



Meridian Architects & Engineers

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January 10, 2007

Ms. Constance C. Holland, AICP
The Delaware Office of State Planning Coordination
540 S. DuPont Hwy
Thomas Collins Building, Third Floor
Dover, DE 19901

RECEIVED
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RE: PLUS Review Comment Response
PLUS 2006-06-05; New Milton

Dear Ms. Holland,

The proposed plans for the above referenced project were reviewed by the State agency planners on June 28, 2006. The comments generated by these agencies, summarized in the letter to Meridian Architects and Engineers dated July 24, 2006, are addressed below. Black text represents the State agency comments and blue text represents the response from the planning team for the project.*

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- This project is located within levels 1, 2, and 3 according to the Strategies for State Policies and Spending. In addition, it is located within the Sussex County growth area and within the future annexation/growth area identified in the Town of Milton Comprehensive Plan.

Our office has no objections to the proposed rezoning of this project in accordance with the relevant County codes and ordinances. Regarding the site plan, this project is a mixed use project providing commercial,

residential, and open space uses. Our office supports mixed use projects as essential to the Livable Delaware strategy of concentrating growth in and around existing communities and infrastructure. With that said, this letter lists concerns and recommendations from the various State agencies that should be considered as you move forward.

While this office understands that you have discussed the possibility of annexation into the Town and have decided against that course of action, the State continues to feel that this project should be part of the Town. We remain concerned about the impacts to this development on the Town of Milton. This development, when completed, will place 3,785 residential units and 439,000 square foot of commercial space immediately next to an existing town with a population under 2,500. If this plan moves forward in the County, we encourage the developer, the County, and the Town to meet to discuss ways to mitigate the impacts this development will have on the Town of Milton and integrate the new community into the Milton area.

*The Developer will work with the State and County agencies to produce a "planned community" that fits the character of the surroundings and meets all of the regulatory requirements. Meeting the regulatory requirements, for example drainage and traffic design, will produce a community that is an asset to the Town of Milton and the surrounding area by providing economic growth and retail conveniences. The Developer worked with the Town of Milton for over two years in order to incorporate the property into the Town and move forward with the proposed development. Unfortunately the Town and applicant were unable to reach agreement on the annexation and the provision of public utilities to the proposed development. The applicant then chose to pursue the development in Sussex County.

- During the PLUS meeting it was mentioned that the commercial properties on the north side of Route 16 would be pulled close to the road with parking in the rear. The State recommends the same type of commercial buildings on the southern side of Route 16 to avoid the large parking lots showing from the roadways. In addition, housing design styles were not mentioned during the PLUS meeting; however we recommend the character of both the housing and the commercial fit the surrounding area of Milton. Milton is a historic town with a defined historic district the State asks that you work with Sussex County and the Town of Milton to ensure that new development fit the character Milton. Our publication, Better Models for Development in Delaware, gives many examples of commercial, even large commercial, buildings that can be altered to make them more attractive to the surrounding neighborhood.

The commercial uses south of Route 16 are planned to be "service" oriented retail tenants (i.e., grocery store, home improvement store, dry cleaners, video store, etc.) The intersection of Route 16 and Route 30 is an ideal location for such uses so they can take advantage of the travel patterns of their customers. Unfortunately these retail uses also include a significant parking requirement that must be accessible to the tenant's front doors. These large parking fields will, however, be screened from public view along Route 16 by a landscaped berm. In addition, the main entrance off Route 16 into this commercial parcel will include buildings at the entry and lining the entrance road to mimic the same "main street" retail planning that occurs on the north side of Route 16. Ideally the combination of the landscaped berm and treated entrance will minimize the impact of the parking fields while providing the necessary requirements for future retail tenants.

The proposed architecture for the both the retail and residential will draw from the local vernacular. Milton, and other Delaware coastal towns, provide a rich architectural character that the Villages of Elizabethtown will draw from. The goal for the retail architecture will be to create a variety of vertical buildings that look like they have been developed over time, instead of long horizontal facades that are indicative of "strip" retail.

Street Design and Transportation

- DeIDOT will require a traffic impact study for this development. Previously scoping meetings have been held regarding somewhat similar proposals for most of this same acreage but they would like to revisit the most recent scope issued to make sure that the scope is appropriate to the current proposal. The developer's traffic engineer should contact Mr. Todd Sammons to schedule a scoping meeting for the study. He may be reached at (302) 760-2134.

*The Traffic Group, Inc. has completed its traffic analysis and has submitted the Traffic Impact Study to DELDOT for review and comment. The entrance and road designs will be completed under the guidance and review of DELDOT using the information obtained by the Traffic Impact Study.

- Regarding the conceptual site plan, DeIDOT offers the following comments:
 - Although DeIDOT did not mention it at the PLUS meeting, Delaware Routes 16 and 30 and Cedar Creek Road are all classified as collector roads. DeIDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way

width of 40 feet from the centerline on collector roads. Therefore they will require right-of-way dedication along the frontage to provide any additional width needed from this project.

* The required right-of-way dedication along the state roads will be incorporated into the design and will be recorded with the Final Site Plan at the Sussex County Recorder of Deeds.

- b) The number and location of the entrances proposed on Route 16, and the roundabout that is being considered on Route 16, will require further review. Because they will need to be evaluated in the TIS, the developer's traffic and site engineers should contact our Subdivision Manager for Sussex County, Mr. John Fiori to verify that these features are preliminarily acceptable subject to the results of the TIS.

* The developer's traffic and site engineers will contact our Subdivision Manager for Sussex County, Mr. John Fiori to verify that these features are preliminarily acceptable subject to the results of the TIS.

- c) There are several locations where the proposed development could, and does not, connect to adjoining undeveloped parcels. DeIDOT recommends that stub streets be provided in those locations. Similarly, connection is shown to Collins Street or Russell Street in the Collins and Russell Subdivision. They would recommend that the County require a connecting street to join those streets to the boulevard that is proposed to parallel them. Properly located and designed, such a street would not encourage development traffic to use Collins Street or Russell Street but would provide residents of Collins and Russell Streets with access to the goods and services available in the proposed development without traveling Route 16.

* During the final design and engineering process, the applicant will work with local officials to provide connections to adjacent properties that could be developed. Such future connections will take into account possible stream crossings, existing development, and of course the development potential for adjacent properties (as many will be used as spray irrigation fields for the proposed sewer treatment facility.)

- Several boulevard streets, with wide medians, are proposed to boulevard with a two-lane road if the boulevard is the minor street. If at-grade intersections are planned, the boulevards will need to be narrowed at Route 16 to form single intersections, or they will need to be limited to right turns in and out, with a median on island on Route 16, or Route 16

will need to be widened through the site frontage. Opposite Russell Street, limiting the boulevard to right turns in and out would not be an option.

* The applicant will work with DeIDOT during the preliminary and final design and engineering to ensure that we are providing appropriate and safe site access. The purpose of the Boulevards running north and south is to provide unique pedestrian connections between the major open space elements on both the north and south sides of the property. If these boulevards need to narrow as they approach Route 16, they will, however, we hope to be able to maintain as wide a median as possible at these intersections to accentuate the open space planning that is prevalent through the community.

At the PLUS meeting, the developer expressed an interest in tunneling under Route 16 in several places. While DeIDOT is willing to discuss the matter further, they generally will not permit tunnels under State-maintained roads because of the security risk they represent. Also, in most of Sussex County, DeIDOT would expect groundwater to be a concern. If the developer's goal is simply to avoid creating at-grade intersections, bridges over Route 16 may be an option. The developer should contact our Subdivision Engineer, Mr. Marc Cote' if they wish to pursue the matter of tunnels or bridges further. Mr. Cote' may be reached at (302) 760-2165. At-grade intersection options may be discussed with Mr. Fiori.

* The developer and the developer's traffic engineers will contact the appropriate person(s) at DeIDOT depending on which option (at-grade intersections, bridges or tunnels) they wish to pursue.

- a) No cul-de-sacs or other turnarounds are shown at the ends of the dead-end streets. Without a turnaround, fire trucks, garbage trucks, visitors and others must either back out of the street or turn around in someone's driveway. It is strongly recommend that the plan be revised to eliminate dead-end streets where possible and that turnarounds be provided where that is not possible.

* There are no dead end public streets, only private rear alleys (or lanes). Public access to these homes is off the public street in front, not the alley in the rear. Fire, garbage, and visitor access will therefore occur in the front, along the public street. The applicant will, however, minimize any dead end alleys during the final design and engineering process.

- b) There are several long, straight, and relatively wide streets proposed. DeIDOT would expect speeding to be a problem on such streets and they recommend that the developer design in anticipation of that.

*The applicant will incorporate traffic calming devices during the final design and engineering process to help slow down traffic. These could include pedestrian bump outs, small traffic circles at key intersections, and appropriate signage.

- c) Bicycle and pedestrian facilities, probably in the form of a 10-foot wide shared use path in a 15-foot permanent easement, will be required along the site frontage on Routes 16 and 30, Mulberry Street Extended and Cedar Creek Road and should also be provided within the site. Mr. Fiori will determine the specific type of improvements that will be required along the State-maintained roads, e.g. sidewalks or a multi-use path, as part of the entrance plan review.

*Bicycle and pedestrian facilities, in the form of a 10-foot wide shared use path in a 15-foot permanent easement, will be provided along the site frontage on Routes 16 and 30, Mulberry Street Extended and Cedar Creek Road.

Natural and Cultural Resources

- During the June 28 PLUS meeting, the Department of Agriculture learned that the approximately 1,781 acres of preserved agricultural land being proposed for spray irrigation has the capacity to accommodate approximately 6 million gallons of wastewater per day. However, the New Milton project will only require approximately 1,188,500 gallons per day of that capacity. The Department would be opposed to spray irrigation on this preserved agricultural land if it creates “unintended” infrastructure (i.e., sewer) that supports growth in conflict, or inconsistent, with the State’s Strategies for State Policies and Spending (especially Level 4 Investment Areas).

The effluent to be applied to the preserved agricultural lands will be treated to the unlimited public access criteria as designated by DNREC. The Developer does not know if future projects of others approved by the County and State will elect to utilize the waste water treatment facility and its appurtenances. It is not the intent of the Developer to limit the availability of the waste water treatment system. The future path of the Town of Milton’s wastewater system is uncertain at best and the developers are allowing enough extra capacity in this system to provide for the town’s current and future needs.

- In addition, even though the preserved agricultural land will be providing infrastructure to the New Milton development, the 50 and 300 foot setback and notification requirements of the agricultural preservation statute will still apply where applicable. Please see Delaware Code Title 3, Chapter 9, Subchapter II, Section 910.
1. The Russell development adjacent to this proposed development has historical drainage problems that involve an inadequate outlet for storm runoff. Special attention should be used in reviewing the proposed plans to ensure that drainage in the old development is not adversely impacted.
 - * The developer intends to address the drainage problems in the Russell development by providing stormwater management for the Russell development on The Villages of Elizabethtown site.
 2. The Drainage Section requests all existing ditches on the property be checked for function and cleaned if needed prior to the construction of homes. Wetland permits may be required before cleaning ditches.

If necessary, existing ditches on the property will be checked for function and cleaned prior to the construction of homes.

3. The Drainage Section requests that all precautions be taken to ensure 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 project will be designed to meet DNREC requirements for pre and post development runoff conditions. Due to the fact that the majority of the site is presently agricultural and not wooded, typical stormwater management practices combined with "green technology" should mitigate or even offset downstream drainage issues.

4. This project lies within three miles of the Delmarva Fox Squirrel (DFS) population located at the Prime Hook National Wildlife Refuge. If DFS occur and you are clearing forest or building roads and homes within 150 feet of forest, you may be impacting DFS and their habitat.

*A monitoring report for existing vegetation conditions was conducted within the forested uplands, riparian buffers and wetlands of the proposed Villages of Elizabethtown Development Project. The Ingram Branch and Pemberton branch areas were integral to this study.

Onsite assessments determined that existing woody stemmed trees and under story vegetation are characteristic of a functional Delaware Fox Squirrel (*Sciurus niger cinereus*) (DFS) habitat. Mature stands of oak (*Quercus* spp.), hickory (*Carya* spp.), sweetgum (*Liquidambar styraciflua*), walnut (*Juglans nigra*) and loblolly pine (*Pinus taeda*) are present. All of which serve as primary food sources for DFS. Therefore, critical habitat areas will be protected with a minimum of 150 feet of forested buffers. These critical habitat areas will be maintained and managed with best management practices as indicated in the Villages of Elizabethtown Comprehensive Open Space Management Plan.

- a) There is an Atlantic White Cedar swamp associated with Ingram Branch and maintaining the 100-foot minimum forested buffer is extremely important, especially with such a large scale development.

*A monitoring report for existing vegetation conditions¹ was conducted within the forested uplands, riparian buffers, and wetlands of both the Ingram Branch and Pemberton Branch of the proposed Villages of Elizabethtown Development Project. Both areas possess significant Atlantic White Cedar (*Chamaecyparis thyoides*) stands in wetland

¹ Villages of Elizabethtown Comprehensive Open Space Management Plan (VECOSMP)

microclimate(s). Therefore, a 100 foot minimum forested buffer will be maintained and managed in and around all Atlantic White Cedar swamps. Other existing rare and threatened species characteristic of the Atlantic White Cedar swamps will also be protected and managed. Exotic invasive vegetation that may pose a threat to the ecology of these ecosystems will be managed with Integrated Vegetation Best Management Practices.

- b) The forested lands to the south provide pollution reduction benefits to Lavina Pond, which drains into the Broadkill River, and eventually drains into the Delaware Bay by Beach Plum Island Nature Preserve. The Office of Nature Preserves respectfully requests that stringent consideration be given to stormwater impacts on the forested lands to the south of the development.

*The peak discharge rates of stormwater from the site will be less than or equal to the site in its current state (pre-existing condition). The quality of stormwater discharge from the site will be higher than it is in its current state in accordance with current Sussex Conservation District standards.

- c) The "school" trail is approximately 900 feet long. The developer may want to consider working with the adjacent community to create a school trail that runs primarily along established roads to avoid potential safety issues with a trail through the woods.

*The proposed school trail is in the most appropriate location for access to the existing school from the proposed development. The applicant will provide appropriate signage and lighting to ensure that this trail is safe for children to use.

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

Office of State Planning Coordination – Contact: Herb Inden 739-3090

This project is located within levels 1, 2, and 3 according to the Strategies for State Policies and Spending. In addition, it is located within the Sussex County growth area and within the future annexation/growth area identified in the Town of Milton Comprehensive Plan.

According to the site plan received the majority of the development will be within Levels 1 and 2 with the Level 3 areas being around Ingram Branch and Pemberton Branch. 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 office has no objections to the proposed rezoning of this project in accordance with the relevant County codes and ordinances. Regarding the site plan, this project is a mixed use project providing commercial, residential, and open space uses. Our office supports mixed use projects as essential to the Livable Delaware strategy of concentrating growth in and around existing communities and infrastructure. With that said, this letter lists concerns and recommendations from the various State agencies that should be considered as you move forward.

While this office understands that you have discussed the possibility of annexation into the Town and have decided against that course of action, the State continues to feel that this project should be part of the Town. We remain concerned about the impacts to this development on the Town of Milton. This development, when completed, will place 3,785 residential units and 439,000 square foot of commercial space immediately next to an existing town with a population under 2,500. If this plan moves forward in the County, we encourage the developer, the County, and the Town to meet to discuss ways to mitigate the impacts this development will have on the Town of Milton and integrate the project into the Milton community.

* The Developer will work with the State and County agencies to produce a "planned community" that fits the character of the surroundings and meets all of the regulatory requirements. Meeting the regulatory requirements, for example drainage and traffic design, will produce a community that is an asset to the Town of Milton and the surrounding area by providing economic growth and retail conveniences. The Developer worked with the Town of Milton for over two years in order to incorporate the property into the Town and move forward with the proposed development. Unfortunately the Town and applicant were unable to reach agreement on the annexation and the provision of public utilities to the proposed development. The applicant then chose to pursue the development in Sussex County.

During the PLUS meeting it was mentioned that the commercial properties on the north side of Route 16 would be pulled close to the road with parking in the rear. The State would like to see the same type of commercial buildings on the southern side of Route 16 to avoid the large parking lots showing from the roadways. In addition, housing design styles were not mentioned during the PLUS meeting; however we recommend the character of both the housing and the commercial fit the surrounding area of Milton. Milton is a historic town with a defined historic district the State asks that you work with Sussex County and the Town of Milton to ensure that new development fit the character Milton. Our publication, *Better Models for Development in Delaware*, gives many examples of

commercial, even large commercial, buildings that can be altered to make them more attractive to the surrounding neighborhood.

*The commercial uses south of Route 16 are planned to be "service" oriented retail tenants (i.e., grocery store, home improvement store, dry cleaners, video store, etc.) The intersection of Route 16 and Route 30 is an ideal location for such uses so they can take advantage of the travel patterns of their customers. Unfortunately these retail uses also include a significant parking requirement that must be accessible to the tenant's front doors. These large parking fields will, however, be screened from public view along Route 16 by a landscaped berm. In addition, the main entrance off Route 16 into this commercial parcel will include buildings at the entry and lining the entrance road to mimic the same "main street" retail planning that occurs on the north side of Route 16. Ideally the combination of the landscaped berm and treated entrance will minimize the impact of the parking fields while providing the necessary requirements for future retail tenants.

The proposed architecture for the both the retail and residential will draw from the local vernacular. Milton, and other Delaware coastal towns, provide a rich architectural character that the Villages of Elizabethtown will draw from. The goal for the retail architecture will be to create a variety of vertical buildings that look like they have been developed over time, instead of long horizontal facades that are indicative of "strip" retail.

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

The Division of Historical and Cultural Affairs has no objection to the rezoning of this area. The project as now proposed includes the Capt. N. C. Ellingsworth House (S3441), probably a tenant house, in the northwestern corner; an agricultural complex (S3431) on the north side of Rt. 16 near the middle of the parcel; an early-20th-century dwelling (S-3424), apparently now demolished, on Mulberry St north of Rt. 16; and a cemetery (S-3433) adjacent to Holly Lake. There are areas of high potential for both prehistoric- and historic-period archaeological sites. The Beers Atlas of 1868 shows the Capt. N. C. Ellingsworth House and two other tenancies owned by him, all on Rt. 30, and the J. S. Betts House and the A. Young House, along Cedar Creek Rd. There are several neighboring late-19th- and early-20th-century properties on Rt. 16 and along Gravel Hill Rd., including the Jas. Ponder House (S-3432; Beers Atlas of 1868) on the south side of Rt. 16, which is being isolated on an out-parcel on the south side of this development.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Ellingsworth, Betts, and Young 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. The known cemetery will be preserved in the woodlot, but there should be some kind of preservation and maintenance covenant in perpetuity covering this area. DHCA will be happy to discuss these issues with the developer; the contact person for this program is Faye Stocum, 302-736-7400.

*The known cemetery will be preserved in the woodlot with a preservation and maintenance covenant in perpetuity covering that area.

There is nothing known on the parcel to the north proposed for the sewage treatment plant, but there is a medium to high potential for prehistoric-period archaeological sites here. The location will require a stream crossing which will probably involve an Army Corps of Engineers permit. In this case, the developer will be required to consult with this office under Section 106 of the National Historic Preservation Act of 1966, as amended and may be required to undertake an archaeological survey, depending on the Corps' area of jurisdiction. The DHCA will be happy to assist the developer in this process.

* If a stream crossing permit from The Army Corp of Engineers is required, the developer will consult with the Historic Preservation Office to determine if an archaeological survey is required.

If the developer does upgrade Rt. 16 to four lanes, there could be adverse effects on a number of historic properties along the road. The DHCA would like the opportunity to document the buildings within the area prior to any demolition activities. They would also appreciate the opportunity to look for archaeological sites and learn something about their location, nature, and extent prior to any ground-disturbing activities. The DHCA recommends that the developer include sufficient landscaping to protect the neighboring historic properties from adverse visual and noise effects, particularly in the southwest corner, around the Ponder House, and along the eastern end of Rt. 16. They would be happy to discuss these issues further with the developer.

The developer is open to archeological investigation and restoration of the Ponder graveyard site.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

DeIDOT will require a traffic impact study for this development. Previously scoping meetings have been held regarding somewhat similar proposals for most of this same acreage but they would like to revisit the most recent scope issued to make sure that the scope is appropriate to the current proposal. The developer's traffic engineer should contact Mr. Todd

Sammons to schedule a scoping meeting for the study. He may be reached at (302) 760-2134.

* The Traffic Group, Inc. has completed its traffic analysis and has submitted the Traffic Impact Study to DELDOT for review and comment. The entrance and road designs will be completed under the guidance and review of DELDOT using the information obtained by the Traffic Impact Study.

a) Regarding the conceptual site plan, DeIDOT offers the following comments:

- a. The plan presented now is a significant improvement over those presented previously. There is now a clear hierarchy of streets and the number and location of access points, while perhaps not yet optimal, is much improved. DeIDOT appreciates the effort that has been put into this plan.
- b. Although they did not mention it at the PLUS meeting, Delaware Routes 16 and 30 and Cedar Creek Road are all classified as collector roads. DeIDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on collector roads. Therefore they will require right-of-way dedication along the frontage to provide any additional width needed from this project.

* The required right-of-way dedication along the state roads will be incorporated into the design and will be recorded with the Final Site Plan at the Sussex County Recorder of Deeds.

- c. The number and location of the entrances proposed on Route 16, and the roundabout that is being considered on Route 16, will require further review. Because they will need to be evaluated in the TIS, the developer's traffic and site engineers should contact our Subdivision Manager for Sussex County, Mr. John Fiori to verify that these features are preliminarily acceptable subject to the results of the TIS. Mr. Fiori may be reached at (302) 760-2260.

* The developer's traffic and site engineers will contact our Subdivision Manager for Sussex County, Mr. John Fiori to verify that these features are preliminarily acceptable subject to the results of the TIS.

- d. There are several locations where the proposed development could, but does not, connect to adjoining undeveloped parcels. DelDOT recommends that stub streets be provided in those locations. Similarly, no connection is shown to Collins Street or Russell Street in the Collins and Russell Subdivision. They would recommend that the County require a connecting street to join those streets to the boulevard that is proposed to parallel them. Properly located and designed, such a street would not encourage development traffic to use Collins Street or Russell Street but would provide residents of Collins and Russell Streets with access to the goods and services available in the proposed development without traveling Route 16.

* During the final design and engineering process, the applicant will work with local officials to provide connections to adjacent properties that could be developed. Such future connections will take into account possible stream crossings, existing development, and of course the development potential for adjacent properties (as many will be used as spray irrigation fields for the proposed sewer treatment facility.)

- Several boulevard streets, with wide medians, are proposed to cross Route 16. Route 16 would clearly be the major street at these intersections, but it is difficult to operate the intersection of a boulevard with a two-lane road if the boulevard is the minor street. If at-grade intersections are planned, the boulevards will need to be narrowed at Route 16 to form single intersections, or they will need to be limited to right turns in and out, with a median on island on Route 16, or Route 16 will need to be widened through the site frontage. Opposite Russell Street, limiting the boulevard to right turns in and out would not be an option.

At the PLUS meeting, the developer expressed an interest in tunneling under Route 16 in several places. While DelDOT is willing to discuss the matter further, they generally will not permit tunnels under State-maintained roads because of the security risk they represent. Also, in most of Sussex County, DelDOT would expect groundwater to be a concern. If the developer's goal is simply to avoid creating at-grade intersections, bridges over Route 16 may be an option. The developer should contact our Subdivision Engineer, Mr. Marc Cote' if they wish to pursue the matter of tunnels or bridges further. Mr. Cote' may be reached at (302) 760-2165. At-grade intersection options may be discussed with Mr. Fiori.

The developer and the developer's traffic engineers will contact the appropriate person(s) at DelDOT depending on which option (at-grade intersections, bridges or tunnels) they wish to pursue.

- No cul-de-sacs or other turnarounds are shown at the ends of the dead-end streets. Without a turnaround, fire trucks, garbage trucks, visitors and others must either back out of the street or turn around in someone's driveway. It is strongly recommend that the plan be revised to eliminate dead-end streets where possible and that turnarounds be provided where that is not possible.

* There are no dead end public streets, only private rear alleys (or lanes). Public access to these homes is off the public street in front, not the alley in the rear. Fire, garbage, and visitor access will therefore occur in the front, along the public street. The applicant will, however, minimize any dead end alleys during the final design and engineering process.

- There are several long, straight, and relatively wide streets proposed. DelDOT would expect speeding to be a problem on such streets and they recommend that the developer design in anticipation of that. If long, straight streets are desired for the vistas they provide, traffic calming measures, such as speed tables or neck-downs, and street trees (as proposed) should be designed into them.

* The applicant will incorporate traffic calming devices during the final design and engineering process to help slow down traffic. These could include pedestrian bump outs, small traffic circles at key intersections, and appropriate signage.

- a) Bicycle and pedestrian facilities, probably in the form of a 10-foot wide shared use path in a 15-foot permanent easement, will be required along the site frontage on Routes 16 and 30, Mulberry Street Extended and Cedar Creek Road and should also be provided within the site. Mr. Fiori will determine the specific type of improvements that will be required along the State-maintained roads, e.g. sidewalks or a multi-use path, as part of the entrance plan review.

* Bicycle and pedestrian facilities, in the form of a 10-foot wide shared use path in a 15-foot permanent easement, will be provided along the site frontage on Routes 16 and 30, Mulberry Street Extended and Cedar Creek Road. There will also be shared use paths throughout the site.

- b) The developer's site engineer should contact Mr. Fiori regarding our specific requirements for road improvements and access.

The developer's site engineer will contact Mr. Fiori regarding specific requirements for road improvements and access.

- c) The proposed development will be served by DART First State Bus Route 303, which runs between Dover and Georgetown by way of Ellendale and Milton. The developer should contact Mr. David Dooley Development Planner at the Delaware Transit Corporation, for guidance on how to implement bus stop pads, signs, shelters and other amenities along Delaware Route 16 to access that service. We recommend that transit schedules and information be maintained at the development's community center. Mr. Dooley may be reached at (302) 5766064.

* The developer will contact Mr. David Dooley Development Planner at the Delaware Transit Corporation, for guidance on how to implement bus stop pads, signs, shelters and other amenities along Delaware Route 16.

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

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. The Department acknowledges and commends the spirit of stewardship that is reflected in the site design.

Soils

According to the Sussex County soil survey, Evesboro, Sassafra, Rumford, Woodstown, Klej, and Swamp were mapped on subject parcel. Evesboro is an

excessively well-drained soil of low-lying uplands that, generally, has moderate limitations for development. Sassafras and Rumford are well-drained upland soils that, generally, have few limitations for development. Woodstown and Klej are moderately well-drained soils found on low-lying uplands that have moderate limitations for development. Swamp is a very poorly-drained wetland associated (hydric) soil that has the highest severity level limitations for development.

Wetlands

It appears from the site plan, that there is at least a 100 ft. buffer from all wetlands on the site. We applaud your efforts in this matter and ask that the buffer not be changed during site plan review. PLUS materials indicate that the wetlands have been delineated (presumably a field delineation). This delineation should be verified by the Corps through the Jurisdictional Determination process.

Please note that impacts to palustrine wetlands are regulated by USACE 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 Corps 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.

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.

* Should any permits, as outlined above, be required at any point in the process, the permitting will be handled by certified Environmental Consultants on behalf of the developer.

Water Bodies

Site plans indicate that a road crossing (east of area "C," detached town homes) will run through a stream on site. Impacts to streams and associated riparian wetlands, including road crossings, are regulated by the Subaqueous Land Section, Division of Water Resources and the Corps. For more information please contact the Wetlands and Subaqueous Lands Section at 302-739-9943.

Any necessary stream crossing permitting will be handled by certified Environmental Consultants on behalf of the developer

Impervious Cover

Based on information presented in the PLUS application, this parcel's post-development surface imperviousness was calculated to increase by 40%. Although this figure appears to be a reasonable characterization of the amount of this project's likely amount of created surface imperviousness, the applicant is still advised to make certain that all of these created forms of surface imperviousness (rooftops, roads, and sidewalks) are included in this calculation. Otherwise, an inaccurate assessment of this project's actual environmental impacts will be made. It is strongly advised, therefore, that the applicant recalculate this project's surface imperviousness using the aforementioned considerations.

* Although, as stated above, it is a *reasonable characterization* that *this parcel's post-development surface imperviousness was calculated to increase by 40%*, exact calculations of impervious area will be incorporated into the stormwater management design that will be reviewed and verified by the Sussex Conservation District.

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline. Based on analyses of 2002 aerial photography by the University of Delaware, the Broadkill River watershed, at that time, had about 7.9 percent impervious cover. Although this data is about 4 years old and likely an underestimate, it illustrates the importance of a proactive strategy to mitigate for predictable and cumulative environmental impacts. Since the amount of imperviousness generated by this project (reported as 40%) will significantly exceed the desirable watershed threshold of 10 percent, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of the 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 is an example of a practical BMPs that could easily be implemented to reduce surface imperviousness.

* The Developer intends to utilize "green technology" practices were practical and will be required to meet the requirements as set forth by DNREC Division of Soil and Water Sediment and Stormwater Management Regulations.

TMDLs

With the adoption of Total Maximum Daily Loads (TMDLs) as a "nutrient-runoff-mitigation strategy" for reducing nutrients in the Broadkill River watershed,

reduction of nitrogen and phosphorus loading will be mandatory. 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. Nutrient reductions prescribed under TMDLs are assigned to those watersheds or basins on the basis of recognized water quality impairments. Although TMDL nutrient reductions for nitrogen and phosphorus have not been officially finalized for the Broadkill River watershed to date, it is expected that a 40 percent reduction will be required for both nitrogen and phosphorus.

As mentioned previously, the proposed project is located directly adjacent to sensitive headwater or near headwater riparian wetlands associated with the Ingram and Pemberton Branches, greatly increasing the probability of harmful impacts to surface and groundwater quality of all waters within the greater Broadkill River watershed, and reducing the probability that the State will achieve future required TMDL nutrient reductions. Maintaining the recommended 100-foot upland buffer from all wetlands and water bodies is an example of a BMP that will help meet imminent TMDL nutrient reductions.

TMDL Compliance through the PCS

As indicated above, Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been proposed for the Broadkill Watershed. The TMDL calls for a 40% reduction for nitrogen and phosphorus from baseline conditions. The Department developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Some additional Best Management Practices that may help this proposed project meet TMDL reductions are wider vegetated buffers along watercourses, increasing passive open space, using enhanced nutrient removal wastewater technologies, and the use of storm water management treatment trains.

Water Resource Protection Areas

The DNREC Water Supply Section has determined that the southeastern edge of the proposed development falls within an area of excellent ground-water recharge (see following map and attached map).

Excellent recharge areas are near-surface areas within which precipitation infiltrates the land surface to the unconfined aquifer at a more rapid rate than other areas.

The proposed development would change the total impervious cover from 0% to approximately 40% in proposed development area. The proposed development area does not impact the excellent ground water recharge area. The developer on the PLUS application provided these numbers.

DNREC Water Supply Section will comment further on the final placement of the public well(s), their associated wellhead protection area(s), the wastewater treatment plant, the spray irrigation facility, and the associated wastewater spray fields during the permitting process.

For more information, refer to:

Source Water Protection Guidance Manual for the Local Governments of Delaware

<http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html>

Ground-Water Recharge Design Methodology

http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf

New Milton 06-06 review (PLUS 2006-06-05) The blue lines indicate the projects border, the Excellent Recharge area is shown as solid green.

The Developer will work with the agencies listed and direct the contracted designers to comply with the directives as set forth in the provided web links.

Water Supply

The project information sheets state that water will be provided to the project by a central water system. Our records indicate that the project site is not located in

an area where public water service is available. Any public water utility providing water to the site must obtain a Certificate of Public Convenience and Necessity (CPCN) from the Public Service Commission. Information on CPCNs and the application process can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well(s) be needed, it (they) 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 constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Potential Contamination Sources do exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case, there is a Groundwater Management Zone A, named Clean Delaware Inc., located within 1000 feet of the proposed project.

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

* A Phase 1 Environmental Study has been completed for the project.

Sediment and Erosion Control/Storm water Management

Standard Comments:

- d) 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 Jessica Watson,

Program Manager, at (302) 856-7219 for details regarding submittal requirements and fees.

- e) It is strongly recommended that you contact the Sussex Conservation District to schedule a pre-application 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.
 - f) 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.
 - Each stormwater management facility should have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties must be adequately conveyed through the site to the discharge point without interruption.
 - Clearly address how Stormwater Quality and Quantity Treatment will be provided. If this project is eligible for a Quantity Waiver, please make the request in the stormwater
 - e) Narrative citing the specific regulation. As of April 11, 2005, stormwater BMPs must also consider water quality as well as quantity in impaired water bodies; reducing nutrients through BMPs will also help achieve the future required TMDL nutrient reductions in the Broadkill River watershed.
 - f) Please indicate on the sediment and stormwater management plan who shall be responsible for maintenance of the stormwater management facilities both during construction and after. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.
 - g) If a stormwater management pond is going to be utilized as a sediment trap/basin during construction it must be designed to

accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.

- h) All ponds are required to be constructed per Pond Code 378.
- i) Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval. Please address.

Site-Specific Comments:

- A Certified Construction Reviewer (CCR) is required for this project.
- The District will require a phased plan and sequence of construction for this project. DNREC regulations require no more than 20 acres to be disturbed at more time. Please address.
- Under the DNREC Health and Safety Memo of 2000, all wet ponds are required to have an open space depth of 3 feet or more that comprises 50-75 percent of the area of the pond.
- Consideration should be made for any adjacent properties during the design of this project, including drainage and erosion/sediment control.
- Please comply with all new regulations and policies including Stormwater Regulations, Erosion and Sediment Control Handbook, and NRCS Rainfall events for the 2, 10, and 100-year storm events.
- If the stormwater facility will discharge to a ditch, please analyze the ditch with tailwater conditions of ½ full during the 2-year storm event, and full during the 10-year storm event.
- The Sussex Conservation District is concerned with the close proximity of the buildings/road/pond next to Ingram Branch. The District recommends relocating any structures away from the Branch and buffering the area.

* The proposed uses (with the exception of storm water management facilities) adjacent to the Ingram Branch have been setback a minimum of 100 feet from the top of slope to the stream.

All comments from the Sussex Conservation District to be addressed during the design and review phase of the project should it receive preliminary subdivision approval. BMP's such as bioretention and bioswales will be considered for this project. In addition, the project will be required to meet all of the regulatory requirements as established by the State of Delaware.

Drainage

The Russell development adjacent to this proposed development has historical drainage problems that involve an inadequate outlet for storm runoff. Special attention should be used in reviewing the proposed plans to ensure that drainage in the old development is not adversely impacted. It would be good if the proposed development would consider the drainage conditions of the older development and incorporate a solution in the stormwater plan for the newer condition. The Drainage Program would be willing to work on a solution to this problem.

* The developer intends to address the drainage problems in the Russell development by providing stormwater management for the Russell development on The Villages of Elizabethtown site.

The Drainage Section requests all existing ditches on the property be checked for function and cleaned if needed prior to the construction of homes. Wetland permits may be required before cleaning ditches.

* If necessary, existing ditches on the property will be checked for function and cleaned prior to the construction of homes.

The Drainage Section requests that all precautions be taken to ensure 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 Drainage Section strongly recommends that any drainage conveyance between two parcels within a subdivision be dedicated as a drainage easement and such easement be designated as passive open space, not owned by individual landowners. The easement should be of sufficient width to allow for future drainage maintenance as described below.

2. Along an open ditch or swale, the Drainage Section recommends a maintenance equipment zone of 25 feet measured from the top of bank on the maintenance side, and a 10-foot setback zone measured from top of bank on the non-maintenance side. These zones should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be native species spaced to allow for drainage maintenance at maturity. Trees should not be planted within 5 feet of the top of ditch to avoid future blockages from roots.

3. Along a stormwater pipe the Drainage Section recommends a maintenance equipment zone of 15 feet on each side of the pipe as measured from the pipe centerline. This zone should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be spaced to allow for drainage maintenance at maturity.

The Drainage Section recommends that any drainage/utility easement owned by an individual landowner should not have structures, decks, buildings, sheds, kennels, fences or trees within the drainage easement to allow for future drainage maintenance.

* Per the recommendation of the Drainage Section, drainage/utility easements will not have any structures, decks, sheds and the like to allow for future drainage maintenance.

Open Space

The Delaware Coastal Programs supports alternative management of open space; including the use of vegetated buffers. The developer is strongly urged to consider alternatives to mowed grass within community open space areas. Mowing and other maintenance costs from lawn areas can become a substantial burden for community maintenance associations. There may be areas within the development that are appropriate for warm or cool season grasses, especially around storm water management ponds. The maintenance costs associated with meadow type grasses are much lower than those of lawn grasses, provide food and habitat for birds and other wildlife, and can help reduce non-point source pollution.

Any lands set aside for conservation purposes should be placed into a permanent conservation easement or other binding protection mechanism. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

Rare Species

This project lies within three miles of the Delmarva Fox Squirrel (DFS) population located at the Prime Hook National Wildlife Refuge. If DFS occur and you are clearing forest or building roads and homes within 150 feet of forest, you may be impacting DFS and their habitat. Live trapping surveys may be conducted to

determine if DFS are present at your project site. Please contact Charisa Morris of the U.S. Fish and Wildlife Service at 410-573-4527 or Holly Niederriter of the Delaware Division of Fish and Wildlife, Nongame and Endangered Species Program at 302-653-2880 to obtain a Live Trapping Survey Protocol for Delmarva Fox Squirrel and a list of qualified DFS trappers. Permits, approvals and appropriate credentials and experience are required before any consultant or other person can live-trap Delmarva fox squirrels.

Additional Rare Species and Buffers

There is an Atlantic White Cedar swamp associated with Ingram Branch and maintaining the 100-foot minimum forested buffer is extremely important, especially with such a large scale development. This community type relies on specific hydrology to persist and is especially sensitive to sedimentation and changes in water quality. The buffer zone should be placed in a permanent conservation easement so that future clearing is prevented. We further recommend that Ingram Branch and Lavina Pond not be used as stormwater outlets. There are also numerous species of rare plants and animals associated with Pemberton Branch.

State Natural Heritage Site

Due to the presence of the Atlantic White Cedar swamp, this project lies within a State Natural Heritage Site. This is one of the criteria used to determine the presence of Critical Resource Waters. The final decision regarding Critical Resource Waters, if this is an issue, will be made by the U.S. Army Corps of Engineers (USACE). The information above will aid the Corps in their determination.

Nuisance Waterfowl

Stormwater management 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. We recommend that the number of ponds in the site plan be reduced. Because geese do not feel safe when they can't see the surrounding area for predators, the remaining ponds should be planted with a perimeter of tall vegetation such as trees, shrubs, wildflowers or native grasses. This is especially important for ponds that are adjacent to athletic and recreational type fields. 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, land managers or property owners 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 proper landscaping, monitoring, and other techniques, geese problems can be minimized.

X Villages of Elizabethtown proposed open space includes existing upland forest, wetlands, water courses, impoundments, mixed use green space and storm water management areas. This open space will be enhanced, managed and actively maintained through a comprehensive open space management plan². The VECOSMP will meet and/or exceed Delaware Coastal Management Program (DCMP) policies and criterion. The open space will be designated by specific management units (MU) that will be actively maintained with state of the art "Green Technology Best Management Practices." The best management practices will be conducted by qualified applied scientists at a frequency and duration enough to support measurable results. The specific MUs will include open waterways, wetlands, forested buffers, regeneration areas and mixed-use green space. Since this project lies within three miles of a known Delaware Fox Squirrel population, minimal impact will take place within critical habitat areas and buffers will be maintained.

The aquatic bench shelf of storm water management pond(s) will be planted with native wetland vegetation for pre-discharge nutrient reduction, habitat enhancement and aesthetic enhancement. All ponds will be buffered with appropriate native vegetation and will be actively managed³. Nuisance waterfowl, such as resident Canada geese and mute swans, will be monitored and controlled with non-lethal stress deterrents. The open space management planning also provides for educational outreach regarding Green Technology best management practices and interpretations of the natural environment.

Natural heritage research was conducted⁴ in order to determine the canopy, under story, and ground cover vegetation characteristics of white cedar swamps of the Delmarva Peninsula. Conservation landscape practices will be utilized in and around water courses, storm water retention areas, regeneration areas, and re-forestation areas for the restoration of critical habitat. Vegetative species selection and installation will be consistent with existing vegetation and rare and

threatened species such as the Atlantic White Cedar will be introduced at the appropriate time and location.

State Resource Areas/Natural Areas

The Office of Nature Preserves commends the applicant's efforts to develop in the open fields, while maintaining the forested lands on the site. Both the Open

² Villages of Elizabethtown Comprehensive Open Space Management Plan

³ Villages of Elizabethtown Comprehensive Open Space Management Plan

⁴ Villages of Elizabethtown Comprehensive Open Space Management Plan

Space Council and the Natural Areas Advisory Council recently moved to amend the State Resource Area map and the Natural Areas Inventory map and identified the forested lands located just north of Lavina Pond as both a State Resource Area and a State designated Natural Area. Waggamons Pond lies within the current Prime Hook State Resource Area.

State Resource Area lands include any open lands characterized by great natural scenic beauty, or whose existing openness, natural condition or present state of use, if retained, would maintain important recreational areas and wildlife habitat, and enhance the present or potential value of abutting or surrounding urban development, or would maintain or enhance the conservation of natural or scenic resources, including environmentally sensitive areas.

Natural Areas involve areas of land or water, or of both land and water, whether in public or private ownership, which either retains or has reestablished its natural character (although it need not be undisturbed), or has unusual flora or fauna, or has biotic, geological, scenic or archaeological features of scientific or educational value. The Open Space Council and Natural Areas Advisory Council.

The forested lands to the south provide pollution reduction benefits to Lavina Pond, which drains into the Broadkill River, and eventually drains into the Delaware Bay by Beach Plum Island Nature Preserve. The Office of Nature Preserves respectfully requests that stringent consideration be given to stormwater impacts on the forested lands to the south of the development. More compact development is proposed just north of this area, providing greater opportunity for increased stormwater runoff. One option to reduce impervious cover is to reduce lots in this area thereby maintaining more open space, and more of a chance for stormwater to infiltrate into the ground, lessening stormwater impacts to surrounding lands as well as downstream.

The "school" trail is approximately 900 feet long. The developer may want to consider working with the adjacent community to create a school trail that runs primarily along established roads to avoid potential safety issues with a trail through the woods.

*The proposed school trail is in the most appropriate location for access to the existing school from the proposed development. The applicant will provide appropriate signage and lighting to ensure that this trail is safe for children to use.

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.

Site Investigation and Restoration

There are 2 SIRB sites located more than one mile from the proposed project:

Milton Maintenance Yard (DE-0255) and King Cole Cannery (DE-1252)

A Facility Evaluation was completed for the Milton Maintenance Yard and No Further Action was recommended. A Final Plan was issued in March, 2003 for the King Cole Cannery site. Due to the distance from these sites to the proposed project, SIRB does not believe that either site will impact the development.

Underground Storage Tanks

There is one inactive LUST site(s) located near the proposed project:

Brittingham Elementary School, Facility # 5-000336, Project # S9907146

No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 182.3 tons (364,691.2 pounds) per year of VOC (volatile organic compounds), 151.0 tons (301,939.6 pounds) per year of NO_x (nitrogen oxides), 111.4 tons (222,776.6 pounds) per year of SO₂ (sulfur dioxide), 9.9 ton (19,831.0 pounds) per year of fine particulates and 15,253.0 tons (30,505,954.7 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 73.5 tons (147,096.5 pounds) per year of VOC (volatile organic compounds), 8.1 ton (16,185.1 pounds) per year of NO_x (nitrogen oxides), 6.7 ton (13,431.3

pounds) per year of SO2 (sulfur dioxide), 8.7 ton (17,332.5 pounds) per year of fine particulates and 298.1 tons (596,296.5 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 29.1 tons (58,298.5 pounds) per year of NOx (nitrogen oxides), 101.4 tons (202,777.3 pounds) per year of SO2 (sulfur dioxide) and 14,954.8 tons (29,909,658.2 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO2	PM2.5	CO2
Mobile	182.3	151.0	111.4	9.9	15253.0
Residential	73.5	8.1	6.7	8.7	298.1
Electric Power		29.1	101.4		14954.8
TOTAL	255.8	188.2	219.5	18.6	30505.9

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 29.1 tons of nitrogen oxides per year and 101.4 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 and links to mass transport system, and fund a lawnmower exchange program for their new occupants.

* Conservation of the wooded areas of the site will help offset the impact of this development on air quality by removing carbon dioxide from the air.

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

This Agency has no objection to the re-zoning request. The information provided below shall be considered when plans are being designed.

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):

2) Fire Protection Water Requirements:

- a. Water distribution system capable of delivering at least 1500 gpm for 2hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile)
 - b. Water distribution system capable of delivering at least 1000 gpm for 1hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)
 - c. 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. (One & Two- Family Dwelling)
1. Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

1. Fire Protection Features:

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

- 6) For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

1. **Accessibility**

- e) 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 Beach Hwy and Isaacs Road must be constructed so fire department apparatus may negotiate it.
- f) 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.
- g) 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.
- h) The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- e) 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.

e) **Gas Piping and System Information:**

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

f) **Required Notes:**

- f) 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"
- g) Proposed Use
- h) Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- i) Square footage of each structure (Total of all Floors)
- j) National Fire Protection Association (NFPA) Construction Type
- k) Maximum Height of Buildings (including number of stories)
- l) Townhouse 2-hr separation wall details shall be shown on site plans

- m) Note indicating if building is to be sprinklered
- n) Name of Water Provider
- o) Letter from Water Provider approving the system layout
- p) Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- q) 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.

*All comments generated from the State Fire Marshal's office will be addressed as part of the design and review phase of this project should the subdivision receive preliminary approval.

Department of Agriculture - Contact: Milton Melendez 698-4500

The Delaware Department of Agriculture has no objections to the proposed development. The *Strategies for State Policies and Spending* encourages

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responsible development in areas within Investment Level 2 and 3. However, since the feasibility and success of this project hinges largely on the use of land enrolled in the Delaware Agricultural Lands Preservation program for wastewater disposal (spray irrigation), the Department offers the comments below.

The Department supports the use of properly designed and maintained spray irrigation facilities to dispose of wastewater. Title 3, Chapter 9, §909 (a)(5)(e) allows spray irrigation application on land in the preservation program provided it benefits the farming of land, and does not adversely impact the lands ability to produce crops. The Delaware Agricultural Lands Preservation Foundation has guidelines on spray irrigation on preserved land, as well as a Memorandum of Understanding with DNREC relating to spray irrigation.

During the June 28 PLUS meeting, the Department learned that the approximately 1,781 acres of preserved agricultural land being proposed for spray irrigation has the capacity to accommodate approximately 6 million gallons of wastewater per day. However, the New Milton project will only require approximately 1,188,500 gallons per day of that capacity. The Department would

be opposed to spray irrigation on this preserved agricultural land if it creates "unintended" infrastructure (i.e., sewer) that supports growth in conflict, or inconsistent, with the State's *Strategies for State Policies and Spending* (especially Level 4 Investment Areas).

In addition, even though the preserved agricultural land will be providing infrastructure to the New Milton development, the 50 and 300 foot setback and notification requirements of the agricultural preservation statute will still apply where applicable. Please see Delaware Code Title 3, Chapter 9, Subchapter II, Section 910.

§ 910. Agricultural use protections.

- e) 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:

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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.

- e) 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:

- 3) 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.

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 excess 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. The project is located in an area the Town of Milton designated as its existing service territory, pursuant to 26 Del. C. § 203D (b). In order for a private utility to provide wastewater services to the project, it would need approval from the Town of Milton and seek a CPCN from the Public Service Commission. Additionally, if it is a new wastewater utility that has not previously been granted a CPCN by the Commission, it must also demonstrate that it possess the financial, managerial, and operational capabilities to begin the business of a wastewater utility. Should the Town of Milton opposes the CPCN of the private utility and refuse to offer those services itself, the private utility could petition the Commission to grant it a CPCN despite the Town's objection. If this were to happen, the matter would be assigned to a hearing examiner for evidentiary proceedings at which time each party could present their case. Based upon the record developed, the Commission would then have to determine if the public convenience and necessity would be served by granting a CPCN to the private utility.

The project is not located in the certificated water service area of any utility; however, it is within an area the Town of Milton has designated for possible future annexation. If a private utility were to apply for a CPCN to provide water services, the Town could object the CPCN being granted. If this were to happen, the matter would be assigned to a hearing examiner for evidentiary proceedings to determine the legal basis upon which the Commission could deny the requested CPCN. Finally, if it is a new water utility that has not previously been granted a CPCN by the Commission, it must also demonstrate that it possess the financial, managerial, and operational capabilities to begin the business of a water utility.

Delaware State Housing Authority – Contact Karen Horton 739-4263

This proposal is to review a proposed Large Parcel Development for rezoning of 758 acres for 3,785 residential units and 439,000 sq. ft. of commercial space in Levels 1, 2, & 3 near Milton. This proposal is located on both sides of Delaware Route 16 from Delaware Route 30 to Cedar Creek Road. According to the State Strategies Map, the proposal is located in Investment Level 1, 2, & 3 areas. DSHA supports this proposal because residents will have proximity to services, markets, and employment opportunities. Furthermore, the proposal will provide 400 units of moderately-priced housing mixed throughout the development through its participation in the County's Moderately Priced Housing Unit pilot program. These units will ensure much needed long-term affordable housing opportunities to people who live and work in Sussex County.

Department of Education – Contact: John Marinucci 739-4658

The Department of Education offers the following comments on behalf of the Cape Henlopen School District.

1. Using the DOE standard formula, this development will generate an estimated 1892 students.
2. DOE records indicate that the Cape Henlopen School Districts' elementary schools are not at or beyond 100% of current capacity based on September 30, 2005 elementary enrollment.
3. DOE records indicate that the Cape Henlopen School Districts' secondary schools are not at or beyond 100% of current capacity based on September 30, 2005 secondary enrollment.
4. While the Cape Henlopen School District secondary and elementary schools are not currently beyond capacity, ***the district does NOT have adequate student capacity to accommodate the additional students likely to be generated from this development.*** This development will cause significant burden to the Cape Henlopen School District as it is built and residential units are occupied, without additional educational infrastructure resources. The developer is strongly encouraged to contact the Cape Henlopen School District Administration to address the issue of school over-crowding that this development will cause.
5. DOE requests developer work with the Cape Henlopen 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.

* A separate study is enclosed to address the above issues and is authored by Any Brandenberger, a recognized authority on the subject within the State of Delaware.

Sussex County – Contact: Richard Kautz 855-7878

The Sussex County Engineer Comments: The project is located west of the Town of Milton and a portion of the projects boundary adjoins the town boundary. The project proposes to develop using a central community wastewater system. It is located in Sussex County's North Coastal Planning Area and within a Developing Area of the Town of Milton. The project is not in an Environmentally Sensitive Developing Area and Sussex County does not expect to provide sewer service in the foreseeable future. Sussex County recommends the developer contact the Town of Milton or a private wastewater purveyor for wastewater services.

If the project is not annexed into Milton, Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. It is recommended that the wastewater system be operated under a long-term contract with a capable wastewater utility. In addition, we recommend they have a wastewater utility provider prior to approving the project. 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.

Submission and approval of a sewer concept plan is not required.

Should you have any questions or comments regarding this application please do not hesitate to contact me at your convenience.

Sincerely,

Jessica Nichols, P.E.