage

Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50 percent of the fair market value of the structure before the damage occurred. Substantial damage also means cumulative flood-related damages sustained by a structure on two separate occasions during a 10 year period for which the cost of repairs at the time of each flood event equals or exceeds 25 percent of the fair market value of the structure before the damage occurred. See "Substantial Improvement".

48. Substantial Improvement

Any repair, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the fair market value of the structure before the start of construction of the improvement.

This term includes structures, which have incurred "substantial damage", as defined herein regardless of the actual repair work performed. The term does not, however, include any project for improvement of a structure to correct existing violation(s) of State or Local Health, Sanitary or Safety Code Specifications which have been identified by the Local Code Enforcement Official and which are the minimum necessary to assure safe living conditions.

Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined above, must comply with all Ordinance requirements that do not preclude the structure's continued designation as a historic structure. Documentation that a specific Ordinance requirement will cause removal of the structure from the National Register of Historic Places or the State Inventory of Historic Places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from Ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.

For the purpose of this definition improvement is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences whether or not the alteration affects the external dimensions of the structure.

49. Top of Bank

The lines depicted on the FIRM maps delineating each side of a stream indicate the top of the bank. In the field a professional familiar with fluvial geomorphology should document the top of the bank. When a professional is not employed the top of the bank will be considered to be the top of the first significant slope landward of the water's edge when it is followed by at least 50 feet of relatively flat land.

50. Variance

A grant of relief by a community from the terms of a floodplain management Regulation.

51. Violation

The failure of any structure or development to be fully compliant with all requirements of this Ordinance. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required by this Ordinance is presumed to be in violation until such time as the documentation is provided. No future improvements or developments can be made to structures found to be in violation unless the development is to bring the structure into compliance with the current ordinance.

ARTICLE III – ESTABLISHMENT OF THE SPECIAL FLOOD HAZARD AREA

Section 3.1 Identification

a. The identified special flood hazard area shall be those areas of Wayne County which are subject to a one percent or greater chance of flooding in any given year as shown on the Flood Insurance Rate Map (FIRM) and described in the Flood Insurance Study (FIS) prepared for Wayne County by the Federal Emergency Management Agency (FEMA) dated September 2nd, 2016 or the most recent revision thereof including all digital data developed as part of the FIS.

b. The identified special flood hazard area shall also be those special flood hazard areas which have been identified as flood hazard areas by Wayne County use of historic or other technical data and sbown on an officially recognized "FIRM". These areas shall be designated as appropriate with the level of technical data described below and shall be managed accordingly.

Section 3.2 Descriptions of Special Flood Hazard Areas

The identified special flood hazard area shall consist of the following four specific areas:

a) The Floodway Area shall be those areas of AE zone identified as Floodways in the FIS and as shown on the FIRM. The term shall also include any floodway areas delineated by developers in the approximated floodplain and designated as such by the community.

b) The Floodway Fringe Area shall be those areas of AE zone for which specific one hundred (100) year flood elevations have been provided in the FIS but which lie beyond the Floodway Area.

c) The AE Area Without Floodway shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA for which 100-year flood elevations have been provided but no Floodway has been delineated.

d) The Approximated floodplain shall be those areas identified as an A Zone on the FIRM included in the FIS prepared by FEMA and for which no one hundred (100) year flood elevations have been provided.

Section 3.3 Changes in Designation of Area

a. The delineation of the identified special flood hazard area may be revised by Wayne County where natural or man-made changes have occurred and/or more detailed studies conducted or undertaken by the U.S. Army Corps of Engineers, a River Basin Commission or other qualified agency or individual document the necessity for such changes. However, prior to any such change, approval must be obtained from the Federal Emergency Management Agency.

b. A County's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practical but, not later than six months from the date such information becomes available, the County shall notify FEMA of the changes by submitting technical or scientific data.

c. Wayne County may identify and regulate new flood hazard or ponding areas. These areas shall be delineated on a "Local Flood Hazard Map" using best available topographic data and locally derived information such as flood of record, historic high water marks and/or approximate study methodologies.

Section 3.4 Elevations Prevail

a. If the lowest natural grade adjacent to proposed development within an identified flood hazard area is at or above the Base Flood Elevation specified in the Flood Insurance Study (FIS), the structure shall not be required to conform to the flood prevention design and construction standards or flood-related development codes in Article VI.

Topographic data certified by a registered professional engineer or licensed professional surveyor shall be submitted in sufficient detail to allow a thorough review by the Floodplain Administrator. The applicant shall apply for a Letter of Map Amendment (LOMA) from FEMA to have the Special Flood Hazard Area designation removed from the parcel or structure prior to certificate of occupancy/ completion.

b. If the lowest natural grade adjacent to proposed development is below the Base Flood Elevation specified on the Flood Insurance Study (FIS), the site shall be considered to be within the Floodplain Area and the proposed structure shall be required to conform to all appropriate provisions of this Ordinance.

Section 3.5 Boundary Disputes

Should a dispute concerning any district boundary arise, an initial determination shall be made by the Floodplain Administrator and any party aggrieved by this decision may appeal to the County Commission sitting as the "Floodplain Appeals Board". The burden of proof shall be on the appellant/applicant.

ARTICLE IV – UTILIZATION OF THE SPECIAL FLOOD HAZARD AREA

Section 4.1 Floodway

Within any Floodway Area (F1), no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge. The resultant engineering study shall include a cover letter, signed and sealed by the responsible professional, providing a statement of findings in basic terms. In addition, studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the Floodplain Administrator.

Because Floodways present increased risk to human life and property due to their relatively faster and deeper flowing waters the Floodways shall be preserved to the greatest extent possible.

a) New development shall not be permitted in the Floodway where reasonable alternatives exist elsewhere. In addition to the requirements below the applicant shall demonstrate that there are no reasonable alternatives other than the Floodway encroachment before a permit is issued.

b) When the Floodway is the only reasonable alternative the applicant shall demonstrate that the Floodway encroachment is the minimum necessary to accomplish the project.

c) All permitted uses, activities, and development shall be undertaken in strict compliance with the flood proofing and related provisions contained herein, and in all other applicable Federal and State Law, Ordinances and Regulations.

d) In special flood hazard areas for which no regulatory floodway has been designated, the regulatory floodway for small, single lot development not incorporating significant amounts of fill can, at the discretion of WayneCounty, be determined to be the channel of the stream and the adjacent land areas to a distance of one-half the width of the special flood hazard area as measured from the top of the bank nearest the site to the upland limit of the 1% annual chance special flood hazard area boundary.

Section 4.2 Floodway Fringe

Within any Floodway Fringe Area any development and/or use of land shall be permitted provided that all such uses, activities and/or development shall be undertaken in strict compliance with the flood-proofing and related provisions contained herein and in all other applicable codes, ordinances and regulations.

Section 4.3 AE Zone Without Floodway Area

Within any AE Zone Without Floodway Area, no new construction or development shall be allowed unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the elevation of the 100-year flood more than one (1) foot at any point

Section 4.4 Approximated Floodplain (Zone A)

Within any Approximated Floodplain Area:

a. The Floodplain Administrator shall use elevation and floodway information from Federal, State, or other acceptable sources when available to determine the elevation above which development will be reasonably safe from flooding.

b. When data from an acceptable source is not available, the Floodplain Administrator shall review, or shall cause to be reviewed; all proposed development to determine (1) the amount being invested and (2) the specific flood risk at the site. The Floodplain Administrator shall then require the applicant to determine the elevation above which the development and adjacent properties including but not limited to existing buildings will be reasonably safe from flooding using hydrologic and hydraulic analyses or other techniques. When hydrologic and hydraulic analyses are required, they shall only be prepared by a registered professional engineer who shall certify that the methods used correctly reflect currently accepted technical concepts. The resulting study shall include a cover letter, signed by the responsible

professional, providing a statement of findings in basic terms. In addition, studies, analyses, computations, etc. shall be submitted in sufficient detail to allow a thorough technical review by the Floodplain Administrator.

c. Any development and/or use of land shall be permitted provided that all such uses, activities and/or development shall be undertaken in strict compliance with the flood-proofing and related provisions contained herein and in all other applicable Federal and State Laws, Ordinances and Regulations.

d. Within any apportioned Floodplain Zone (Zone A) without Floodway Area, no new construction or development shall be allowed unless it is demonstrated that the cumulative impact of the proposed development, when combined with all other existing and anticipated development, will not increase the elevation of the 100-year flood more than one (1) foot at any point.

Section 4.5 Alteration or relocation of a stream

a. Whenever a developer intends to alter or relocate a stream within the special flood hazard area the developer shall notify in writing, by certified mail, Town of Fort Gay's Floodplain Administrator, the State Coordinating Office, any adjacent communities and any adjacent property owners of all such intended activities prior to the alteration or relocation of the stream. Copies of all required notifications must be submitted to the Federal Emergency Management Agency. In addition prior to issuing the local permit the Floodplain Administrator shall require copies of all necessary permits from those governmental agencies from which Federal or State Law requires approval

a. The developer shall also assure Wayne County in writing that the flood carrying capacity within the altered or relocated portion of the stream will be maintained. The Floodplain Administrator may require the applicant to demonstrate that the altered or relocated portion of stream will provide equal or greater conveyance than the original stream segment. If hydrologic and hydraulic analysis are required, they shall only be undertaken by a registered professional engineer, who shall certify that the methods used correctly reflect currently accepted technical concepts. The resulting study shall include a cover letter, signed by the responsible professional, providing a statement of findings in basic terms. In addition, studies, analyses and computations shall be submitted in sufficient detail to allow a thorough technical review by the Floodplain Administrator.

b. Alteration of a stream includes placement of temporary or permanent culverts, bridges or other stream crossings. The Floodplain Administrator may require the use of certain "best practice" techniques in the construction of bridges, culverts or stream crossings to prevent damage, loss of stream crossings and localized flooding caused by blockage. These techniques may include, but are not limited to, wing walls, trash grates or requiring openings to be of sufficient size to pass debris and/or anticipated future increases in flood heights.

c. All new and replacement bridges, culverts and other stream crossings shall adhere to the relevant anchoring requirements contained in this Ordinance.

d. The developer is required to provide the County a legal agreement detailing all scheduled inspections and maintenance to be performed on altered or relocated watercourses including culverts, bridges and other stream crossings. It shall be the responsibility of the applicant to transfer the agreement to the purchaser when the land associated with the watercourse alteration is transferred. A copy of all new agreements shall be provided to the Floodplain Administrator. Failure to transfer the agreement and provide a signed copy to the Floodplain Administrator shall subject the violator to the penalties set forth in Section 8.4 of this Ordinance.

e. The applicant must submit any maps, computations or other material required by the Federal Emergency Management Agency (FEMA) to revise the Flood Insurance Study (FIS) and/or Flood Insurance Rate Maps (FIRM), when notified by the Floodplain Administrator, and must pay any fees or other costs assessed by FEMA for this purpose.

ARTICLE V – CRITERIA FOR BUILDING AND SITE PLAN APPROVAL

Section 5.1 General

A Permit is required in order to determine whether all new construction or substantial improvements are:

a) Located in an identified Floodplain, Floodway or other special flood hazard area.

b) Designated (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

c) Constructed with material and utility equipment resistant to flood damage as outlined in FEMA Technical Bulletin 2-93 (FIA-TB-2) or the most recent revision thereof.

d) Constructed by methods and practices that minimize flood damage.

e) Constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during flooding.

f) To comply with West Virginia Code §11-3-3a. concerning County Assessor "Building or Real Property Improvement Notice".

g) Approved by County Health Department for Well, Septic and other permits to assure facilities are designed and located in compliance with the flood damage reduction requirements of this Ordinance.

Section 5.2 Basic Format

The basic format of the permit shall include the following:

a) Name and address of applicant.

b) Name and address of owner of land on which proposed development is to occur.

c) Applicant shall provide names, addresses, and valid West Virginia license numbers of all contractors working at the building site, or affidavits stating that work is being performed by individuals exempt from contractor licensing as set forth in Title 28, Series 2, section 3.9(b) of the West Virginia Code of State Regulations or the most recent revision thereof, if known at the time the Permit Application is submitted. If not known, applicant shall provide the information within 14 days of execution of a contract with its contractor(s) prior to beginning construction.

d) A description of site location sufficient to locate the proposed development including tax map and parcel numbers and most recent deed book and page number.

e) A standard site plan showing size and location of the proposed development as well as any existing buildings or structures. The site plan shall also show all adjacent roads and watercourses with direction of flow, the lowest adjacent grade to the proposed foundation and/or toe of fill, the Base Flood Elevation and the location of the Floodway boundary when applicable.

f) An acknowledgement that the applicant agrees to pay any and all fees associated with the permitting process as set forth in Article VII Sections 7.3 and 7.9 of this Ordinance.

g) An acknowledgment that the applicant agrees to allow The Floodplain Administrator and authorized representatives of floodplain management programs access to the development to inspect for compliance.

h) The contract required by West Virginia Code of State Regulations, Title 28, Series 4, and all addendums to the contract(s) shall be presented to the Floodplain Administrator for review within fourteen (14) business days of contract signing. The Floodplain Administrator shall keep copies of all contracts or addendums and shall file "redacted" copies of the contracts and addendums with the Clerk of the County Court in the Applicant's Permit Application File. The Floodplain Administrator shall consult with the applicant to redact proprietary and confidential information from the contracts and addendums that are not otherwise public information. Failure to present contract(s) or

addendums for review shall void the permit. If a licensed contractor is not involved, or the work is of an aggregate construction cost value of less than ten thousand dollars including material and labor, a brief written description of proposed work and the estimated value will suffice.

Section 5.3 Elevation and Flood Proofing Information

All applicants are encouraged to exceed the minimum elevation requirements contained herein. Flood insurance rates can be lowered significantly by increasing the elevation of the lowest floor above the freeboard height required by this Ordinance.

Depending on the type of structure involved, the following information shall also be included in the application for work within the Special flood hazard area:

A. All structures shall be elevated two feet above the Base Flood Elevation and:

a. A plan showing the size of the proposed structure and its relation to the lot where it is to be constructed.

b. A determination of elevations of the Base Flood, existing ground, proposed finished ground and lowest floor, certified by a registered professional engineer or licensed professional surveyor.

c. Plans showing the methods of elevating the proposed structure including details of proposed fills, pile structures, retaining walls, foundations, erosion protection measures, etc. When required by the Floodplain Administrator, a registered professional engineer or architect shall prepare the plans.

d. Plans showing the methods used to protect utilities (including sewer, water, telephone, electric, gas, etc.) from flooding to two feet above the Base Flood Elevation at tbe building site.

e. During the course of construction, as soon as the basic elements of the lowest floor are in place and before further vertical construction, it is highly recommended that the applicant check for error by obtaining elevation data completed by a registered professional engineer or licensed professional surveyor certifying the height of the lowest floor. If a mistake in elevation has been made this is the best time to correct the error.

f. A finished construction elevation certificate must be prepared by a licensed professional surveyor or others of demonstrated qualification. Tbe elevation certificate must confirm the structure in question together with attendant utilities are elevated in compliance with permit conditions.

g. A Non-Conversion Agreement shall be signed by the applicant whenever the Floodplain Administrator determines that the area below the first floor could be converted to a non-conforming use (generally applies to enclosed areas

below base flood elevation that are 5 ft. high or more). This agreement shall state:

i. The area below Base Flood Elevation shall not be converted for use other than for parking, building access or for allowable storage as detailed in this Ordinance.

ii. The applicant agrees to notify prospective purchasers of the existence of the Non-Conversion Agreement. It shall be the responsibility of the applicant to transfer the agreement at closing to the purchaser through notarized signature, a copy of all new Non-Conversion Agreements shall be provided to the Floodplain Administrator. Failure to transfer the Non-Conversion Agreement and provide a signed copy to the Floodplain Administrator shall subject the violator to the penalties set forth in Section 8.4 of this Ordinance.

B. All structures shall be flood proofed to two feet above the Base Flood Elevation (nonresidential structures only):

All applicants shall meet or exceed the minimum flood proofing requirements contained herein. Flood insurance rates can be lowered significantly by increasing the level of flood proofing above the height required by this Ordinance. In order to obtain an "elevation credited" flood insurance rate on dry flood proofed buildings, flood proofing must extend at least one foot above the Base Flood Elevation.

a. Plans showing details of all flood proofing measures, prepared by a registered professional engineer, showing the size of the proposed structure and its relation to the lot where it is to be constructed.

b. A determination of elevations of the Base Flood, existing ground, proposed finished ground, lowest floor, and flood proofing limits, certified by a registered professional engineer or licensed professional surveyor.

c. A Flood Proofing Certificate, FEMA 81-65, as revised by FEMA, shall be prepared by the registered professional engineer who prepared the plans in (1) above, stating the structure in question, together with attendant utility and sanitary facilities are designed so that:

i. The structure is water tight with walls substantially impermeable to the passage of water from the lowest structural element to two feet above the Base Flood Elevation.

ii. The structure will withstand the hydrostatic, hydrodynamic, buoyant, impact, and other forces resulting from the flood depths, velocities, pressures, and other factors associated with the Base Flood.

C. For Appurtenant structures constructed of flood resistant materials – used solely for parking of vehicles, or limited storage (Appurtenant Structures only)

a. A site plan prepared by a licensed professional surveyor or others of demonstrated qualifications showing elevation of existing ground, proposed finished ground and lowest floor. The plan shall also show details of proposed flood resistant materials usage and the size of the proposed structure and its relation to the lot where it is to be constructed. The location of the Floodway boundary shall be represented on the plan when a Floodway is present on the site.

b. An Elevation Certificate, based on finished construction, must be prepared by a licensed professional surveyor or others of demonstrated qualifications. This certificate or report must confirm that the structure in question, together with attendant utilities is designed so that:

(a) Flood resistant materials as detailed in FEMA Technical Bulletin 2-93 (FIA-TB-2) are used in the construction of the structure from the lowest structural element to two feet above the Base Flood Elevation and that all utilities are located at least two feet above the Base Flood Elevation.

(b) Hydrostatic flood forces on exterior walls are equalized by allowing for automatic entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

(i) A minimum of two openings have a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
(ii) The bottom of all openings shall be no higher than one foot above grade.
(iii) Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

c. In addition, the applicant shall sign a Non-Conversion Agreement and notify prospective purchasers of the existence of the Non-Conversion Agreement. It shall be the responsibility of the applicant to transfer the Non-Conversion Agreement to any purchaser at closing through notarized signature. A signed copy of the transferred Non-Conversion Agreement shall be provided to the Floodplain Administrator. Failure to transfer the Non-Conversion Agreement and provide a signed copy to the Floodplain Administrator shall subject the violator to the penalties set forth in Section 8.4 of this Ordinance.

Section 5.4 Site Plan Criteria

Site plans are required for all development, new construction and substantial improvements determined to be located in a special flood hazard area and all proposed subdivisions and manufactured home parks. These proposals shall be reviewed by the Floodplain Administrator to assure that they are consistent with the need to minimize flood damage.

The owner or developer shall submit a preliminary site plan to the Floodplain Administrator that includes the following information:

a) Name of registered professional engineer, licensed professional surveyor or other qualified person responsible for providing the information required in this section.

b) A map showing the location of the proposed subdivision and/or development with respect to Floodplain Areas, proposed lot sites, and fill areas.

c) Where the subdivision or manufactured home park lie partially or completely in the special flood hazard areas, the plan map shall include detailed information giving the location and elevation of proposed roads, utilities and building sites. All such maps shall also show contours at intervals of two (2) or five(5) feet depending upon the slope of the land and identify accurately the boundaries of the special flood hazard areas. A registered professional engineer or licensed professional surveyor must certify the site plan.

d) All subdivision proposals and other proposed new developments which are proposed to take place either fully or partially within the Approximated Floodplain Area (F4) and which are greater than ten (10) lots or two (2) acres, whichever is the lesser, shall include Base Flood Elevation data and shall delineate the Floodway.

    a. When a Flood Insurance Study (FIS) is available from FEMA, the data contained in that study must be used to substantiate the Base Flood Elevation.

    b. If a FEMA Flood Insurance Study is not available the required data may be available from an authoritative source, such as the U.S. Army Corps of Engineers, U.S. Geological Survey, Natural Resource Conservation Service or State and Local Water Resource Department.

    c. If the required data is not available from other sources the applicant shall develop the technical data using detailed methodologies comparable to those contained in a Flood Insurance Study. This data shall be prepared and certified by a registered professional engineer, who shall certify that the methods used correctly reflect currently accepted technical concepts

e) Where the subdivision or other development site lies partially in the special flood hazard area and all proposed development including fill will take place on natural grade a significant vertical distance above the Approximated Floodplain Area (Zone A) boundary depicted on the map, development of detailed Base Flood Elevation data may not be necessary. In these cases the site plan for the proposed development must show contours at intervals of two (2) or five (5) feet depending on the slope, and clearly delineate the area to be developed and the location of the special flood hazard boundary as scaled from the FEMA map. A registered professional engineer, licensed professional surveyor or others of demonstrated qualifications must certify the site plan.

Section 5.5 – Restrictions to Subdivision of land in special flood hazard areas.

Subdivision of land in the special flood hazard area shall result in lots that include a buildable portion outside of the special flood hazard area and be served by streets within the proposed subdivision having surfaces not lower than 1 foot below the elevation of the line defining the special flood hazard area limits. All new structures shall be sited on the portion of the subdivided lot that is located outside of the special flood hazard area.

ARTICLE VI – SPECIFIC REQUIREMENTS

Section 6.1 Design and Construction Standards

In order to prevent excessive damage to buildings, structures, and related utilities and facilities, the following restrictions apply to all development, subdivision proposals, manufactured home parks, new construction and to construction of substantial improvements, and the repair of substantial damage, to existing structures occurring in the Special flood hazard area.

A. Basements and Lowest Floors

a. Residential Structures – All new construction, relocation, substantial improvements, including repair of substantial damage, of residential structures must have the lowest floor, including basement, ductwork and utilities, elevated to two feet above the Base Flood Elevation.

b. Non-residential Structures – All new construction, relocation, substantial improvements, including repair of substantial damage, of non-residential structures must have the lowest floor, including basement, ductwork and utilities, elevated to two feet above the Base Flood Elevation; or, together with attendant utility and sanitary facilities, be designed so that the structure is water tight with walls substantially impermeable to the passage of water from the lowest structural element to two feet above the Base Flood Elevation.

c. Openings – For all new construction, relocation, substantial improvements, and repair of substantial damage, those fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or meet or exceed the following minimum criteria:

i. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding, shall be provided
ii. The bottom of all openings shall be no higher than one foot above grade.
iii. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

d. A Non-Conversion Agreement shall be signed by the applicant on all flood-proofed structures and any elevated structures when the Floodplain Administrator determines that the area below the first floor could be converted to a non-conforming use (generally applies to the enclosed areas below base flood elevation that are 5 ft. high or more). This agreement shall state:

i. The area below the Base Flood Elevation shall not be converted for use other than for parking, building access or for allowable storage as detailed in this Ordinance.

ii. The applicant agrees to notify prospective purchasers of the existence of the Non-Conversion Agreement. It shall be the responsibility of the applicant to transfer the Non-Conversion Agreement at closing to the purchaser through notarized signature. A copy of a Non-Conversion Agreement shall be provided to the Floodplain Administrator. Failure to transfer the Non-Conversion Agreement and provide a signed copy to the Floodplain Administrator shall subject the violator to the penalties set forth in Section 8.4 of this Ordinance.

B. Manufactured Home Placement

Certain unique characteristics of manufactured homes installed in special flood hazard areas pose an elevated risk of substantial damage to property. Therefore, it is required that:

a. All manufactured homes to be installed within the special flood hazard areas of Wayne County shall be installed by a contractor possessing a valid West Virginia Manufactured Home Installer's License. The installer shall use an installation design engineered to withstand flood hazards specific to the particular home site. Manufactured homes to be installed or substantially

improved within the special flood hazard areas shall be installed in accordance with the following standards:

(a) The lowest floor, ductwork and utilities including HVAC/heat pump shall be elevated two feet above the Base Flood Elevation.

(b) Elevation shall be on reinforced piers on a permanent foundation or other foundation elements of at least equivalent strength engineered for use in a flood hazard area. Installation designs incorporating dry stacked block piers shall not be used in special flood hazard areas.

(c) All manufactured homes shall be securely anchored to an adequately anchored foundation system in compliance with the requirements of 42 West Virginia Code of State Regulations, Series 19, Sections 10A and 10B as authorized by West Virginia Code § 21-9-1 et seq. The anchoring shall be adequate to resist flotation, collapse, or lateral movement. Methods of anchoring may include but are not limited to the over-the-top and frame ties, attached to permanent foundation elements. Ground anchors may not be adequate to satisfy flood specific anchoring requirements. This requirement is in addition to applicable State and Local anchoring requirements for resisting wind forces.

(d) Permanently attached rigid skirts and perimeter wall skirts of brick or block must have openings to prevent collapse and damage to supporting piers. The openings must be designed to automatically equalize hydrostatic flood forces by allowing for entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or meet or exceed the following minimum criteria:

(i) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
(ii) The bottom of all openings shall be no higher than one foot above grade.
(iii) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(e) Any additions to a manufactured home shall be similarly anchored and vented.

b. The licensed West Virginia manufactured home installer installing the unit shall perform a site inspection and certify in writing that the manufactured home has been installed to the standards set forth in this Ordinance.

C. Appurtenant Structures

A When possible, appurtenant structures shall be located out of the special flood hazard area.

B Where appurtenant structures not connected to the principal structure are to be located on sites below the Base Flood Elevation, the following flood damage reduction provisions apply:

a. Use of the structure shall be restricted to parking or limited storage.

(a) Structures shall be no more than 800 square feet in size and valued at less than $10,000. (Ten thousand dollars).

(b) Floors shall be at or above grade on at least one side.

(c) Structures shall be located, oriented and constructed to minimize flood damage.

(d) Structures shall be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

(e) Flood resistant materials as detailed in FEMA Technical Bulletin 2-93 (FIA-TB-2) shall be used in the construction of the structure from the lowest structural element to two feet above the Base Flood Elevation.

(f) Machinery, electric devices or appliances, and all utilities shall be located at least two feet above the Base Flood Elevation.

(g) Opening requirements:

b. Hydrostatic flood forces on exterior walls are equalized by allowing for automatic entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

(i) A minimum of two openings have a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
(ii) The bottom of all openings shall be no higher than one foot above grade.
(iii) Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

c. In addition, a Non-Conversion Agreement shall be signed by the applicant stating that the use of the appurtenant structure or detached or attached garage shall not be changed from the use permitted, acknowledging that the structure may be subject to greater flood risk and that higher flood insurance premiums may be possible, and that a change in use may require full compliance with this Ordinance. The applicant agrees to notify prospective purchasers of the existence of the Non-Conversion Agreement. It shall be the responsibility of the applicant to transfer the Non-Conversion Agreement at closing to the purchaser through notarized signature. A copy of the Non-Conversion Agreement shall be provided to the Floodplain Administrator. Failure to transfer the Non-Conversion Agreement and provide a signed copy to the Floodplain Administrator shall subject the violator to the penalties set forth in Section 8.4 of this Ordinance.

D. Recreational Vehicle Placement

A. Recreational vehicles to be placed within any special flood hazard area shall either:

a) Be on site for fewer than 180 consecutive days. Or,

b) Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnected utilities and security devices, and has no permanently attached additions. Or,

c) Be installed in accordance with the manufactured home placement requirements and all other flood reduction requirements contained in this Ordinance.

E. Fill

A. Wayne County officially recognizes the beneficial functions the Floodplain Area serves in storage and transportation of water during floods. Placement of fill in the special flood hazard area is discouraged and should be minimized.

A. Placement of fill in other areas of the special flood hazard area shall be restricted to functional purposes such as elevating a structure. Fill shall only be permitted in the same permit with the related structure or other functional purpose. Placement of fill to dispose of spoil from excavation or to elevate yards, parking lots, or fields will not generally be considered a functional purpose. The Floodplain Administrator may require the developer to provide compensatory storage before permitting fill.

No fill shall be permitted in the Floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with currently accepted technical standards that the proposed fill will not result in any increase in the Base Flood Elevation.

All fill placed in the special flood hazard area shall meet or exceed the following standards:

A. Fill shall be used only to the extent to which it does not adversely affect the subject property and adjacent properties. The Floodplain Administrator may require the applicant to demonstrate through engineering reports that proposed fill would not adversely affect the subject property and adjacent properties. When required, hydrologic and hydraulic analyses shall be undertaken only by a professional engineer who shall certify that the technical methods used correctly reflect currently accepted technical concepts. The resulting study shall include a cover letter, signed and sealed by the responsible professional, providing a statement of findings in basic terms. In addition, studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the Floodplain Administrator. During permit review the Floodplain Administrator shall consider the following issues that have the potential to cause adverse impact to the subject property and adjacent properties:

   a) Unacceptable increases in flood heights.
   b) Blocking drainage from the subject property and adjacent properties.
   c) Deflection of floodwaters onto adjacent existing structures.
   d) Increases to stream velocity initiating or exacerbating erosion problems.
   e) Other unique site conditions may be considered when determining whether fill will cause adverse impact to the subject property and adjacent properties including, but not limited to, subsidence areas, karst topography, stream blockages, and steep topography adjacent to the channel.

B. Fill shall be used only to the extent to which it does not adversely affect the capacity of channels or floodways of any tributary to the main stream, drainage ditch, or any other drainage facility or system.

C. A Fill Site must be contoured to drain properly (avoid ponding) consistent with pre-construction conditions. This provision does not apply to properly constructed impoundments which comply with the remainder of this Ordinance and which are properly permitted by the West Virginia Department of Environmental Protection.

D. Fill shall extend beyond a structure for a sufficient distance to provide acceptable access. For residential structures, fill shall extend laterally fifteen (15) feet beyond the building line from all points before the start of sloping

required in subsection 5 below. For non-residential structures, fill shall be placed to provide access acceptable for intended use.

E. At grade access, with fill extending laterally fifteen (15) feet beyond the building line shall be provided to a minimum of twenty-five (25) percent of the perimeter of a non-residential structure.

F. Fill shall consist of soil or rock material only. Sanitary landfills shall not be permitted; no trash or woody debris shall be buried on site.

G. Fill material shall be compacted to provide the necessary stability and resistance to erosion, scouring or settling. Fill compaction standards must be appropriate to proposed post fill use, particular attention is necessary when fill is being used to elevate a structure.

H. Fill slopes shall be no steeper than one (1) vertical on two (2) horizontal, unless substantiating data justifying steeper slopes are submitted to and approved by the Floodplain Administrator.

I. Fill site and fill must be protected from erosion.

   a. Fill slopes exposed to flood waters with expected velocities during the occurrence of the base flood of five feet per second or less will be protected from erosion by covering them with grass, vines, weeds, or similar vegetative undergrowth.

   b. Fill slopes exposed to flood waters with expected velocities during the occurrence of the base flood of greater than five feet per second will be protected from erosion by armoring them with stone or rock slope protection.

J. All applicants placing fill in a special flood hazard area shall obtain a Conditional Letter of Map Revision (CLOMR) from FEMA when directed to do so by the Floodplain Administrator before a permit can be issued. After fill is finished the applicant shall convert the CLOMR to a Letter of Map Revision based on Fill (LOMR-F) before a Certificate of Compliance can be issued. The Floodplain Administrator is hereby appointed as the designated official to approve a request for a (CLOMR) or (LOMR-F), and shall cooperate with the applicant with respect to any requirements of FEMA for requesting a (CLOMR) or (LOMR-F), which includes, but is not necessarily limited to, approving said request and executing Form 1, "Overview & Concurrence Form" or other form as may be required by FEMA.

K. The applicant shall submit any maps, computations or other material required by the Federal Emergency Management Agency (FEMA) to revise the Flood Insurance Study (FIS) and/or Flood Insurance Rate Maps (FIRM), when notified by the Floodplain Administrator, and shall pay any fees or other costs assessed by FEMA for this purpose.

F. Placement of Structures and other development

A. All structures and other development shall be constructed and placed on the property so as to offer the minimum obstruction to the flow of water and shall be designed to have a minimum obstruction effect upon the flow and height of floodwater.

(a) Whenever possible, structures and other development shall be constructed with the longitudinal axis parallel to the direction of flood flow and,

(b) In so far as practicable, structures and other development shall be placed approximately on the same flood-flow lines as those of adjoining structures or development.

G. Anchoring

a) All structures and other development including stream crossings shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, and lateral movement, thus reducing the threat to life and property and decreasing the possibility of the blockage of bridge openings and other restricted sections of the watercourse

b) All air ducts, large pipes, swimming pools and storage tanks located at or below the Base Flood Elevation shall be firmly anchored to resist flotation.

H. Flood Protection Setback

a) A Flood Protection Setback equal to twice the width of the watercourse channel measuring from the top of one bank to the top of the opposite bank of 50 feet, whichever is less, shall be maintained from the top of the banks of all watercourses. Specifically, as for oil and gas wells and well pads, no well pad may be prepared or well drilled within 100 feet from any perennial stream, natural or artificial lake, pond, reservoir or wetland. [See W.Va. Code §22-6A-12(b)]. To reduce erosion, natural vegetation shall be maintained in this area. Where natural vegetation does not exist along the watercourse and conditions for replanting are suitable, high priority shall be given to planting vegetation in the setback area to stabilize banks and enhance aquatic resources.

b) Necessary public works and temporary construction may be exempted from this subsection at the discretion of the Floodplain Administrator.

c) At the discretion of the Floodplain Administrator the Flood Protection Setback requirement can be waived in whole or part if the applicant demonstrates that it is impossible to allow any development without

encroachment into the Flood Protection Setback Area. The conditions shall be the minimum necessary and shall be made only after due consideration is given to varying other siting standards, such as side, front and back lot line setbacks.

I. Storage

a) No materials that are buoyant, flammable, explosive, or in times of flooding could be injurious to human, animal or plant life, shall be stored below Base Flood Elevation except for mineral storage properly and wholly within the ground in compliance with other State environmental agency(ies) requirements..

b) Storage of other material or equipment may be allowed if not subject to substantial damage by floods and firmly anchored to prevent flotation or readily removable from the area within the time available after flood warning.

c) Due to the potential of masking the natural elevation and making it more difficult to enforce this Ordinance, material that resembles "fill" material shall not be considered "storage" material for purposes of this subsection.

J. Utility and Facility Requirements

a) All new or replacement water systems whether public or private, shall be designed to minimize or eliminate infiltration of floodwaters into the systems.

b) All new or replacement sanitary disposal systems, whether public or private, shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

c) All other new or replacement public or private utilities and facilities shall be located and constructed to minimize or eliminate flood damage.

d) Onsite waste disposal systems shall be located to avoid impairment to the system or contamination from the system during flooding.

K. Drainage

Adequate drainage shall be provided to reduce exposure to flood hazard areas as well as around structures on slopes within zones AH and AO to guide floodwaters around and away from proposed structures

.

L. Backflow Preventers

Back flow prevention valves should be used for all enclosed structures with sewage or drainage facilities located in the special flood hazard area Floodplain Area.

ARTICLE VII – ADMINISTRATION

Section 7.1 Designation of Floodplain Administrator

The Floodplain Administrator is hereby appointed as Floodplain Administrator and is vested with the responsibility, authority and means to implement the commitments made. Upon appointment of a new Floodplain Administrator, the meeting minutes with the applicable Floodplain Ordinance shall be provided to The State Coordinating Office and FEMA.
Within one year of his appointment the new Floodplain Manager must attend the State/FEMA sponsored NFIP Class 273 entitled "Managing Floodplain Development" and remain current with State required continuing education annual training. (See W.Va. Code §15-5-20a) In the absence of a formally appointed Floodplain Administrator the duties set forth in this Ordinance for the Floodplain Administrator shall be temporarily fulfilled by the President of the County Commission.

The Floodplain Administrator shall administer and implement this Ordinance by granting or denying floodplain development permits in accordance with its provisions. The Floodplain Administrator shall also be responsible for submitting all required reports to FEMA concerning participation in the National Flood Insurance Program.

Section 7.2 Development Permits and Site Plan Approvals Required

It shall be unlawful for any contractor, person, partnership, business, limited liability corporation or corporation to undertake or cause to be undertaken, any development or the new construction, substantial improvement, repair of substantial damage, the placement or relocation of any structure (including manufactured homes) within Wayne Countyunless a permit application and standard site plan has been completed, and a permit has been obtained from the Floodplain Administrator. In addition, where land that is either partially or fully in the special flood hazard area is to be subdivided, utilized for a manufactured home park or subdivision or otherwise developed, a detailed site plan must be submitted to, and approved by, the Floodplain Administrator prior to any development.

Section 7.3 Approval of Permits and Plans

a. The Floodplain Administrator shall review, or shall cause to be reviewed, all permit applications and plans within 90 days from the Permit Application submission date in order to determine whether the proposed development is reasonably safe from flooding. Further, the Floodplain Administrator shall review all objections, comments, protest letters and other writings submitted in opposition of said Floodplain Permit Application and give due consideration to the same before granting or denying said Permit.

b. All permits and plans shall be approved only after it has been determined that the proposed work to be undertaken will be in conformance with the requirements of this Ordinance, State and Federal Laws, Ordinances and Regulations.

c. The Floodplain Administrator shall not issue a permit to any person who does not possess a valid contractor's license when a contractor's license is required by West Virginia Code §21-11-76.

d. The Floodplain Administrator, before issuance of the permit, shall require the applicant to furnish satisfactory proof that such person is duly licensed as a contractor under the provisions of West Virginia State Code. If the applicant is not licensed. If the applicant is not licensed under West Virginia Code §21-11-6 a written affidavit that such person is not subject to licensure as a contractor or subcontractor as defined in §21-11-6 shall be filed with the County Clerk, date/time stamped and filed in the official Floodplain Permit Application File.

e. The Floodplain Administrator shall require and keep on file copies of any documentation pertaining to the permit from any other governmental agencies, whether Federal or State or Local, that requires site approval, shall be submitted to the County Clerk, date/time stamped and filed in the official Floodplain Permit Application File prior to final issuance of said permit and prior to the start of construction. This information shall be maintained for the life span of the development.

f. The Floodplain Administrator shall provide a copy of all permits to the County Assessor as required by West Virginia Code §11-3-3a. and provide a copy of all Floodplain Permits for new structures to the County E-911 Addressing Coordinator.

After the filing of an Application for a Floodplain Permit and receiving a properly and timely filed objection to the issuance of a Floodplain Permit Application, but prior to the Floodplain Administrator's decision to grant or deny the same, the Floodplain Administrator may, in his sole discretion, hold a public meeting wherein evidence can be taken or given by interested persons or parties. Said meeting shall have a court reporter present to record all testimony and receive all exhibits and evidence. Said meeting notice shall be mailed by certified mail return receipt requested to the Permit Applicant and the objecting person or entity and placed upon the agenda of a regularly scheduled Wayne County Commission meeting announcing the date, time and place of said meeting not prior to 10 calendar days from official announcement. The meeting transcript and exhibits presented shall be filed in the official Floodplain Application Permit File.

Section 7.4 Application Procedures

Application for a permit and/or site plan approvals shall be filed, in writing, in duplicate, on the forms supplied by the Wayne County Commission and shall include all information stipulated under Article V of this Ordinance.

Section 7.5 Changes

After the issuance of a Floodplain Permit or site plan approval by the Floodplain Administrator or Floodplain Appeals Board, no changes of any kind shall be made to the application, permit, or any of the plans, specification or other documents submitted with the application without the written consent and approval of the Floodplain Administrator.

Section 7.6 Permit Placards

The Floodplain Administrator shall issue a permit placard, which shall be prominently displayed on the subject property during the time development is in progress. This placard shall show the number of the permit, the date of its issuance and be signed by the Floodplain Administrator or the County Commissioners sitting as the Floodplain Appeals Board.

Section 7.7 Start of Construction

Work on the proposed development shall begin within 180 days after the date of issuance of the Floodplain Permit or the Floodplain Permit shall expire unless a time extension request made in writing to the Floodplain Administrator and filed in the official Floodplain Permit Application File by the County Clerk is granted, in writing, by the Floodplain Administrator after a showing by the applicant of "justifiable delay" not caused by the negligence or lack of due diligence of the applicant. Any extension of the 180 day Start of Construction timeframe shall only be granted if the permit holder can demonstrate compliance with this Floodplain Ordinance, FIRM and/or FIS in effect at the time the extension is granted. All work on the proposed development must be completed within 18 months of permit issuance, at which time the permit shall expire, unless a time extension made in writing to the Floodplain Administrator and filed in the official Floodplain Permit File by the County Clerk is granted in writing by the Floodplain Administrator. The request for a time extension shall be in writing and shall state the reasons for the extension. When considering an extension, the Floodplain Administrator shall consider the following criteria:

a) Has the applicant diligently pursued the completion of the proposed development during the 18 months?
b) Will the granting of the extension be detrimental to public safety, health, or welfare or injurious to other property?

Section 7.8 Stop Work Orders, Inspections and Revocations

A. Stop-Work Orders

a) The Floodplain Administrator shall issue, or cause to be issued, a "Stop Work Order Notice" for any development found ongoing without having obtained a

Floodplain Permit. Disregard of a Stop Work Order Notice shall subject the violator to the penalties described in Section 8.4 of this Ordinance.

b) The Floodplain Administrator shall issue, or cause to be issued, a "Stop Work Order Notice" for any development found non-compliant with the provisions of this Ordinance and/or the conditions of the Floodplain Permit. Disregard of a Stop Work Order notice shall subject the violator to the penalties described in Section 8.4 of this Ordinance.

c) In the event that the Floodplain Administrator issues a Stop Work Order Notice, the Floodplain Permit shall be stayed pending a determination of whether a violation actually occurred and/or abatement of the alleged violation, whichever occurs first.

d) In the event of an Appeal on a Floodplain Permit, the Floodplain Administrator shall immediately issue a Stop Work Order Notice that shall remain in effect until a resolution of said Appeal.

B. Inspections and Revocations

a. During the development period, the Floodplain Administrator or other authorized County, State or Federal Government Officials may inspect the premises to determine that the work is progressing in compliance with the information provided on the Floodplain Permit Application, this Ordinance and with all applicable Federal, State and County laws, Regulations and Ordinances.

b. If the Floodplain Administrator discovers that the work does not comply with the Floodplain Permit Application, this Ordinance or that there has been a false statement(s) or misrepresentation(s) by any applicant in the permitting process, the Floodplain Administrator shall issue a "Stop Work Order Notice", revoke the permit and request a temporary injunction in the Circuit Court of Town of Fort Gay. The Floodplain Administrator shall notify any appropriate agency or authority if the Floodplain Administrator finds a violation of any non-Floodplain Law, Regulation or Ordinance.

c. The Floodplain Administrator or other authorized County, State or Federal Government Officials may inspect any development covered by this or previous Floodplain Ordinances to determine whether any portion of the development has been altered to be non-compliant with the requirements of this or other Ordinances.

Section 7.9 Certificate of Compliance

a) In the special flood hazard area it shall be unlawful to occupy, or to permit the use of occupancy, of any building or premises, or both, or part thereof hereafter created, erected, installed, changed, converted or wholly or partly altered or enlarged in its use or structure until a Certificate of Compliance has been issued

by the Floodplain Administrator stating that the building or land conforms to the requirements of this Ordinance. Occupying or using a building or premises in violation of this section shall subject the violator to the penalties described in Section 8.4 of this Ordinance.

b) In the special flood hazard area it shall be unlawful to inspect and approve a permanent utility connection to any building or premises, or both, or part thereof hereafter created, erected, installed or rebuilt until the utility inspector is in possession of a copy of the Certificate of Compliance issued by the Floodplain Administrator stating that the particular development being inspected conforms to the requirements of this Ordinance. Inspection and approval of utilities in violation of this section shall subject the violator to the penalties described in Section 8.4 of this Ordinance.

c) In the special flood hazard area it shall be unlawful to install a permanent utility connection to any building or premises, or both, or part thereof hereafter created, erected, installed or rebuilt until a Certificate of Compliance has been issued by the Floodplain Administrator stating that the development conforms to the requirements of this Ordinance. Installation of utilities in violation of this section shall subject the violator to the penalties described in Section 8.4 of this Ordinance.

d) A Certificate of Compliance shall be issued by the Floodplain Administrator upon satisfactory completion of all development in the special flood hazard .

e) Issuance of the Certificate of Compliance shall be based upon the inspection conducted as prescribed in this Ordinance and any finished construction elevation certificate, hydraulic data, flood proofing certificate, or encroachment analyses which may have been required as a condition of the Floodplain Permit approval process.

Section 7.10 Fees

a) Floodplain Determination fee shall be assessed on all proposed development. This shall be a flat fee approved by Wayne County

b) Proposed development determined to be occurring in a special flood hazard area regulated by this ordinance shall be assessed an additional fee, payable to Wayne County based upon a set schedule approved by Wayne County using the estimated value of the proposed construction as determined by the Floodplain Administrator.

c) In addition, the applicant shall be responsible for reimbursing Wayne County for any additional costs for services necessary for review and/or inspection of proposed development. Services include, but are not limited to, professional engineering and surveying. The Floodplain Administrator may require a deposit

towards these additional costs. Additional costs may include reimbursement for contracted services.

Due to the increased cost of processing, when any work for which a permit is required by this ordinance is started or proceeded with prior to obtaining a permit the fees above specified shall be doubled. The additional fee is intended to partially reimburse Wayne County for the additional cost of processing permits for work already underway. To more fully recover this cost the fees above shall be tripled for every subsequent occurrence by the same person. Payment of the increased fee shall not relieve any person from complying fully with the requirements of this ordinance in the execution of the work or from other penalties prescribed herein.

ARTICLE VIII – APPEALS AND PENALTIES

Section 8.1 Appeals

Whenever a person or entity is aggrieved by a decision of the Floodplain Administrator with respect to the provisions of this Ordinance, it is the right of that person or entity to appeal to the Wayne County Commission sitting as the Floodplain Appeals Board. Such appeal must be filed with the County Clerk, in writing, within thirty (30) days after notification of the decision of the Floodplain Administrator as announced at a regularly scheduled Wayne County Commission Meeting. Said Appeal shall be served by the aggrieved person by regular mail on all interested parties on the date that said Appeal is filed. Upon receipt of such appeal, the Floodplain Appeals Board shall set a time, date and place not less than ten (10) nor more than sixty (60) calendar days for the purpose of hearing the appeal. Notice of the time, date and place of the hearing shall be given to all interested parties by placing an announcement of said hearing date, time and place on the agenda of the next regularly scheduled Wayne County Commission meeting notice and to announce the date, time and place of the appeal hearing not sooner than 10 calendar days from said announcement date, at which time all may appear and be heard. The determination by the Floodplain Appeals Board shall be final in all cases, subject to any Appeal to the Circuit Court of Wayne County, West Virginia or any other Court of competent jurisdiction.

In the event an Appeal is filed wherein a Floodplain Permit grant has been ruled by the Floodplain Administrator, the Floodplain Administrator shall immediately issue a Stop Work Order Notice that shall remain in effect until a resolution of said appeal.

Section 8.2 Appeal Review Criteria

a) All appeals contesting only the permit fee, the cumulative substantial damage requirement, the flood protection setback requirement, or the freeboard requirements, may be handled at the discretion of the Floodplain Appeals Board.

Section 8.3 Variances

If compliance with any of the requirements of this Ordinance would result in an exceptional hardship to a prospective builder, developer or landowner, Town of Fort Gay may, upon request, grant relief from the strict application of the requirements. Considerations for the issuance of Variances to this Ordinance shall adhere to the following criteria:

a. A decision granting or denying the variance request shall only be issued by the Floodplain Appeals Board upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the permit would result in exceptional hardship to the applicant, and (iii) a determination that granting the permit will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing laws, regulations or ordinances.

b. An affirmative decision granting a variance shall be issued only upon determination that it is the minimum necessary, considering the Special Flood Hazard Area, to afford relief. Financial hardship, used as sole criteria, shall not be considered sufficient justification to grant a variance.

c. An affirmative decision granting a Floodplain variance shall be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

d. The Floodplain Appeals Board shall notify the applicant in writing and signed by a majority of the Floodplain Appeals Board that (i) the issuance of a decision to allow construction of a structure below the Base Flood Elevation will result in increased premium rates for flood insurance, and (ii) such construction below the Base Flood Elevation increases risk to life and property. Such notification shall be maintained with a record of all decisions as required in this Ordinance; and

e. The Floodplain Appeals Board shall (i) maintain a record of all decisions including justification for the decisions, and (ii) report such decisions issued in its biannual report to the Federal Emergency Management Agency.

f. An affirmative decision shall not be granted for issuance of a Floodplain variance for any construction, development use or activity within any Floodway Area that would cause any increase in the Base Flood Elevation.

Section 8.4 Penalties

Any person, who fails to comply with any or all of the requirements or provisions of this Ordinance or direction or Order of the Floodplain Administrator, or any other authorized employee of, shall be unlawful and shall be referred to the Prosecuting Attorney who shall expeditiously prosecute all such violators. All violations shall be a misdemeanor. A violator

shall, upon conviction, pay a fine to the Wayne County Commission of not less than fifty dollars ($50.00) or more than five hundred dollars ($500.00) plus cost of prosecution. Each day during which any violation of this Ordinance continues shall constitute a separate offense. In addition to the above penalties, all other actions are hereby reserved including an action in equity for the proper enforcement of this Ordinance. The imposition of a fine or penalty for any violation of, or non-compliance with, this Ordinance shall not excuse the violation or non-compliance with the Ordinance or permit it to continue; and all such persons shall be required to correct or remedy such violations or non-compliance within a reasonable time. Any structure constructed, reconstructed, enlarged, altered or relocated in non-compliance with this Ordinance may be declared by the Wayne County Commission to be a public nuisance and abated as such subject to other applicable laws and exhaustion of appellate rights.

ARTICLE IX – GOVERNMENT ACTIONS

Section 9.1 Municipal Annexation

a) The Wayne County Floodplain Ordinance in effect on the date of annexation shall remain in effect and shall be enforced by the Floodplain Administrator for all annexed areas until the municipality adopts and enforces a Floodplain Ordinance which meets or exceeds the requirements for participation in the National Flood Insurance Program.

b) Municipalities with existing Floodplain Ordinances shall pass a resolution acknowledging and accepting responsibility for enforcing Floodplain Ordinance Standards prior to annexation of any area containing identified Floodplain Areas.

c) All plats or maps of annexation shall show the Floodplain boundaries, Base Flood Elevation and location of the Floodway where determined.

d) In accordance with the Code of Federal Regulations, Title 44 Subpart (B) Section 59.22(a)(9)(v) all Federal Emergency Management Agency participating governments must notify the State Coordinating Office and Federal Insurance Administration in writing whenever the boundaries of the governments have been modified by annexation or the governments has otherwise assumed or no longer has authority to adopt and enforce floodplain management regulations for a particular area. In order that all Flood Insurance Rate Maps accurately represent the government's boundaries, a copy of a map of the government boundaries suitable for reproduction, clearly delineating the new boundaries or new area for which the government has assumed or relinquished floodplain management regulatory authority must be included with the notification.

e) NFIP participating governments must notify the State Coordinating Office in writing whenever the boundaries of the governments have been modified by annexation or the government has otherwise assumed or no longer has authority to adopt and enforce floodplain management regulations for a

particular area. A copy of a map of the government boundaries suitable for reproduction, clearly delineating the new boundaries or new area for which the government has assumed or relinquished floodplain management regulatory authority must be included with the notification.

Section 9.2 Permits for Governmental Entities

Unless specifically exempted by law, all public utilities and Municipal, County, State and Federal entities are required to comply with this Ordinance and obtain all necessary permits. Any entity claiming to be exempt from the requirements of this Ordinance must provide a written statement setting forth the rationale for exemption and file the same with FEMA. In addition the entity claiming exemption shall provide copies of all relevant legal documentation demonstrating the exemption.

ARTICLE X – SEVERABILITY AND MUNICIPAL LIABILITY

Section 10.1 Severability

If any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance shall be declared invalid for any reason whatever, such decision shall not affect the remaining portions of this Ordinance which shall remain in full force and effect and for this purpose the provisions of this Ordinance are hereby declared to be severable.

Section 10.2 Liability

The granting of a permit or approval of a subdivision, development plan in an identified Special Flood hazard Area, shall not constitute a representation, guarantee, or warranty of any kind by the Wayne County Commission or by any official or employee thereof of the practicability or safety of the proposed use, and shall create no liability upon the Wayne County Commission. This Ordinance does not create a private cause of action. All applicants

proposing construction in or near a Floodplain Area are urged to locate construction as far away from, and as high above, all flooding sources as possible.

ARTICLE XI – ENACTMENT

Passed on First Reading this 25th day of July, 2016

Passed on Second and Final Reading this 8th day of August, 2016

As the Floodplain Ordinance of The Wayne County Commission

All previously enacted Floodplain Ordinances are hereby null and void and vacated as replaced by this Ordinance. This Ordinance is in effect on the date signed by the President of the Wayne County Commission

Signed:

Robert E Pasley

President of the Wayne County Commission

Date Signed: August 8, 2016

Attachment E: Marketing Package

Wayne County

WEST VIRGINIA

Logistically Logical.

FEATURED SITES

May 2019

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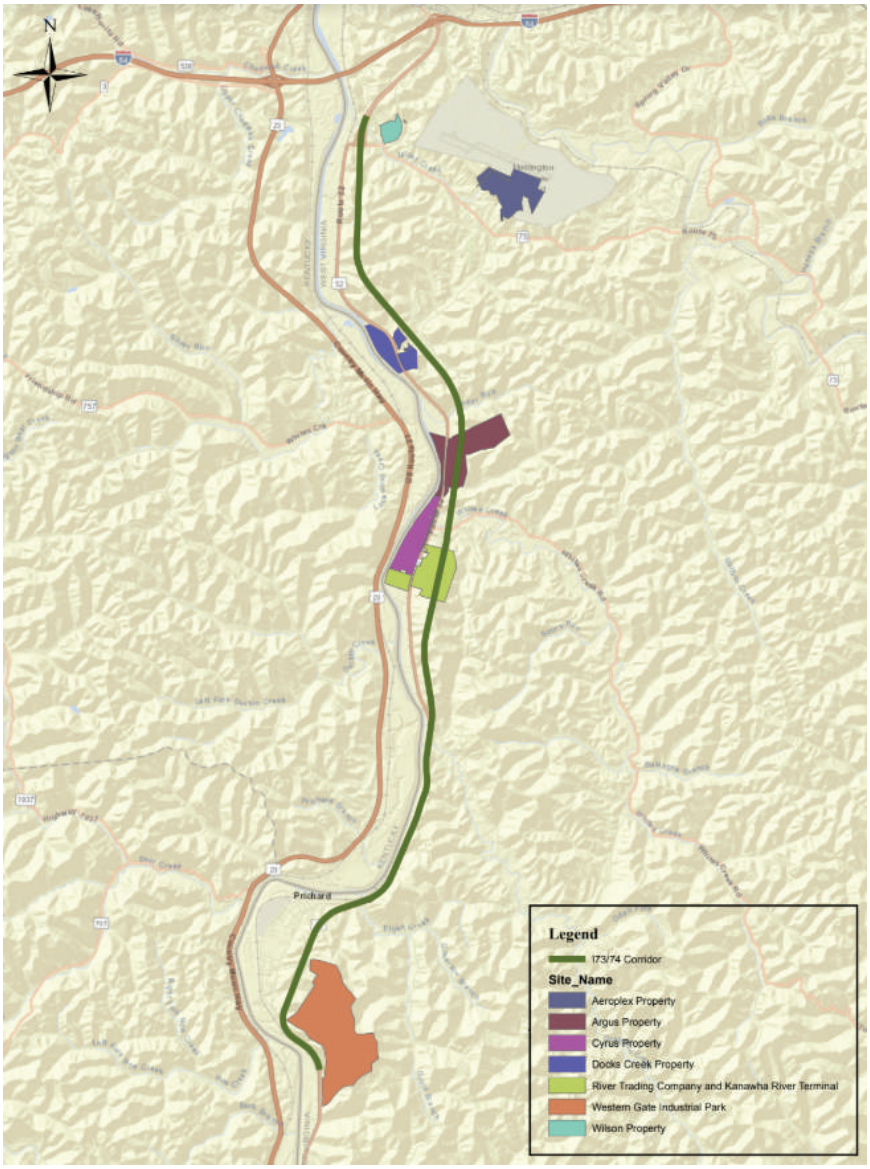


The sites highlighted in this document are located along or near the future I-73/-74 corridor (currently U.S. Route 52), which is shown in green on the map above. All of the sites are located within a 16-mile span between the Huntington Tri-State Airport and Heartland Intermodal Gateway, a truck-to-rail transfer facility along the Norfolk Southern line. Locations along this corridor have been selected in an effort to minimize transportation costs of fill materials while maximizing future use of the identified sites.

This document provides details on property conditions, recognized environmental conditions, brownfield status, transportation access, and available utilities for each of the selected sites. Please contact the Wayne County Economic Development Authority for more detailed information on each of the sites, including Phase I and Phase II environmental assessments (where applicable), utility costs, and site ownership/parcel information. Contact infomration can be found on page 11.



Wayne County, West Virginia

Where river meets rail, and the highway meets the runway.

Wayne County is the home of the Huntington Tri-State Airport, West Virginia's second busiest airport. The state's only FedEx B-757 hub, which accommodates ground and heavy air freight cargo, is located at the airport.

The county is also served by two Class One railroads - CSX (east/west) and Norfolk Southern (north/south). CSX connects the Midwest and the Ohio River Valley to northeastern United States and Canadian markets including the ports of Baltimore, Philadelphia, and New York. Norfolk Southern connects the Midwest and the Big Sandy River Valley to the Mid-Atlantic and Southern states including ports at Norfolk, Charleston, Savannah, and Jacksonville.

The Ohio River borders the northern boundary of Wayne County and is considered a portion of the port of Huntington, one of the largest inland ports in the United States. Additionally, 14 miles of the Big Sandy River, which borders the western boundary of the county, is open to barge traffic.

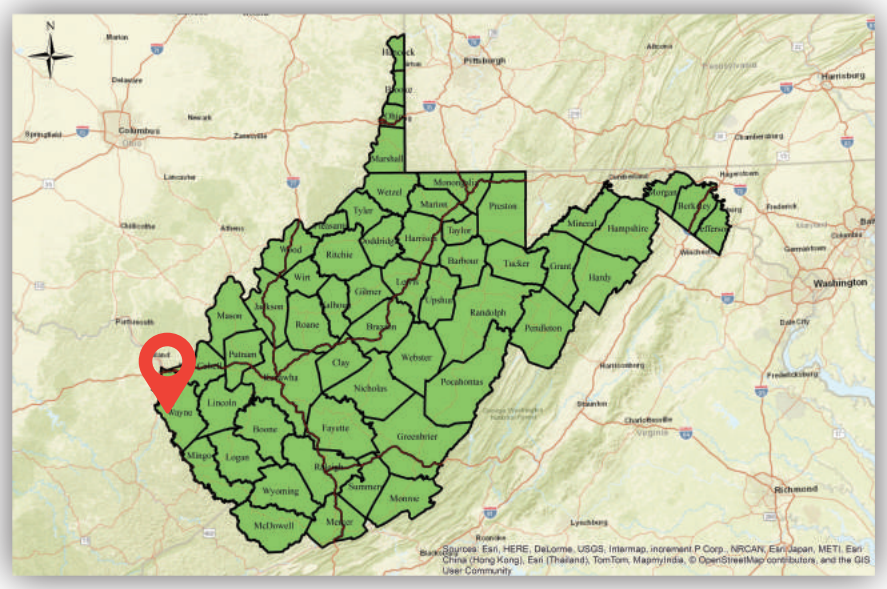
Interstate 64 serves as the entrance to the northern part of Wayne County and provides four lane access to industrial and commercial sites adjacent to the Ohio and Big Sandy rivers. I-64 connects the major metropolitan areas of St. Louis, Louisville, Lexington, Richmond, Norfolk, and Virginia Beach. The planned I-73/-74 corridor will provide four lane access to the southwestern parts of Wayne County.

Four of the seven sites highlighted in this document feature on-site rail access, three of the seven have on-site waterway access, and one of them is adjacent to the airport. All of the sites are within 16 miles of I-64, the Huntington Tri-State Airport, and the truck-to-rail transfer services at the Heartland Intermodal Gateway, and are located along the future I-73/-74 corridor.

The ability to move freight by air, water, rail, and road, as well as its proximity to major markets, is what makes Wayne County, West Virginia...

Logistically Logical.

Access to Markets



The following cities are a one-day drive from Wayne County, WV:

250 miles
Columbus, OH
Cincinnati, OH
Indianapolis, IN
Lexington, KY
Louisville, KY

500 miles
Atlanta, GA
Charlotte, NC
Chicago, IL
Cleveland, OH
Detroit, MI
Nashville, TN
Pittsburgh, PA
Richmond, VA
Washington, D.C.

Huntington-Ashland MSA

Wayne County is part of the Huntington-Ashland metropolitan statistical area (MSA). This MSA is the largest in West Virginia and includes seven counties across three states: West Virginia, Ohio, and Kentucky. Locally, the region is referred to as the "Tri-State Area."

Huntington-Ashland MSA residents are a valuable part of the labor pool for Wayne County businesses. Current estimates show that approximately 60% of Wayne County workers reside outside of the county.

360,474

The Huntington-Ashland MSA population in 2019. There are currently 149,425 residents in the workforce.

85.4%

The number of residents with a high school diploma or higher. Of those, 10% possess an associate's degree, 12.9% hold a bachelor's degree, and 9.1% have a graduate degree or higher.

$11,129

The difference between the average earnings per job in the Huntington-Ashland MSA ($47,865) and the United States ($58,994). The cost of living in Huntington is 11% below the national average, according to Forbes.

Regional Employers

The following sectors are currently the largest employers in the region:

1. Health Care and Social Assistance
2. Government
3. Retail Trade
4. Accommodation and Food Services
5. Manufacturing

Industry Clusters

The top six industry clusters, based upon earnings per worker, overall job growth, job growth regional competitiveness, job concentration, and contribution to gross regional product are:

1. Oil and Gas Production and Transportation
2. Automotive
3. Electric Power Generation and Transmission
4. Water Transportation
5. Upstream Chemical Products
6. Construction Products and Services

America's Best Community

Huntington, WV was named the $3 million grand prize winner of the America's Best Communities competition in 2017 for a comprehensive plan to transform Huntington into the economic gateway of the Appalachian region. Huntington is located in both Wayne and Cabell counties. The northernmost site featured in this document is only a 15-minute drive from downtown Huntington, which features:

Marshall University
Marshall was recently designated as an "R2" research institution by the Carnegie Classification of Institutions of Higher Education, placing it among the top six percent of colleges and universities in the nation. The university's colleges and schools include business, information technology and engineering, medicine, and pharmacy.

Mountwest Community & Technical College
Mountwest offers associate's degrees and certificates in the areas of applied technology, information technology, transportation, management technology, hospitality management, and health.

Robert C. Byrd Institute for Advanced Flexible Manufacturing
RCBI offers shared manufacturing, technical services, quality training and certification, maker labs, and workforce development training, including an apprenticeship program.

Great Quality of Life
Huntington has a vibrant downtown, which includes dining and shopping at The Market, Heritage Station, and Pullman Plaza. Heritage Farm Museum & Village, the state's first Smithsonian Affiliate, is also located in Huntingtown, as well as the Big Sandy Superstore Arena, the historic Keith-Albee Performing Arts Center, and the Huntington Museum of Art.

Aeroplex Property

95 Acres

Adjactent to the Huntington Tri-State Airport

Only 4 Miles from I-64

FedEx Air and Ground Freight On-Site

Site Details

The Aeroplex Property totals approximately 95 acres and is located immediately south of the Huntington Tri-State Airport. The space can accommodate non-aeronautical and aeronautical business, with capabilities in housing corporate and general aviation fleet mix and hangars.

The property is owned by the Tri-State Airport Authority and has been selected as a Quality Site for development by American Electric Power (AEP). The owner is willing to subdivide the property.

FedEx Air and ground freight are both located on-site and have the capability to handle heavy air freight cargo. Tie-down parking, deicing facilities, and power-in/power-out parking for Group II are accessible on site.

Huntington Tri-State Airport is the second busiest airport in West Virginia and has the second largest runway. The FedEx B-757 hub is the only one in the state.

Environmental

Recognized Environmental Conditions: None
Brownfield: No
100-year Floodplain: No
Designated Wetlands: No

Transportation

Nearest Intersate: I-64 Exit 1 (3.9 miles)
Nearest Airport: Huntington Tri-State Airport (0.0 miles)
Rail Access: Heartland Intermodal Gateway (12.1 miles)

Utilities

Electric | Natural Gas | Water | Sewer | Broadband

Argus Property

Site Details

The Argus Property is located between the Norfolk Southern Railroad and Big Sandy River. The property consists of five parcels totaling 144.35 acres. Argus Energy is the owner.

A closed coal loading facility is located on the property. The area was generally used for farming activities prior to the coal loading facility being added in the 1990's. Phase I and Phase II Environmental Site Assessments have been conducted on the property. The western section, including the coal loading facility, will require reclamation as part of development.

According to the *Advantage Valley Site Planning Study*, two 76,000 square foot buildings with parking and access could conceptually be located on the property with earthwork occuring on parts of the western section and not within the 100-year floodplain or wetland areas.

144.35 Acres

Rail and Waterway Access On-Site

Capacity for Two 76,000 SF Buildings with Parking and Access

Environmental

Recognized Environmental Conditions: Multiple above-ground storage tanks, multiple drums and containers, on-site electrical transformers, miscellaneous equipment, and stained soils. Various petroleum products were stored on-site, including diesel fuel and oil for equipment.
Brownfield: Yes
100-year Floodplain: Partially
Designated Wetlands: Partially

Transportation

Nearest Intersate: I-64 Exit 1 (6.1 miles)
Nearest Airport: Huntington Tri-State Airport (7.6 miles)
Rail Access: On-site (Norfolk Southern)
Rail Siding: Heartland Intermodal Gateway (7.1 miles)
Waterway Access: On-site (commercial dock at river mile marker 7.6)

Utilities

Electric | Natural Gas | Water | Broadband

Cyrus Property

115.55 Acres

Rail and Waterway Access On-Site

Capacity for Multiple Buildings Totaling 600,000 SF with Parking and Access

Site Details

The total acreage of the Cyrus Property is approximately 155.55 acres.

According to the *Advantage Valley Site Planning Study*, with earthwork occuring on parts of the property, multiple buildings totaling more than 600,000 square feet of space with parking and access could conceptually be located in this area. This conceptual layout does not include development within the 100-year floodplain or wetland areas.

There is an operational coal loading facility on the property that will require reclamation as part of redevelopment. Disturbed acreage documented in the active mining permit for this site is 79 acres.

Zeyit Aydinli, Chief Executive Officer of Ustore, Inc., is the current contact.

Environmental

Recognized Environmental Conditions: Above-ground storage tanks, multiple drums and containers, on-site electrical transformers, and miscellaneous equipment.
Brownfield: Yes
100-year Floodplain: Partially
Designated Wetlands: Partially

Transportation

Nearest Intersate: I-64 Exit 1 (7.2 miles)
Nearest Airport: Huntington Tri-State Airport (8.7 miles)
Rail Access: On-site (Norfolk Southern)
Rail Siding: Heartland Intermodal Gateway (6.2 miles)
Waterway Access: On-site (commercial dock at river mile marker 8.5)

Utilities

Electric | Natural Gas | Water | Broadband

Docks Creek Property

Site Details

The Docks Creek Property consists of multiple land tracks totaling approximately 86 acres.

There is a coal loading facility on the western section of the property between U.S. Route 52 and the Big Sandy River that is currently operational. The coal loading facility will require reclamation as part of development. Disturbed acreage documented in the active mining permit is 52.63 acres.

The eastern section of the property includes residential and forestland.

86 Acres

Two Commercial Docks On-Site

Rail Access On-Site

Environmental

Recognized Environmental Conditions: Above-ground storage tanks, drums and containers, on-site electrical transformers, coal storage, and miscellaneous equipment. Various petroleum products were stored on-site, including diesel fuel and oil for equipment.
Brownfield: Yes
100-year Floodplain: Partially
Designated Wetlands: No

Transportation

Nearest Intersate: I-64 Exit 1 (4.6 miles)
Nearest Airport: Huntington Tri-State Airport (6.1 miles)
Rail Access and Siding: On-site (Norfolk Southern)
Waterway Access: On-site (two commercial docks at river mile markers 6.1 and 6.3)

Utilities

Electric | Natural Gas | Water | Sewer | Broadband

River Trading Company and Kanawha River Terminal

125 Acres

Rail Access On-Site

No Anticipated Environmental Issues

Site Details

This location includes approximately 125 acres and has served as farmland and forestland for multiple decades. Farmland use has been mainly cattle and corn and hay production. Cattle are not located on the property currently. However, hay production continues on parts of the property.

Portions of the property immediately adjacent to the Big Sandy River are within the 100-year floodplain. In these areas, applicable permitting will be required for development activities.

Environmental

Recognized Environmental Conditions: None
Brownfield: No
100-year Floodplain: Partially
Designated Wetlands: No

Transportation

Nearest Intersate: I-64 Exit 1 (7.7 miles)
Nearest Airport: Huntington Tri-State Airport (9.2 miles)
Rail Access: On-site (Norfolk Southern)
Rail Siding: Heartland Intermodal Gateway (5.6 miles)
Waterway Access: Not available
(closest dock is approximately 0.5 miles downstream)

Utilities

Electric | Natural Gas | Water | Broadband

Western Gate Industrial Park

Site Details

The proposed Western Gate Industrial Park consists of multiple parcels totaling 514 acres.

The southern section is the location of the former Prichard Landfill. This landfill includes two cells where waste was placed for several years. The cells, totaling approximately 36 acres, have been covered, and the landfill is closed. The northern section was used as a valley fill for soil and rock placement. These materials were generated during the upgrading of U.S. Route 52, located immediately west of the property, from two-lane to four-lane. This area is currently used as a shooting range. The central sections of the property include open areas and forestland.

A conceptual layout for the southern section of the property designed by Triad Engineering includes seven buildings totaling 144,000 square feet in addition to a convenience store at the entrance of the property. The buildings would range in size from 10,400 square feet to 57,600 square feet.

To increase flat land available on the southern section of the property next to U.S. Route 52, installation of a box culvert system will be required.

Environmental

Recognized Environmental Conditions: The former Prichard Landfill currently has 10 years left in a 30-year post-landfill closure program. During this period, leachate from the landfill cells is monitored and collected for disposal. The integrity of the landfill caps must be maintained during this period. The remaining sections of the property have no known environmental concerns.
Brownfield: Partially (southern section)
100-year Floodplain: No
Designated Wetlands: No

Transportation

Nearest Intersate: I-64 Exit 1 (14 miles)
Nearest Airport: Huntington Tri-State Airport (15.4 miles)
Rail Access: Heartland Intermodal Gateway (2 miles)

Utilities

Electric Water Broadband

514 Acres

Capacity for 7 Buildings Totaling 144,000 SF

Only 2 miles from the Heartland Intermodal Gateway

Wilson Property

33.127 Acres

Only 2.2 miles from I-64 and 3.7 miles from Huntington Tri-State Airport

Capacity for 40,000 SF of Building Space

Site Details

The Wilson Property consists of four parcels totaling 33.127 acres.

A Phase I Environmental Site Assessment was conducted on the property in 2018. It indicated that in 1955 part of the site was likely used for agriculture (garden space) with the rest of the property forested. A power line was noted on the property in the 1960s. The site was mostly cleared during the 1970s; however, little use of the property occurred. A small structure was located on the southwest corner of the site, with some large containers, but the purpose of the building and/or containers was not identified. Currently, the site is vacant, with no day-to-day use of the property.

The southern part of the property can be used with minimal earthwork moving. According to the *Advantage Valley Site Planning Study*, a 14,000 square foot building with parking and access could be located in this area. With earthwork occuring in the central and northern part of the property, more than 40,000 square feet of building space plus associated parking and access could be made available.

Environmental

Recognized Environmental Conditions: The Phase I ESA identified an area in the southern section of the site, approximately 40,000 square feet in size, that contains concrete and metal rubble associated with excavation activity during the 1980s. These materials are considered a recognized environmental condition, as their origin was not identified.
Brownfield: Yes
100-year Floodplain: No
Designated Wetlands: No

Transportation

Nearest Intersate: I-64 Exit 1 (2.2 miles)
Nearest Airport: Huntington Tri-State Airport (3.7 miles)
Rail Access: Heartland Intermodal Gateway (11.7 miles)

Utilities

Electric | Natural Gas | Water | Sewer | Broadband

For more information on any of these sites or to schedule a visit, please contact:

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