DC GROUP
DESIGN CONSULTANTS GROUP, L.L.C.
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December 3, 2007

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RECEIVED
S.P.C. PLANNING AND BUDGET

Mr. Mark Davidson
Design Consultants Group, Inc.
18072 Davidson Drive
Milton, De 19968

RE: PLUS review – PLUS 2007-10-06; Smith Tract
Response to comments in (Red): DC Group – March 31, 2008

Thank you for meeting with State agency planners on October 31, 2007 to discuss the proposed plans for the Smith Tract project to be located on the west side of Sussex County Road 48.

According to the information received, you are seeking a rezoning of 40 acres from AR-1 to C-1 for a mixed residential subdivision of affordable housing and 311,340 sq. ft. of commercial. As presented, we are seeking a rezoning of 39.43± Acres from AR-1 to CR-1 with a Conditional Use overlay for 36 condominium flats and 88 Townhouse Units (Fee Simple) with the remaining lands being used for Commercial at 57,600 square feet of warehouse/mini storage with 1,500 square foot office and 64,800 square feet of general office and light retail. The applicant would like to note that this project has been submitted and approved for consideration under the Counties Moderately Priced Housing Unit Ordinance (MPHU).

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property.

We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

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 Office of State Planning and Coordination recognizes the proposed project requesting a zoning change from AR-1 to C-1 is located within a Level 1 Investment area near the City of Georgetown. **This office has no objection to the proposed zoning change;** however, this office would request the developer to begin to formally engage conversations with the Town of Georgetown to address the several key issues they have raised regarding annexation, water supply and sewer service. As noted in the letter provided by the Town of Georgetown dated October 24, 2007, the Town has no record of the developer beginning to work with the local community to address any of their concerns. This office offers it assistance to work to address the Town's concerns as well as any concerns the developer may have in an effort to reach an agreeable medium for both parties in relation to the proposed. If you have any questions or would require this office's assistance please call. Mr. Smith and my office have met with the Town of Georgetown on several occasions, (July 18, 2006, January 18, 2007& February 14, 2007) and most recently on February 12, 2008 and March 28, 2008. During several meetings with the Town, it was indicated that the Town was updating their comprehensive plan and that they do not have a zoning designation that would fit the proposed project layout. The applicant has submitted a letter to the Town indicating his desire to have the Town reconsider the future zoning designation of this property under their comprehensive plan update. This site is currently served by the Town's water system and the town has indicated their desire to serve this site with sanitary sewer in the future. Although this application is being sought through the County, the applicant will coordinate the project design between the Town's and Counties minimum standards.

Street Design and Transportation

- Zoar Road is 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 they will require right-of-way dedication along the frontage to provide any additional width needed from this project. **The plan included with the PLUS application appears to address this requirement.** Additional right-of-way has been shown on the plans and will be dedicated to Del DOT.

- DelDOT will also require a 15-foot wide permanent easement across the frontage of the site for a future 10-foot wide shared use path, and possibly the construction of that path. The developer should contact Mr. Derek Sapp, The DelDOT Subdivision Manager for western Sussex County, for specific requirement in this regard. Mr. Sapp may be reached at (302) 760-4803. The revised plan includes a 15-foot wide permanent easement across the frontage of the site.

- A traffic impact study has been submitted for the proposed development and is now under review. DelDOT anticipates sending comments to Sussex County in five to six weeks.

- Without prejudging the TIS results, the developer should anticipate a-requirement to improve Zoar Road to meet DelDOT's local road standards. This requirement includes but is not limited to 11-foot lanes and 5-foot shoulders. Generally DelDOT requires this sort of improvement only within the limits of the site frontage but, depending on the results of the traffic impact study, improvements further removed from the site may be necessary. The applicant agrees that a number of projects have only had to improve road conditions along the limits of the site frontage. This property falls within a Level 1 Investment area. Asking that this project support State roads more than what is being asked on projects falling within Level 4 areas is contrary to the objectives of the States Policies for Spending in an Investment Area Level 1.

- Splitter islands should be provided at the proposed roundabout to direct traffic the proper way around the roundabout. Splitter islands have been incorporated into the layout as indicated.

Natural and Cultural Resources

- 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. So noted.

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

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

The Office of State Planning and Coordination recognizes the proposed project requesting a zoning change from AR-1 to C-1 is located within a Level 1 Investment area near the City of Georgetown. **This office has no objection to the proposed zoning change**; however, this office would request the developer to begin to formally engage conversations with the Town of Georgetown to address the several key issues they have raised regarding annexation, water supply and sewer service. As noted in the letter provided by the Town of Georgetown dated October 24, 2007, the Town has no record of the developer beginning to work with the local community to address any of their concerns. This office offers it assistance to work to address the Town's concerns as well as any concerns the developer may have in an effort to reach an agreeable medium for both parties in relation to the proposed. If you have any questions or would require this office's assistance please call. The applicant will be happy to provide records of joint meetings with the Town of Georgetown prior to October 24, 2007. Subsequent meetings, after October 24, 2007, as stated above, have been held with the Town of Georgetown. The applicant would like to note that the above referenced letter was not provided with these PLUS comments.

Division of Historical and Cultural Affairs – Contact: Terrance Burns 739-5685

In reference to this particular parcel, the historic resources at State Historic Preservation Office of the Division of Historic & Cultural Affairs did show and indicate the following:

- There was no indication of a known Archaeological site or National Register listed property on or within parcel, but this parcel is still in a vicinity where it is a possibility that there could be a potential archaeological site on this parcel, or nearby it.

- The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out.
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- Prior to any demolition or ground-disturbing activities, or before any type of construction proceeds the developer may want to hire an archaeological consultant to check or examine this parcel/property (project area) for the possibility of a cemetery here, or to see if there are any archaeological sites on it. The applicant's family has owned this property since the 19th Century and concurs with the Division of Historic & Cultural Affairs that this site has no known archeological remains or any marked or unmarked graves with the subject property. The property has been occupied by the applicant and his family within the existing farm house on site. The property has been predominantly farmed lands with recent small segmented areas being planted as wildlife conservation set-a-sides by the applicant. The set-a-side areas are voluntarily fallow former farmed fields. The applicant, by virtue of actual and oral history, is satisfied that all of his ancestors are legally buried with in local area church and public cemeteries.

  During construction, if any human remains are discovered, the applicant will immediately cease all work within the vicinity and will contact Division of Historic & Cultural Affairs.

The State Historic Preservation Office of the Division of Historic & Cultural Affairs recommends and do hope that the developer will take these comments in to consideration. Also, if the developer would like to discuss this in further detail, contact Mr. Terence Burns, Information Resource Specialist, at the State Historic Preservation Office of the Division of Historic & Cultural Affairs at (302) 736-7400.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

Comments below have been noted above.

1) **The proposed plan is a significant improvement over the one presented in January. DelDOT particularly appreciates the addition of rain gardens and the increased landscaping of the parking areas.**

2) Zoar Road is 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 they will require right-of-way dedication along the frontage to provide any additional width needed from this project. **The plan included with the PLUS application appears to address this requirement.**

3) DelDOT will also require a 15-foot wide permanent easement across the frontage of the site for a future 10-foot wide shared use path, and possibly the construction of that path. The developer should contact Mr. Derek Sapp, The DelDOT Subdivision Manager for western Sussex County, for specific requirement in this regard. Mr. Sapp may be reached at (302) 760-4803.

4) A traffic impact study has been submitted for the proposed development and is now under review. DelDOT anticipates sending comments to Sussex County in five to six weeks.

5) Without prejudging the TIS results, the developer should anticipate a requirement to improve Zoar Road to meet DelDOT's local road standards. This requirement includes but is not limited to 11-foot lanes and 5-foot shoulders. Generally DelDOT requires this sort of improvement only within the limits of the site frontage but, depending on the results of the traffic impact study, improvements further removed from the site may be necessary.

6) Splitter islands should be provided at the proposed roundabout to direct traffic the proper way around the roundabout.

7) The developer's site engineer should contact Mr. Sapp regarding specific requirements for entrance improvements.

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

Soils

Based on the Sussex County soil survey update, Ingleside, Hammonton, Hurlock and Mullica were mapped in the immediate vicinity of the proposed construction. Ingleside is a well-drained upland soil that, generally, has few limitations for development. Hammonton is a moderately well-drained soil that has moderate limitations for development. Hurlock and Mullica are poorly- to very poorly-drained wetland associated (hydric) soils that have severe limitations for development. Approximately 60-70% of the

soils mapped on subject parcel are Hurlock/Mullica. Hurlock and Mullica soils are considered unsuitable for development and should be avoided. A Soils reconnaissance has been performed for this project and will be incorporated into the hearing booklets as well as within the stormwater management report.

Based on the Statewide Wetland Mapping Project (SWMP) mapping, no wetlands were mapped on this parcel. Although no wetlands were mapped by the SWMP, most of the soils on this parcel are poorly to very poorly drained and indicative of wetland conditions.

As mentioned previously, most of the mapped soils on the combined parcel land area are mapped as poorly to very poorly-drained hydric Hurlock or Mullica soils (estimated 60-70%). Hydric soils typically have a seasonal high water table 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 (roof tops, roads, sidewalks, and stormwater management structures). The applicant has hired Kenneth W. Redinger to review the site for both State and Federal Wetlands and found the site to have **NO Wetlands**.

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 Mullica and 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 the above-mentioned regulatory guidelines in the Sussex County Code I submit the following section in full in order to outline what the code is saying; **§ 99-16. Suitability of land; preservation of natural features.**

A. Land which is unsuitable for subdivision or development due to flooding, improper drainage, steep slopes, adverse earth formations or topography, utility easements or other features which will be reasonably harmful to the safety, health and general welfare of the present or future inhabitants of the subdivision and/or its surrounding areas shall not be subdivided or developed unless adequate methods are formulated by the developer and approved by the County Engineer and where applicable to the rules and regulations of the

> State Department of Natural Resources and Environmental Control to solve problems created by the unsuitable land conditions. Such lands shall be set aside for uses as shall not involve such a danger.

I would like to submit for the record that this code does not state that this site *"should not be developed"* as the State is indicating above but that the developer should apply the adequate methods for developing this project as approved by the County Engineer and The DNREC. Since this site is bordered along the entire north by Tax Ditches and has an existing ditch which will be left intact within the property, the threat of flooding and improper drainage is significantly reduced.

It should also be noted, that on two separate transactions, the applicant, sold land to the State of Delaware. The lands conveyed to the State of Delaware were comprised of similar soil characteristics as noted by the State above. These conveyed lands were incorporated into the massive expansion of the Delaware Department of Motor Vehicle complex.

Impervious Cover

Based on information provided by the applicant in the PLUS application form, this projects post-development surface imperviousness is estimated to reach 56 percent. However, given the scope and density of this project (i.e., when viewing the conceptual project layout in the context of the total land area) this estimate appears to be a significant underestimate. When calculating surface imperviousness, it is important to include all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, stormwater management structures, ponds, and roads) in the calculation for surface imperviousness; this will ensure a realistic assessment of this project's likely post-construction environmental impacts. Therefore, surface imperviousness should be recalculated to include al of the above-mentioned forms of constructed surface imperviousness. The revised plan has reduced overall imperviousness to 51 percent. This estimate is based on paved surface areas and future building sizes for each multi-family building lot. Roof top water runoff will be placed underground in perforated piping trench systems to alleviate additional surface runoff to the ponds. Net development areas and their associated densities and imperviousness will be taken into account when designing the on-site storm water management system. The stormwater management system will be an asset to the community and will provide a visual.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness. Best management practices have been included in the revised plan and include the use of landscaping and rain gardens within the parking lot to reduce overall imperviousness. According to Chapter 72 Section 72-7 C. of the Moderately Priced Housing Unit Program, the County Council is authorized to modify the provisions of the County's Zoning Ordinance as it pertains to the parking requirements. Additional buffer plantings with native species, the use of infiltration where practical, as well as other practices are outlined on the revised plan.

Context-sensitive design standards, additional planting of street trees, and low impact development BMP's along all roadways and parking lots, provision of 44% of open space, and reduction of site's imperviousness, conservatively, all these measures will reduce the impact this development will have on the environment and sensitive resource areas off-site.

ERES Waters

This project is located adjacent to receiving waters of the Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 5.6.3.5 of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants. With the addition of a reforestation area on a portion of the site, the retaining of a portion of open space as a park, buffers along the State properties and the adjacent Town of Georgetown water facility, rain gardens within the parking lot and the elimination of the current farming practice, will significantly improve water quality in this area.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays 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. This project is located in the high nutrient reduction area requiring an 85 and 65 percent reduction in nitrogen and phosphorus, respectively. Additionally, a 40 percent reduction in bacteria will also be required.

Compliance with TMDLs through the PCS

As stated above Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. The TMDL calls for an 85 percent reduction in nitrogen and a 65% reduction in phosphorus from baseline conditions. Additionally, a 40 percent reduction in bacteria will also be required from baseline conditions. A Pollution Control Strategy (PCS) will provide the regulatory framework for achieving them. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses (or ditches), increasing passive, wooded open space that reduce surface imperviousness (i.e., pervious pavers), and the use of green-technology stormwater management technologies.

The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool. Relevant site data was entered into DNREC's Protocol to determine the sites nutrient loading. The site plan as proposed meets the required TMDL reduction for both Total Nitrogen and Phosphorus. With the utilization of all best management practices, the site would adequately mitigate the nutrient impacts associated with this development.

Water Resource Protection Areas

The Water Supply Section has determined that the project falls largely within a wellhead protection area for Georgetown Water (see following map and attached map). Wellhead protection areas are surface and subsurface areas surrounding a public water supply well

where the quantity and quality of ground water moving toward these wells may be adversely affected by land use activities. The applicant is unaware of any studies leading to the determination of the highlighted area shown on the referenced maps. The applicant is requesting the monitoring well data that supports ground water moving in the direction towards the Town of Georgetown's public well. The applicant is aware of the positive effect that the existing ditches along the western and north boundary lines provide for a draw down of the groundwater. These ditches were designed and constructed by the Soil Conservation Service for the maximum drainage impact.

DNREC recommends that the portion of the new development within the wellhead protection area not exceed 20% impervious cover (DNREC, 2005). Some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. However, the development should not exceed 50% regardless. A water balance calculation will be necessary to determine the quantity of clean water to be recharged via a recharge basin. The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in stormwater) and protect the quality and quantity of ground water and surface water supplies. Allowances for augmenting groundwater recharge will be considered. The site plan presented allows for approximately 49% open space and as previously stated above Chapter 72 Section 72-7 C. of the Moderately Priced Housing Unit Program, the County Council has authorization to modify the provisions of the County's Zoning Ordinance as it pertains to the parking requirements which would allow for the potential reduction in impervious surfaces.

The change from cropland to the proposed commercial use will introduce petroleum hydrocarbons that are associated with commercial land use (DNREC, 1999). The Source Water Assessment Report for Georgetown Water shows that this well draws from an unconfined aquifer and has a rating of moderately susceptible to contamination with a high vulnerability rating (DNREC, 2003). This development as proposed has the potential to increase these ratings and may cause the Public Drinking Water System to exceed drinking water standards. The results of the Nutrient Protocol indicate the reduction of pollutants exiting the site as well as the reduction of groundwater pollution. The introduction of heavily landscaped areas throughout the site will further reduce the amount pollutants that this site will allegedly produce. All impervious surfaces will be directed towards the stormwater ponds located onsite and will discharge to the existing ditch along the north border of the property. The ponds are being proposed as lined wet ponds and will be in series. Microorganisms living in the water are known to breakdown petroleum hydrocarbons and in some instances petroleum hydrocarbons are known to sink

to the bottom sediments. The DNREC, 1999 Source Water Assessment Plan defines vulnerability as; ".....Vulnerability includes consideration of such factors as aquifer characteristics, well or surface water intake integrity, and well screen depth." The report further details, if a well in an unconfined aquifer and has a top of the well screen that is less than 100-feet below ground surface, than the well is regarded as having high vulnerability. The Town of Georgetown may wish to explore mitigation measures to protect the commercial use of the well on their property. The applicant believes that protective measures regarding the commercial use of the Town of Georgetown water well should not be unilateral.

The proposed development would change the impervious over from 0% to approximately 37%. The developer provided these numbers on the PLUS application form. This appears to be an underestimation. Ideally, relocating any open space areas to the part of the parcel within the wellhead protection area would decrease the total impervious area in the wellhead protection area. Augmenting the ground-water recharge with clean rooftop run-off systems are another alternative to reducing the total impervious cover. Thank you for the excellent ideas. To clarify, the 37% was the amount of paving being proposed and does not include the roof tops that are being proposed onsite.

The proposed site plans show the use of bio-filtration basins for storm water management within the wellhead protection area. If a problem were to occur in the storm water system that released contaminants, they would pose a likely threat to the quality of water drawn by Georgetown Water from this well. As previously stated, all impervious surfaces will be directed towards the stormwater ponds located onsite and will discharge to the existing ditch along the north border of the property. The ponds are being proposed as lined wet ponds and will be in series. DNREC states the following: ***DNREC appreciates the series of ponds proposed for advanced treatment and protection of wellhead areas.*** Referenced in the stormwater section of this letter.

In addition, because the wellhead protection area the source of public drinking water, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program. Hazardous materials are not anticipated for storage on this site, but if encountered, all specific approvals will be obtained.

References

Delaware Department of Natural Resources and Environmental Control. (1999). *The State of Delaware Source Water Assessment Plan*: Dover, DE, p. 301. http://www.wr.udel.edu/swaphome/publications.html

Department of Natural Resources and Environmental Control. (2003). *Public Water Supply Source Water Assessment for Georgetown Water.* p.39.

Delaware Department of Natural Resources and Environmental Control (2005): Source Water Protection Guidance Manual for the Local Governments of Delaware: Dover, DE, 144 p.
http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swapp_guidance_manual_final.pdf

Map of Smith Tract (PLUS 2007-10-06) as it impacts the wellhead protection area. The dark red area shows the wellhead protection area.

Water Supply

The project information sheets state that water will be provided to the project by the Town of Georgetown via a public water system. DNREC records indicate that the project site is not located in an area where public water service is available. Any public water utility providing water to the site must obtain a Certificate of Public Convenience

and Necessity (CPCN) from the Public Service Commission. Information on CPCNs and the application process can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public/miscellaneous public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be located and constructed in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells. The property is indeed in an area where public water service is available. The existing house and outbuildings on the property have been serviced with water by the Town of Georgetown for the past 15 years. Furthermore, there is an existing 10" water main along the frontage of this property as delineating by the Town of Georgetown as-builts.

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

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

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

Sediment and Erosion Control/ Stormwater Management

The DNREC Sediment and Stormwater Program ensure sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, DNREC does not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice. Will Comply.

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site over 5,000 square feet. Because the Sediment and Stormwater Program is in the process of revising its state regulations it is a good idea to contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as

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

Because of the parcel's location in an impaired watershed and the amount of impervious surface, the applicants should incorporate green technology best management practices and low impact development practices to reduce stormwater flow and meet water quality goals, including roof top disconnection from the storm drain system. **DNREC appreciates the series of ponds proposed for advanced treatment and protection of wellhead areas.** The applicant is proposing to outlet stormwater to an existing tax ditch onsite. A downstream analysis may be required to determine potential impact to up/downstream property owners as a result of this proposed project.

Drainage

The Drainage Program has researched the Tax Ditch rights-of-ways for parcel # 135-23-18. The information is as follows:

- This parcel is within the McGee Tax Ditch watershed and is affected by a tax ditch right-of-way. Prong 1 has a 16.5-foot tax ditch right-of-way on the right side and no right-of-way on the left side from the junction with Sub 2 of Prong 1 (shown on attached map as P1S2) until its terminus. This right-of-way is measured from top of bank, looking upstream. The applicant concurs with this as it was determined during the 2006 transaction of land to the State of Delaware.

- This parcel also has a 250-foot tax ditch right-of-way, also on Prong 1 (located on the northern portion of the parcel). This section of Prong 1 has an 80-foot tax ditch right-of-way in the woods on the right side and 250-foot tax ditch right-of-way on the left side. This section of right-of-way is measured from centerline of ditch, looking upstream. The section of Prong 1 with the 80-foot tax ditch right-of-way is on the land that was conveyed by the applicant to the State of Delaware. The 250-foot tax ditch right-way-way as stated above was reduced to 50-feet by Court Order Change Number 7 in October 2007 and is delineated, as such, on the site plans.

- The tax ditch rights-of-way include the entire width of the ditch.

Contact the DNREC Drainage Program in Georgetown at (302) 855-1930 to discuss impacts to the Tax Ditch and the release of stormwater into the Tax Ditch.

In addition, the Drainage Program has following comments for this site:

- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.

- The Drainage Program encourages the elevation of rear yards to direct water towards the streets and alleyways where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain cases. Therefore, catch basins placed in rear and side yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, pools, and kennels can hinder drainage patterns as well as future maintenance to the storm drain or catch basin. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.

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

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

- 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.

Open Space

The developer is strongly urged to consider alternatives to mowed grass within community open space areas, especially along stormwater management facilities upon development of this parcel. Mowing and other maintenance costs from lawn areas can become a substantial burden. There may be areas that are appropriate for warm or cool season grasses. The maintenance costs associated with meadow type grasses are much lower than those of lawn grasses, and provide food and habitat for birds and other wildlife and can help reduce non-point source pollution. The developer is encouraged to review "Community Spaces, Natural Places: A guide to restoration, management, and maintenance of community open space". This document provides a reference of practical and successful open space management techniques that emphasize natural landscape alternatives other than turf grass management. The guidebook is available online at: http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/.

The updated plan takes into account a reforestation of the project in the vicinity of the neighboring Town of Georgetown well. This along with grass plantings around the pond will help reduce the overall cost of maintenance for the community. Majority of other open spaces within the site will be open park settings for the occupants of this development to enjoy.

Nuisance Geese

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. 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. Trails around two of the ponds are depicted in the site plan, but it is unclear if an adequate vegetative buffer (not mowed lawn) is going to be left intact around the perimeter as well. 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. This type of habitat is not as attractive to geese because their view of the surrounding area is blocked and they can't scan for predators. At this time, they 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.) can become a burden.

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 number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

The applicant is looking to reduce the expenditures of the Homeowners and occupants of the commercial properties by introducing plantings and grasses around the stormwater ponds to lessen maintenance costs. These measures will deter the viability of the ponds for use by the "Nuisance Geese". Other additional measures to lessen the geese population in this area will be reviewed by the applicant.

Underground Storage Tanks

There are five inactive and two active LUST site(s) located near the proposed project:

Cheertraus/Home Services, Facility # 5-000388, Project # S8901001
Georgetown State Service Center, Facility # 5-000701, Project # S9207175
DOT-South District Headquarters, Facility # 5-000408, Project # S0004044
Former Delaware State Police Troop #4, Facility # 5-000417, Project # S9506144
Sussex Correctional Center Pretrial B, Facility # 5-000406, Project # S9512303
Three Bells Market, Facility # 5-000248, Project # S9401005
Artcraft Lighting Center, Facility # 5-000753, Project # S8905242

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

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 23.9 tons (47,735.3 pounds) per year of VOC (volatile organic compounds), 19.8 tons (39,521.6 pounds) per year of NOx (nitrogen oxides), 5.8 tons (11,626.4 pounds) per year of SO2 (sulfur dioxide), 0.5 ton (1,034.9 pounds) per year of fine particulates and 796.0 tons (1,592,061.6 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 3.8 tons (7,676.8 pounds) per year of VOC (volatile organic compounds), 0.4 ton (844.7 pounds) per year of NOx (nitrogen oxides), 0.4 ton (701.0 pounds) per year of SO2 (sulfur dioxide), 0.5 ton (904.6 pounds) per year of fine particulates and 15.6 tons (31,119.9 pounds) per year of CO2 (carbon dioxide). Street trees will be furnished throughout the site. The benefits of street trees have been thoroughly documented. They play a vital role in carbon sequestration, air pollution absorption, street traffic calming and asphalt life cycle extension, energy conservation, and provide intangible sociological benefits.

Emissions from electrical power generation associated with this project are estimated to be 1.5 tons (3,042.5 pounds) per year of NOx (nitrogen oxides), 5.3 tons (10,582.7 pounds) per year of SO2 (sulfur dioxide) and 780.5 tons (1,560,941.8 pounds) per year of CO2 (carbon dioxide).

The applicant is exploring solar/photovoltaic options to reduce traditional energy consumption. For example, this use of solar energy to generate the street lights within the development.

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	23.9	19.8	5.8	0.5	796.0
Residential	3.8	0.4	0.4	0.5	15.6
Electrical Power		1.5	5.3		780.5
TOTAL	27.7	21.7	11.5	1.0	1592.1

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.5 tons of nitrogen oxides per year and 5.3 tons of sulfur dioxide per year.

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

"ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on

heating, cooling, and hot water energy use and are typically achieved through a combination of:

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

The applicant is exploring Energy Star appliance packages as a part of the housing element options.

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

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

State Fire Marshal's Office – Contact: Duane Fox 856-5800

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):

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

a. **Fire Protection Water Requirements**:
   - Water distribution system capable of delivering at least 1500 gpm for 2-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 Storage, Industrial, and/or Mercantile sites, the infrastructure for fire protection water shall be

provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
- All structures over 10,000 sq.ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq.ft., 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in Delaware State Fire Prevention Regulations
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.
- Most Mini-Storage buildings in excess of 2,500 square feet in area are required to be protected by automatic sprinkler systems.

c. **Accessibility**
- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfares; namely, County Road 48 must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**
   - Provide type of fuel proposed, and show locations of bulk containers on plan.

e. **Required Notes**:
   - Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
   - Proposed Use
   - Townhouse 2-hr separation wall details shall be shown on site plans
   - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
   - Square footage of each structure (Total of all Floors)
   - National Fire Protection Association (NFPA) Construction Type
   - Maximum Height of Buildings (including number of stories)
   - Note indicating if building is to be sprinklered
   - Name of Water Provider
   - Letter from Water Provider approving the system layout
   - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
   - Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures. All comments above have been noted and will be addressed on the formal submittal of the State Fire Marshal plans for this project.

Department of Agriculture - Contact: Scott Blaier 698-4500

The Delaware Department of Agriculture has no objections to the proposed development. 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. Please feel free to contact the Delaware Forest Serve at (302) 698-4500 for more information.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500. The revised plan includes a landscape design that utilizes the strategies outlined in "the right tree in the right place" concept. Some of the strategies include the use of native species only for buffer areas. Native species will also be utilized in buffer and rear yard plantings. Street trees have been carefully selected for their use at this site and to provide much needed shading of impervious surfaces. Secondary plantings have been provided to provide climate control by limiting unnecessary heat build up in summer and the cooling affects of winter winds in winter.

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.

Delaware State Housing Authority – Contact Vicki Powers 739-4263

This proposal is for a site plan review of 36 condos, 88 townhomes, 66,300 sq. ft. of office space and 57,800 sq. ft. of warehouse/mini storage space on 40 acres located on the west side of Sussex County Road 48, 2,400 feet north of Road 48 and Road 321 intersection near Georgetown. According to the State Strategies Map, the proposal is located in an Investment Level 1 area. As a general planning practice, **DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities such as Investment Level 1 and 2 areas outlined in the State Strategies Map. Furthermore, DSHA encourages residential development in Level 1 and 2 areas that are affordable to first time homebuyers. DSHA supports the fact that this proposal targets first time homebuyers.** For informational purposes, the most recent real estate data collected by DSHA shows the median income price in Sussex County to be $258,500. However,

families earning respectively 100% of Sussex County's median income only qualify for mortgages of $169,101, thus creating an affordability gap of $89,399. The provision of units within reach of families earning at least 100% of Sussex County's median income would help increase housing opportunities for first time homebuyers.

Department of Education – Contact: John Marinucci 735-4055

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

1. Using the DOE standard formula, this development will generate an estimated 62 students.
2. DOE records indicate that the Indian River School Districts' *elementary schools **are at or beyond** 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Indian River School Districts' *secondary schools **are not at or beyond** 100% of current capacity* based on September 30, 2006 secondary enrollment. In multiple correspondences from the Indian River School District administration, the district asserts that while the Indian River High School has capacity, the Indian River Middle Schools' student population exceeds student capacity.
   NOTE: September 30, 2007 District enrollments are in the process of being certified.
4. This development will create additional elementary school and middle school student population growth which will further compound the existing shortage of space. The developer is strongly encouraged to contact the Indian River School District Administration to address the issue of elementary school over-crowding that this development will exacerbate.
5. DOE requests developer work with the Indian River School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

Sussex County – Contact: Richard Kautz 855-7878

The site is within the Georgetown annexation area and is contiguous to land within the corporate limits. The developer should negotiate an agreement for service and annexation by the town. The applicant is currently working on an agreement with the Town of Georgetown for water and sewer service to the project. Water currently serves the property. The Town of Georgetown currently does not have

a zoning designation within their ordinance to match the concept proposal of this project.

The Sussex County Engineer Comments:

The Sussex County Engineering Department has no comments regarding this review as the proposed project will be served by the town of Georgetown's wastewater facilities.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

Following receipt of this 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.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

Constance C. Holland, AICP
Director

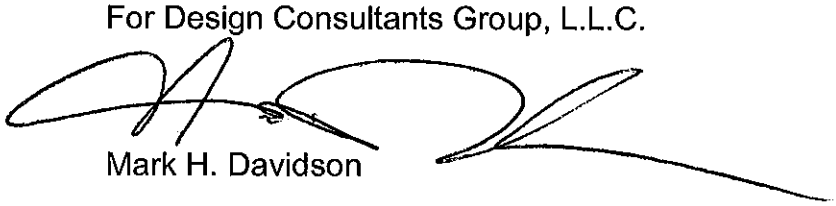
CC: Sussex County

Attached to our response are the updated site plans that will be incorporated into our re-submittal to Sussex County.

If you have any questions please do not hesitate to call.

Sincerely,

For Design Consultants Group, L.L.C.



Mark H. Davidson

attachments:

pc: Mr. Rodney Smith, Applicant