



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

January 20, 2015

Mr. Andrew Hayes
ForeSite Associates Inc.
208 Delaware Street
New Castle, DE 19720

RE: PLUS review 2014-12-04, Avon Site

Dear Mr. Hayes,

Thank you for meeting with State agency planners on December 17, 2015 to discuss the proposed plans for the Avon site. According to the information received, you are seeking review of a site plan and rezoning from I to CR for 190 residential units and 312,400 sf of commercial uses on 45.5 +/- acres 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 New Castle County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

Strategies for State Policies and Spending

- This project is located in Investment Level 1 according to *Strategies for State Policies and Spending*. This site is also located in the New Castle County Growth Zone. 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. This project is a mixed use project providing residential and commercial uses. **Our office supports mixed use infill and redevelopment projects as essential to the concentration of growth in and around existing communities and infrastructure.** This is the type of project that is highly desirable to allow us to meet our goals of revitalizing our already urbanized areas while protecting agricultural lands and natural resource areas from encroachment by sprawling suburban and rural development.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known cultural or historic resources, such as an archaeological site or National Register-listed property, on this parcel. However, if there is going to be any development or construction project on this parcel, the developer should still be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is outlined in Chapter 54 of Title 7, of the Delaware Code.

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 (Delaware Code Title 7, Chapter 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 and
www.history.delaware.gov/preservation/cemeteries.shtml.

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 (historic or pre-historic), historic cemetery or unmarked human remains.

- 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. 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.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- Per Section 2.3.1 of the Standards and Regulations for Subdivision Streets and State Highway Access, Traffic Impact Studies (TIS) are warranted for developments generating more than 400 vehicle trip ends per day or 50 vehicle trip ends per hour. Section 2.3.2 provides that for developments generating less than 2,000 vehicle trip ends per day and less than 200 vehicle trip ends per hour, DelDOT may accept an Area Wide Study Fee of \$10 per daily trip in lieu of a TIS.

Using Institute of Transportation Engineers (ITE) data, DelDOT estimates that the proposed development would generate 12,256 vehicle trip ends per typical weekday. Therefore, considering only our volume warrants, a TIS would be warranted and payment of the Area Wide Study Fee would not be an option.

Therefore DelDOT will require a TIS. Recognizing this requirement, the applicant and their engineer met with DelDOT and New Castle County staff on November 24, 2014, to determine a scope of work for the study. As discussed below under Suggestions, DelDOT has advertised for comment a revision of the Standards and Regulations. Recognizing that the revision might result in a reduced study area, the applicant has asked DelDOT to delay issuance of the scope of work resulting from that meeting pending their review of the draft regulations and possibly DelDOT's adoption of the regulations.

- The site entrances on Delaware Route 273 must be designed in accordance with DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, which is available at http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf. DelDOT recognizes that the proposed site entrances already exist. While they do not meet current standards and were designed for lower traffic volumes than are now proposed, they should be able to support some volume of traffic without improvement. Depending on the development phasing it may be possible to allow the supplicant to build and occupy part of it with relatively minor improvements at the entrances.

With regard to the site entrances, the existing site driveway connecting the two entrances intersects the main site driveway about 175 feet from Route 273. This distance allows storage for a queue of about eight vehicles exiting the main entrance before access to the site driveway is blocked. Queuing at both Route 273 and the internal intersection should be addressed as part of the TIS to make sure this design will suffice.

- This project is located within the regulated airspace zones of New Castle Airport (ILG), which is a public-use facility. Federal Aviation Regulation (FAR) Part 77 imposes height restrictions on any structures within these zones. DelDOT requires that the applicant for this project submit a “Proposed Construction/Alteration in Airport Zones Notification Form” in accordance with Delaware Code (2 Del. C. § 602).

This notification form can be submitted during the plan approval process with the local land use jurisdiction, but DelDOT’s Office of Aeronautics is willing to test hypothetical height numbers to prevent any future project complications. Please contact Josh Thomas with the Office of Aeronautics at (302) 760-4834 with any questions or concerns. A copy of the notification form can be found at this address:

http://www.deldot.gov/information/community_programs_and_services/airports/pdfs/aviation_obstruction_review_form.pdf

Department of Natural Resources and Environmental Control – Contact Bahareh Van Boekhold 735-3495

Wetlands

- State regulated subaqueous lands ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. Upon review of the GIS layers, Perennial River/Stream are located on and adjacent to the property. White Clay Creek is a critical resource water. Any work in the water body will need a permit from DNREC’s Wetlands and Subaqueous Lands. State subaqueous lands include all tidal waters (up to the mean high water line), most non-tidal rivers, streams, lakes, ponds, bays and inlets (up to the ordinary high water line), most perennial streams and ditches and many intermittent streams and ditches. An on-site inspection by a representative of the Wetlands and Subaqueous Lands Section or an environmental consultant is recommended to determine the limits of jurisdictional State subaqueous lands. Additional information about State regulated subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>.
- Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, where the use, degradation or destruction of these waters could affect interstate or foreign commerce. The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site

inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdiction. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at

<http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm>.

- According to GIS SWMP maps, there are considerable wetlands regulated by the U.S. Army Corps of Engineers. DNREC suggests contacting them for guidance on wetland regulations for the area.

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 within the greater Christina River Basin and the White Clay Creek Sub-basin. The Christina River Basin includes Christina River Sub-basin and the White Clay Creek Sub-basin. In the Christina River Basin, post-development nitrogen and phosphorus loading must be capped at the pre-development or baseline loading rate (or a 0% post-construction increase in N & P in Delaware's portion of the Christina River Basin) to meet the required TMDL for each nutrient. Moreover, reductions in bacteria that range from 29% to 95% is also required (depending upon location). The specific required nutrient and bacterial requirements for the various stream segments in the Basin, and background information is outlined in the report entitled "*Christina River Basin High-Flow TMDL*" by the EPA. This report can be retrieved from the following weblink:

http://www.epa.gov/reg3wapd/tmdl/pa_tmdl/ChristinaMeetingTMDL/index.htm

- 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 739-4811 for further information concerning compliance requirements or view the following web link: <http://dda.delaware.gov/nutrients/index.shtml>

Flood Management

- A portion of this parcel is located in a Zone A floodplain. Zone A floodplains do not have Base Flood Elevations established. Since this parcel is greater than 5 acres, New Castle

County will likely require a flood study be done to determine the base flood elevation and the correct boundary of the special flood hazard area.

Water Supply

- DNREC records indicate that the project is located within the public water service area granted to United Water DE under Certificate of Public Convenience and Necessity (CPCN) 88-CPCN-03. DNREC recommends that the developer contact United Water DE to determine the availability of public water. Any public water utility providing water to the site must obtain a 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.
- Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there is an Underground Storage Tank associated with Avon Products Inc. located within 1000 feet of the proposed project.

Source Water Protection Areas

- The project does not fall within any wellhead protection or excellent groundwater recharge potential areas. However, the parcel falls entirely within the Red Clay Creek Drinking Water Watershed. This area is s a Level 2 source water protection area for New Castle County (NCC). In addition, the project falls partially within areas of steep slopes and flood plains protected as Level 1 source water protection areas for NCC (see map).

Level 2 Source Water Protection Areas are the delineated watershed upstream from public drinking water supply intakes. Land Use or Land Activity within these areas has the

potential to influence water quality or quantity to the public drinking water system. Level 1 Source Water Protection Areas are defined as flood plains. Land Use or Land Activity within this area has the potential to influence water quality or quantity to the system. The Ground Water Protection Branch (GPB) recommends referring to NCC Unified Development Code for regulations regarding development in these water resource protection areas.

Sediment and Stormwater Management

- A Sediment and Stormwater Plan Approval will be required for this project. If remediation is required on the site, the remediation plan Sediment and Stormwater Plan will be reviewed by DNREC Sediment and Stormwater Program. Otherwise, the plan will be reviewed by the delegated agency, New Castle County Department of Land Use.

Air Quality

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 2 – Potential Regulatory Requirements may apply to your project:

Table 2: Potential Regulatory Requirements	
Regulation	Requirements
7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling	Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. Use covers on trucks that transport material to and from site to prevent visible emissions.
7 DE Admin. Code 1113 – Open Burning	Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. Prohibit the burning of land clearing debris. Prohibit the burning of trash or building materials/debris.
7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan	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)
7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	Use structural/ paint coatings that are low in Volatile Organic Compounds. Use covers on paint containers when paint containers are not in use.
7 DE Admin. Code 1144 – Control of Stationary Generator Emissions	Ensure that emissions of nitrogen oxides (NO _x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO ₂), carbon monoxide (CO), and carbon dioxide (CO ₂) from emergency generators meet the emissions limits established. (See section 3.2). Maintain recordkeeping and reporting requirements.

<p>7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles</p>	<p>Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</p>
<p>Regulation 21 Section 10 – Emission Standards for Hazardous Air Pollutants, Asbestos</p>	<p>Ensure no visible residue of asbestos materials remains in the work area after all asbestos materials are removed in accordance with NESHAP. Display DANGER signs whenever airborne asbestos may be present in accordance with NESHAP and OSHA Use wet removal techniques. 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.</p>

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

Hazardous Waste Sites

- If it is determined by the Department that there was a release of a hazardous substance on the property in question, it is suggested that the guidelines and provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware *Regulations Governing Hazardous Substance Cleanup* be followed.
- There are three SIRS sites found within a ½-mile radius of the proposed project:
 - Windy Hills (DE-0162) located adjacent to the north of the project property. The property was alleged to be a former landfill for many years. A Preliminary Assessment (PA) was conducted in August 1987 because of plans to develop a housing development. The PA determined that there was no evidence of a landfill and gave the site a No Further action designation. The Site has been delisted and archived.
 - Motor Wheel Corp (DE-0175) is located 0.07 miles south-west of the project property. The site operated from 1958-1982 making wheels for trains. In 1985, a settling lagoon was emptied and the sludge along with soil was removed shipped off site. The property was sold in 1985 and another PA was conducted in 1988 followed by a Site Inspection in 1989. In 1990, an Interim Investigation was conducted. Many underground storage tanks were removed and the soil removed for disposal. A Remedial Investigation (RI) was completed in Dec 1993 and found some small amounts of TCE. More soil was removed and disposed of off site. The Proposed plan was published in February 1994 and became the Final Plan in July 1994. The FPRA required that the site remained industrial use only and a Deed Restriction be recorded for the groundwater. The Site received a Certificate of Completion of Remedy (COCR) in June 1996. The Site currently has annual Operations and Maintenance inspections.
 - Gildea Nursery (DE-1251) is located 0.12 miles south of the project property. A PA and SI were conducted on the site in October 1999 to determine the presence of contamination due to the nursery and past farming practices. The site was entered into the

Voluntary Clean-up Program (VCP) in November 2000. A Facility Evaluation was completed in November 2003 and suggested the no further evaluations were needed. The PPRA and FPRA were published in June 2004 and August 2004 and determined that a No Further Action designation was needed. The Site will be given a COCR soon.

Tank Management Section

- 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 leaking underground storage tank (LUST) project is located within the parcels of interest:
 - Avon Products Inc, Facility: 3-000457, Projects: N8703003 (Inactive)
- The following confirmed leaking underground storage tank (LUST) projects are located within a quarter mile from the proposed project area:
 - Westvaco Corp, Facility: 3-000814, Project: Inactive)
 - Sardo Warehouse Brookside, Facility: 3-000453, Projects: N9001002, N9405107, N9603054 (Inactive)
 - Potts Welding & Boiler Repair, Facility: 3-001316, Project: N9701010 (Inactive)
 - Former Motor Wheel Site, Facility: 3-000678, Project: N9204115 (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.

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 (DSFPR):

Fire Protection Water Requirements

- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
- Where a water distribution system is proposed for sites containing Mercantile occupancies, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

Fire Protection Features

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

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 and the center island at the entrance into the property off of Ogletown Road must be constructed so fire department apparatus may negotiate it.
- 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.
- 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”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- 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

- Please be advised that DeIDOT has advertised for comment a comprehensive revision of the Standards and Regulations. The comment period ran through June 30 and DeIDOT could adopt this revision as soon as February 2015. Implementation guidance has not been developed but DeIDOT recommends that the developer's engineer become familiar with the proposed changes and assess whether any of them could be relevant to this project. Information on the proposed revision is available in the Register of Regulations and at http://www.deldot.gov/information/pubs_forms/revisions_to_ASR/index.shtml.
- Because the proposed development would generate more than 200 vehicle trips per day, a Pre-Submittal Meeting is required before plans are submitted for review. Guidance on what will be covered at this meeting and how to prepare for it is located at http://www.deldot.gov/information/business/subdivisions/Pre-Submittal_Meeting_Requirements.doc. The form needed to request this meeting is available at http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.doc.
- As shown on the Investment Level map associated with the *Strategies for State Policies and Spending*, the subject development is located in a Level 1 area. DeIDOT's Shared-Use Path and/or Sidewalk Process policy (available at http://www.deldot.gov/information/business/subdivisions/SUP_Sidewalk_Process.pdf) states that a path or sidewalk shall be installed along the State-maintained road frontage of any development in a Level 1 or 2 area. Where the construction is not physically possible, a fee in lieu of construction is charged. For part of the frontage east of the east site entrance, it may be necessary to charge the fee due to a stream crossing. However, the applicant should expect a requirement that they install a sidewalk or shared-use path most of the site frontage to serve the development.
- The proposed site layout would reuse much of the employee parking lot remaining from the site's former industrial use to serve retail and restaurant uses. This lot layout depends on one-way flow through the parking aisles and features angled parking and six parking aisles accessing the east side of the main site driveway within about 350 feet. Because retail and restaurant traffic is different from employment traffic, this layout could lead to congestion both in the lot and along the main site driveway. DeIDOT recommends that the developer consider alternative designs for this lot, to allow for two-way traffic in the aisles and fewer

access points along the main site driveway. At the PLUS meeting, the developer's engineer suggested reorienting the parking aisles parallel to the main site driveway. That seems like a good approach.

Department of Natural Resources and Environmental Control – Contact Bahareh Van Boekhold 735-3495

Soils Assessment

- According to the soil survey mapping update, the soil mapping unit mapped in the immediate vicinity of the proposed project is the Elsinboro-Delanco-Urban land complex (ErB). The ErB soil mapping unit contains soils altered or disturbed by excavation and filling during commercial or industrial development. The soils in this mapping unit are considered well-drained and, generally, have few to moderate limitations for commercial/industrial/residential development.



Figure 1: NRCS soil survey mapping update in the immediate vicinity of the proposed project

Bog Turtle

- A review of the DNREC database has revealed that there may be suitable habitat for the federally listed bog turtle (*Glyptemys muhlenbergii*) within the proposed project area. Bog turtles typically occur in freshwater wetlands with open canopies, mucky soils, and tussock vegetation. However, they can occur in more marginal habitats as well. Because the bog turtle is a federally listed species, protected under the Endangered Species Act, its presence can affect the scope of work. To ensure that the project will not impact bog turtles or their habitat, Phase I surveys for bog turtle habitat should be conducted.

Phase I surveys can be conducted any time of year when ice and/or snow cover is not present. If potential habitat is found, however, please note there is a time of year restriction during which Phase II surveys for bog turtles must be conducted. *A Delaware approved bog turtle surveyor must be used to conduct the surveys.* Please contact Holly Niederriter (302-735-8670) to obtain a list of contacts to conduct Phase I and, if necessary, Phase II surveys.

If potential bog turtle habitat is found during Phase I surveys, you are required to either:

- Completely avoid all direct and indirect project impacts to the wetland, in consultation with the U.S. Fish and Wildlife Service and Delaware Division of Fish and Wildlife;
OR
- Have Phase II surveys conducted to determine if bog turtles are present. In accordance with Delaware's bog turtle site survey procedures, surveys must be conducted by a State-approved bog turtle surveyor between April 15 and June 15.

Long-eared Bat

- This project area falls within 3 miles of known Northern Long-eared Bat (*Myotis septentrionalis*) locations. Northern Long-eared Bats have been proposed for federal listing as endangered under the U.S. Endangered Species Act. Although there are no current requirements for this species, once Northern Long-eared Bat are listed, DNREC anticipates a regulatory zone of 3 miles surrounding known bat locations. As such, please note that future development activities in this area may be subject to review by endangered species biologists.

National Wild and Scenic River

- This project parcel includes areas designated as the White Clay Creek National Wild and Scenic River as administered by the National Park Service (NPS). The Wild and Scenic Rivers Act states that designated rivers possess outstandingly remarkable natural, cultural and other values, that they are to be preserved in free-flowing condition, and that they and their immediate environments are to be protected. The White Clay Creek watershed was designated into the National Wild & Scenic Rivers system because of its exceptional hydro-geologic, botanic, fish and wildlife, and historical resources. The watershed is one of only a few relatively intact and ecologically functioning river systems remaining in the highly congested and developed corridor linking Philadelphia, Pennsylvania, with Newark, Delaware. Please contact the NPS Northeast Region office (200 Chestnut Street, 3rd Floor, Philadelphia, PA 19106; fax: 215-597-0932) to determine whether or not your project needs to be reviewed by the NPS:
 - Chuck Barszcz, Manager, NPS NER Wild & Scenic Rivers (phone: 215-597-6482, Charles_barszcz@nps.gov)
 - Julie Bell, River Manager, NPS NER Wild & Scenic Rivers (phone: 215-597-6473, julie_bell@nps.gov).

Wetland Buffer

- To protect the function and integrity of wetlands on the parcel, a minimum 100 foot buffer should be left intact around the perimeter. This recommendation is based on peer reviewed

scientific literature that shows an adequately sized buffer that effectively protects wetlands and streams in most circumstances is about 100 feet in width. Upland buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle. Lot lines, roadways, and infrastructure should not be placed within this buffer zone. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms. Finally, DNREC recommends planting native plant species wherever possible. 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.

Additional information on TMDLs and water quality

- Although a Pollution Control Strategy (PCS) to achieve the required TMDL nutrient and bacterial load reduction requirements has been established for the Christina watershed, attainment of the load reduction(s) is hampered by circumstance that the strategies for this watershed are entirely voluntary in nature. The web link for the Christina watershed PCS strategies is as follows:
<http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx>
- DNREC strongly encourages the applicant reduce nutrient and bacterial pollutants on their parcel through voluntary implementation of the following recommended BMPs:
 - Maintain as much of the existing open space as possible; DNREC further suggests additional native tree and native herbaceous planting, wherever possible.
 - Calculate post-construction surface imperviousness that include 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.
 - Use of pervious paving materials (i.e., pervious pavers) as a BMP to mitigate the impacts (e.g., increased flooding potential and pollutant runoff) associated with surface imperviousness.
 - Use of a raingarden(s) as a BMP for mitigating nutrient and bacterial pollutant runoff from increases in surface imperviousness. Please contact Lara Allison at 739-9939 for further information about the possibility for installing a raingarden(s) on this parcel.
 - Voluntarily 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. DNREC strongly encourages the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact John Martin or Jen Walls at 302-739-9939 for more information on the protocol.

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 strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Assessment 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.
- 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 (800-662-8802). SIRS should also be contacted as soon as possible at 302-395-2600 for further instructions.

Additional information on air quality

- New homes and businesses 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 homes and businesses 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) for the project could not be quantified. DAQ was also unable to quantify the mobile emissions, as daily trip data was not provided in the

application. Should this information be provided, DAQ will quantify the mobile emissions based on data taken from the ITE Trip Generation Manual, 8th Edition.

- Note that emissions associated with the actual construction of the mixed use development, 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 paragraph 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, housing, 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 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 surface lot 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.
 - Providing no more than the minimum local code requirements for parking capacity. This measure minimizes the environmental harms associated with parking facilities, such as automobile dependency, vehicle emissions, land consumption, and stormwater runoff.

- 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 NO_x are reduced each year. There is an opportunity to connect the property to a transit network via two existing DART bus stops located within walking distance at the western extent of the property along Ogletown Road.
- 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 adjacent residential areas. 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 DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Avon Site Mixed Use Development project.

Delaware State Fire Marshall's Office – Contact Duane Fox 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, technical services link, plan review, applications or brochures.

Division of Public Health – Contact Laura Saperstein 744-1011

The Delaware Division of Public Health (DPH) is pleased to be able to participate in the PLUS application process. In keeping with its mission to protect and promote the health of all people in Delaware, DPH looks for opportunities to encourage and enhance our population's health behaviors that will result in healthy people and healthy communities.

Community design can impact the health of a population. Studies show that persons in lower-income communities, the elderly, and children often suffer more from consequences of inadequate land-use and transportation. Additionally, physical activity has a direct correlation to many chronic diseases, including hypertension, diabetes and obesity. In 2012, 39.1% of Delawareans reported a BMI of "overweight," and 26.9% reported a BMI as "obese." To that end, DPH looks to make recommendations for land-use that can empower Delawareans to make good health behaviors a part of their daily lives.

- DPH is pleased to see the inclusion of many critical land use options that support population health in the Avon site plan. The inclusion of a pedestrian infrastructure throughout the residential and commercial space using sidewalks and multi-use pathways will enable residents to choose walking as a recreational option. Additionally, keeping the road around the perimeter intact [for fire marshal use] will enhance individuals' ability to incorporate physical activity into their daily routines.
- The proposed tennis courts, courtyard/green areas, and swimming pool within the residential development are also in line with the area's SCORP recommendations and will enhance access to leisure physical activity, also important to healthy living. DPH would also like to commend the Avon developers for restricting the pad-sites along the frontage to eateries that will not include "fast-food." Diet and nutrition are important to healthy living because of the substantial influence food choices have on overall health; and limiting fast-food options and consumption is fundamental to healthy living.
- The Avon site has the opportunity to increase positive health behaviors for its commercial and residential audiences by incorporating the following recommendations into its land development proposal:
 - Include pedestrian lighting on all paths and walkways to enhance the usability of active transportation and recreation options.
 - Consider including bike facilities into the land use plan, such as bike lanes, bike signage, bike parking, and a continued bike-lane with right-turn at the front entrance.
 - Include crosswalks at all key intersections, including parking-lots
 - Consider connection of internal sidewalks to transit stops on property frontage at Rt.273 and shared accommodations for pedestrians, bicyclists and transit users. Although, pedestrian usage is limited at this time and interconnectivity along Rt. 273 is sparse, planning to include these infrastructures in land development can serve as a model to others for future development.

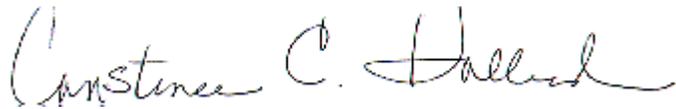
Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments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

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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". The signature is written in black ink and is positioned above the typed name and title.

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

CC: New Castle County