PLAYBOOK

Decommissioning & Redevelopment Playbook for the Mitchell Power Station & Adjacent Canestrale Properties

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I EXECUTIVE SUMMARY

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1.0 EXECUTIVE SUMMARY

The primary purpose of this Playbook and associated Appendix documents is to provide a menu of redevelopment "Plays" for consideration by industrial site selectors and the development community as they seek new sites for development in the Pittsburgh region.

While this Playbook does, in fact, recommend a preferred redevelopment strategy, the Playbook is also designed to provide a variety of useful data and information that can be utilized in the due diligence efforts of interested parties. Recognizing that different investors have different priorities and goals, the information contained in this Playbook and associated Appendix documents is intended to provide a wide range of data and ideas organized and located in one place as a means to stimulate further creative thought by development professionals.

1.1 PROJECT INTRODUCTION & SCOPE

The genesis of this project is a US Federal Government program known as "The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative". Supported by the US Department of Commerce Economic Development Administration (EDA), the goal of POWER is to "align and leverage complementary Federal economic and workforce development resources, targeting Federal assistance through competitively awarded grants to partnerships anchored in communities impacted by changes in the coal economy."

Supported by the POWER program, the Pennsylvania Department of Community and Economic Development (DCED) selected the "Mitchell Power Station and Adjacent Canestrale Properties" site (Subject Site) as the first in Pennsylvania to be addressed under this program. One of a number of closed or closing coal-fired power plants across the Commonwealth, successful redevelopment of the Subject Site will serve as a model for other sites going forward.

In mid-2017, DCED selected a consulting team led by Civil & Environmental Consultants (CEC) to prepare this Playbook and associated Appendix documents. In collaboration with DCED and property owners First Energy and Canestrale Environmental Control Corporation, CEC has conducted a comprehensive process of redevelopment planning for the Subject Site, including preparation of site and market analyses, redevelopment strategy options, financial and economic impact analyses, and recommendations for actions to move the process forward.

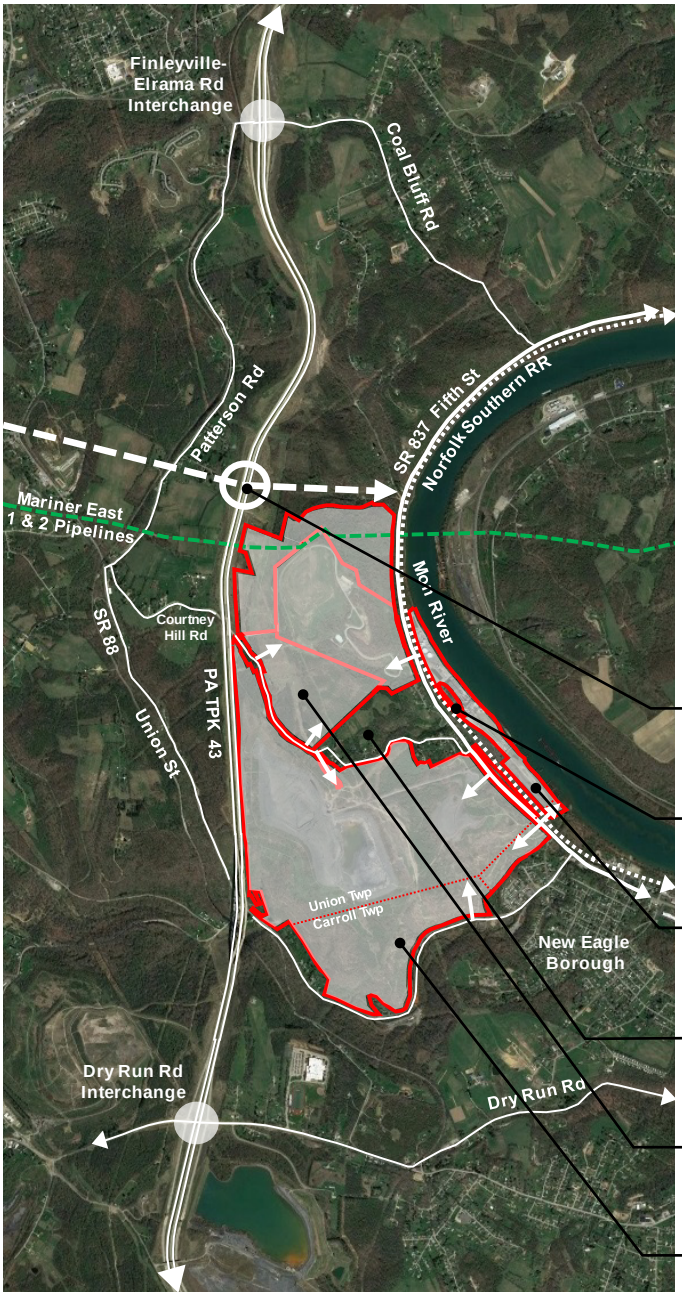
The remainder of this Executive Summary summarizes key findings of the Playbook.

1.2 SITE ATTRIBUTES & ASSETS SUMMARY

The Subject Site is located approximately 18 miles south of Pittsburgh in Washington County, Pennsylvania. The majority of the site is located in Union Township, with lesser portions located in Carroll Township and New Eagle Borough.

The site is comprised of the following key site attributes:

- Large Site in Cohesive Ownership: Totaling approximately 856 acres, site ownership is held by two entities working cooperatively to pursue redevelopment opportunities.
- River Access: In total, the site has approximately 4,900 linear feet of direct frontage along the Monongahela River and 30 existing and permitted mooring cells.
- Potential Major Road Access: The site has approximately 7,900 linear feet of direct frontage on PA TPK 43, a limited access toll road that is part of the Southern Beltway network.
- Rail Access: Approximately 7,900 linear feet of Norfolk Southern dual mainline track lies within the site.
- Existing Utilities: An operating West Penn Power substation is located within the site, while the utilities serving Mitchell Station power plant are still largely in place.
- Mariner East 1&2 Pipelines: Approximately 2,400 linear feet of two major natural gas liquids (NGL) pipelines travers the North Site.
- Natural Gas Supply: The potential exists to tap the Mariner East 1 & 2 Pipeline system to provide direct natural gas service to the site.



Potential Interchange for Future extension of the Southern Beltway

Active West Penn Power Substation

Power Plant Site - ± 57 Acre

Courtney Hill Road Residential Area

North Site - ± 294 Acres

South Site - ± 505 Acres

1.3 MARKET ANALYSIS SUMMARY

The isolated location of the Subject Site relative to the region's commerce and population centers, combined with limited population growth and spending power in the vicinity of the site, makes most residential and commercial uses infeasible from a market demand perspective. Conversely, the site's location, history, and physical attributes make it a much more likely candidate for industrial redevelopment.

The growing natural gas industry in Southwestern Pennsylvania, as indicated in the Marcellus and Utica NGL Existing and Planned Infrastructure map below, makes natural gas and natural gas liquids (NGL) supply chain-related industrial uses a logical fit for the Subject Site.

The Shell cracker in Beaver County as well as any other ethane cracker facilities developed in the region will offer a steady supply of ethylene/polyethylene, a key input to manufacturers in a number of industries.

Based on market research, the best opportunities for business attraction for the region are found in chemical and plastics manufacturing. The following are industries that could potentially locate on the Subject Site:

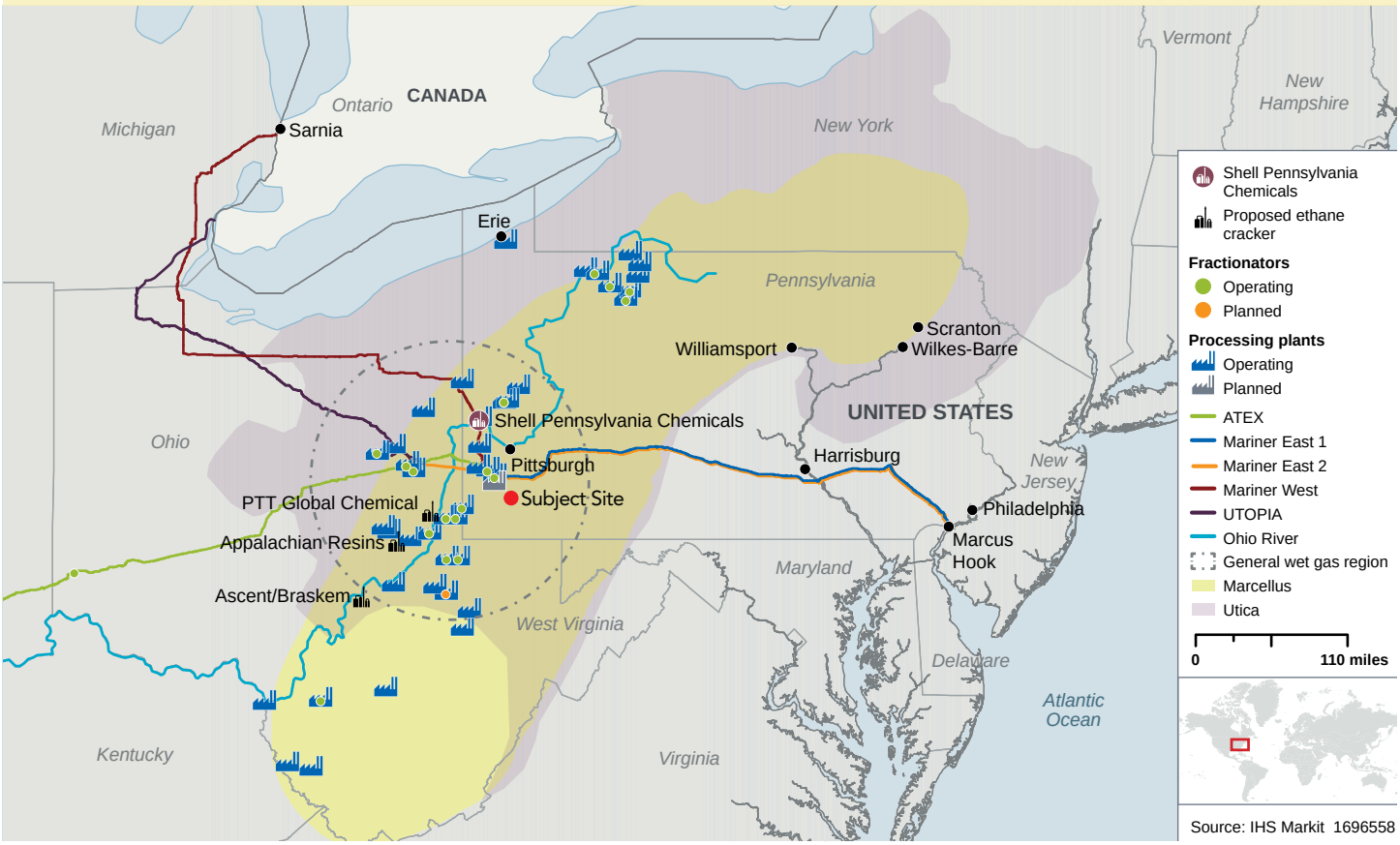
Plastics Manufacturing

- Plastic Film, Sheet & Bag Manufacturing
- Plastic Pipe & Parts Manufacturing
- Laminated Plastic Manufacturing
- Plastic Bottle Manufacturing
- Miscellaneous Plastics Products
- Plastics Wholesaling

Chemical Manufacturing

- Petrochemical Manufacturing
- Organic Chemical Manufacturing
- Plastics & Resin Manufacturing
- Adhesive Manufacturing
- Chemical Wholesaling
- Fuel Blending/Refining

MARCELLUS AND UTICA NGL EXISTING AND PLANNED INFRASTRUCTURE



1.4 REUSE STRATEGY ALTERNATIVES SUMMARY

In response to the market dynamics and physical site characteristics identified earlier in this document, three strategic alternatives for reuse of the site have been prepared. Each alternative responds to market forces in a different way, thus providing a menu of "plays" designed to appeal to a range of differing investor/developer goals:

Reuse Strategy A
Natural Gas/NGL-Related Manufacturing:

Use of the entire 856-acre site (North Site, South Site, Power Plant Site) to accommodate one or two large manufacturing enterprises.

Reuse Strategy B
North & South Sites Industrial Park:

Use of the North and South Sites only (799 acres) to accommodate an industrial park.

Reuse Strategy C
Power Plant Site:

Use of the Power Plant Site along the riverfront only (57 acres) to accommodate a manufacturing use.

1.5 RECOMMENDED ACTIONS & SCHEDULE SUMMARY

The Subject Site is best suited for reuse as an industrial site serving the natural gas and NGL-related sectors.

Of the three redevelopment strategies presented, the financial feasibility analysis indicates that Concept C – Power Plant Site Manufacturing is financially viable without the need for public subsidy, while Concepts A and B would require public subsidies in the range of $50-75 million.

At buildout, Concept C could yield over 1,400 new jobs and over $2.4 million in new annual tax revenue, while yields for Concepts A and B could be in the range of 8-9,000 new jobs and $12-13 million in new annual tax revenue.

Given these factors, and the desire to establish the site as a successful new employment center in the near term, a two-phase redevelopment strategy is recommended:

- Phase 1 – Near-Term Redevelopment of the Power Plant Site as a Manufacturing/Transport Facility
- Phase 2 – Longer Term Redevelopment of the North & South Sites for a Large Industrial User or as a Light Industrial Park

This two-phase strategy suggests initial development of the "low-hanging fruit", the smaller Power Plant Site that does not require public subsidy, as a means to "seed" development interest in the larger North and South Sites. Initial investment needs for the smaller Power Plant Site are less than if the entire site were involved, and a successful redevelopment of the Power Plant Site will put the entire Subject Site and vicinity on the regional map as a credible new location for industrial development.

In addition, this "Power Plant Site First" strategy will buy time for gaining regulatory approvals for the North and South Sites, and also for working towards a new interchange on PA TPK 43 to improve roadway access to the site.

The Redevelopment Implementation Schedule shown below identifies recommended actions and a timeline for moving the process forward.

IMPLEMENTATION SCHEDULE

RECOMMENDED ACTIONS	MONTHS																												
1 - DCED, First Energy & Canestrale Review/Revise/Approve "Recommended Redevelopment Strategy"	1	2	3	4																									
2 - Community Stakeholders Review/ Revise/Approve "Recommended Redevelopment Strategy"			3	4																									
3 - DCED, First Energy, Canestrale & Community Stakeholders Form "Project Steering Committee (PSC)"				4																									
4 - PSC Design & Implement Project-Specific Workforce Strategy for Subject Site				4	5	6	7	8																					
5 - PSC Develop Streamlined Permitting & Entitlements Process for Subject Site				4	5	6	7	8																					
6 - PSC Bring Subject Site to "Shovel-Ready Lite" Status				4	5	6	7	8																					
7 - PSC Design & Execute Subject Site Marketing Campaign (Estimated Timeline)				4	5	6	7	8	9	10	11	12																	
8 - First Energy & Canestrale Close Phase 1 Development Deals with Site Developer and/or User (Estimated Timeline)												12																	
9 - Site Developer and/or User Design/ Construct Site Infrastructure & Building Facilities (Estimated Timeline)												12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
10 - Site User Commence Manufacturing Operations (Estimated Timeline)																														30

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2 SITE ATTRIBUTES & ASSETS

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2.0 SITE ATTRIBUTES & ASSETS

The purpose of this section is to summarize existing site conditions related to redevelopment of the Mitchell Power Station and Adjacent Canestrale Properties (Subject Site). For more detail related to the content of this section, see the following attachments to this Playbook document:

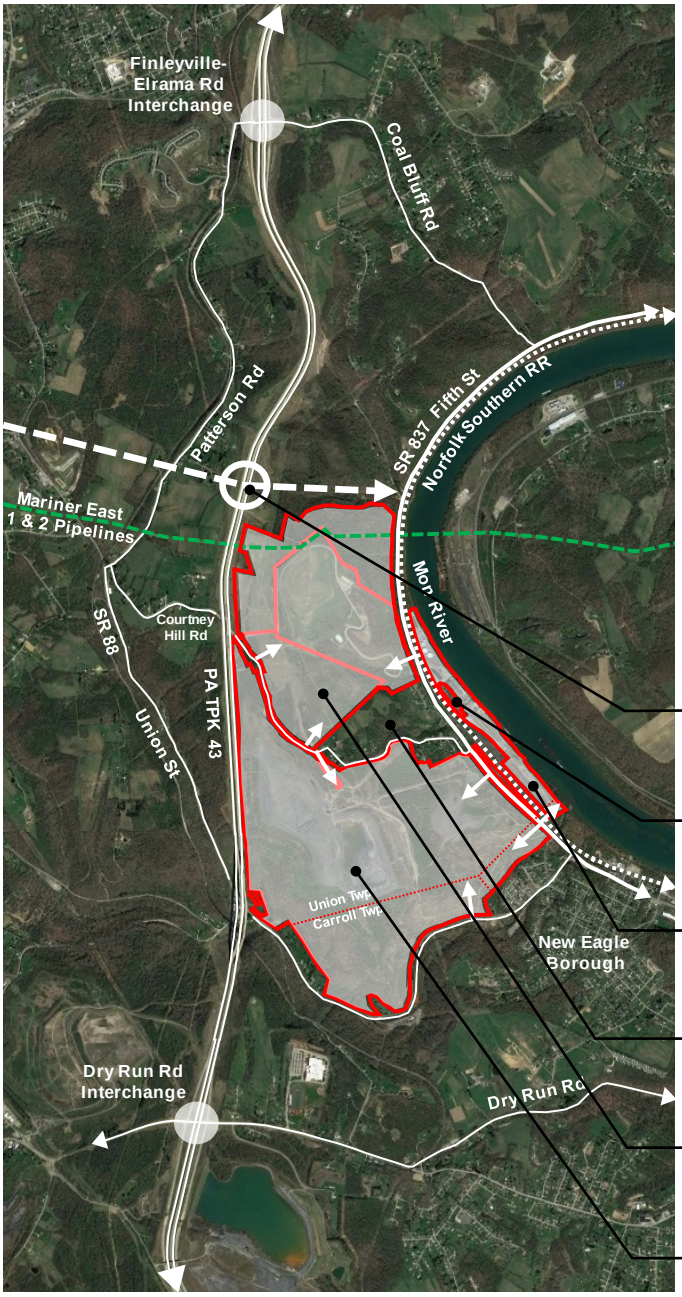
- **Attachment A** – Phase I Environmental Site Assessments
- **Attachment B** – Abatement & Demolition Narrative & Cost Estimates
- **Attachment C** – Permit Documents Analysis
- **Attachment D** – Utility Infrastructure Assessment
- **Attachment G** – Energy Options Assessment

2.1 SITE ATTRIBUTES & ASSETS HIGHLIGHTS

The Subject Site is located approximately 18 miles south of Pittsburgh in Washington County, Pennsylvania. The majority of the site is located in Union Township, with lesser portions located in Carroll Township and New Eagle Borough.

The site is comprised of the following key site attributes:

- Large Site in Cohesive Ownership: Totaling approximately 856 acres, site ownership is held by two entities working cooperatively to pursue redevelopment opportunities.
- River Access: In total, the site has approximately 4,900 linear feet of direct frontage along the Monongahela River and 30 existing and permitted mooring cells.
- Potential Major Road Access: The site has approximately 7,900 linear feet of direct frontage on PA TPK 43, a limited access toll road that is part of the Southern Beltway network.
- Rail Access: Approximately 7,900 linear feet of Norfolk Southern dual mainline track lies within the site.
- Existing Utilities: An operating West Penn Power substation is located within the site, while the utilities serving Mitchell Station power plant are still largely in place.
- Mariner East 1&2 Pipelines: Approximately 2,400 linear feet of two major natural gas liquids (NGL) pipelines travers the North Site.
- Natural Gas Supply: The potential exists to tap the Mariner East 1 & 2 Pipeline system to provide direct natural gas service to the site.



Potential Interchange for Future extension of the Southern Beltway

Active West Penn Power Substation

Power Plant Site - ± 57 Acre

Courtney Hill Road Residential Area

North Site - ± 294 Acres

South Site - ± 505 Acres

1 - Large Site in Cohesive Ownership

4 - Rail Access

5 - Existing Utilities

2 - River Access

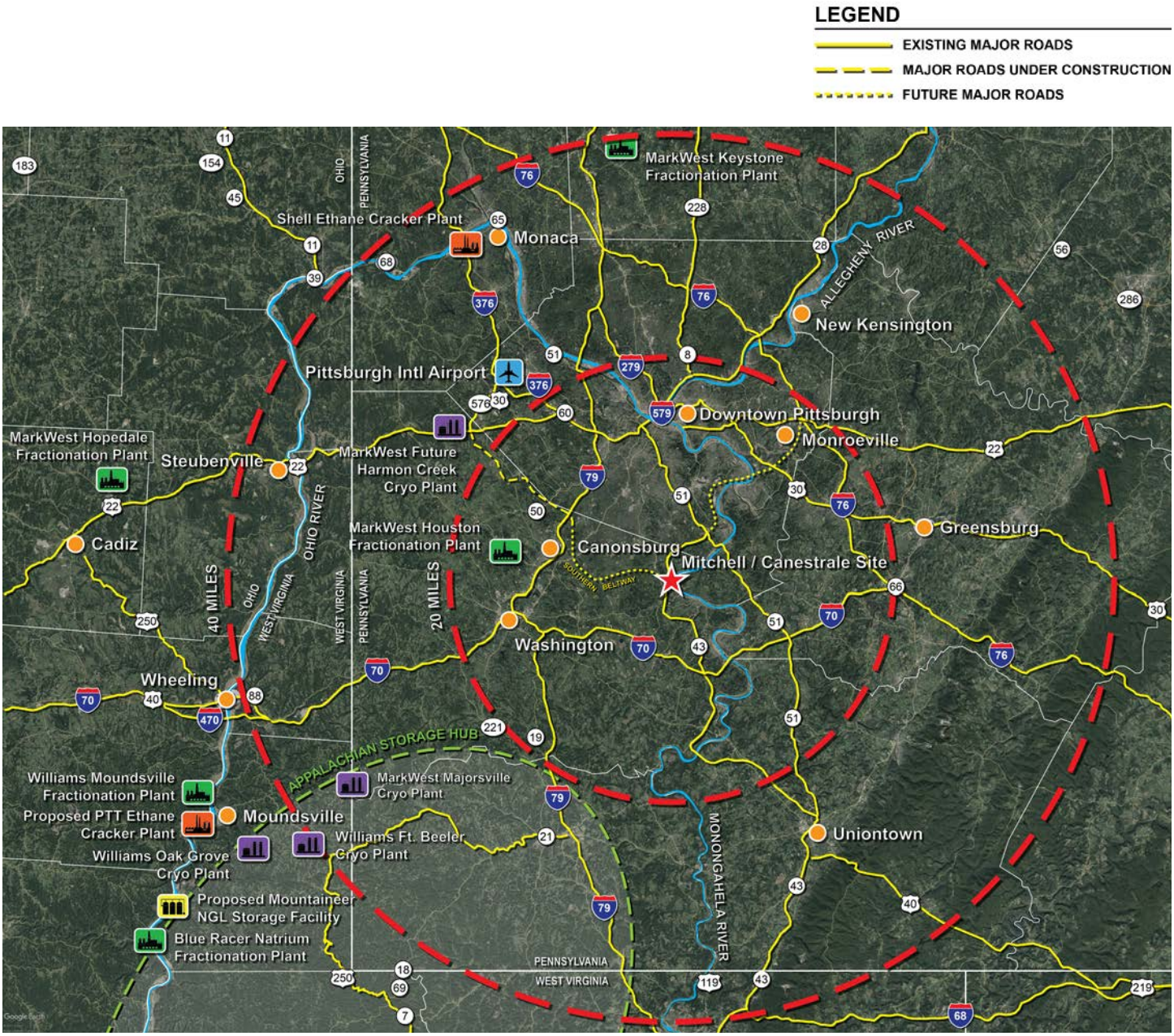
3 - Potential Major Road Access

6 - Mariner East 1 & 2 Pipelines

2.2 REGIONAL SETTING

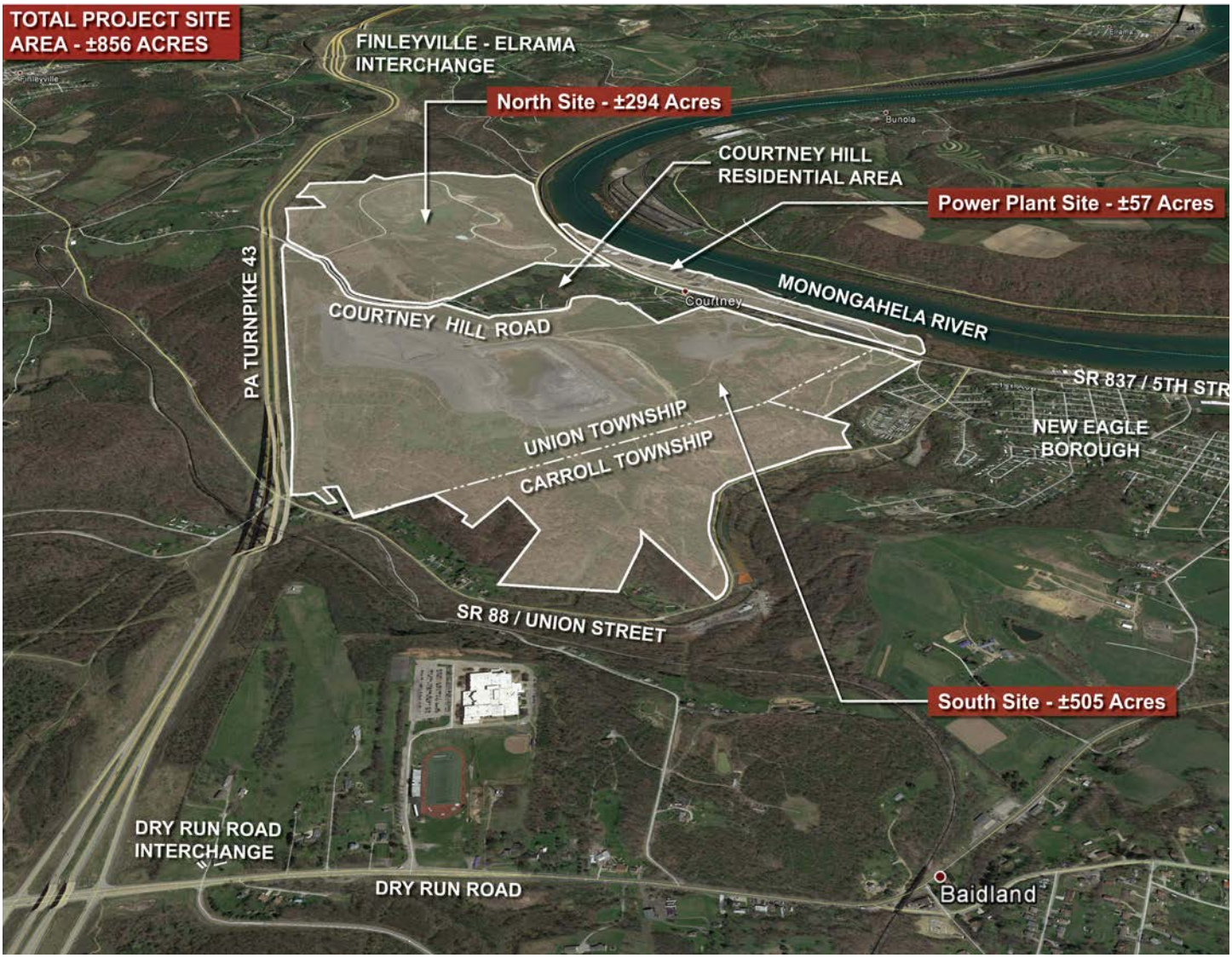
The Subject Site is located approximately 18 miles south of Downtown Pittsburgh along the Monongahela River. Pittsburgh International Airport is located just over 20 miles northwest of the site. The Canonsburg/Southpointe area is the closest major employment center, located approximately 18 miles west of the site. The region is home to many major oil and gas facilities located well west of the site in the western part of the region.

Primary regional roadway access to the site is provided by PA TPK 43, a limited access toll road that is part of the Southern Beltway roadway network. As shown in the Regional Setting diagram, a future segment of the Southern Beltway will intersect with PA TPK 43 in the vicinity of the site, potentially at the site itself.



The Subject Site is comprised of three separate, cohesive land units adjacent to one another, as shown in the Aerial View below. These three land units completely surround the Courtney Hill Residential Area:

- North Site: ± 294 acres bounded by PA TPK 43, Courtney Hill Road, SR 837, a residential area, and undeveloped land.
- South Site: ± 505 acres bounded by PA TPK 43, SR 88/Union Street, SR 837, and residential areas.
- Power Plant Site: ± 57 acres bounded by the Monongahela River and SR 837.



2.3 EXISTING LAND USE

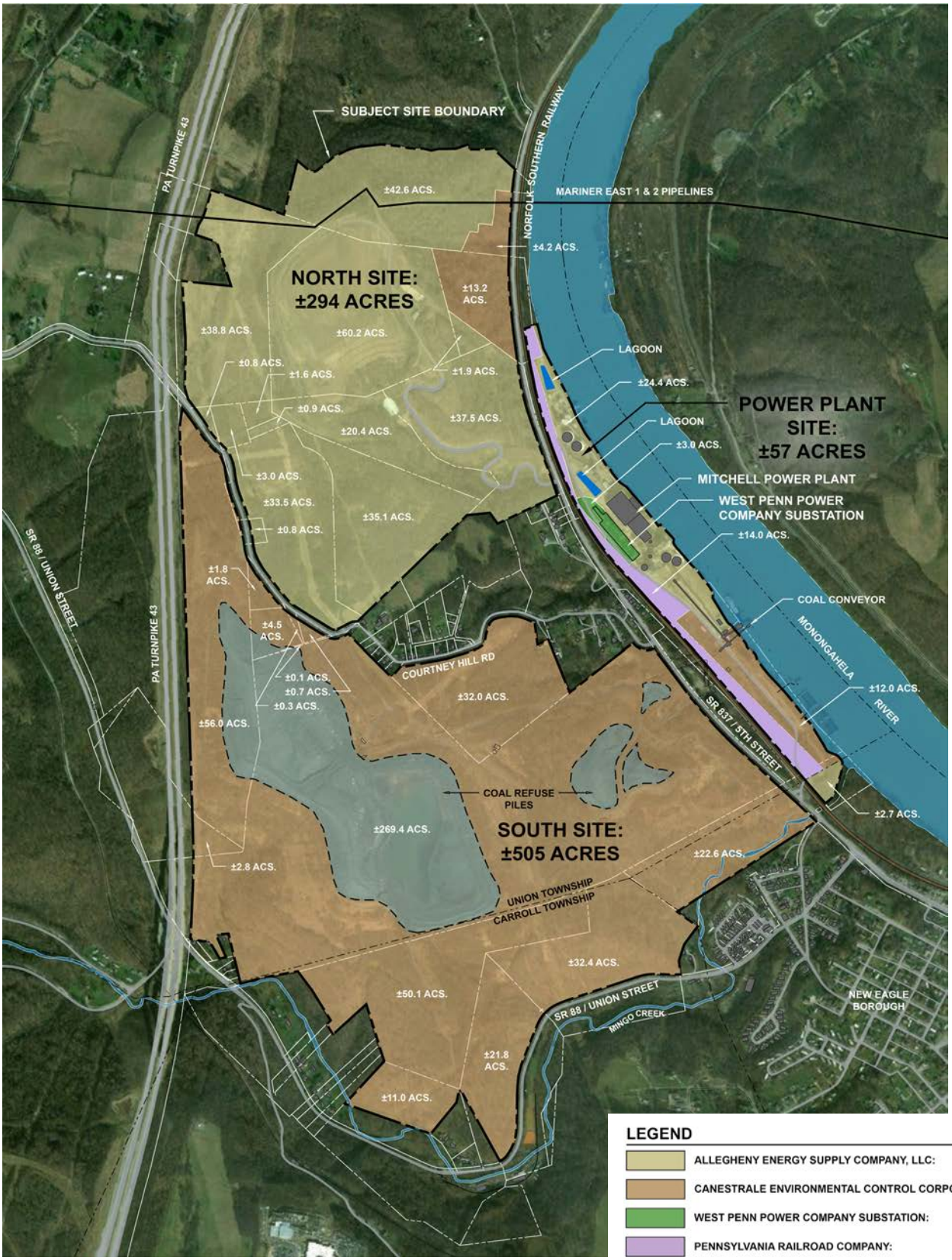
As shown by the Existing Land Use diagram, the North Site is undeveloped and characterized by a Coal Combustion Residual (CCR) waste landfill and a combination of wooded areas and open fields. A private road traverses the site and provides access to a proposed First Energy landfill site. In addition, the Mariner East 1 & 2 pipelines, part of a national-scale NGL pipeline, traverse and lie within the North Site area.

The Mitchell Power Station FGD Disposal Site is a residual waste disposal facility permitted under Pennsylvania Department of Environmental Protection Residual Waste Regulations (25 Pa. Code 288, Permit No. 300809). The Site is located in Union Township, Washington County, Pennsylvania and was used for the disposal of coal combustion by-products (CCBs) from the former Mitchell Power Station. The disposal area is located within the top of an erosional valley immediately adjacent and draining to the Monongahela River. Water quality monitoring in accordance with the Site's permit is completed quarterly and includes groundwater and surface water monitoring.

The South Site is comprised of steep, undeveloped slopes and woodlands and a large coarse and fine coal refuse disposal area. Coal refuse materials were conveyed to the site from a former coal preparation plant along the river that served the Mathies Mine, which was the source of coal for the power plant. A number of private gravel or dirt roads, as well as power and natural gas lines, traverse the site.

The northern half of the Power Plant Site is occupied by the former Mitchell Station Power Plant, which was shut down in 2013. The southern half of the Power Plant site is vacant, but was formerly the location of a coal processing operation serving the power plant.

EXISTING LAND USE



The site comprises three distinct visual zones completely surrounding a fourth zone, the Courtney Hill Road / SR837 Residential Area. Representative character for each visual zone is provided, along with observations for each of the following:

- Roadway Perimeters
- Power Plant / Riverfront Site
- Canestrale & First Energy Site
- Courtney Hill Road / SR 837 Residential Area

ROADWAY PERIMETERS OBSERVATIONS

- PA TPK 43 directly abuts the Subject Site, providing great visibility of western site edge.
- No direct access to the Subject Site from PA TPK 43.
- Long-range plans for the Southern Beltway show potential for a new interchange near the Subject Site.
- Roadway access to the Subject Site today is via winding, 2-lane roads with limited capacity to handle significant additional traffic loads.

PA Turnpike 43

SR 837 / Fifth Street

SR 88 / Union Street

SR 837 / Fifth Street

SR 88 / Union Street

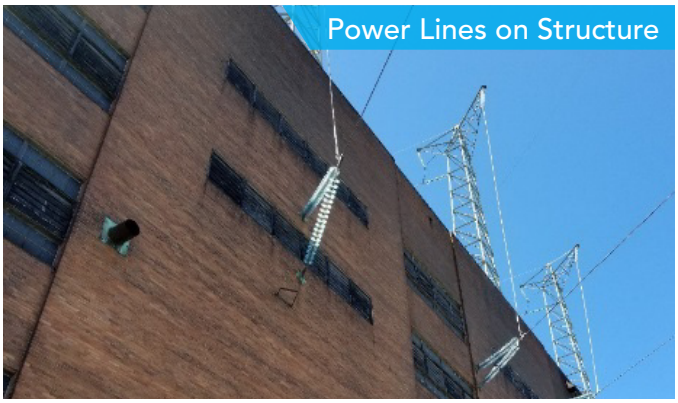
POWER PLANT / RIVERFRONT SITE OBSERVATIONS

- Existing Barge loading facility at power plant edge provides opportunity for river commerce-dependent reuse.
- West Penn Power Substation is operational and appears prohibitively expensive to relocate.
- Existing gas-fired boilers in the power plant may be suitable for reuse to heat buildings for a new user at the Subject Site.
- Several high-tension power lines are structurally supported by the main power station building, requiring relocation prior to any demolition of the building.
- It appears to be cost-prohibitive to reuse existing coal-fired boilers.
- It appears to be cost-prohibitive to reuse the existing 283 Megawatt turbine.

FE Mitchell Power Station

River Commerce

West Penn Power Substation


Power Lines on Structure

Coal-Fired Boilers

283 MW Turbine

CANESTRALE & FIRST ENERGY SITE OBSERVATIONS

- The Subject Site is topographically dynamic and will require significant earthwork to create developable pads of size.
- Several high-tension power lines emanating from the Mitchell Substation cross the Project Site and require avoidance in reuse schemes.
- Coarse coal refuse materials, which comprise the majority of the refuse on the site, typically can be re-used in site grading operations for redevelopment.

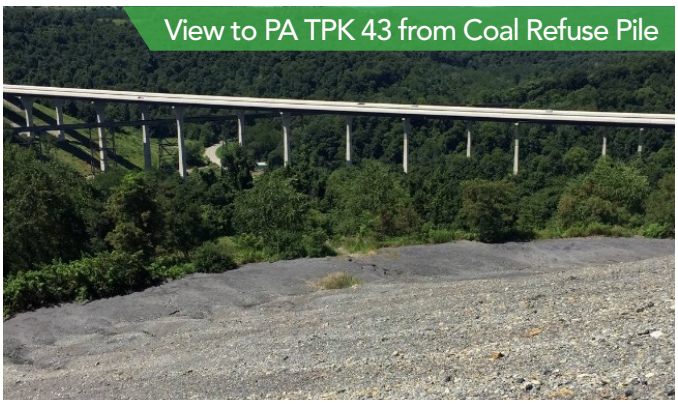
View of Power Plant Site

Power Lines Crossing Canestrale Site

Fine Coal Refuse Slurry Impoundment

Canestrale Consent Order Work

Conveyor House


View to PA TPK 43 from Coal Refuse Pile

COURTNEY HILL ROAD / SR 837 RESIDENTIAL AREA OBSERVATIONS

- The Courtney Hill Road / SR 837 residential area is completely surrounded by the Subject Site.
- Any reuse of the Subject Site must respect the residential nature and character of this area by adhering to buffering and other land use requirements prescribed by law.

Close Adjacency to Power Plant

War Memorial on SR 837

Residences on SR 837

Residences on SR 837

Residences on Courtney Hill Road

Residences on Courtney Hill Road

The Union Township Zoning Map – September 2012 indicates current site zoning. As indicated, current site zoning is a mix of the following:

HI – Heavy Industrial District

The purpose of this district is to encourage the continuation and revitalization of heavy industry in those areas of the Township which have already been established for these uses.

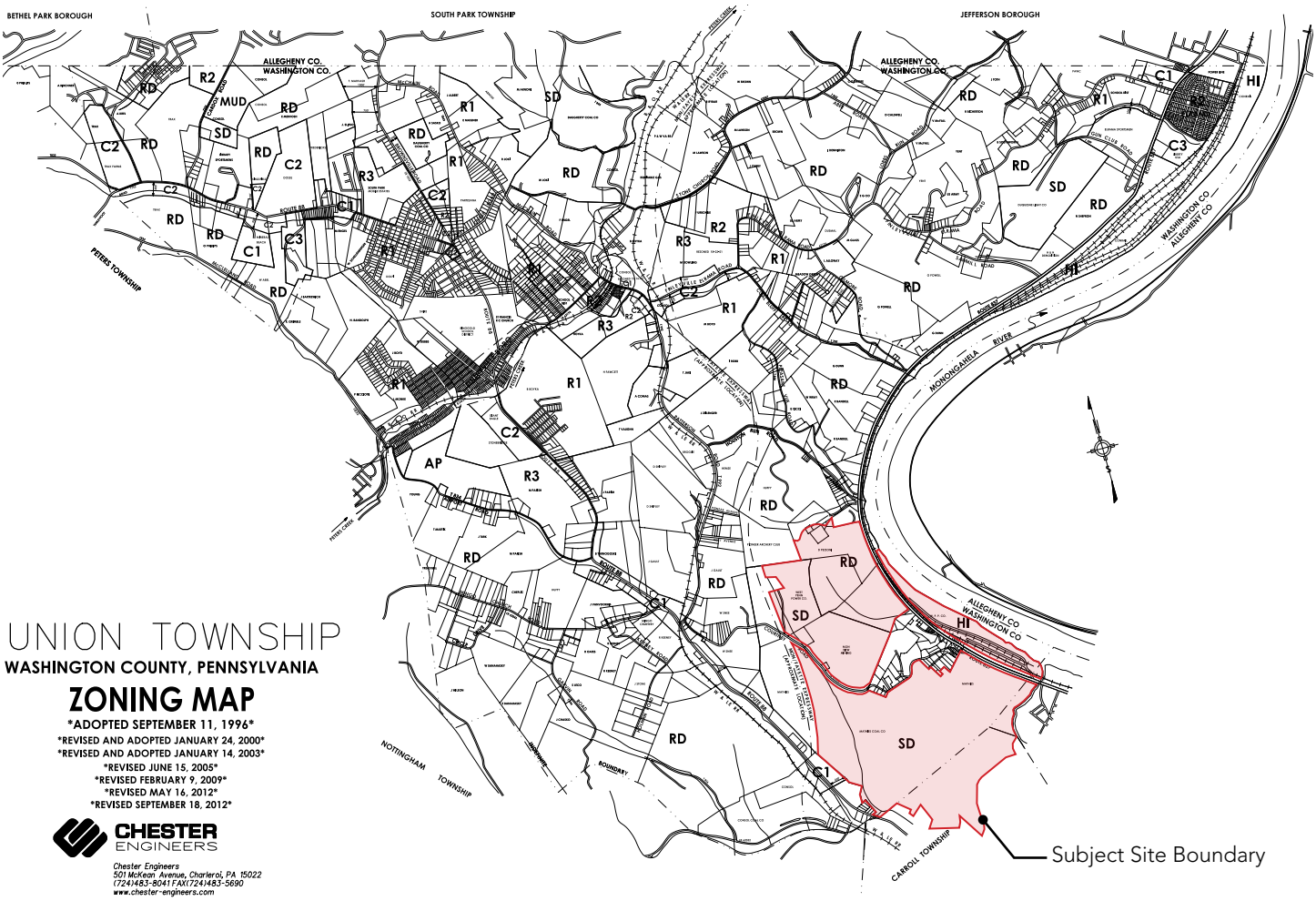
RD – Rural Development District

The purpose of this district is to provide for agriculture and low density single family residential development in rural areas of the Township where public sewers are not available and to provide for accessory uses and compatible public and semi-public uses as conditional uses or uses by special exception.

SD – Special Development District

The purpose of this district is to accommodate the existing Sanitary Landfill and existing waste disposal sites of the Coal Companies and the Electric Power Generating Plants and provide for the reclamation of the sites and the appropriate re-use of the reclaimed property.

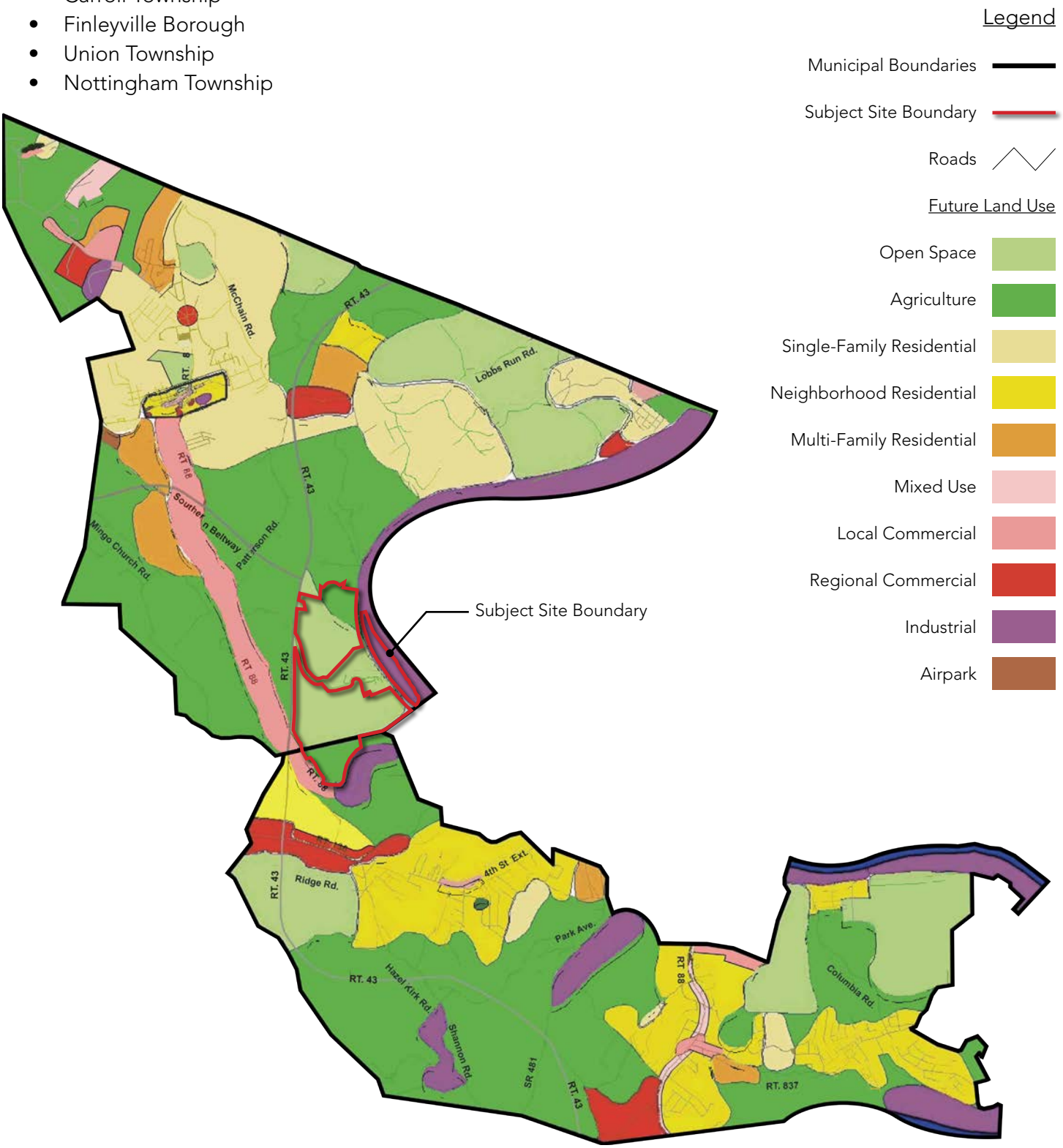
RD	- Rural Development District
R1	- Low Density Single Family Residential District
R2	- One and Two Family Village Residential District
R3	- Multifamily Residential District
C1	- Local Commercial District
C2	- General Commercial District
C3	- Heavy Commercial District
HI	- Heavy Industrial District
AP	- Airport District
SD	- Special Development District
MUD	- Mixed Use/Overlay District
	- Subject Site Boundary



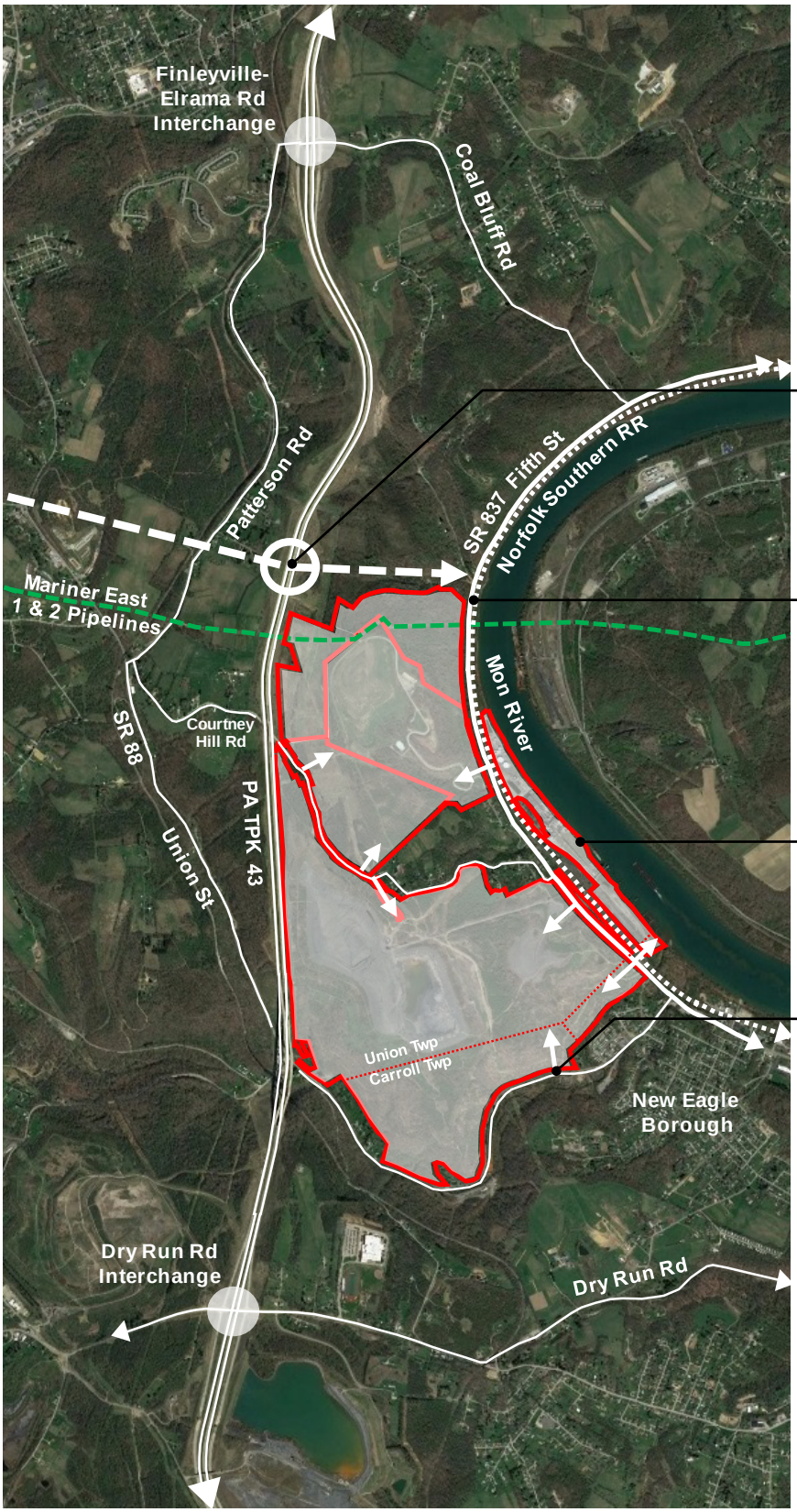
A "Multi-Municipal Comprehensive Plan" was published in August 2007 setting forth a coordinated pattern of future land uses for the following jurisdictions:

- Carroll Township
- Finleyville Borough
- Union Township
- Nottingham Township

This document was adopted as the "Carroll Township – Union Township Joint Comprehensive Plan" by the two townships in September 2012.



2.4 EXISTING TRANSPORTATION



Regional roadway access to the Subject Site is primarily available via PA TPK 43, a limited-access toll road administered by the Pennsylvania Turnpike Commission. The site has approximately 7,900 linear feet of direct frontage on PA TPK 43. Two existing PA TPK 43 interchanges are located near the site, providing site access via a network of local, 2-lane roads.

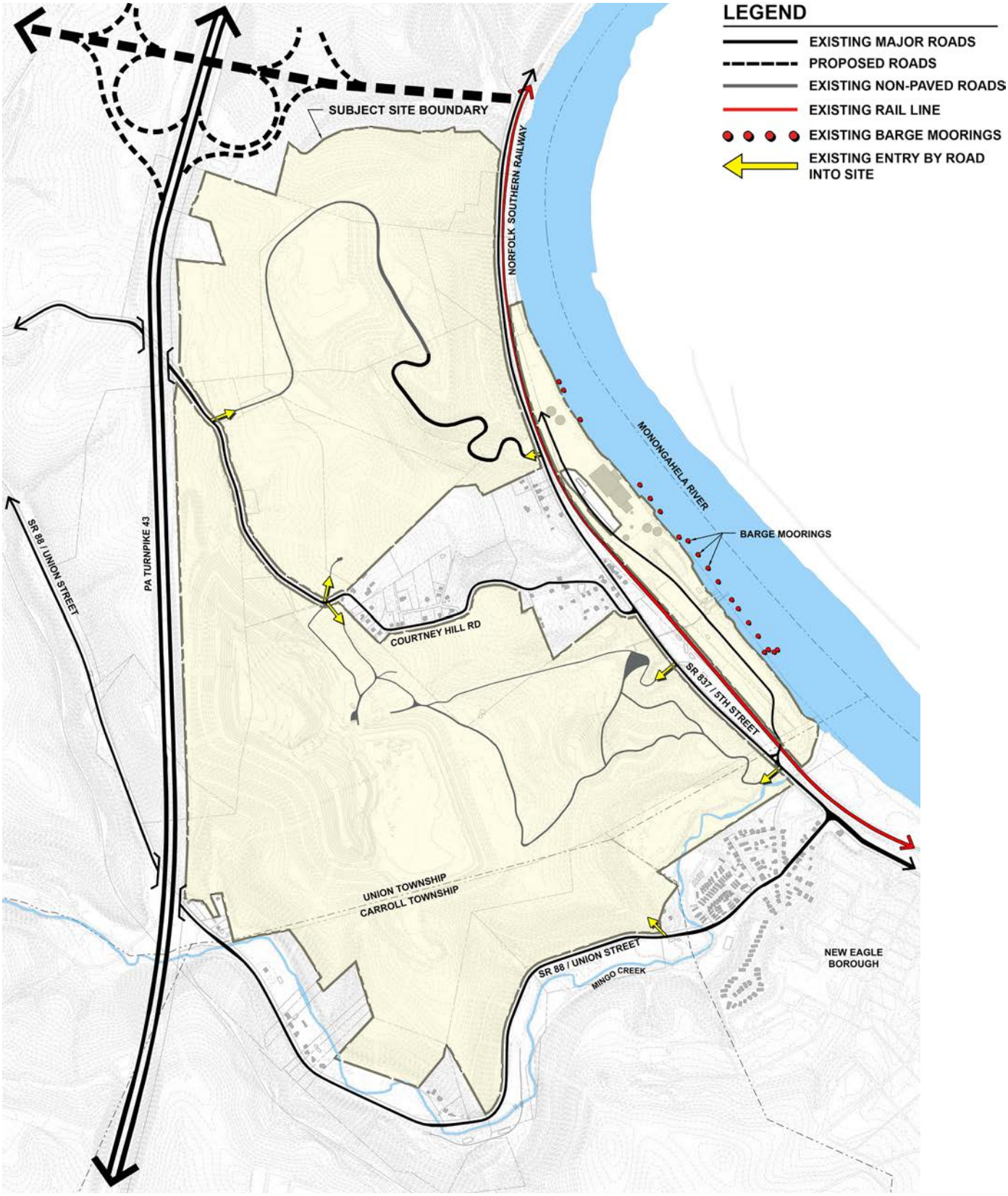
Potential Interchange & Future Southern Beltway - Potential roadway alignment and interchange location subject to determination by Pennsylvania Turnpike Authority.

Norfolk Southern Railroad Mainline - Approx. 7,900 LF dual-track frontage; On-site space for switch & swing track; On-site space to create railyard facility.

Monongahela River Frontage - Approx. 4,900 LF; 30 (18 FE/12C) mooring cells; Fleeting for over 100 barges.

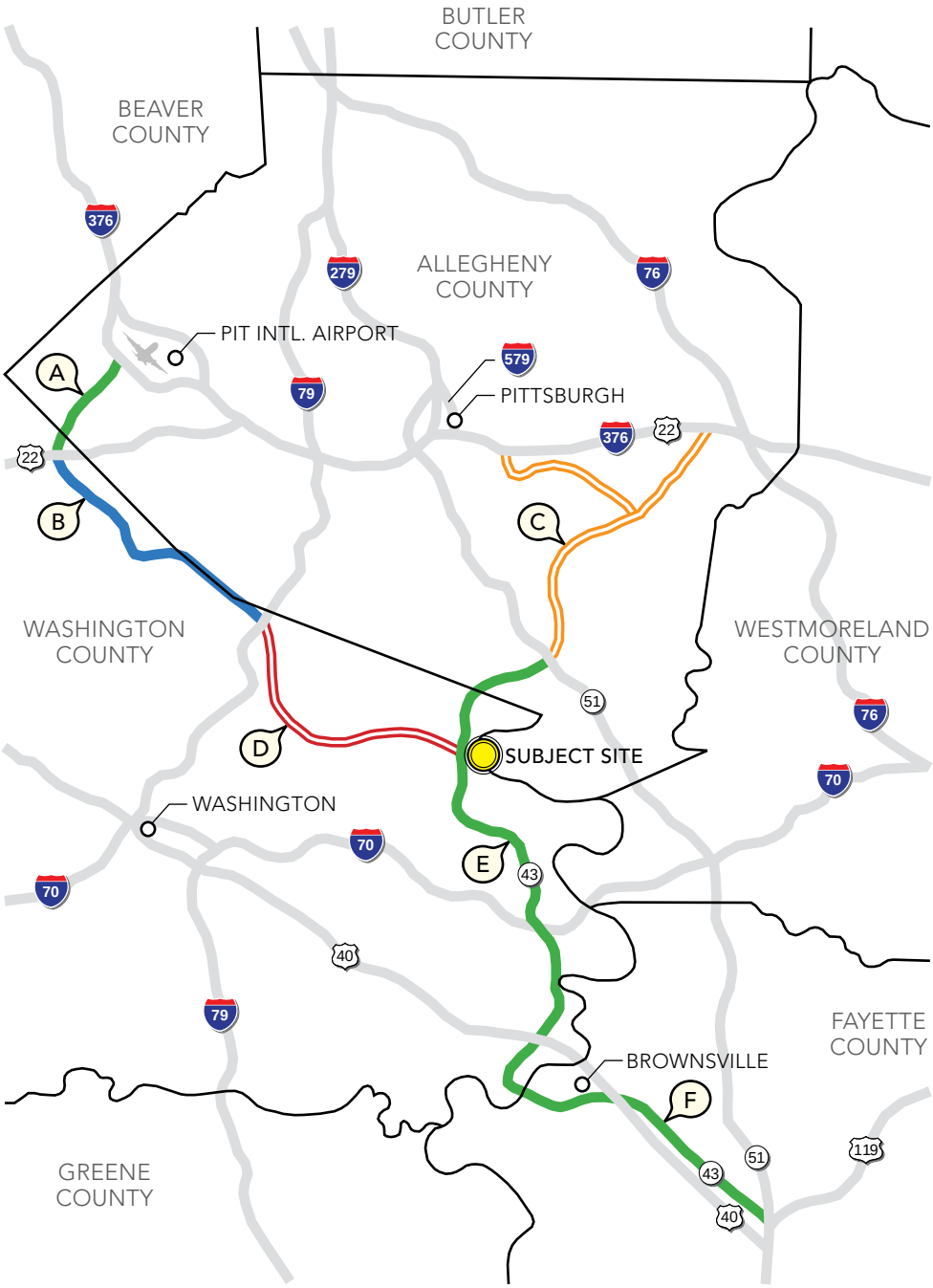
Site Roadway Access - Currently via several local, unimproved 2-lane roads.

EXISTING TRANSPORTATION



PA TPK 43 is part of the Southern Beltway roadway network that will ultimately provide a high-speed southern loop around the Pittsburgh Metropolitan Area, from I-376/Pittsburgh International Airport in the west to I-376/Monroeville in the east. A future section of the Southern Beltway, the "I-79 to the Mon-Fayette Expressway" section, will interchange with existing PA TPK 43 in the vicinity of the Subject Site.

According to the Pennsylvania Turnpike Commission, the I-79 to Mon-Fayette Expressway section is currently prioritized for construction after both the US Route 22 to I-79 section (under construction, due to open in 2020) and the PA Route 51 to I-376 section are completed.



Legend

- County Boundaries
- Major Highways
- Completed Roads
- Under Construction
- Priority Project #1
- Priority Project #2

A: Findlay Connector

Opened October 2006.

B: U.S. Route 22 to I-79

Construction is underway and is scheduled to be completed in 2020.

C: PA Route 51 to I-376

Final design, right-of-way acquisition, and construction of the project will continue as funding becomes available.

D: I-79 to Mon-Fayette Expressway

The Turnpike Commission will proceed with final design, right-of-way acquisition, and construction of the project as funding becomes available.

E: I-70 to PA Route 51

Opened April 2002.

F: Uniontown to Brownsville

Project construction in two phases.
Phase 1 opened October 2008 and an additional interchange with PA Route 51 and U.S. 119 is scheduled to open December 2018
Phase 2 opened July 2012.

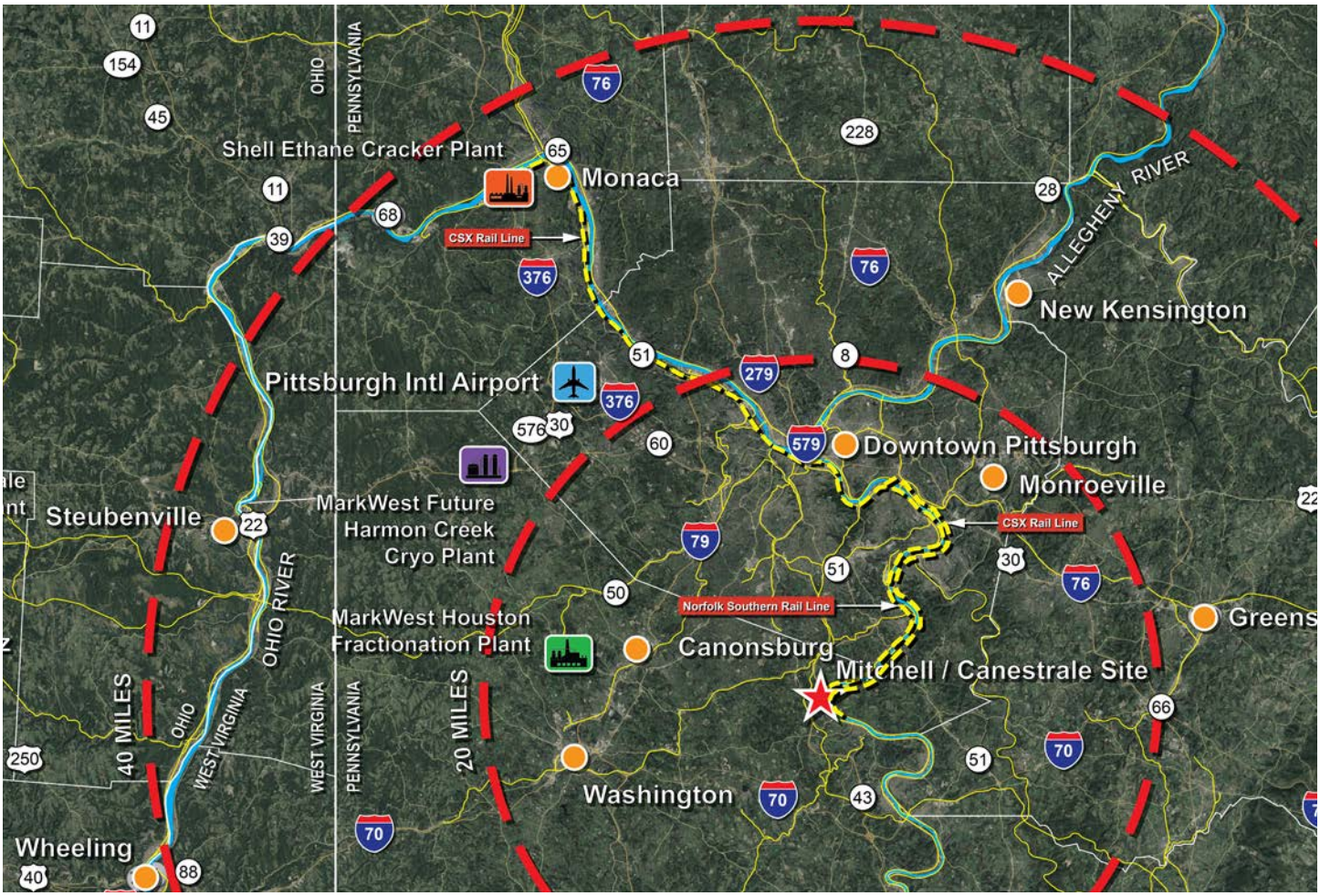
Two (2) Norfolk Southern mainline tracks (The Mon Line) parallel the Power Plant Site. There is opportunity for switch tracks to be installed at north and south ends and a swing track extended into the Power Plant Site. Installing a mainline switch into the north end of the site would add a significant amount of difficulty/ expense. Norfolk Southern approval of a turnout in that location would be heavily dependent on sufficient traffic/business levels (which would need to justify the work involved). It would be safer to assume that rail access would only come from the South end. While this would likely preclude the option for unit train service, Norfolk could likely bring in smaller amounts of cars in manifest service.

- Approximately 7,900 linear feet rail track
- Room at south end of Power Plant Site for additional spurs for railyard facility
- 200,000 square feet (4.5 acres) of flat, reclaimed coal storage area for general use/redevelopment - possible future railyard
- One rail crossing on entrance road to site

The Mon Line parallels the Monongahela and Ohio Rivers and extends directly from the Subject Site to the Shell Appalachia Ethane Cracker facility currently under construction in Monaca, PA.

The Subject Site has approximately 4,900 linear feet of direct frontage on the Monongahela River. This frontage includes:

- 30 Mooring Cells/Load Cells
- Fleeting for Over 100 Barges



2.5 EXISTING UTILITIES

Information on existing utilities serving the Subject Site was obtained through a variety of sources, including Pennsylvania One Call, direct contacts to utility providers, and onsite observations. Findings for each primary utility are summarized below.

Power

Electrical service to the Subject Site is provided by West Penn Power Company.

As shown in Existing Utilities, several high-tension power lines emanate from the West Penn Power Company substation on the Power Plant Site and traverse the North and South Sites.

With an operating substation within the Power Plant Site, First Energy has indicated that, at this time, electrical service for a new user at the site is available in the range of 100-200 MW of primary power at 138KV. This level of power availability is significant and is sufficient to support a variety of industrial power users.

As discussed in Appendix G Energy Options, several alternative methods for providing power at the site were investigated, including:

- Renewable Energy
- Combined Heat & Power (CHP)
- Battery Energy Storage Systems

In general, renewable energy sources could offer opportunities for site users with limited power needs. A CMP system, however, could make use of natural gas to provide a more efficient energy system for a larger mixed-use campus and industrial facilities that have 24/7 usage profiles.

Water

Water service to the Subject Site is provided by Pennsylvania American Water Company.

Line sizes in the area range from a 12" line running down Courtney Hill Road that downsizes to an 8" line at Route 837 at the south end of the site.

Sanitary Sewer

Sanitary sewer service to the Subject Site is provided by New Eagle Sanitary Authority.

New Eagle's wastewater treatment plant (WWTP) is located one-half mile south of the Mitchell Power Station and has a pump station where Mingo Creek enters the Monongahela River at Medira Street. The WWTP has a capacity of 800,000 GPD but is only processing 200,000 GPD at present.

Natural Gas

Natural gas service to the Subject Site is provided by Peoples Natural Gas:

- Peoples Natural Gas: Peoples pipelines traverse the site in a generally north-to-south direction and provide methane service.

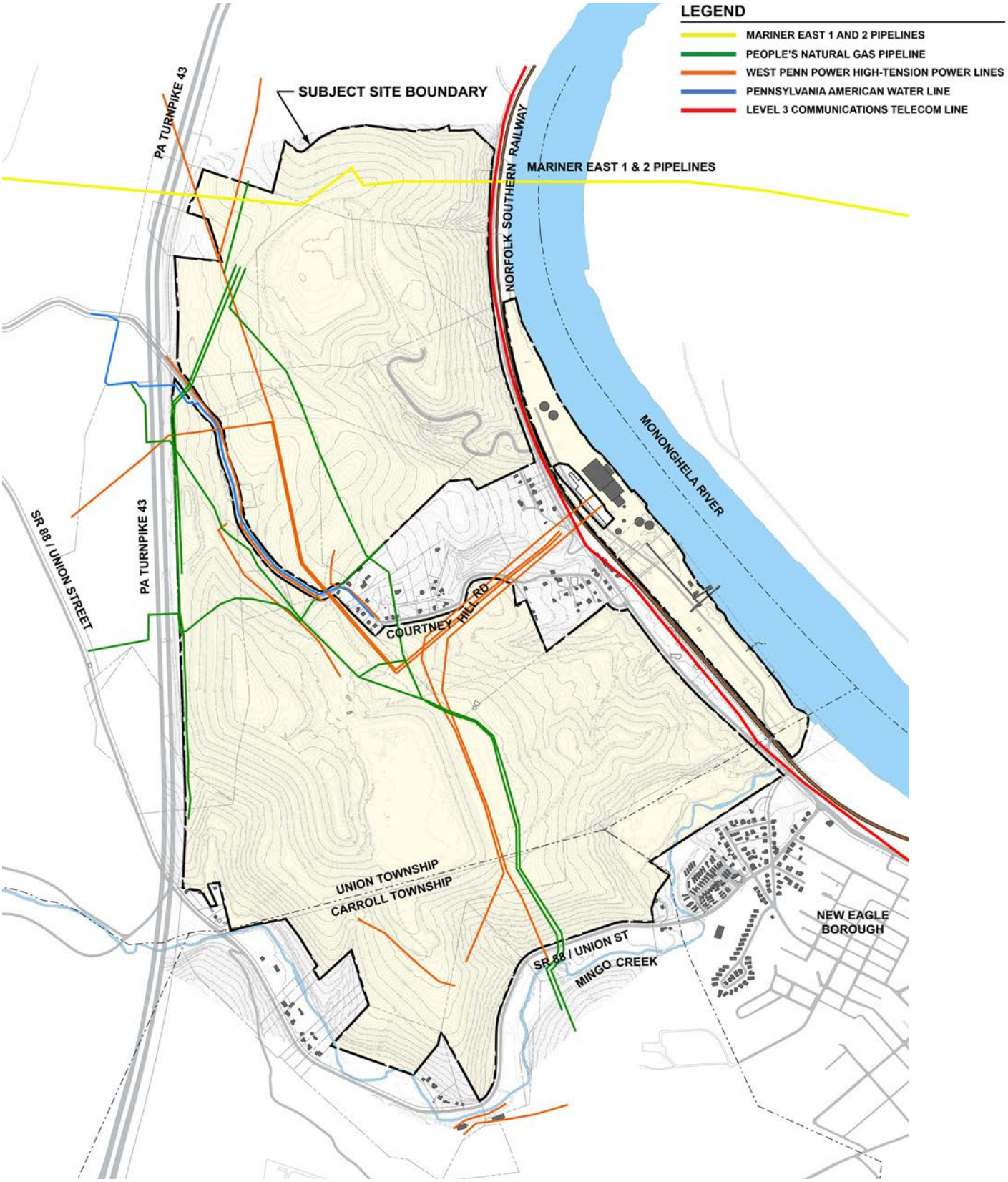
- In addition, Mariner East 1 & 2 Pipelines cross the site from east-to-west at the northern part of the North Site and carry liquid propane and ethane. Mariner 1 commenced operations in Q4 2014 and Q1 2016 and provides interstate and intrastate propane and ethane service. Mariner East 2 is expected to commence operations in Q3 2017 and will provide propane, ethane, and butane service.

Telecom

It appears telecom service to the Subject Site is provided by Level 3 Communications via an underground telecom line paralleling the Norfolk Southern rail line through the site.

Verizon Pennsylvania LLC and Comcast Cable TV did not respond to requests for information.

EXISTING UTILITIES



2.6 EXISTING ENVIRONMENTAL CONDITIONS

The Natural Resource Development Constraints map from the Washington County Comprehensive Plan indicates several constraints associated with portions of the Subject Site, including:

- Floodplain
- High Quality Watershed
- Steep Slope (>25%)

At present, the site is characterized by significant topographic elevation changes. The site high point, located at the top of the coal refuse disposal area on the South Site, is approximately 1,245 feet above sea level, while the site low point, located in the southeast corner of the South Site, is approximately 775 feet above sea level. This results in a total site elevation differential of approximately 470 feet.

Much of the site is underlain by the Mathies Coal Mine. The central portion of the North Site is occupied by a Coal Combustion Residual (CCR) landfill containing stabilized Flue Gas Desulfurization (FGD) waste from the former power plant operations.

In addition, the central portion of the South Site is occupied by a Coal Refuse pile. A significant portion of the Canestrale property contains a permitted coal refuse disposal area. This area contains both coarse coal refuse and fine coal slurry refuse generated by the former coal preparation plant that processed coal form the Matthies Mine. The requirements for final reclamation and closure of the coal refuse area are defined by a Consent Order and Agreement (COA) executed between the Pennsylvania Department of Environmental Protection (PADEP) and Canestrale Environmental Control Corporation. The COA makes the PADEP responsible for water quality discharges from the coal refuse area. Redevelopment of the South Site will involve significant grading of coarse and fine coal refuse materials. Coarse coal refuse materials are "typically" suitable for grading operations for redevelopment of the site; subject to further evaluation and testing to determine if expansive pyritic materials are present in the refuse. Over-excavation and removal of fine coal slurry materials may be required during regrading.

Alternatively, it may be feasible to "encapsulate" fine coal slurry materials, de-water and consolidate these materials during regrading for redevelopment. Further evaluation and testing of the fine coal slurry materials should be considered to determine the feasibility of re-processing these materials. As a result of the COA, the PADEP is a stakeholder in the redevelopment of the South Site and implementation of the Playbook strategies.

The Power Plant Site riverfront is comprised of several differing conditions at water's edge:

- Reach 1: Downstream Natural Vegetated Earth Slope
- Reach 2: Low-Elevation Sheetpile Wall
- Reach 3: Reinforced Concrete Flood Wall
- Reach 4: High-Elevation Sheet Pile Wall
- Reach 5: Porch Deck
- Reach 6: Upstream Natural Vegetated Earth Slope
- FE Shoreline Adjacent to Canestrale
- Canestrale Shoreline

Phase I Environmental Site Assessments were performed in support of this project and are included as Appendix A to this Playbook. The Phase I ESA were produced as two separate documents, one for Canestrale properties and one for First Energy properties.

Key findings for the First Energy properties revealed no Recognized Environmental Conditions (RECs) except for the following, summarized from the Phase I ESA:

- Small reportable spills/releases occurred at the Mitchell power station during it's operating life. This REC appears to have a low potential to significantly impact the environmental condition of the Subject Site.
- The Mathies Mine site historically operated 11 Underground Storage Tanks (USTs). This REC appears to have a low potential to significantly impact the environmental condition of the First Energy Site.

- Three USTs were located at Mitchell power plant from the 1980s until the mid-to-late 1990s. The materials stored in the tanks could impact the environmental condition of the Subject Site.

- Onsite groundwater monitoring points indicate that releases from CCR landfill may have impacted onsite groundwater. This REC appears to have a low potential to significantly impact the environmental condition of the Subject Site.

- A large Above-Ground Storage Tank (AST) without secondary containment is located on the east side of the CCR landfill. This REC appears to have a low potential to significantly impact the environmental condition of the Subject Site.

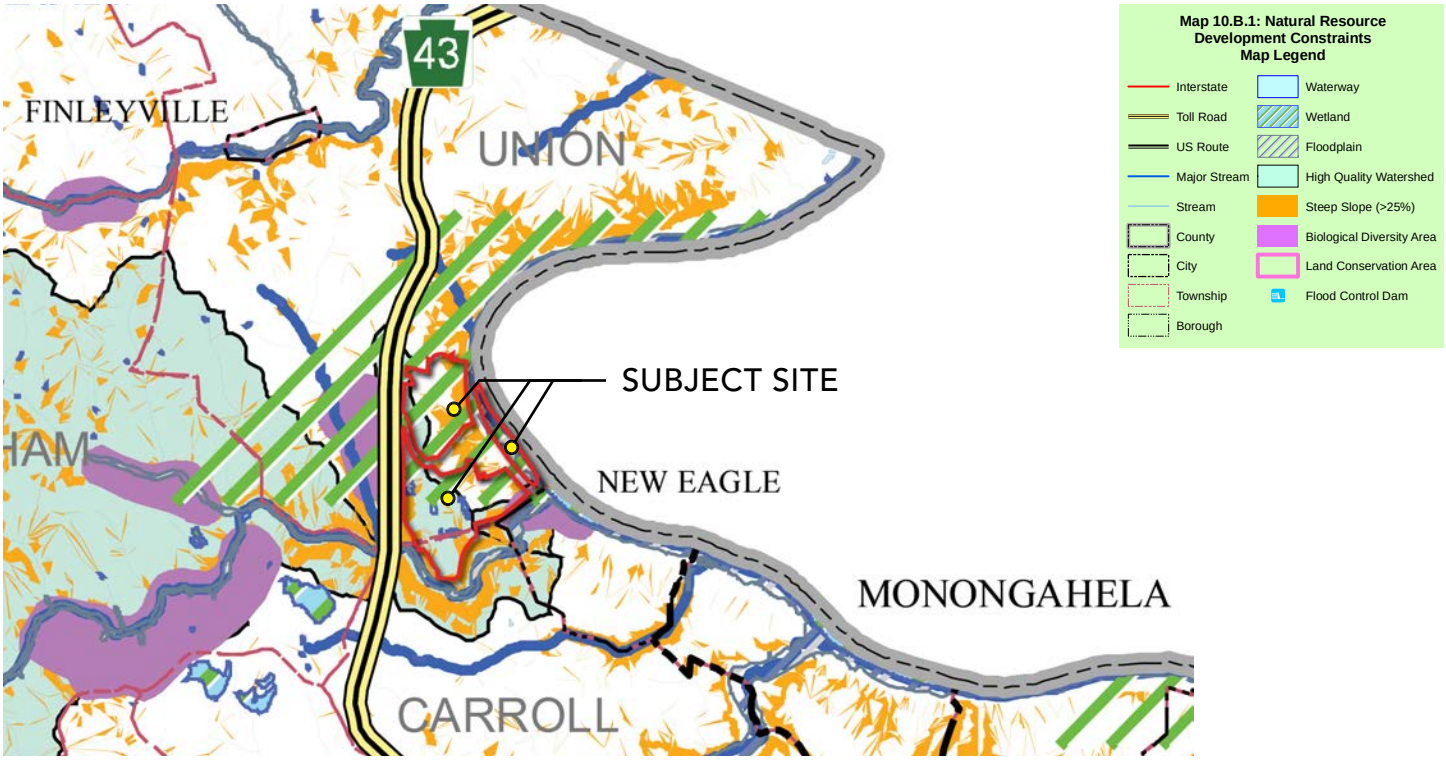
- After retirement of Mitchell power plant, the basement flooded with river water, which became impacted by oil. This REC appears to have a low potential to significantly impact the environmental condition of the Subject Site.

Key findings for the Canestrale properties revealed no Recognized Environmental Conditions (RECs) except for the following, summarized from the Phase I ESA:

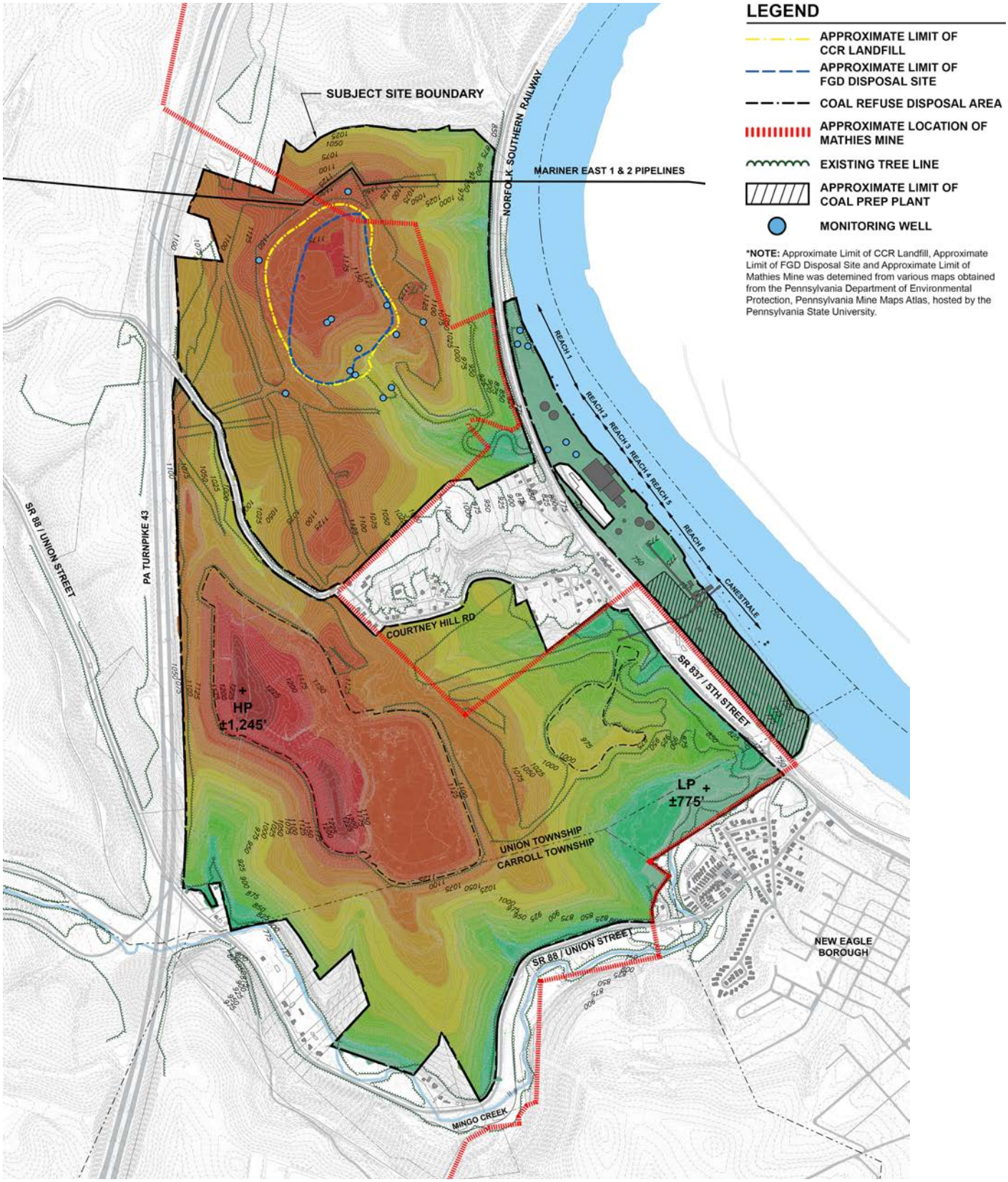
- Historic UST's were located at the Mathies Mine Site, and one UST potentially remains. If released, the materials stored in the UST could impact the environmental condition of the Subject Site.

- Releases from leaking transformers and drums/containers of unknown substances contaminated soils at the prep plant and Coal Refuse Disposal Area (CRDA). Impacts to site soils and/or groundwater could remain.

- Groundwater appears to be impacted by historic mining operations. Hazardous constituents in the discharges could impact the environmental condition of the site.



EXISTING ENVIRONMENTAL CONDITIONS



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3 MARKET ANALYSIS

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3.0 MARKET ANALYSIS

The purpose of this section is to summarize market demand, potential redevelopment scenarios, financial feasibility, and economic impacts related to redevelopment of the Mitchell Power Station and Adjacent Canestrale Properties site (Subject Site). For more detail related to the content of this section, see the following attachments to this Playbook document:

- Appendix E – Highest & Best Use Analysis
- Appendix H – Development Cost Estimates & Site Capacity Analysis

3.1 MARKET ANALYSIS HIGHLIGHTS

The isolated location of the Subject Site relative to the region's commerce and population centers, combined with limited population growth and spending power in the vicinity of the site, makes most residential and commercial uses infeasible from a market demand perspective. Conversely, the site's location, history, and physical attributes make it a much more likely candidate for industrial redevelopment.

The growing natural gas industry in Southwestern Pennsylvania, as indicated in the Marcellus and Utica NGL Existing and Planned Infrastructure map below, makes natural gas and natural gas liquids (NGL) supply chain-related industrial uses a logical fit for the Subject Site.

The Shell cracker in Beaver County as well as any other ethane cracker facilities developed in the region will offer a steady supply of ethylene/polyethylene, a key input to manufacturers in a number of industries.

Based on market research, the best opportunities for business attraction for the region are found in chemical and plastics manufacturing. The following are industries that could potentially locate on the Subject Site:

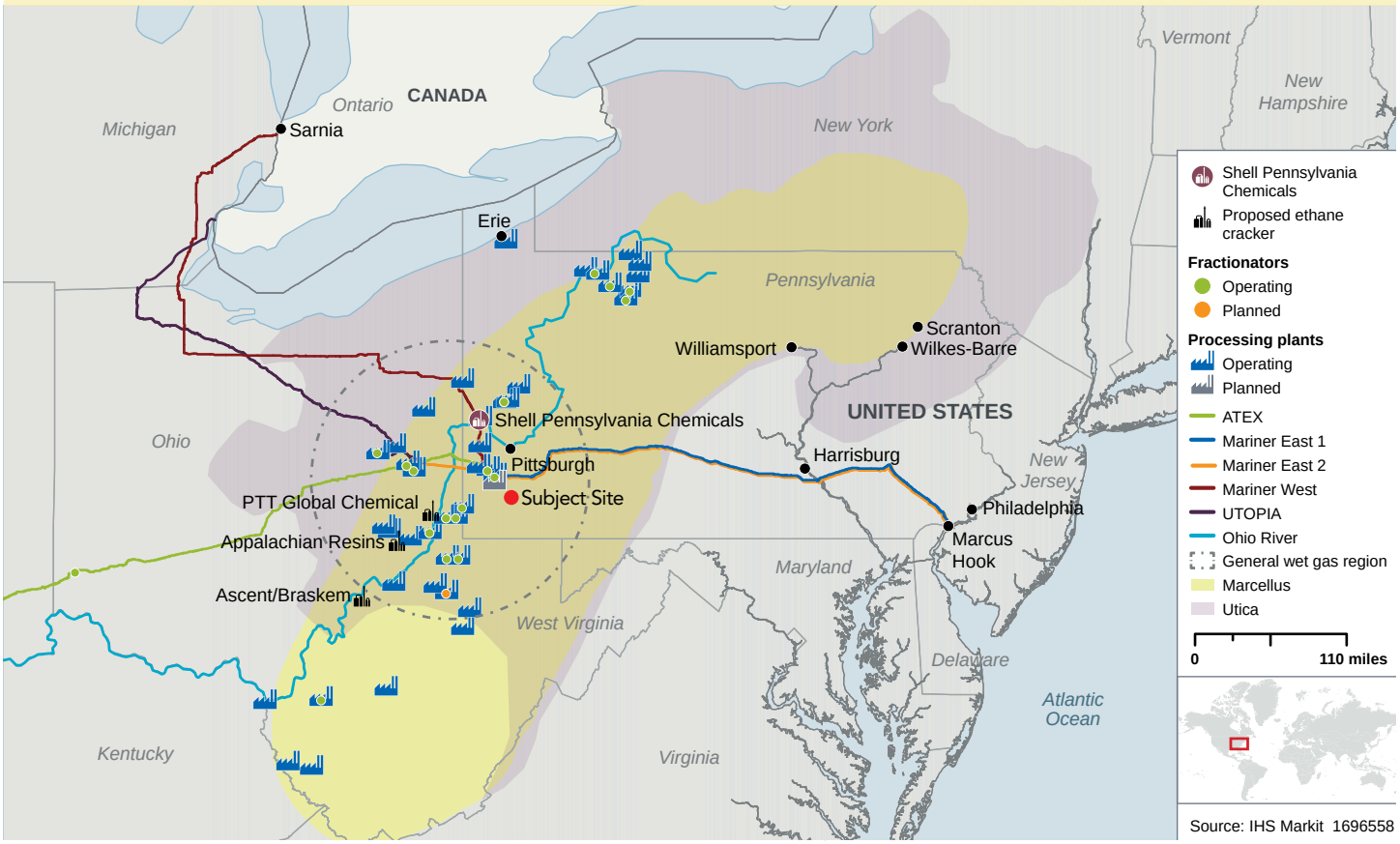
Plastics Manufacturing

- Plastic Film, Sheet & Bag Manufacturing
- Plastic Pipe & Parts Manufacturing
- Laminated Plastic Manufacturing
- Plastic Bottle Manufacturing
- Miscellaneous Plastics Products
- Plastics Wholesaling

Chemical Manufacturing

- Petrochemical Manufacturing
- Organic Chemical Manufacturing
- Plastics & Resin Manufacturing
- Adhesive Manufacturing
- Chemical Wholesaling
- Fuel Blending/Refining

MARCELLUS AND UTICA NGL EXISTING AND PLANNED INFRASTRUCTURE

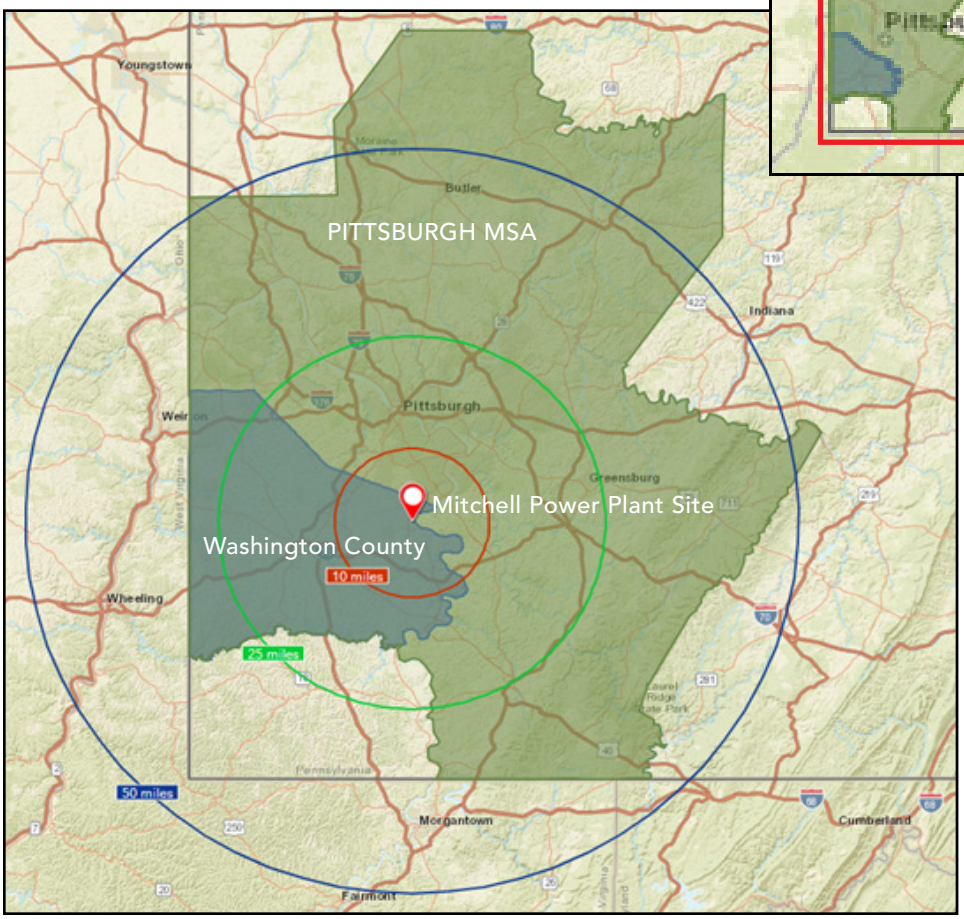


3.2 REGIONAL ECONOMIC CONTEXT

To provide context for the market assessment, historic and projected employment data for Washington County and the Pittsburgh Metropolitan Statistical Area (MSA) was analyzed to understand economic and industry trends in the region.

When looking at the economy for the Pittsburgh MSA as a whole from 2007-2017, the effects of the booming oil and gas extraction industry are masked by major losses in Manufacturing (-16,000 jobs, -16%), Government (-14,600 jobs, -11%), Construction (-7,200 jobs, -10%), and Information (-5,300 jobs, -24%). For the most part, these are the same sectors that have shown losses within Washington County. Besides transformation in the MSA's economy due to these factors, the Pittsburgh MSA is also going through a dramatic positive transformation driven by growth in high tech, professional and technical related industries

Despite the strong representation of the oil and gas extractive sector, manufacturing industries in the natural gas supply chain have yet to gain from opportunities due to proximity. At the metro level, Chemical Manufacturing has experienced a decline of 1,200 jobs (-21%) since 2007, and Plastics and Rubber Product Manufacturing has added just 20 jobs (+1%). The continuation of gas extraction and processing in the region offers an opportunity to reverse these trends and grow opportunities in these downstream manufacturing sectors. This can occur to proximity to gas but also with proximity to markets, rail, river along with developable sites.



3.3 MARKET ANALYSIS INTERVIEWS - KEY/RECURRING THEMES

In order to gain real-time industry perspective on market demand and redevelopment potential for the Subject Site, interviews were conducted with a range of leading Pittsburgh regional real estate and economic development professionals in mid-August 2017. Interviewees included:

- **Rick O'Brien**, Executive Vice President – Jones Lang LaSalle (JLL), Commercial/Industrial Real Estate
- **Brian Goetz**, Executive Vice President – The Buncher Company, Industrial Development
- **Tony Rosenberger**, President & COO – Chapman Properties, Industrial Development
- **Patty Horvatich**, Vice President Business Investment & **Mike Henderson**, Senior Director Business Investment – Pittsburgh Regional Alliance
- **Helen Hart**, General Solicitor & **Joe Torp**, Development Engineer – Norfolk Southern, Railroad Company
- **Bob Griffin**, Economic Development Director & **Susan Morgan**, Brownfields & Municipal Planning Manager – Redevelopment Authority of the County of Washington
- **Barry Ford**, President – Continental Real Estate Companies, Retail/Commercial Development
- **Matt Pitzarella**, Director Energy, Environmental & Natural Resources – Buchanan Ingersoll Rooney PC, Law Firm

Over the course of the interviews, a number of "Key/Recurring Themes" emerged. These key issues, observations, and trends are summarized below.

KEY/RECURRING STAKEHOLDER THEMES

A number of "Key/Recurring Themes" emerged from the interviews, opinions on particular issues that spanned across most or all of the sessions. Given the diversity of interest represented by the eight interviews, the themes identified are important factors to consider and address in a successful reuse strategy for the Mitchell Power Station & Adjacent Canestrale Properties.

What we heard:

Redevelopment of the site as an industrial center serving natural gas and NGL-related users could create a new employment paradigm for this part of the Mon Valley.

Large "Footer-Ready" Industrial Sites Develop Quickly:

"Ready-to-Go" land with infrastructure and regulatory efficiencies in place is attractive to the market.

Retail/Commercial/Residential Uses Not a Good Fit:

Commercial mixed use will not work here, due limited population, amenities, etc.

Big Industrial User Would Drive Infrastructure Changes:

Similar to the Shell Ethane Cracker, a significant industrial employment generator could re-prioritize regional infrastructure capital improvement planning.

Plastics Manufacturers a Key Target Industry:

As the Shell Ethane Cracker continues to ramp, more interest is expected from plastics, chemical, and other manufacturing companies.

Workforce Within 30 Miles:

Site selectors will look at the laborshed within a 30-mile radius of the site.

Industrial Use a Good Fit:

Key site attributes, including rail, river, road, large site in cohesive ownership, industrial legacy, make this a natural industrial site.

Very Active Industrial Market:

Industrial market in the region has been very active over the last 3-5 years.

3.4 POTENTIAL USES

Based on the Key/Recurring Themes identified in interviews with industry leaders and a preliminary evaluation of site selection factors for the Subject Site, the pool of potential uses was narrowed. The isolated location of the site relative to the region's commerce and population centers, combined with limited population growth and spending power in the vicinity of the site, makes most residential and commercial uses infeasible from a market demand perspective.

Conversely, the site's location, history, and physical attributes make it a much more likely candidate for industrial development. The Potential Use table below summarizes these findings.

POTENTIAL USE	LIMITED MARKET FEASIBILITY	POTENTIALLY MARKET FEASIBLE
Single-Family Residential	X	
Multi-Family Residential	X	
Retail & Restaurant	X	
Residential & Commercial Mixed-Use	X	
Hotel	X	
Office	X	
Medical Office	X	
R&D		X
Light Industrial/Flex		X
Warehousing, Distribution, Cold Storage		X
Manufacturing/Heavy Industrial		X
Power Generation/Distribution		X
Ethane Cracker		X
Other NGL-Related Facilities		X
Waste Coal-Related		X

The growing natural gas industry in Southwest Pennsylvania makes natural gas and natural gas liquids (NGL) supply chain-related industrial uses a logical fit for the Subject Site.

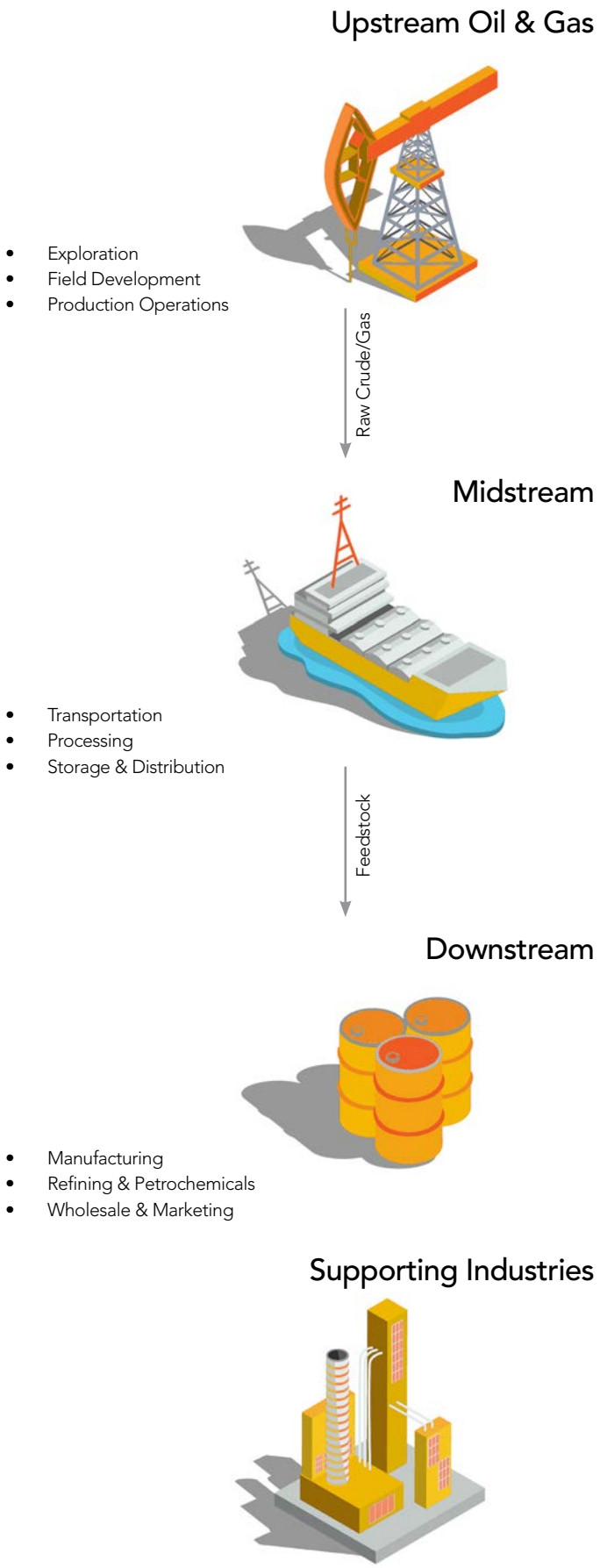
The first large-scale, NGL-based petrochemical investment in Pennsylvania is the Shell Pennsylvania Chemicals ethane cracker in Beaver County. It is slated to be a world-scale, ethane-fed cracker that will produce 1.5 million metric tons (MT) per year of ethylene, which will be converted to over 1.0 million MT per year of high-density polyethylene (HDPE) and 550,000 MT per year of linear low-density polyethylene (LLDPE). HDPE and LLDPE are two of the fastest growing and largest volume plastic resins globally. IHS Markit forecasts this project to be completed by 2021–22 despite the significant feedstock and transportation infrastructure required to meet the project's needs, beyond that which is normally incurred in a comparable US Gulf Coast (USGC) facility.

According to IHS Markit, between 2026 and 2030 the expected ethane production from the Marcellus and Utica Shale plays will be enough to support up to four additional world-scale ethane crackers in Pennsylvania, even after meeting the demand from the future Shell Pennsylvania Chemicals ethane cracker. This is also in addition to meeting the demand for ethane from pipelines currently shipping it out of the region and future pipeline projects that will do the same.

The natural gas supply chain is commonly separated into three segments: upstream, midstream, and downstream.

From an industrial use perspective, downstream manufacturing represents a potential opportunity for the Subject Site, and adequate ethane cracking capacity is key to unlocking this potential within the larger region generally.

A more detailed assessment of use potential for the Subject Site is documented in the table on the following page.



DETAILED ASSESSMENT OF POTENTIAL USE

1 - Limiting Factors

2 - Some Potential

3 - Strong Fit

POTENTIAL USE	LOCATION/ MARKET	SITE FEATURES	TRANSPORTATION	UTILITIES	LABOR	TOTAL
LIGHT INDUSTRIAL						
Light Manufacturing & Assembly related to regional supply chains and markets	2	3	2	3	2	12
Logistics, Warehouse, Supply Chain	2	3	2	3	2	12
NATURAL GAS-RELATED HEAVY INDUSTRIAL						
Feedstock mfg from NGLs (ethane, propane, butane, natural gasoline, isobutane)	1	2	2	3	2	10
Shell-produced polyethylene intensive mfg	3	3	2	3	2	13
Other NGL intensive mfg (eg resins, chemicals, rubbers, fertilizers)	3	3	2	3	2	13
Natural gas energy intensive mfg (eg food, steel, glass relying on NG for heat or power)	3	3	2	3	2	13
Natural gas-fired power generation to support adjacent mfg.	2	3	2	3	2	12

3.5 PRIMARY INDUSTRY TARGETS FOR ATTRACTION

The Shell cracker in Beaver County as well as any other ethane cracker facilities developed in the region will offer a steady supply of ethylene/polyethylene, a key input to manufacturers in a number of industries. Based on market research, the best opportunities for business attraction for the region are found in chemical and plastics manufacturing. These are industries that could potentially locate on the Subject Site. Below are the specific industry sectors by five-digit NAICS code.

PRIME INDUSTRY TARGETS FOR ATTRACTION	
CHEMICAL MANUFACTURING	PLASTICS MANUFACTURING
32511 - Petrochemical Manufacturing	32611 - Plastic Film, Sheet & Bag Manufacturing
32519 - Organic Chemical Manufacturing	32612 - Plastic Pipe & Parts Manufacturing
32521 - Plastics & Resin Manufacturing	32613 - Laminated Plastic Manufacturing
32552 - Adhesive Manufacturing	32616 - Plastic Bottle Manufacturing
42469 - Chemical Wholesaling	32619 - Miscellaneous Plastics Products
	42461 - Plastics Wholesaling

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4 REUSE STRATEGY ALTERNATIVES

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4.0 REUSE STRATEGY ALTERNATIVES

The purpose of this section is to present three potential redevelopment scenarios for the Mitchell Power Station and Adjacent Canestrale Properties site (Subject Site), along with financial feasibility and economic impacts associated with the three scenarios. For more detail related to the content of this section, see the following attachments to this Playbook document:

- Appendix E – Highest & Best Use Analysis
- Appendix F – Concept Grading Plans & Earthwork Estimates
- Appendix G – Energy Options Assessment
- Appendix H – Development Cost Estimate & Site Capacity Analysis

4.1 REUSE STRATEGY ALTERNATIVES HIGHLIGHTS

In response to the market dynamics and physical site characteristics identified earlier in this document, three strategic alternatives for reuse of the site have been prepared. Each alternative responds to market forces in a different way, thus providing a menu of "plays" designed to appeal to a range of differing investor/developer goals:

Reuse Strategy A
Natural Gas/NGL-Related Manufacturing:

Use of the entire ± 856-acre site (North Site, South Site, Power Plant Site) to accommodate one or two large manufacturing enterprises.

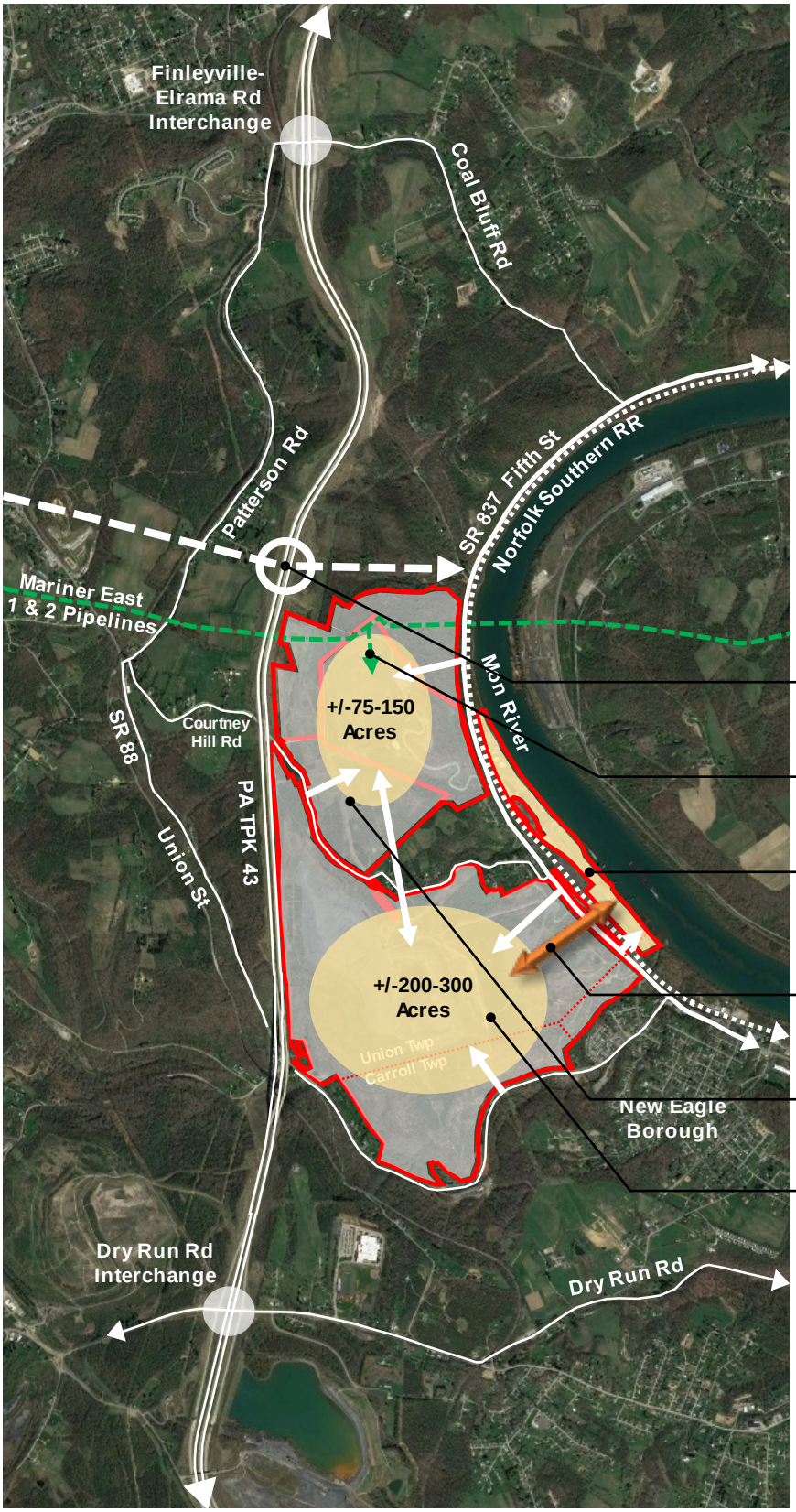
Reuse Strategy B
North & South Sites Industrial Park:

Use of the North and South Sites only (± 799 acres) to accommodate an industrial park.

Reuse Strategy C
Power Plant Site:

Use of the Power Plant Site along the riverfront only (± 57 acres) to accommodate a manufacturing use.

4.2 REUSE STRATEGY A - NATURAL GAS/NGL-RELATED MANUFACTURING



Reuse Strategy A includes the North and South Sites and the Power Plant Site, totaling ± 856 acres.

Reuse Strategy A is designed for one or two large industrial facilities that require direct connections to rail and river access, direct connections to natural gas and/or natural gas liquids (NGLs), and a robust power supply.

Targeted users under this strategy could include manufacturers utilizing Shell Ethane Cracker-produced feedstock (plastics manufacturers), other NGL-intensive manufacturers (resins, chemicals, rubbers), and natural gas energy-intensive manufacturers (food, steel, glass).

Potential Interchange & Future Southern Beltway

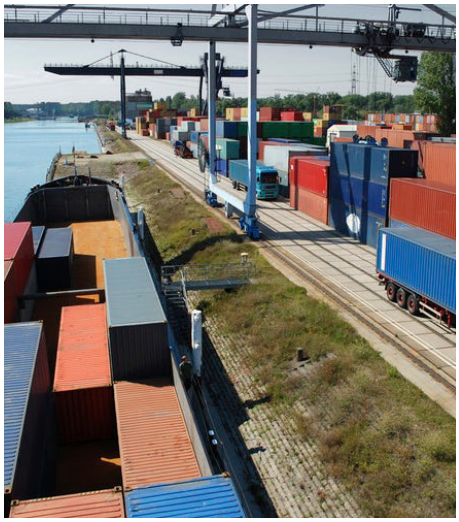
Direct Connection to Mariner East Pipelines

Power Plant Site - Multi-Modal Transport Center - Rail, Road, River (+/- 57 acres)

Materials/Products Conveyor Linkage

North Site - Natural Gas-Related Manufacturing

South Site - Natural Gas-Related Manufacturing



PPG

CORNING

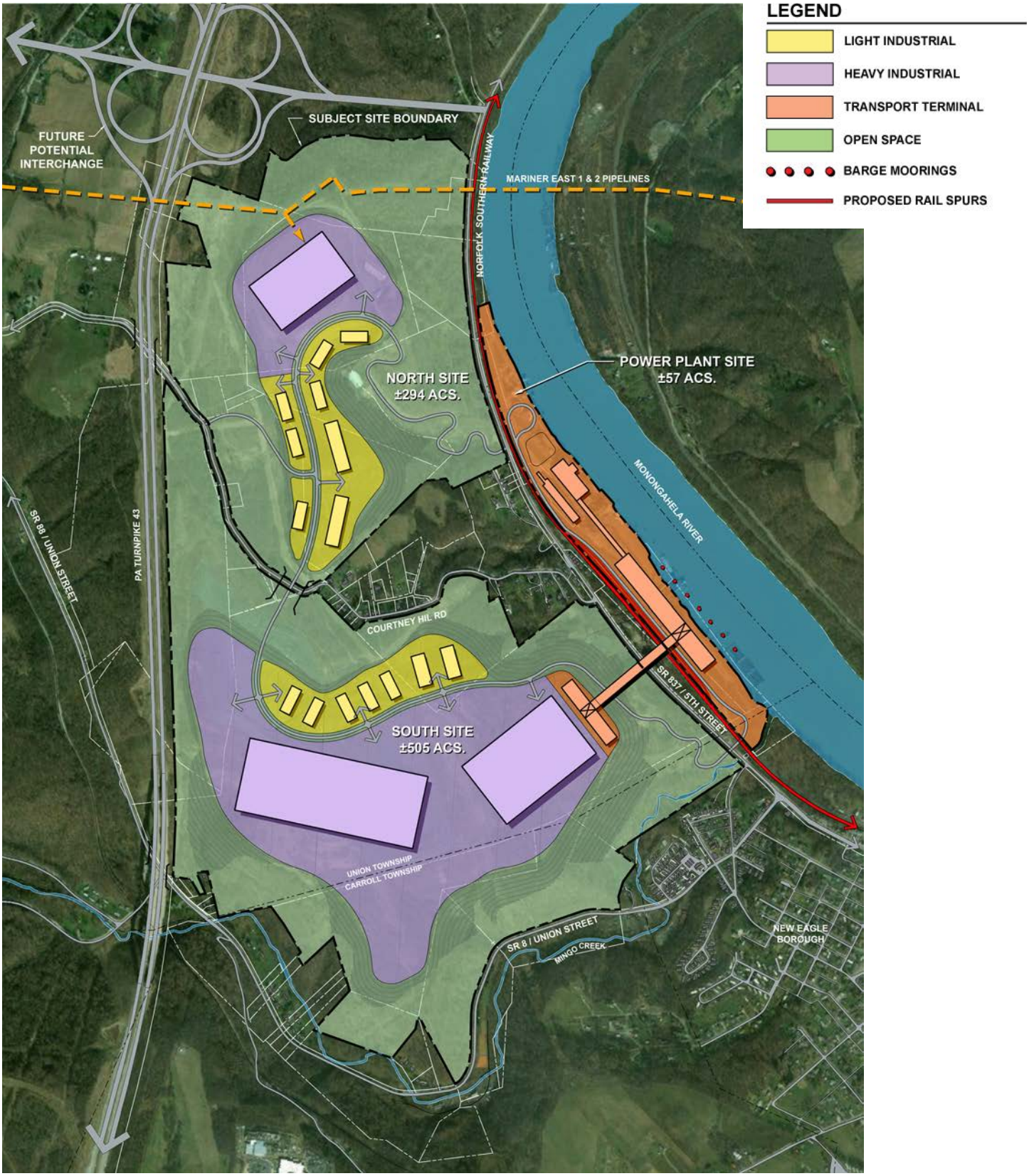
As illustrated in Land Use Concept A, this reuse strategy develops the North and South Sites with balanced earthwork to create two large pad-ready sites. A loop road is introduced to link the North and South Sites into a cohesive development, while the alignment of the loop road on the development pads creates large sites for primary manufacturing users and smaller sites for secondary supporting uses.

The Power Plant Site along the riverfront is redeveloped as a transport terminal supporting the primary manufacturing use. The existing power plant building is repurposed as a storage facility with administrative space for the transport function. In addition, this concept offers the opportunity of a direct conveyance link, such as an automated material handling system (AMHS), between the transport terminal on the riverfront and the primary manufacturing facilities on the adjacent South Site.

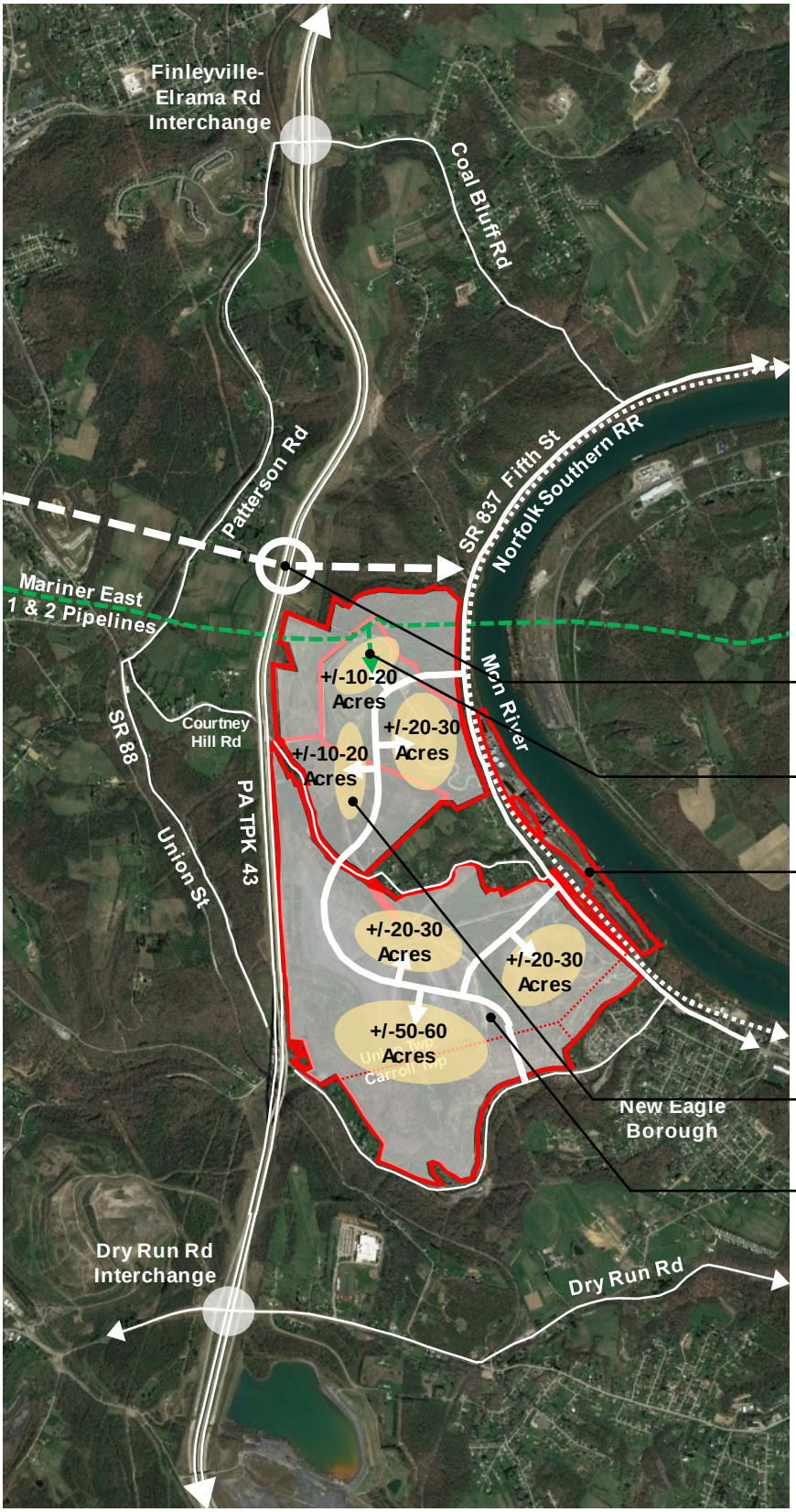
The Reuse Strategy A Summary below provides key metrics associated with this strategy. See the Site Capacity Analysis in Appendix H for additional detail.

REUSE STRATEGY A SUMMARY	
ITEM	ACRES
Gross Site Area	856
Buildable Site Area	382
Total Buildable Site Area	45%
ITEM	SQUARE FEET
Manufacturing	4,928,000
Light Industrial	900,000
Transport-Related Storage/Admin	580,270
Total Potential Building Gross Floor Area (GFA)	6,408,270

STRATEGY A LAND USE



4.3 REUSE STRATEGY B - NORTH & SOUTH SITES INDUSTRIAL PARK



Reuse Strategy B includes the North and South Sites, totaling ± 799 acres. The Power Plant Site is not included or developed in this alternative.

Reuse Strategy B is designed for a variety of light industrial facilities co-located in a cohesive industrial park setting, with the potential for direct connections to natural gas and/or natural gas liquids (NGLs), and a robust power supply.

Targeted users under this strategy could include light manufacturing and assembly related to regional supply chain and markets, and logistics, warehouse, and supply chain entities.

Potential Interchange & Future Southern Beltway

Direct Connection to Mariner East Pipelines

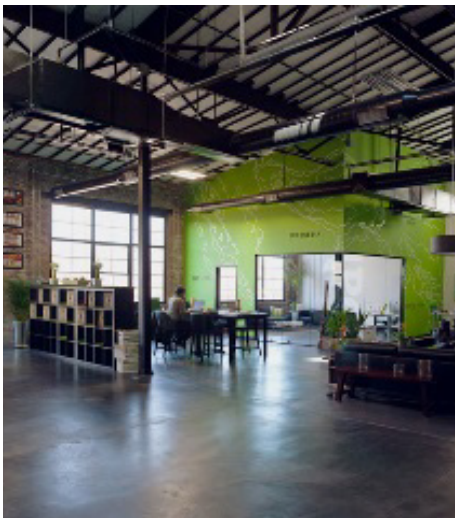
Power Plant Site - Undeveloped (+/- 57 acres)

North Site - Light Industrial, Tech, Assembly

South Site - Light Industrial, Tech, Assembly

SMS
MEER
SMS
MEER

MATTHEWS
INDUSTRIAL PARK
SOUTH CAROLINA'S
Global Logistics Triangle
I-95 US301 I-26
TRI-COUNTY
ELECTRIC
COOPERATIVE



amazon
fulfillment
main entry

CORNER CAFE

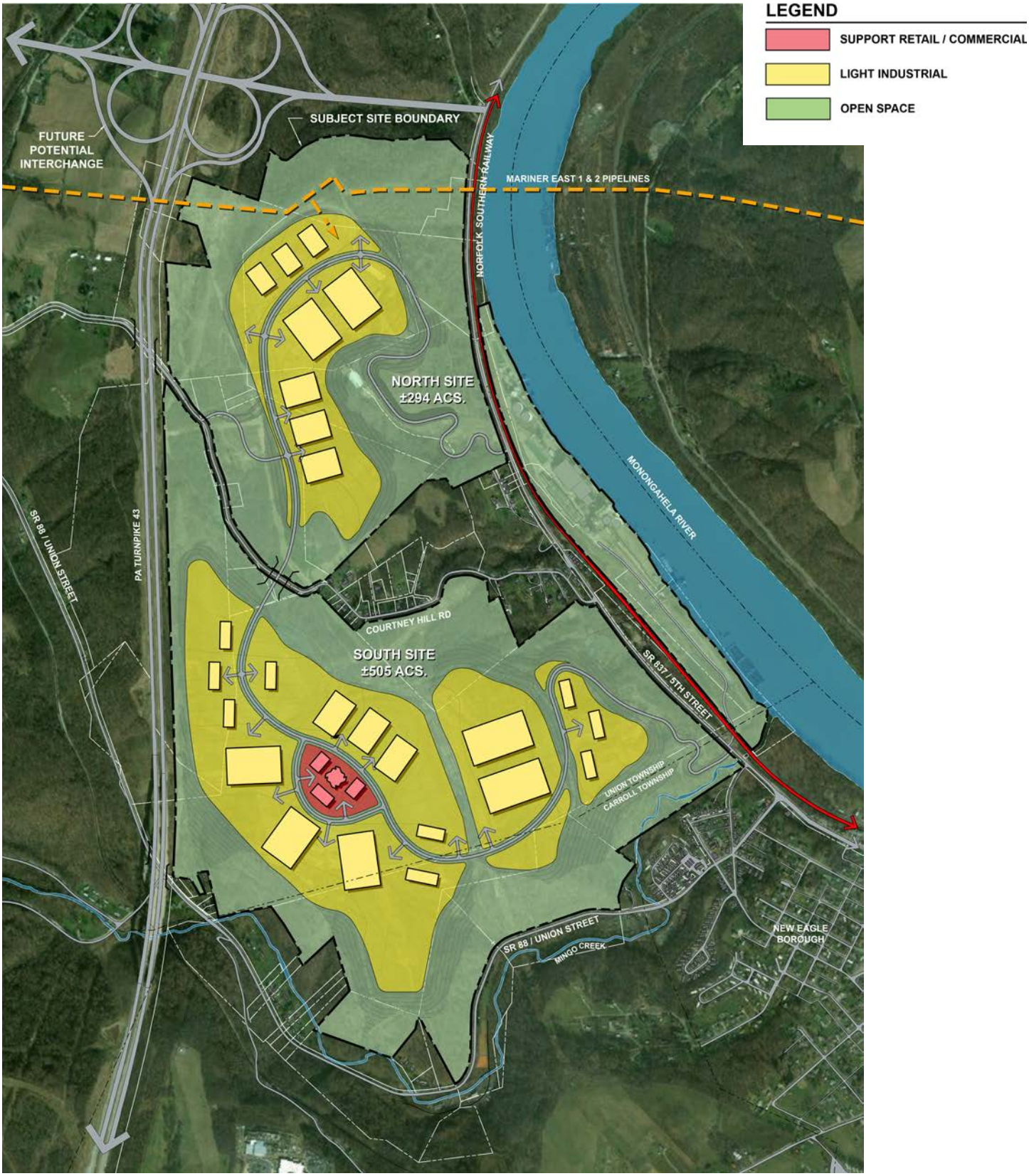
As shown in Land Use Concept B, this reuse strategy develops the North and South Sites with balanced earthwork to create four pad-ready sites of varying size. As with Concept A, a loop road is provided to link the North and South Sites into a cohesive development. The Concept B loop road, however, is aligned to provide generally smaller sites to accommodate varied light industrial uses, including warehouses and flex space. In addition, a supporting retail facility is provided within the largest pad site to create a nearby "center" for the park intended for convenience retail, restaurant, and related uses serving the needs of park employees.

In this strategy, the Power Plant Site along the riverfront is not developed.

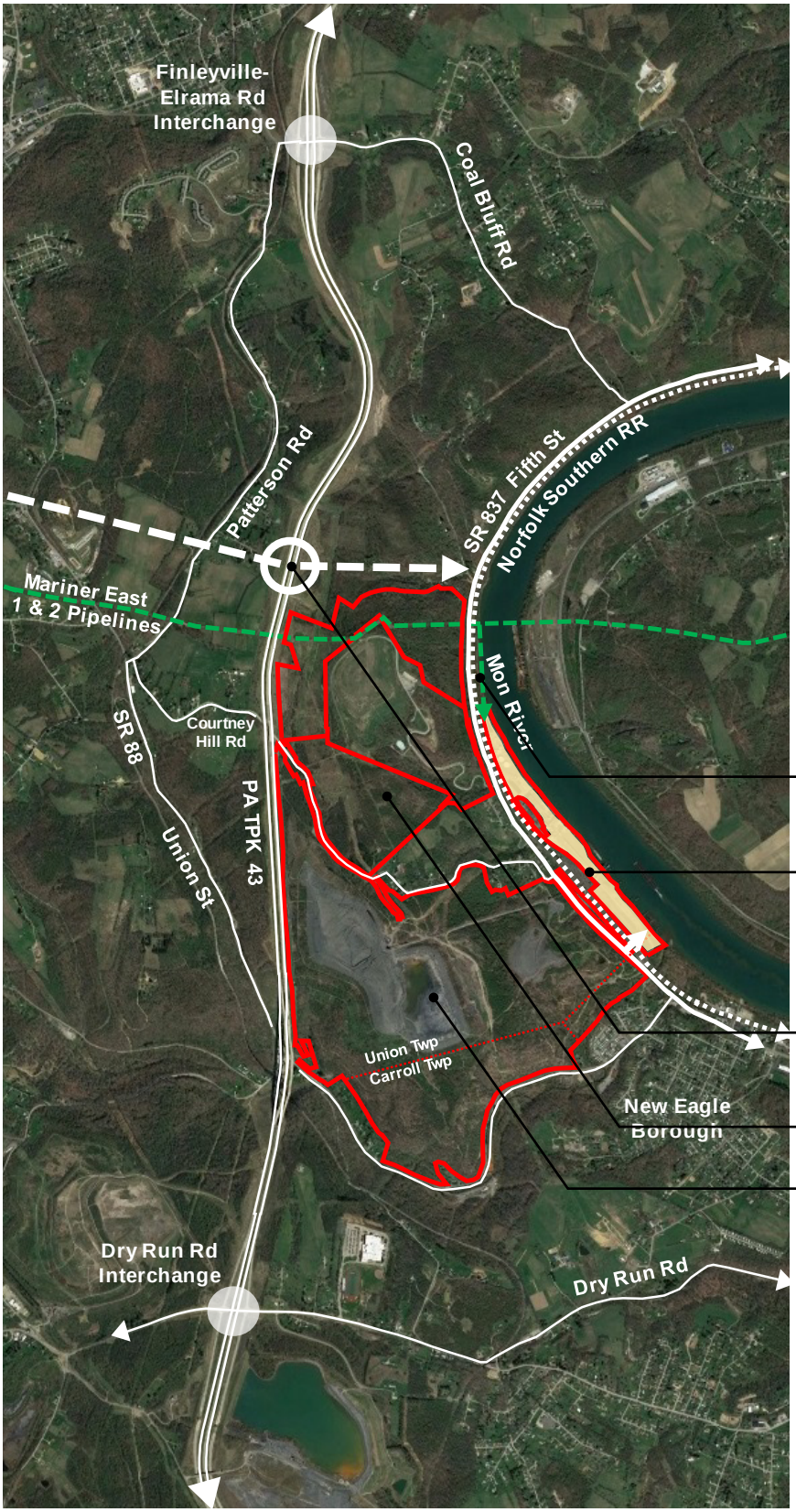
The Reuse Strategy B Summary below provides key metrics associated with this strategy. See the Site Capacity Analysis in Appendix H for additional detail.

REUSE STRATEGY B SUMMARY	
ITEM	ACRES
Gross Site Area	799
Buildable Site Area	325
Total Buildable Site Area	41%
ITEM	SQUARE FEET
Manufacturing	0
Light Industrial	4,000,000
Transport-Related Storage/Admin	0
Total Potential Building Gross Floor Area (GFA)	4,000,000

STRATEGY B LAND USE



4.4 REUSE STRATEGY C - POWER PLANT SITE MANUFACTURING



Reuse Strategy C includes the Power Plant Site, totaling ± 57 acres. The North and South Sites are not included or developed in this alternative.

Reuse Strategy C is designed for a riverfront manufacturing facility requiring direct connections to rail and river access and a robust power supply, with the potential for a nearby connection to natural gas and/or natural gas liquids (NGLs).

Targeted users under this strategy could include manufacturers utilizing Shell Ethane Cracker-produced feedstock (plastics manufacturers), other NGL-intensive manufacturers (resins, chemicals, rubbers), and natural gas energy-intensive manufacturers (food, steel, glass).

Direct Connection to Mariner East 1 & 2 Pipeline

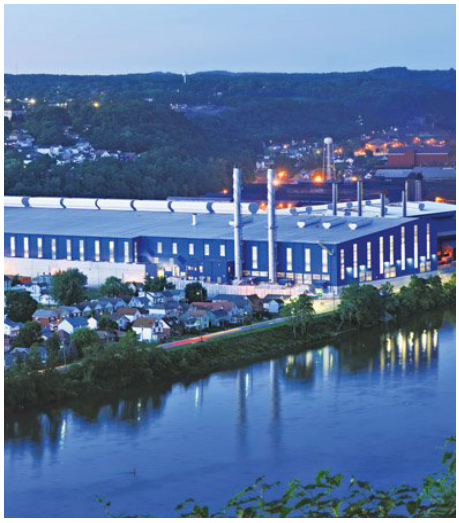
Power Plant Site - Manufacturing & Related Multi-Modal Transport - Rail, Road, River
(+/- 57 acres)

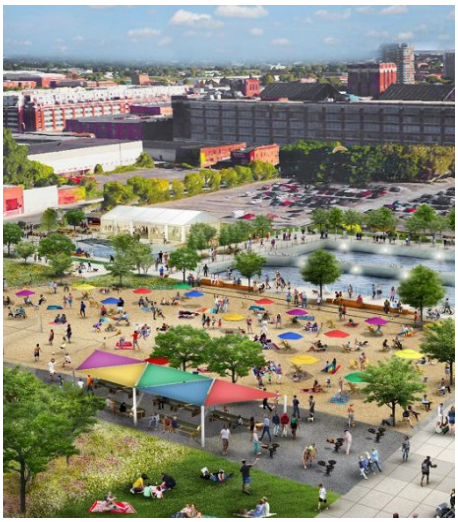
Potential Interchange & Future Southern Beltway

North Site - Undeveloped

South Site - Undeveloped

HAZELWOOD
GREEN





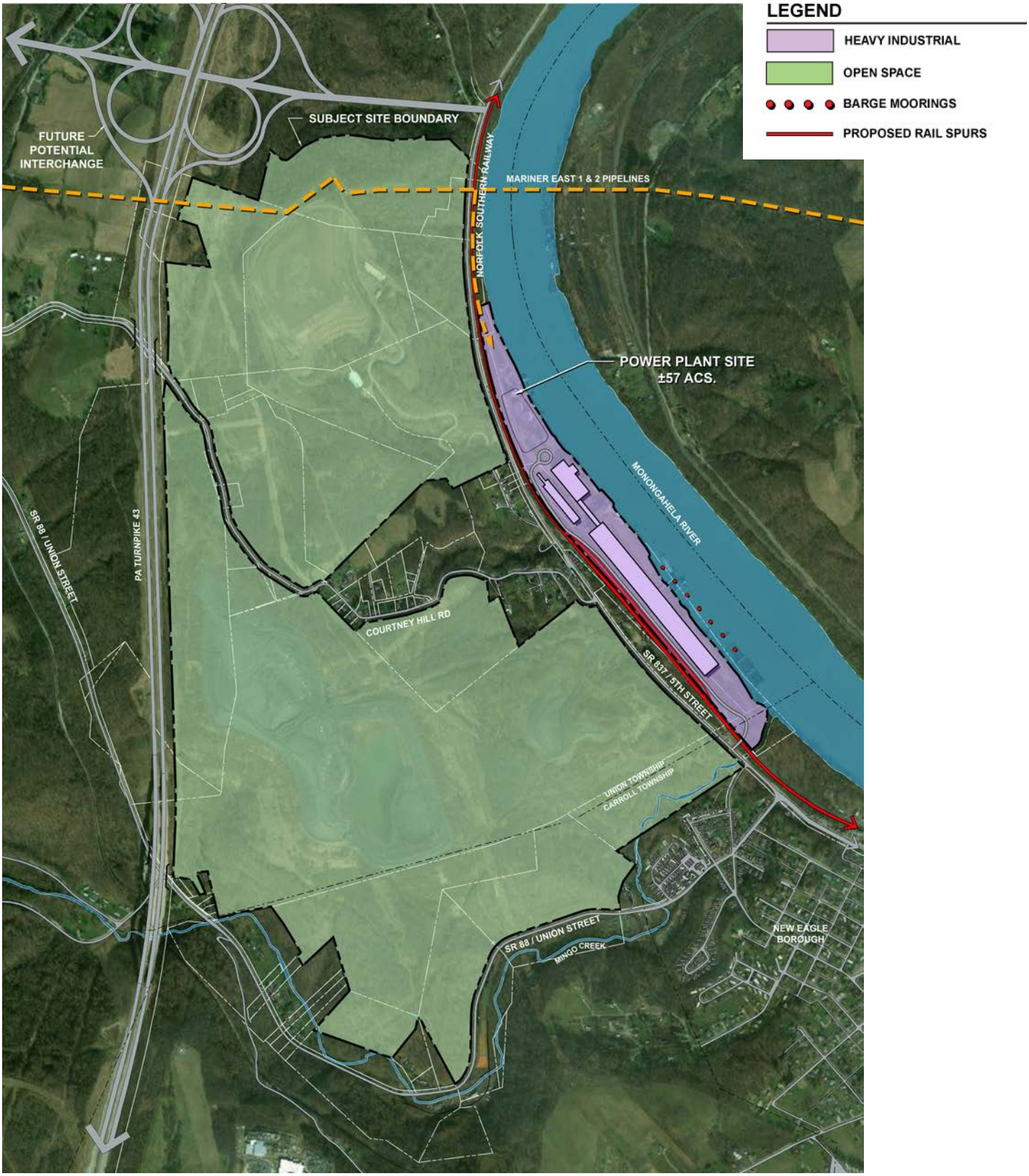
As illustrated in Land Use Concept C, this reuse strategy develops the Power Plant Site along the riverfront as a manufacturing facility and supporting transport terminal with onsite access to both rail and river transport. A new linear manufacturing building provides space for the manufacturing operation, while the existing power plant building is repurposed as a storage and transport facility serving the manufacturing operation. In addition, the repurposed power plant building houses the administrative functions of the manufacturing operation and the supporting transport terminal.

In this strategy, the North and South Sites are not developed.

The Reuse Strategy C Summary below provides key metrics associated with this strategy. See the Site Capacity Analysis in Appendix H for additional detail.

REUSE STRATEGY C SUMMARY	
ITEM	ACRES
Gross Site Area	57
Buildable Site Area	57
Total Buildable Site Area	100%
ITEM	SQUARE FEET
Manufacturing	704,000
Light Industrial	0
Transport-Related Storage/Admin	580,270
Total Potential Building Gross Floor Area (GFA)	1,284,270

STRATEGY C LAND USE



4.5 FINANCIAL FEASIBILITY ANALYSIS SUMMARY

For each concept, a determination was made to identify any funding gap that would result assuming pads are sold at market rates. This gap reflects the amount of public subsidy needed to incentivize a developer to undertake the project and achieve an acceptable return on investment. Because of market uncertainties surrounding the timeline for selling off many acres of pad-ready sites to end users, it is difficult to determine an internal rate of return (IRR) for each project. IRR can vary significantly based on the project timeline, and projects with the same equity multiple can have vastly different IRRs depending on how long it takes to sell off sites. For simplicity, each concept was evaluated in terms of profit margin and multiple on invested equity to provide an estimate of the funding gap.

Concept A would require public subsidy of $50-$60 million, or about 45% of the total project cost including financing. This would allow a developer to achieve an equity multiple above the minimum 1.5x-2x range. Even with this subsidy, such an investment would be somewhat less attractive to a developer than Concept C due to increased complexity associated with the larger site, a higher equity contribution required, and a lower equity multiple.

Concept B would require an even greater public subsidy of $65-$75 million, over 80% of the total project cost. A private developer would be unlikely to undertake such a project even with a subsidy since the absolute return generated pales in comparison to the amount of effort and risk required to develop such a large site.

Concept C would generate pre-tax profit of $13.9 million, achieving an equity multiple of 3.87x, without any public subsidy. If an end user interested in the site can be found, this concept appears to be financially feasible.

Total project cost, sources of funds, and the funding gap for each concept are summarized in the Funding Gap table below.

See Appendix E Highest & Best Use Analysis for the full analysis of financial feasibility of the three concepts.

A full financial feasibility comparison (assuming public subsidy) can be found in the Financial Feasibility Comparison on the following page.

FUNDING GAP						
	STRATEGY A: NATURAL GAS/NGL-RELATED MANUFACTURING		STRATEGY B: NORTH & SOUTH SITES INDUSTRIAL PARK		STRATEGY C: POWER PLANT SITE	
	$	%	$	%	$	%
Total Project Cost (inc. financing)	121,326,783	100	85,537,344	100	32,325,217	100
Developer Equity Attracted	9 M - 11 M	8	2 M - 3 M	3	4 M - 6 M	15
Developer Loan	51 M - 61 M	47	13 M - 15 M	16	26 M - 29 M	85
Funding Gap	50 M - 60 M	45	65 M - 75 M	81	0	0

FINANCIAL FEASIBILITY COMPARISON			
	STRATEGY A: NATURAL GAS/ NGL-RELATED MANUFACTURING	STRATEGY B: NORTH & SOUTH SITES INDUSTRIAL PAK	STRATEGY C: POWER PLANT SITE
Estimated Construction Period (Years)	5	5	2
Pad Sale Price per Acre	$ 125,000	$ 65,000	$ 150,000
Sellable Pad-Ready Acres	325 acres	325 acres	49 acres
Pad Sale Proceeds	$ 40,625,000	$ 21,125,000	$ 7,350,000
Multi-Modal Facilities Sale Proceeds	$ 41,321,772	N/A	$ 41,321,772
Gross Proceeds	$ 81,946,772	$ 21,125,000	$ 48,671,772
Selling Costs	5%	5%	5%
Net Proceeds	$ 77,849,433	$ 20,068,750	$ 46,238,183
Loan to Cost Ratio	85%	85%	85%
Loan Interest Rate	5.0%	5.0%	5.0%
USES			
Land Acquisition	$ 3,041,300	$ 2,167,762	$ 873,538
Development Cost	$ 111,915,114	$ 81,781,250	$ 30,133,864
Total Cost	$ 114,956,414	$ 83,949,012	$ 31,007,402
Loan Interest	$ 6,370,369	$ 1,588,333	$ 1,317,815
Total Project Cost	$ 121,326,783	$ 85,537,344	$ 32,325,217
SOURCES			
Loan	$ 56,377,766	$ 14,056,743	$ 27,476,434
Developer Equity	$ 9,949,018	$ 2,480,602	$ 4,848,783
Public Subsidy	$ 55,000,000	$ 69,000,000	-----
Total Project Cost	$ 121,326,783	$ 85,537,344	$ 32,325,217
Pre-Tax Profit	$ 11,522,650	$ 3,351,406	$ 13,912,966
Profit Margin	14.80%	17.60%	30.09%
Multiple on Invested Equity	2.16x	2.42x	3.87x

4.6 ECONOMIC & FISCAL IMPACTS ANALYSIS SUMMARY

Economic impacts of the three concepts include jobs created by new businesses operating within the redeveloped site and the multi-modal warehouse facility. To estimate the number of new jobs created, the total building area of each concept was divided by an industry average jobs-per-square-foot ratio. Jobs per square foot can vary significantly depending on the type of facility and industry. A conservative ratio of one job per 1,000 SF for manufacturing and light industrial space was assumed, and one job per 2,500 SF for the multi-modal warehouse.

Total economic impacts for each concept are summarized in Economic Impact Summary – Annual Impacts below. Concept B would result in the highest number of new jobs, an increase of 10% over the current job total in Washington County. Concept B would also add the highest amount of earnings, an increase of 9%. Concept A, however, would contribute the most in terms of sales, growing the county's Gross Regional Product by 18%.

ECONOMIC IMPACT SUMMARY - ANNUAL IMPACTS			
	STRATEGY A: NATURAL GAS/ NGL-RELATED MANUFACTURING	STRATEGY B: NORTH & SOUTH SITES INDUSTRIAL PARK	STRATEGY C: POWER PLANT SITE
Total Jobs	8,005	8,987	1,464
Pct. Increase	9%	10%	2%
Total Earnings	$ 511,439,250	$ 541,602,109	$ 92,068,193
Pct. Increase	9%	9%	2%
Total Sales	$ 2,109,804,622	$ 1,599,522,892	$ 369,666,711
Pct. Increase	18%	13%	3%

In addition to economic impacts, the redevelopment will generate property tax revenues for the county and its sub-jurisdictions. These revenues were estimated by multiplying estimated assessed values for new development at full buildout of each concept by 2017 millage rates.

Annual tax revenues to each jurisdiction are summarized in Estimated Annual Tax Revenue at Full Buildout. In Concept A, jurisdictions would receive a combined $12.9 million in tax revenue each year. Jurisdictions would receive $12.6 million annually in Concept B, and $2.5 million annually in Concept C. This assumes that all improvements are taxed at full value and no property tax breaks are used to incentivize development.

ESTIMATED ANNUAL TAX REVENUE AT FULL BUILDOUT			
	STRATEGY A: NATURAL GAS/ NGL-RELATED MANUFACTURING	STRATEGY B: NORTH & SOUTH SITES INDUSTRIAL PARK	STRATEGY C: POWER PLANT SITE
Estimated Assessed Value of Improvements	$ 736,133,864	$ 720,000,000	$ 140,133,864
TAX REVENUE			
Washington County	$ 1,788,805	$ 1,749,600	$ 340,525
Ringgold School District	$ 10,100,125	$ 9,878,760	$1,922,707
Municipalities (combined)	$ 967,872	$ 946,659	$ 184,249
Total	$ 12,856,802	$ 12,575,019	$ 2,447,481

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5 RECOMMENDED ACTIONS & SCHEDULE

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5.0 RECOMMENDED ACTIONS & SCHEDULE

The purpose of this section is to recommend a market-responsive path forward as a means to move the Mitchell Power Station and Adjacent Canestrale Properties site (Subject Site) towards successful redevelopment as a viable business enterprise and employment center in the near term.

5.1 RECOMMENDED REDEVELOPMENT STRATEGY

As presented previously, the Subject Site is best suited for reuse as an industrial site serving the natural gas and NGL-related sectors.

Further, of the three redevelopment strategies presented, the financial feasibility analysis indicates that Concept C – Power Plant Site Manufacturing is financially viable without the need for public subsidy, while Concepts A and B would require public subsidies in the range of $50-75 million.

At buildout, Concept C could yield over 1,400 new jobs and over $2.4 million in new annual tax revenue, while yields for Concepts A and B could be in the range of 8-9,000 new jobs and $12-13 million in new annual tax revenue.

Given these factors, and the desire to establish the site as a successful new employment center in the near term, a two-phase redevelopment strategy is recommended:

- Phase 1 – Near-Term Redevelopment of the Power Plant Site as a Manufacturing/Transport Facility
- Phase 2 – Longer Term Redevelopment of the North & South Sites for a Large Industrial User or as a Light Industrial Park

This two-phase strategy suggests initial development of the "low-hanging fruit", the smaller Power Plant Site that does not require public subsidy, as a means to "seed" development interest in the larger North and South Sites. Initial investment needs for the smaller Power Plant Site are less than if the entire site were involved, and a successful redevelopment of the Power Plant Site will put the entire Subject Site and vicinity on the regional map as a credible new location for industrial development.

In addition, this "Power Plant Site First" strategy will buy time for gaining regulatory approvals for the North and South Sites, and also for working towards a new interchange on PA TPK 43 to improve roadway access to the site.

5.2 ACTIONS TO ENABLE REDEVELOPMENT

In order to move forward in an efficient manner that yields the greatest chance for success, it is important for the parties to the redevelopment initiative to band together in an appropriate fashion that presents a unified face to the marketplace.

Industrial site selectors and developers looking at opportunities do not like uncertainty. Conversely, industrial site selectors and developers often gravitate to those opportunities that are packaged, coordinated, prepared for action, and "Ready-to-Go".

These ten actions are designed to achieve a "Ready-to-Go" posture for effective presentation of the Subject Site to the marketplace:

1. DCED, First Energy & Canestrale Review/Revise/Approve "Recommended Redevelopment Strategy"

   Support and approval of the redevelopment strategy by the property owners and the project sponsor are basic to any further actions. The three parties will need to discuss, review, revise if needed, and ultimately approve moving forward with a strategy supported by all. Agreement and approval by the parties may be documented in a Memorandum of Understanding or similar document.

2. Community Stakeholders Review/Revise/Approve "Recommended Redevelopment Strategy"

   For the redevelopment initiative to succeed, it is critical that key community stakeholders support the initiative and are on-board the process early. Industrial site selectors and developers consider community support for a project a strong positive in decision-making. The community stakeholders group should include local and state elected representatives, community organizations, community residents, economic development agencies, and others.

3. DCED, First Energy, Canestrale & Community Stakeholders Form "Project Steering Committee (PSC)"

   Formation of a "Project Steering Committee (PSC)" will provide a forum for discussion and cohesive decision-making, and will enable the redevelopment initiative to speak with one voice in the marketplace. The PSC could be more or less formal as is comfortable and productive for the participants. A key goal of the PSC is enabling the ability to present a unified face to the marketplace.

4. PSC Design & Implement Project-Specific Workforce Strategy

   In today's business attraction environment, workforce is top-of-mind for industrial site selectors and developers. A strong workforce strategy will be a significant selling point for the redevelopment initiative. The workforce strategy should consider which segments of the workforce will be needed for the targeted Phase 1 development in particular, take stock of existing workforce assets, and work with local educational institutions to create programs to address shortfalls.

5. PSC Develop Streamlined Permitting & Entitlements Process

   A key selling point to the redevelopment strategy will be a transparent, cohesive process for regulatory approvals and entitlements. A key function of the PSC should be to work collaboratively with federal, state and local regulators to create a process that is efficient, visible, and readily accessible to the due diligence efforts of industrial site selectors and developers.

6. PSC Bring Subject Site to "Shovel-Ready Lite" Status

   Another key consideration for industrial site selectors and developers is "Time-to-Market". The concept of "Shovel-Ready Lite" identifies needed improvements, designs those improvements, develops a construction timeline for them, and identifies a funding mechanism to pay for construction, basically doing everything short of actually commencing construction. The pitch to a prospect can then be "These improvements can be in place by the time you open your doors."

7. PSC Design & Execute Marketing Campaign

   Soft marketing, such as word-of-mouth, can begin as soon as the parties are in agreement on a strategy. A more formal marketing campaign would be most effective once items 3 through 6 above have been addressed and incorporated into it, thus allowing presentation of the site as "Ready-to-Go". The marketing campaign should start with identifying strategic prospects that are in growth mode. Once done, a game plan for effectively reaching out to them can be prepared.

8. First Energy & Canestrale Close Development Deals with Site Developer and/or User (Estimated Timeline)

   Both First Energy and Canestrale own properties form the Subject Site, so separate but coordinated development deals will need to be reached for the site to develop cohesively. In addition, Norfolk Southern Railroad properties within the Phase 1 site will need to be addressed.

9. Site Developer and/or User Design/Construct Site Infrastructure & Building Facilities (Estimated Timeline)

   Once development deals are struck, site infrastructure and facility design can take place on a variety of timelines ranging from a fast-track process with separate design/construction packages or as a single design/construction package. Depending on project complexity, and assuming a streamlined regulatory process, a design/construction time period could range from 12-24 months.

10. Site User Commence Manufacturing Operations (Estimated Timeline)

    Many manufacturing operations begin with a limited pilot or test line to validate and commission the new production process. Once completed, a ramp to full production is begun that grows incrementally over time. Depending on the actual user, it may take time for a new manufacturing facility to reach full production capacity.

5.3 RECOMMENDED REDEVELOPMENT SCHEDULE

The Redevelopment Implementation Schedule below indicates how Phase 1 redevelopment could unfold.

The schedule sets forth aggressive actions for the first 4 months culminating in formation of a "Project Steering Committee (PSC) to coordinate and move the process forward. The next 6 months are spent preparing and marketing the site, while the remaining 18 months are allocated to design and construction of a new manufacturing facility.

IMPLEMENTATION SCHEDULE																														
RECOMMENDED ACTIONS	MONTHS																													
1 - DCED, First Energy & Canestrale Review/Revise/ Approve "Recommended Redevelopment Strategy"	1	2	3	4																										
2 - Community Stakeholders Review/Revise/Approve "Recommended Redevelopment Strategy"			3	4																										
3 - DCED, First Energy, Canestrale & Community Stakeholders Form "Project Steering Committee (PSC)"				4																										
4 - PSC Design & Implement Project-Specific Workforce Strategy for Subject Site				4	5	6	7	8																						
5 - PSC Develop Streamlined Permitting & Entitlements Process for Subject Site				4	5	6	7	8																						
6 - PSC Bring Subject Site to "Shovel-Ready Lite" Status				4	5	6	7	8																						
7 - PSC Design & Execute Subject Site Marketing Campaign (Estimated Timeline)				4	5	6	7	8	9	10	11	12																		
8 - First Energy & Canestrale Close Subject Site Development Deals with Site Developer and/ or User (Estimated Timeline)												12																		
9 - Site Developer and/or User Design/Construct Site Infrastructure & Building Facilities (Estimated Timeline)												12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
10 - Site User Commence Manufacturing Operations (Estimated Timeline)																														30

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