



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

November 6, 2008

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

Jamie Smith, Operations Manager  
Town of Laurel  
201 Mechanic Street  
Laurel, DE 19956

**RE: PLUS review – 2008-09-13; Village Brooke East**

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 East project to be located east of Route 14 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**

The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as the Town of Laurel is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the Town. **It is understood that permits and approvals are required from all involved regulatory agencies including Federal, State and the Town of Laurel.**

### **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 proposed project is located within an Investment Level 1 according to the State Strategies for Policy and Spending and calls for the 284 residential units on 77.56 acres adjacent to the Town of Laurel.

It should be noted the applicant has or has been annexed into the Town of Laurel in compliance with their most recent certified comprehensive land use plan.

### **Street Design and Transportation**

- 1) US Route 9 is classified as a minor arterial highway and 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 40 feet from the centerline on minor arterial highways and 30 feet from the centerline on local roads. Therefore we 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 require the developer to provide a 15-foot wide permanent easement along the property frontage on both roads and to provide a 10-foot wide shared use path within that easement on Discount Land Road. **Agreed.**
- 3) DelDOT appreciates that the Preliminary Master Plan included in the PLUS application may be somewhat conceptual. They offer 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) DelDOT recommends that dead end streets 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 and that where possible the dead end streets be extended to tie back into the internal street system. **The dead end design as proposed reduces asphalt pavement and the associated impervious area negative environmental impact. Pavement reduction also eliminates extra expense allowing a more affordable home to be offered. The developer prefers to retain the design which is fully in compliance with the Delaware State Fire Prevention Regulations for emergency vehicle accessibility.**
  
- c) DelDOT recommends that an internal connection be provided to the self-storage area so that residents can visit their storage units without using Discount Land Road. **The self-storage area is available to residents and owners of all Village Brooke communities (West, East and North). While it may be more convenient for Village Brooke East residents to access the facility from an internal connection, the opposite would be true for the residents of the other two larger communities. The developer prefers to retain the design.**

### **Natural and Cultural Resources**

- Rogers Branch, a blue line stream, flows across the southeast corner of the property that will be impacted by the proposed development. This blue line feature on the property is subject to the requirements of the State Subaqueous Lands Regulations and cannot be filled in without a permit from the Wetlands and Subaqueous Lands office. Options for the project include redesigning around the blue line features. The developer may be able to mitigate; however, to do so, they may have to reduce the size of the project. **The developer does not wish to fill in any portion of the Rogers Branch as a part of this project.**
  
- The Drainage Program recommends the creation of a maintenance plan for Rogers Branch. The Drainage Program recommends a maintenance area on each side of Rogers Branch. The area should be dedicated open space and utilized for mechanized maintenance, and possible spoil placement, if the branch requires periodic maintenance or future re-construction. **The developer is willing to cooperate in the creation of a maintenance plan for Rogers Branch. Please supply the necessary contact information.**

- To adequately protect water quality and to provide wildlife habitat, this buffer should be at least 100 feet in width. There are both lots and infrastructure within 100 feet of this riparian wetland area (in southeastern quadrant of plan) and they should be pulled out of the buffer zone. **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.**

This office has received the following comments from State agencies:

**Office of State Planning Coordination – Contact: 739-3090**

The proposed project is located within an Investment Level 1 according to the State Strategies for Policy and Spending and calls for the 284 residential units on 77.56 acres adjacent to the Town of Laurel. **This Office has no objection to the proposed and encourages the applicant to work closely with the Town of Laurel and State agencies to address any concerns or recommendations outlined in this report.**

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

No comments received

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

- 4) 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 West 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.**
- 5) US Route 9 is classified as a minor arterial highway and 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 40 feet from the centerline on minor arterial highways and 30 feet from the centerline on local roads. Therefore we 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.**

- 6) DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage on both roads and to provide a 10-foot wide shared use path within that easement on Discount Land Road. **Developer will comply.**
- 1) DelDOT appreciates that the Preliminary Master Plan included in the PLUS application may be somewhat conceptual. They offer 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) DelDOT recommends that dead end streets 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, and that where possible the dead end streets be extended to tie back into the internal street system. See Chapter 3 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access regarding connectivity within developments and Chapter 5 regarding the design of cul-de-sacs and other turnaround features. **The dead end design as proposed reduces asphalt pavement and the associated impervious area negative environmental impact. Pavement reduction also eliminates extra expense allowing a more affordable home to be offered. The developer prefers to retain the design.**
  - f) DelDOT recommends that an internal connection be provided to the self-storage area so that residents can visit their storage units without using Discount Land Road. **The self-storage area is available to residents and owners of all Village Brooke communities (West, East and North). While it may be more convenient for Village Brooke East residents to access the facility from an internal connection, the opposite would be true for the residents of the other two larger communities. The developer prefers to retain the design.**
- 2) DelDOT recommends that the developer's site engineer contact our Subdivision Manager for western Sussex County, Mr. Derek Sapp, for more detailed comments. Mr. Sapp may be reached at (302) 760-4803. **Developer shall contact Mr. Sapp for more detailed comments.**

**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), Glassboro (GoA), Udorthents (UdB), and Hurlock (HvA) were mapped in the immediate vicinity of the proposed construction (See figure 1). Pepperbox-Rosedale complex is a moderately well-drained to well-drained upland soil that has moderate to few limitations. Glassboro is a somewhat poorly-drained transitional soil (i.e., upland/wetland interface) likely to have both wetland and upland soil components. Udorthents are soils with variable site-specific limitations which have been extensively modified through excavation, filling or grading activities. Hurlock is a poorly-drained wetland associated (hydric) soil that has severe limitations for development. Approximately 10% of the soils mapped on subject parcel(s) lands were mapped as Hurlock. Hurlock soils, as mentioned previously, have severe limitations for development and should not be developed. **The Hurlock soils are generally associated with the mapped wetlands on the site which have not been proposed for development.**

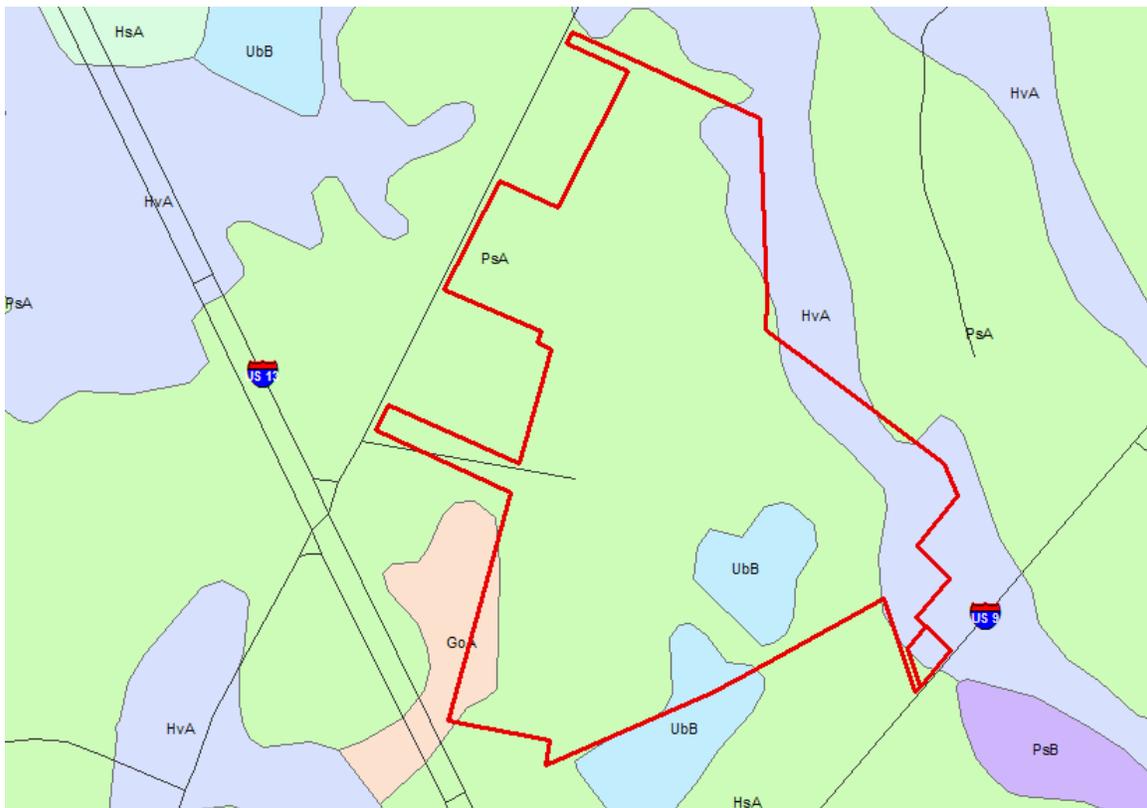


Figure 1: NRCS soil survey update mapping in the immediate vicinity of Village Brook East

## Wetlands

Based on Statewide Wetlands Mapping Project (SWMP) mapping, palustrine forested scrub-shrub forested (PSS3/F01A), palustrine forested (PF01A), Palustrine emergent (PEM1Cx), and Palustrine unconsolidated bottom (PUBHx; an excavated pond) wetlands were mapped in the immediate vicinity of the proposed construction (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.

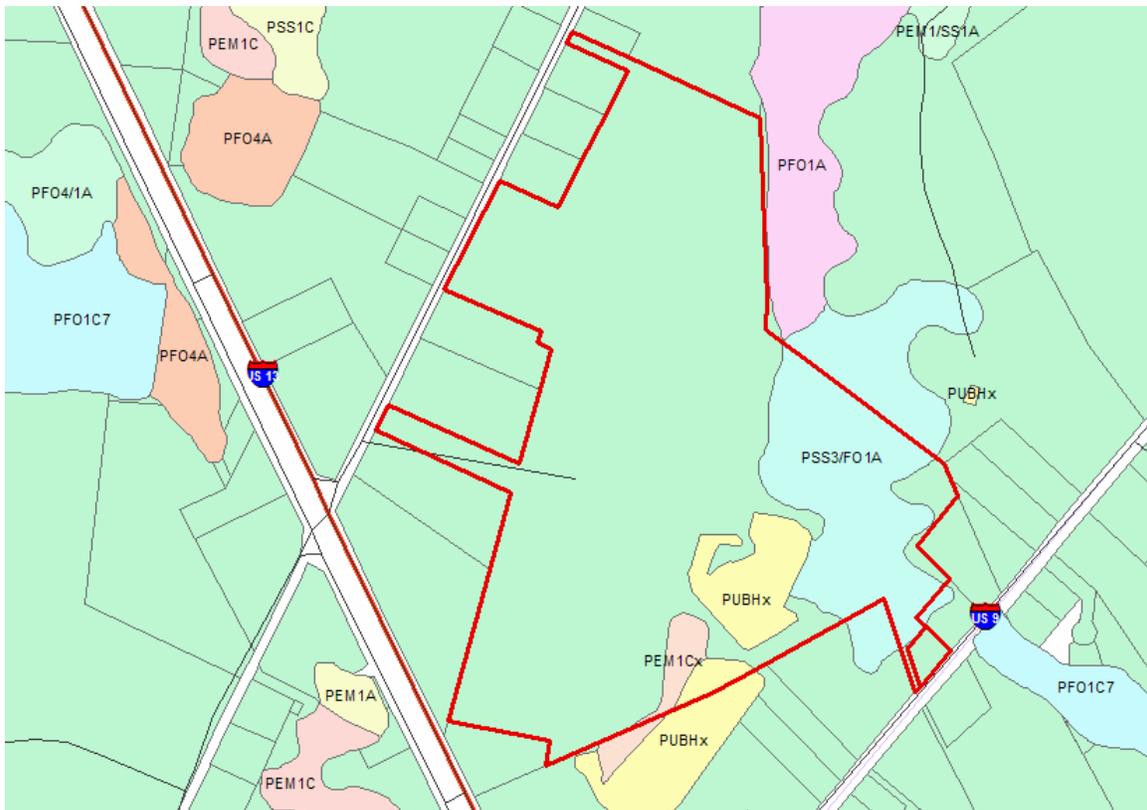


Figure 2: SWMP mapping in the immediate vicinity of Village Brooke East

Rogers Branch, a blue line stream, flows across the southeast corner of the property that will be impacted by the proposed development. This blue line feature on the property is subject to the requirements of the State Subaqueous Lands Regulations and cannot be filled in without a permit from the Wetlands and Subaqueous Lands office. Options for the project include redesigning around the blue line features. The developer may be able to mitigate; however, to do so, they may have to reduce the size of the project. The Rogers Branch 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 Rogers Branch.

DNREC could not find any record of a jurisdictional determination on the property. They may want to request one, as most developers do, to determine if all or just a portion of the blue line features are jurisdictional under State regulations. Additionally, the SWMP maps show wetlands regulated by the Corps of Engineers on the southeast part of the property next to Rogers Branch where there is proposed development. The developer should contact the Corps of Engineers to get a jurisdictional determination for the property. **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 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. **Please refer to responses above.**

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 or constructed forms of structural imperviousness (e.g., rooftops, roads, sidewalks, and stormwater management structures). **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.**

### **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 part - 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 proposed projects through a public water system. Our files reflect that the Town of Laurel does not currently hold a Certificate of Public Convenience and Necessity (CPCN) to provide public water in these areas. According to §203C, Subchapter II, Chapter 1, Title 26, Delaware Code, the municipality is required to give notice to the Public Service Commission when the annexation is complete. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-736-7547. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells. **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.**

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 recommends the creation of a maintenance plan for Rogers Branch. The Drainage Program recommends a maintenance area on each side of Rogers Branch. The area should be dedicated open space and utilized for mechanized maintenance, and possible spoil placement, if the branch requires periodic maintenance or future re-construction. 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 Rogers Branch. Please supply the necessary contact information.**
- 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 Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine wetlands on the wooded area on the southeast side of the property. The amount of proposed tree removal from this area appears excessive. The Drainage Program recommends limited tree removal in this area. Where practical, plant native trees, and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided. Even with these measures this area may not provide adequate residential drainage. A part of the wooded area is mapped as Fallsington soil, which has a high water table and poor natural drainage. Limitations for foundations for homes of three stories or less is severe due to a high water table. Crawl spaces and basements within this area are very questionable. If this area is developed as proposed, especially with crawl spaces and basements, a statement should be on the deed informing the prospective buyers that future drainage problems are very likely. **The developer acknowledges that some areas of the site exhibit a high water table which poses limitations for certain types of foundations. At this juncture, it appears that homes constructed on “controlled” fills with a “concrete slab-on-grade” are best suited to this environment.**
  - Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering Rogers Branch. This site will drain into Records Pond, which has existing water quality problems. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing stormwater into the Records Pond watershed. **Acknowledged.**

### **Rare Species**

DNREC has never surveyed this property; therefore, it is unknown if there are State-rare or federally listed plants, animals or natural communities at this project site. DNREC have records of numerous rare species downstream, therefore, maintaining adequate forested riparian buffer along Rogers Branch would be extremely important for minimizing impacts to these species and to water quality. **The developer retained the services of JCM Environmental to conduct a site visit, research records and prepare a report specifically to address rare, threatened and/or endangered species for this property. The findings concluded that no such species were found to exist.**

*Recommendation:* to adequately protect water quality and to provide wildlife habitat, this buffer should be at least 100 feet in width. There are both lots and infrastructure within 100 feet of this riparian wetland area (in southeastern quadrant of plan) and they should be pulled out of the buffer zone. **Please refer to the response to this issue found above.**

### **Forest Preservation**

As with the Neal Property (PLUS 2007-02-10) application, this project proposes to remove 12.5 out of 16 acres of forest. The current plan proposes approximately 44 single family detached units in the wooded area, whereas the Neal Property proposed approximately 25 units.

The GIS database and State wetland maps indicate that a rather large part of the forest contains wetlands. Impacts to this habitat type should be avoided as it can support an array of plant and animal species. This forest is also part of a larger forest block, and larger, connected areas of forest are important for many species of wildlife especially migratory birds. Forest fragmentation separates wildlife populations, increases road mortality, and increases “edge effects” that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species.

#### *Recommendations:*

1. A greater effort to preserve existing trees could be made, and we suggest the applicant consider omitting or relocating some of the approximately 44 units/structures currently located within the southeastern quadrant of the site plan. **Omitting 44 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 (blue line stream) corridor will remain intact as a connection to off-site existing forested areas. Considerable numbers of replacement vegetation in the form of trees, shrubs and groundcovers are planned in areas which are currently both forested and open agricultural lands.**
2. If trees are cleared, despite the recommendations above, it is recommended that clearing not occur 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 one breeding season; once trees are cleared the result is an overall loss of habitat. **Acknowledged.**

### **Nuisance Geese**

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 currently exist as abandoned borrow pits which shall be upgraded to current “Pond Code” standards. Vegetated pond edge buffers will be planted with native species and managed to control plant community variety as a part of project construction to minimize or eliminate the nuisance waterfowl issue.**

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

**Recommendations:** **The applicant indicated that they were going to utilize a nuisance species management plan.** The plan should include plantings of native 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, we do 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.**

### **Site Investigation and Restoration**

One (1) Site Investigation & Restoration Branch (SIRB) site was found within a half mile radius of the proposed site: Whites Salvage (DE-0329), located adjacent to the southern portion of the proposed project. Whites Salvage received a No Further Action designation in 2007.

Based on the previous agricultural use of the proposed project site, which may have involved the use of pesticides and herbicides, and the location of the SIRB site, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development. In addition, should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions. **The developer engaged JCM Environmental to conduct a Phase I ESA prior to purchase of the property. The ESA concluded that no environmental hazard existed. An existing residence and**

debris was removed from the property and properly disposed of at a State solid waste facility.

### **Under/Aboveground Storage Tanks**

There are two (2) inactive LUST sites located within a quarter mile from the proposed project:

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

Name: Laurel Exxon  
Facility ID: 5-000313  
Project: S9605077

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.

**Acknowledged.**

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

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.**

### **Solid and Hazardous Waste**

The solid and hazardous waste management branch does not regulate borrow pits. If during construction unauthorized waste disposal is discovered, an Environmental Protection Officer should be called. **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 East development may have.

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

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Direct Residential	8.8	1.0	0.8	1.0	35.6
Electrical Power Generation	ND*	3.5	12.1	ND*	1,787.5
Mobile	21.8	18.0	13.3	1.2	1,823.2
<b>Total</b>	<b>30.6</b>	<b>22.5</b>	<b>26.2</b>	<b>2.2</b>	<b>3,646.3</b>

(\*) 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:

<b>Regulation 6 -</b> Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> <li>• <b>Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</b></li> <li>• <b>Using covers on trucks that transport material to and from site to prevent visible emissions.</b></li> </ul>
<b>Regulation 1113 –</b> Open Burning	<ul style="list-style-type: none"> <li>• <b>Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</b></li> <li>• <b>Prohibiting the burning of land clearing debris.</b></li> <li>• <b>Prohibiting the burning of trash or building materials/debris.</b></li> </ul>

<b>Regulation 1145 – Excessive Idling of Heavy Duty Vehicles</b>	<ul style="list-style-type: none"><li>• <b>Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</b></li></ul>
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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 East 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. For the area where Mini-Storage buildings are proposed, water distribution system capable of delivering at least 750 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
- Where a water distribution system is proposed for 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.
- Where Mini-Storage buildings are proposed, with few exceptions, sprinkler protection will be required.

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](http://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 2 and 3 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) 698-4500. **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**

Village Brook East

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

**Amenities to encourage active transportation**

- Ensure that there are sidewalks, crosswalks and walking/bicycling paths connecting the residential developments to the 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.**

#### **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. The Village Brooke East land use plan illustrates numerous neighborhood park areas throughout the entire community. Gardens for growing ornamental plantings as well as vegetables and fruits are being considered as a component of the neighborhood parks.**

#### **Delaware State Housing Authority – Contact Vicki Powers 739-4263**

This proposal is for a site plan of 284 residential units on 77 acres located southeast of Country Road 468, east of Route 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.

**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.

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