



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

October 22, 2014

Mr. Roger Gross
Merestone Consultants
19633 Blue Bird Lane, Suite 9
Rehoboth Beach, DE 19971

RE: PLUS review 2014-09-03, Arbor Lyn

Dear Mr. Gross,

Thank you for meeting with State agency planners on September 24, 2014 to discuss the proposed plans for Arbor Lyn. According to the information received, you are seeking review of a rezoning of 35 acres from AR-1 to HR-RPC and site plan for the construction of 203 residential units in Sussex 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 Sussex 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.** *{As this plan evolves and moves through the system, the Developer will work with the various agencies to determine their requirements and what elements of that cooperative exercise will be incorporated into the design.}*

Strategies for State Policies and Spending

This project is located in Investment Levels 1 and 2 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. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas.

This site lies within an Investment Level 1 & 2 area according to the Strategies for State Policies and Spending Update; it is adjacent to a developing area; and therefore residential development is appropriate for this site and is permitted pursuant to Chapter 115: Zoning Ordinance of the Sussex County Code. Investment Levels 1 or 2 lands are most often impacted by environmentally sensitive features, agricultural preservation issues, or other infrastructure issues.

The project is a proposed HR-RPC located within the Environmentally Sensitive Development District. This approximate 36 acre site is located along the north side of Warrington Road (SCR #275) east of John J. Williams Highway in Sussex County, Delaware. The Developer is applying for site plan approval in accordance with the County's HR-RPC requirements. The plan under consideration proposes 203 residential dwelling units composed of a mixture of single-family and multi-family units. It makes good planning sense to allow for increased densities in areas where either infrastructure exists or can be improved at a fraction of the cost to create new systems to support growth in less desirable areas that would contribute to urban sprawl. The developer has been able to incorporate features into the site design that will provide for the preservation of some forested areas; maximize inter-connectivity within the community by utilizing sidewalks and pathways; and create community areas consisting of a club house and pool for social and recreational activities.

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Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known archaeological sites or National Register-listed property on this parcel. However, according to the Pomeroy and Beers Atlas of 1868 (which is a 19th-century historic map), it seems that there was dwelling slightly on or very close to the parcel, near the southwest side. The dwelling was associated with a R. Morricks, the USGS Topographic of 1931 also indicated that there was a dwelling there, and it is possible that there could be archaeological remains associated with it as well. With this in mind, it is important that the developer be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is in Title 7, Chapter 54, 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. *{There was no evidence of any physical remnants of the existing house onsite. Furthermore, there was no evidence of any family cemetery plots associated with the original residence. If, however, through the course of development the unexpected discovery of unmarked human remains occurs, the developer understands that the discovery and disposition of such remains will be governed by the Delaware's Unmarked Human Remains Act of 1987.}*

- 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

- Plans for the proposed development are apparently still somewhat tentative but by the developer's estimate on the PLUS application, the site would generate 1,525 vehicle trip ends per day. Therefore, in accordance with the traffic volume warrants found in Section 2.3.1 of our Standards and Regulations for Subdivision Streets and State Highway Access, the proposed development warrants a Traffic Impact Study (TIS). However, in accordance with Section 2.3.2, DeIDOT may accept a fee of \$10 per daily trip in lieu of a TIS for developments generating fewer than 2,000 vehicle trips per day and fewer than 200 vehicle trips per hour in the peak hours of the day. DeIDOT has already discussed this matter with the developer and have written to Sussex County in this regard. See attached letter dated July 23, 2014. *{The development, as proposed, will generate less than 2000 vehicle trips per day and less than 200 peak hour trips. The developer has decided to pay an Area Wide Study Fee of \$10 per daily trip towards State improvement projects in the area.}*

The payment of the fee would not exempt the developer from contributing toward off-site improvements or count toward those improvements. Presently, DeIDOT anticipates requiring contributions toward improvements at the intersections of Warrington Road with Delaware Route 24 and Old Landing Road and possibly elsewhere. *{It is anticipated that the development will require roadway improvements along Warrington Road in the form of left and right turn lanes, improved drainage, improved intersection designs, and multi-modal facilities for pedestrian circulation.}*

- 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. *{Acknowledged}* 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.
- The site entrance must be designed in accordance with DeIDOT's Standards and Regulations for Subdivision Streets and State Highway Access. *{Acknowledged}* A copy of the Standards and Regulations is available at http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf.
- 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 November 2014. 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. *{Acknowledged}* 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.
- Referring to Section 1.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Initial Stage review fee shall be assessed to this project. *{Acknowledged}*
- Referring to Section 1.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Construction Stage review fee shall be assessed to this project. *{Acknowledged}*
- In accordance with Section 3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, any off-site improvements and when those improvements are warranted need to be noted on the record plan. *{Any offsite improvements that are required will be enumerated on the record plan as requested.}*
- In accordance with Section 3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, a site plan shall be prepared prior to issuing "Letter of No Objection". The following information will be required for the "Letter of No Objection" review:
 - Copy of the Initial Stage Fee Calculation Form
 - Copy of the Initial Stage Review Fee
 - Gate-Keeping Checklist – Site Plan
 - Design Checklist – Record Plan*

- Owners and Engineer's name and e-mail address
- Three (3) paper sets of the Record Plan
- Conceptual Entrance Plan
- CD with a pdf of the Site Plan
- Submission of the Area-Wide Study Fee (if applicable)

*For the design checklist for the site plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, pages D-2 and D-3.

- As specified in Section 3.4.1.2 of the Standards and Regulations for Subdivision Streets and State Highway Access, the record plan should show all existing entrances (residential/commercial) within 400 feet of the proposed entrance. *{The final record plan and entrance construction plans will show all existing entrances within 400 feet of the proposed entrance.}*
- The developer's engineer should evaluate the criteria in Section 3.5.5.5 of the Standards and Regulations for Subdivision Streets and State Highway Access to determine whether a bus stop is required at the site entrance and the design of it if one is needed. *{A bus stop, if required, will be provided in accordance with the design criteria of Section 3.5.5.5.}*
- In accordance with the minimum standards provided in Section 3.6.5 and Figure 3-3 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require dedication of right-of-way along the site's frontage on Warrington Road. *{A right-of-way dedication will be provided in accordance with the functional classification of Warrington Road.}*
- In accordance with Section 3.6.5 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Warrington Road. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby established to the State of Delaware, as per this plat.**" *{A 15-foot wide easement for a multi-use path has been provided on the site plan.}*
- Referring to Section 4.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review;
 - Copy of the Construction Stage Fee Calculation Form
 - Copy of the Construction Review Fee
 - Gate-Keeping Checklist – Entrance Plan
 - Design Checklist – Entrance Plan**
 - Three (3) paper sets of the Entrance Plan
 - Auxiliary Lane Worksheet
 - Sight Distance Worksheet
 - SWM Report and Calculations (if applicable)
 - CD with a pdf of the Entrance Plan**For the design checklist for the entrance plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, pages D-9 and D-13.
- In accordance with Section 4.8 of the Standards and Regulations for Subdivision Streets and State Highway Access, stormwater facilities, excluding bioswales, shall be located a minimum of 20 feet from the ultimate right-of-way line of Warrington Road. See Section 3.6.5 and Figure 3-3 regarding the location of that line. *{All stormwater management facilities will be located a minimum of 20 feet from the dedicated right-of-way for Warrington Road.}*
- In accordance with Section 5.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require the establishment of a sight distance triangle at the entrance in accordance with AASHTO

standards. *{A site distance triangle is shown on the site plan.}* A worksheet has been developed to assist with this task and can be found at <http://www.deldot.gov/information/business/subdivisions/Intersection-Sight-Distance.xls>.

- Metes and bounds and total areas need to be shown for any drainage easements. Section 5.7.2.5 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access requires, in part, a minimum 20-foot wide drainage easement for storm drainage systems, open or closed, that fall outside the existing right-of-way or the drainage/utility easement. These easements must be shown and noted on the record plan. *{Drainage easements, if required, will be provided in accordance with the requested criteria.}*

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 739-9071

TMDLs

- The project is located in the low nutrient reduction zone of the greater Inland Bays watershed. In this watershed, Total Maximum Daily Load (TMDL) pollutant reduction targets have been developed by the State of Delaware (under the auspices of Section 303(d) of the 1972 Federal Clean Water Act) for nutrients (e.g., nitrogen, phosphorus), and bacteria. 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. The TMDL for the low reduction zone of the Inland Bays watershed calls for 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 40 percent reduction (17 percent for marine waters) in bacteria from baseline conditions.
- The adopted Inland Bays Pollution Control Strategy regulation was published in the Delaware Register of Regulations on November 11, 2008 and is now an enforceable regulatory directive. A Pollution Control Strategy (PCS) is an implementation strategy that identifies the actions necessary (regulatory and non-regulatory) to systematically reduce the pollutant loading to a given water body, and meet the TMDL reduction requirements specified for that water body. *{All stormwater management facilities will be designed in accordance with the new stormwater management regulations adopted in January 2014. Runoff reduction practices such as filter strips, biofiltration swales, and infiltration (recharge) practices will be implemented into the overall stormwater management strategy to comply with these regulations.}* These regulations can be reviewed at <http://regulations.delaware.gov/documents/November2008c.pdf> and background information, guidance documents, and mapping tools can be retrieved from http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib_pcs.htm.

Water Supply

- The project information sheets state water will be provided to the project by Tidewater Utilities via a public water system. DNREC records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 83-W-15. *{Acknowledged; a “Willing & Able” letter as been provided by tidewater Utilities, Inc. to provide both potable and fire flow water demands.}*
- 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. *{If, through the course of construction, it's determined that dewatering will be required, the required dewatering well construction permits will be acquired from DNREC.}*
- 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. *{Acknowledged}*

Source Water Protection Areas

- The DNREC Water Supply Section, Ground-Water Protection Branch has determined that the parcel falls within two wellhead protection areas for Sussex County (see map). The wellhead protection areas protect wells owned by the City of Rehoboth. *{Acknowledged}*
- Sussex County's Source Water Protection Ordinance meets only the minimum standards of protection. DNREC has in the past and continues to encourage the County to revise their ordinance to strengthen the level of protection. *{Portions of the site lie within a Wellhead Protection Area. Development within those areas will be done pursuant to Sussex County's Source Water Protection Ordinance, Chapter 89.}*
- Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where land use activities or impervious cover may adversely affect the quantity and quality of ground water moving toward such wells. *{The site plan currently proposed less than 50% impervious land cover. The NRCS Web Soils Survey indicates that onsite soils have a deep water table and outstanding recharge potential. It is anticipated that recharge systems designed in accordance with the new stormwater management regulations will be used to replenish groundwater aquifers.}*
- Chapter 115 Zoning Article IV §115-19 Of the County's Code states in part that agricultural districts are also intended for protection of water resources. These parcels are zoned as agricultural district and it would afford more protection to the drinking water for the City of Rehoboth if it remained agricultural. *{This site lies within an Investment Level 1 & 2 area; it is adjacent to a developing area; and therefore residential development is appropriate for this site and is permitted pursuant to Chapter 115: Zoning Ordinance of the Sussex County Code.}*

In addition, because the wellhead protection area is an existing source of public drinking water and the excellent ground-water recharge area so readily affects the underlying aquifer, the storage of hazardous substances or wastes should not be allowed within these areas unless specific approval is obtained from the relevant state, federal, or local program. *{Acknowledged}*



Sediment and Stormwater

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on 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 practicable. 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 Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101). *{A detailed sediment and stormwater management plan will be developed for this site. The “Three Step Process” as outlined in the new stormwater management regulations (adopted in January 2014) will be followed to obtain compliance.}*

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: *{The Developer will be responsible for compliance with all State and Federal regulations regarding air quality.}*

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 minimum 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.
7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles	Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

For a complete listing of all Delaware applicable regulations, please look at the 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 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. *{Acknowledged; the project will comply with all applicable regulatory requirements.}*

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. *{Acknowledged; the project will comply with all applicable regulatory requirements.}*
- There are no confirmed leaking underground storage tank (LUST) projects located within a quarter mile from the proposed project area. *{Acknowledged}*
- 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.

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

- 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 and 2 area. DelDOT's Shared-Use Path and/or Sidewalk Process policy (available at http://www.deldot.gov/information/business/subdivisions/SUP_Sidewalk_Process.pdf) provides that in Level 1 and 2 areas a path or sidewalk must be installed along the State-maintained road frontage. If a physical impossibility exists, and none is apparent here, then a fee in lieu of construction shall be paid. *{Acknowledged; it is anticipated that a multi-use path will be installed along the property frontage on Warrington Road.}*
- Expect a requirement for a separate turning template plan that verifies vehicles can enter and exit safely. The entrance shall be designed for the largest vehicle using the entrance. *{This site lies within an Investment Level 1 & 2 area; it is adjacent to a developing area; and therefore residential development is appropriate for this site and is permitted pursuant to Chapter 115: Zoning Ordinance of the Sussex County Code.}*
- Be advised that the standard general notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of May 21, 2014 for the Record/Site Plan and Construction Plan general notes and the Temporary Traffic Control general notes. The notes can be found at http://www.deldot.gov/information/business/subdivisions/DelDOT_Development_Coordination_Plan_Sheet_Notes.doc
- Please check to determine whether any utilities will need to be relocated as part of this project. *{Any Utilities requiring relocation will be relocated per Del DOT and the utility provider's requirements.}*

- Please use the Auxiliary Lane Worksheet to determine whether auxiliary lanes are warranted at the site entrance. *{Acknowledged; auxiliary lane worksheets will be provided as part of the entrance plan submittal process.}*

The worksheet can be found at http://www.deldot.gov/information/business/subdivisions/auxiliary_lane_worksheet.xls.

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 739-9071

Site Visit Request

- Fish & Wildlife scientists have not surveyed the project area and in order to provide more informed comments, DNREC requests the opportunity to conduct a survey to evaluate habitat and determine the potential for species of conservation concern. Please note that DNREC scientists have extensive knowledge of the flora and fauna of the state. The survey will be conducted at no expense to the landowner. Please call (302) 735-8658 or at Kate.Fleming@state.de.us if the landowner will grant a site visit. *{A Threatened and Endangered Species review and an Existing Vegetation/Woodland Survey will be performed as part of this application. The Developer, currently, does not own the subject property but would not have a problem with DNREC conducting an onsite survey. If DNREC wishes to perform an onsite survey, I would suggest contacting the current property owners.}*

Forest Preservation

- The concept plan currently clears most of the forest on the parcels, and leaves the remaining forest highly fragmented. DNREC strongly recommends retaining more of the forested area, and limiting forest fragmentation on the site. Small, disconnected areas behind lots, on corners, and in other irregular places are often underutilized and can become a maintenance problem. In general, larger, connected areas are more beneficial to wildlife and may be more useful to the residential community as well. Forest fragmentation separates wildlife populations, increases road mortality, and increases “edge effects” that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species. *{Existing perimeter forested buffers and some interior wooded areas will be preserved. Some of the internal forested areas will be incorporated into the stormwater management design to be used as natural filtration systems. Any additional deforestation will be restricted through development covenants and restrictions.}*

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, DNREC recommends 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 March or November. 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, which can contain oil and other pollutants that homeowners may use on their lawns and driveways.

{It is anticipated that recharge reduction practices and infiltration practices will be implemented as part of the overall stormwater management strategy. If, however, a stormwater management wet pond is designed, the developer will implement practices in the form recommended by DNREC to create a less desirable habitat for nuisance waterfowl.}

- 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.

Soils Assessment

- Based on the NRCS soils survey mapping update, the Greenwich (GrA) mapping unit is mapped in the immediate vicinity of the proposed project (Figure 1). *{Acknowledged}*



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

Additional information on TMDLs and water quality

- Compliance with the specified TMDL nutrient and bacterial reduction requirements specified for the Inland Bays watershed can be facilitated by the strategies and requirements described in the Inland Bays Pollution Control Strategy (PCS), and the implementation/adherence to the following recommended BMPs:
 - **Retain more of the existing forest cover than currently proposed.** Based on information submitted in the PLUS application, the applicant has plans to remove at least 85% of the existing forest cover on this parcel to accommodate this project; removal of large amounts of forest cover on this parcel will contribute to significant increases in pollutant runoff to the greater Inland Bays watershed. *{This site, although mostly wooded, lies within a highly developed area consisting of commercial uses and high density residential communities. This*

proposal is consistent with the type of development encouraged within Level 1 & 2 Investment Areas according to the State's Policies and Spending Update. An attempt to preserve some forested areas along the perimeter of the site for buffers and some interior areas to be incorporated into stormwater filtration systems will be made.

- 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. *{All post-construction impervious land cover will be calculated as required by the stormwater management regulations.}*
- Use of rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts via runoff/discharges from impervious surfaces. Please contact Lara Allison at 739-9939 for further information about the possibility for installing a raingarden(s) on this parcel. *{Preliminary indications are that the soils have a deep water table and have excellent recharge potential. It is anticipated that infiltration and runoff reduction practices such as filter strips, biofiltration swales, sheet flow to open space, etc. will be implemented to comply with the stormwater management regulations.}*
- Use of pervious paving materials (instead of conventional asphalt and concrete) to mitigate pollutant load runoff impacts. *{The developer will consider the use of permeable pavement and pavers and other runoff reduction practices to mitigate pollutant load impacts.}*
- Use of green-technology storm water management (in lieu of open-water management structures) and raingardens as BMPs to reduce nutrient pollutant impacts. Please contact Lara Allison at 739-9939 for further information about siting a raingarden(s) in this parcel. *{See above response; wet stormwater management ponds are not anticipated.}*
- 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. *{The design of the site will comply with the Sediment and Stormwater and the Inland Bays Pollution Control Strategy Regulations. Selection and implementation of BMP practices will be determined by site conditions and ensuring its continued operation and functionality.}*

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. *{Acknowledged; however none anticipated.}*
- 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. *{Acknowledged; all applicable regulations governing the installation of ASTs will be followed.}*

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 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. *{It is the intention of the Developer to perform necessary environmental studies including a Phase I ESA, Jurisdictional wetlands determination upon receiving preliminary site plan approval from Sussex County.}*
- Additional remediation may be required if the project property or site is re-zoned by the county. *{Acknowledged; however none anticipated.}*
- 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). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions. *{Acknowledged; the project will comply with all applicable regulatory requirement.}*

Additional information on air quality

- New homes 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; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
 - The emission of greenhouse gases which are associated with climate change, and
 - The emission of air toxics.
 - Air emissions generated from new homes 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 the Arbor-Lyn may have on air quality.

Emissions Attributable to Arbor-Lyn (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Area source emissions	6.4	0.7	0.6	0.8	25.8
Power emissions	*	2.5	8.8	*	1296.6
Mobile emissions	9.4	9.9	0.3	0.1	6088.3
Total emissions	15.8	13.1	9.7	0.9	7410.7

(*) Indicates data is not available.

- Note that emissions associated with the actual construction of the residential community, 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, 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.

{This site lies within an Investment Level 1 & 2 area; it is adjacent to a developing area and is generally considered to be an infill area of the Route One urban corridor ; and therefore residential development is appropriate for this site and is permitted pursuant to Chapter 115: Zoning Ordinance of the Sussex County Code. It makes good planning sense to allow for increased densities in areas where either infrastructure exists or can be improved at a fraction of the cost to create new systems to support growth in less desirable areas that would contribute to urban sprawl. This site is located

adjacent to the existing residential communities of; the Estates of Sea Chase, the Estates of Sea Chase Condo and Sterling Crossing that have densities of 4.13, 6.5 and 6.29 respectively. This project is consistent with the pattern of growth in the area. The Beebe Medical Campus, located to the north of this site was approved by Sussex County as a Conditional use. Future expansion of that facility is anticipated, requiring additional residential development to support that growth.}

- 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 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, particularly to and from nearby residential areas, and, where possible, including mass transit. 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.
 - 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 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.

{At this time it is not known who will be building the homes, in an effort to mitigate the stated impacts of new construction and related vehicle emissions the Builder should construct ENERGY STAR qualified homes for this development. Sidewalks, a nature trail and multi-use path have been proposed to further help reduce vehicle emissions. Perimeter forested areas will be maintained and an aggressive landscape plan will be provided as part of the final site plan.}

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 Arbor Lyn project.

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 sidewalks along the frontage of the Arbor Lyn subdivision. Additionally, because the location of the development is within a reasonable distance to entertainment, restaurants, and local transit options, residents have the opportunity to incorporate physical activity into daily routines through active transportation. Finally, the proposed inclusion of "community recreation areas" aligns with the SCORP regional priorities, and will further engage residents with opportunities for active recreation.
- DPH feels the Arbor Lyn Subdivision has the opportunity to increase positive health behaviors for its residents by incorporating the following recommendations into its land development proposal:
 - The inclusion of internal walkways into the pedestrian infrastructure will enable residents to choose walking as a recreational option. Additionally, any opportunity to provide pedestrian connection to the existing land development(s) will encourage active transportation (walking/biking) among residents.
 - Include pedestrian lighting on all paths and walkways to enhance the usability of active transportation options.
 - Include crosswalks at all key intersections
 - Include bicycle facilities, such as bike lanes, signage and parking to enhance non-motorized options.

{The plan proposes to incorporate pedestrian infrastructure such as sidewalks, multi-use paths. The community recreational area will be designed to create interconnectivity and accessibility to community members. A system of street and site lighting is proposed for the site.}

Department of Education-Contact Despina Wilson 735-4040

- The DOE requests that the developer work with the affected School District's transportation department to establish developer supplied bus stop shelter ROW. *{The Developer will work with the CHSD transportation department to incorporate any bus stop shelter ROW and shelter structures as determined and recommended by the school district.}*
- The DOE recognizes the integral role of educational facilities within communities. As such, the DOE seeks to assure that residential growth, that generates additional demand on educational facilities, is managed with adequate educational infrastructure being made a part of sub-division plans as appropriate, such as adequate width of roads to accommodate school buses and designated pick up and drop off sites. *{The Developer will contact the School District to incorporate appropriate roadway widths, drop off and pick up areas to accommodate school buses as required.}*

As per DOE formula, this development would potentially add 102 students to the school district. DOE records indicate that the affected School Districts' schools are nearing or exceeding capacity based on the September 30, 2013 elementary enrollment. As such, the DOE requests that the developer contact the affected School District administration to address the issue of school over-crowding that this development has the potential to cause. *{School capacity will be increased with the addition of the new elementary school proposed by the District on John J. Williams Highway (Route #24). The Developer will work with the CHSD transportation department to incorporate any bus stop shelter ROW and shelter structures as determined and recommended by the school district.}*

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

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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". The signature is written in black ink on a white background.

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

CC: Sussex County