



Landscape Architecture
New Urbanism Design
Land Use Planning/Permitting
Community Design
Prime Consultant – Project Management

November 6, 2008

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

Jamie Smith, Operations Manager
201 Mechanic Street
P. O. Box 210
Laurel, DE 19956
Town of Laurel, Delaware

RE: PLUS review – PLUS 2008-09-12; Village Brooke West

Dear Mrs. Holland and Mrs. Smith:

We appreciated the opportunity to meet with State agency planners on September 27, 2008 to discuss the proposed plans for the Village Brook West project to be located north east of County Road 468, southwest of Route 13 within the Town of Laurel. As directed, following receipt of the October 22, 2008 comments letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

This document represents our written response to comments received. Our response to each State agency comment is given in red and introduced into the body of the original letter below.

DEVELOPER RESPONSE

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 propose rezoning is located within an Investment Levels 2 and 3 according to the State Strategies for Policy and Spending and seeks a rezoning of 88.51 acres and a site plan approval through the Town of Laurel for 369 residential units. It should be noted that this project is part of a larger project also seen through PLUS this month as Village Brooke East and Village Brooke North.

Street Design and Transportation

- Discount Land Road is classified as a local road. 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 DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project. **Developer will comply with right-of-way dedications as required by DelDOT published regulations and requirements.**
- DelDOT will also require that a sidewalk or a paved multi-modal path be provided across the frontage of the site. **Acknowledged.**
- DelDOT appreciates from its title that the developer may be unwilling to change the Amended Final Master Plan included in the PLUS application, however, DelDOT offers the following comments on it nonetheless:
 - a) The plan shows a storm water management pond that may be too close to Discount Land Road. **Adjustments to pond location will be made as necessary to comply with DelDOT published regulations and requirements during the construction document preparation phase.**
 - b) Two long blocks of Village Brooke West Lane are divided longitudinally by long open space areas labeled as parks. This design raises several concerns. First, from the plan it is not clear whether the streets on either side of the park will both be two-way or represent a one-way pair. If they

are both two-way, they will need separate names and their intersections with other streets are too close together. If they are a one-way pair, they should be clearly labeled (and signed) as such. In either case, their intersections with Mockingbird Lane and Forget-Me-Not Lane are likely to be confusing to drivers and should be redesigned. An identical street/park configuration exists in a Sussex County planned community situated on Route 88 known as Paynter's Mill where streets on either side of the park or community green are two-way. There have been no reports of confusion or traffic safety issues over the past five years since construction.

In addition to DelDOT's concerns about street design, the "park" areas in the median of Village Brooke West Lane should be reconsidered. If they are intended as a landscaped median, primarily for aesthetic purposes, they seem needlessly wide. If they are intended for use as parkland, they should be made wider, or perhaps relocated and reconfigured. Surrounding these parks with streets, means that all park users must necessarily cross a street to use them and minimizes the amount of usable recreation space in them. The "village green" is intended as both a park and open space area for use and enjoyment by the residents. As a tree lined open area, this feature should also serve a positive aesthetic purpose for residents and visitors to the community and to homes fronting directly onto this green feature.

- c) DelDOT recommends that a bicycle and pedestrian connection be provided to the adjacent apartment complex south of the site, possibly as an extension of Mockingbird Lane. DelDOT has issued an entrance permit for this project which requires the construction of a multi-modal path ten (10) feet in width across the entire Discount Land Road frontage of the site. This bicycle/pedestrian path constitutes a connection to the adjacent apartment complex while maintaining the privacy and security of Village Brooke West residents.
- a) DelDOT recommends that Sugar Maple Lane, Meadowsweet Lane, River Birch Lane and Green Brier Lane be designed with cul-de-sacs or other turnarounds, so that visitors do not have to back out or turn around in someone's driveway. The use of cul-de-sacs requires additional pavement, produces additional impervious area and creates additional expense which must be passed along to the purchaser. The dead-end street designs illustrated fully comply with the State Fire Prevention Regulations allowing emergency vehicle accessibility.

This office has received the following comments from State agencies:

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

The propose rezoning is located within an Investment Levels 2 and 3 according to the State Strategies for Policy and Spending and seeks a rezoning of 88.51 acres and a site plan approval through the Town of Laurel for 369 residential units. Based upon the information provided by the applicant and the Town of Laurel, this office has no objections to the re-zoning; however, the applicant is encouraged to work closely with the Town to ensure compliance with the Town’s comprehensive land use plan and to address any concerns or recommendations raised within this report.

State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685

No comments received

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) A traffic impact study (TIS) would be warranted for this development if the plans were accepted for review by the Town after March 31, 2008. However, a TIS will be required for Village Brooke North. The traffic from this development and Village Brooke East will be included in that TIS and we anticipate making recommendations that could be applied to these developments as well. Therefore separate studies for each development do not seem necessary. The developer’s traffic engineer (Orth-Rodgers & Associates) has met with DelDOT and a written Traffic Impact Study “Scope” in connection with the Village Brooke North application has been finalized.
- 1) Discount Land Road is classified as a local road. 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 DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project. Developer will comply with right-of-way dedications as required by DelDOT published regulations and requirements.
- 2) DelDOT will also require that a sidewalk or a paved multi-modal path be provided across the frontage of the site. The developer’s site engineer should contact our Subdivision Manager for western Sussex County, Mr. Derek Sapp, regarding our specific requirements. Mr. Sapp may be reached at (302) 760-4803. Acknowledged.
- 3) DelDOT appreciates from its title that the developer may be unwilling to change the Amended Final Master Plan included in the PLUS application, however, DelDOT offers the following comments on it nonetheless:

- d) The plan shows a storm water management pond that may be too close to Discount Land Road. Such a pond would be acceptable if the developer provides a 20-foot minimum buffer between the ultimate right-of-way and the top of slopes of the pond and the runoff from the site is managed such that the rate and volume of the post-development runoff would not exceed the rate and volume of the pre-development runoff. However, DelDOT would prefer that the ponds be placed farther from the road. **Adjustments to pond location will be made as necessary to comply with DelDOT published regulations and requirements during the construction document phase of the project.**
- e) Chapter 3 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access provides criteria for designing a site plan sufficient to obtain a Letter of No Objection. Of particular relevance here are the criteria concerning linkage streets (a.k.a stub streets). DelDOT standards require that linkage streets serving up to 3,000 vehicles per day be spaced an average of 660 feet apart and that linkage streets serving higher volumes be spaced an average of 1,320 feet apart. At least one linkage street (stub street) should be provided to the William Beyer property (Tax Parcel 2-32-12-39.02). **If required by the Town of Laurel, the applicant will set aside a right-of-way for a future connection by the Town of Laurel between Village Brooke West and the lands N/F William Beyer. The connection of these two properties would necessitate the crossing of a Federal jurisdictional wetland area that was delineated by the developer's environmental consultant. As pointed out in the Village Brooke East PLUS letter, DNREC agency representatives discourage "segmenting" natural forested pathways such as this boundary drainage-way feature. Introducing a crossing of this sensitive area may create an issue for the Town of Laurel in the future.**
- f) Two long blocks of Village Brooke West Lane are divided longitudinally by long open space areas labeled as parks. This design raises several concerns. First, from the plan it is not clear whether the streets on either side of the park will both be two-way or represent a one-way pair. If they are both two-way, they will need separate names and their intersections with other streets are too close together. If they are a one-way pair, they should be clearly labeled (and signed) as such. In either case, their intersections with Mockingbird Lane and Forget-Me-Not Lane are likely to be confusing to drivers and should be redesigned. **An identical street/park configuration exists in a Sussex County planned community situated on Route 88 known as Paynter's Mill where streets on either side of the park or community green are two-way. There have been no reports of confusion or traffic safety issues over the past five years since construction.**

In addition to DelDOT’s concerns about street design, the “park” areas in the median of Village Brooke West Lane should be reconsidered. If they are intended as a landscaped median, primarily for aesthetic purposes, they seem needlessly wide. If they are intended for use as parkland, they should be made wider, or perhaps relocated and reconfigured. Surrounding these parks with streets, means that all park users must necessarily cross a street to use them and minimizes the amount of usable recreation space in them. **The “village green” is intended as both a park and open space area for use and enjoyment by the residents. As a tree lined open area, this feature should also serve a positive aesthetic purpose for residents and visitors to the community and to homes fronting directly onto this green feature.**

- g) DelDOT recommends that a bicycle and pedestrian connection be provided to the adjacent apartment complex south of the site, possibly as an extension of Mockingbird Lane. **DelDOT has issued an entrance permit for this project which requires the construction of a multi-modal path ten (10) feet in width across the entire Discount Land Road frontage of the site. This bicycle/pedestrian path constitutes a connection to the adjacent apartment complex while maintaining the privacy and security of Village Brooke West residents.**

- b) DelDOT recommends that Sugar Maple Lane, Meadowsweet Lane, River Birch Lane and Green Brier Lane be designed with cul-de-sacs or other turnarounds, so that visitors do not have to back out or turn around in someone’s driveway. **The use of cul-de-sacs requires additional pavement, produces additional impervious area and creates additional expense which must be passed along to the purchaser. The dead-end street designs illustrated fully comply with the State Fire Prevention Regulations allowing emergency vehicle accessibility.**

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

Soils

According to the NRCS soil survey update, Pepperbox-Rosedale complex (PsA), Klej (KsA), and Hurlock (HvA) were mapped in the immediate vicinity of the combined parcel project area (See figure 1). Pepperbox-Rosedale complex is a moderately well-drained to well-drained upland soil that has moderate to few limitations. Klej is a somewhat poorly-drained transitional soil (i.e., upland/wetland interface) likely to have both wetland and upland soil components. Hurlock is a poorly-drained wetland associated (hydric) soil that has severe limitations for development. Approximately 10 percent of the soils mapped on the combined parcel project area were mapped as

Hurlock. The Hurlock soils are generally associated with the mapped wetlands on the site which have not been proposed for development.

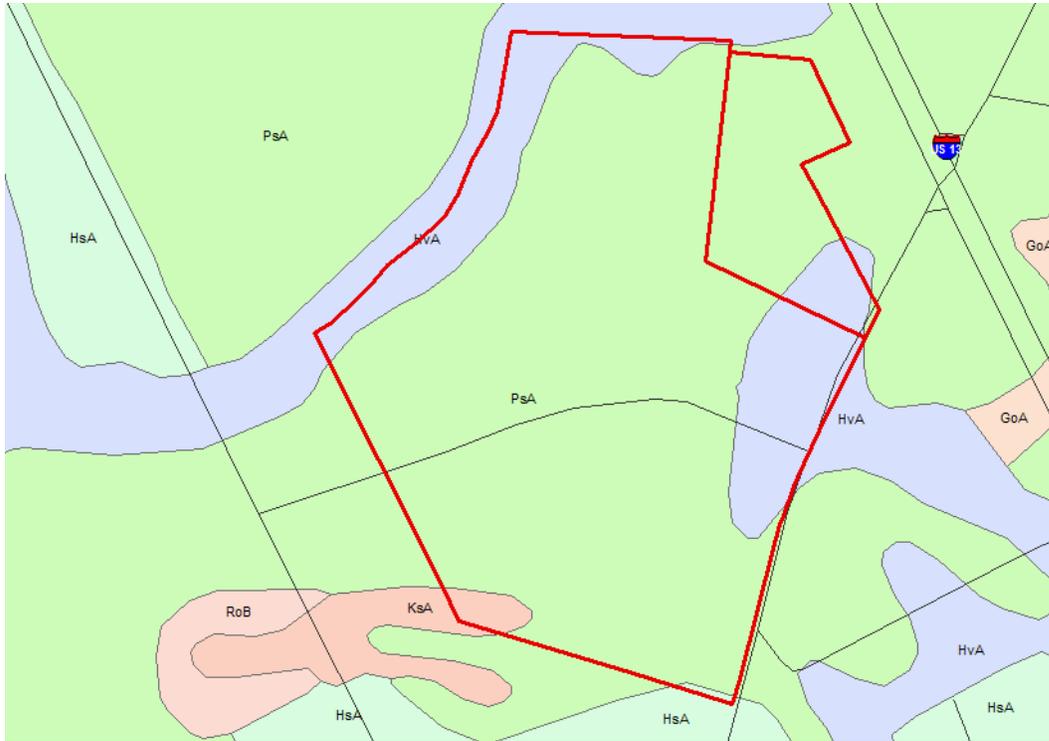


Figure 1: NRCS soil survey mapping in the immediate vicinity of Village Brook West

Wetlands

Based on Statewide Wetlands Mapping Project (SWMP) mapping, palustrine forested riparian wetlands (PFO1C7) and non-riparian palustrine wetlands (PFO4A), bound the entire northern and western boundaries of the proposed project area (See figure 2). The developer has retained JCM Environmental to field delineate the Federal jurisdictional wetlands on the site. The field delineation was surveyed by the project land surveyor and illustrated upon a Wetland Boundary Survey and upon the Preliminary Site Plan. All Federal jurisdictional wetlands identified have been avoided on the land use plan and not proposed for any form of development or disturbance.

Additional unmapped wetlands are likely in the vicinity of the Hurlock soil mapping unit (See figure 1).

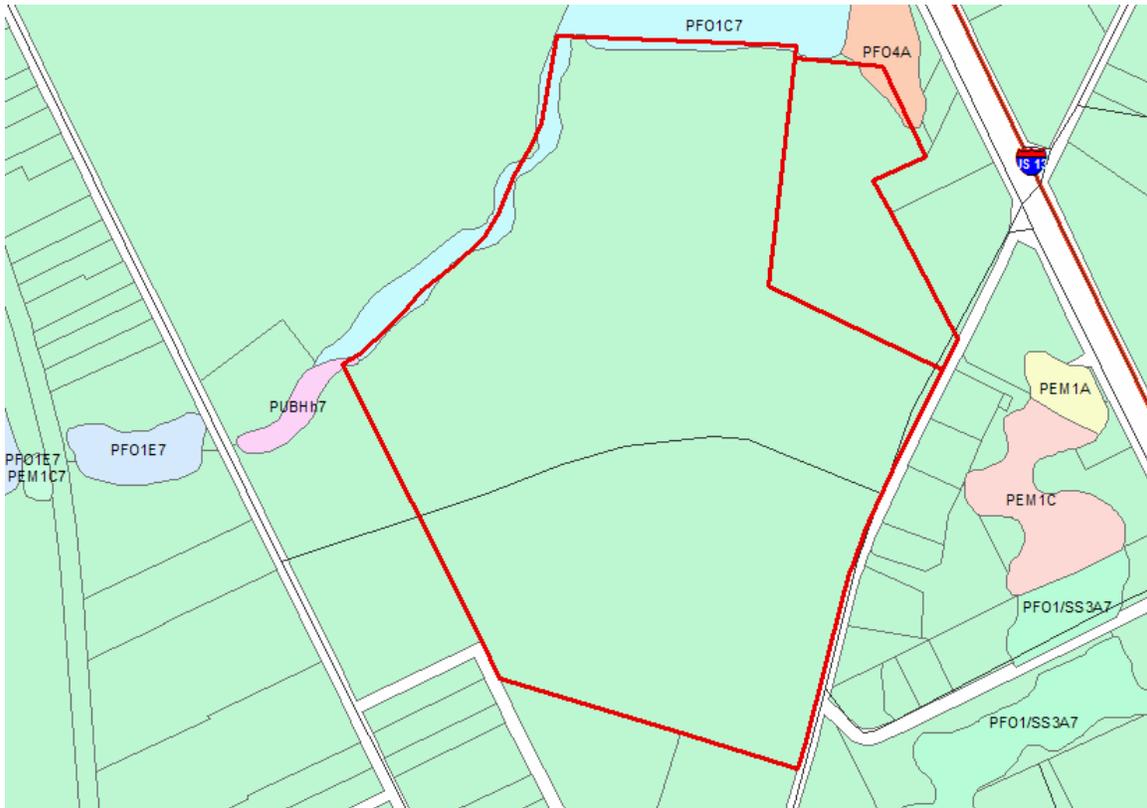


Figure 2: SWMP mapping in the immediate vicinity of Village Brooke West

A blue line stream flows along the northwest property boundary. Any work that is conducted in the stream may need a Subaqueous Lands Permit. Additionally, a vegetated buffer next to the stream may be required by the Town or County. **The stream was identified and accurately located by aerial topographic mapping during the early planning stages of the proposed development. The land use plan was prepared in such a manner as to avoid the need for any filling or disturbance to this stream.**

The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C. Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section. **The developer has retained the services of JCM Environmental to delineate both State and Federal jurisdictional wetlands prior to preparation of the land use plan in order that all wetlands impacts would be avoided and to eliminate the need for any permits in these environmentally sensitive areas.**

In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Please contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks. **The developer has retained the services of JCM Environmental to delineate both State and Federal jurisdictional wetlands prior to preparation of the land use plan in order that all wetlands impacts would be avoided and to eliminate the need for any permits in these environmentally sensitive areas.**

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or “the Corps”) manual is the only acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations. To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant’s consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763. **The developer has retained the services of JCM Environmental to delineate both State and Federal jurisdictional wetlands prior to preparation of the land use plan in order that all wetlands impacts would be avoided and to eliminate the need for any permits in these environmentally sensitive areas.**

Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements - A Review*. J. Environ. Qual. 23: 878-882), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands.

The State and Federal jurisdictional wetland area in its entirety will be left undisturbed before, during and after construction of this project. While a buffer of varying width is

allowed for in the current land use plan, the developer is unable to expand that buffer to the recommended 100' width and maintain residential densities that promote affordable housing pricing.

As mentioned previously, a significant portion of this parcel contains poorly-drained wetland associated (hydric) Hurlock soils (approximately 10 %) which have a seasonal high water table occurring at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or “nor’easters.” This is in addition to increased flooding probabilities from surface water runoff emanating from future created forms of structural imperviousness (e.g., rooftops, roads, sidewalks, and stormwater management structures).

Based on the Chapter 99, Section 16A of the Sussex County Code (paraphrased), lands compromised by improper drainage or flooding potential pose significant threats to the safety and general welfare of future residents and, therefore, shall not be developed. Soils mapped as Hurlock fit the criterion for improper drainage or high flooding potential, and should be avoided. The Watershed Assessment Section believes permitting development on such soils would be inconsistent with above-mentioned regulatory guidelines in the Sussex County Code. **The developer acknowledges this soils issue and will take the necessary engineering precautions to insure that all proposed new housing and associated infrastructure are protected from possible flooding. These Hurlock soils generally are associated with the Federal jurisdictional wetlands which have been delineated by JCM Environmental and avoided on the land use plan.**

As noted previously, the palustrine headwater riparian wetlands bound the northern and western boundaries of the combined parcel project area. Headwater riparian wetlands serve to protect water quality which helps maintain the ecological integrity and functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since headwater riparian wetlands serve as natural buffers that protect the water and habitat quality of streams from sediment and nutrient-laden runoff, their protection deserves the highest priority. Therefore, the Watershed Assessment Section strongly recommends that a 100-foot upland buffer be maintained or established from the stream and headwater riparian wetlands associated with the Hood’s Branch. A literature review of existing buffer research by Castelle et al. (1994) has documented consensus among researchers that a 100-foot upland buffer is the minimum buffer width necessary, under most circumstances, to protect water quality. **The State and Federal jurisdictional wetland area in its entirety will be left undisturbed before, during and after construction of this project. While a buffer of varying width is allowed for in the current land use plan, the developer is unable to expand that buffer to the recommended 100' width and maintain residential densities that promote affordable housing pricing.**

Impervious Cover

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 this project's 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. **The developer will direct the project civil engineers to consider BMPs to reduce or mitigate impervious cover impacts. The developer has committed to the Town of Laurel that considerable tree plantings (2 street trees per dwelling unit) as well as shrubs and groundcovers will be installed in all Village Brooke communities.**

ERES Waters

This project is located adjacent to receiving waters of the Nanticoke watershed, which Broad Creek is a part of, and designated as having waters of Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Moreover, provisions defined in subsection 5.6.3.5 of same section, specially authorize the Department to mandate BMPs to meet standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants. **The developer has retained the services of JCM Environmental and will direct them to develop a site specific "pollution control strategy" using BMPs that will be subject to the review and approval of the Sussex Conservation District.**

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Broad 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 Broad Creek watershed, "target-rate-nutrient reductions" of 30 and 50 percent will be required for nitrogen and phosphorus, respectively. Additionally, "target-rate-reductions" of 2

percent will be required for bacteria. **The developer acknowledges this responsibility and will retain competent environmental consultants to develop a plan for the “target-rate-nutrient reductions” called for in current regulations.**

TMDL Compliance through the PCS

As indicated above, TMDLs for nitrogen and phosphorus have been proposed for the Broad Creek watershed. The TMDL calls for a 30 and 50 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 2 percent reduction in bacteria. 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 wider vegetated buffers along watercourses/wetlands, increasing the amount of passive, wooded open space, use of pervious paving materials to reduce surface imperviousness, and deployment of green-technology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool. **The developer acknowledges this responsibility and will retain competent environmental consultants to develop a plan for the “target-rate-nutrient reductions” using the PCS framework called for in current regulations.**

Water Supply

The information provided indicates that the Town of Laurel will provide water to the project(s) through a central public water system. Our files reflect that the Town of Laurel Utilities does not currently hold a Certificate of Public Convenience and Necessity (CPCN) to provide public water to this parcel (Parcel Identification #'s 2-32-12.00-60.00); however, the other parcel (Parcel Identification #'s 2-32-12.00-39.00) is located within the public water service area granted to The Town of Laurel under CPCN 95-CPCN-12. 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)736-7547. 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. **By copy of this written response to PLUS comments, we are notifying the Town of Laurel accordingly.**

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. **Acknowledged.**

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

Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there is an Underground Storage Tank associated with Laurel Save located within 1000 feet of the proposed project. **Acknowledged.**

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

Sediment and Erosion Control/Stormwater Management

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. 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) 856-2105 for details regarding submittal requirements and fees. **Acknowledged.**
- Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals. The Sediment and Stormwater Management Program ensures that sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we 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. **Acknowledged.**

Drainage

- 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. **Acknowledged.**
- 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. **Acknowledged.**
 - The Drainage Program recommends the creation of a maintenance plan for the branch on the northwest side of this subdivision. Identify maintenance access points and spoil disposal areas on the sediment and stormwater plans. **The developer is willing to cooperate in the creation of a maintenance plan for the branch. Please supply the necessary contact information.**

Riparian Buffer

The application states that there will be disturbance within 100 feet of Hood Branch, and it doesn't specify how wide a buffer they are going to leave intact. In addition, buffer widths are not noted on the site plan. Upland buffers along wetlands and water courses are utilized by wildlife for foraging, resting and breeding. These buffers also form a travel corridor between wildlife habitats. In terms of providing adequate wildlife habitat and to protect water quality, upland buffers should be at least 100 feet in width. This is a fairly large development with a proposed 42% impervious surface (existing estimated to be 0.44%). Cumulative impacts are a concern, especially along a tributary that already has inadequate buffers along most of its length downstream.

Recommendations:

1. From what can be determined from the site plan approximately 24 small villas (#156-#167 & #358-#369), 6 large villas (#168-#172) and a stormwater management pond may be within 100 feet of the tributary. If this is the case, these features should be omitted from the site plan or relocated. **Omitting 30 residential units on the plan would have a significant negative impact to providing affordable housing on this site. Every effort will be made to preserve existing natural vegetation for the reasons given. As the land use plan illustrates, the Federal jurisdictional wetland corridor will remain intact as a connection to off-site existing forested and non-forested areas. Considerable numbers of replacement vegetation in the form of trees, shrubs and groundcovers are planned in areas which are currently open agricultural lands.**

2. If the existing vegetation along Hood Branch is less than 100 feet in width, we recommend plantings of native plants to a width of at least 100 feet. This 100-foot buffer should not contain lot lines. **See above response.**

Nuisance Waterfowl

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. **The wet ponds necessary for storm water management on this site shall be designed and constructed to current “Pond Code” standards. Vegetated pond edge buffers will be planted with native species and professionally managed to control plant community variety as a part of project construction to minimize or eliminate the nuisance waterfowl issue. The HOA documentation will require the home owners to contract with a qualified environmental firm to regularly inspect and maintain pond plant communities as designed.**

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, the property owner/land manager 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. **See above response.**

Recommendation: DNREC recommends native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds. When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond. The vegetation also blocks the ability to easily move between land and water. **Acknowledged.**

At this time, DNREC does not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) may become a burden to the property owner/land manager. **Acknowledged.**

Under/Aboveground Tanks

There is one (1) inactive LUST site located within a quarter mile from the proposed project:

Name: Laurel Save
Facility ID: 5-000285
Project: S9911248

Should any underground storage tanks or petroleum contaminated soil be discovered by any person during construction, the DNREC-TMB at (302) 395-2500 and the DNREC Emergency Response Hotline at (800) 662-8802 must be notified within 24 hours.

Should any contamination be encountered, PVC pipe materials will have to be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

Also, please note that if any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.

Acknowledged.

Air Quality

Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Village Brooke West development may have.

Emissions Attributable to Village Brooke West Subdivision (Tons per Year)

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Direct Residential	11.4	1.3	1.0	1.3	46.3
Electrical Power Generation	ND*	4.5	15.7	ND*	2,322.5
Mobile	28.3	23.4	17.3	1.5	2,368.8
Total	39.7	29.2	34.0	2.8	4,737.6

(*) Indicates data is not available.

Note that emissions associated with the actual construction of the subdivision, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

Recommendations:

The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:

Regulation 6 - Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> • Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Using covers on trucks that transport material to and from site to prevent visible emissions.
Regulation 1113 – Open Burning	<ul style="list-style-type: none"> • Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibiting the burning of land clearing debris. • Prohibiting the burning of trash or building materials/debris.
Regulation 1145 – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> • Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing only energy efficient homes.** Energy Star qualified homes are up to 30% more energy efficient than typical homes. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and

upgraded water-heating equipment. Every percentage of increased energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.

- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions.
- **Funding a lawnmower exchange program.** New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees at residential units and in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality. The applicant should submit a plan to the DNREC Air Quality Management Section which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Village Brooke West development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402. **Acknowledged.**

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

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

the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- Where a water distribution system is proposed for townhouse type dwellings it shall be capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

b. **Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfare(s) must be constructed so fire department apparatus may negotiate it. If a “center island” is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

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

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

d. **Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures. **Acknowledged.**

Department of Agriculture - Contact: Scott Blaier 739-4811

The Delaware Department of Agriculture has no objections to the proposed development. The project is located within the Town of Laurel, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 1 areas.

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.

Do Not Plant List

Due to the high risk of mortality from insects and disease, the Delaware Forest Service does not recommend planting any of the following species:

Callery Pear
Leyland Cypress
Red Oak (except for Willow Oak)
Ash Trees

Please contact the Delaware Forest Service for more information at (302) 698-4500.

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- **Acknowledged.**

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. **Acknowledged.**

Delaware Division of Public Health- Health Promotion Bureau- contact Michelle Eichinger (302) 744-1011

As a way to promote physical activity and access to healthy foods, we recommend that the following amenities be included in the Village Brook West plan:

Amenities to encourage active transportation

- Ensure that there are sidewalks, crosswalks and walking/bicycling paths connecting the residential developments to the neighboring commercial development. Further, ensure there is a way to connect paths in the developments and existing paths. **The land use plan presented to the Town of Laurel for consideration illustrates a well developed system of sidewalks and interior path systems interconnecting residences to community amenities, and to each other. These pedestrian and bicycle systems are also intended to connect residents to similar systems that exist or may exist in the greater Laurel community.**
- Designate bike paths to supplement the sidewalks already proposed in the plan so that residents can travel by foot or by bicycle. In addition, install bike racks in convenient locations around the property, including areas around the neighborhood community center. **Acknowledged. As stated in the PLUS presentation, the applicant intends to develop the multi-modal path system to accommodate electric vehicles such as golf carts to allow residents to move about the community.**

Amenities to encourage active recreation

- Designate open space for active recreation for the residents in this community. Consider including a picnic area, as well as, tennis courts, basketball courts, shuffleboard, or horseshoe areas. **Acknowledged. As the plan moves forward from Preliminary Site Plan to a more detailed land use plan, active recreation alternatives will be given serious consideration.**
- Even though this is an active adult community, the incorporation of playgrounds would provide active recreation opportunities for children who visit. If feasible, consider including a walking path around the playground areas. **Acknowledged. Ample area for this use is found in the central amenities area at the end of the village green and serious consideration will be given to this suggestion.**

Increase opportunities for healthy eating

- Consider including a community garden in areas close to the neighborhood activity centers. Community gardens not only provide opportunities for community engagement, but they also provide access to fresh produce and, as well as an opportunity for physical activity. **Acknowledged. Ample area for this use is found in the central amenities area at the end of the village green and serious consideration will be given to this suggestion.**

Delaware State Housing Authority – Contact Vicki Powers 739-4263

This proposal is for a site plan review of 369 residential units on 88 acres located on Discount Land Road, northwest of the intersection with US 13 within the Town of Laurel. According to the *State Strategies Map*, the proposal is located in an Investment Level 1 area. **DSHA supports this proposal because residents will have proximity to services, markets, and employment opportunities. Furthermore, the proposal targets this development as an active adult community.** According to the most recent real estate data collected by DSHA, the median home price in Sussex County is \$260,000. However, households earning respectively 100% of Sussex County’s median income only qualify for mortgages of \$164,791, thus creating an affordability gap of \$95,209. **Furthermore, the elderly are the fastest growing segment of our population, specifically in Sussex County.** We encourage both the Town of Laurel and the developer to coordinate setting aside some of the units to be affordable to the elderly low- and moderate-income households. The provision of units within reach of households earning at least 100% of Sussex County’s median income will ensure housing that is affordable to the elderly population. **Based upon current Village Brooke East economic projections, the affordability targets given above are fully achievable on this site.**

PLUS – 2008-09-12
Village Brooke West

Department of Education – Contact: John Marinucci 735-4055

No comments received.

Sussex County – Contact: Richard Kautz 855-7878

The town is encouraged to avoid the creation of new enclaves when annexing, to eliminate existing enclaves during its negotiation of the annexation agreement, and to notify the Sussex County Planning Department when the annexation becomes effective. Also, the Town is encouraged to require adequate buffers to protect the adjacent agricultural activities.

No comment about the project. The site is to be entirely within the town limits and does not directly impact County services or properties outside the town limits.

END DEVELOPER RESPONSE

This concludes our written response to State agency planners. As always, if you should have questions regarding any aspect of this project, please do not hesitate to contact our office accordingly.

Sincerely,
Land Tech Land Planning, LLC

Jeffrey A. Clark, R.L.A.

cc: Mr. Michael Pouls