



**STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION**

May 19, 2010

Mr. Gary Cuppels
ECI, LLC
P.O. Box 820
Rehoboth Beach, DE 19971

RE: PLUS review – 2010-04-05; Montchanin Commercial Project

Dear Mr. Cuppels:

Thank you for meeting with State agency planners on April 28, 2010 to discuss the proposed plans for the Montchanin Commercial project to be located within the Town of Georgetown at the intersection of Route 113 and Route 9.

According to the information received, you are seeking site plan approval through the Town for a commercial shopping center with approximately 177,820 sq. ft. of commercial retail space.

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 the Town of Georgetown is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the Town.**

Strategies for State Policies and Spending

This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. In addition, this site is located within the Town of Georgetown. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office - Contact Terrance Burns 736-7404

- The developer should be aware of the Delaware Unmarked Human Remains Act of 1987, outlined in Chapter 54 of Title 7 of the Delaware Code, which pertains to 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. Therefore, prior to any demolition or ground-disturbing activities, the developer may want to consider hiring an archaeological consultant to examine the parcel for archaeological sites, including a cemetery or unmarked human remains.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The site access must be designed in accordance with Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access. This manual is available on-line at http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/standards_and_regulations_031108.pdf and <http://regulations.delaware.gov/documents/February2010c.pdf>. Please note that there are slight differences between the two versions. Section references in these comments refer to the version on the DelDOT website, which is correct in most cases. However, where the versions differ, the version in the Register of Regulations is correct.
- As proposed, the subject development would meet Del-DOT's volume warrants for a traffic impact study (TIS), as contained in Section 2.3.1 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access. A meeting was held on March 25, 2010, to set the scope of work for that study. In accordance with Section 3.10.2 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access, all required off-site improvements, and the schedule for their construction, must be specified by notes on the record plan.
- In accordance with Sections 3.6.5 and 5.1.6 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access, a 15-foot wide permanent easement will need to be established across the property frontage and a 10-foot wide multi-use path shall be constructed within the easement. The location of the easement shall be outside the limits of the ultimate right-of-way for this road. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement for a 10-foot wide multi-use path is hereby established, as per this plat.**" Where the County requires sidewalk, DelDOT will modify their requirements accordingly. It is not necessary to provide both a multi-use path and a sidewalk on the same frontage.

- US Route 113 is classified as a Principal Arterial, which per Section 3.6.5 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access requires a 100-foot right-of-way (50-feet from inside edge of inside travel lane). Therefore additional right-of-way shall be dedicated to public use in order to obtain the required distance from centerline along the entire property frontage. The right-of-way dedication note shall read as follows, **"A 50' Strip Of Right-Of-Way From The Inside Travel Lane Is Hereby Dedicated To Public Use As Per This Plat."**
- US Route 9 is classified as a Minor Arterial, which per Section 3.6.5 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access requires an 80-foot right-of-way (40-feet from centerline of right-of-way). Therefore additional right-of-way shall be dedicated to public use in order to obtain the required 40-feet from centerline along the entire property frontage. The right-of-way dedication note shall read as follows, **"A 40' Strip Of Right-Of-Way From The Centerline Of Right-Of-Way Is Hereby Dedicated To Public Use As Per This Plat."**
- In accordance with Section 3.5 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access, we anticipate requiring interconnections to the Sixty Two Acres in Georgetown, LLC to the north and to the service station on the corner of US Routes 9 and 113. The proposed service road, which would provide the connection to the north, is largely consistent with the planned grade separation of Routes 9 and 113. When the grade separation is built, it will function as a ramp.
- Related to the service road just mentioned is a spur ramp proposed west of the service station. This ramp would not have an adequate right turn deceleration lane, as specified in Section 5.2.2.1 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access. As such Del-DOT anticipates denying that access point. It may be possible to develop an acceptable design by shifting the service station access from Route 9 to the ramp and making other changes internal to the development, but this has yet to be explored. DelDOT is concerned that the proposed right-turn out of the site onto southbound US Route 113 could result in drivers cutting across the southbound through lanes to the existing U-turn crossover. In accordance with Section 3.10.2 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access, we anticipate requiring improvements to the crossover to prevent this movement from occurring.
- In accordance with Section 3.4.1.2 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access, the site plan must show all existing entrances (residential/commercial) in the vicinity of the proposed entrance.
- DelDOT anticipates that the Town of Georgetown will require a "Letter of No Objection" from the Department for this project. Per Section 3.4 of Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access, the developer must

submit **three (3) signed and sealed** copies of the **record plan**, with an Initial Stage Fee Calculation Form and the Initial Stage Fee. The review fee will be based on the number of lots within the subdivision. Please make all submissions to Mr. Derek Sapp, Subdivision Manager. The entrance plan will not be reviewed until after the “Letter of No Objection” has been issued.

- As specified in Section 4.1 of Del-DOT’s Standards and Regulations for Subdivision Streets and State Highway Access, when the entrance construction plans are submitted for review, the developer must submit **two (2) copies** of the construction plans, one copy of the record plan, an Initial Stage Fee Calculation Form, a Construction Stage Fee Calculation Form, a Construction Stage Review Fee, an application for highway entrance permit and a signed and sealed commercial entrance design checklist for review and approval. The review fee will be based on the number of lots within the subdivision. Be advised that the Department will not review the entrance plan until it has signed off on the record plan. Please make all submissions to Mr. Derek Sapp, Subdivision Manager.

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

Sediment and Stormwater Program.

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. A pre-application meeting is required for this 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 Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees (Delaware Code, Title 7, Chapter 40; Delaware Regulations, Administrative Code, Title 7, 5101).

Drainage Program.

- This parcel is located in the **Deep Creek** Tax Ditch watershed; however it is not affected by a Tax Ditch right-of-way.
- This parcel is located in the **Layton Vaughn** Tax Ditch watershed and is affected by the following rights-of-way:

Layton Vaughn Tax Ditch	Left	Right
Main		
Station 222+81 to 226+50	25'*	120'*
Station 226+50 to 234+40	30'*	30'*
Prong 10		
Station 0+00 to 8+75	84'	84'

Please note that the above rights-of-way are measured from the centerline of the ditch, with the exception of the ones noted with an asterisk, which are measured from top of the ditch bank. The designation of Left and Right side are based upon looking upstream.

Any change to the location of the tax ditch or existing tax ditch rights-of-way will require a change to the Layton Vaughn Tax Ditch court order. The placement of permanent obstructions within tax ditch rights-of-way is prohibited. Please continue to work with the Drainage Program in Georgetown to resolve any issues with the tax ditch rights-of-way for this project (Delaware Code, Title 7, and Chapter 41).

Wetlands.

- 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.

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 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 acceptable basis for making a jurisdictional wetland determination for non-tidal wetlands in Delaware.

Water Supply.

- 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.
- Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there are three Underground Storage Tanks associated with R E Blakely & Son, Discount Gas, and Georgetown EXXON, and a Hazardous Waste Generator associated with Don’s Hydraulics Inc. located within 1000 feet of the proposed project. *Ricardo Rios - (302) 739-9944, Ricardo.Rios@state.de.us*

Air Quality.

- The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:
 - **Regulation 1106** - Particulate Emissions from Construction and Materials Handling
 - Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.
 - Using covers on trucks that transport material to and from site to prevent visible emissions.
 - **Regulation 1113** - Open Burning
 - Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year.
 - Prohibiting the burning of land clearing debris, trash or building materials/debris.
 - **Regulation 1141** – Limiting Emissions of Volatile Organic Compounds From Consumer and Commercial Products

- Restricting the use of certain coatings and consumer products in typical architectural applications.
- **Regulation 1145** - Excessive Idling of Heavy Duty Vehicles
 - Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

Hazardous Waste Sites.

- There is one SIRB site found within a ½-mile radius of the proposed project:
 - Rt. 113 Associates Site (DE-1414) overlaps the south-east portion of the project area. The site was a certified Brownfields. The site was given a Certificate of Competition of Remedy (COCR) in August 2009 with an Environmental Covenant (EC). The EC restricts the installation and use of groundwater from any well on the property without prior written approval of DNREC-SIRB.

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.

Tank Management Branch.

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 7 Del.C. Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.

The following LUST projects are located within a quarter mile of the rezoning site:

- ****On the Development Project Site**** Georgetown Exxon (Active Remediation), Facility ID: 5-000268, Project: S9608143
- Jeff Whites Quality Auto (Inactive), Facility ID: 5-000728, Project: S9304070
- Musselman Property James (Inactive), Facility ID: 3-001087, Project: N9211256
- RE Blakeley & Son (Inactive), Facility ID: 5-000158, Project: S0001012, S9404077
- Discount Gas (Inactive), Facility ID: 5-000162, Project: S9106113
- Georgetown Dash In #116 (Inactive), Facility ID: 5-000496, Project: S0307041, S1001004, S9611195
- Paul Short (Inactive), Facility ID: 5-000460, Project: S9201012

- Per the **UST Regulations: Part E, § 1. Reporting Requirements:**
 - “Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:
 - The Department’s 24-hour Release Hot Line by calling 800-662-8802; and
 - The DNREC, Tank Management Branch by calling 302-395-2500.”
- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.
- 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.
- Should the municipality anticipate being more restrictive than Delaware’s Regulations Governing Underground Storage Tank Systems or Delaware’s Regulations Governing Aboveground Storage Tanks, please be aware that the municipality shall be responsible for enforcing the more restrictive rules.
Elizabeth Wolff - (302) 395-2500, Elizabeth.Wolff@state.de.us

State Fire Marshal’s Office – Contact Duane Fox 739-4394

- 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 Mercantile sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.
- Fire Protection Features:
 - All structures over 10,000 sq.ft. aggregate will require automatic sprinkler protection installed.
 - Buildings greater than 10,000 sq.ft., 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
 - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
 - Show Fire Lanes and Sign Detail as shown in DSFPR

- 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 major thoroughfares must be constructed so fire department apparatus may negotiate it.
 - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- Gas Piping and System Information:
 - Provide type of fuel proposed, and show locations of bulk containers on plan.
- Required Notes:
 - Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
 - Square footage of each structure (Total of all Floors)
 - National Fire Protection Association (NFPA) Construction Type
 - Maximum Height of Buildings (including number of stories)
 - Note indicating the 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

Recommendations/Additional Information

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

State Historic Preservation Office - Contact Terrance Burns

- There does not appear to be any known historic or cultural resources, such as an archaeological site or listed National Registered property on this parcel (property).
- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on or in reference to historic or cultural resources.
- The developer should also provide some landscaping along the borders of the parcel in order to lessen the visual effects on the surrounding properties.

Department of Transportation – Contact Bill Brockenbrough

- Please see the Subdivision Section, under “Doing Business” on Del-DOT’s website (below) for the latest instructions on plan submittals:
<http://www.deldot.gov/information/business>
- Any sub-station and/or wastewater facilities will be required to have access internal to the development, with no direct access to the State maintained highway.
- The following note will need to be added concerning the maintenance responsibility of the multi-use paths if they are required, “The multi-use path shall be the responsibility of the property owner. The State assumes no responsibility for the future maintenance of the multi-use path.”
- DelDOT understands that the plan for the Sixty Two Acres in Georgetown, LLC development may be revised. However, from their perspective, a significant problem posed by the development presently approved there has been its lack of a good connection to US Route 9. The proposed service road will help a great deal in that regard. However, DelDOT would still anticipate a significant amount of traffic using the proposed interconnection in the west corner of the subject development. We recommend that the developer adjust the site plan to provide that traffic with a viable route that does not pass directly in front of their strip retail buildings. One way to do that might be to modify the service drive for the building on the southwest edge of the site.

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

Impervious Surfaces and Best Management Practices.

- Based on a review of the project’s conceptual lot layout, post-construction surface imperviousness will likely be considerably higher than the stated figure (75%) provided in the PLUS application; the TR-55 methodology indicates closer to 85 percent imperviousness for a development of this type and coverage. It is not clear if the impervious cover figure truly reflects all post-construction forms of created surface imperviousness.
- DNREC strongly recommends that the applicant recalculate surface imperviousness with all forms of constructed surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water stormwater management structures, artificial turf, and roads) included in the calculation. Failure to include all forms (and their extent) of surface imperviousness will underestimate this project’s post-construction environmental impacts.
- 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 establishment of additional forest cover acreage) – are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

Since this project is a commercial project likely to generate large amounts of created surface imperviousness that will almost certainly increase the volume of pollutant-laden water ultimately draining to the Chesapeake Bay, we strongly urge the applicant to voluntarily limit surface imperviousness to 20% or less.

Air Quality

- Measures may be taken to substantially reduce the air quality emissions and include:
 - **Constructing only energy efficient buildings.** Energy Star qualified buildings are up to 30% more energy efficient. 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.
 - **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.** For every vehicle trip that is replaced by someone using a sidewalk, bike path or mass transit can significantly reduce mobile source emissions.
- 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 is advised to contact DNREC Air Quality Management Section for measures that may be incorporated into the Montchanin Commercial property. *Deanna Morozowich - (302) 739-9402, Deanna.Morozowich@state.de.us*

Drainage Program

- The Drainage Program requests 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 onsite stormwater. Notify downstream landowners of the change in volume of water released on them.

Soils Assessment

- DNREC strongly recommends that the applicant avoid soils mapped as Hurlock (HuA) and Mullica (MmA). These soils are poorly drained and indicative of wetland conditions (hydric). 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 the increased probability of flooding due to or increased surface water runoff emanating from future created or constructed forms of structural imperviousness (e.g., rooftops, roads, parking areas, sidewalks, and stormwater management structures). Approximately 60-70% of the proposed project area contains Hurlock and Mullica soils (See figure 1).

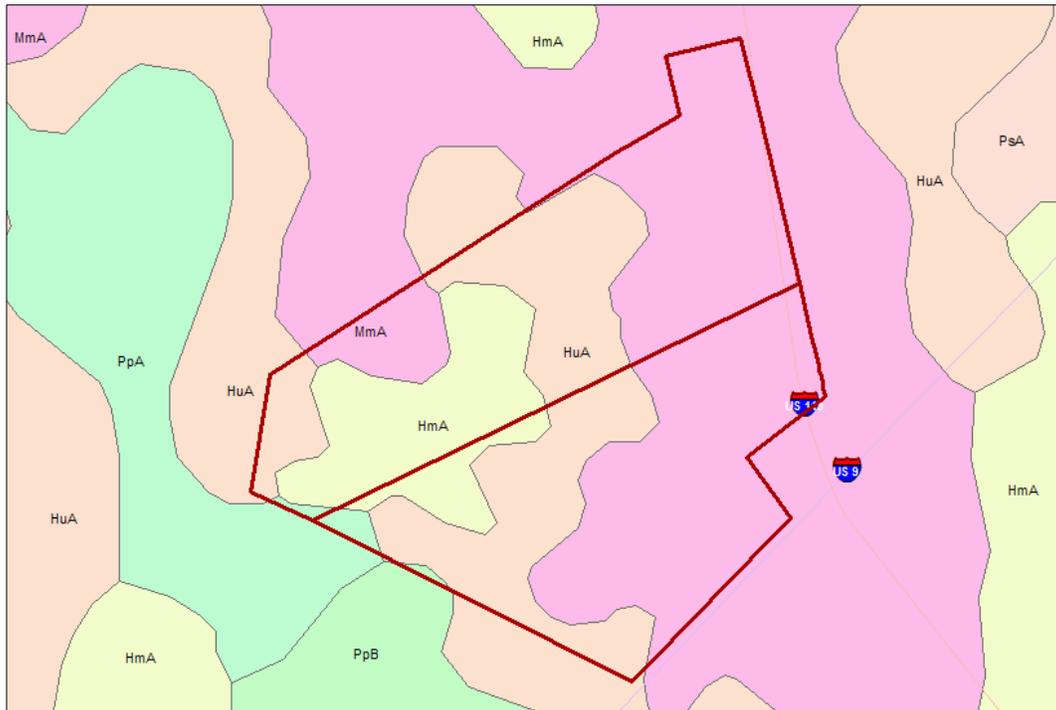


Figure 1: NRCS soil survey update in the immediate vicinity of the proposed project

Hazardous Waste Sites

- SIRB strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Assessment in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA. *Krystal Stanley - (302) 395-2644, Krystal.Stanley@state.de.us*

Wetlands

- 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.

- When designing a project on a site with regulated watercourses, any extensive piping, filling or burying of streams or ditches in excess of the minimum needed for road crossings should be avoided. Where road crossings are necessary, bridge spans which avoid significant impacts to stream banks and channels should be used wherever possible. Where placement of culverts is unavoidable, culvert designs which utilize multiple barrels at different elevations to preserve a low flow channel are usually preferred. Contact the Wetlands and Subaqueous Lands Section for further information regarding preferred designs.
- 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.

TMDL in the Chesapeake watershed

- The project is located in the greater Chesapeake drainage, specifically within the Nanticoke River sub-watershed. It should be noted by the applicant that the State of Delaware is expected to develop a watershed implementation plans and 2-year progress milestones as part of an accelerated effort to restore all waters of the Chesapeake Bay. Failure by the State to attain significant reductions in nutrient pollutants may subject the State to potential Federal actions or penalties. As part of the State's efforts to implement these future regulations, the proposed project was reviewed against DRAFT EPA Chesapeake Bay TMDL Standards and it should be noted that as presented, this project, would not meet the required TMDL nutrient pollutant reduction requirements. DNREC asks the developer and the Town of Georgetown to be considerate of this on-going effort and continue to work closely with the Department to address these issues to ensure the continued implementation of the proposed project.
- In this watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nitrogen, phosphorus, and bacteria (under the auspices of Section 303(d) of the Clean Water Act). 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 State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; State of Delaware Surface Water Quality Standards, as amended July 11, 2004) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the Nanticoke watershed 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 from baseline conditions. However, more stringent TMDL reduction(s) may be developed by the EPA (in the near future) for the entire Chesapeake drainage, thus increasing the TMDL reduction targets for the Nanticoke watershed or supplanting the existing TMDL reduction targets developed by the State.

A Pollution Control Strategy (PCS) is the regulatory directive requiring the implementation of various best management practices (BMPs) that help reduce transport of nutrient and bacterial pollutant runoff from all waters draining into a “greater” common watershed; with the ultimate objective of achieving the obligatory TMDL reduction requirements for that watershed. However, the PCS for the Nanticoke River watershed has not been formally completed to date. In absence of a current PCS, the applicant is strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended BMPs:

- A 100-foot buffer width from all delineated water bodies and wetlands (USACOE and State approved wetland delineations).
- Maximize or increase the amount and/or preservation of passive wooded open space.
- Based on a review of the project’s conceptual lot layout, post-construction surface imperviousness is likely to be considerably higher than the stated figure (75%) provided in the PLUS application. Please recalculate the project’s surface imperviousness and include all forms of created surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) in the revised calculation.
- DNEC strongly recommend the use of pervious paving materials (instead of conventional asphalt and concrete), rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to reduce the impacts associated with all sources of created surface imperviousness.
- Assess how your development will affect nutrient runoff through the use or implementation of the Nutrient Budget protocol. Please contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Department of Agriculture – Contact Scott Blaier 698-4529

- 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. To further support this concept the Delaware Forest Service does not recommend the planting of the following species due to the high risk of mortality from insects and disease:

Callery Pear

Ash Trees

Leyland Cypress

Red Oak (except for Willow Oak)

If you would like to learn more about the potential problems or impacts associated with these trees, please contact the Delaware Forest Service for more information at (302) 698-4500.

- 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.

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, Ofc. Of State Planning Coordination

CC: Town of Georgetown