



**STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF STATE PLANNING COORDINATION**

August 18, 2015

Mr. Dev Sitaram, P.E.  
17 Polly Drummond Center, Suite 201  
Newark, DE 19711

RE: PLUS review 2015-07-03; Harborage of Wilmington

Dear Mr. Sitaram,

Thank you for meeting with State agency planners on July 22, 2015 to discuss the proposed plans for Harborage of Wilmington. According to the information received, you are seeking review of a rezoning of 8.42 acres from S to ST and a site plan review for a 120 bed assisted living facility on Shipley Road in New Castle County.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as the City of New Castle is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the City as well as New Castle County.**

**Strategies for State Policies and Spending**

- This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. Investment Level 1 reflects areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where future redevelopment or infill projects are expected and encouraged by State policy. Thus, the Office of State Planning Coordination has no objections to this project.

**Code Requirements/Agency Permitting Requirements**

Department of Transportation – Contact Bill Brockenbrough 760-2109

- Per Section 2.2.2.1 of the Development Coordination Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the plan accompanying the PLUS application, we estimate that the development would generate 329 vehicle trip

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ends per day on a typical weekday and 35 vehicle trip ends in the peak hour of that day. The daily volume is nine trips higher than the volume shown on the PLUS application. Based on either the daily volume or the peak hour volume, as we calculate them, this project would not warrant a TIS.

- The site access on Shipley Road must be designed in accordance with DelDOT's Development Coordination Manual (formerly the Standards and Regulations for Subdivision Streets and State Highway Access), which is available at <http://www.deldot.gov/information/business/subdivisions/changes/index.shtml>.
- In accordance with Section P.3 and Figure P.3-a of the Development Coordination Manual, because the proposed development would generate more than 200 vehicles per day, DelDOT will require a Pre-Submittal Meeting to discuss the project before plans are submitted for review. The form to request a Pre-Submittal Meeting is available at [http://www.deldot.gov/information/business/subdivisions/Meeting\\_Request\\_Form.pdf](http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.pdf). The need for a Traffic Operational Analysis (TOA) in accordance with Section 2.3 of the Manual will be discussed at the Pre-Submittal Meeting.
- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage on Shipley Road. The total right-of-way width on Shipley Road is 60 feet and Shipley Road is a collector road. The standard dedication on two-lane collector roads is 40 feet from the road centerline. Therefore a dedication of an additional ten feet may be needed. However, because the distance from the road centerline is not dimensioned on the plan we cannot be certain. If a dedication is needed, then the following right-of-way dedication note is required, "**An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat.**" We cannot tell from the level of detail provided but the plan accompanying the PLUS application appears to show this dedication.
- In addition to the right-of-way dedication just mentioned, and in accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot permanent easement for infrastructure along the property frontage. The following note should be added to the plan: "**A 15-foot permanent easement is hereby established for the State of Delaware as per this plat.**"

Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352

### **TMDLs**

- Total Maximum Daily Loads (TMDLs) for nitrogen, phosphorus, and bacteria have been promulgated through regulation in most of the State of Delaware's water bodies. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited waterbody" can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; *State of Delaware Surface Water Quality Standards, as amended July 11, 2004*) to the extent necessary to support

use goals such as, swimming, fishing, drinking water and shell fish harvesting. TMDLs are required by federal law (Section 303(d) of the 1972 Clean Water Act), and the states are charged with developing and implementing specific land use practices that support these goals. This project is located in the Piedmont drainage area, specifically in the Shellpot Creek watershed. In the Shellpot Creek watershed, post-development nitrogen and phosphorus loading must be capped at the pre-development or baseline loading rate (0% post-construction increase in N & P). Moreover, reductions in bacteria must be reduced by 74%.

- A nutrient management plan is required under the *Delaware Nutrient Management Law (3 Del. Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. According to the submitted PLUS application, this project's open space is likely to exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at (302) 739-4811 for further information concerning compliance requirements or view the following web link: <http://dda.delaware.gov/nutrients/index.shtml>

### **Water Supply**

- The information provided indicates that United Water DE will be used to provide water to the proposed project through a public water system. Our records indicate that the project is located within the public water service area granted to the City of Wilmington under Certificate of Public Convenience and Necessity 94-CPCN-09. It is recommended that the developer contact the City of Wilmington to determine the availability of public water. Any public water utility providing water to the site must obtain a Certificate of Public Convenience and Necessity (CPCN) from the Public Service Commission. Information on CPCN's and the application process can be obtained by contacting the Public Service Commission at (302) 739-4247. Should an on-site Public/Miscellaneous Public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area, and it must also be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.
- Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.
- All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule.

Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

**Sediment and Stormwater Program**

- A sediment and stormwater plan will be required for the site. Contact the reviewing agency to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as possible. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the New Castle County Department of Land Use Engineering Section. Contact the Department of Land Use at (302) 395-5470 for details regarding submittal requirements and fees.

**Air Quality**

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply to your project:

<b>Table 1: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106</b> - Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> <li>• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</li> <li>• Use covers on trucks that transport material to and from site to prevent visible emissions.</li> </ul>
<b>7 DE Admin. Code 1113</b> – Open Burning	<ul style="list-style-type: none"> <li>• Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</li> <li>• Prohibit the burning of land clearing debris.</li> <li>• Prohibit the burning of trash or building materials/debris.</li> </ul>
<b>7 DE Admin. Code 1135</b> – Conformity of General Federal Actions to the State Implementation Plan	<ul style="list-style-type: none"> <li>• Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)</li> </ul>
<b>7 DE Admin. Code 1141</b> – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	<ul style="list-style-type: none"> <li>• Use structural/ paint coatings that are low in Volatile Organic Compounds.</li> <li>• Use covers on paint containers when paint containers are not in use.</li> </ul>
<b>7 DE Admin. Code 1144</b> – Control of Stationary Generator Emissions	<ul style="list-style-type: none"> <li>• Ensure that emissions of nitrogen oxides (NO<sub>x</sub>), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) from</li> </ul>

	<p>emergency generators meet the emissions limits established. (See section 3.2).</p> <ul style="list-style-type: none"> <li>• Maintain recordkeeping and reporting requirements.</li> </ul>
<b>7 DE Admin. Code 1145</b> – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> <li>• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</li> </ul>
<b>Regulation 21 Section 10</b> – Emission Standards for Hazardous Air Pollutants, Asbestos	<ul style="list-style-type: none"> <li>• Ensure no visible residue of asbestos materials remains in the work area after all asbestos materials are removed in accordance with NESHAP.</li> <li>• Display DANGER signs whenever airborne asbestos may be present in accordance with NESHAP and OSHA</li> <li>• Use wet removal techniques.</li> <li>• Dispose of all asbestos containing waste in clearly labeled sealed containers and store in a secure location awaiting transport to an authorized disposal facility, not to exceed a period of 45 days.</li> </ul>

For a complete listing of all Delaware applicable regulations, please look at our website:  
<http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

**Instructions for Handling Asbestos**

- Please select a Certified Professional Service Firm (CPSF) from the attached list to inspect the facility and sample for Asbestos-Containing Materials (ACM). Please contact the Delaware Office of Management and Budget’s Division of Facilities Management at (302) 739-5644 or donna.sapp@state.de.us, to confirm the current licensing status of a particular inspector and contractor prior to procuring those services. Once you receive the CPSF report detailing their findings as to how much, what type(s), and the location(s) of the ACM present, you can use that info to fill out the “Notification of Demolition or Renovation” form. If necessary, please select an asbestos abatement contractor from the list, and call to schedule the work to begin three weeks (or more) from the date you mail the form to EPA. When you choose an abatement contractor, please enter the remainder of the required info on the form, to include the name of the Abatement Contractor, name of the Hazmat Hauler who will haul the ACM, and the Hazmat landfill where the ACM will be taken. Once you have completed the form, please make four (4) copies of it, and then send the ORIGINAL to USEPA at the following address:

USEPA Region III  
Attn: Asbestos Coordinator  
1650 Arch Street  
Philadelphia, PA 19103

Send one copy to the DAQ:

DNREC/DAQ  
c/o Mr. Thomas Postell  
655 S. Bay Rd., Suite 5N

Dover, DE 19901

- You must wait a minimum of ten business days after EPA receives your notification, prior to any activity which may disturb asbestos-containing materials (reasoning behind waiting three weeks to begin abatement work). This allows the EPA asbestos inspectors time to coordinate and schedule a site visit if they so desire.

Once the ACM has been abated, a post-abatement inspection by a CPSF asbestos inspector shall be performed to verify that all ACM has been removed.

Following asbestos removal and re-inspection, normal demolition procedures may be employed to complete the demolition process.

Please keep in mind that physical demolition and loading, transport, and landfill dumping of construction/demolition debris can be quite costly. Another option for more affordable demolition does exist. If the local fire company is interested in using the structure(s) for firefighter training, they are authorized to burn it/them to the ground upon completion of their training. This significantly reduces the volume and mass of material remaining to be loaded, transported, and dumped; thereby reducing demolition costs by a good margin. Keep in mind that this type of demolition via firefighting instruction is limited to those months not encompassed by Delaware's Ozone Season Burn Ban.

#### **Hazardous Waste Sites**

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

The proposed project is located on a DNREC Site Investigation and Restoration Section (SIRS) site. 2004 & 2008 Shipley Road (DE-1603) is identified as the project property. The Site was historically operated for agricultural and horticultural purposes. Aboveground and underground storage tanks were removed and the Site was given a No Further Action designation in 1998. A Phase I was conducted in February 2012 and found cabinets containing pesticides and herbicides but could not be safely removed at the time. A variety of other materials were observed on the property and the buildings. A second Phase I Assessment was conducted and the Site became eligible for the Brownfields Program in April 2015.

An Interim Action Work plan was submitted July 2015 for shallow soil excavation after the Brownfields Investigation identified areas of shallow soil contamination due to the oil storage tanks and the past agricultural operations. Supplemental soil sampling for arsenic will also be conducted due to the historic operations of the Site. The Site is currently still being investigated under the Brownfields program.

**Tank Management.** Please be aware:

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 7 Del.C., Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.
- The following confirmed leaking underground storage tank (LUST) project is located within the proposed project parcel:
  - WD Martine Floriculturists, Facility: 3-000766, Project: N9803052 (Inactive)
- The following (LUST) projects are located within a quarter mile from the proposed project area:
  - Yerger Property, Facility: 3-002099, Project: N0711116 (Inactive)
  - Bill and Barbara Fleischman Residence, Facility: 3-002522, Project: N1010086 (Inactive)
- Per the **UST Regulations: Part E, § 1. Reporting Requirements:**
  - Any indication of a Release of a Regulated Substance that is discovered by any person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:
    - The Department's 24-hour Release Hot Line by calling (800) 662-8802; and
    - The DNREC Tank Management Section by calling (302) 395-2500.

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There is a known 20-century dwelling (N09385) on this parcel and another near the parcel west of Shipley Road. If there will any development, on this parcel, the developer should still be aware of the Unmarked Human Burials and Human Skeletal Remains Law of 1987 (Delaware Code: Title 7, Chapter 54), which pertains to the discovery and disposition process of such remains.
- Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (7 Del. C. Ch. 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any

unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you would like to know more information pertaining to unmarked human remains or cemeteries, please check the following websites for additional information: [www.history.delaware.gov/preservation/umhr.shtml](http://www.history.delaware.gov/preservation/umhr.shtml) and [www.history.delaware.gov/preservation/cemeteries.shtml](http://www.history.delaware.gov/preservation/cemeteries.shtml).

Therefore, prior to any demolition or ground-disturbing activities, the developer may want to hire an archaeological consultant to examine the parcel for any potential archaeological site or archaeological resources, such as cemetery, burial site, or unmarked human remains. Furthermore, if there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Furthermore, any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at [www.achp.gov](http://www.achp.gov).

Delaware State Fire Marshall's Office – Contact John Rudd 739-4394

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

- **Fire Protection Water Requirements:**
  - Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.

- The infrastructure for fire protection water shall be provided, including the size of water mains.
  
- **Accessibility:**
  - All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Bethel Church Road must be constructed so fire department apparatus may negotiate it. If a “center island” is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision. . If a “turn-about (circle) island” is placed in the access roads to the buildings, they shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus.
  - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
  - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
  - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
  - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
  
- **Gas Piping and System Information:**
  - Provide type of fuel proposed, and show locations of bulk containers on plan.
  
- **Required Notes:**
  - Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
  - Name of Water Supplier
  - Proposed Use
  - National Fire Protection Association (NFPA) Construction Type
  - Maximum Height of Buildings (including number of stories)
  - Provide Road Names, even for County Roads

### **Recommendations/Additional Information**

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

#### Department of Transportation – Contact Bill Brockenbrough 760-2109

- We see several places on the plan where sidewalks would directly abut parking spaces and we have two related comments in this regard:
  - We recommend that the sidewalks be placed at the same elevation as the parking lot so that residents and visitors do not have to walk through the lot to a curb cut.
  - We recommend the use of parking bumpers, bollards or planters to prevent vehicles from overhanging, or potentially driving onto, the sidewalks. As necessary, see Figure 3.5.4.3-c in the Development Coordination Manual for guidance in this regard.
- Please be advised that as of August 1, 2015, all new plan submittals and re-submittals, including major, minor and commercial plans, shall be uploaded via the PDCA (Planning Development Coordination Application) with any review fee paid online via credit card or electronic check. Guidance on how to do this is available on our website at <http://www.deldot.gov/information/business/subdivisions/>

#### Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352

##### **Soils Assessment.**

- Based on soils survey mapping update, the Talleyville Montalto Urban land complex (TdB) soil mapping unit and the Delanco-Codorus Hatboro complex (DcB) were mapped on subject parcel. TdB and DcB are well to moderately well-drained with few to moderate limitations for development. (see Figure 1.)

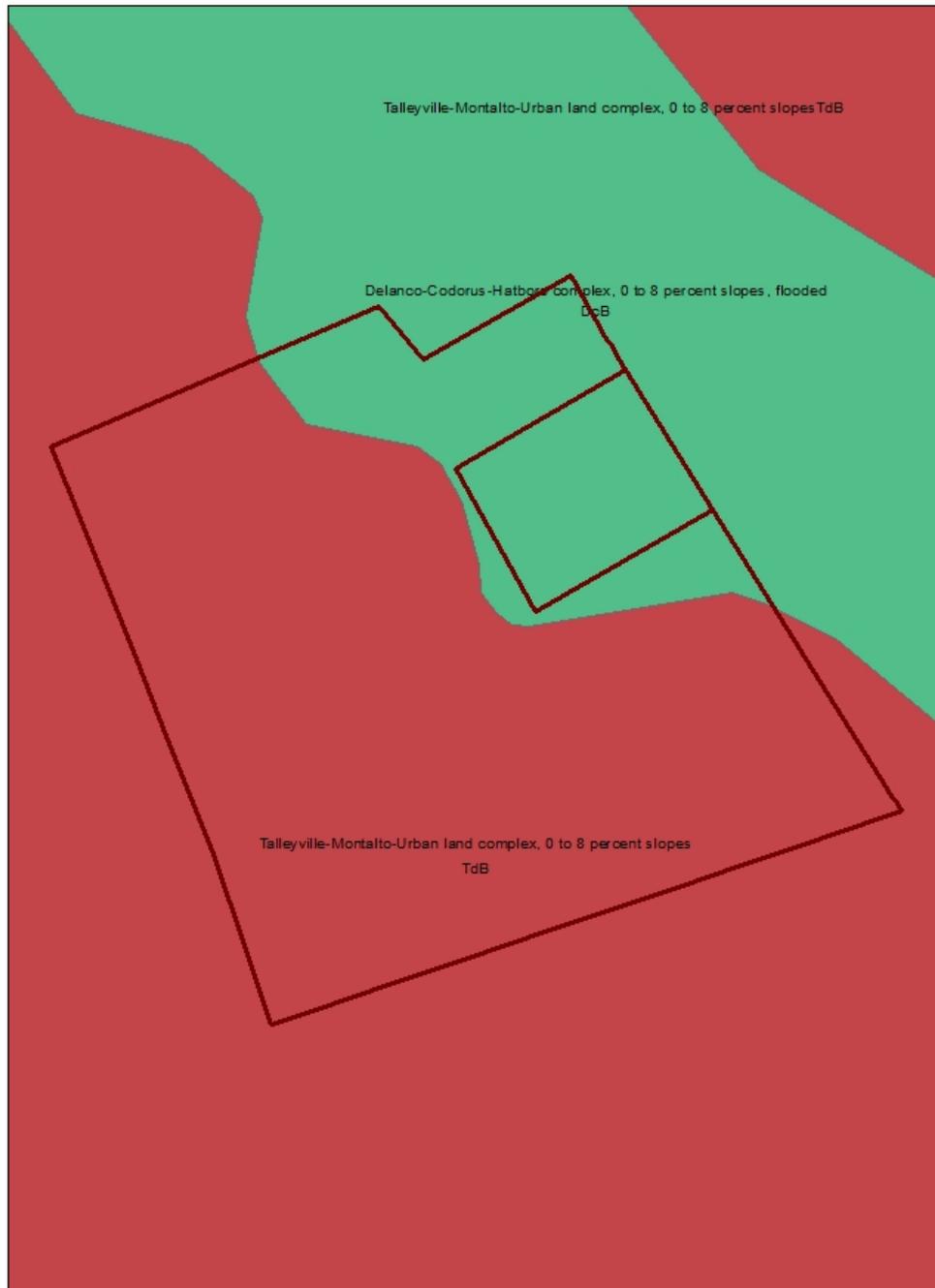
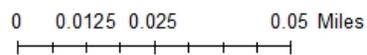


Figure 1: Soil Survey mapping update in the immediate vicinity of the proposed construction



## **Nuisance Waterfowl**

- Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns surrounding ponds provide attractive habitat for these species.

To deter waterfowl from taking up residence in these ponds, we recommend planting the surrounding open space with a mix of native wildflower plantings (to be planted in accordance with the Sediment and Stormwater Plan approval agency requirements). It is best to mow the open space area surrounding the pond only once a year, either in February or March. If mowing must occur more often, it would be helpful to leave a minimum buffer of 15-30 feet in width to be mowed annually. This area would be necessary to adequately deter the waterfowl from inhabiting the area (when the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond). In addition to deterring nuisance waterfowl, the native wildflower mix will also serve to attract bees, butterflies, and other pollinators, and reduce run-off.

Our program botanist, Bill McAvoy would gladly assist in drafting a list of plants suitable for this site. Bill can be contacted at (302) 735-8668 or [William.McAvoy@state.de.us](mailto:William.McAvoy@state.de.us).

## **Additional information on TMDLs and water quality**

- We strongly encourage the applicant reduce nutrient and bacterial pollutant runoff from their parcel through voluntary implementation of the following recommended best management practices (BMPs):
  - Maintain as much of the existing open space as possible; we further suggest additional native tree, shrub and/or native herbaceous vegetation plantings, wherever possible.
  - Calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation. Omission of any of the above-stated forms of surface imperviousness will result in an underestimate of the actual post-development surface imperviousness and environmental impacts.
  - Use of green-technology storm water management structures (in lieu of open-water management structures) and raingardens as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts from runoff or discharges from impervious surfaces.

Please contact Lara Allison at (302) 739-9939 for further information about the possibility for installing a raingarden(s) on this parcel.

- Since the proposed commercial project will create additional impervious surfaces that will significantly increase the probability for future impacts associated with onsite and offsite flooding along with impacts associated with pollutant runoff draining to adjoining streams and wetlands in the greater Shellpot watershed, wherever practicable, the use of pervious paving materials (e.g. pervious pavers) instead of conventional asphalt and concrete as a BMP to mitigate these impacts. We especially recommend the use of pervious paving materials for all area(s) in the proposed project designated for parking.
- Assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs.

#### **Additional information on tank management**

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.
- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

#### **Additional information on hazardous waste sites**

- DNREC's Site Investigation and Restoration Section (SIRS) strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Additional remediation may be required if the project property or site is re-zoned by the county.

Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-

hour emergency number at (800) 662-8802. SIRS should also be contacted as soon as possible at (302) 395-2600 for further instructions.

#### **Additional information on air quality**

- The developer indicates that the property is currently zoned Suburban (S) and requests that the property be rezoned to Suburban Transition (ST). According to New Castle County code, the current zoning designation requires residential-only use and open spaces. If rezoned to Suburban Transition, the code allows for both residential and non-residential use, and the focus shifts away from open space and more toward transportation access.
- The overall scope includes 8.42 acres, with some existing trees. The applicant states that there are zero acres of forested land, and, thus, zero acres of forest will be removed. However, DNREC notes that some existing trees appear to be removed in the site plan, and two existing treelines to the north and to the west of the property appear to be kept as a vegetated buffer. According to the application, a total of 5.06 acres of “open space,” will remain after the project is complete.
- The existing property has sidewalks, shoulders, and access to public transportation. At present, the shoulders do not appear to be marked for bike lanes. The developer notes that sidewalks will be added as part of this project; bike paths will not be added. Shipley Road and Barker Drive (to the south of the property) have sidewalks on both sides of the street. The sidewalks and crosswalks along Shipley Road are contiguous, leading up to and away from an existing DART bus stop at the intersection of Foulk Road. This stop is a half mile walk from the property and is served by route 21.
- DNREC encourages developers and builders to consider all sustainable growth practices in their design, and we believe that the air quality impacts associated with the project should be completely considered. New facilities may emit, or cause to be emitted, additional air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:
  - Emissions that form ozone and fine particulate matter; Delaware currently violates federal health-based air quality standards for ozone. New Castle County, Delaware is classified as non-attainment for not meeting federal and state 8-hour ozone standards. Compared to Kent and Sussex Counties, short term 1-hour average peak ozone levels are usually highest in New Castle County, as well,
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.

Air emissions generated from new facilities include emissions from the following activities:

- Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity, and

- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) were quantified. Table 2 – Projected Air Quality Emissions represents the actual impact Harborage of Wilmington may have on air quality.

Emissions Attributable to Harborage of Wilmington (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NO <sub>x</sub> )	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Area source emissions	3.7	0.4	0.3	0.4	15.1
Power emissions	*	1.5	5.1	*	755.3
Mobile emissions	5.5	5.7	0.2	0.1	3546.6
Total emissions	8.2	7.6	5.6	0.5	4317.0

(\*) Indicates data is not available.

Note that emissions associated with the actual construction of the assisted living facility, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

- DNREC encourages sustainable growth practices that:
  - Control sprawl;
  - Preserve rural and forested areas;
  - Identify conflicting land use priorities;
  - Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
  - Coordinate transportation, environment, and climate protection plans with land use plans; and
  - Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing with only energy efficient products**
  - Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency

translates into a percent reduction in pollution. The Energy Star Program is an excellent way to save on energy costs and reduce air pollution.

- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation and from the use of oil or gas heating equipment.
- **Constructing with high albedo, high solar reflectance materials.** This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.
- **Providing shade for parking areas.** Approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. Such measures can also have the additional benefit of channeling or infiltrating stormwater.
- **Encouraging the use of safe multimodal transportation.** This measure can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, bike path, or mass transit, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year. An opportunity to connect to the DART transit system exists via a bus stop at the intersection of Shipley Road and Foulk Road. This stop is a half mile south of the property and is served by route 21.
- **Using retrofitted diesel engines during construction.** This includes equipment that is on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees in vegetative buffer areas, particularly those between the site and nearby residential areas.** Native trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development. The applicant should submit a plan to the DNREC Division of Air Quality (DAQ) which addresses the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Harborchase of Wilmington project. The DAQ point of contact is Rachel Yocum, and she may be reached at (302) 739-9402 or [Rachel.yocum@state.de.us](mailto:Rachel.yocum@state.de.us).

Delaware State Fire Marshall's Office – Contact John Rudd 739-4394

- Preliminary meetings with Fire Protection Specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: [www.statefiremarshal.delaware.gov](http://www.statefiremarshal.delaware.gov), technical services link, plan review, applications or brochures.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP  
Director, Office of State Planning Coordination

CC: New Castle County