



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF MANAGEMENT AND BUDGET
STATE PLANNING COORDINATION

December 19, 2006

Mr. Bill Stephens
Stephens Environmental Consulting, Inc.
229 Lake Drive
Newark, DE 19702

RE: PLUS review – PLUS 2006-11-04; Windsor Farms South

Dear Mr. Stephens:

Thank you for meeting with State agency planners on November 29, 2006 to discuss the proposed plans for the Windsor Farms South project to be located on Wilson Hill Road in Sussex County.

According to the information received, you are seeking site plan approval through Sussex County for 225 residential units on 150 acres located in Investment Level 4.

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.

This proposal is located in Investment Level 4 according to the *Strategies for State Policies and Spending*, and is in the Low Density area according to the Sussex County Comprehensive plan. **The comments in this letter are technical, and are not intended to suggest that the State supports this development proposal. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or**

other approvals necessary to construct the development you indicate or any subdivision thereof on these lands.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: Bryan Hall 739-3090

This project represents a major land development that will result in 225 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This project is also located in the Low Density Area according to the Sussex County Comprehensive plan. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4 areas. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. The project as proposed is likely to bring more than 500 new residents to an area where the State has no plans to invest in infrastructure upgrades or additional services. These residents will need access to such services and infrastructure as schools, police, and transportation. To provide some examples, the State government funds 100% of road maintenance and drainage improvements for the transportation system, 100% of school transportation and paratransit services, up to 80% of school construction costs, and about 90% of the cost of police protection in the unincorporated portion of Sussex County where this development is proposed. Over the longer term, the unseen negative ramifications of this development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases.

Because the development is inconsistent with the *Strategies for State Policies and Spending*, the State is opposed to this proposed subdivision.

Division of Historical and Cultural Affairs – Contact: Alice Guerrant 739-5685

The Division of Historical and Cultural Affairs is not in favor of this development in Level 4, because it will adversely affect the historic agricultural landscape in this area and lead to the destruction of archaeological sites. Beers Atlas of 1868 shows the N. Isaac House in the eastern portion of the parcel. This appears to have been replaced by a mid-20th-c. house (S-5110), now demolished. By the 1917 USGS 15' Millsboro

topographic map, there were two additional buildings behind the Isaac House. There are small areas of high potential for prehistoric-period archaeological sites. There is an adjacent historic farmstead to the west (S-5111) which appears on Beers Atlas as the B. L. Cornwall House.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Isaac and Cornwall houses, usually a good distance behind or to the side of the house. The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out, and the developer may want to hire an archaeological consultant to check for the possibility of a cemetery here if this development is approved. The DHCA would have to have a copy of any archaeological report done for this purpose. They will be happy to discuss these issues with the developer; the contact person for this program is Faye Stocum, 302-736-7400.

If this development is approved, the DHCA recommends that the development be sufficiently landscaped to block noise and visual intrusions from the adjacent historic property. They would also like the opportunity to examine the area for archaeological sites, prior to any ground-disturbing activities, to learn something about their location, nature, and extent.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

Windsor Farms LLC seeks to develop a 150.549-acre parcel (Tax Parcel 2-31-6.00-11.00) midway between Georgetown and Bridgeville. More specifically, the land is on the south side of Wilson Hill Road (Sussex Road 527) between Delaware Route 404 and State Forest Road (Sussex Road 579). The development would consist of 225 single-family detached houses. The land is presently zoned AR-1 in Sussex County and would be developed by under the County's cluster development option.

Because this development is proposed for a Level 4 Area, it is inconsistent with the *Strategies for State Policies and Spending*. As part of their commitment to support the *Strategies*, DelDOT refrains from participating in the cost of any road improvements needed to support this development and is opposed to any road improvements that will substantially increase the transportation system capacity in this area. DelDOT will only support taking the steps necessary to preserve the existing transportation infrastructure and make whatever safety and drainage related improvements are deemed appropriate and necessary. The intent is to preserve the open space, agricultural lands, natural habitats and forestlands that are typically found in Level 4 Areas while avoiding the

creation of isolated development areas that cannot be served effectively or efficiently by public transportation, emergency responders, and other public services.

DelDOT strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in approved Comprehensive Plans. They encourage the use of transfer of development rights where this growth management tool is available.

If this development proposal is approved, notwithstanding inconsistencies with the relevant plans and policies, DelDOT will provide technical review and comments.

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

Investment Level 4 Policy Statement

This project is proposed for an Investment Level 4 area as defined by the *Strategies for State Policies and Spending* and is also located outside of a designated growth area in the relevant municipal and county certified comprehensive plans. According to the *Strategies* this project is inappropriate in this location. In Investment Level 4 areas, the State's investments and policies, from DNREC's perspective, should retain the rural landscape and preserve open spaces and farmlands. Open space investments should emphasize the protection of critical natural habitat and wildlife to support a diversity of species, and the protection of present and future water supplies. Open space investments should also provide for recreational activities, while helping to define growth areas. Additional state investments in water and wastewater systems should be limited to existing or imminent public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development.

With continued development in Investment Level 4 areas, the State will have a difficult, if not impossible, time attaining water quality (e.g., TMDLs) and air quality (e.g., non-attainment areas for ozone and fine particulates) goals. Present and future investments in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in certified Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available.

This particular development certainly compromises the integrity of the State Strategies and the preservation goals inherent in many of DNREC's programs. Of particular concern are the potential impacts to all three layers of the Green Infrastructure map

(natural resource and recreation priorities, crop land, and forest land) and the increase in the amount of impervious cover. While mitigating measures such as conservation design, central wastewater systems instead of individual on-site septic systems, and other best management practices may help mitigate impacts from this project, not doing the project at all is the best avenue for avoiding negative impacts. As such, this project will receive no financial, technical or other support of any kind from DNREC. Any required permits or other authorizations for this project shall be considered in light of the project's conflict with our State growth strategies.

Green Infrastructure

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special state conservation interest.

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

General Design Comment

PLUS materials indicate that a recreational facility is proposed on site. This facility includes a community center, pool, tot lot, and tennis courts. This proposed recreational facility and adjoining 13 units cuts through the forested area on site. The developer is encouraged to relocate this facility and 13 units to a more appropriate area on site. Perhaps the developer could achieve this by minimizing the size of the stormwater management ponds.

Soils

According to the Sussex County soil survey update, Pepperbox, Rockawalkin, and Rosedale were mapped on the subject parcel. Pepperbox and Rockawalkin are moderately well-drained soils of low-lying upland that have moderate limitations for development. Rosedale is a somewhat well-drained upland soil that, generally, had few limitations for development.

Wetlands

Based on Statewide Wetland Mapping Project (SWMP) mapping, palustrine forested wetlands were mapped in a small wooded area near the southeast corner of the parcel. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Vegetated buffers of no less than 100 feet should be employed from the edge of wetland complexes. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

Impacts to Palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are nonjurisdictional isolated wetlands, the Corps must be contacted to make the final jurisdictional assessment. They can be reached by phone at 736-9763.

In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process.

Because there is strong evidence that federally regulated wetlands exist on site, a wetland field delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified Corps of Engineers through the Jurisdictional Determination process.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-9943 to schedule a meeting.

Impervious Cover

Based on a review of the PLUS application, post-development surface imperviousness was estimated via calculation to be about 25 percent. However, given the scope and density of this project, this estimate is likely an **underestimate**. The applicant's apparent use of natural areas (forests, wetlands or buffers) or functional amenities (stormwater management or wastewater disposal) for meeting the County's open space requirements artificially lowers the actual amount of created surface imperviousness, resulting in an underestimate of its true environmental impacts. Furthermore, the applicant should also realize that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, and roads) and their extent should be accounted for when calculating surface imperviousness. It was not clear from the information submitted whether all of these considerations were comprehensively considered in the applicant's calculation. It is strongly recommended that the finalized impervious surface calculation reflect all of these concerns.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

ERES Waters

This project is located adjacent to receiving waters Gravelly Branch subwatershed, a subwatershed found within the greater Nanticoke watershed, and designated as having waters of Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Moreover, provisions defined in subsection 5.6.3.5 of same section, specially authorize the Department to mandate BMPs to meet standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Nanticoke watershed (including the Gravelly Branch subwatershed). A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the greater Nanticoke watershed, “target-rate-nutrient reductions” of 30 and 50 percent will be required for nitrogen and phosphorus, respectively.

TMDL Compliance through the Pollution Control Strategy (PCS)

As indicated above, Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been proposed for the Nanticoke watershed. The TMDL calls for a 30 and 50% reduction in nitrogen and phosphorus from baseline conditions. A pollution control strategy will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses, increasing passive, wooded open space, using enhanced nutrient removal wastewater technologies, and the use of stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Water Supply

The project information sheets state water will be provided to the project by Tidewater Utilities via a public water system. Our records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity (CPCN) number 05-CPCN-29. Since an on-site public/miscellaneous public well will 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 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 located and constructed 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.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.

A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to the Division of Soil and Water Conservation along with the \$195 NOI fee prior to plan approval.

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique. Green Technology BMPs must be given first consideration for stormwater quality management. Each stormwater management facility should have an adequate outlet for release of stormwater.

It is strongly recommended that you contact the reviewing agency to schedule a preliminary meeting to discuss the sediment and erosion control and stormwater management components of the plan. 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.

Drainage

The Drainage Program requests that the engineer take precautions to ensure that the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The application states the project intends to keep all stormwater onsite. However, if an emergency overflow is required, the Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction.

The Drainage Program does not have a clear understanding how stormwater will convey to the stormwater management areas. The Drainage Program requests that the routing of major stormwater pipes through yards be prohibited.

The Drainage Program encourages the elevation of rear yards to direct water towards the streets where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in rear yards in certain cases. Therefore, catch basins placed in rear yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, kennels, and other structures placed along the storm drains, or within 10 feet of the catch basins, can hinder drainage patterns as well as future maintenance to the storm drains or catch basins. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.

The Drainage Program requests a 15-foot side yard setback on all lots with a drainage easement on the side unless otherwise specified. A 15-foot side yard setback will allow room for equipment to utilize the entire drainage easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction.

The Drainage Program requests a 10-foot drainage easement around all catch basins located on private property to ensure adequate room for maintenance. The Drainage Program recommends restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being placed within 10 feet of the catch basin.

Record all drainage easements on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction.

Open Space

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Doing so will

provide wildlife habitat and it will create recreational opportunities for residents. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces. Natural habitat implementation efforts should be targeted to open space areas adjacent to forests and/or wetlands. Natural habitat could consist of reforesting portions of open space or establishing meadow grasses. The developer is encouraged to review "Community Spaces, Natural Places: A guide to restoration, management, and maintenance of community open space". This document provides a reference of practical and successful open space management techniques that emphasize natural landscape alternatives other than turf grass management. The guidebook is available online at: <http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/>.

In addition, a detailed open space management plan should be recorded on the record plan. This plan should outline how to manage each open space area, as well as invasive species. Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

Rare Species

DNREC has never surveyed this site; therefore, it is unknown if there are state-rare or federally listed plants, animals or natural communities at this project site.

They do have records of a state-rare bird, Black-billed Cuckoo (*Coccyzus erythrophthalmus*) and a state-rare amphibian, mud salamander (*Pseudotriton montanus*) in the vicinity and both of these species could inhabit the forested area of this project. Black-billed Cuckoo breed in early successional habitats especially those with abundant Lepidopteran larvae. This species is expected to occur early May through September and nests anytime between May to August. We recommend that the forest on this property (which is early successional according to our GIS database) be left intact. At the very least, clearing should not occur between April and August.

Mud salamander is rather secretive and inhabits muddy wetland areas adjacent to small streams and wooded swamps. Aerial photographs and our GIS database indicate possible forested wetlands on the eastern boundary of the project. It is recommended that this wetland be avoided and at least a 300ft upland buffer be left intact around the wetlands. Upland buffers around wetlands provide critical habitat for many wetland dependent species for a portion of their life cycle (especially salamanders). This would entail the removal of several lots and associated cul-de-sac.

Forest Preservation

DNREC evaluated the project area for a Stewardship plan that was being drafted by the Department of Agriculture, Forestry Service in December of 2005. They were unaware of any plans by the landowner to develop this parcel or to harvest the woods.

DNREC highly recommends that the developer omit those lots, roadways, amenities and stormwater management ponds that are going to result in tree clearing. Some of these features could be relocated to a portion of the site plan that is currently slated to be a stormwater management pond, as there seems to be an excessive number of them being proposed.

The wooded areas within the project boundaries may seem small, but they are part of a larger forest block and larger, connected areas of forest are more beneficial to most wildlife species, particularly migratory birds. 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.

Nuisance Geese

The applicant indicated that nuisance geese would be considered in the planning of this project but methods of control were not indicated. There seems to be an excessive number of ponds being proposed. These ponds may attract waterfowl like resident Canada geese and mute swans. 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 around ponds provide an attractive habitat for these species. First of all, we recommend that the number of ponds be reduced and large ponds be reduced in size. DNREC further recommends native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number and/or size of the ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 17.3 tons (34,535.2 pounds) per year of VOC (volatile organic compounds), 14.3 tons (28,592.8 pounds) per year of NO_x (nitrogen oxides), 10.5 tons (21,096.3 pounds) per year of SO₂ (sulfur dioxide), 0.9 ton (1,877.9 pounds) per year of fine particulates and 1,444.4 tons (2,888,821.5 pounds) per year of CO₂ (carbon dioxide).

However, because this project is in a level 4 area, mobile emission calculations should be increased by 118 pounds for VOC emissions for each mile outside the designated growth areas per household unit; by 154 pounds for NO_x; and by 2 pounds for particulate emissions. A typical development of 100 units that is planned 10 miles outside the growth areas will have additional 59 tons per year of VOC emissions, 77 tons per year of NO_x emissions and 1 ton per year of particulate emissions versus the same development built in a growth area (level 1,2 or 3).

Emissions from area sources associated with this project are estimated to be 7.0 tons (13,929.6 pounds) per year of VOC (volatile organic compounds), 0.8 ton (1,532.7 pounds) per year of NO_x (nitrogen oxides), 0.6 ton (1,271.9 pounds) per year of SO₂ (sulfur dioxide), 0.8 ton (1,641.3 pounds) per year of fine particulates and 28.2 tons (56,467.5 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 2.8 tons (5,520.7 pounds) per year of NO_x (nitrogen oxides), 9.6 tons (19,202.4 pounds) per year of SO₂ (sulfur dioxide) and 1,416.2 tons (2,832,354.0 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	17.3	14.3	10.5	0.9	1444.4
Residential	7.0	0.8	0.6	0.8	28.2
Electrical		2.8	9.6		1416.2

Power					
TOTAL	24.3	17.9	20.7	1.7	2888.8

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 2.8 tons of nitrogen oxides per year and 9.6 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

- building envelope upgrades,
- high performance windows,
- controlled air infiltration,
- upgraded heating and air conditioning systems,
- tight duct systems and
- upgraded water-heating equipment.”

The Energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

State Fire Marshal’s Office – Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal’s Office. 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):

a. **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

b. **Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Wilson Hill 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.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

c. **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

d. **Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Name of Water Supplier
- Proposed Use

- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

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.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Scott Blaier 698-4500

The proposed development is in an area designated as Investment Level 4 under the *Strategies for State Policies and Spending*. The *Strategies* do not support this type of isolated development in this area. The intent of this plan is to preserve the agricultural lands, forestlands, recreational uses, and open spaces that are preferred uses in Level 4 areas. The Department of Agriculture opposes development which conflicts with the preferred land uses, making it more difficult for agriculture and forestry to succeed, and increases the cost to the public for services and facilities.

More importantly, the Department of Agriculture opposes this project because it negatively impacts those land uses that are the backbone of Delaware's resource industries - agriculture, forestry, horticulture - and the related industries they support. Often new residents of developments like this one, with little understanding or appreciation for modern agriculture and forestry, find their own lifestyles in direct conflict with the demands of these industries. Often these conflicts result in compromised health and safety; one example being decreased highway safety with farm equipment and cars competing on rural roads. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. We oppose the creation of isolated development areas that are inefficient in terms of the full range of public facilities and services funded with public dollars. Public investments in areas such as this are best directed to agricultural and forestry preservation.

The proposed development is adjacent to a property permanently preserved through the State's Agricultural Lands Preservation Program (Warren District, (Parcel # 2.31-03.00-64.00)). Therefore, the activities conducted on this preserved property will be protected by the agricultural use protections outlined in Title 3, Del. C., Chapter 9. These protections effect adjoining developing properties. The 300 foot notification requirement affects **all new deeds** in a subdivision located in whole or part within 300 feet of an Agricultural District. Please take note of these restrictions as follows:

§ 910. Agricultural use protections.

(a) Normal agricultural uses and activities conducted in a lawful manner are preferred and priority uses and activities in Agricultural Preservation Districts. In order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land use adjacent to Agricultural Preservation Districts shall be subject to the following restrictions:

(1) For any new subdivision development located in whole or in part within 300 feet of the boundary of an Agricultural Preservation District, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:

This property is located in the vicinity of an established Agricultural Preservation District in which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities."

(2) For any new subdivision development located in whole or in part within 50 feet of the boundary of an Agricultural Preservation District, no improvement requiring an occupancy approval shall be constructed within 50 feet of the boundary of the Agricultural Preservation District.

(b) Normal agricultural uses and activities conducted in accordance with good husbandry and best management practices in Agricultural Preservation Districts shall be deemed protected actions and not subject to any claim or complaint of nuisance, including any such claims under any existing or future county or municipal code or ordinance. In the event a formal complaint alleging nuisance related to normal agricultural uses and activities is filed against an owner of lands located in an Agricultural Preservation District, such owner, upon prevailing in any such action, shall be entitled to recover reasonably incurred costs and expenses related

to the defense of any such action, including reasonable attorney's fees (68 Del. Laws, c. 118, § 2.).

In addition, if any wells are to be installed, Section 4.01(A)(2) of the Delaware Regulations Governing the Construction and Use of Wells will apply. This regulation states:

(2) For any parcel, lot, or subdivision created or recorded within fifty (50) feet of, or within the boundaries of, an Agricultural Lands Preservation District (as defined in Title 3, Del. C., Chapter 9); all wells constructed on such parcels shall be located a minimum of fifty (50) feet from any boundary of the Agricultural Lands Preservation District. This requirement does not apply to parcels recorded prior to the implementation date of these Regulations. However, it is recommended that all wells be placed the maximum distance possible from lands which are or have been used for the production of crops which have been subjected to the application of land applied federally regulated chemicals.

This site overlaps with the State's Green Infrastructure Investment Strategy Plan. The Crop Land layer is present on the entire site. This designation identifies areas of the state that have viable and valuable agricultural cropland, as discussed in Governor Minner's Executive Order Number 61. Areas such as these should be preserved as such, and not developed for residential use.

The Developer should also be aware that the Department of Agriculture (Forest Service) owns several forest conservation easements on the woodlands surrounding most of the property. Therefore, the DDA suggests the developer make all new residents aware that the adjacent forestlands are commercial "working" forests that may be cut in part, or entirely, for timber harvest from time to time.

The Delaware Department of Agriculture supports growth which expands and builds on existing urban areas and growth zones in approved State, county and local plans. Where additional land preservation can occur through the use of transfer of development rights, and other land use measures, we will support these efforts and work with developers to implement these measures. If this project is approved we will work with the developers to minimize impacts to the agricultural and forestry industries.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Tree Mitigation

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This will help to meet the community’s forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact our offices at (302) 349-5754.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Delaware State Housing Authority – Contact Vicki Walsh 739-4263

This proposal is for a site plan review of 225 residential units on 150 acres located on Wilson Hill Road, north of the intersection of Gravelly Branch Road and Route 404 between Milton and Georgetown. According to the *State Strategies Map*, the proposal is located in an Investment Level 4 area. As a general planning practice, DSHA encourages residential development only in areas where residents will have proximity to services, markets, and employment opportunities, such as Investment Level 1 and 2 areas outlined

in the State Strategies Map. Since the proposal is located in an area targeted for agricultural and natural resource protection, and therefore inconsistent with where the State would like to see new residential development, DSHA does not support this proposal.

Department of Education – Contact: John Marinucci 739-4658

DOE recognizes that this development project is in level 4 of the State Strategies for Policies and Spending and as such, DOE does not support the approval of this project

DOE offers the following comments on behalf of the Indian River School District.

1. Using the DOE standard formula, this development will generate an estimated 112 students.
2. DOE records indicate that the Indian River School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2005 elementary enrollment.
3. DOE records indicate that the Indian River School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2005 secondary enrollment. In multiple correspondences from the Indian River School District administration, the district asserts that while the Indian River High School has capacity, the Indian River Middle Schools' student population exceeds student capacity.
4. This development will create additional elementary school and middle school student population growth which will further compound the existing shortage of space. The developer is strongly encouraged to contact the Indian River School District Administration to address the issue of elementary school over-crowding that this development will exacerbate.
5. DOE requests developer work with the Indian River School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

Sussex County – Richard Kautz 855-7878

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included

under Ordinance Number 1152 (County Code 99-9C). For example, the reduction of 225 lots from 20,000 sq. ft. to an average lot size of 10,605 sq. ft. allows for more than 48 acres of open space. The number acres of "useable" open space to be provided is not clear from the information provided. Regardless, a number of the lots do not have direct access to open space. The remaining open space is that which would otherwise be required with or without the clustering (i.e. stormwater management, buffers, and utilities). These issues can be addressed by including in the application an explanation of how the developer plans to mitigate them and the issues raised by the State agencies during this review.

The developer should relocate the stormwater management ponds located along the property frontage to an interior, less visible location.

Clarify the purpose of the "Reserved" area.

Soon Sussex County will be considering implementation of a Source Water Protection Program required by the State. Depending on the requirements adopted by the County Council this project might be affected. Any well location should insure that the wellhead protection area is entirely on site.

The Sussex County Engineer Comments:

The project proposes to develop using a private central community wastewater system. We recommend that the wastewater system be operated under a long-term contract with a capable wastewater utility. The proposed project is located within the boundaries of the Western Sussex Planning Area 4. The Sussex County Engineering Department expects the planning study to be complete by August 2007. There is currently no schedule to provide service to this project. Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A review and approval of the treatment and disposal system by the Sussex County Engineering Department is also required and plan review fees may apply. Disposal fields should not be counted as open space. Wastewater disposal fields should be clearly identified on recorded plots.

If Sussex County ever provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or owners expense.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of

the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

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

Sincerely,

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

Constance C. Holland, AICP
Director

CC: Sussex County