

## **5.0 Adverse Environmental Impacts that Cannot be Avoided**

This section provides an overview of the Project-related adverse environmental impacts that cannot be avoided or adequately mitigated if the Project is implemented. Specifically, the Project-related unavoidable impacts are mainly associated with construction, and may result from disturbance to soils, vegetation, streams, wetlands, and other resources. Other identified unavoidable impacts include the loss of vegetation, and related increases in impervious areas. These impacts are anticipated to be neither major in magnitude nor significant in relative terms.

### **5.1 NATURAL RESOURCES**

### **5.2 GEOLOGY**

#### **5.2.1 SUBSURFACE**

##### *Potentially Unavoidable Vibration and Noise Impacts Related to Removal of Bedrock:*

Due to the fact that if any vibrations occur, they will be minimal, short in duration, and any related impacts will be mitigated to the maximum extent practicable through the implementation of all the mitigation measures and precautions previously discussed, said impacts are not anticipated to be significant. Refer to *DEIS Section 5.3.6.3 Noise*, for a discussion on the potential for noise impacts.

#### **5.2.2 SURFACE**

##### *Unavoidable Long-Term Increase in Impervious Areas and Avoidable Short-Term Impacts Related to Erosion and Siltation of Water Resources, and Dust:*

Due to the previously discussed provisions and mitigation measures including the proposed clustering design, the potential impacts related to an increase in impervious areas, erosion, sedimentation, and dust are expected to be short in duration, minimal, and are not anticipated to be significant.

#### **5.2.3 WATER RESOURCES**

##### **5.2.3.1 GROUNDWATER**

##### *Unavoidable Long-Term Impacts on Groundwater Infiltration and Avoidable Short and Long-Term Impacts to Water Quality:*

Construction Activities: Construction activities, if not properly managed, could result in minor groundwater quality impacts. Due to the fact that any disturbances to the pockets of groundwater during construction will be short in duration, and will be mitigated to the maximum extent practicable through

the above-described provisions and mitigation measures, potential impacts are not anticipated to be significant

Reduction in Groundwater Infiltration: Other threats to groundwater quality include the proposed increase of impervious areas by 22 acres (for a total of 23 acres of impervious surfaces), thus reducing the amount of groundwater infiltration. This permanent increase in impervious areas, however, is considered minimal compared to the remaining 191 (including wetlands and water bodies) acres of pervious surfaces on the Project site, and a drop in the amount of groundwater available to surrounding residential properties that use on-site wells for their water source is not anticipated, and therefore, no impacts on groundwater infiltration are anticipated.

No impacts on groundwater infiltration are anticipated from the 22-acre increase in impervious areas due to the proposed use of stormwater detention, which will promote infiltration into the soil.

Contaminants in Runoff: The increase in impervious areas particularly associated with roads and driveways may increase the potential for runoff contaminated with automobile-related pollutants such as oil, grease, and other petroleum products. This could be a long-term impact.

The potential impacts related to the proposed increase in impervious areas and related stormwater runoff that may contain automobile pollutants, while considered longer in duration, are not anticipated to result in significant nor permanent adverse impacts to groundwater quality, due to the proposed implementation of the SWPPP, combined with the natural filtration provided as surface water infiltrates through the soil to the groundwater.

### **5.2.3.2 SURFACE WATER AND WETLANDS**

#### ***Unavoidable Impacts to Wetlands “A, B, Q, J, M, H, and E” and Tributaries 3 through 6 and 8, Which Will Be Offset By Compensatory Mitigation Measures:***

Through the Project design, along with full compliance with the requirements of NWP #14 (which requires compensatory mitigation), compliance with the SWPPP, and the use of proper construction techniques and Best Management Practices (BMP), direct adverse impacts to these wetlands and Tributaries related to the construction of the Project Site roads while permanent to the areas filled, will be offset and fully mitigated through compensatory mitigation measures, and as a result, are not anticipated to be significant.

#### ***Unavoidable but Temporary Impacts to Wetland “C” and Tributaries 4 and 5 by Utilities:***

Through the Project design, along with full compliance with the requirements of NWP #12 (which requires full restoration of the impacts), compliance with the SWPPP, and the use of proper construction techniques and BMP, direct adverse impacts to utility crossings of Wetland “C” and Tributaries 4 and 5 will be temporary in nature, and are not anticipated to be significant.

*Avoidable Indirect Impacts Related to Proposed Filling of Wetlands and Tributaries:*

The potential for indirect impacts related to the temporary disturbances to wetlands and tributaries during the installation of the utility crossings, and the permanent filling of wetlands and tributaries during the construction of the Project site roads will be mitigated to the maximum extent practicable through the Project design, and compliance with both NWP #12 and #14 and as a result, the direct and potential indirect impacts are not anticipated to be significant.

*Unavoidable Increase in Impervious Areas and Related Runoff:*

The potential for erosion and sedimentation during construction (a short-term impact), the increase in stormwater runoff from impervious surfaces and the potential for this runoff to introduce petroleum and other contaminants (a potential long-term impact) would minimally impact the Project sites or off-site surface waterbodies or wetlands due to the proposed Project design, implementation and compliance with the SWPPP and associated provisions and mitigation measures; and due to the indirect nature of the discharge and the distance the runoff must travel before reaching these waterbodies. Therefore, such impacts are not anticipated to be significant.

**5.2.3.3 Floodplain**

Based on the fact that no construction will occur within the 100-year floodplain, and the implementation of the above described mitigation measures, provisions, development practices, and compliance with the SWPPP, no direct or indirect impacts on the 100-year flood plain are anticipated.

**5.2.4 TERRESTRIAL AND AQUATIC ECOLOGY**

**5.2.4.1 VEGETATION**

*Unavoidable Temporary and Permanent Loss of Vegetation:*

Due to the Project design, which will preserve approximately 191 acres or 89% of the site's vegetation and therefore remain pervious, the permanent loss of approximately 22 acres (total of 23 acres with 1 acre existing) of vegetation is not anticipated to be a significant impact. Revegetation, whether ornamental plantings or lawned areas, will deter increased stormwater flows generated during construction. Post-construction stormwater runoff will also increase due to increased impervious surface areas. Since significant areas of the site will remain vegetated, due in large part to the clustering design, and other areas will be revegetated, and stormwater detention basins will be constructed, the impact of these increased flows are expected to be minor, short in duration, and not anticipated to be significant.

**5.2.4.2 FISH AND WILDLIFE**

**5.2.4.2.1 TERRESTRIAL SPECIES**

*Unavoidable Permanent Loss of Terrestrial Habitat a Temporary Impact:*

As a result of the mitigation measures and provisions described in *DEIS Section 4.1.4.2 Fish and Wildlife*, the potential impact on terrestrial species due to the permanent loss of vegetation is expected to be temporary and minimal as a result of the cluster design of the Project, along with the proposed increase in landscaping and lawned areas that will ultimately result in additional areas and a potential positive impact for terrestrial species typical to suburban areas.

**5.2.4.2.2 AQUATIC SPECIES**

*Unavoidable Permanent Impacts Related to Wetland and Stream Crossings:*

The permanent impacts to the wetlands and tributaries and related aquatic habitat necessary for road construction cannot be avoided. While the direct impacts to these small sections of the wetlands and tributaries will be permanent, the Project design, which includes clustering, will result in the least amount of impact necessary, and the provisions of NWP #14 will be fully complied with.

*Unavoidable Temporary Impacts Related to Wetland and Stream Crossings:*

The proposed temporary impacts to the wetlands and streams related to the construction of the utilities under NWP #12, while unavoidable, will be fully mitigated through complete restoration of the disturbed areas back to their pre-construction conditions.

*Avoidable Impacts Related to Wetland and Stream Crossings*

During the proposed crossing of the wetlands and tributaries for both road and utility construction, there exists the potential for short-term adverse impacts to the aquatic species through erosion, sedimentation and stormwater runoff. However, these potential impacts are avoidable through the use of proper construction techniques, BMP's, and implementation and compliance with the SWPPP.

**5.2.5 CLIMATE AND AIR RESOURCES**

**5.2.5.1 CLIMATE**

No impacts on the climate are anticipated.

### **5.2.5.2 AIR RESOURCES**

#### ***Unavoidable Minor Long-Term Localized Automobile-Related Increases in Carbon Monoxide (CO), Ozone (O<sub>3</sub>), Nitrogen Dioxide (NO<sub>2</sub>), and Fine Particulate Matter (PM<sub>2.5</sub>) (automobile-related Pollutants):***

The projected increase in traffic is anticipated to cause a minor, long-term localized increase in the levels of automobile-related pollutants. However, the increased pollutant levels generated by increased traffic is not expected to exceed regional standards, and is therefore, not considered to be significant.

#### ***Unavoidable Minor Temporary Air Quality Impacts During Construction Phases:***

The air quality within the Project area may experience short-term adverse impacts as a result of airborne particulates including dust raised by construction vehicles in motion. This increase is expected to be sporadic and short-term in nature and will be most noticeable in the area immediately adjacent to the construction. The impacts will be minimized by the use of dust inhibitors, such as calcium chloride and other dust-control provisions found in the NYSDOT Standard Specifications for construction. Therefore, they are not anticipated to be significant.

## **5.3 HUMAN RESOURCES**

### **5.3.1 TRANSPORTATION**

#### ***Avoidable Impacts to Traffic Flow:***

The traffic impact analysis concluded that the increased automobile trips will not result in unacceptable operating conditions at these intersections, provided specific mitigation measures are implemented. This could include modifications to the signal timings at the Pawling/Pinewoods Avenue intersection, and either signal timing or other modifications at the NYS Route 2/Pawling Avenue intersection. Therefore, impacts to travel times are not anticipated to be significant.

### **5.3.2 LAND USE, ZONING AND COMPLIANCE WITH THE COMPREHENSIVE PLAN**

#### ***Unavoidable Change From Vacant to Residential:***

The Project will result in the unavoidable change in the current use of the Project site from vacant to residential. While this change in use will be long-term and considered permanent, it is not anticipated to result in a significant adverse impact on the Site, nor the surrounding land uses due to the fact that the Project design calls for the clustering of the senior apartments and the Carriage Hill Landing homes. This design is possible because the Project is being developed through a PDD, allowing for more flexibility in design and the preservation of the existing rural character, a planning and design technique encouraged by the Town of Brunswick Comprehensive Plan. In addition, the existing zoning currently allows for residential development. Therefore, the Project is not in conflict with the existing Zoning Ordinance, the Comprehensive Plan, or the vision of the Town of Brunswick regarding this particular site.

### 5.3.3 AGRICULTURAL LAND USES

#### *Unavoidable Loss of Land Within an Agricultural District:*

While the Project site is currently not an active agricultural use, it is located within an Agricultural District as defined by the New York State Department of Agriculture and Markets, and therefore an Agricultural Data Statement has been prepared and is located in *DEIS Appendix 7*. As previously mentioned, there are large agriculturally classified parcels to the east and north as well as to the south. At one time, the Project site and surrounding area was likely predominantly agricultural. Over the years, large parcels were subdivided into the residential developments seen today.

An Agricultural Data Statement (ADS) has been prepared and is included in *DEIS Appendix 7 – Agricultural Data Statement*. The ADS will be submitted to the NYS Department of Agriculture and Markets.

While the Project will result in the unavoidable loss of land in an Agricultural District, the Site is not currently an active agricultural use, and the steep slopes prevalent in certain areas of the Site do not lend itself to productive agricultural uses. As a result, the permanent loss of land in an Agricultural District associated with this Project is not anticipated to be significant.

### 5.3.4 COMMUNITY SERVICES

#### 5.3.4.1 GENERAL GOVERNMENT

#### *Long-Term Unavoidable Increased Need For Government Services – Minimal to No Impact Related to General Government Services:*

It is anticipated that the increased need for general government services associated with the Project as they relate to road and utility maintenance, along with the need for providing recreational activities, will be sufficiently offset by:

- > The positive benefits related to the overall economic activity in the Town associated with the increase in residents (as discussed in more detail below);
- > The additional property taxes and the sewer and water user fees to be collected from the new residences;
- > The incremental phasing of the Project; and
- > The on-site recreational and community service provisions through the homeowners association.

Therefore, the Project is not anticipated to result in adverse impacts related to an increased need for general government services.

**5.3.4.2 EDUCATIONAL FACILITIES**

*Positive Impacts on School Districts*

No adverse impacts are anticipated. While there exists the potential for positive impacts on the School Districts due to the fact that the Project is expected to generate a comparably small amount of school-age children, resulting in no measurable increases in demand on the local school districts, while at the same time generating additional school tax revenue.

**5.3.4.3 POLICE AND FIRE PROTECTION**

*Long-Term Unavoidable Increase in Demand for Police and Fire Protection Services:*

With the use of appropriate materials for all proposed structures and fire sprinkler systems in the Senior Housing Units, along with the fact that the existing water supply system has adequate capacity to provide water to the proposed Project for domestic and fire fighting purposes, any impact associated with the increased demand for fire protection is anticipated to be neither adverse nor significant.

**5.3.4.4 UTILITIES**

*Long-Term Unavoidable Increased Demand for Utilities:*

It is anticipated that the private utilities have adequate capacity to serve the Project site, and that no related adverse impacts are anticipated.

**5.3.4.5 WATER SUPPLY**

*Long-Term Unavoidable Increased Water Demand:*

Due to the fact that the existing water supply system has adequate capacity to provide water to the proposed development for domestic and firefighting purposes, and combined with the decision to coordinate the design of the system with the Town of Brunswick and the Rensselaer County Department of Health, any impact associated with the increased demand for water associated with the Project is anticipated to be neither adverse nor significant.

**5.3.4.6 SEWAGE TREATMENT**

*Long-Term Unavoidable Increase in Sewer Load:*

The wastewater treatment plant and City of Troy sewer system currently have adequate capacity and will be able to accommodate the additional sanitary sewer flow from the Project. Therefore, there are no impacts anticipated related to the ability of the County-owned wastewater treatment plant to effectively

treat wastewater associated with this Project and the City of Troy sewer system to accommodate the flows.

**5.3.4.7 SOLID WASTE DISPOSAL**

*Long-Term Unavoidable Increase in Solid Waste Generation:*

No impacts are anticipated as a result of the Project increase in solid waste generation.

**5.3.5 SOCIOECONOMIC CONDITIONS**

**5.3.5.1 POPULATION AND INCOME**

*Positive Economic Impact:*

Residents of the Project are projected to generate more than \$200,000 per year in sales tax revenue, based on estimated income levels as a function of home values and projected consumption patterns. This will be a positive economic impact for the community and surrounding area

**5.3.5.2 HOUSING**

*Positive Impact Associated With an Increase in the Availability of Needed Housing Choices:*

The Project is anticipated to result in an overall positive impact associated with an increase in the availability of needed housing choices. Specifically, the net impact on the housing market is that the Project is anticipated to: (1) provide new housing that is needed, but is currently either in short supply or unavailable (i.e.: rental housing for seniors and carriage homes for empty nesters); and (2) indirectly increase the availability of existing housing that is also in demand (i.e., affordable single family homes). The Project thus facilitates a transition of current residents that have lived in their current homes for a number of years, but now have a different lifestyle or housing need, to a more appropriate and desirable living arrangement that is still within their home community. The transition precedes a step further, with these older homes (which are typically more affordable than new construction) becoming available for first time homebuyers.

**5.3.5.3 SUPPORT FACILITIES**

*Minimal Long-Term to No Impacts Anticipated Related to the Provision of Recreational and Community Facilities:*

The applicant is preserving 75.3 acres of land that will be designated to remain as forever wild. The applicant is also proposing on its site plan and subdivision plan to build 1.25 miles of walking trails throughout the site, three community garden plot areas, a 10.48 acres conservation zone, and a 10,000 +/- s.f. Clubhouse that will have an indoor lap pool, a conference/business center, a media center, a state of

the art fitness facility, a game room, and several additional activity spaces that can be used by the entire Carriage Hill Community. All of these proposed recreation areas – walking trails, garden areas, open space, and conservation zone - will be owned and maintained by the Carriage Hill Home Owners Association. The Clubhouse will be owned and maintained by an affiliated entity of the applicant, which will be the owner of the Senior Housing. In addition to all of this, the applicant is willing to pay the full park/recreation fee of \$500 per residential lot and \$500 per residential unit.

### **5.3.5.4 ECONOMIC IMPACTS**

#### *Positive Long-Term Economic Impacts:*

As described in more detail in *DEIS Section 4.2.5.4*, the Project is anticipated to result in positive impacts related to an increase in sales and property tax revenue, along with the benefits associated with the projected increase in temporary and permanent jobs.

### **5.3.6 CULTURAL RESOURCES**

#### **5.3.6.1 HISTORIC AND ARCHEOLOGICAL RESOURCES**

##### *Disturbance to Historic and Archeological Resources:*

Pursuant to the OPRHP letter dated October 26, 2005 (DEIS Appendix 4 Correspondences), it is the opinion of SHPO that the Project will have No Adverse Effect on historic properties in or eligible for inclusion in the State and National Registers of Historic Places with the condition that an approved Avoidance Plan is implemented.

#### **5.3.6.2 VISUAL RESOURCES**

##### *Unavoidable Long-Term Views of the Project From Off-Site Locations:*

Due to the fact that the Project will not be visible from any designated Resource of National, State or local significance, and that the projected views of the Project from the surrounding residential areas and along NYS Route 2 will be sporadic and minimal, combined with the proposed mitigation, the Project is not anticipated to result in significant adverse visual impacts.

**5.3.6.3 NOISE**

*Unavoidable Short-Term Increases in Noise Associated With Construction:*

While the Project will result in unavoidable increases in noise levels on and immediately adjacent to the site related to construction activities, they would be short-term in duration, and due to anticipated noise attenuation and the proposed hours of construction, any noise generated from the Site is not anticipated to result in significant adverse impacts.

**5.3.7 ENVIRONMENTAL CONDITIONS**

The Phase I Environmental Site Assessment (ESA) and numerous related site inspections did not reveal any impacts to soil or groundwater quality. No environmental concerns are present in this area.

**5.3.8 CUMULATIVE IMPACTS**

No adverse cumulative impacts are anticipated that cannot be mitigated.