



## ENGINEERING CONSULTANTS INTERNATIONAL, LLC

**ENGINEERING  
PLANNING  
SURVEYING**

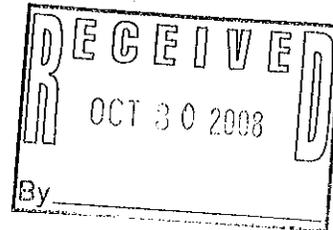
220 Rehoboth Avenue  
P. O. Box 820  
Rehoboth Beach, Delaware  
19971  
(302) 226-2844  
(800) 403-4749  
Fax (302) 226-2939  
E-mail: [eci@ecieng.com](mailto:eci@ecieng.com)

552 Atlantic Avenue  
Millville, Delaware  
19967  
(302) 537-8555  
Fax (302) 537-8556  
E-mail: [ecide2@ecieng.com](mailto:ecide2@ecieng.com)

[www.ecieng.com](http://www.ecieng.com)

October 27, 2008

Ms. Constance C. Holland, AICP  
Director  
State Planning Coordination  
Office of Management and Budget  
The State of Delaware  
122 William Penn Street  
Third Floor  
Dover, DE 19901



**RE: PLUS PROJECT NO. 2007-09-08  
EASTGATE  
ECI PROJECT NO. 08-038**

Dear Ms. Holland:

In response to your letter dated October 24, 2007 to Mr. David Braun of Braun Engineering and Surveying concerning the PLUS review of Eastgate we offer the following responses.

### 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 area is designated as an "Area of Study" according to the Strategies for State Policies and Spending. At the time the current version of the Strategies was being developed, this area was the subject of a study to determine potential alignments for a limited access highway along Route 113 corridor. This study is still ongoing, and in fact two of the proposed alternative alignments are in the vicinity of this site. Since the Strategies were completed, the City of Milford proposed and the State certified an amendment to Milford's comprehensive plan, which includes this area as an annexation area. The City met all annexation requirements of the Delaware Code and the parcel was annexed on July 24, 2006. Our office considers the City of Milford to be in compliance with the Strategies.*

*The State has no objections to the development of this project in compliance with the City of Milford's certified comprehensive plan, codes, and ordinances. However, we note that it is essential to the developers and the City to continue coordination with the DelDOT Route 113 North/South Study.*

**ECI has met and will continue to meet with DelDOT to provide the appropriate design for this development to further the goals of the City of**

**Milford and with the applicable departments within DelDOT. The design of this project will meet or exceed the requirements of the City of Milford and all applicable state and county agencies. The developer welcomes the support of the State Planning Office. Please note that the Engineer/Planner/Surveyor of record has changed to ECI.**

## **STREET DESIGN AND TRANSPORTATION**

*The proposed development is very close to two future highway alignments that have been identified in the US 113 North/South Study. Specifically, the Green and Purple alignments, which are the only two that have been retained for further study, would pass close by the south side of this development. While they do not expect to require right-of-way from this development, there could be noise impacts.*

*Elks Lodge Road is classified as a local road and Cedar Creek Road is classified as a collector road. DelDOT's policy is to require dedication of sufficient land to provide minimum right-of-way widths of 30 feet from the centerline on local roads and 40 feet from the centerline on collector roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.*

**We acknowledge your comment and will continue to work with DelDOT to accomplish their right of way goals.**

*DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage for a future 10-foot wide shared use path. Because of their small amounts of frontage, the developer will not be required to build this path.*

**A 15-foot wide permanent easement will be made a part of the plan for a future 10' wide multi-use path to be constructed by DelDOT.**

*Regardless of whether a TIS is required, they may require the developer to participate in off-site improvements required of other developers in the surrounding area. Possible locations include the intersections of Wilkins Road (Sussex Road 206) with Elks Lodge Road, Cedar Creek Road, and Delaware Route 1.*

**We acknowledge your comment and will continue to work with DelDOT Based upon Preliminary Plan Approval a TIS does not seem to be a requirement.**

*DelDOT recommends that driveway access be provided from "C" Avenue to the adjoining residential strip lots along Elks Lodge Road.*

**In accordance with a meeting with Derek Sapp of the DelDOT planning group, we will investigate relocating the existing driveway to the internal subdivision road.**

*DelDOT recommends that a street connection be provided, possibly as an extension of "A" Way, to the parcel to the north where a regional commercial development is proposed.*

**The plan has been revised to provide an interconnection to the parcel to the north as requested.**

*DelDOT recommends that a street connection be provided from "D" Avenue to the parcel to the south, where they understand that another residential development be proposed.*

**The plan has been revised to provide an interconnection to the parcel to the south as requested.**

*DelDOT recommends that the developer consider extending "D" Avenue east to intersect Cedar Creek Road. Providing access on both Elks Lodge Road and Cedar Creek Road would result in a better distribution of site traffic and would reduce the need for road improvements at the proposed entrance on Elks Lodge Road. At a*

*minimum, there should be a street connection to one road and a bicycle and pedestrian connection to the other.*

**In accordance with a meeting with Derek Sapp of the DelDOT Planning Group we have included in the plan a path or walkway connecting the subdivision to Cedar Creek Road.**

## **NATURAL AND CULTURAL RESOURCES**

*The Drainage Program is aware of existing drainage concerns associated downstream of this area. Please contact the Sussex Conservation District to discuss the probability of a downstream analysis for this project. The Drainage Program requests that the engineer take precautions 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 Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream Landowners of the change in volume of water released on them.*

**The Stormwater Management Plan will meet or exceed the requirement of the Sussex Conservation District as well as DNREC. Best Management Practices (BMP's) will be made a part of the Stormwater Management Plan.**

*Increase the side yard setback to 15 feet on all properties with a drainage easement on the side. The increase will allow room for equipment to utilize the entire easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction. The side yard setback would only increase on the side with the drainage easement.*

**The Stormwater Management Plan will meet or exceed the requirement of the Sussex Conservation District as well as DNREC. Best Management Practices will be made a part of the stormwater management plan. In accordance with The City of Milford Zoning Code Section 230-11-B-1-a-6, minimum side yard setbacks are 8 feet. Side yard setbacks will be increased as necessary when drainage easements are required within a side yard setback.**

*All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides. Place restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being placed next to the catch basin.*

**All stormwater facilities within drainage easements and open space areas will have the required easements necessary for future maintenance mandated by the City of Milford and the Sussex Conservation District.**

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

**An appropriate language will be included in all deeds and included in the Homeowner articles of agreement.**

*Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing the stormwater into the Cedar Creek watershed.*

**The Stormwater Management Plan will meet or exceed the requirement of the Sussex Conservation District as well as DNREC. Best Management Practices will be made a part of the stormwater management plan.**

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

**OFFICE OF STATE PLANNING COORDINATION – CONTACT: DAVID EDGELL 739-3090**

*This area is designated as an "Area of Study" according to the Strategies for State Policies and Spending. At the time the current version of the Strategies was being developed, this area was the subject of a study to determine potential alignments for a limited access highway along the Route 113 corridor. This study is still ongoing, and in fact two of the proposed alternative alignments are in the vicinity of this site. Since the Strategies were completed, the City of Milford proposed and the State certified an amendment to Milford's comprehensive plan, which includes this area as an annexation area. The City met all annexation requirements of the Delaware Code and the parcel was annexed on July 24, 2006. Our office considers the City of Milford to be in compliance with the Strategies. The State has no objections to the development of this project in compliance with the City of Milford's certified comprehensive plan, codes and ordinances. However, we note that it is essential for the developers and the City to continue coordination with the DelDOT Route 113 North/South Study.*

**We have participated in numerous meeting with DelDOT and will continue to be in contact throughout the design phase of this project to further DelDOT's future traffic planning in the immediate vicinity of this project. Again, the developer welcomes the support of the State Planning Office.**

**DIVISION OF HISTORICAL AND CULTURAL AFFAIRS – CONTACT: TERRANCE BURNS 739-5685**

*According to the historical resources and documents at the State Historic Preservation Office, there are no historic features, such as a National Register property, Archaeological site on or within this parcel. However, on the Beers Atlas Map of 1868, it does shows that there were of some type dwelling or structure, which appeared to have been nearby, or close to where this parcel is now. These dwellings or structures are indicated as H. Vreeland houses, and there may be historic-period archaeological remains associated them or areas of high potential for a prehistoric archaeological site as well.*

*Because of the nature of where this parcel is located there is a possibility that there still could be an undiscovered prehistoric or historic archaeological site on this parcel or nearby.*

*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. If any construction proceeds on this parcel, the State Historic Preservation Office of the Division of Historical & Cultural Affairs would like the opportunity to examine the area prior to any demolition or ground-disturbing activities, to see if there are any archaeological sites on it, in order to learn more information about this area in detail.*

*If you would like to discuss this information or other issues further, contact the State Historic Preservation Office Division of Historical & Cultural Affairs at (302) 744-7400 ext .25, and we will be more than happy to assist you.*

**We acknowledge your concerns and will address historic issues or conditions during the design and construction of this project as they become apparent.**

**DEPARTMENT OF TRANSPORTATION – CONTACT: BILL BROCKENBROUGH 760-2109**

*Elks Lodge Road is classified as a local road and Cedar Creek Road is classified as a collector road. DelDOT's policy is to require dedication of sufficient land to provide minimum right-of-way widths of 30 feet from the centerline on local roads and 40 feet from the centerline on collector roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.*

**We acknowledge your comment and will continue to work with DelDOT to meet proper right of way.**

*DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage for a future 10-foot wide shared use path. Because of their small amounts of frontage, the developer will not be required to build this path.*

**A 15-foot wide permanent easement will be made a part of the plan for a future 10' wide multi-use path to be constructed by DelDOT.**

*The proposed development is very close to two future highway alignments that have been identified in the US 113 North/South Study. Specifically, the Green and Purple alignments, which are the only two that have been retained for further study, would pass close by the south side of this development. While they do not expect to require right-of-way from this development, there could be noise impacts. We recommend that the developer contact the project manager for that study, Mr. Monroe Hite, for more information and continue to monitor the progress of it as they develop their plans. Mr. Hite may be reached at (302) 760- 2120.*

**We will contact the DelDOT during the design phase of this project to review possible noise impacts.**

*DelDOT's current volume warrant for requiring a traffic impact study (TIS) for a residential development is 2,100 vehicles per day. With an average daily traffic volume of 1,836, the proposed development would not meet that warrant.*

**Based upon the review by DelDOT, we agree that no TIS is required.**

*However, under new standards that DelDOT expects to adopt this calendar year, we would have a daily traffic warrant of 400 vehicles per day and a peak hour warrant of 50 vehicles per hour for all land uses. Pending legislative approval, they propose to allow some developments with daily volumes less than 2,000 vehicles per day and peak hour volumes less than 200 vehicles per hour to pay a fee (so DelDOT can undertake the required analysis) in lieu of doing such studies. Currently that fee is proposed to be \$5.00 per daily trip. Therefore, depending on the project schedule, it is possible that the developer may be required to prepare a TIS or to pay a \$9,180 fee toward a DelDOT traffic analysis.*

**Preliminary Plan Approval was granted for this project and the Department by this correspondence acknowledges that a TIS is not required.**

*Regardless of whether a TIS is required, they may require the developer to participate in off-site improvements required of other developers in the surrounding area. Possible locations include the intersections of Wilkins Road (Sussex Road 206) with Elks Lodge Road, Cedar Creek Road, and Delaware Route 1.*

**This issue will be fully addressed as the plan advances.**

*DelDOT recommends that driveway access be provided from "C" Avenue to the adjoining residential strip lots along Elks Lodge Road.*

**In accordance with a meeting with Derek Sapp of the DelDOT planning group, we will investigate relocating the existing driveway to the internal subdivision road.**

*DelDOT recommends that a street connection be provided, possibly as an extension of "A" Way, to the parcel to the north where a regional commercial development is proposed.*

**The plan will be revised to provide an interconnection to the parcel to the north as requested.**

*DelDOT recommends that a street connection be provided from "D" Avenue to the parcel to the south, where they understand that another residential development be proposed.*

**The plan will be revised to provide an interconnection to the parcel to the south as requested.**

*DelDOT recommends that the developer consider extending "D" Avenue east to intersect Cedar Creek Road. Providing access on both Elks Lodge Road and Cedar Creek Road would result in a better distribution of site traffic and would reduce the need for road improvements at the proposed entrance on Elks Lodge Road. At a minimum, there should be a street connection to one road and a bicycle and pedestrian connection to the other.*

**In accordance with a meeting with Derek Sapp of the DelDOT Planning Group we have included in the plan a path connecting the subdivision to Cedar Creek Road.**

10. *Because the proposed development is in the City of Milford and the streets would be built to City standards for City maintenance, the following comments are only advisory:*

*DelDOT understands that the proposed townhouses would all be rear loaded. "E" Alley, where the townhouses would therefore serve 64 driveways, many of them with positioned in pairs across from each other, in a single block. DelDOT is concerned that this could result in peak hour operational problems. At a minimum, they recommend that the alley be posted as one-way. If possible, "B" way should be extended through the block of townhouses to shorten the block length.*

*The following curves do not meet DelDOT's subdivision street standards: C11, C51, C70, C74, C82, C95, C97 and C98.*

*DelDOT recommends that "B" Way and the knuckle on "D" Avenue be extended to connect to "A" Way for improved circulation within the development.*

**We acknowledge your comments and they will be investigated and addressed as site constraints allow during the design phase of this project.**

11. *The developer's site engineer has already met with the Subdivision Manager for Sussex County, Mr. Derek Sapp, to discuss the proposed plan. DelDOT recommends that they maintain that coordination through the plan development process. Mr. Sapp may be reached at (302) 760-4803.*

**We will continue to meet with Mr. Sapp and DelDOT officials during the design phase of this project.**

**THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL – CONTACT:  
KEVIN COYLE 739-9071**

### **SOILS**

*According to the Sussex County soil survey, Downer, Ingleside, and Hambrook were mapped in the immediate vicinity of the proposed construction. Downer, Ingleside, and Hambrook are well-drained upland soils that, generally, have few limitations for development.*

## **IMPERVIOUS COVER**

*Based on a review of the PLUS application form, post-construction surface imperviousness was projected to reach 34 percent. However, given the projected scope and density of this project, this estimate appears to understate the actual amount of created post-development surface imperviousness.*

*The applicant should realize that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, stormwater management structures, and roads) should be included in the calculation for surface imperviousness; it was unclear from the submittal whether constructed surface imperviousness was comprehensively considered. Nonetheless, it is strongly recommended that the applicant include all of aforementioned forms of surface imperviousness in their finalized calculation for surface imperviousness. This will ensure a realistic assessment of this project's likely post-construction environmental impacts.*

Impervious area calculations will be recalculated and noted on the Final Site/Record Plan.

*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.*

**We acknowledge your comments and will utilize Best Management Practices in the design of the Stormwater Management Plan for this project.**

## **TMDLs**

*Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Cedar Creek watershed. 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 Cedar Creek watershed, "target-rate-nutrient reductions" of 45 percent will be required for nitrogen and phosphorus. Additionally, "target-rate reductions" of 96 percent will be required for bacteria.*

## **TMDL COMPLIANCE THROUGH THE PCS**

*As indicated above, Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been proposed for the Cedar Creek watershed. The TMDL calls for a 45 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 96 percent reduction in bacteria from baseline conditions. A Pollution Control Strategy (PCS) 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 BMPs such as increasing the amount of passive, wooded open space (planted with native woody and herbaceous vegetation), use of pervious paving materials to reduce surface imperviousness, and the deployment of green-technology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.*

**We recognize the importance of addressing total maximum daily loads (TMDL's) as a method of reducing nutrients to the Cedar Creek Watershed. It is our intention to implement BMP's and nutrient removal in the community wastewater system and stormwater management facilities and comply with applicable TMDL regulations where physically possible. It must be recognized that the wastewater needs for the project will be addressed by connection to the City of Milford sanitary sewer system.**

**ECI will develop a stormwater management plan for the site that will incorporate BMP's and pollution control strategies throughout the system that meet or exceed standards promulgated by the Sussex Conservation District and DNREC.**

## **WATER SUPPLY**

*The information provided indicates that the City of Milford will provide water to the already annexed project(s) through a central public water system. DNREC files reflect that the City of Milford does not currently hold a Certificate of Public Convenience and Necessity (CPCN) to provide public water in this (these) areas. According to §203C, Subchapter II, Chapter 1, Title 26, Delaware Code, the municipality is required to give notice to the Public Service Commission when the annexation is complete. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at (302) 739-4247. Should an on-site public/miscellaneous public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area. 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.*

**The City of Milford will supply public water for this project and will apply for the required CPCN from the Public Utility Commission.**

**The site contractor will be responsible for any and all permits, be it building permits or dewatering permits, during the construction of this project.**

## **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. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.*

*Because of the parcel's location in an impaired watershed and the amount of impervious surface, consider incorporating more green technology BMPs and low impact development practices to reduce stormwater flow and to meet water quality goals.*

*The Sediment and Stormwater Management Program ensures sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater*

management facilities. However, they do not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice. Drainage

1) The Drainage Program is aware of existing drainage concerns associated downstream of this area. Please contact the Sussex Conservation District to discuss the probability of a downstream analysis for this project. The Drainage Program requests that the engineer take precautions 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 Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.

2) The Drainage Program encourages the placement of storm drains within street rights-of-way, alleyways, or common open space where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain cases. Therefore, catch basins placed in rear PLUS

3) Increase the side yard setback to 15 feet on all properties with a drainage easement on the side. The increase will allow room for equipment to utilize the entire easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction. The side yard setback would only increase on the side with the drainage easement.

4) All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides. Place restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being placed next to the catch basin.

5) Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.

6) Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing the stormwater into the Cedar Creek watershed.

For questions or clarifications, please contact Jim Sullivan at (302) 739-9921.

**We acknowledge the above comments. The stormwater management plan for this project will meet or exceed all requirements of the Sussex Conservation District and DNREC. Utilization of Best Management Practices and reduction of impervious surfaces will be made a part of the stormwater management plan. Post Development runoff will not exceed pre-development runoff and may possibly be less. It must be noted that setback and side yard requirements are established by the City of Milford.**

## **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 could consist of increasing tree canopy density, reforesting portions of open space or establishing meadow grasses. The developer is encouraged to review and side yards will need to be clear of obstructions and be accessible for*

*maintenance. Decks, sheds, fences, pool, and kennels can hinder drainage patterns as well as future maintenance to the storm drain or catch basin. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.*

*"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/dcmo/>. 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.*

**We acknowledge your comments and restrictions will be included in all deeds and also be made a part of the Homeowners Articles of Agreement.**

### **RARE SPECIES**

*DNREC has never surveyed the project area; therefore, it is unknown if there are state rare or federally listed plants, animals or natural communities at this project site. There are several rare species within the vicinity, but they are associated with the forested riparian buffer along the tributary to Cedar Creek or occur downstream. The answer to Question #32 on the PLUS application form indicates that this tributary to Cedar Creek is the intended stormwater outlet. We recommend that run-off that enters this tributary be highly filtered of sediments, nutrients and chemicals. The federally listed plant, *Helonias bullata* (swamp pink), occurs downstream and is highly sensitive to changes in water quality and could be detrimentally impacted.*

**The Stormwater Management Plan will meet or exceed the requirements of the Sussex Conservation District and DNREC. DNREC is invited to visit the site at their convenience. Please contact Mr. Ben Miller, an Environmental Specialist at ECI, LLC, to arrange a site visit. Mr. Miller may be reached at (302) 226-2844.**

### **NUISANCE GEESE**

*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. We recommend that a buffer comprised of tall grasses, wildflowers, shrubs, and trees be planted at the edge and within a buffer area around the perimeter. Waterfowl do not feel safe when they cannot 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 homeowners 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 proper landscaping, monitoring, and other techniques, geese problems can be minimized.*

**Creative landscaping techniques within the project site and specifically at the stormwater management pond(s) will diminish the attraction of nuisance waterfowl.**

### **AIR QUALITY**

*Once complete, vehicle emissions associated with this project are estimated to be 16.0 tons (31,925.8 pounds) per year of VOC (volatile organic compounds), 13.2 tons (26,432.4 pounds) per year of NOx (nitrogen oxides), 9.8 tons (19,502.3 pounds) per year of SO2 (sulfur dioxide), 0.9 ton (1,736.0 pounds) per year of fine particulates and 1,335.3 tons (2,670,555.0 pounds) per year of CO2 (carbon dioxide).*

Emissions from area sources associated with this project are estimated to be 6.4 tons (12,877.1 pounds) per year of VOC (volatile organic compounds), 0.7 ton (1,416.9 pounds) per year of NOx (nitrogen oxides), 0.6 ton (1,175.8 pounds) per year of SO2 (sulfur dioxide), 0.8 ton (1,517.3 pounds) per year of fine particulates and 26.1 tons (52,201.0 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 2.6 tons (5,103.6 pounds) per year of NOx (nitrogen oxides), 8.9 tons (17,751.6 pounds) per year of SO2 (sulfur dioxide) and 1,309.2 tons (2,618,353.9 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO	PM2.5	CO2
Mobile	16.0	13.2	9.8	0.9	1335.3
Residential	6.4	0.7	0.6	0.8	26.1
Electrical	2.6	8.9	1309.2		
Power					
TOTAL	22.4	16.5	19.3	1.7	2670.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 2.6 tons of nitrogen oxides per year and 8.9 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 PLUS 2007-09-08 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 DNREC Energy Office 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 homebuilders 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.

**The project will utilize Energy Star certifications for appliances, heating and air conditioning systems, insulation and other factors that directly impact power requirements and/or energy requirements to support the residences.**

**With regard to electrical power generation, although the resident of the development will purchase electrical power, the inhabitants of the residences located within the development have no direct control of the manner in which power is generated within the State of Delaware. The project provides significant opportunities for bicycling and walking throughout the project site.**

**With regard to vehicular traffic, the developer is not in a position to control impacts related to vehicle emissions.**

**STATE FIRE MARSHAL'S OFFICE – CONTACT: DUANE FOX 739-4394**

*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:*

*Water distribution system capable of delivering at least 1000 gpm for 1- hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.*

*Where a water distribution system is proposed for multi-family sites and for townhouse type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.*

*b. Fire Protection Features:*

*All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed. PLUS 2007-09-08*

*c. 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 the main public thoroughfare 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.*

*d. Gas Piping and System Information*

*e. 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"*

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

*Proposed Use*

*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*

*Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.*

*Show Fire Lanes and Sign Detail as shown in DSFPR*

*For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan PLUS 2007-09-08 Page 16 of 18*

*Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units*

*Square footage of each structure (Total of all Floors)*

*National Fire Protection Association (NFPA) Construction Type*

*Maximum Height of Buildings (including number of stories)*

*Note indicating if building is to be sprinklered*

*Name of Water Provider*

*Letter from Water Provider approving the system layout*

*Townhouse 2-hr separation wall details shall be shown on site plan  
Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered*

*Provide Road Names, even for County Roads*

**All applicable regulations of the State Fire Marshal Office will be addressed during the design phase of this project. All streets will be names appropriately and approved by the City of Milford and by Sussex County as required.**

#### **DEPARTMENT OF AGRICULTURE - CONTACT: SCOTT BLAIER 698-4500**

*The Delaware Department of Agriculture has no objections to the proposed project. The property is within the City of Milford's municipal boundary.*

#### *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. Please feel free to contact the Delaware Forest Service at (302) 698-4500 for more information.*

#### *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.*

**A comprehensive landscaping plan will be developed for this project which provides a buffer to the adjacent properties and creates a pleasing view-shed of the site and surrounding area by the use of the native trees, shrubs, and plantings where appropriate. We welcome the support of the Department of Agriculture.**

**With regard to the “right tree for the right place”, it is the intention of the developer to preserve woodlands where possible, and to provide reforestation of the project in a comprehensive manner.**

**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.*

**We acknowledge your comment. If any expansion occurs as a result of the project all appropriate agencies will be contacted.**

**DELAWARE STATE HOUSING AUTHORITY – CONTACT VICKI WALSH 739-4263**

*This is a site plan review for 208 residential units on 42.5 acres located on Elks Lodge Road between Wilkins Road and Johnson Fork Road in Milford, Sussex County. This proposal has been annexed into the Town of Milford and is therefore consistent with the State Strategies Map. As a general planning practice, DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities. DSHA supports the fact that this proposal targets the full range of incomes including first time homebuyers. For informational purposes, the most recent real estate data collected by DSHA shows the median home price in Sussex County to be \$260,000. However, families earning respectively 100% of Sussex County's median income only qualify for mortgages of \$164,791, thus creating an affordability gap of \$95,209. The provision of units within reach of families earning at least 100% of Sussex County's median income would help increase housing opportunities for first time homebuyers. We recommend that some of the units be set-aside at this price level to ensure that working households have access to affordable housing. This proposed development is within the Milford School District. DOE offers the following comments on behalf of the Milford School District.*

**As this is a project of the Milford Housing Development Corporation housing costs are a very important part of the planning for this project it is the goal of the project to provide housing opportunities for low to moderate income levels.**

**DEPARTMENT OF EDUCATION – CONTACT: JOHN MARINUCCI 735-4055**

- 1. Using the DOE standard formula, this development will generate an estimated 104 students.*
- 2. DOE records indicate that the Milford School Districts' elementary schools are at or beyond 100% of current capacity based on September 30, 2006 elementary enrollment.*
- 3. DOE records indicate that the Milford School Districts' secondary schools are not at or beyond 100% of current capacity based on September 30, 2006 secondary enrollment.*
- 4. The Milford School District has communicated to the DOE the district's lack of capacity at all grade levels given the number of planned and recorded residential sub divisions within district boundaries.*
- 5. This development will create significant additional elementary and secondary student population growth, which will further compound the existing shortage of space experienced by the Milford School District.*
- 6. The developer is strongly encouraged to contact the Milford School District*

*Administration to address the issue of school over-crowding that this development will exacerbate.*  
*7. DOE requests developer work with both the Milford 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 school district.*

**The Milford School District will be consulted during the design of this project and public bus stops will be made a part of the design.**

It is my sincere hope that these responses to the various state agencies comments will meet with their approval. If you have any comments related to this correspondence please do not hesitate to contact me at (302) 226-2488

Sincerely,

**Engineering Consultants International, LLC**

A handwritten signature in black ink, appearing to read 'Gary T. Cuppels', written over a horizontal line.

Gary T. Cuppels, PLS, PP  
President