

TOWNSHIP OF BETHLEHEM

LAND USE PLAN ELEMENT

FOR THE ROUTE 173 CORRIDOR

ROM RESEARCH & OFFICE
GC GENERAL COMMERCIAL
MFG MANUFACTURING
NC NEIGHBORHOOD COMMERCIAL
HC HIGHWAY COMMERCIAL
DISTRICTS

September 2024

Adopted by the Planning Board on (date)

Prepared by
Heyer Gruel & Associates
236 Broad Street
Red Bank, NJ 07701

Land Use Plan Element for the Route 173 Corridor (ROM Research and Office, GC General Commercial, MFG Manufacturing, NC Neighborhood Commercial, and HC Highway Commercial Districts)

Township of Bethlehem
County of Hunterdon

Prepared by



Heyer Gruel & Associates
Community Planning Consultants
236 Broad Street
Red Bank, NJ 07701
732-741-2900

Adopted by the Planning Board on (Date)

The original of this report was signed and sealed in accordance with N.J.S.A. 45:14a-12.

Michael Davis, AICP, PP #6533

Credits

Bethlehem Township Committee

Mayor Paul Muir
Deputy Mayor Judy Nelson
Steve Keefe
Bob Kenny
Paul Lenzi, Jr.

Bethlehem Township Planning Board

Ken Shilay, Chairperson
Grace Ann Kelly, Vice Chairperson
Paul Muir, Mayor
Philip Bellon, Class IV
Jose Medieros, Class IV
Ryan Messinger, Class IV
Brad Nelson, Class IV
Jose Reyes, Class II
Jeff Coletti, Alternate #1
Steve DeLorenzo, Alternate #2
Daniel McManamon, Alternate #3
Daniel MacDonnell, Alternate #4

Planning Board Attorney

Kara Kaczynski, Esq.

Planning Board Secretary

Monica Shilay, Planning Board Secretary

Heyer Gruel & Associates

Michael Davis, AICP, PP #6533

With assistance from Megan Adam, Associate Planner

The preparation of this Plan was made possible utilizing grant funding from the Hunterdon County Economic Development Grant Program and the New Jersey Highlands Council.

Contents

Introduction	5
Location and Context.....	6
Community Vision.....	6
Land Use Goals and Objectives	8
Existing Land Use and Zoning	11
Land Use.....	12
Residential Land Uses	13
Farm (Qualified)	13
Commercial.....	14
Vacant Land	14
Exempt Properties	14
Existing Zoning.....	15
Research & Office (ROM) and Manufacturing (MFG) Districts	15
Neighborhood Commercial (NC), Highway Commercial (HC), and General Commercial (GC) Districts.....	18
Split-Zoned Lots	21
Environmental Characteristics	23
Highlands Region Context	23
Overview	23
Land Use Capability Zones.....	24
Agricultural Uses.....	25
Conservation	26
Critical Infrastructure.....	26
Land Use/ Land Cover	26
Preserved Lands	27
Topography	26
New Jersey Statewide Trails	27
Land Use and Zoning Recommendations	27
Overall Recommendations	28
Research, Office Manufacturing District.....	29
Neighborhood Commercial, Highway Commercial, General Commercial	29
Manufacturing District.....	29
Climate Change Vulnerability Assessment.....	30

Introduction

The Township of Bethlehem in Hunterdon County retains roots which date prior to the founding of New Jersey. The legacy of the original Native American settlers is apparent in the naming of Bethlehem's northern border with Franklin Township and Hampton Borough, the Musconetong River. Additionally, the Musconetcong Mountains covers the southern half of the Township.

Bethlehem's landscape is mostly rural in nature and is characterized by single-family residences, farms, farmhouses, forests, open space, and conservation areas. Commercial and small-scale industrial development has been established along the New Jersey Route 173 corridor (the "Corridor"), which spans from the Township's northwestern border with Bloomsbury Borough to its southeastern border with Union Township.

The purpose of a Land Use Element is to establish the current and historic patterns of development and land use, including the natural environment, to outline the vision for the Township's planning policies, and make recommendations designed to achieve a municipality's goals and objectives and implement that vision for the future. This Land Use Element will provide short- and long-term planning recommendations intended to guide policies and development for sections of the Township within either the Research and Office (ROM), General Commercial (GC), Manufacturing (MFG), Neighborhood Commercial (NC), or Highway Corridor (HC) District, and located along the Route 173 corridor. For the purposes of ease of use of this Plan, the areas within these parameters will be collectively referred to as the "Focus Area." The remaining zoning districts within the Township will be the focus of a future Land Use Element.

Bethlehem Township adopted its first Master Plan in 1984. The Township has adopted various subsequent Master Plan Elements and Reexamination Reports, with Reexamination Reports occurring in 2012 (one in February and another in July), and July of 2024. The July 2012 Reexamination maintains the same "Major Land Development & Objectives" and "Extent of Reduction/Increase in Problems & Objectives" conditions as the February Report; however, it offers additional considerations to the "Significant Changes in Assumptions, Policies, and Objectives" for Bethlehem Township. Since the 2012 Reexamination, Bethlehem Township has adopted four Master Plan Elements, including the following: Highlands Element for Bethlehem Township Master Plan (2014), Highlands Land Use Ordinance for Bethlehem Township (2014), and Housing Plan Element and Fair Share Plan (2020). The recently adopted 2024 Reexamination report largely carries forward existing planning policies and goals and provides details regarding how the Highlands regulations have impacted the development of Bethlehem Township and the relationship between the Township's zoning and Highlands policies.

The Township has historically been proactive in its planning initiatives and has consistently worked hard to maintain its rural and historic characteristics. Bethlehem has also adopted several documents to establish its conformance with the Highlands Regional Master Plan. Previous planning initiatives include:

- 1984 Master Plan and Reexamination Report
- 2011 Highlands Planning Area Petition Ordinance
- 2012 Highlands Environmental Resource Inventory Report for the Township of Bethlehem (Updated May 2014)
- 2012 Master Plan Reexamination Reports (February and July)
- 2014 Highlands Element for Bethlehem Township Master Plan
- 2014 Highlands Land Use Ordinance for Bethlehem Township
- 2015 Zoning Map Amendment and Resolution
- 2017 Interactive Historical Places Map for Bethlehem Township
- 2017 Highlands Exemption Ordinance
- 2020 Housing Plan Element and Fair Share Plan
- 2023 Recreation and Open Space Inventory (ROSI) Mapping
- 2024 Master Plan Reexamination Report

This Plan expands on previous planning efforts and provides analyses of existing land uses and zoning, development, environmental characteristics, physical and visual form, and evaluates the current and future land use demands of the Route 173 corridor.

Location and Context

The Township of Bethlehem is located within the northwestern corner of Hunterdon County. The Focus Area, which is the geographic subject of this Land Use Plan, encompasses the Township's central area for non-residential development, mainly due to its frontage along the Route 173 highway.

Route 173, designated as an old section of U.S. Route 22, runs directly north of the newer Interstate 78/Lightning Division Memorial Highway throughout the Township. Roads which bisect the Route 173 Corridor include Vargo Lane, Person Road, Vliet Farm Road, D Hull Lane, Asbury West Portal Road/ County Road 643, and Tunnel Road. Asbury West Portal Road serves as a significant roadway, as it connects residential sections of the Township with the Focus Area and with the adjacent Franklin Township.

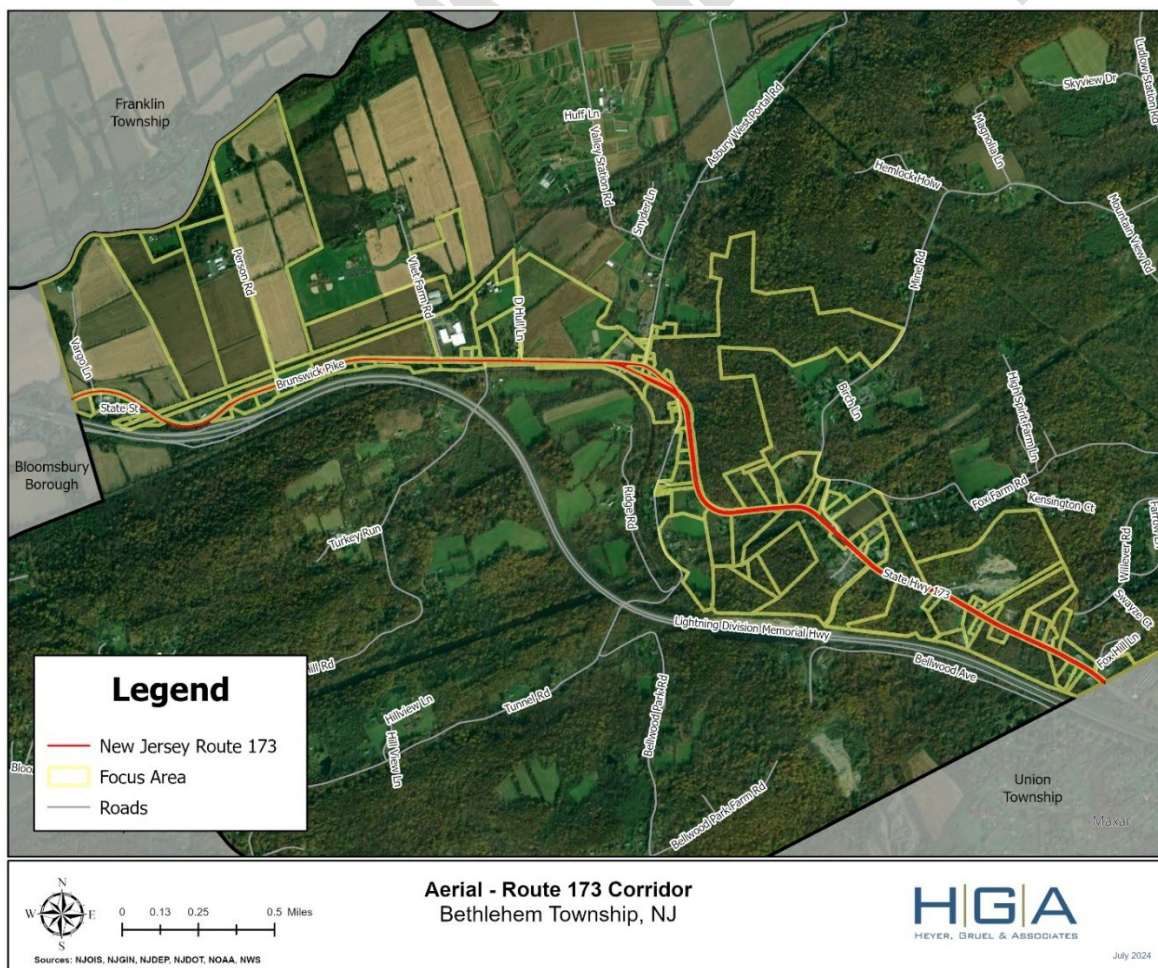
Community Vision

Bethlehem is known for its rural landscapes and extensive open space, on which the Township continues to support farming and recreational activities. Several of the Township's landscapes include landmarks or are themselves of historical significance. To offer deeper insight into these sites, the Township has established an interactive digital directory of its historical landscapes and built structures. A passion to

discover and preserve places of local history is further evident in the foundation of organizations such as the West Portal Historic Society.

Ultimately, the Township seeks to promote economic development along the Route 173 Corridor in a way that will establish unique local businesses and increase tourism in the area. The Township's desire to teach about and preserve its local history can instigate such development, especially as several of the designated historical places are located either along Route 173 or a bisecting roadway. Areas located along the Route 173 Corridor include the West Portal Community, Hannah's Rock, and the Jugtown Mountain Reserve. Further, located along the bisecting Vliet Farm Road are the Stephen Huczko Memorial (within Heritage Park) and Vliet Farm. The Jugtown (Musconetcong or Pattenburg) Tunnel is located at the end of the bisecting Tunnel Road, and the Asbury Graphite Mills are located at the end of the bisecting Asbury West Portal Road.

Optimizing nearby historical assets to promote economic development along the Route 173 Corridor will serve the community in a meaningful way and develop a network of tourism that is unique to the rural character of Bethlehem Township.



Land Use Goals and Objectives

A series of Goals and Objectives were adopted as part of the 2024 Master Plan Reexamination. The following Goals and Objectives are relevant to this Land Use Plan for the Focus Area:

1. The Township should prepare an updated Environmental Resource Inventory (ERI) Report to the previous 2014 ERI that establishes the baseline/existing conditions of the Township's natural resources. The ERI should incorporate older data that can be compared to the most up-to-date information to determine whether the resources are being improved or worsened. Once the baseline data is established, the Township should review the data and develop recommendations to mitigate those impacts.
2. The Township should prepare a Climate Hazard Vulnerability Assessment, which will form the basis of zoning ordinance revisions that will allow Bethlehem Township to become a more resilient community and be better prepared for hazards, such as those identified in the Hunterdon County Hazard Mitigation Plan which includes hurricanes, nor'easters, and severe storms.
3. The Bethlehem Township Preserved Lands Map, which was created as part of the Highlands conformance process, should be adopted as an amendment to the Bethlehem Township Master Plan, specifically the Greenway and Open Space Plan and Recreation Plan Element. This mapping should be reviewed periodically to reflect any updates.
4. Currently the Neighborhood Commercial (NC), General Commercial (GC) and Highway Commercial (HC) are combined in Section 102-15 of the Township's Zoning Ordinance. The ordinance should be revised to include three (3) separate sections and appropriate uses reviewed for each zone district.
 - a. Each commercial zone should specify the intent and intensity of the uses. An example of each includes:
 - i. Neighborhood Commercial: Uses such as health care facilities, professional offices, small grocery stores, general or specialty stores which furnish convenience goods and services to meet the daily needs of the residents of the



*Figure 1 – Sunset in Bethlehem Township
Courtesy of Bethlehem Resident Steve Schwab*

- municipality. Uses should promote walkability and connection to assets such as parks and trails.
- ii. General Commercial: Uses that do not typically require outside activities such as drive-up windows, gasoline sales, significant late night parking lot activity or similar impacts adjacent to the lower intensity land use. (i.e. Hardware Store, Non-Drive Thru Restaurants, Drug Stores).
 - iii. Highway Commercial: Uses and facilities which primarily serve the travelling public, such as automobile oriented facilities, tourist facilities, eating establishments, indoor recreation establishments, etc.
- b. The intensity of the uses in each commercial zone must be sensitive to the overall rural and natural character of the Township.
 - c. Uses in these zones should be evaluated and updated to include uses that will spur economic development in the Township and to support and protect the Township's ecological and agricultural assets. Examples of these uses include agritourism, ecotourism, boutique hotels, museums, specialty retail shops, etc.
5. The Township should identify split-zoned properties and rezone as single zone districts, as appropriate, based on location, existing use, and surrounding uses.
 6. The existing uses and bulk standards of the ROM zone should be reviewed and evaluated in accordance with the standards of the Preservation Area of the Highlands.
 7. The Township may want to consider incorporating Dark-Sky compliant standards, which may be appropriate for a rural community like Bethlehem Township. The International Dark- Sky Association is a grassroots advocate network that shares best practices and tools to protect the night skies for present and future generations. The Township should consider implementing dark sky compliant standards that reduce glare, light trespass, and sky glow as a means to retain the rural character of the Township.
 8. Review and evaluate interconnectedness of publicly accessible open space properties. The Township should create an inventory of all public use easements, conservation easements and deeds that will help identify areas that may be underutilized and recommend additional easements or connections along roadways that would better link the Township's open spaces.
 9. When vehicle crashes occur on Route 78, Route 173 becomes a bypass, causing traffic concerns to the township and residents. The township should continue to work with the State and County to ensure the safety of motorists and residents when these incidents occur.

New Goals and Objectives related to this Land Use Element are outlined below:

1. Encourage businesses and tourism initiatives along the Route 173 Corridor which support existing historical assets and local interests.
2. Prioritize the preservation of designated Bethlehem Township Historical Places along or bisecting the Route 173 Corridor.
3. Encourage opportunities to expand family-friendly programming within existing parks and open spaces, particularly within Heritage Park and the Jugtown Mountain Reserve.
4. Foster small-scale neighborhood commercial development along Brunswick Pike, instilling flexible use classifications and bulk standards in relation to the existing historic West Portal Community.
5. Evaluate and capitalize on opportunities to continue extending large contiguous areas of preserved farmlands where appropriate.
6. Ensure future development is compatible with the local vernacular architecture that defines Bethlehem Township.



Figure 2 - West Portal Old Town Hall, located along Brunswick Pike.

Existing Land Use and Zoning

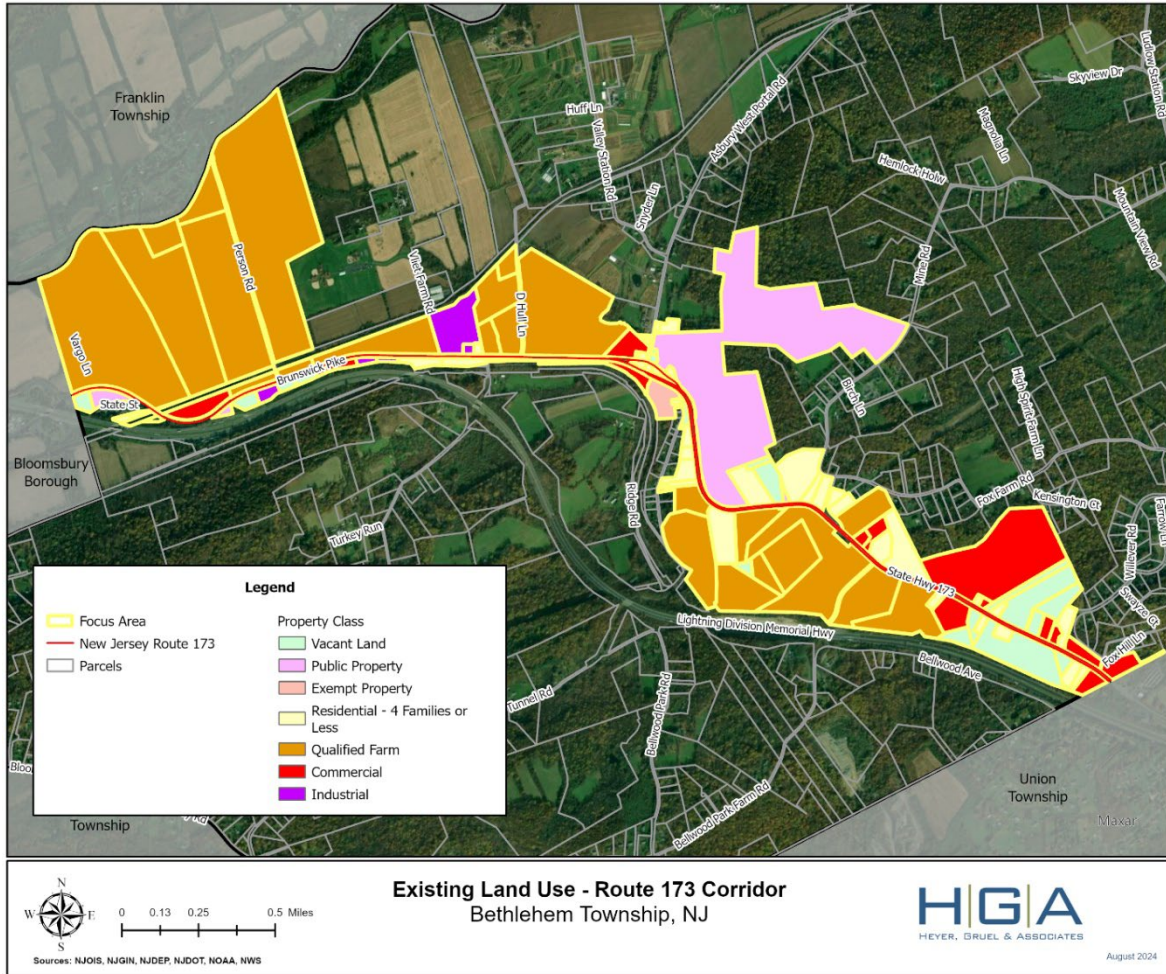
In order to provide the guiding framework that enhances the visual, physical, environmental, and economic health of the community, it is necessary to understand the existing land use patterns of the subject zones as well as identify localized issues that will require specific attention. The following section is broken down first by land use only, then by zoning district.

Bethlehem Township consists of a land area of approximately 20.7 square miles (13,280 acres). The existing land uses along Route 173 mainly include farm buildings, with some industrial use to the northwest, between Vliet Farm Road and D Hull Lane. Residential and commercial uses are located periodically along the Corridor. The Jugtown Mountain Reserve is classified as public property and includes extensive frontage along Route 173. Vacant parcels along the Corridor are located primarily within the southwestern section of Township, near its border with Union Township.

As noted above, this Land Use Element defines the Focus Area as properties within the Route 173 Corridor, specifically within the Research & Office, General Commercial, Manufacturing, Neighborhood Commercial, and Highway Commercial Zones. The below land use map provides a breakdown of property use as classified by MOD IV tax records. While some tax records may not be completely up to date, the best available data has been utilized for the property classifications. The property classifications are as follows:

Property Class	Land Use
1	Vacant Land
2	Residential Land (with four families or less)
3B	Qualified Farmland
4A	Commercial Land
4B	Industrial Land
15A-F	Public School Property, Other School Property, Public Property, Church and Charitable Property, Cemeteries and Graveyards, Other exempt properties

The existing land use map on the following page indicates property classifications based on the latest available MOD IV property information.



Land Use

The Focus Area is predominantly characterized by qualified farmland, with public property and commercial properties representing the second and third largest land use category by acreage, respectively. Although representing only approximately 8.8% of the total acreage within the Focus Area, residential properties generated the largest number of parcels within a single land use category (36 parcels, or approximately 31.9% of the total parcels) in the Focus Area.

The following table highlights the existing land uses for the Focus Area as per available tax records. It should be noted that mixed-use development is not accounted for within this Land Use Classification.

Route 173 Corridor Land Use Summary					
2022 MOD IV Property Tax Data					
Land Use	Class	Acres	% of Total	# of Parcels	% of Total
Vacant	1	72.2	8.2%	22	19.5%
1-4 Family Residential	2	77.2	8.8%	36	31.9%
Qualified Farm	3B	459.5	52.4%	15	13.3%
Commercial	4A	93.4	10.7%	15	13.3%
Industrial	4B	18.8	2.1%	5	4.4%
Public Property	15C	155.6	17.7%	20	17.7%
Total		876.7	100.0%	113	100.0%

Residential Land Uses

Residential land use within the Township is classified by one- to four-family residential (Class 2) units. The residential land uses represent the fourth largest land use category in the Focus Area, covering only around 8.2% of the land. No properties within the Focus Area consisted of apartment use. These residences are mainly located outside of the Focus Area, within the MR and Single-Family Residential (R-1.5) zones. However, Class 2 residential land uses were recorded within the GC, HC, and NC zones of the Focus Area.

Farm (Qualified)

The largest property class within the Focus Area is Class 3B, Qualified Farm. Properties that are classified as Qualified Farm have been qualified and are assessed under the Farmland Preservation Act of 1964, N.J.S.A. 54:4-23.1 et seq. These properties are no less than 5 acres in size and are actively devoted to agricultural or horticultural uses and have been so for at least two years. The Qualified Farms consist of 52.4% (459.5 acres) of the Focus Area's land use and are situated within the GC, HC, MR, and ROM Districts. The following table identifies those properties.

Qualified Farms in the Focus Area			
Block	Lot	Qualifier	Zone
34	5	Q0094	HC
19	2	Q0047	GC
27	8	Q0060	HC
19	1	Q0046	GC
19	7	Q0048	GC
19	6	Q0048	GC

20	1	Q0050	GC
25	1	Q0051	ROM
14	14	Q0170	MR
19	8	Q0049	GC
19	9	Q0048	GC
25	3	Q0053	ROM
25	2	Q0052	ROM
26	1	Q0046	ROM
25	5	Q0050	ROM

Commercial

The commercial land use classification (Class 4A) accounts for 10.7% (93.4 acres) of the total acreage within the Focus Area, making it the second largest land use category. As seen in the Route 173 Corridor Land Use Summary table above, a total of 15 commercial properties are dispersed throughout the Focus Area. Concentrations of commercial land use are found along the entire Route 173, with a cluster of Neighborhood Commercial properties located adjacent to Asbury West Portal Road, and a larger section of Highway Commercial properties near Bethlehem’s border with Union Township.

The businesses associated with the commercial lots are smaller, locally owned operations; examples of existing businesses include a used car dealer, repair shops, supply stores, and a tourism agency. Restaurants within the Focus Area include the Spain Inn 2 (located along the westbound side of Route 173 in the Neighborhood Commercial District), Muddy Waters Gastropub, and Jerzee’s Restaurant & Bar (both located along the eastbound side of Route 173, within the Highway Commercial District).

Vacant Land

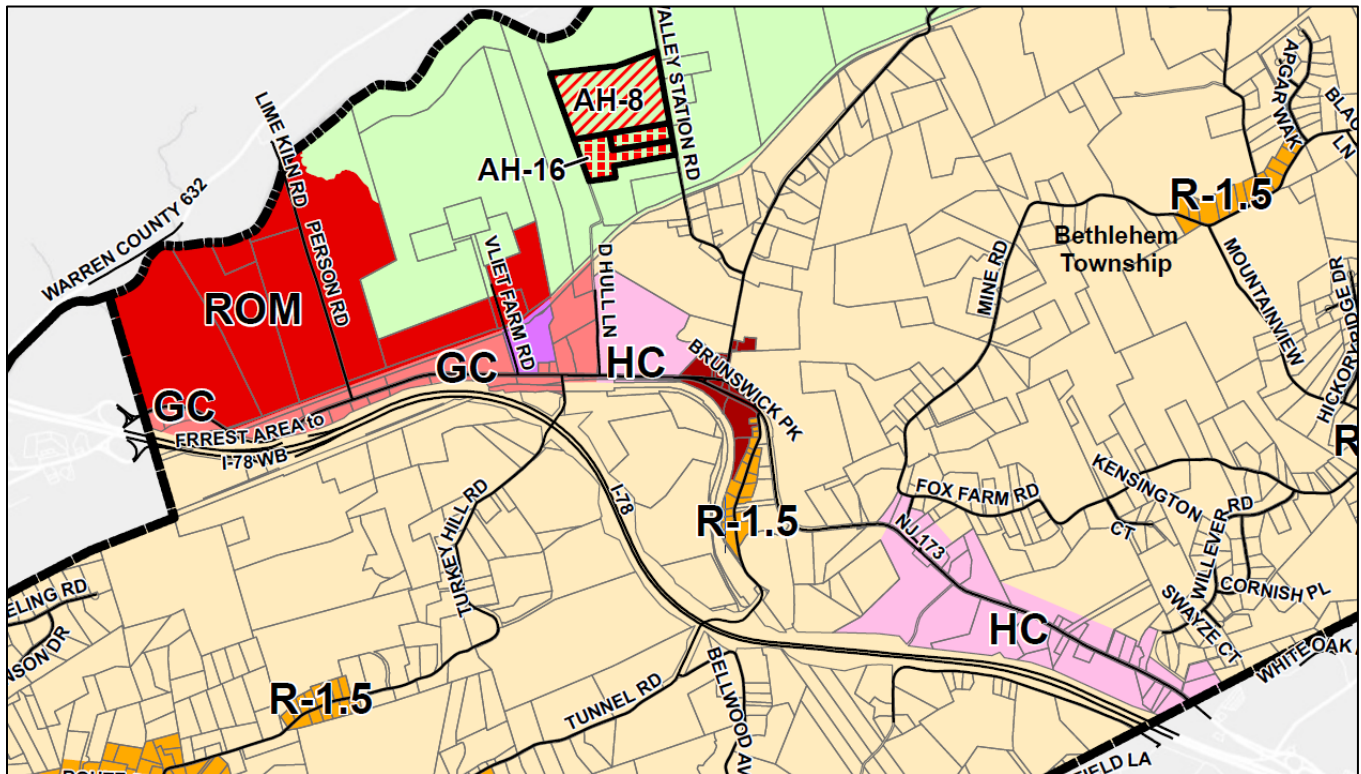
Vacant land accounts for the fifth largest land use by acreage, representing 72.2 acres (8.2%) of the Focus Area. The majority of the Focus Area’s vacant land is located within the General Commercial and Highway Commercial Zones. There is a large patch of vacant land along the eastbound side of Route 173, adjacent to the Bethlehem-Union Township border. Two primary parcels within this section include Lot 9 of Block 13 (approximately 18.2 acres) and Lot 16 of Block 34 (approximately 12.8 acres).

Exempt Properties

A total of five parcels within the Focus Area are designated within the public property “exempt” land use class and measure a total of 155.6 total acres. This land accounts for approximately 17.7% of the Focus Area. Examples of these public properties along the Route 173 Corridor include a portion of the Jugtown Mountain Reserve, a branch of the New Jersey Department of Transportation (NJDOT) and public parking lot.

Existing Zoning

While Bethlehem Township consists of nine (9) zoning districts and two (2) affordable housing overlays, this Land Use Element is focused only on the land use and development of properties within the Research & Office (ROM), General Commercial (GC), Manufacturing (MFG), Neighborhood Commercial (NC), and Highway Commercial (HC) Districts. An overall zoning map of the Route 173 Corridor is found below.



Research & Office (ROM) and Manufacturing (MFG) Districts

The Research & Office (ROM) District is located in the northwestern corner of the Township, adjacent to its borders with Franklin Township and Bloomsbury Borough. The ROM District includes large plots of open space, general agricultural use, and large section of preserved farmland along Person Road. A smaller portion of the district which spans across Vliet Farm Road is occupied by the Allgrind Plastics Inc. fabrication company.

The Manufacturing (MFG) District is a small district, located directly south of the ROM District and in between patches of the General Commercial (GC) District. The MFG District includes frontage along the Route 173 Corridor. This district mainly includes facilities and improvements of the SleekFence manufacturing company.

In establishing permitted uses and bulk standards, section §102-16 of the Bethlehem Township zoning ordinance groups the ROM and MFG Districts together. These requirements are outlined in the subsequent sections.

Permitted Uses/Land Uses

The ROM and MFG districts allow for farms, offices and office buildings with multitenant spaces, manufacturing plants (provided that the synthesis of chemical products for direct industrial sale is not involved in the manufacturing, assembling or fabricating process), laboratories of an experimental, research, or testing nature (i.e., within completely enclosed buildings and which do not produce noticeable noise, vibrations, smoke, dust, odors, heat or glare outside the building), and repair garages (MFG District only).



Figure 3 - Site of Multi-Machine, within the MFG District

Permitted accessory uses include off-street parking and loading, garages and storage buildings, temporary construction trailers, and employee cafeterias as part of a principal building or as the entire use of an accessory building.

Conditional uses include public utility uses and solar or photovoltaic energy facilities. Within Article VI, Exceptions, Modifications, and Development Alternatives, section §102-35 outlines conditional use regulations for the entire Township. Section §102-35A describes "public utility uses" to "include such uses as telephone dial equipment centers, power substations and other utilities serving the public, such as sewage treatment plants, but shall exclude dumps and sanitary landfills." Further, the complete solar ordinance and additional standards are presented in §102-37.3.

The permitted uses are categorized into land uses by the MOD IV property tax data, residential, commercial, farms, etc., as was discussed in the previous section of this Element. Reviewing how the permitted uses break down into land usage provides valuable insight into the ways the districts have developed.

Bulk Standards

The following chart represents the bulk standards for all principal uses for both the principal buildings and accessory structures within the ROM and MFG Districts:

Principal Use Bulk Schedule: Principal Building									
	Minimum Lot Requirement				Minimum Yard Requirements			Max Lot Coverage	Max FAR
	Area	Frontage	Width	Depth	Front	Side	Rear		
ROM District	5 acres	400 ft	400 ft	400 ft	150 ft	100 ft (each)	100 ft	50%	0.2
MFG District	3 acres	300 ft	300 ft	300 ft	125 ft	75 ft (each)	75 ft	55%	0.2

	Accessory Structure Minimum Requirements		
	Distance to side line	Distance to rear line	Distance to other building
ROM District	75 ft	75 ft	50 ft
MFG District	50 ft	50 ft	50 ft

The bulk schedule presents a general set of requirements for both the ROM and MFG Districts, as well as minimum requirements for off-street loading, parking, and signage, presented in §102-16F, §102-16G, and §102-16H, respectively. The general requirements for the districts are outlined below:

The general requirements for the districts are outlined below:

- Any principal building may contain more than one use and/or organization. Any lot may contain more than one principal structure.
- At least 75 feet in the ROM District and 50 feet in the MFG District adjacent to any street line, and 30 feet adjacent to any lot line shall not be used for parking and shall be landscaped in accordance with the provisions of § 102-23.
- No merchandise, products, waste, equipment or similar material or objects shall be displayed or stored outside, except that in the MFG District only, uses may have an outside storage area, provided that such outside storage area does not exceed 20% of the lot area, is located in the rear yard only and is enclosed entirely by a fence, wall, plant material or combination thereof in order to provide a visual barrier between the storage area and any street or property line.

- All buildings shall be compatibly designed, whether constructed all at one time or in stages over a period of time. All building walls facing any street or residential district line shall be suitably finished for aesthetic purposes.
- All portions of the property not utilized by buildings or paved surfaces shall be landscaped and buffered in accordance with the provisions of § 102-23. In any case, no less than 15% of the total lot area shall be landscaped.
- A landscape buffer area shall be provided in accordance with the provisions of § 102-23L.

Neighborhood Commercial (NC), Highway Commercial (HC), and General Commercial (GC) Districts

The three existing commercial districts within the Township all include frontage along the Route 173 Corridor, and consist of the Neighborhood Commercial (NC), Highway Commercial (HC), and General Commercial (GC) Districts. The NC District is located along both Brunswick Pike and Route 173, and adjacent to Asbury West Portal Road. The NC District is bordered by a HC District to the northwest, and by single-family residential use around its remaining borders. This district has been partially developed and contains sections of forest area and wetlands.

The HC District is divided into two sections along the Route 173 Corridor, with a smaller section located in between the GC and NC Districts, and a larger section spanning from around Mine Road to the border with Union Township. The smaller section is agriculturally based, while the larger section of the HC District includes a combination of developed land, forest area, and wetlands.

The GC District is located along the Route 173 Corridor, spanning from Bethlehem's border with Bloomsbury Borough to the intersection of Route 173 with D Hull Lane. The GC District is bordered to the south by residential parcels and the I-78 roadway, to the north by the ROM District, and to the east by both the MFG and HC Districts. This district includes a variety of land use types, the majority of which is qualified farmland. This district is mainly developed for local businesses including a wholesaler, truck supply store, and masonry contractor.

In establishing permitted uses and bulk standards, section §102-15 of the Bethlehem Township zoning ordinance groups the NC, HC, and GC Districts together. These requirements are outlined in the subsequent sections.

Permitted Uses/Land Uses

The principal permitted uses within all three of the Township's commercial districts (i.e., NC, HC, and GC) include the retail sales of goods and services, offices and office buildings, and farms.

Additional permitted uses within the HC and GC Districts only include banks (including drive-in facilities), restaurants and taverns, shopping centers comprised of the above uses, and automobile sales through franchised new car dealers.



Figure 4 - The Fuel Ox truck supplier, within the GC District

The remaining permitted uses are exclusive to the GC district: repair garages and manufacturing plants (must carry out processes within completely enclosed buildings and do not involve the synthesis of chemical products).

Permitted accessory uses for all three commercial districts include off-street parking and loading, garages and storage buildings, temporary construction trailers, and solar energy facilities, with the following mounting restrictions: "roof-mounted only in NC zone, ground-mounted and roof-mounted in the GC zone, and roof-mounted and ground-mounted on lots greater than 2 1/2 acres in the HC zone."

Conditional uses within all three districts include public utility uses and service stations. Within Article VI, Exceptions, Modifications, and Development Alternatives, specific regulations for setbacks, installations, screening, and landscaping are found. Regulations for public utility use are found within §102-35A and for service stations, within §102-35F. Additional conditional uses, permitted only within the HC and GC Districts, include motels (§102-3C), hotels (§102-3G), and car washes (§102-35B).



Figure 5 - Spain Inn 2, within the NC District

Bulk Standards

The following chart outlines the bulk standards for all principal uses (including both principal buildings and accessory structures) within the NC, HC, and GC Districts:

Principal Use Bulk Schedule: Principal Building								
	Minimum Lot Requirement				Minimum Yard Requirements			Max Lot Coverage
	Area	Frontage	Width	Depth	Front	Side	Rear	
NC District	30,000 SF	150 ft	150 ft	125 ft	60 ft	20 ft (each)	30 ft	25%
HC District	40,000 SF	175 ft	175 ft	175 ft	75 ft	20 ft (each)	35 ft	25%
GC District	40,000 SF	175 ft	175 ft	135 ft	50 ft	20 ft (each)	20 ft	25%

	Accessory Structure Minimum Requirements			
	Distance to side line	Distance to rear line	Distance to other building	Max Lot Coverage
NC District	15 ft	15 ft	15 ft	5%
HC District	25 ft	15 ft	20 ft	5%
GC District	20 ft	15 ft	15 ft	5%

The bulk schedule presents a general set of requirements for both the ROM and MFG Districts, as well as minimum requirements for off-street loading, parking, and signage, presented in §102-15F, §102-15G, and §102-15H, respectively. The general requirements for the districts are outlined below:

- Any principal building may contain more than one use and/or organization, provided that the total building coverage of the combined activities does not exceed the maximum building coverage specified for the district and further, that each activity occupies a minimum gross floor area of 500 square feet.
- At least the first 15 feet adjacent to any street line and eight feet adjacent to any lot line shall be planted and/or maintained in lawn area or ground cover or landscaped with evergreen shrubbery.
- All buildings shall be compatibly designed, whether constructed all at one time or in stages over a period of time. All building walls facing any street or residential district line shall be suitably finished for aesthetic purposes.
- All areas not utilized for buildings, parking, loading, access aisles, driveways or pedestrian walkways shall be suitably landscaped with shrubs, ground cover, seeding or similar plantings and

maintained in good condition. In any case, no less than 15% of the total lot area shall be landscaped.

- A landscape buffer area shall be provided in accordance with the provisions of § 102-23L.

Split-Zoned Lots

Along the Route 173 Corridor focus area, there are twelve (12) properties that are split-zoned, meaning the property is located in two or more zones. However, one of the split-zoned parcels includes acreage within both the MR District and the R-1.5 Single Family Residential Zones, which are zoning districts not being analyzed by this Land Use Element. This parcel has also been removed from the analysis below due to the fact that these zoning districts are not being analyzed as a part of this land use element.

The split-zoned property which includes acreage with the MR and R-1.5 Districts only is:

- Block 14, Lot 8

Excluding Block 14, Lot 8, the Focus Area analysis is therefore done on the assumption of 112 parcels (totaling 876.7 acres). These totals account for both roads and existing railroad rights-of-way.

In evaluating the most appropriate zoning district to resolve the complications of specific split-zoned properties, the following considerations were analyzed to provide recommendations as to the potential rezoning of property:

- Roadway frontage and property access,
- Existing zoning designations and relation to the commercial corridor of Route 173,
- Existing conditions of land including environmental constraints and topography, and
- Resolution of split-zoned properties to provide parcel-wide land use regulations, as opposed to having multiple districts and sections of regulations for one property.

Block	Lot	Total Acreage	Zone Split
14	18	3.15	HC south of Mine Road; MR north of Mine Road
16	2	1.00	Split between HC, GC, and NC along the eastbound side of Route 173
18	4	1.93	GC along Route 173; MR adjacent to I-78
18	5.01	0.95	GC along Route 173; MR adjacent to I-78
34	42	4.60	HC along the Route 173 Corridor; MR away from the roadway

Bethlehem Township
Route 173 Land Use Element

300	3	4.90	GC along Route 173 frontage; ROM north of the Corridor
34	5	9.41	HC along Route 173 frontage, MR on rear portion of parcel
34	12	52.64	HC along Route 173 frontage, MR on rear portion of parcel
34	14	3.00	HC along Route 173 frontage, MR on rear portion of parcel
34	16	12.03	HC along Route 173 frontage, MR on rear portion of parcel
34	30	5.00	HC along Route 173 frontage, MR on rear portion of parcel

DRAFT

Environmental Characteristics

Environmental characteristics, such as floodplains, surface water, wetlands, and steep slopes can impact development opportunities. The Focus Area is no exception. Reviewing available geographic information systems data from a variety of sources, including NJDEP, FEMA and the Highlands Council, can assist in determining whether areas are likely to be impacted by environmental characteristics and features. The following section details the existing environmental characteristics within the Focus Area based upon available data sources. It should be noted that this data intends to serve as a model and should not be used to replace an actual survey of the properties.

Several C-1 streams/rivers pass underneath the Route 173 Corridor, while standing bodies of water are found more infrequently. Three (3) parcels within the Focus Area which contain standing bodies of water include Lot 6 of Block 19 (GC District), Lot 3 of Block 19 (MFG District), and Lot 61.01 of Block 32 (HC District). Collectively, the Focus Area's streams and standing bodies of water have established 300-foot buffers around the intersections of Route 173 with Vargo Lane, D Hull Lane, Asbury West Portal Road, Mine Road, and the border with Union Township.

Wetland designations are found mainly within the southeastern section of the Focus Area. A total of 12 HC District parcels with frontage along Route 173 include sections of wetlands: Block 34, Lots 12, 14, 16, 30, 31, 32, 33, and 34, as well as Block 13, Lots 9, 9.01, 10, and 11. Further, steep slopes exceeding 15% are found primarily around the Jugtown Mountain Reserve, and on Lot 12 of Block 34.

Highlands Region Context

Overview

As 91% (approximately 12,146 acres) of Bethlehem Township's land falls within the Preservation Area of the Highlands Region, and the remaining 9% (1,141 acres) falls within the Highlands Planning Area, Highlands conformance remains both pertinent and relevant.

Bethlehem's small Planning Area borders the Route 173 Corridor to the south and extends to the Township's northern border with Franklin Township; it is further bounded by D Hull Road to the west and Asbury West Portal Road to the east. Much of the Planning Area land falls within the Conservation-Environmentally Constrained Sub-zone (CECSZ), which according to the Highlands Council, "consists of significant environmental features within the Conservation Zone that should be preserved and protected from nonagricultural development. Development activities will be constrained through restrictions on the extension or creation of water supply and wastewater services."

Nearly all of the Focus Area is included within the Highlands Preservation Area, specifically within the Protection Zone. According to the Highlands regulations, "the Protection Zone (PZ) consists of the highest

quality natural resource value lands that are essential to maintaining water quality, water quantity, and sensitive ecological resources and processes. Land acquisition is a high priority for lands in the PZ and development activities will be extremely limited. Any development will be subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands and natural resources.”

The Highlands Council has created a detailed online Interactive Environmental Resource Inventory (ERI) for the entire Region. The ERI offers insight into Bethlehem’s existing agricultural uses, conservation resources, critical infrastructure, land use/land cover, preserved lands, topography, and more. The ERI outlines the environmental factors which must be considered in relation to the revitalization of the Route 173 Corridor.

The Department of Environmental Protection (DEP), Division of Land Use Regulation is responsible for the regulatory program established by the Highlands Act which applies only to “Major Highlands Development” in the Highlands Preservation Area. Per N.J.A.C. 7:38-1 et seq., a “Major Highlands Development”, which is limited to a maximum impervious coverage limit of three percent, is defined as:

1. Any non-residential development in the preservation area;
2. Any residential development in the preservation area that requires an environmental land use or water permit or that results in the ultimate disturbance of one acre or more of land or a cumulative increase in impervious surface by one-quarter acre or more;
3. Any activity undertaken or engaged in the preservation area that is not a development but results in the ultimate disturbance of one-quarter acre or more of forested area or that results in a cumulative increase in impervious surface by one-quarter acre or more on a lot; or
4. Development that results in the ultimate disturbance of one-quarter acre or more of forested area or that results in a cumulative increase in impervious surface by one-quarter acre or more on a lot; or
5. Any capital or other project of a State entity or local government unit in the preservation area that requires an environmental land use or water permit or that results in the ultimate disturbance of one acre or more of land or a cumulative increase in impervious surface by one-quarter acre or more. Major Highlands Development shall not mean an agricultural or horticultural development or agricultural or horticultural use in the preservation area.

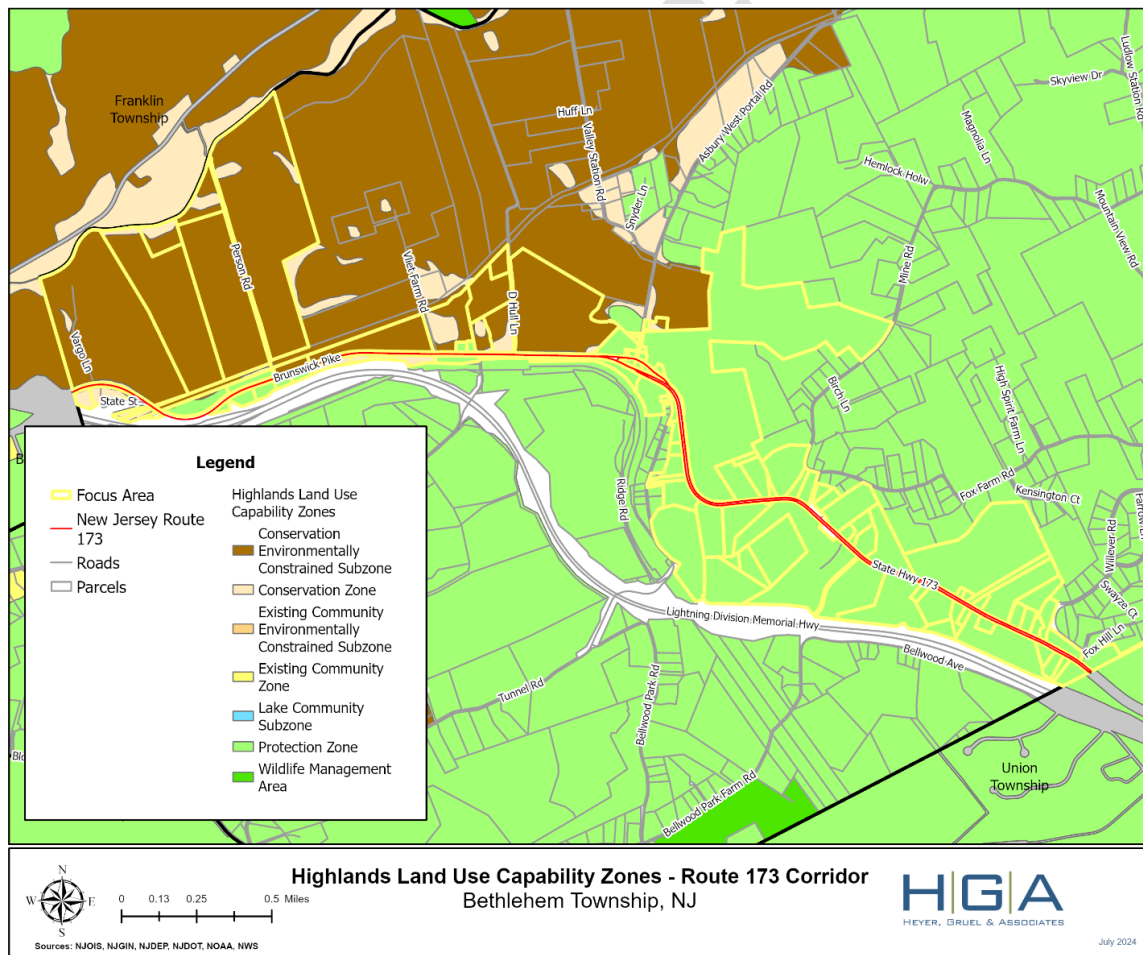
Land Use Capability Zones

The Highlands Council has developed the Land Use Capability Zone Map, which is one of a series of capability maps and identifies the Highlands Region in three distinct Zones, within which are four Sub-Zones as follows:

- Protection Zone
- Wildlife Management Sub-Zone
- Conservation Zone
 - Conservation Environmentally Constrained Sub-Zone
- Existing Community Zone

- Existing Community Environmentally Constrained Sub-Zone
- Lake Community Sub-Zone

The Land Use Capability Zone Map is intended to provide all levels of government and the public with an indication of land use capacity as well as areas for special consideration due to regionally significant resources. The Map was updated in June of 2024 and incorporates updated underlying data, now includes FEMA Flood Hazard data, and has eliminated the use of Public Water Existing Area Served due to the data being inaccurate and not readily updatable. The Land Use Capability Zones for the Route 173 corridor are represented in the following map.



Agricultural Uses

According to the Highlands ERI, Bethlehem contains a total of 4,366 acres (32.8% of the Township's total area) of land area that is actively used for agricultural purposes. Agricultural use applies to a variety of farming practices, animal husbandry, crop production, wood product production, agrotourism, farmers markets, and other related activities. North of the 173 Corridor includes many lands used for agricultural

purposes, particularly within the existing GC, ROM, MFG zones, and the section of the HC zone west of Asbury West Portal Road.

Conservation

Riparian Areas

A total of 3,395.4 acres, or 25.5% of the Township is comprised of Riparian Areas. The Highlands Council defines these areas as the integration of flood prone areas, riparian soils, wetlands and streams, and wildlife corridors. Riparian Areas serve as an interface between surface water bodies (e.g., streams, rivers, lakes, or reservoirs) and terrestrial ecosystems. They moderate fluctuations in water temperature, help maintain groundwater recharge and stream base flow, stabilize stream banks, and provide flood storage areas. Several Riparian Areas are found along the Route 173 Corridor.

Critical Wildlife Habitat

A total of 10,959.5 acres, or 82.5% of Bethlehem Township's land area, contains Critical Wildlife Habitat. Endangered, threatened, and special concern species are included within this designation. These habitats are critically important to maintaining biological diversity in the Highlands Region. Larger concentrations of Critical Wildlife Habitats are found within the Focus Area, near Heritage Park, and east of Asbury West Portal Road.

Critical Infrastructure

The Township includes a miniscule amount of Sewer Service Areas (14.9 acres or 0.1%). Sewer Service Area is defined at N.J.A.C. 7:15 as the land area identified in an areawide Water Quality Management Plan from which wastewater generated is conveyed to, or has been determined to be eligible, to pursue a permit to connect to a domestic treatment works or industrial treatment works. No sewer service areas are located within the Focus Area.

Land Use/ Land Cover

Land Use/Land Cover data provides comprehensive and detailed mapping of Land Use/Land Cover in natural and built environments. Most of the Township's land area is described as forested area, followed by agriculture and developed land. This trend is applicable within the Focus Area. Developed parcels are found mainly along the Route 173 Corridor frontage. Further, agricultural use is found to the west of Asbury West Portal Road, while forest areas are located to the east of Asbury West Portal Road.

Topography

Throughout the entire Township are steep slope protection areas, particularly around the Jugtown Mountain Preserve. According to the Highlands ERI, a total of 4,157.8 acres, or 31.3%, of the Township is

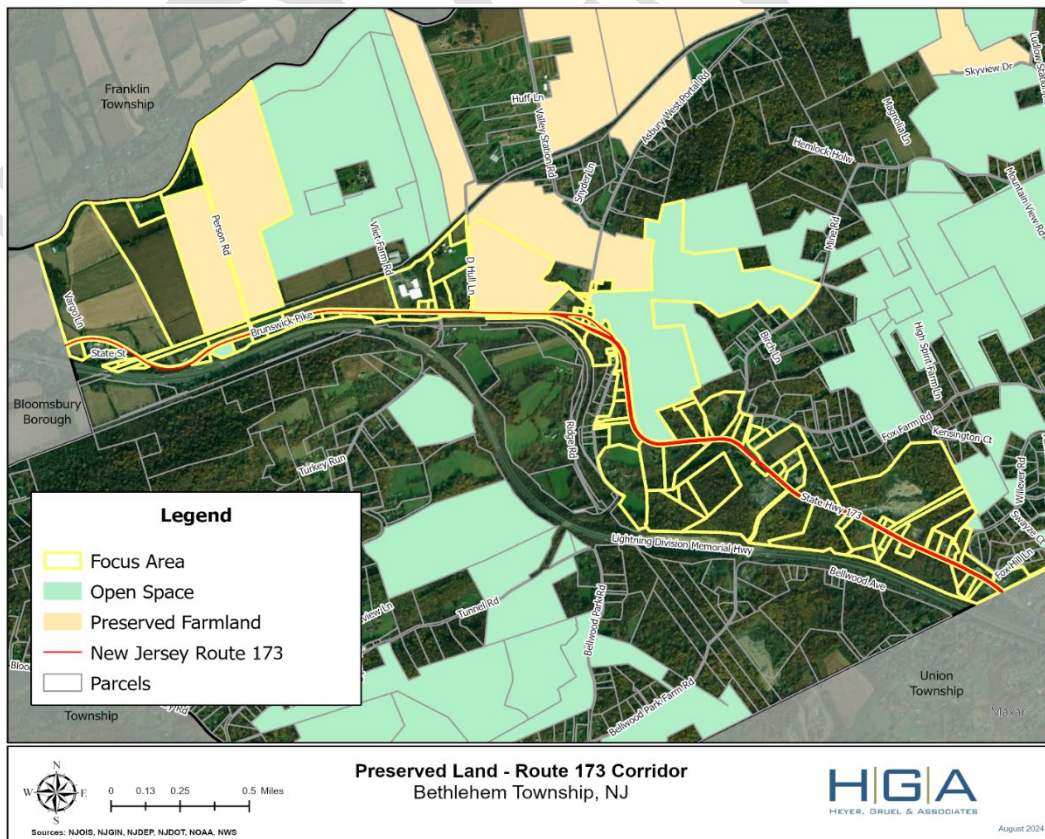
located within a Steep Slope Protection Area. These areas can be further categorized as “Severely Constrained” and “Moderately Constrained,” encompassing 3,343.8 acres and 814 acres, respectively.

New Jersey Statewide Trails

Trails are an essential part of every community in New Jersey, providing not only outdoor recreation but connecting residents with local culture and history, natural phenomena, area business and each other. Within Bethlehem Township, there are a total of 14.4 miles in trails, which are generated by several individual trails. The longest trails within the Township include sections of the Highlands Trail (5.7 miles), the Main Trail (1.3 miles), and Eastside Loop Trail (1.2 miles).

Preserved Lands

Bethlehem Township contains a total of 162 preserved areas, which comprise a total of 4,968.8 acres. These areas are classified as follows: Farmland (1,586.6 acres), County Open Space (873.9 acres), Municipal Open Space (638.5 acres), State Open Space (611.1 acres), Private Open Space (600.8 acres), Non-Profit Open Space (443.6 acres), and Water Supply Management Areas (214.3 acres). Preserved lands include preserved farmland, open space, and recreation areas. To the north of the Route 173 Corridor are several parcels of preserved farmland. The Jugtown Mountain Preserve is designated as a County Open Space area.



Land Use and Zoning Recommendations

Overall Recommendations

- Buffering standards as provided for in Section 102-23.M should be evaluated and revised to increase buffering between residential uses and proposed non-residential uses. Additional berm and screening requirements should be considered to appropriately protect residential uses from adjacent properties with a particular focus on reducing off site impacts of nuisances such as sights, sounds, and smells.
- Review existing requirements and provide additional regulations for the storage of vehicles and equipment on private property. Particular consideration should be given to regulated parking surfaces, curbing, stormwater runoff, vehicle idling, buffering, and screening.
- Continue to evaluate existing zoning ordinance permitted uses and floor area ratios to ensure that developments are appropriate to the scale and community within Bethlehem Township.
- Evaluate and expand on Section 102-5, Prohibited uses, to incorporate uses which the Township expressly does not want to permit, including truck stops/terminals/depots, warehousing, and shopping malls.
- Amend zoning of split-zoned properties to provide consistent regulation across entire parcels in accordance with the table below:

Block	Lot	Total Acreage	Zone Split	Recommendation
14	18	3.15	HC south of Mine Road; MR north of Mine Road	Rezone to R-1.5
16	2	1.00	Split between HC, GC, and NC along the eastbound side of Route 173	Rezone to HC
18	4	1.93	GC along Route 173; MR adjacent to I-78	Rezone to GC
18	5.01	0.95	GC along Route 173; MR adjacent to I-78	Rezone to GC
34	42	4.60	HC along the Route 173 Corridor; MR away from the roadway	Rezone to HC
300	3	4.90	GC along Route 173 frontage; ROM north of the Corridor	Rezone to GC
34	12	52.64	HC along Route 173 frontage, MR on rear portion of parcel	Rezone to HC
34	5	9.41	HC along Route 173 frontage, MR on rear portion of parcel	Rezone to HC
34	14	3.00	HC along Route 173 frontage, MR on rear portion of parcel	Rezone to HC
34	16	12.03	HC along Route 173 frontage, MR on rear portion of parcel	Rezone to HC
34	30	5.00	HC along Route 173 frontage, MR on rear portion of parcel	Rezone to HC

- Maintain consistency with Highlands Council planning efforts and updated 2024 land use capability zone mapping.
- Evaluate proposed uses and opportunities for Block 26 Lot 2.01 to expand on the existing Heritage Park recreational area.
- Develop a signage ordinance for non-residential uses along Route 173 to provide a consistent aesthetic to the area taking into consideration the rural and low-intensity development of surrounding areas.

- Amend residential and non-residential zoning districts to permit residences existing prior to a certain date to reduce the number of variance applications as related to the expansion or improvement of existing residential uses.
- Maintain and continue to preserve valuable natural and historic resources within the Township.
- Capitalize on existing farmland within the Route 173 corridor by promoting and supporting agrotourism.
- Evaluate the feasibility of providing additional trails throughout preserved lands to provide connected systems of greenways throughout the corridor.
- Remove regulations from the definitions section of the ordinance and relocate definitions into the Zoning or Design Standards sections of the ordinance, as appropriate.
- Review and evaluate interconnectedness of publicly accessible open space properties. The Township should create an inventory of all public use easements, conservation easements and deeds that will help identify areas that may be underutilized and recommend additional easements or connections along roadways that would better link the Township's open spaces.
- The Township should continue to work together to ensure that farming remains economically sustainable and viable. Strategies pertaining to its retention, sustainability as an industry, should be incorporated in the Township's Master Plan.

Research, Office Manufacturing District

- Revise Section 102-16 – ROM Research, Office and Manufacturing and MFG Manufacturing Districts into two separate sections regulating each zone separately to consider the different implications of different uses in zoning districts.
- Review the extent of the ROM Zoning District boundaries along the western portion of the Route 173 corridor and consider reducing the size of the zone to reduce the impact of large-scale developments on existing land use and traffic patterns.

Neighborhood Commercial, Highway Commercial, General Commercial

- Revise Section 102-15 – NC Neighborhood Commercial, HC Highway Commercial and GC General Commercial Districts into three separate sections regulating each zone separately to consider the different implications of different uses in zoning districts.
- Amend the Highway Commercial District to support additional uses including contractor's office, storage yard, truck and equipment service and repair, and accessory parking and storage of vehicles and equipment.
- Within each specific district, evaluate existing permitted uses and review appropriate uses to include within each specific district and consider amending the zone to support additional permitted uses including self-storage facilities, contractor offices, artist studios, animal hospitals, and recreational facilities such as swim clubs, indoor tennis courts, bowling alleys, skating rinks and gymnasias.
- Amend bulk standards to provide alternate options for smaller lot development.

Manufacturing District

- Evaluate existing permitted uses and review appropriate uses to include and consider amending the zone to support additional uses including contractor's office, storage yard, truck and equipment service and repair, and accessory parking and storage of vehicles and equipment.
- Provide appropriate standards to regulate parking surfaces, curbing, stormwater runoff, vehicle idling, buffering, and screening of storage of materials and equipment outdoors.

Climate Change Vulnerability Assessment

On February 8, 2021, Governor Murphy signed into law an amendment to the Municipal Land Use Law (N.J.S.A. 40:55D-28) requiring any Land Use Plan Element to include a Climate Change-Related Hazard Vulnerability Assessment. The Assessment shall rely on the most recent natural hazard projections and best available science provided by the NJDE.P.

The Assessment is required to include:

- Analysis of current and future threats and vulnerabilities of the municipality associated with climate change related natural hazards, including increased temperatures, drought, flooding, hurricanes, and sea level rise.
- A “Build-Out Analysis” of future development with an assessment of threats and vulnerabilities related to that development.
- Identification of facilities, utilities, roadways, and infrastructure necessary for evacuation and sustaining quality of life during a natural disaster.
- Potential impacts of natural hazards on components and elements of the Master Plan.
- Strategies and design standards available to reduce or avoid risks associated with natural hazards.
- A policy statement regarding consistency, coordination, and integration of the Vulnerability Assessment with various existing or proposed plans such as:
 - Natural Hazard Mitigation Plan
 - Floodplain Management Plan
 - Emergency Management Plan
 - Emergency Response Plan
 - Post-Disaster Recovery Plan

This Master Plan Element is the first phase of the Route 173 Land Use Plan. Phase 2 of this plan will include the Climate Change Vulnerability Assessment which, once completed, will be amended into this Plan.