

# HANOVER CROSSINGS PHASES 3 AND 4 AND HANOVER LOT 9 SITE PLANNING



Prepared for:

*Earth Conservancy*

*Greater Wilkes-Barre Chamber of Business and Industry*

*Draft Summary Report*

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Engineers & Planners  
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PURPOSE

The purpose of the Site Planning and Programming Study of Hanover Crossings Phases 3 and 4 and Hanover Lot 9 has been to investigate the development potential of over 600 acres of currently-vacant land about 4 miles southwest of Wilkes-Barre, Pennsylvania (Figure 1.1). The gross acreage is bisected by PA Route 29, dividing the study area into two distinct parts: Hanover Crossings Phases 3 and 4 and Hanover Lot 9. Hanover Crossings Phase 3 is 134 acres and is part of the Hanover Crossings Business Park, which is owned by the Greater Wilkes-Barre Chamber of Business and Industry. Hanover Crossings Phase 4 is physically adjacent to Hanover Crossings Phase 3 and is 75 acres. Both Hanover Crossings Phase 4 and the 410-acre Hanover Lot 9 are owned by the Earth Conservancy (EC). Hanover Crossings Phases 3 and 4 are in Hanover Township and Hanover Lot 9 is partly in the City of Nanticoke and partly in Hanover Township. Both municipalities are within Luzerne County.



Figure 1.1: Context and Existing Access for Hanover Crossings Phases 3 and 4 and Hanover Lot 9.



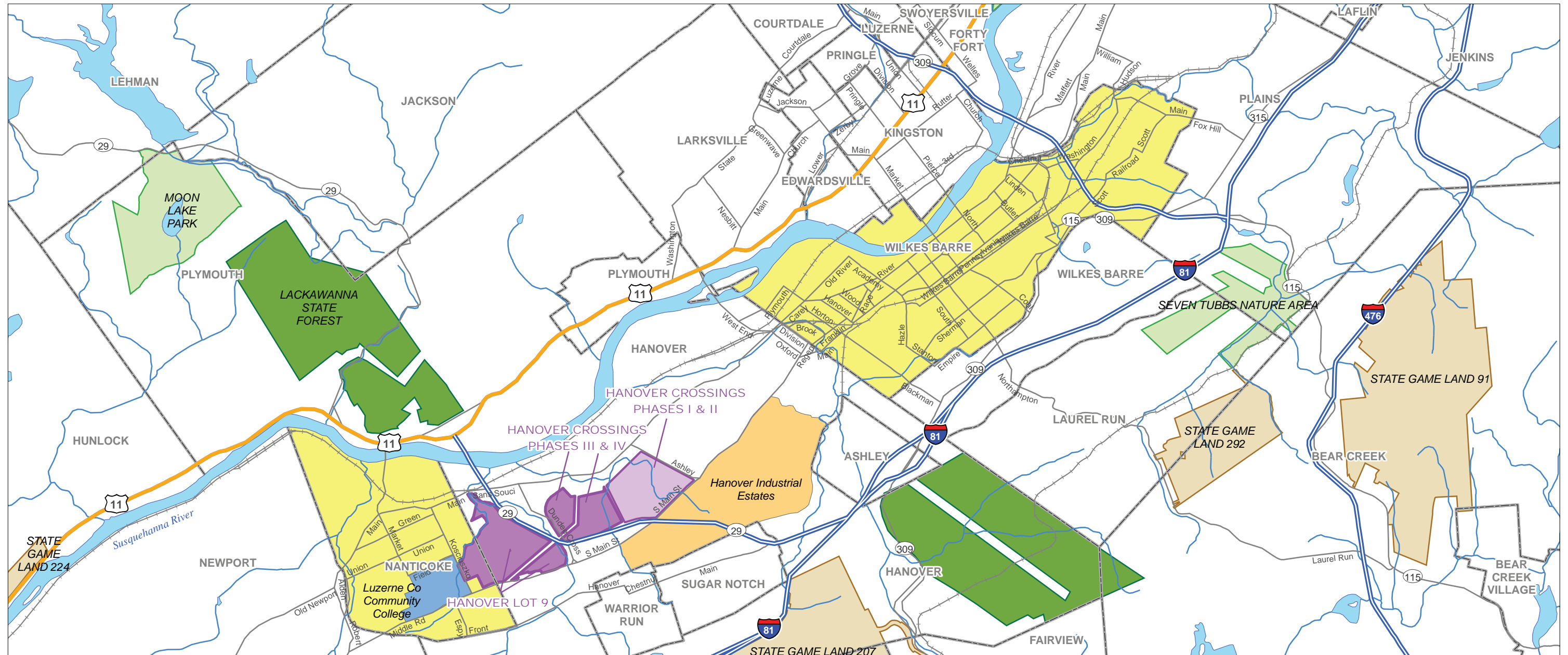
Patriot's Park, City of Nanticoke.

The general area has been the focus of planning initiatives over several decades. The 1999 EC Route 29 Mixed-Use Development Master Plan recommended a mix of uses as well as a new roadway, the South Valley Parkway. The goal of the Plan was to provide for a high-quality environment to attract new employers and better paying jobs to the Wilkes-Barre area. The 2008 Reuse Analysis and Sustainable Redevelopment Framework Study for the South Valley Corridor Lands encouraged diverse development opportunities including housing, commercial, and public land use options. Among the factors to support its recommendations was the presence of Luzerne County Community College (LCCC) right in the area.

Since 1999, a number of implementation steps have been made toward realizing economic and community development of this area, as follows:

- Reclamation of the mine spoils on the Hanover Crossings Phase 4 site (formerly known as the Loomis site);
- Final alignment and design of the proposed South Valley Parkway;
- Completion of the infrastructure for Phases 1 and 2 of the Hanover Crossings Business Park;
- Completion of the first two phases of the Safety Institute on the southwest side of the Community College;
- Sale of the first two phases of the Hanover Crossings Business Park to a local developer;
- Expansion of the Community College enrollment to 7,500 students;
- Additional nearby land reclamation by EC; and,
- Continued high occupancy in the nearby Hanover Industrial Estates development.





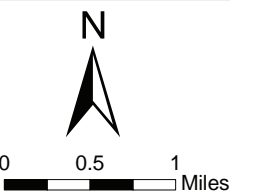
# Hanover Crossings REGIONAL AREA

## Legend

- Study Area
- Hanover Industrial Estates
- County and Local Parks
- State Game Lands
- Hanover Crossings Phases I & II
- Luzerne County Community College
- State Forests
- Cities

Figure 1.2

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In addition, the EC received funding from the US Environmental Protection Agency (EPA) Brownfields and Land Revitalization Program and the Pennsylvania Department of Environmental Protection (PA DEP) Growing Greener Program to reduce acid mine drainage and conduct planning and reclamation activities based on identifying future development opportunities for Hanover Lot 9.

The current Site Planning and Programming Study of Hanover Crossings Phases 3 and 4 and Hanover Lot 9 has been funded by the Pennsylvania Department of Community and Economic Development (DCED) to assist the Greater Wilkes-Barre Chamber of Business and Industry and EC in determining a plan for the future use of the subject lands.

## ■ SETTING

The subject parcels are a mix of former deep mine and strip mine coal land, formerly mined by the Blue Coal Corporation, and vacant raw land. Adjacent or nearby in proximity are Hanover Crossings Business Park, Hanover Industrial Estates, and LCCC. In addition, PA Route 29 bisects this area. PA Route 29 connects directly to I-81, approximately 3 miles to the southeast (**Figure 1.2**).

The Pennsylvania Department of Transportation (PennDOT) is in the process of completing final design of the South Valley Parkway (SVP). The SVP is intended to be a two-lane roadway that will extend from the current Exit 2 of PA Route 29 to just east of the intersection of Middle Road and Kosciuszko Street. This new roadway is expected to result in dynamic changes to traffic flow and land accessibility in this area and the SVP has the potential to provide direct



*Kosciuszko Street, looking south toward Middle Road. Hanover Lot 9 is on the left.*

access to Hanover Phases 3 and 4 and to Hanover Lot 9. The plans for Hanover Crossings and Hanover Lot 9 in this study fully consider an SVP-supported future as part of prospective land development on these parcels.

Hanover Industrial Estates is a fully-occupied, mixed-use business park of approximately 1,000 acres located less than a mile southeast of the study area. Any future development proposed for Hanover Crossings or Hanover Lot 9 is intended to be complementary to and build upon the past successes of Hanover Industrial Estates. Hanover Crossings is a relatively new business park and infrastructure has been installed for Phases 1 and 2 of the overall plan. Future development of the remaining lands in Phase 2 and in Hanover Crossings Phases 3 and 4 must be undertaken with consideration given to existing Hanover Crossings Business Park land uses, market demand, environmental constraints, and accessibility.

LCCC is located just to the west of Hanover Lot 9. In 2010, enrollment was more than 7,500 students. Most

are from nearby communities and commute on a daily basis to the college. The presence of the college and its deficient access was a key factor in advancing the SVP. In the future, the College's enrollment is expected to grow and to reflect a more diverse student body, including additional population of students, faculty, and staff interested in residential accommodation, convenience retail, and retail services such as restaurants and cafés.

## ■ PROCESS

The planning process took place over 12 months and included four major phases: Compile and Analyze Existing Documentation, Conceptual Plans, Schematic Design, and Draft and Final Summary Report. Characteristics of the properties were examined during the Compile and Analyze Existing Documentation phase. Environmental conditions of these previously-mined sites, adjacent uses, parcelization of the over 600 acres (including impacts from the SVP), and zoning were mapped.

During this first phase, the consultants met with stakeholders, including LCCC, Hanover Township, and Luzerne County. The consultant team also met with real estate brokers and developers to discuss market potential for the sites.

The second phase, Conceptual Plans, included several cycles of exploring various development scenarios for the sites. Concept development plans included the programming of uses on the sites, access opportunities, internal circulation alternatives, and the size and placement characteristics of buildings, parking areas, and open space.

A convergence on a preferred concept allowed the initiation of Phase 3, Schematic Design. The schematic plans were developed and refined and order-of-magnitude cost estimates were prepared. With the elaboration of the schematic plans, draft and final summary reports were prepared to conclude the study.

The planning process included several presentations to key stakeholders to solicit feedback on the emerging plans. The first meeting was with the EC Board and was held on July 21, 2011 and included a summary of the Identifying Opportunities and an explanation of the Concept Alternatives. On November 9, 2011, a second meeting was held at EC with the host organization and the Greater Wilkes-Barre Chamber of Business and Industry and with invited stakeholders, including representatives from PennDOT, State Representative Mullery's office, LCCC, Senator Yudichak's office, the City of Nanticoke, and the Luzerne County Planning Commission. The presentation included a summary of the Schematic Plans. The summary of the Schematic Plans was also presented to the Greater Wilkes-Barre Chamber of Business and Industry Board of Directors on December 19, 2011. 🌿



## Existing Conditions

During the Compile and Analyze Existing Documentation Phase of the Hanover Crossings Phases 3 and 4 and Hanover Lot 9 Site Planning and Programming Study, existing functional and physical conditions of the sites were examined. Previous planning studies were reviewed, data was compiled, and field investigations were conducted in order to document the conditions of the study area. These conditions are documented in the form of maps and written descriptions on the following pages.

### ■ LAND USE

The Existing Land Use map (**Figure 2.1**) illustrates how land is currently used in the study area. The following land use categories have been used to map the use of parcels within the study area:

1. Residential
2. Commercial
3. Industrial
4. Institutional
5. Protected Open Space
6. Agricultural and Vacant
7. Transportation and Utilities

The subject sites are currently vacant, having been formerly mined by the Blue Coal Corporation. Mining operations ceased in the mid-1970s. EC purchased the land in 1994 and has worked since then on making the land usable through planning efforts and mine reclamation.

Land uses adjacent to the sites are industrial, institutional, commercial, and residential. The land to the east of Hanover Crossings Phases 3 and 4 is Phases 1 and 2 of Hanover Crossings. Hanover Crossings introduced the region to the area's first technology-based business park in 2000. Uses within the park are generally light industrial and office and the Caremark building employs the greatest amount of people within the business park.



CVS Caremark facility in Hanover Crossings Phase 1.

Hanover Industrial Estates is a fully-occupied, mixed-use business park of approximately 1,000 acres and is located southeast of the project area, on both sides of PA Route 29. The south side of PA Route 29 in Hanover Township also has a mix of residential, institutional, commercial, open space and industrial uses. Properties along Middle Road, also called Main Street, are largely residential.

Institutional uses include LCCC, located in the City of Nanticoke, just west of Hanover Lot 9. The LCCC campus is primarily located within the superblock



Entrance to Luzerne County Community College (LCCC) from Kosciuszko Street.

of Field Street, Kosciuszko Street, Middle Road, and Prospect Street. Other nearby institutional uses include Holy Transfiguration Ukrainian Cathedral on East Field Street and the campus of the Greater Nanticoke Area High School further to the north on Kosciuszko Street.

Much of the City of Nanticoke that is adjacent to Hanover Lot 9 is residential. Small parcels with open space, commercial, and institutional uses are interspersed throughout the city.

A concentration of commercial uses exists along Sans Souci Parkway in Hanover Township.

### ■ HYDROLOGY

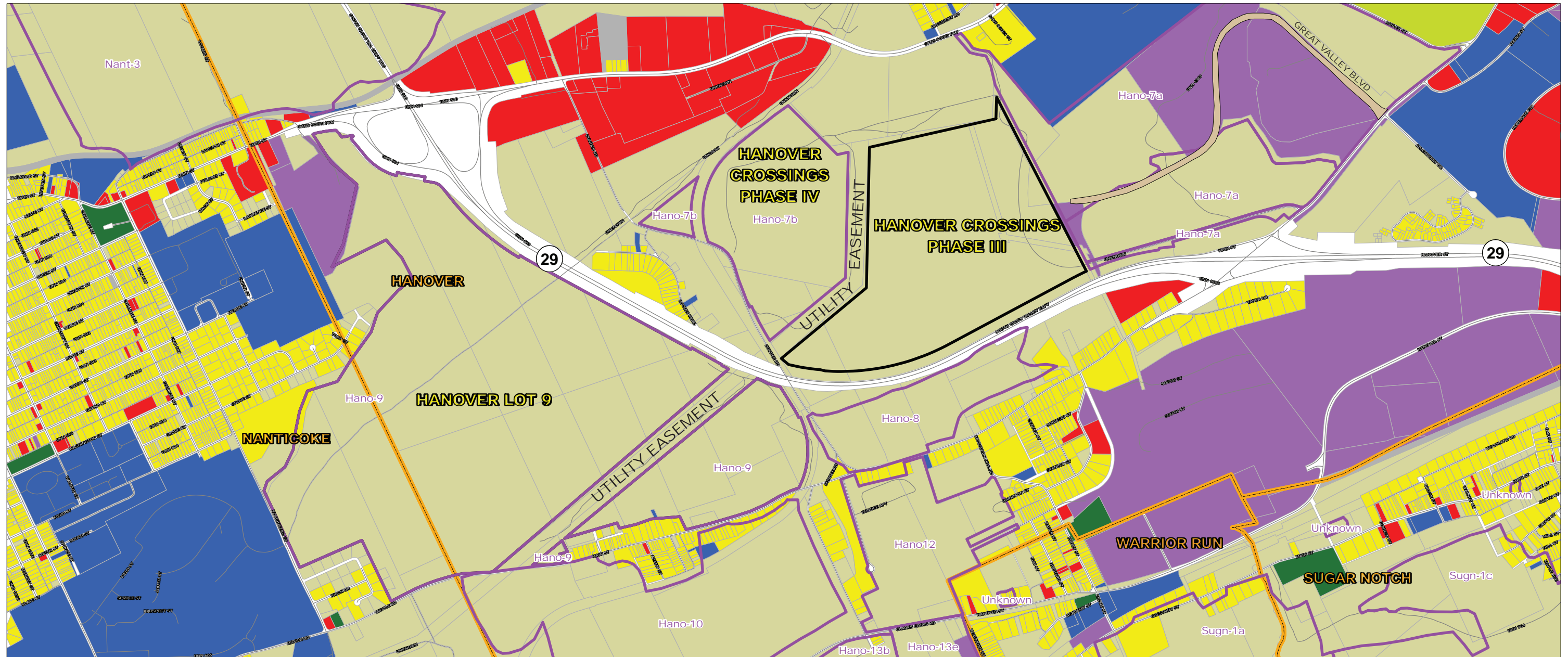
The Hydrology map (**Figure 2.2**) illustrates where waterways and their associated floodplains exist within the study area. The presence of these natural features

enhances the setting of the study area but may also restrict development opportunities.

The area is part of two different watersheds: Nanticoke Creek and Warrior Run. Hanover Lot 9 primarily feeds into Espy Run, which feeds into Nanticoke Creek. Espy Run's course runs along virtually the same alignment as the western Hanover Lot 9 property line and wetlands and floodplains associated with Espy Run exist within the western limits of Lot 9. A recent EC reclamation study has proposed new grading for this area (called "Phase A" by EC) that would create pad sites for development and three stormwater basins in the western portion of Lot 9. The Federal Emergency Management Agency (FEMA) identifies much of the northern portion of Lot 9 in Hanover Township, near the southwest quadrant of the PA Route 29 and Sans Souci Parkway interchange, as part of the 100-year floodplain. In addition, small areas of wetlands have been identified elsewhere on the tract.

Hanover Crossings Phase 4 is primarily located in the Nanticoke Creek watershed. The creek itself is located just outside of the Phase 4 property line, while wetlands associated with Nanticoke Creek are located in the south portion of the site. Recent reclamation of the Phase 4 site created a large stormwater basin in the western section of Phase 4. The northern quarter of Lot 9 is within the Warrior Run watershed.

Hanover Crossings Phase 3 is in both the Nanticoke Creek and Warrior Run watersheds. Approximately one-third of the Phase 3 tract in the southwest corner is part of the Nanticoke Creek watershed and includes a small portion of the creek's associated wetlands. The remaining portion of the tract is part of the Warrior Run watershed, with Warrior Run running through the



# Hanover Crossings EXISTING LAND USE - 2011

Figure 2.1

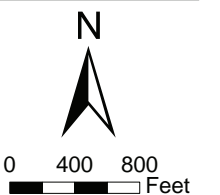
## Legend

- Current and Former Earth Conservancy Properties
- Greater Wilkes-Barre Chamber of Business and Industry
- Residential

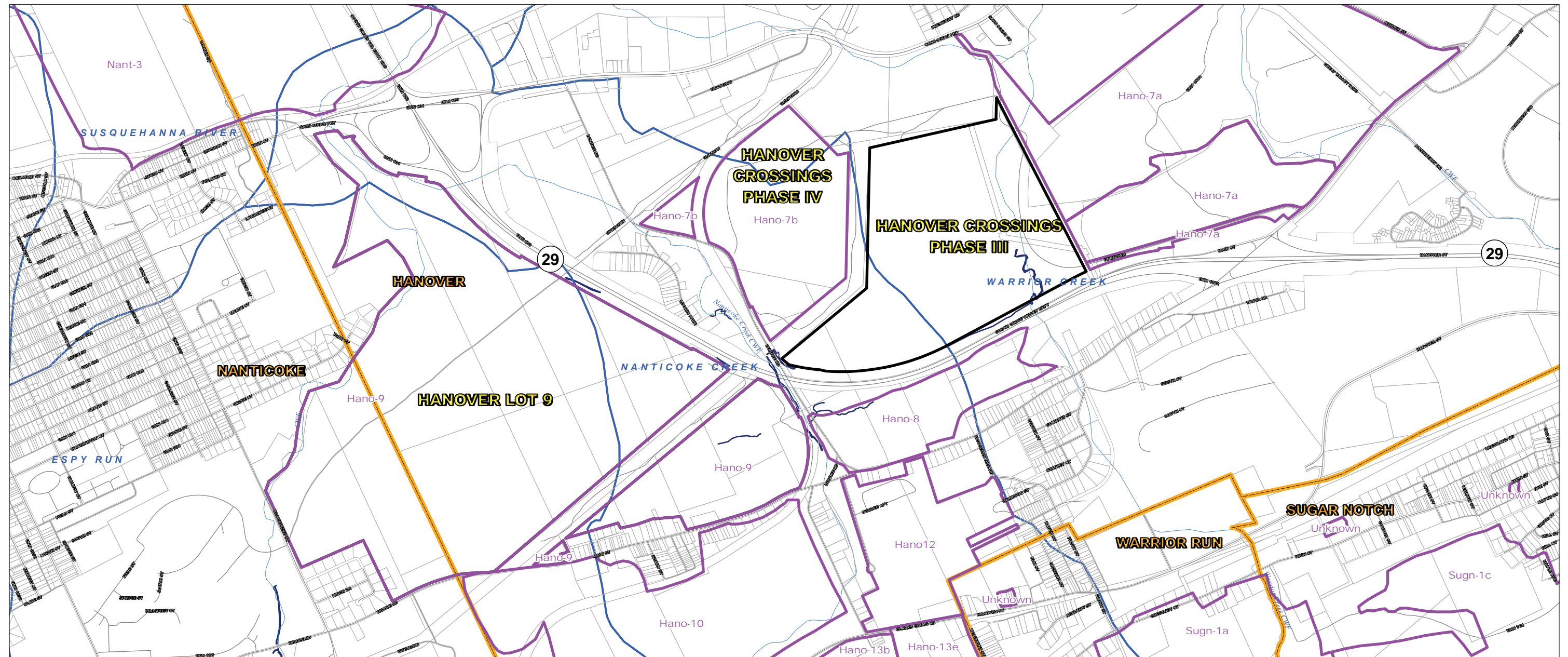
- Commercial
- Industrial
- Institutional
- Golf Course
- Protected Open Space
- Vacant

- Transportation and Utilities

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# Hanover Crossings HYDROLOGY

## Legend

- Current and Former Earth Conservancy Properties
- Greater Wilkes-Barre Chamber of Business and Industry
- Watersheds
- Streams
- Surveyed Channels
- Other Wetlands
- Surveyed Wetlands
- NWI Wetlands
- FEMA 100yr Floodplain

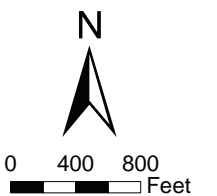


Figure 2.2



eastern portion of the tract. A number of wetland areas have been identified in the Phase 3 tract. The recent reclamation of the Phase 4 site created new grading for Phase 3 that established a stormwater basin in the middle of the tract.

NATURAL FEATURES

The Hydrology map described above, along with maps of Elevation (Figure 2.3) and Steep Slope (Figure 2.4) define the natural features of the sites. Combined, the information on these maps comprises Composite Constraints (Figure 2.5), a compilation that represents the primary physical limitations related to future development prospects.

HANOVER LOT 9

The topography of Hanover Lot 9 is such that the highest elevation is located on the two smaller tracts to the south, near the proposed South Valley Parkway (SVP), and drain toward the northwest, near the interchange of Route 29 and Sans Souci Parkway. The difference in elevation between the north and south areas of Lot 9 is approximately 500 feet. The small southern tracts of Lot 9 also have considerable slopes, with much of the area containing greater than 25% slopes. Other areas within Lot 9 with slopes greater than 25% are present along portions of Kosciuszko Street, in the west within the City of Nanticoke, and approximately 1,000 feet west of Route 29 along the former rail line. Steep slopes are also present in the City of Nanticoke, south of Grove Street, and in Hanover Township, adjacent to PA Route 29.

The northern portion of Lot 9, near the interchange of PA Route 29 and Sans Souci Parkway, is largely within the FEMA 100-year floodplain and consequently presents the biggest limitation on development within Lot 9. The two smaller, southern tracts of Lot 9 also present development limitations due to the existing steep slopes. Steep slopes and wetlands restrict development just south of Grove Street in the City of Nanticoke and in periodic spots along Kosciuszko Street. In addition, several small areas of wetland and/or steep slopes exist within Lot 9.

HANOVER CROSSINGS PHASE 4

The recent reclamation of the Phase 4 site created a “pad” that serves as the highest elevation on Phase 4. The area to the west is the lowest portion of the site with an overall difference in grade between the two of approximately eighty feet. The steep slopes on the west side of Phase 4 restrict development opportunities.

HANOVER CROSSINGS PHASE 3

The topography of Phase 3 slopes toward the northeast corner of the tract, with a difference in grade of about 200 feet from one edge to the other. A few narrow bands of areas of steep slope exist along, and south of, the future alignment of the SVP, and there is, as well, a band running north to south in the middle of the site.

Wetlands and steep slopes limit development within the middle of the site, specifically a band that runs

north to south in the middle of the Phase 3 tract. Steep slopes and wetlands also exist south of the proposed SVP.

PROGRAMMATIC AND SITE PLANNING CONSIDERATIONS (SUITABILITY ANALYSIS)

The inventory of existing conditions, described above, has been reviewed and analyzed from the perspective of development opportunities for each site (Figure 2.6). The following is a summary of some of the relevant programmatic and site planning considerations for Hanover Crossings Phases 3 and 4 and Hanover Lot 9.

HANOVER LOT 9

Land Use/Access/Visibility

PA Route 29 runs adjacent to the site on the northeast while the proposed South Valley Parkway borders the south end of the site. PA Route 29 is a limited access facility, thereby eliminating the possibility of direct access to the site, but the visibility to the site from PA Route 29 is good. In contrast, the SVP offers an opportunity for direct access to Hanover Lot 9. A business park at the eastern end of Lot 9 could capitalize on the visibility from the adjacent roadways and direct access from the SVP.

Potential access to and through the site may be via a new road on an old railroad bed that runs on a

southwest-to-northeast alignment from Kosciuszko Street to the Sans Souci Parkway, passing under PA Route 29 and over Dundee Road.

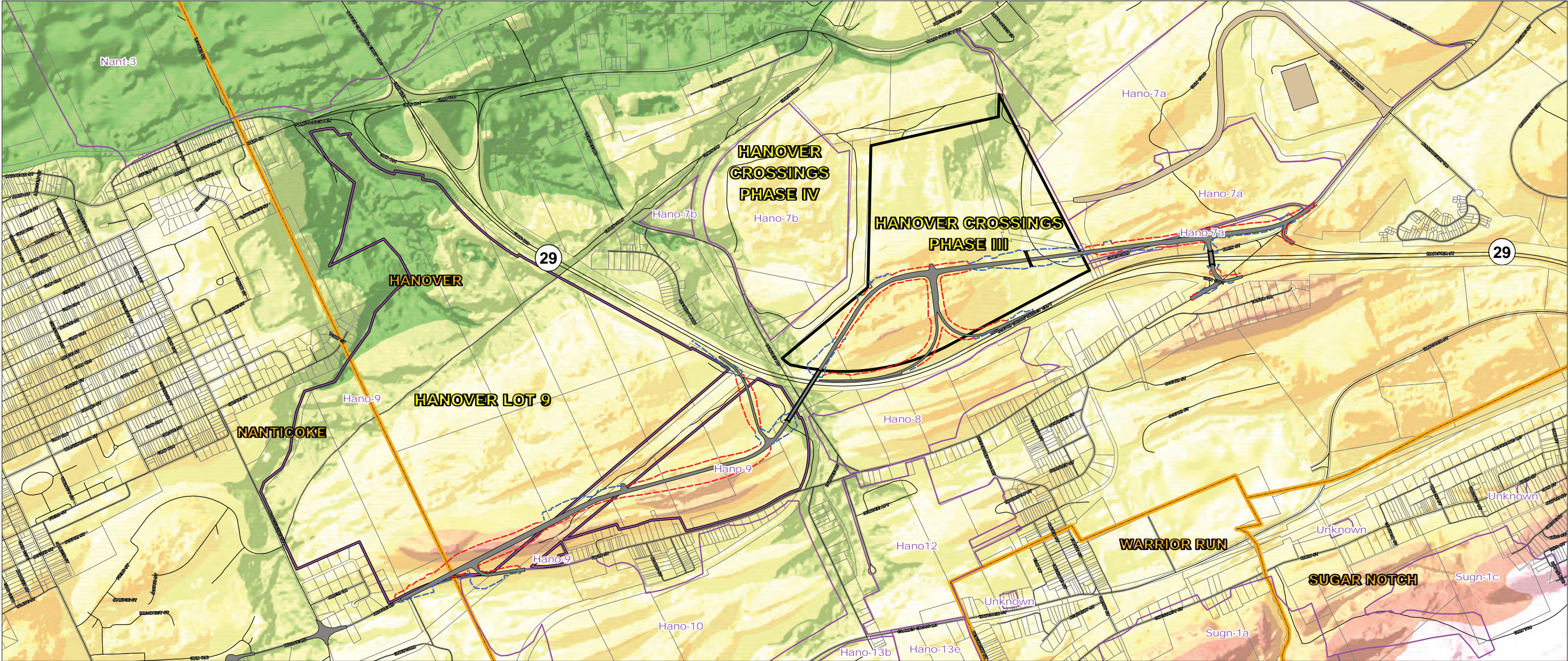
To the west and northwest of Hanover Lot 9 are the City of Nanticoke and LCCC. This nearby population provides a potential market for future uses that might include retail, recreation, entertainment, and daycare, while the specific population of students, staff, and faculty associated with the college may provide a market for housing, daycare, and institutional uses.

Land uses to the northwest and north of Hanover Lot 9 are primarily residential and open space. Steep topography and drainage conditions render much of the northern edge of the Lot 9 tract undevelopable. This northern area may be preserved as open space. However, adjacent to this area, the opportunity exists to develop residential land uses that both expand on the residential uses near the City of Nanticoke and Hanover Township border and that benefit from the access to, and view of, open space to the north.

Site Planning

The Hanover Lot 9 tract is 410 acres in total, but environmental and engineered characteristics present limitations on the developability of the tract. A utility easement running northeast to southwest in the southern part of the tract takes up 21 acres of the Lot 9 tract. The anticipated presence of the proposed SVP in the southern portion of Lot 9 also limits development opportunities in the southern portion of the tract. The SVP right-of-way, for example, will likely take up 46 acres in the southern portion of Lot 9. Together, the utility easement and the proposed SVP, as well as





Hanover Crossings  
ELEVATION

Figure 2.3

**Legend**

South Valley Pkwy Footprint

Great Valley Blvd & Building

Proposed Structures

Cut

Fill

Current and Former Earth Conservancy Properties

Greater Wilkes-Barre Chamber of Business and Industry

Municipal Boundaries

511 - 550 ft.

550 - 600 ft.

600 - 650 ft.

650 - 700 ft.

700 - 750 ft.

750 - 800 ft.

800 - 850 ft.

850 - 900 ft.

900 - 1,046 ft.

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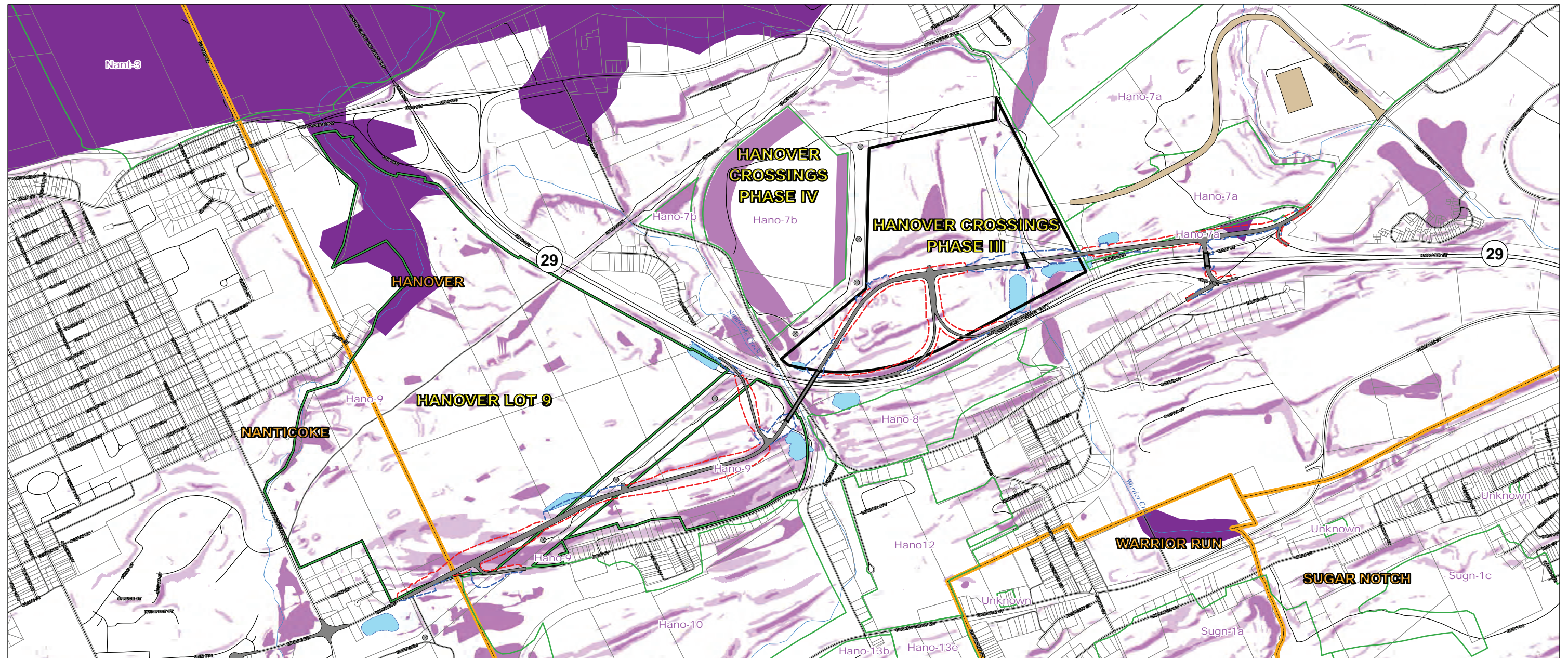
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### Figure 2.4





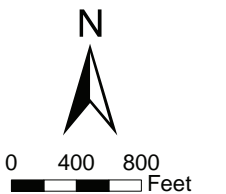
# Hanover Crossings COMPOSITE CONSTRAINTS

Figure 2.5

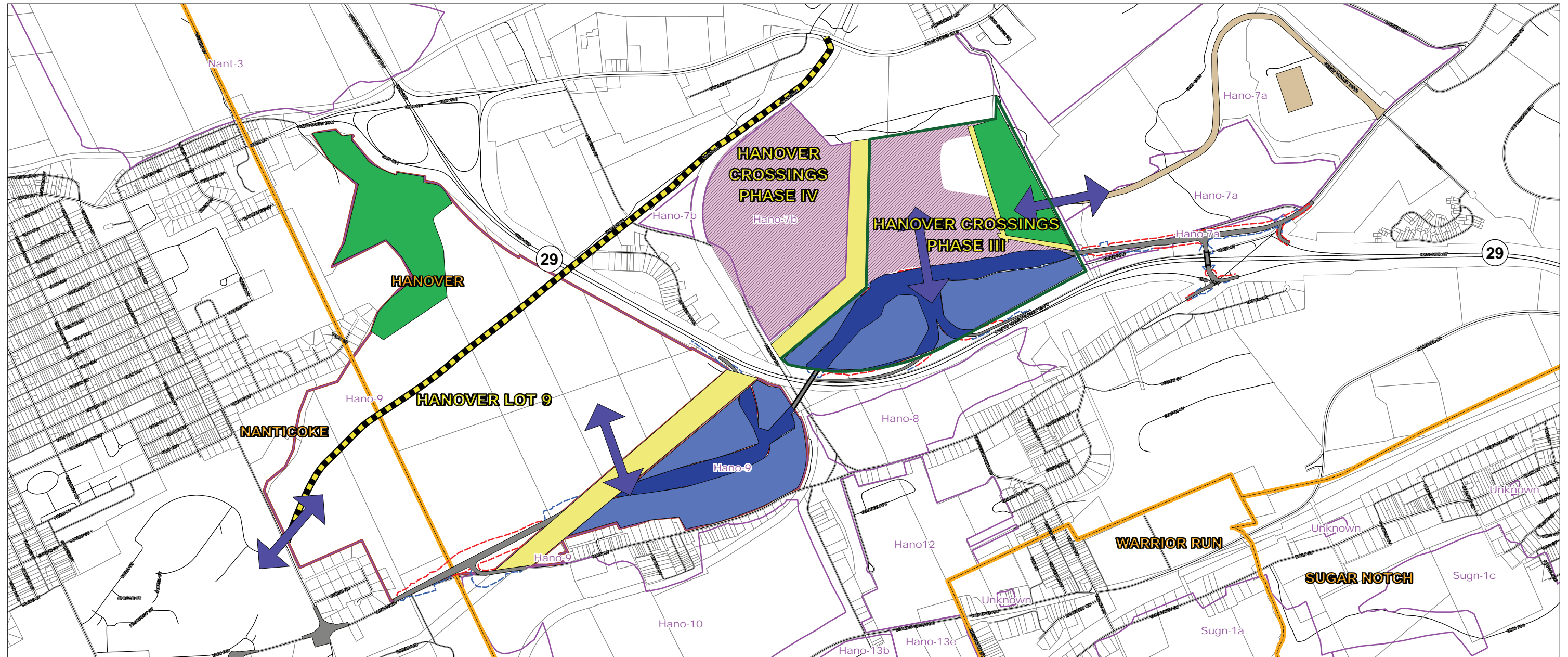
## Legend

- |                              |   |   |
|------------------------------|---|---|
| South Valley Pkwy Footprint  | Proposed Basin Locations                              | Level 1: Floodplain                         |
| Great Valley Blvd & Building | Current and Former Earth Conservancy Properties       | Level 2: Wetlands & Steep Slopes (over 25%) |
| Proposed Structures          | Greater Wilkes-Barre Chamber of Business and Industry | Level 3: Moderate Slopes (15 to 25%)        |
| Cut  Fill                    | Electrical Transmission Line Towers                   | Level 4: Slight Constraints                 |

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# Hanover Crossings SUITABILITY ANALYSIS

Figure 2.6

## Legend

- South Valley Pkwy Footprint
- Great Valley Blvd & Caramark Building

- Proposed SVP Structures
- Cut
- Fill

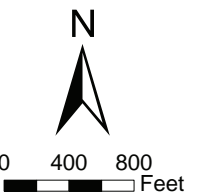
- Current and Former Earth Conservancy Properties
- Greater Wilkes-Barre Chamber of Business and Industry Property
- Municipal Boundaries

- Pad Site
- Proposed South Valley Parkway Alignment
- Access Limitations

- Riparian Area
- Existing Railroad Bed
- Anticipated Access Into Site (Primary)

- Utility Easement

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other landlocked acreage, take up approximately 88 acres of the Lot 9 tract, leaving about 322 acres for possible development.

Of the 322 developable acres of Lot 9, steep topography, wetland areas, and drainage conditions, along with the stream course of Espy Run and the riparian buffer around it, limit development in the northern part and eastern edge of Hanover Lot 9. Portions of the middle of the tract and in the south, close to the proposed SVP, have steep grades that could limit development in those areas. However, areas with challenging topography and drainage, and areas that are disjointed because of PA Route 29 and SVP, could provide the opportunity to preserve a wide swath of open space. These open space areas could, in turn, provide trail, pedestrian and bicycle access to multiple development clusters throughout Hanover Lot 9.

The topographic conditions of Hanover Lot 9 are, despite the presence of shallow strip-mined areas, including widely-distributed excavation pits and mounds, relatively naturalistic. To accommodate changes in elevation in the central and western portions of the site, developers may utilize parcels and building sizes that allow development to follow topographic changes gradually. Smaller parcels and building sizes are also more consistent with the residential components of the City of Nanticoke that are nearby.

Proximity to the proposed South Valley Parkway in the southern portion of the Hanover Lot 9 tract provides a theoretical opportunity for direct access into the site from a regional route. However, development potential next to the proposed SVP in the southern portion of Lot 9 is restricted due to steep topography and the

fragmentation of lands by the proposed SVP alignment and existing utility easement. It is only at the central-east portion of the site that access from the SVP is realistic.

## HANOVER CROSSINGS PHASES 3 AND 4

### Land Use/Access/Visibility

The physical proximity to the current business park/light industrial uses of Hanover Crossings Phases 1 and 2 provides the opportunity to extend these uses further along Great Valley Boulevard into Phases 3 and 4. This latter area could draw users via a shared access along the Great Valley Boulevard alignment and, potentially, direct access off of the proposed South Valley Parkway. Visibility from the South Valley Parkway would also support light industrial and/or commercial uses. Interviews with area developers indicate that there is a strong likelihood that market

and physical conditions would support extension of business park/light industrial uses into Phases 3 and 4.

### Site Planning

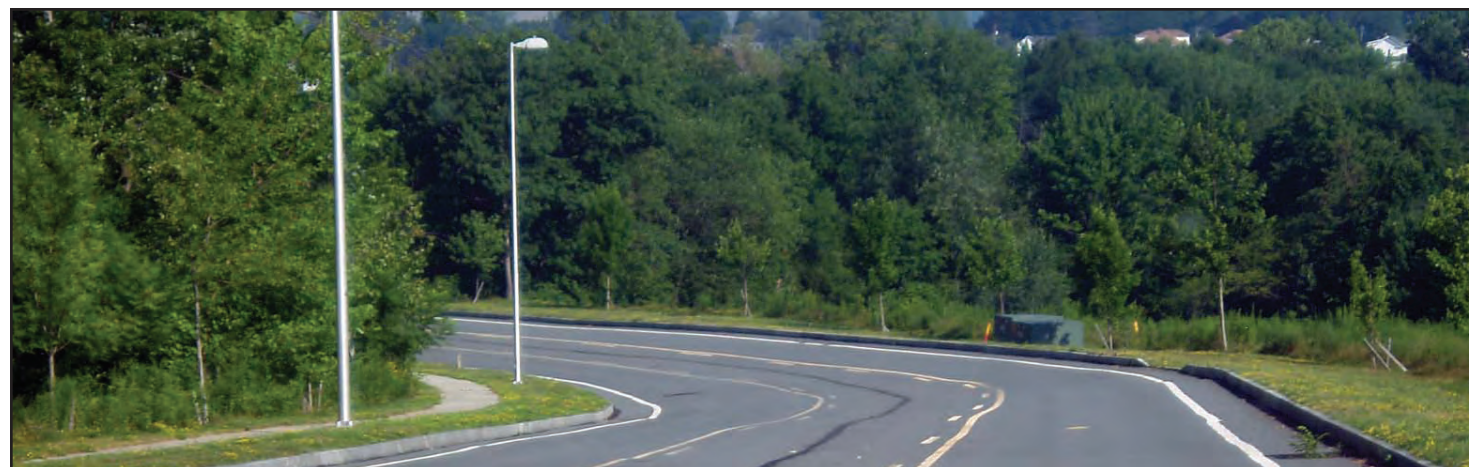
Together, Phases 3 and 4 of Hanover Crossings make up 224 acres, of which environmental and engineered characteristics limit the ability to develop the entire tract. An existing utility line that runs on a northeast-to-southwest alignment takes up approximately 15 acres of the total acreage and separates the sites into Phase 3 (134 acres) and Phase 4 (75 acres). The presence of Nanticoke Creek and its associated riparian areas and nearby wetland areas limits development in the south portion of Phase 4 and in the southwest portion of Phase 3.

Of the 134 acres that make up Phase 3, Warrior Run and its associated riparian setbacks occupy approximately 19 acres. Additional wetland areas and steep slopes exist around the perimeter of the

reclaimed pad sites, as well as in the non-reclaimed portion of Phase 3. An utility easement in the eastern portion of Phase 3 consumes 3 acres. The proposed roundabout connection between the SVP and PA Route 29 and the SVP right-of-way will take up approximately 16 acres. Furthermore, landlocked areas within the ramps connecting the SVP to PA Route 29 total approximately 36 acres. These small parcels may not prove to be economical to develop and do have accessibility limitations. Together, the utility easement, Warrior Run and its associated riparian buffer, and the presence of the SVP leave Phase 3 with approximately 60 acres for development.

The recent reclamation of the former Loomis site left one large pad site (Hanover Crossings Phase 4 and part of Hanover Crossings Phase 3) ready to be developed. This pad site has been regraded with large, flat-to-gently-sloped areas that can accommodate buildings, parking, and circulation, while steep topography changes and drainage conditions are pushed to the perimeter of the pad. The current topography of these reclaimed tracts is typical of that for business park/light industrial uses, which may require buildings to accommodate large-scale machinery, distribution activities, services, and loading. Buildings on the Crossings Phases 3 and 4 pad site might be 80,000-150,000 square feet, with requisite parking, access, and landscape area located within each tract.

Areas within Phases 3 and 4 with challenging topography and drainage or wetland issues do provide the opportunity to preserve open space, and the high elevation of the pad site on the Phase 4 tract provides an opportunity to orient buildings and/or open space to have the benefit of the high-quality view to the west. 🌿



Great Valley Boulevard in Hanover Crossings Phases 1 and 2.



The schematic plans for Hanover Crossings Phases 3 and 4 and Hanover Lot 9 respond to market factors as outlined by real estate brokers, local developers, and stakeholders. Specifically, an expansion of Hanover Crossings Business Park into its Phase 3 and 4 components will extend its program to currently-vacant lands close to and adjoining PA Route 29 and the planned South Valley Parkway (SVP). Hanover Lot 9 is situated to take advantage of its proximity to LCCC, its visibility from PA Route 29, and its future accessibility from the South Valley Parkway and can be developed as a mixed-use site for retail, residential, outpatient medical, and business park activities.

Recommendations for Hanover Crossings Phases 3 and 4 and Hanover Lot 9 make the following assumptions:

- Schematic plans represent a possible arrangement of roadways, buildings, parking areas, and stormwater management facilities. Depending on evolving market factors over the next few years and interest shown by developers, the arrangements may be modified to achieve a more precise “fit” with the market.
- Reclamation of existing shallow strip-mined areas, including widely-distributed excavation pits and mounds found on many parts of the site, should occur in conjunction with development. The highest priority for reclamation should be areas intended for road rights-of-way, buildings, off-street parking, and ancillary green and pedestrian circulation areas. As development occurs, further reclamation should ensue, until such time as all remaining mine-disturbed areas on the sites have been reclaimed.

- Access from the proposed SVP is desirable but not absolutely required for the development of either site. Access to each site is proposed from the SVP as well as from other roadways. The schematic plans may be realized with, or without, the construction of the SVP.
- Existing covenants place certain restrictions on the size of buildings on Hanover Crossings Phases 3 and 4 and Hanover Lot 9. The buildings and their arrangement shown on the schematic plans are in conformance with these covenants.
- Costs associated with providing access and utility services to potential subdivided development lots on each tract are anticipated to be provided by the Greater Wilkes-Barre Chamber of Business and Industry and/or EC. Costs associated with the development of potential subdivided lots are anticipated to be borne by developers yet to be identified.

## ■ HANOVER LOT 9

### DEVELOPMENT AREAS

The schematic plan (**Figure 3.1**) for Hanover Lot 9 consists of four development areas, as follows:

1. A mixed-use, walkable “village” at the western end of the site, closest to Kosciuszko Street and the campus of LCCC;

2. A business park/flex space/convenience retail/medical services area at the eastern end of the site along PA Route 29 and accessible from the South Valley Parkway;
3. A single family detached/townhouse/senior housing residential neighborhood in the north-central portion of the site, closest to the existing E. Grove Street portion of Nanticoke; and
4. A student housing/garden apartment area in the south-central portion of the site, adjacent to the mixed-use village.

Development areas have been identified and located to take advantage of visibility from perimeter roadways (PA Route 29, South Valley Parkway, and Kosciuszko Street); accessibility (principally from the South Valley Parkway and Kosciuszko Street, but also from areas east of PA Route 29 via an existing but generally unused underpass associated with that highway); proximity to LCCC; and the most buildable areas of the site (avoiding natural constraints, including floodplains and steeply-sloped areas, and the South Valley Parkway right-of-way and electrical transmission line easement).

Development areas have been identified and located as part of an overall site plan that contains extensive open space. Open space provides natural resource protection, microclimate moderation, and visual quality as well as support for stormwater management, recreational use, and pedestrian and bicycle mobility.

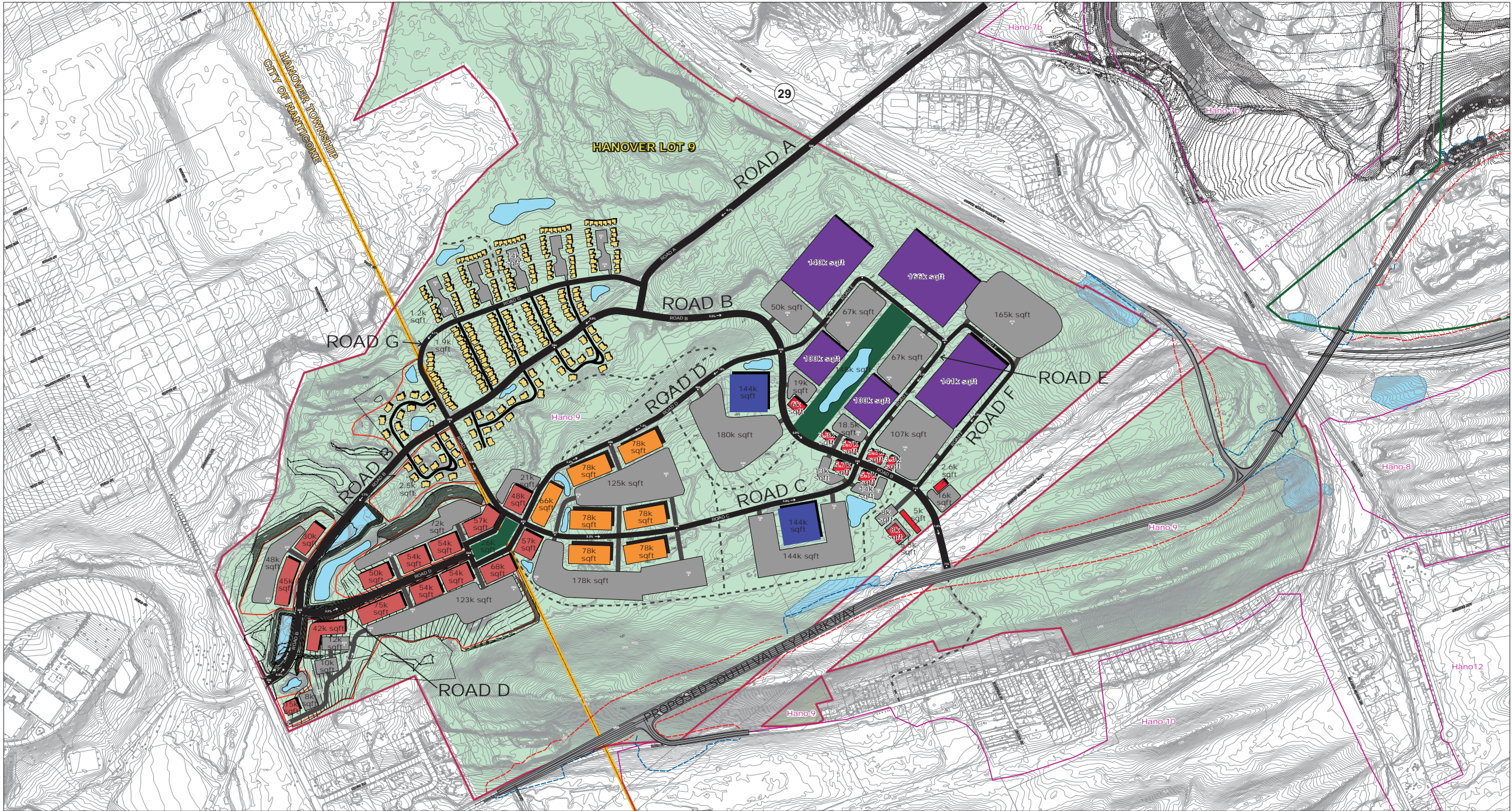
### Mixed-Use Village

The mixed-use village area is within ¼-mile of the main buildings on the LCCC campus and is considered functionally and physically linked to it. The Community College driveway off Kosciuszko Street forms a four-legged intersection with a new roadway that provides access to the mixed-use village area and the other parts of Lot 9 (Road B). Perpendicular to Road B and 500 feet east of Kosciuszko Street is Road D, the main spine of the village. Along this spine road are two- and three-story mixed-use buildings, with ground level shops and retail services and upper-story offices and residential units. Community College-sponsored or -related uses are appropriate here, as are other retail, office, or residential uses. The spine road has on-street parking, sidewalks, crosswalks, and pedestrian-scaled lighting. Buildings are sited up to the sidewalk, with off-street parking provided behind.

A village “green” civic/open space forms an identifiable center for this area. Informal use of this formal green space is presumed to be passive recreation, while special event and seasonal programming could also occur throughout the year.

EC has submitted an application to the EPA Office of Wastewater Management for a National Pollutant Discharge Elimination System (NPDES) permit to allow reclamation and development of the City of Nanticoke portion of Lot 9 (called Parcel A by EC, and conforming generally with the mixed-use village area of the schematic plan). The mixed-use village portion of the schematic plan is in accordance with the NPDES-submitted plan with respect to designated development areas, grading, and stormwater management facilities.





Hanover Crossings  
HANOVER LOT 9  
SCHEMATIC PLAN

Figure 3.1

**Legend**

- South Valley Pkwy Footprint
- Proposed SVP Structures
- Cut
- Fill
- Proposed Basin Locations
- Current and Former Earth Conservancy Properties
- Greater Wilkes-Barre Chamber of Business and Industry Property
- Municipal Boundaries
- Mixed Use
- Business Park/Flex Space
- Convenience Retail
- Medical Outpatient
- Medium Density Residential
- Low Density Residential
- New Roadway
- Park
- Parking
- Open Space
- Bicyclist & Pedestrian Trail

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**Mixed-Use Village Development Program**

- 235,000 square feet – Office/Classroom
- 235,000 square feet – Retail (including Restaurants)
- 160 Units – Residential

**Business Park/Flex Space/Convenience Retail/Medical Services Area**

The business park/flex space/convenience retail/medical services area consists of three sub-areas. The three sub-areas are business park/flex space, convenience retail, and medical outpatient services.

The business park/flex space sub-area consists of three large-footprint (140,000 to 160,000 square foot) buildings visible from PA Route 29 in a horseshoe arrangement with inner parking areas and common open space, along with two smaller-footprint (100,000 square foot) buildings. Access to this area is generally from the SVP, on the main loop road through Hanover Lot 9 (Road B). Two small loop roads directly serve the buildings and related parking in this sub-area – an inner loop (Road E) that further defines the horseshoe, and a southeast perimeter loop (Road F) that can also provide truck access to the back or sides of two of the large-footprint buildings. It is assumed that the large-footprint buildings are one story and the smaller-footprint buildings are two story, although two-story, large-footprint buildings are feasible as part of this schematic plan. Uses could range from warehousing to manufacturing, business incubator, and/or offices or laboratories.

The convenience retail sub-area is located along the new Road B and is close to the South Valley Parkway. Two retail businesses are within 400 feet of the SVP, while several more are at the intersection of Road B and Road E. All of these businesses are highly-accessible by vehicles traveling on the SVP and by pedestrians from the business park/flex space and medical services sub-areas and from the student housing/garden apartment area.

The medical services sub-area is west of the new Road B and consists of two multi-story buildings and related parking, one at the corner of Road B and the new Road D, and one west of the convenience retail sub-area at the intersection of Road B and the new Road C. It is assumed that the medical outpatient services buildings would be three or four stories.

A landscaped park is located along a southwest-to-northeast axis from Road B into the business park/flex space sub-area and visually and physically links the medical outpatient services, convenience retail, and business park/flex space sub-areas. This linear green space provides physical connections for people on foot and opportunities for stormwater recharge as well as recreational uses such as lunching, small group meetings, reading, and relaxing. Special events could also be programmed here.

The development of business park/flex space typically involves preliminary earthwork in order to establish pad sites that can accommodate buildings with large footprints. The existing topography of the portion of Lot 9 that is designated for business park/flex space includes steep slopes and grade changes that would

have to be smoothed out in order to accommodate large pad site types of development. As it happens, the construction of the proposed SVP is estimated to yield 750,000 cubic yards of excess fill material. Because of the close proximity of the proposed SVP and Hanover Lot 9, the two construction projects could mutually benefit. Excess fill from SVP could be easily transported to Lot 9 used to create “pad” sites for the business park/flex space portion of Lot 9. This procedure would save costs for both the SVP contractor and the Lot 9 business park/flex space developer. EC should pursue this cost-saving solution with PennDOT to reclaim Hanover Lot 9.

**Business Park/Flex Space/Convenience Retail/Medical Services Area Development Program**

- 647,000 square feet – Business Park/Flex Space
- 51,000 square feet – Convenience Retail
- 288,000 square feet – Medical Services

**Single-family Detached/Townhouse/Senior Housing Residential Neighborhood**

The single-family detached/townhouse/senior housing residential neighborhood is close to the mixed-use village and is on both sides of Road B, the main loop road through Hanover Lot 9. Within this neighborhood are a combination of single-family detached dwellings and two-story townhouse units intended for families, couples, or single individuals and attached single-story patio units intended primarily for seniors. The

allocation shown to either single-family detached or townhouse or single-story patio units is not significant in itself and is flexible, depending on the future market for each.

The arrangement of single-story patio units shows common parking areas, whereas townhouses (and single-family detached units) are presumed to have individual driveways, although this distinction is also not significant in the context of the overall schematic plan. Access to the residential units in this neighborhood is provided by Road B, a new local collector road, and a set of small local streets. This neighborhood is highly accessible to the mixed-use village via Road C.

**Single-family Detached/Townhouse/Senior Housing Residential Neighborhood Development Program**

- 266 Units

**Student Housing/Garden Apartment Area**

The student housing/garden apartment area is within a ¼-mile of both the village green (to the west) and the convenience retail sub-area (to the east), making it strategically located for potential residents of this area. The area is also within ½-mile of the buildings on the campus of LCCC, making for a potential strategic geographical relationship for students, staff, and/or faculty of that institution. Buildings front on Road C and Road D, with off-street parking provided behind.

Since this area is intended to function as an extension of the mixed-use village area, similar characteristics for roadways (on-street parking, sidewalks, crosswalks, and pedestrian-scaled lighting) are recommended along Roads C and D. Buildings are presumed to be three-story, double-loaded corridor structures, although variations in height and configuration are possible. Rental occupancy is assumed, although other forms of tenure are possible.



Market potential exists for housing, including apartments for students, on Hanover Lot 9.

### Student Housing/Garden Apartment Area Development Program

→ 400 Units

### Open Space and Trails

Areas for development are located to preserve more than half the site for open space on Hanover Lot 9. Open space provides a naturalized landscape in which stream courses and wetlands and the floodplains and ecosystems associated with them are undisturbed. Wooded areas, riparian areas and steep slopes have been left intact. Trails are indicated on the schematic plan (Figure 3.1) showing pedestrian connections to destinations within Hanover Lot 9 and providing low-key access to the extensive natural, open space areas of the tract.

### Trails

→ 1.8 Miles or 4.5 Acres of open space associated with the trail system

### Parks (Mixed-Use Village and Business Park/Flex Space areas)

→ 4 Acres

### ACCESS AND INTERNAL CIRCULATION

Access to Hanover Lot 9 occurs at three locations. The first is via the new Road B that forms a four-legged intersection with the eastern driveway to LCCC at Kosciuszko Street. Road B continues through Hanover Lot 9 and forms a second access into the site at the SVP, midway between its intersection with Middle Road/South Main Street (to the west) and its intersection with the southbound exit ramp from PA Route 29 (to the east). The third access point is via the existing but generally unused underpass associated with PA Route 29 that would permit a road connection with Dundee Road and Sans Souci Parkway. Within the site, this third access point forms the eastern end of Road A, which intersects with Road B in the north-central portion of the site.



Potential access point to Hanover Lot 9 from Kosciuszko Street, opposite entrance to LCCC.

The schematic plan includes accommodations for access into Hanover Lot 9 with, or without, the construction of the SVP. With construction of the

SVP, there are three access points into the tract, as described above. However, if the SVP is not constructed, access into Hanover Lot 9 is still provided, via Kosciuszko Street and the access from the east, Road A. Access via Route A would provide for travel from Dundee Road, Sans Souci Parkway, and from Hanover Crossings Phases 3 and 4.

Roads B, C, and D are the main internal roadways for the site. Road B leads from Kosciuszko Street, passes the low-density residential area, and then swings south to provide access to both Road E and Road F, the loop roads associated with the medical outpatient, convenience retail, and business park/flex space areas, before intersecting with the SVP. In the middle of its course, Road B intersects with Road A, which accesses the aforementioned underpass to Dundee Road and Hanover Crossings Phases 3 and 4. Road D is the spine of the mixed-use village area. Within the mixed-use area it provides a signature one-way vehicular circulation pattern around the park area, and continues east (as a two-way road) where it connects to Road B and the medical outpatient, convenience retail, and business park/flex space areas. Road C connects to Road B at the east and west ends of the tract, but provides a southerly route through the tract. Road C provides access to the business park/flex space, medical outpatient, and convenience retail sub-areas in the east, and provides access to the student housing/garden apartment area.

Roads E, F, and G provide for secondary movement within the site, principally access to buildings and parking areas. Small, short streets permit access to individual single-family detached dwellings and townhouses in the residential neighborhood in the north-central portion of the tract.



All roadways are presumed to be Complete Streets, providing for vehicular, pedestrian, and bicycle use. Sidewalks on both sides would be consistent with this principle, as would crosswalks at intersections. Bicycle use would be accommodated either via Share the Road opportunities or through marked on-road bicycle lanes. Future transit operations on Roads B, C, and D should be taken into account in the design of these streets.

The schematic plan supports the inclusion of a trail system through the site’s open space areas. Connections between internal development areas and to off-site destinations should be accommodated in the layout of the trail system.

BUILDING USE AND FORM

Mixed-use and medium density residential uses fronting Roads B, C, and D define the space of the streetscape and contribute significantly to the experience of being in that space and development should support a pedestrian-friendly character for these areas. Buildings should be sited up to sidewalks.

Front façades of buildings should utilize awnings, columns, offset rooflines, cornices, and transoms to articulate architectural styles and provide an articulated first story and entryway. Building façades should include windows and glazed doors to provide a minimum of 60% transparency on the ground floor façade. Window displays for retail stores are encouraged. The maximum signage area should be

no more than 5% of the total façade area. A minimum of two feet in front of the entrance and apart from the effective sidewalk area (pedestrian thoroughway) should be free of obstacles to provide adequate space for entering and exiting buildings.

Business park/flex space, medical outpatient and convenience retail use areas should also be supportive of pedestrian use. Buildings should be sited up to sidewalks or park settings to structure multi-modal access and to enhance the pedestrian experience.

STORMWATER MANAGEMENT

Stormwater management follows Green Street principles of allowing infiltration as close to the source as possible and minimizing the use of significantly-sized detention basins and pipes. Where underground infrastructure and pipes are required, systems should be designed to slow and detain water during large storm events so as to minimize impacts on nearby waterways.

Porous paving for parking areas, sidewalks, and trails and swales, rain gardens, and other types of recharge opportunities internal to parking lot areas and adjacent to cartways are consistent with these principles. Landscaped areas and tree plantings should be incorporated as much as possible as they contribute to the evapotranspiration of rain water. The distribution of open space areas throughout the site will also assist with the implementation of these Green Street principles.

SUSTAINABILITY

The recommendations for Hanover Lot 9 include mixing of land uses, pedestrian and bicyclist facilities, and siting buildings up to sidewalks, in support of pedestrian and transit access. These ideas strengthen the future sustainability of the area. A mixed-use character and multi-modal access possibilities promote walking, biking, and transit trips, helping to reduce auto-dependency and to promote healthier lifestyles and environmental stewardship.

In addition to these planning principles, other steps should be taken toward improving the sustainability of Hanover Lot 9. Sites should be developed with environmentally-sustainable designs, including provisions to capitalize on building orientation, minimize stormwater runoff, harvest solar and/or wind power, adapt and reuse existing materials, improve existing infrastructure, and minimize atmospheric pollutants. The Leadership in Energy and Environmental Design (LEED) certification, developed by the US Green Building Council (USGBC), provides a list of standards for environmentally-sustainable construction. Developers should be encouraged to seek LEED certification through a Green Building Rating System offered by the USGBC.

COST ESTIMATE

A Cost Estimate summary for Hanover Lot 9 is shown on **Figure 3.2**. Costs associated with providing basic access and utility services to potential subdivided

development lots on Hanover Lot 9 are anticipated to be borne by the tract’s owner. As such, Road B and possibly Road A would be the EC’s responsibility. Costs associated with the development of potential subdivided lots are anticipated to be borne by developers yet to be identified.

HANOVER CROSSINGS PHASES 3 AND 4

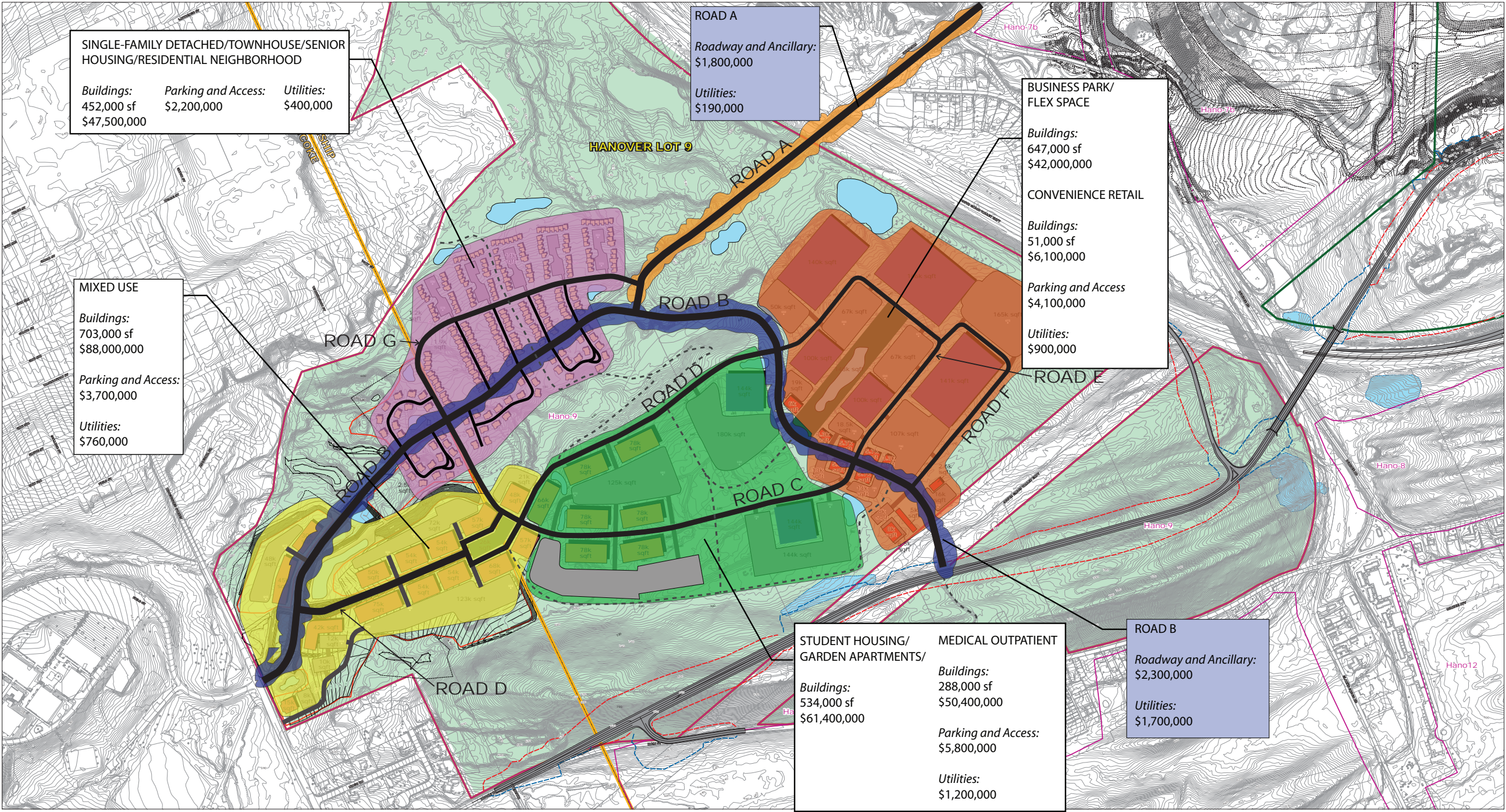
DEVELOPMENT AREAS

Business Park/Flex Space

The schematic plan for Hanover Crossings Phases 3 and 4 (**Figure 3.3**) consists of three buildings with different footprints and accessory off-street parking areas on the Phase 3 tract and three large-footprint (100,000 square feet each) buildings and an accessory off-street parking area on the Phase 4 tract. For the Phase 3 buildings, development is shown on three lots—Lot A, situated on the north side of the Great Valley Boulevard, at the western edge of Phase 3; Lot B, east of Lot A; and Lot C, located on the south side of the Great Valley Boulevard extension, close to the proposed roundabout on the SVP.

Lot A includes a 156,000-square-foot building with parking in front. From Great Valley Boulevard, access into Lot A is provided by a driveway that allows access to the parking area and to a driveway connection to the

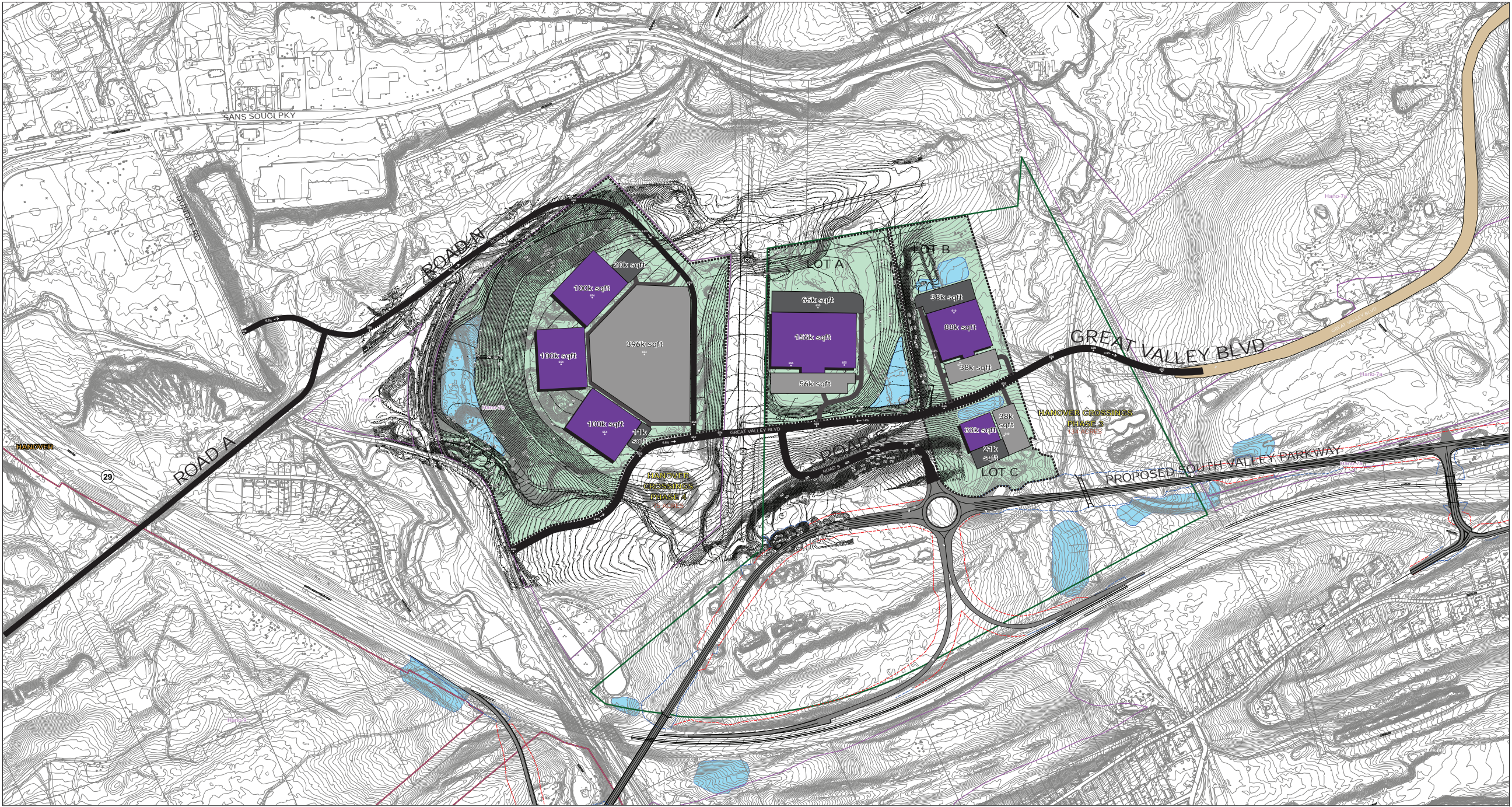




Hanover Crossings  
HANOVER LOT 9  
SCHEMATIC PLAN - COST ESTIMATE

Figure 3.2





Hanover Crossings  
HANOVER CROSSINGS PHASES 3 & 4  
SCHEMATIC PLAN

Figure 3.3

**Legend**

South Valley Pkwy Footprint	Proposed Structures	Current and Former Earth Conservancy Properties	Landscaped Area	Potential Subdivision Boundary
Great Valley Blvd & Building	Cut	Greater Wilkes-Barre Chamber of Business and Industry Property	Business Park/Flex Space	
Loomis As-Built Site	Proposed Basin Locations	New Roadway	Automobile Parking	Truck Loading Court

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rear of the building for truck access and loading. Uses on Lot A could be in the warehousing or manufacturing subsectors, likely in a single-story configuration, or could include offices or laboratories, perhaps utilizing a partial or full second story.

Lot B includes an 88,000-square-foot building also identified for business/flex space. Access is provided via two driveways—one on the eastern side and the other on the western side of the lot. Both driveways provide access to the parking area in front of the building. The western driveway also provides truck access to the service and loading area at the rear of the building.

Lot C is located close to the SVP proposed roundabout on the south side of the Great Valley Boulevard extension and at 33,000 square feet, the building is the smallest proposed on the Phase 3 tract. A driveway is located on the east side of the lot and provides access to a side parking area as well as truck access to a rear service and loading area.

For the Phase 4 site, uses could include warehousing, manufacturing, and/or distribution, and thus likely one-story buildings or offices and/or research and development (R&D), in which case buildings may include a partial, or full, second floor. Buildings on the Phase 4 site are envisioned as potential signature structures, taking advantage of the prominent siting and view through orientation and façade transparency.

#### Business Park/Flex Space

→ 577,000 square feet – Business Park/Flex Space

#### Open Space

Previous site preparation and reclamation of Hanover Crossings Phases 3 and 4 has created pad sites for development (Phase 3, Lot A and Phase 4) and relatively modest grading will result in usable pads on Phase 3, Lots B and C. Perimeter acreage surrounding future buildings, and parking, loading, and driveway areas should remain free of development, providing permeability for stormwater and building users with access to open space and views. The open space area to the west of the buildings proposed on the Hanover Crossings Phase 4 site provides an opportunity to capitalize on the prominent views from this site and a potential outdoor eating or recreating space.

Site restrictions associated with Hanover Crossings Phase 3, such as steep slopes, a stream course, and utility easements, have limited the area for development. In the south portion of Phase 3, the SVP and roundabout and ramp connections between the SVP and PA Route 29 occupy acreage but create areas for open space retention. The existing utility easement and Warrior Run and its associated floodplain limit development potential in the eastern portion of Phase 3 but also offer open space opportunities.

#### ACCESS AND INTERNAL CIRCULATION

Primary access is provided by an extension to the existing Great Valley Boulevard, which connects to Dundee Road on the western side of the tract, and by Road S, the northern “leg” of the proposed



At present, Great Valley Boulevard terminates at the edge of Hanover Crossings Phase 3.

roundabout on the SVP. Great Valley Boulevard is the street address of the tracts to be developed as part of Hanover Crossings Phases 3 and 4.

Secondary access is provided by Road N, which is on an alignment to the north of the Phase 4 tract and connects to Dundee Road as well as to the new Road A that runs between Hanover Lot 9 and Hanover Crossings Phase 3 and 4. Road N allows trucks to access Hanover Crossings Phases 3 and 4 from Sans Souci Parkway. This opportunity would be absent without Road N, since Dundee Road has a narrow

underpass at the old rail alignment. (Another option would be to remove the narrow underpass.)

As the construction of the SVP has not yet occurred, the schematic plan makes circulation accommodations for the development of Hanover Crossings Phases 3 and 4 by including access into the site other than by the SVP. If the SVP is not built, Hanover Crossings Phases 3 and 4 can still achieve access, from Great Valley Boulevard and from Road N, which both tie into Dundee Road. Dundee Road connects to PA Route 29 and Sans Souci Parkway.





Dundee Road underpass below railroad bed.

## BUILDING USE AND FORM

A standard for building quality has already been established in Hanover Crossings Phases 1 and 2 and this standard should be maintained in Phases 3 and 4. Important factors include clearly-defined pedestrian circulation through parking lots, drop-off access at the front entrances of buildings, and landscape areas adjacent to buildings and parking areas.

Front façades of buildings should utilize awnings, columns, offset rooflines, cornices, and transoms to articulate architectural styles and provide an articulated first story and entryway. Building façades should include windows and glazed doors to provide a minimum of 45% transparency on the ground floor façade. The maximum signage area should be no more than 5% of the total façade area.

## STORMWATER MANAGEMENT

As in the case of Hanover Lot 9, stormwater management follows Green Street principles of allowing infiltration as close to the source as possible and minimizing the use of significantly-sized detention basins and pipes. Recognizing that Phase 4 already has a significantly-sized detention basin associated with it, nonetheless opportunities for recharge and evapotranspiration internal to parking lot areas and adjacent to cartways should be pursued.

Where underground infrastructure and pipes are required, stormwater systems should be designed to slow and detain water during large storm events so as to minimize impacts on nearby waterways. Porous paving for parking areas, sidewalks, and trails and swales, rain gardens, and other types of recharge opportunities internal to parking lot areas and adjacent to cartways are consistent with these Green Street principles. Landscaped areas and tree plantings should be incorporated as much as possible as they contribute to the evapotranspiration of rain water. The distribution of open space areas throughout the site will also assist with the implementation of these principles.

## SUSTAINABILITY

Steps should be taken toward sustainability of Hanover Crossings Phases 3 and 4. Sites should be developed with environmentally-sustainable designs, including provisions to capitalize on building orientation, minimize stormwater runoff, harvest solar and/or wind power, adapt and reuse existing materials, improve existing infrastructure, and minimize atmospheric pollutants. The Leadership in Energy and

Environmental Design (LEED) certification, developed by the US Green Building Council (USGBC), provides a list of standards for environmentally-sustainable construction. Developers of proposed development sites along the corridor should be encouraged to seek LEED certification through a Green Building Rating System offered by the USGBC.

## COST ESTIMATE

A Cost Estimate summary for Hanover Crossings Phases 3 and 4 is shown on **Figure 3.4**. Costs associated with providing basic access and utility services to potential subdivided development lots on Hanover Crossings Phases 3 and 4 are anticipated to be borne by the tracts' owners. As such, the extension Great Valley Boulevard, Road S (connection to the SVP roundabout), and Road N (connection to Dundee Road) would be the responsibility of a combination of the Greater Wilkes-Barre Chamber of Business and Industry and the EC. Costs associated with the development of potential subdivided lots are anticipated to be borne by developers yet to be identified.

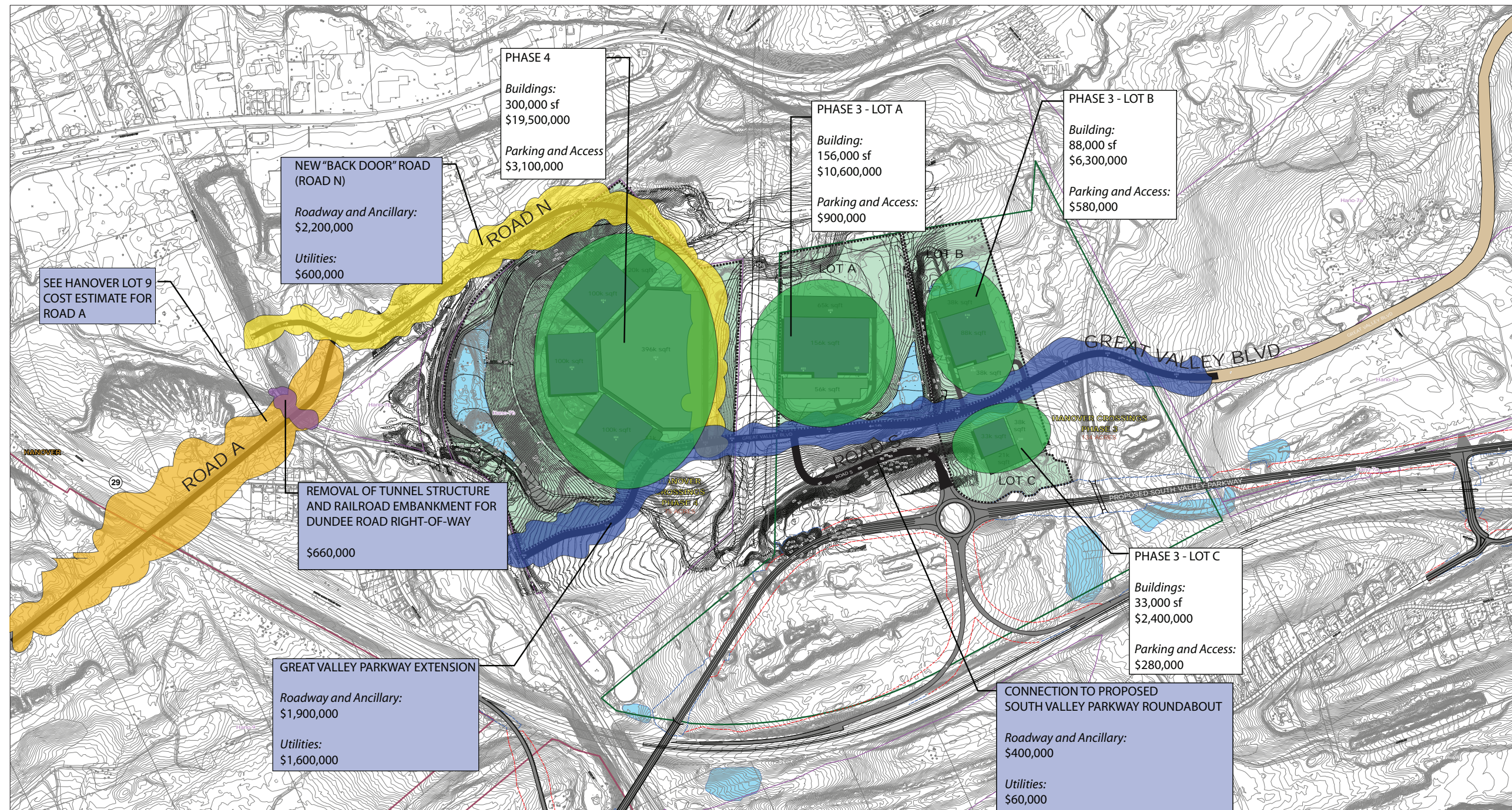
Road A, the potential road to connect from Hanover Crossings Phases 3 and 4 over to Hanover Lot 9 on an existing railroad bed, is another potential access road cost. An alternative to the construction of this road is to remove the current underpass of the railroad bed that is part of Dundee Road. The underpass removal has the benefit of allowing truck access from Sans Souci Parkway via Dundee Road to the extended Great Valley Boulevard. In this latter scenario there would be less of a reason to construct Road N, and the opportunity to connect Dundee Road to the center of Hanover Lot 9 via Road A would most likely be lost.

## Moving Forward

The schematic plans for Hanover Crossings Phases 3 and 4 and Hanover Lot 9 represent a blueprint for the future of the study area. Programmatic recommendations respond to market factors and the opportunity to expand the existing Hanover Crossings Business Park into its Phases 3 and 4 components and allow Hanover Lot 9 to take advantage of its proximity to the LCCC. Both tracts, on either side of PA Route 29, can enjoy visibility from that limited-access highway and future accessibility from the SVP. The development of the tracts will reclaim currently-vacant, formerly-mined lands close to the City of Wilkes-Barre, and in the case of Hanover Lot 9 at least partly within the City of Nanticoke, and put them to beneficial use. Development recommendations for Hanover Lot 9, in particular, underscore sustainable environmental and economic principles through mixing of land uses, connectivity, and multi-modal mobility. Both tracts will retain extensive open space for long-term conservation, recreation, and ecologic benefits.

With the SVP will come a new level of accessibility for the area generally. The development potential of the two tracts is definitely heightened by the prospective construction of the SVP. As economic conditions in the region continue to improve and the SVP becomes a reality, the schematic plans prepared as part of this study can serve as an effective guide for the realization of successful development for Hanover Crossings Phases 3 and 4 and Hanover Lot 9. 🌿





Hanover Crossings  
HANOVER CROSSINGS PHASES 3 & 4  
SCHEMATIC PLAN - COST ESTIMATE

Figure 3.4



■ PRELIMINARY ROADWAY COST ESTIMATE FOR HANOVER LOT 9

December 16, 2011

1. ENTIRE PROJECT ITEMS	COST
Inspector's Field Office	\$75,000
Unforeseen Water Pollution Control	\$20,000
Scheduling	\$25,000
Inspection	\$1,500,000
Mobilization	\$750,000
Hauling of Excess Embankment to Project Site	\$1,000,000
Construction Services	\$500,000
Sub Total	\$3,870,000

2. ROAD B LOOP	COST
Clearing and Grubbing	\$80,000
Excavation	\$25,000
Roadway Pavement	\$965,000
Concrete Curb (Both Sides)	\$246,000
Concrete Sidewalk (Both Sides)	\$375,000
Drainage	\$45,000
Guide Rail	\$25,000
Landscaping	\$100,000
Erosion Control	\$55,000
Traffic Control	\$10,000
Pavement Marking and Signing	\$2,500
Highway Lighting	\$20,000
Construction Surveying	\$5,000
Sub Total	\$1,953,500

3. VILLAGE MIXED-USE DEVELOPMENT	COST
Clearing and Grubbing	\$160,000
Excavation	\$900,000
Roadway, Parking Lot and Driveway Pavements	\$1,170,000
Concrete Curb(Both Sides)	\$124,000
Concrete Sidewalk (Both Sides)	\$110,000
Drainage	\$90,000
Landscaping	\$200,000
Erosion Control	\$110,000
Traffic Control	\$20,000
Pavement Marking and Signing	\$5,000
Highway Lighting	\$40,000
Construction Surveying	\$10,000
Sub Total	\$2,939,000

4. BUSINESS PARK	COST
Clearing and Grubbing	\$200,000
Excavation	\$2,500
Roadway, Parking Lot and Driveway Pavements	\$1,928,000
Concrete Curb(Both Sides)	\$152,000
Concrete Sidewalk (Both Sides)	\$214,000
Drainage	\$112,500
Landscaping	\$250,000
Erosion Control	\$135,000
Traffic Control	\$25,000
Pavement Marking and Signing	\$6,500
Highway Lighting	\$50,000
Construction Surveying	\$12,500
Sub Total	\$3,088,000



5. MULTI-FAMILY HOUSING & MEDICAL OUTPATIENT	COST
Clearing and Grubbing	\$200,000
Excavation	\$1,850,000
Roadway, Parking Lot and Driveway Pavements	\$1,688,000
Concrete Curb(Both Sides)	\$220,000
Concrete Sidewalk (Both Sides)	\$250,000
Drainage	\$112,500
Landscaping	\$250,000
Erosion Control	\$140,000
Traffic Control	\$25,000
Pavement Marking and Signing	\$6,000
Highway Lighting	\$50,000
Construction Surveying	\$12,500
Sub Total	\$4,804,000

6. TOWNHOUSES, SINGLES & FLATS	COST
Clearing and Grubbing	\$100,000
Excavation	\$2,500
Parking Lot and Driveway Pavements	\$900,000
Concrete Curb(Both Sides)	\$218,000
Concrete Sidewalk (Both Sides)	\$335,000
Drainage	\$45,000
Landscaping	\$100,000
Erosion Control	\$55,000
Traffic Control	\$10,000
Pavement Marking and Signing	\$2,500
Highway Lighting	\$20,000
Construction Surveying	\$5,000
Sub Total	\$1,793,000

7. ROAD FROM LOT 9 TO BACK ROAD CONNECTOR	COST
Clearing and Grubbing	\$60,000
Excavation	\$200,000
Roadway Pavement	\$630,000
Concrete Curb(Both Sides)	\$160,000
Concrete Sidewalk (One Side)	\$125,000
Drainage	\$50,000
Landscaping	\$100,000
Erosion Control	\$60,000
Traffic Control	\$10,000
Pavement Marking and Signing	\$2,500
Highway Lighting	\$20,000
Construction Surveying	\$5,000
Sub Total	\$1,422,500

8. REMOVAL OF RAILROAD STRUCTURE	COST
Demolition (Includes Shoring)	\$500,000
Excavation	\$160,000
Sub Total	\$660,000
TOTAL	\$20,530,000
CONTINGENCIES (15%)	\$3,079,500
PROJECT TOTAL	\$23,609,500



■ PRELIMINARY UTILITY COST ESTIMATE FOR  
HANOVER LOT 9

December 16, 2011

1. ROAD A	COST
Utility Development Level 4 - 1,300 LF @ 50"/LF	\$65,000
Utility Development Level 3 - 200 LF @ 220"/LF	\$44,000
Sub Total	\$109,000

2. ROAD B	COST
Utility Development Level 1 - 300 LF @ 335"/LF	\$885,500
Utility Development Level 2 - 500 LF @ 290"/LF	\$145,000
Utility Development Level 3 - 3,200 LF @ 220"/LF	\$704,400
Sub Total	\$1,734,900

3. VILLAGE MIXED USE DEVELOPMENT	COST
Road C	
Utility Development Level 1 - 50 LF @ 385"/LF	\$19,250
Utility Development Level 2 - 250 LF @ 290"/LF	\$72,500
Utility Development Level 4 - 550 LF @ 50"/LF	\$27,500
Road D	
Utility Development Level 1 - 1400 LF @ 385"/LF	\$539,000
Utility Development Level 2 - 350 LF @ 290"/LF	\$101,500
Sub Total	\$759,750

4. MULTI-FAMILY HOUSING & MEDICAL OUTPATIENT	COST
Road C	
Utility Development Level 2 - 1700 LF @ 290"/LF	\$493,000
Road D	
Utility Development Level 1 - 1800 LF @ 385"/LF	\$693,000
Sub Total	\$1,186,000

5. BUSINESS PARK	COST
Road C	
Utility Development Level 2 - 200 LF @ 290"/LF	\$58,000
Road E	
Utility Development Level 1 - 2000 LF @ 385"/LF	\$770,000
Road F	
Utility Development Level 4- 1450 LF @ 50"/LF	\$72,500
Sub Total	\$900,500

6. TOWNHOUSES, SINGLES & FLATS	COST
Road G	
Utility Development Level 3- 1750 LF @ 220"/LF	\$385,000
Sub Total	\$385,000

Total Utility Infrastructure Hanover Lot 9 = \$5,075,150



■ PRELIMINARY BUILDING CONSTRUCTION COST ESTIMATE FOR HANOVER LOT 9

December 16, 2011

1. BUSINESS PARK	COST
Flex Building 647,000SF \$65 unit cost	\$42,055.000
Convenience Retail 51,000 SF \$120 unit cost	\$6,120,000
Sub Total	\$48,175,000
2. MULTI-FAMILY HOUSING & MEDICAL OUTPATIENT	COST
Medical Outpatient 288,000SF \$175 unit cost	\$50,400,000
Residential Medium Density 534,000SF \$115 unit cost	\$61,410.00
Sub Total	\$111,810,000
3. VILLAGE MIXED USE DEVELOPMENT	COST
Mixed Use 703,000SF \$125 unit cost	\$87,875,000
Sub Total	\$87,875,000
4. TOWNHOUSES, SINGLES & FLATS	COST
Residential Low Density 452,000SF \$105 unit cost	\$47,460,000
Sub Total	\$47,460,000
TOTAL	\$295,320,000



Hanover Crossings Phases 3 & 4

■ PRELIMINARY ROADWAY COST ESTIMATE FOR  
HANOVER CROSSINGS PHASES 3 AND 4

December 16, 2011

1. ENTIRE PROJECT ITEMS	COST
Inspector's Field Office	\$75,000
Unforeseen Water Pollution Control	\$10,000
Scheduling	\$15,000
Inspection	\$750,000
Mobilization	\$500,000
Construction Services	\$500,000
Sub Total	\$1,850,000

2. GREAT VALLEY PARKWAY EXTENSION	COST
Clearing and Grubbing	\$50,000
Excavation	\$22,000
Roadway Pavement	\$674,000
Concrete Curb (Both Sides)	\$172,000
Concrete Sidewalk (Both Sides)	\$255,000
Drainage	\$40,000
Guide Rail	\$20,000
Landscaping	\$125,000
Erosion Control	\$62,500
Traffic Control	\$25,000
Pavement Marking and Signing	\$6,500
Highway Lighting	\$25,000
Construction Surveying	\$5,000
Sub Total	\$1,482,000

3. ROAD S, CONNECTOR FROM ROUNDABOUT	COST
Clearing and Grubbing	\$10,000
Excavation	\$1,000
Roadway Pavement	\$180,000
Concrete Curb(Both Sides)	\$46,000
Drainage	\$8,000
Guide Rail	\$10,000
Landscaping	\$25,000
Erosion Control	\$12,500
Traffic Control	\$5,000
Pavement Marking and Signing	\$1,500
Highway Lighting	\$5,000
Construction Surveying	\$1,000
Sub Total	\$305,000

4. ROAD N, BACK ROAD CONNECTION	COST
Clearing and Grubbing	\$50,000
Excavation	\$742,000
Roadway Pavement	\$470,000
Concrete Curb(Both Sides)	\$120,000
Concrete Sidewalk (One Side)	\$90,000
Drainage	\$37,500
Guide Rail	\$20,000
Landscaping	\$125,000
Erosion Control	\$62,500
Traffic Control	\$25,000
Pavement Marking and Signing	\$6,500
Highway Lighting	\$20,000
Construction Surveying	\$5,000
Sub Total	\$1,773,500



5. CROSSINGS 3 LOT A	COST
Clearing and Grubbing	\$20,000
Excavation	\$1,000
Parking Lot and Driveway Pavements	\$550,000
Concrete Curb(Both Sides)	\$20,000
Concrete Sidewalk (One Side)	\$15,000
Drainage	\$15,000
Landscaping	\$50,000
Erosion Control	\$25,000
Traffic Control	\$10,000
Pavement Marking and Signing	\$2,500
Highway Lighting	\$10,000
Construction Surveying	\$2,000
Sub Total	\$720,500

6. CROSSINGS 3 LOT B	COST
Clearing and Grubbing	\$20,000
Excavation	\$1,000
Parking Lot and Driveway Pavements	\$225,000
Concrete Curb(Both Sides)	\$20,000
Concrete Sidewalk (One Side)	\$15,000
Drainage	\$15,000
Landscaping	\$50,000
Erosion Control	\$25,000
Traffic Control	\$10,000
Pavement Marking and Signing	\$2,500
Highway Lighting	\$10,000
Construction Surveying	\$2,000
Sub Total	\$395,500

7. CROSSINGS 3 LOT C	COST
Clearing and Grubbing	\$10,000
Excavation	\$1,000
Parking Lot and Driveway Pavements	\$93,000
Concrete Curb(Both Sides)	\$12,000
Concrete Sidewalk (One Side)	\$9,000
Drainage	\$8,000
Landscaping	\$25,000
Erosion Control	\$12,500
Traffic Control	\$5,000
Pavement Marking and Signing	\$1,500
Highway Lighting	\$5,000
Construction Surveying	\$1,000
Sub Total	\$183,000

8. CROSSINGS 4	COST
Clearing and Grubbing	\$40,000
Excavation	\$1,034,000
Parking Lot and Driveway Pavements	\$1,306,000
Concrete Curb(Both Sides)	\$72,000
Concrete Sidewalk (One Side)	\$55,000
Drainage	\$30,000
Landscaping	\$100,000
Erosion Control	\$50,000
Traffic Control	\$20,000
Pavement Marking and Signing	\$5,000
Highway Lighting	\$20,000
Construction Surveying	\$4,000
Sub Total	\$2,736,000

TOTAL	\$9,445,500
CONTINGENCIES (15%)	\$1,416,825
PROJECT TOTAL	\$10,862,325



■ PRELIMINARY UTILITY COST ESTIMATE FOR  
HANOVER CROSSINGS PHASES 3 AND 4

December 16, 2011

1. Great Valley Boulevard Extension	COST
Utility Development Level 1 - 3,100 LF @ 385 <sup>7</sup> /LF	\$1,193,500
Utility Development Level 2 - 1,300 LF @ 290 <sup>7</sup> /LF	\$377,000
Sub Total	\$1,570,500
2. Road N, “Back Road Connection”	COST
Utility Development Level 1 - 1,000 LF @ 385 <sup>7</sup> /LF	\$358,000
Utility Development Level 4 - 3,950 LF @ 50 <sup>7</sup> /LF	\$197,500
Sub Total	\$555,500
3. Road A, (To 29)	COST
Utility Development Level 4 - 1,600 LF @ 50 <sup>7</sup> /LF	\$80,000
Sub Total	\$80,000
4. Road S, Connector from Roundabout	COST
Utility Development Level 4 - 1,150 LF @ 50 <sup>7</sup> /LF	\$57,500
Sub Total	\$57,500
Total Utility Infrastructure Hanover Crossings Phases 3 and 4 = \$2,290,500	

■ PRELIMINARY BUILDING CONSTRUCTION COST ESTIMATE FOR  
HANOVER CROSSINGS PHASES 3 AND 4

December 16, 2011

1. PHASE FOUR	COST
Flex Buildings 300,000SF \$65 unit cost	\$19,500,000
Subtotal	\$19,500,000
2. PHASE THREE, LOT A	COST
Flex Buildings 156,000SF \$68 unit cost	\$10,608,000
Subtotal	\$10,608,000
3. PHASE THREE, LOT B	COST
Flex Buildings 88,000SF \$72 unit cost	\$6,336,000
Subtotal	\$6,336,000
4. PHASE THREE, LOT C	COST
Flex Buildings 33,000SF \$72 unit cost	\$2,376,000
Subtotal	\$2,376,000
TOTAL	\$38,820,000



