



Constance C. Holland, AICP
Director, Office of State Planning Coordination
State of Delaware
122 William Penn Street, Suite 302
Haslet Building, Third Floor
Dover, DE 19901

13 November 2006
Via: Email
& U.S. Mail

RE: PLUS review – PLUS 2006-08-13; Discovery

Dear Ms. Holland,

In regard to the above referenced project and pursuant to your comment letter dated 20 September 06, please find the following point by point response indented in [blue](#) for your review.

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

- The project area is currently within the Level 4 area according to the Strategies for State Policies and Spending. However, we do note that the Town of Laurel has amended their comprehensive plan to include this area as part of their proposed annexation area. The State had no objections to the comprehensive plan amendment and the Town of Laurel's comprehensive plan has been recertified to include these parcels. Therefore, the State views these parcel as a future part of the Town of Laurel and has no objections to the proposed rezoning and development of this parcel in accordance with the relevant codes and ordinances.

[Comment acknowledged.](#)

Street Design and Transportation

- Excepting US Route 13, which is a principal arterial highway, the proposed development would have access on local roads. DeIDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore they will require right-of-way dedication along the frontage to provide any additional width needed from this project.

[Per DeIDOT policy, minimum right-of-way requirements will be included in final design. Preliminary Traffic Information Study \(PTIS\) currently in progress.](#)

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



- The plan includes stormwater management ponds or basins along Route 13 and Discount Land Road. These features appear to be too close to the existing right-of-way. Normally, such a pond is acceptable if two criteria are met. First, the developer must provide a 20-foot minimum buffer between the ultimate right-of-way and the top of slope of the pond.

All stormwater ponds will be designed in accordance with local, state, and federal requirements. Buffer requirements for stormwater ponds adjacent to existing rights of way will be met.

- The plan presented shows several locations on Camp Road, Colonial Road and Discount Land Road where the proposed streets would connect to those roads at something other than right angles. That will not be permitted.

Road intersections will be modified to connect at right angles throughout the site.

- The plan for the development should include a 10-foot wide shared use path in a 15-foot wide permanent easement across the frontage of the site on Camp Road, Colonial Road, Discount Land Road and Waller Road.

Comment acknowledged, however the designer would like to work with DeDOT to coordinate a safe method of pedestrian traffic along the frontage of the main roads. Unlike a typical residential subdivision, traffic volumes will be large and pedestrian safety along these corridors will be of utmost importance.

Natural and Cultural Resources

- **Site visit request** - They would like the opportunity to document the remaining historic buildings within the parcel prior to any demolition activities. They would also like the opportunity to examine the area for archaeological sites to learn something about their location, nature, and extent prior to any ground-disturbing activities.

The developer is initiating an independent study of the site for historic purposes. Significant findings will be reported to the State as required.

- Based on Statewide Wetland Mapping Project (SWMP) mapping, palustrine wetlands were mapped along nearly the entire northern boundary and small portions of the western boundary of subject parcel. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. The developer should maintain a 100-foot vegetated buffer from the wetlands. There should not be any buildings or associated infrastructure within the buffer.

A field wetland delineation is ongoing. No development will occur within the jurisdictional wetland boundaries and all local, state and federal buffer requirements will be met. The designer's/developer's intent is to maximize wetland buffers as much as possible.

element design group
34634 bay crossing blvd. suite a lewes, de 1995B
p 302.645.0777 f 302.645.0177 info@elementdg.com



- The conceptual plan provided with the PLUS application shows numerous conflicts with tax ditch alignments and rights-of-way. The engineer/planner should contact Brooks Cahall, Division of Soil & Water Conservation, Drainage Program, at 302-855-1930, to schedule a meeting to discuss the limitations and procedures for addressing these issues.

A wetlands delineation is ongoing to determine the jurisdictional status of all wetlands and ditches. A meeting is schedule for November 15, 2006 with the Drainage Division to discuss the tax ditch situation.

- **Site Visit Request** - In order to provide more informed comments and to make reasonable recommendations, our program botanist and zoologist request the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. This would also allow the applicant the opportunity to reduce potential impacts to rare species and unique habitats and to ensure that the project is environmentally sensitive.

Comment acknowledged. The designer/developer will contact the Department at the appropriate time to coordinate such a meeting.

- According to the application, 9 out of 43 acres of forest will be removed; however, there are lots and infrastructure on tax parcel 132-12.00-123.00 that will certainly result in more than 9 acres of forest loss. There are at least 125 lots (or units) and associated infrastructure in a portion of this parcel that is entirely forested. DNREC strongly encourages the applicant to recalculate forest loss and make a greater effort to preserve forested areas, especially on tax parcel 132-12.00-123.00. The lots (or units) and infrastructure should be relocated to a portion of the parcel that is non-forested or at the very least downsized to allow for adequate connection to adjacent forested areas. This particular forest is part of a series of connected forested areas that can provide a travel corridor and habitat for wildlife.

Preservation of mature forest will be a major consideration during design phase. The single family section of the site will be re-evaluated during the detailed design phase in order to minimize the impacts to the forested area. In this case a forested buffer will be maintained around the parcel perimeter and the interconnections to other forested areas will be emphasized.

- The current site plan for Discovery does not show a trail system that would link its residents to the entire development and beyond. A complete trail system will: 1) fulfill the recreation need for walking and biking facilities 2) provide nonmotorized opportunities for neighbors to interact in the community and 3) facilitate safe, convenient off-road access to neighboring communities and town centers, parks, public mass transit stops, schools, stores, work etc.

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



During design we will incorporate pedestrian walking/biking paths throughout the site. Non-vehicular traffic flow is an important aspect of the design. The designer is working closely with the retail, sports venue and recreational consultants to design a system for such travel.

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

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

The project area is currently within the Level 4 area according to the Strategies for State Policies and Spending. However, we do note that the Town of Laurel has amended their comprehensive plan to include this area as part of their proposed annexation area. The State had no objections to the comprehensive plan amendment and the Town of Laurel's comprehensive plan has been recertified to include these parcels. Therefore, the State views these parcel as a future part of the Town of Laurel and has no objections to the proposed rezoning and development of this parcel in accordance with the relevant codes and ordinances.

Comment acknowledged.

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

Four historic properties, a c. 1940 house (S-5902) on the site of Mrs. Benston House (as shown on Beers Atlas of 1868), the D. H. Boyce House (S-6032; Beers; now demolished), the J. T. Wright House (S-6034; Beers), and a late 19th-early 20th c. dwelling (S-6036) are within this parcel. There are a number of historic properties all around the area, including the National Register-listed E. L. Hitch Potato House (S-5859) to the north. The southern half of the property has high potential for prehistoric-period archaeological sites. There may be archaeological resources remaining at the known properties. The project will significantly change the historic agricultural landscape in this area.

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

All comments acknowledged. An archeological consultant has been retained and is conducting an archeological review. Significant findings will be reported to the State as required.

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



The DHCA requests that the development include sufficient landscaping to block the adverse visual and noise effects on adjacent historic properties. They would like the opportunity to document the remaining historic buildings within the parcel prior to any demolition activities. They would also like the opportunity to examine the area for archaeological sites to learn something about their location, nature, and extent prior to any ground-disturbing activities.

Buffer landscaping will be planted such as to block visual and noise effects, as well as lighting effects on adjacent properties. The designer/developer will contact the Department at the appropriate time to coordinate such a meeting/field visit.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

When the traffic impact study was scoped in September 2005, the proposed uses were:

- 1) approximately 1,000,000 square feet of retail space,
- 2) 1,500-2,000 residential units,
- 3) sports field for tournaments,
- 4) 6,000 seat stadium for youth sports,
- 5) 200,000 square foot combined non-profit and programming center (college recruiting center, field house, environmental center, Senior Legacy Center, and Boys & Girls Club facility),
- 6) 10 acres of sports entertainment/amusement venue,
- 7) 300-500 room hotel,
- 8) 100,000 square feet for restaurant pad sites and
- 9) a fire house.

The plan has evolved somewhat in that only 1,400 dwelling units are proposed now, the total commercial space (retail and other) is now about 1,100,000 square feet, and some of the sports and non-profit uses have changed.

DelDOT comments are as follows:

- 1) A traffic impact study (TIS) will be required for this development. The scope was set in September 2005. Since then, traffic counts have been submitted and reviewed. DelDOT looks forward to receiving the preliminary TIS. One issue in preparing the preliminary TIS, which the developer's traffic engineer may already have encountered, will be finding data on the traffic that would be generated by some of the proposed facilities. The Institute of Transportation Engineers provides good data on the residential and commercial uses but we have negligible information for the others and are expecting the developer to supply some. When DelDOT has received the completed TIS they will review it and send recommendations to the Town regarding off-site improvements that should be required of the developer. They request that the Town withhold plan approvals pending receipt of those recommendations.

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



A Preliminary Traffic Impact Study (PTIS) is underway. A final (TIS) report will be forwarded to DelDOT upon completion. Both studies will incorporate conservative design values to encompass all potential modifications/adjustments to the design as it evolves. Trip generation numbers have been reviewed with DelDOT prior to submission of the PTIS.

- 2) The section of US Route 13 where this project would have access is subject to the Corridor Capacity Preservation Program, which seeks to maintain the through capacity of certain arterial highways by managing access along them. For that reason, DelDOT may not permit a direct access to US Route 13. The developer should contact Mr. Charles Altevogt, the manager of that program, to resolve what access will be permitted before completing and submitting their preliminary TIS. Mr. Altevogt may be reached at (302) 760-2124.

Rt. 13 intersection alternatives are being reviewed as part of the TIS.

- 3) Excepting US Route 13, which is a principal arterial highway, the proposed development would have access on local roads. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore they will require right-of-way dedication along the frontage to provide any additional width needed from this project.

Per DelDOT policy, minimum right-of-way requirements will be included in final design.

- 4) The developer proposes to connect a four-lane street on the site to Discount Land Road, which is presently only two lanes wide. Without prejudging the results of the traffic impact study, DelDOT anticipates requiring the developer to widen part of Discount Land Road to include four through lanes.

Discount Land Road intersection alternatives are being reviewed as part of the TIS. The preliminary results indicate that Discount Land Road may be widened but not to a four lane road. Turn lanes and bypass lanes can be expected.

- 5) The plan appears to include the vacation and replacement of a section of Camp Road. When their plans become more definite, the developer should contact the Real Estate Section about vacating the Camp Road right-of-way. The Assistant Director of Planning, Mr. Wayne Rizzo can serve as an initial contact in that regard. Mr. Rizzo may be reached at (302) 760-2228. DelDOT points out that the proposal to vacate and replace the section of road just mentioned only addresses the east side of the existing intersection of Camp Road and US Route 13. The developer will need to examine the intersection as a whole in the preparation of the TIS and the design of any improvements there.

element design group
34634 bay crossing blvd. suite a lewes, de 1995B
p 302.645.0777 f 302.645.0177 info@elementdg.com



A realignment of Camp Road is being proposed. The design team's traffic consultant (Orth Rodgers) will coordinate with the appropriate DeDOT personnel in order to process the change correctly.

- 6) The plan includes stormwater management ponds or basins along Route 13 and Discount Land Road. These features appear to be too close to the existing right-of-way. Normally, such a pond is acceptable if two criteria are met. First, the developer must provide a 20-foot minimum buffer between the ultimate right-of-way and the top of slope of the pond. Second, the runoff from the site must be managed such that the rate and volume of the post-development runoff will not exceed the rate and volume of the pre-development runoff. Our Subdivision Manager for Sussex County, Mr. John Fiori, will make a final determination in this matter when reviewing the detailed plans for the site.

All stormwater ponds will be designed in accordance with local, state, and federal requirements. Buffer requirements for stormwater ponds adjacent to existing rights of way will be met. Run-off from the site will be managed such that pre-development runoff (rate and volume) is not exceeded.

- 7) The plan presented shows several locations on Camp Road, Colonial Road and Discount Land Road where the proposed streets would connect to those roads at something other than right angles. That will not be permitted. If the developer and the Town agree on it, the streets could be designed with curves just beyond the intersection approaches so as to minimize the need for plan changes, but we will require right-angle intersections with all State-maintained roads.

Road intersections will be modified to connect at right angles throughout the site.

- 8) The plan for the development should include a 10-foot wide shared use path in a 15-foot wide permanent easement across the frontage of the site on Camp Road, Colonial Road, Discount Land Road and Waller Road.

Comment acknowledged, however the designer would like to work with DeDOT to coordinate a safe method of pedestrian traffic along the frontage of the main roads. Unlike a typical residential subdivision, traffic volumes will be large and pedestrian safety along these corridors will be of utmost importance.

- 9) Internal to the site, the streets would necessarily be either private or municipal. Nonetheless, we offer the following advisory comments regarding the plan:
- a) In the northeast corner of the site, a proposed residential area includes four Y-shaped intersections. DeDOT recommends that they be realigned into T intersections.

Comment acknowledged and modifications to such intersections will be considered in the detailed design of the street networks.

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



- b) In the residential area just mentioned, there is a block where 30 RV parking spaces would be placed in blocks of 15 units each on opposite sides of a through street. This is an undesirable situation with regard to safety.

Comment acknowledged. This area will be re-evaluated during the detailed design phase to ensure proper access and parking is provided off of the main road.

- c) The plan includes a large oval-shaped island that may be a park and appears to have one-way traffic flow around the oval. This oval is situated in a grid street pattern such that two four-way intersections would be created with the grid streets intersecting the oval at approximately 45-degree angles. DeIDOT recommends that the plan be reworked to avoid this unsafe situation. If the oval is retained, only one street should intersect it at any one location.

Comment acknowledged and modifications to such intersections will be considered in the detailed design of the street networks. This main feature will be reviewed in advance with DeIDOT.

- d) North of the oval just mentioned, there are four no-outlet streets proposed. If the Town's comprehensive plan allows for the possible annexation of adjoining parcels, these streets should be extended to the property line and stub streets should be provided in other locations as well. Regardless of whether they become stub streets, cul-de-sacs or other turnarounds should be provided where the streets are proposed, at least temporarily, to end.

Comment acknowledged. These suggestions will be carefully reviewed as the detailed design of the residential phase begins.

- 10) The developer's site engineer should contact the DeIDOT Subdivision Manager for Sussex County, Mr. John Fiori, regarding specific requirements for road improvements and access. Mr. Fiori may be reached at (302) 760-2157.

Comment acknowledged.

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

Soils

According to the Sussex County soil survey, Evesboro, Sassafras, Kenansville, Woodstown, Klej, Fallsington, and Pocomoke were mapped on subject parcel. Evesboro is an excessively well-drained upland soil that has moderate limitations on account of its

element design group
34634 bay crossing blvd. suite a lewes, de 1995B
p 302.645.0777 f 302.645.0177 info@elementdg.com



rapid permeability. Sassafras and Kenansville are well-drained upland soils that, generally, have few limitations for development. Woodstown and Klej are moderately well-drained soil of low-lying uplands that have moderate limitations for development. Fallsington is a poorly-drained wetland associated (hydric) soil that has severe limitations for development. Pocomoke is a very poorly-drained wetland associated (hydric) soil that has the highest severity level for development.

[Comments acknowledged. Soil type and limitations will be considered in site preparation for all aspects of the site development.](#)

Wetlands

Based on Statewide Wetland Mapping Project (SWMP) mapping, palustrine wetlands were mapped along nearly the entire northern boundary and small portions of the western boundary of subject parcel. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. The developer should maintain a 100-foot vegetated buffer from the wetlands. There should not be any buildings or associated infrastructure within the buffer.

PLUS application materials indicate that wetlands have been delineated (presumably a field delineation). This delineation should be verified by the Army Corps of Engineers through the Jurisdictional Determination process. Please note that impacts to palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are nonjurisdictional isolated wetlands, the Corps must be contacted to make the final jurisdictional assessment. They can be reached by phone at 736-9763.

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

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.

Some of the mapped wetlands along the northern boundary are directly adjacent to sensitive headwater or near headwater riparian wetlands associated with an unnamed tributary (or name unknown), greatly increasing the probability of harmful impacts to surface and groundwater quality of all waters within the greater Nanticoke River watershed, and reducing the probability that the State will achieve the required TMDL nutrient reductions. Headwater streams and their associated wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system downstream. In

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



recognition of this concern, the Watershed Assessment Section strongly recommends the applicant consider preserving as much of the existing forested buffer as possible. Otherwise, a buffer width of at least 100 feet should be retained or enhanced to protect the water and habitat quality of this waterway and its associated wetlands.

A field wetland delineation is ongoing. No development will occur within the jurisdictional wetland boundaries and all local, state and federal buffer requirements will be met. The designer's/developer's intent is to maximize wetland buffers as much as possible.

Impervious Cover

Based on the information provided in the PLUS application, estimated post-construction surface imperviousness is calculated to approach 45%. Although this figure appears reasonable, it is still strongly advised that the applicant recheck that their calculation to make sure that they have included all forms of constructed surface imperviousness (i.e., all rooftops, sidewalks, and roads) in this calculation. Failure to comprehensively account for any form or its coverage may result in significant underestimate of this project's true environmental impacts.

Since studies link increases in impervious cover to decreases in water quality, the applicant is strongly encouraged to pursue best management practices (BMPs) that can 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 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 reduce surface imperviousness.

Comments acknowledged. The designer is initiating design methodologies with the Sussex Conservation District. This site will require significant BMP's to accommodate the increased impervious surface. Green Technology BMPs will be the first approach to the stormwater practices.

ERES Waters

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

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



[Comments acknowledged.](#)

TMDLs

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

[Comment acknowledged.](#)

TMDL Compliance through the Pollution Control Strategy (PCS)

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

[Mr. Lyle Jones will be contacted during final design phases for information pertaining to TMDLs.](#)

Water Supply

The information provided indicates that the Town of Laurel will provide water to the proposed projects through a central public water system. DNREC files reflect that Town of Laurel does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. According to SB 135 that was signed on June 30, 2003 by Governor Minner, 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 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

*element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com*



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.

[Comments acknowledged. We will consult with the Engineer for the Town of Laurel for design of the water supply system and all permits and applications required.](#)

Sediment and Erosion Control/Stormwater Management

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

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

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

It is strongly recommended that you contact the reviewing agency to schedule a preliminary meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion.

[Comments acknowledged. Plan review and approval will be coordinated with the Sussex Conservation District. An initial meeting with SCD has been scheduled for November 15, 2006.](#)

*element design group
34634 bay crossing blvd. suite a lewes, de 1995B
p 302.645.0777 f 302.645.0177 info@elementdg.com*



Drainage

The conceptual plan provided with the PLUS application shows numerous conflicts with tax ditch alignments and rights-of-way. The engineer/planner should contact Brooks Cahall, Division of Soil & Water Conservation, Drainage Program, at 302-855-1930, to schedule a meeting to discuss the limitations and procedures for addressing these issues.

Comments acknowledged. Per reviews with Brooks Cahall, all conflicts with Tax Ditch alignments and right-of-ways will be addressed. Final plan shall be in accordance with Tax Ditch requirements. A meeting is schedule for November 15, 2006 with the Drainage Division to discuss the tax ditch situation.

Rare Species

DNREC has never surveyed this site; therefore, it is unknown if there are state-rare or federally listed plants, animals or natural communities at or adjacent to this project site. *Accipiter cooperii* (Cooper's Hawk), a State-Endangered bird, occurs within a forested area southeast of this site and it could occur within the project area as well. This species (as well as many others) depends on larger, connected forested areas for breeding and foraging and efforts to reduce forest fragmentation should be made.

Comment acknowledged.

Site Visit Request

In order to provide more informed comments and to make reasonable recommendations, our program botanist and zoologist request the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. This would also allow the applicant the opportunity to reduce potential impacts to rare species and unique habitats and to ensure that the project is environmentally sensitive. In addition, a survey of the project site will give staff an opportunity to document the biodiversity of the property before construction activities begin. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.

Comment acknowledged. The designer/developer will contact the Department at the appropriate time to coordinate such a meeting.

Forest Preservation

According to the application, 9 out of 43 acres of forest will be removed; however, there are lots and infrastructure on tax parcel 132-12.00-123.00 that will certainly result in more than 9 acres of forest loss. There are at least 125 lots (or units) and associated infrastructure in a portion of this parcel that is entirely forested. We strongly encourage the applicant to recalculate forest loss and make a greater effort to preserve forested areas, especially on tax parcel 132-12.00-123.00. The lots (or units) and infrastructure should be relocated to a portion of the parcel that is non-forested or at the very least downsized to allow for adequate connection to adjacent forested areas. This particular forest is part of a series of connected forested areas that can provide a travel corridor and habitat for wildlife. Also leaving this forest as open space is important because

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



thousands of acres of forested lands in Delaware are being converted by development, and resident wildlife must disperse into surrounding areas which often do not contain adequate habitat. This can result in an increase in human/animal conflicts including interactions on the roadways.

Leaving a forest intact is more beneficial to wildlife than clearing. However, if clearing occurs despite this recommendation, trees should not be cleared from April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This clearing recommendation would only protect those species during the breeding season; once trees are cleared the result is an overall loss of habitat.

Comments acknowledged. Preservation of mature forest will be a major consideration during design phase. The single family section of the site will be re-evaluated during the detailed design phase in order to minimize the impacts to the forested area. In this case a forested buffer will be maintained around the parcel perimeter and the interconnections to other forested areas will be emphasized..

Plant Rescue

Since forested wetlands are to be destroyed, filled, or disturbed, it is recommended that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner. Please contact Lynn Redding at (302) 736-7726, (lynn_redding@ml.com) or William A. McAvoy at (302) 653-2880, (william.mcavoy@state.de.us).

Comment acknowledged, however final design is anticipated to respect existing wetlands and provide ample buffer from them.

Nuisance Geese

The applicant indicated that appropriate measures to address nuisance species would be taken regarding stormwater management ponds; however, specific methods were not listed. We recommend native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (at least 50 feet) around ponds. Geese do not feel as safe from predators when their view of the area is blocked and will be less likely to take up residence in the pond. 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. Because manicured lawns are attractive habitat for geese, we recommend that athletic fields and other lawn areas not be located adjacent to ponds. Geese leave droppings on lawn and paved areas and can become aggressive during the nesting season.

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

[Comment acknowledged.](#)

Recreation

This proposal provides the region with a wide variety of outdoor recreation opportunities that currently don't exist in the area. The Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings are the foundation of the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. High priorities in Western Sussex County are Walking or Jogging Paths, Picnic Areas, Bike Paths and Fishing Areas. Moderate priorities are Swimming Pools, Baseball/Softball fields, Hiking Trails, Basketball Courts, Campgrounds and Playgrounds.

The current site plan for Discovery does not show a trail system that would link its residents to the entire development and beyond. A complete trail system will: 1) fulfill the recreation need for walking and biking facilities 2) provide non-motorized opportunities for neighbors to interact in the community and 3) facilitate safe, convenient off-road access to neighboring communities and town centers, parks, public mass transit stops, schools, stores, work etc.

For additional information about the outdoor recreation priorities, contact Bob Ehemann at 739-9235.

If a trail system is planned, DNREC recommends that a series of stacking trail loops be designed with many access points and connections to adjacent communities. Community trail systems with long continuous trails, perimeter-only trails, and systems with few access points, often go unused and neglected. For trail design/construction specifications, contact Susan Moerschel at (302) 739-9235.

[Comments acknowledged. During design we will incorporate pedestrian walking/biking paths throughout the site. Non-vehicular traffic flow is an important aspect of the design. The designer is working closely with the retail, sports venue and recreational consultants to design a system for such trails.](#)

*element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com*



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.

[Comment acknowledged.](#)

Underground Storage Tanks

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

Sussex Auto Center, Inc, Facility # 5-000067, Project # S9702022

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.

[Comments acknowledged.](#)

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 107.4 tons (214,885.4 pounds) per year of VOC (volatile organic compounds), 89.0 tons (177,910.6 pounds) per year of NOx (nitrogen oxides), 65.6 tons (131,265.7 pounds) per year of SO₂ (sulfur dioxide), 5.8 ton (11,684.9 pounds) per year of fine particulates and 8,987.4 tons (17,974,889.1 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 43.3 tons (86,673.0 pounds) per year of VOC (volatile organic compounds), 4.8 ton (9,536.7 pounds) per year of NOx (nitrogen oxides), 4.0 ton (7,914.1 pounds) per year of SO₂ (sulfur dioxide), 5.1 ton (10,212.7 pounds) per year of fine particulates and 175.7 tons (351,353.1 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 17.2 tons (34,351.0 pounds) per year of NOx (nitrogen oxides), 59.7 tons (119,481.6 pounds) per year of SO₂ (sulfur dioxide) and 8,811.8 tons (17,623,536.0 pounds) per year of CO₂ (carbon dioxide).

*element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com*



	VOC	NOx	SO2	PM2.5	CO2
Mobile	107.4	89.0	65.6	5.8	8987.4
Residential	43.3	4.8	4.0	5.1	175.7
Electrical Power		17.2	59.7		8811.8
TOTAL	150.7	111.0	129.3	10.9	17974.9

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 17.2 tons of nitrogen oxides per year and 59.7 tons of sulfur dioxide per year.

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

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

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

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

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

Comments acknowledged. The developer is receptive to working with DNREC to outline energy saving and pollution reducing methods for the construction on this site. As the design evolves the developer/designer will contact the appropriate Departments to initiate such interaction.

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

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal’s Office. At the time of formal submittal,

element design group
 34634 bay crossing blvd. suite a lewes, de 19958
 p 302.645.0777 f 302.645.0177 info@elementdg.com



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 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile, Storage)
- 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. (Assembly, Business, Multi-Family, Hotel, and Townhouses)
- 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)
- 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.

b. Fire Protection Features:

- All structures over 10,000 sq.ft. aggregate will require automatic sprinkler protection installed.
- 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.

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 Sussex County Hwy, Camp Road, and Discount Land Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also,

element design group
34634 bay crossing blvd. suite a lewes, de 1995B
p 302.645.0777 f 302.645.0177 info@elementdg.com



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:

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

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”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

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.

Comments acknowledged. The water distribution and fire protection systems shall be designed in accordance with the Delaware State Fire Protection Regulations. The final design shall meet all applicable requirements and/or recommendations. Detailed engineering plans will be submitted to the Local and State agencies for the applicable reviews.

Department of Agriculture - Contact: Scott Blaier 698-4500

The Delaware Department of Agriculture has no objections to the proposed application as it is within the Town of Laurel's annexation area.

*element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com*



Most of this site has been designated as having “good” ground-water recharge potential. DNREC has mapped all ground-water recharge-potential recharge areas for the state, and a “good” rating designates an area as having important groundwater recharge qualities.

Maintaining pervious cover in excellent and good recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as “excellent” and “good” recharge areas adversely impacts the future prospects for agriculture in Delaware. The developer should make every effort to protect and maintain valuable ground-water recharge potential areas.

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

Right Tree for the Right Place

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

Native Landscapes

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

Tree Mitigation

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

Comments acknowledged. The designer/developer welcomes continued interaction with the Department.

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



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.

[Comment acknowledged.](#)

Delaware State Housing Authority – Contact Karen Horton 739-4263

This proposal is to develop 1,400 residential units in a mixed use, master planned community with residential, commercial and recreational components north of Laurel, adjacent to and east of Route 13. The location of this site in a Level 2 area, along with the emphasis on design, walkability, and youth sporting events, will make this a great community. While DSHA is encouraged that there are plans to set aside 400 units for first-time homebuyers, we are concerned that they may not reach their intended audience. Often proposals come through PLUS with units set aside for first time homebuyers, however, when the units are actually built, their price is out of reach of this target population. We encourage the developer to explore mechanisms to ensure the affordability of these units. DSHA would be glad to assist in this effort.

For informational purposes, according to the most recent real estate data collected by DSHA, the average home price in Sussex County is \$240,000. However, families earning respectively 80%-100% of Sussex County's median income only qualify for mortgages of \$133,786-\$171,216, thus creating an affordability gap of \$106,214-\$68,784. The provision of units within reach of families earning at least 80%-100% of Sussex County's median income will provide much needed housing for first time homebuyers.

[Comments acknowledged. The market and pricing for these residences are being evaluated in more detail now. Several different sizes and types of units are being proposed for Discovery. This methodology alone will provide different price points for the dwelling units. This mixed use community is intended to provide varied housing types in order to make it a self sustaining development.](#)

Department of Education – Contact: John Marinucci 739-4658

This proposed development is within the Laurel School District DOE offers the following comments on behalf of the Laurel School District.

1. Using the DOE standard formula, this development will generate an estimated 700 students.
2. DOE records indicate that the Laurel 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 Laurel School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2005 secondary enrollment.

element design group
34634 bay crossing blvd. suite a lewes, de 19958
p 302.645.0777 f 302.645.0177 info@elementdg.com



4. While the Laurel 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 Laurel School District as the development it is built-out and residential units are occupied, without additional educational infrastructure resources.

5. The DOE requests that the developer contact the Laurel School District Administration to address the issue of school over-crowding that this development will cause. It is also recommended that the developer consider dedicating some acreage within the development to the Laurel school district for a potential school site or campus. This action would align with the overall planned mixed-use community philosophy that appears to be pursued with this development. The Laurel School District contact information is Superintendent Duda at (302)875-6103.

6. DOE requests developer work with the Laurel 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.

Comments acknowledged. An educational consultant has been retained to study the impact of Discovery on the Laurel School District and will recommend suitable alternatives.

Upon your review of the above, should you have any questions or require additional information, please do not hesitate to contact this office at 302.645.0777. Thank you.

Sincerely,
Element Design Group

Douglas M. Warner, PE

Cc:
Town of Laurel
Bobby Horsey – Discovery LLC
Wendy Baker – Ocean Atlantic

element design group
34634 bay crossing blvd. suite a lewes, de 1995B
p 302.645.0777 f 302.645.0177 info@elementdg.com