



July 25, 2011

Mr. Morris Deputy  
Town of Middletown  
19 West Green Street  
Middletown, DE 19709

RE: Project No. 7486.CE  
PLUS review – 2011-04-07  
Christiana Care Health Systems  
New Castle County, Delaware

Dear Mr. Deputy:

In accordance with the State of Delaware's Office of the State Planning Coordination comments, dated May 23, 2011, on behalf of the Owner, Christiana Care Health Systems, we offer the following responses *in bold italics following each comment*:

According to the information received, you are seeking a site plan approval through Middletown for a 1,014,150 sq. ft. medical facility. The PLUS application states the initial development would be for a freestanding emergency department with the final build out including a hospital and medical campus.

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

*The Applicant will comply with all applicable Federal, State, and local regulations regarding this property. We recognize that the Town of Middletown is the governing authority for this project and this project will comply with Town of Middletown regulations/restrictions.*

### **Strategies for State Policies and Spending**

This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. This site is also located in the Town of Middletown growth area. Investment Level 1 reflects areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where future redevelopment or infill projects are expected and encouraged by State policy.

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 2

*We acknowledge the location of this project within Investment Level 1 according to the Strategies for State Policies and Spending, and also located in the Town of Middletown growth area.*

### **Code Requirements/Agency Permitting Requirements**

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are known cultural and historic resources on the parcel (property), historic houses with barns (N-5209, N-5210), not too far away from the road (Route 299). According to the USGS Topographic Map of 1931, it appears that there were houses approximately in the same vicinity, probably built during the mid to late 19th century, or early 20th century. Since there are known cultural and historic resources on the parcel, there is a possibility that there may be other cultural or historic resources such as potential archaeological sites. With this in mind, it is important that the developer be aware of the Delaware Unmarked Human Remains Act of 1987, in Chapter 54 of Title 7 of the Delaware Code, which pertains to the discovery and disposition of such remains. It is also important to keep in mind that the unexpected discovery of unmarked human remains during construction can result in significant delays, while the process is carried out.

*We understand the requirements of the Delaware Unmarked Human Remains Act of 1987, in Chapter 54 of Title 7 of the Delaware Code, and understand that the discovery of unmarked human remains can result in construction delays.*

- Prior to any demolition or ground-disturbing activities, the developer should consider hiring an archaeological consultant to examine the parcel for archaeological sites, such as a cemetery or unmarked human remains.

*At this point, the Applicant does not anticipate performing any archaeological examinations of the site. We believe the potential for the discovery of cemeteries or human remains is low.*

- 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 any known or potential culture or historic resources.

*There is no Federal involvement with this project.*

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The site access must be designed in accordance with DelDOT'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/Subdivision Manual Revision 1 proposed 060110.pdf](http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf)

*We acknowledge that the site access must be designed in accordance with DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access.*

- The proposed development warrants a Traffic Impact Study (TIS) in accordance with Section 2.3 of the Standards and Regulations. In this instance, however, a traffic study of the Route 299 corridor on the east side of Middletown has been done by McCormick Taylor, working for the Town but with support from DelDOT's Traffic Section. In that study, the subject land was treated as being developed for retail and office uses that would have generated more traffic than what is now proposed. For that reason the applicant has requested a waiver of the TIS requirement under Section 2.3.4 of the Standards and Regulations. While DelDOT has not yet replied to their request, they intend to do so, and to grant it, in the near future. DelDOT may require a Traffic Operational Analysis to address concerns about the site access. Whether they will do so has yet to be determined.

*We acknowledge that the proposed development would warrant a Traffic Impact Study, we also understand that development of this parcel for mixed use was included in a traffic study performed by McCormick Taylor for the Town of Middletown, and that mixed use would have generated more traffic than the development as proposed by this submission. We also understand that DelDOT does intend to grant a waiver to the Traffic Impact Study requirement for this project. To date, this waiver has not been received by the applicant.*

*We understand that a Traffic Operational Analysis may be requested by DelDOT to address concerns about the site access. It should be noted that all site access locations proposed by the Applicant are in the locations identified on the Route 299 improvement plans, prepared by McCormick Taylor.*

- Subsequent to the Route 299 corridor study mentioned above, McCormick Taylor has been developing plans for the widening and improvement of Route 299 between Delaware Route 1 and Catherine Street. These plans are scheduled for completion in April 2011 but DelDOT presently has no funding for that widening. Whereas a TIS would typically identify several road improvements to be made by a developer, in this area we anticipate that the Town will work with this developer and others to apportion the cost of the improvements between them and to administer the construction of the improvements in sections.

*The Applicant understands that presently, there is no funding for the improvements to Route 299, as prepared by McCormick Taylor. The Applicant will be meeting with the Town of Middletown and DelDOT to discuss improvements to Route 299, in late July.*

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 4

- While DelDOT does not have a formal plan submission from the applicant yet, they have had several meetings with them and they believe they are aware of the requirements. Questions on the requirements may be directed to our Subdivision Manager for southern New Castle County, Mr. Pao Lin. Mr. Lin may be reached at (302) 760-2157.

*A Record Plan was submitted to the DelDOT for review and issuance of a Letter of No Objection in early July. We will contact Mr. Lin should questions arise.*

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

### **Wetlands**

- The parcel is bordered on the north side by Dove Nest Branch which is a tidal water body and, according to the PLUS application; there are tidal wetlands on the parcel which have been delineated. Any work within the tidal wetlands would require a permit from the Wetlands and Subaqueous Lands Section (WSLS). There were no other subaqueous lands or wetlands found within the cleared portion of the property.

*We acknowledge that work within the tidal wetlands within the site would require a permit from the Watershed and Subaqueous Lands Section of the State of Delaware Department of Natural Resources and Environmental Control. While the Record Plan for this project does identify a future wetland impact with the construction of the final Medical Office Building on the site, this phase may not be completed for many years. If and when this road crossing is planned, a permit for this work will be obtained.*

- According to the Statewide Wetland Mapping Project (SWMP) maps, tidal (PEM1R.R1UBV& PFO/SS1R) and non-tidal riparian (PFO1C7) wetlands were mapped on subject parcel (Figure 1).

*We acknowledge that wetlands are present on the site; however, no disturbance is proposed during all but the final phase of development.*

- 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. **It is apparent that the developer is proposing a road crossing on wetland on this parcel. A permit is required for a wetland road crossing.** Please contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit.

*While the Record Plan for this project does identify a future wetland impact with the construction of the final Medical Office Building on the site, this phase may not be completed for many years. If and when this road crossing is planned, a permit for this work will be obtained from the Watershed and Subaqueous Lands Section of the Delaware Department of Natural Resources and Environmental Control.*

## TMDLs

- The project is located in the greater Delaware River and Bay drainage – specifically within the Appoquinimink watershed. In this watershed -under the auspices of Section 303(d) of the 1972 Clean Water Act - the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nutrients (e.g., nitrogen, phosphorus), and bacteria. 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 Appoquinimink watershed calls for a 60 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for an 8 percent reduction in bacteria from baseline conditions.

*We acknowledge that the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction target for nutrients (e.g., nitrogen, phosphorus) and bacteria. Currently, infiltration is proposed as the primary stormwater management practice on the site and we will endeavor to meet the TMDL reductions stated. We are not however, able to comment on bacteria reduction as we are unaware of any State approved Best Management Practices for bacteria reduction.*

- A nutrient management plan is required under the *Delaware Nutrient Management law (3 Del. Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project’s open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at 739-4811 for further information concerning compliance requirements, or view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>

*The Applicant acknowledges that, should nutrients be applied to lands or areas of open space in excess of 10 acres, a nutrient management plan in accordance with the Delaware Nutrient Management Program will be prepared.*

## Water Supply

The information provided indicates that Artesian Water Company will provide water to the proposed project through a public water system. DNREC files reflect that Artesian Water

Company does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-736-7547. Should an on-site public well be needed, a minimum isolation distance of 150 ft. is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area, and at least 150 ft. from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

*Since the submission of the PLUS plan, we have been advised that water will be provided by the Town of Middletown and not Artesian Water. We assume the Town of Middletown holds the certificate of public convenience and necessity (CPCN) to provide public water on this site. Currently no water supply wells are proposed on site.*

- 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.

*While we do not anticipate the need for dewatering during construction because of the distance to groundwater, it is acknowledged that, should dewatering be needed, a dewatering well construction permit will be obtained from the Water Supply Section of DNREC.*

- 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.

*We acknowledge that all well permit applications must be prepared and signed by a licensed water well contractor.*

#### **Water Resource Protection Areas**

- The Ground-Water Protection Branch (GPB) has determined that the development falls substantially within an excellent ground-water recharge potential area for the Town of Middletown.

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 7

Although the Town of Middletown's Source Water Protection Ordinance meets the minimum standards of protection, this protection does not limit impervious cover in excellent ground-water recharge potential areas. Impervious cover prevents precipitation from infiltrating through the soil to the water table aquifer. Impervious cover refers to structures including, but not limited to, roads, sidewalks, parking lots, and buildings. Any impervious cover within an area of excellent ground-water recharge potential area has the potential to have a negative effect the quality and quantity of drinking water available.

Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category (excellent) is an indicator of how fast contaminants will move and how much water may become contaminated (Andres, 2004). Land use activities or impervious cover on areas of excellent ground-water recharge potential may adversely affect ground water in these areas.

The construction phase of storm water management ponds requires excavation, hauling, and grading. The heavy equipment used in this phase has the capacity to compact and degrade the structure of the strata that defines the area as an excellent ground-water recharge area (Schueler, 2000). Changes to the structural soil properties may cause significant reduction in recharge capacity. Installing storm-water management ponds in excellent ground-water recharge areas has the potential to contaminate the ground water beneath it and infiltrate into the aquifer.

Ground Water Protection Branch recommends:

- Use Best Management Practices in the design, construction, and maintenance of a storm water management system designed to address water quality with respect to nutrient and other pollutant loads.

*In accordance with Town of Middletown Ordinance, the Applicant has submitted to the Town of Middletown and the Delaware Geological Survey (DGS) a geotechnical report and a request to re-map the Water Resource Protection Area (WRPA) Boundary on the site. On July 11, 2011, the Delaware Geological Survey issued a letter concurring with the conclusions reached by Applicant's consultant and acknowledging that the majority of the site is not located within a recharge WRPA. The applicant will, however, attempt to infiltrate the majority of stormwater runoff from the site including direct recharge of rooftop runoff to the maximum extent practical. The revised WRPA boundary is now shown on the Record Plan for the project.*

- In addition, because the excellent ground water recharge area can readily affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 8

hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

***As stated above, the site will no longer be considered within a Water Resource Protection Area and no hazardous materials are proposed to be stored outside.***

### *References*

Andres, A. Scott, 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware: Delaware Geological Survey Report of Investigations No. 66, p. 14. <http://www.udel.edu/dgs/Publications/pubform.html#investigations>

Schueler, T. R., 2000, The Compaction of Urban Soils, *in* Schueler, T.R., and Holland, H.K., eds., *The Practice of Watershed Protection*: Ellicott City, MD, Center for Watershed Protection, p. 752.

### **Sediment and Stormwater Program**

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a project 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 Town of Middletown. Contact Town of Middletown at (302) 378-9120 for details regarding submittal requirements and fees (Delaware Code: Title 7 Chapter 40)(Delaware Regulations: Administrative Code: Title 7: 5101).

***A Sediment and Stormwater Management Plan will be submitted to the Town of Middletown as part of the Construction Plan submission. We will coordinate with the Town of Middletown for details of submission and applicable fees. A project application meeting with the Town and its Consultant was conducted on May 6, 2011.***

### **Federally Listed Bog Turtle**

- A review of our database has revealed that there may be suitable habitat for the federally listed bog turtle (*Glyptemys muhlenbergii*) within the proposed project area. Bog turtles typically occur in freshwater wetlands with open canopies, mucky soils, and tussock vegetation; however, they can occur in more marginal habitats as well. Because the bog turtle is a federally listed species, protected under the Endangered Species Act, its presence can affect the scope of work. To ensure that the project will not impact bog turtles or their habitat, Phase I surveys for bog turtle habitat should be conducted. Phase I surveys can be

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 9

conducted any time of year when ice and/or snow cover is not present. If potential habitat is found, however, please note there is a time of year restriction during which Phase II surveys for bog turtles must be conducted. *A Delaware-approved bog turtle surveyor must be used to conduct the surveys.* Our program staff would like to offer our assistance in conducting the survey (at no cost to the landowner) please contact Holly Niederriter at (302-735-8670) or Holly.Niederriter@state.de.us . Otherwise, a list of contacts to conduct Phase I and, if necessary, Phase II surveys is available upon request.

If potential bog turtle habitat is found during Phase I surveys, you are required to either:

- 1) Completely avoid all direct and indirect project impacts to the wetland, in consultation with the U.S. Fish and Wildlife Service and Delaware Division of Fish and Wildlife;

OR

- 2) Have Phase II surveys conducted to determine if bog turtles are present. In accordance with Delaware's bog turtle site survey procedures, surveys must be conducted by a State-approved bog turtle surveyor between April 15 and June 15.

*The Applicant has contracted with Nathan Nazdrowic, a State Approved Bog Turtle Surveyor for the identification of potential bog turtle habitats on the site. A Phase I bog turtle survey was conducted on the site the week of July 5, 2011. There is a section of the site within the delineated wetland area, which meets the soil and hydrology criteria and has some vegetative aspects of bog turtle habitat. Mr. Nazdrowicz indicated this wetland as a low quality potential habitat. Additionally, the Applicant is not proposing any disturbance within the wetlands in the first phases of the project.*

#### **Hazardous Waste Sites**

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C. Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.”

*We acknowledge that if it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C. Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.*

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 10

**Tank Management Branch.** Please be aware:

- 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.

*We acknowledge the above.*

- There is one (1) inactive LUST project located within a quarter mile of the project site:
  - DelDOT-Guseman Property, Facility: 3-001611, Project: N0108071 (Inactive)

*We acknowledge the above.*

- 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.”

*We acknowledge the above.*

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

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:

**Fire Protection Water Requirements:**

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.

*The design of the water system to deliver 1,000 gpm for one (1) hour is acknowledged. Town of Middletown regulations require fire hydrants are placed every 400 feet on center. The Record Plans identifies this hydrant spacing.*

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 11

- Where a water distribution system is proposed for healthcare sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

*The size of the water main proposed for the site, 12 inch, is adequate for potable water supply, as well as fire hydrants and sprinkler systems.*

#### **Fire Protection Features:**

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

*All structures are proposed with sprinklers for fire protection.*

- 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

*Fire lane marking requirements will be met for all structures on site.*

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.

*The Fire Department connection location will be identified on the Fire Protection Site Plan and on the construction documents.*

- Show Fire Lanes and Sign Detail as shown in DSFPR.

*Fire Lane and Sign Details will be shown on the Construction Plans and the Fire Site Plan.*

#### **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 from State Route 299 must be constructed so fire department apparatus may negotiate it.

*Access from State Route 299 will be designed and constructed for fire access.*

- 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.

*The drop off circle in the front of the Freestanding Emergency Department is designed to be a primary fire lane and will allow access to the front door within 100 feet.*

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 12

- 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.

*All paved fire lanes are designed without dead ends to preclude the need for cul-de-sacs.*

- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

*Currently, the use of speed bumps or other traffic speed reduction techniques are not proposed for use on this site.*

- 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.

*Should gates or other features be proposed that would limit access by the fire department, those features would be reviewed with the Middletown Fire Department and approval received in writing.*

#### **Gas Piping and System Information**

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

*Natural gas is proposed for use on the site. Natural gas will be provided by Chesapeake Utilities who will install and maintain the natural gas piping on site. No bulk fuel containers are proposed on site.*

#### **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 if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 13

- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

*All above notes will be provided on the Fire Plan.*

### **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.

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

### **Soils**

- DNREC strongly recommends that the applicant avoid soils Zekiah (Za), Lenape (Lk) and Sassafras (SaD; 10-15% slopes) soil mapping units. Zekiah and Lenape are poorly to very poorly-drained (hydric) soil mapping units suggestive of wetland conditions.

Building in such soils is likely to leave prospective residents of this and adjoining properties more susceptible to flooding events in the future (principally from groundwater-driven surface water ponding). This will likely be made worse during extended periods of high intensity rainfall events such as tropical storms/hurricanes or “nor’easters.” This is in addition to the increased flooding probabilities because of 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). The Sassafras (SaD) soil mapping unit should be avoided because of steeply-sloping topography (10-15% slope).

*Thank you for the suggestion regarding development in the Zekiah, Lenape, and Sassafras soil types. We do not anticipate development to occur within areas of Zekiah or Lenape soils. A portion of future development may occur within the Sassafras soil type; however, attention will be paid to steeply sloped areas and development within these areas will be minimized to the maximum extent practical.*

### **Additional information on TMDL’s**

- 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 Appoquinimink watershed has not been formally completed to date. In the absence of a current PCS, the applicant is strongly urged to reduce nutrient and bacterial pollutants through the voluntary commitment to the implementation of the following recommended BMPs:

- Maintain as much of the existing forest cover as possible. We further suggest additional native tree and native herbaceous planting wherever possible.

*The bulk of the development will be outside of the existing forest cover. As the landscape plan is developed, we will be cognizant of the recommendation to utilize native tree and native herbaceous plant material where possible.*

- Maintain 100-foot buffer width(s) from all delineated wetlands (USACE and State approved wetland delineations) is strongly recommended. The USACE can be reached by phone at 736-9763.

*Wetland buffers, with the exception of the potential, future road crossing to the final phase, are in excess of 100 feet.*

- Calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation.

*For the Phase 1 construction, all created impervious areas will be calculated in the stormwater management report. For future phases, we will add a note on the plans that identifies approximate future impervious area, broken down by cover type (i.e., rooftop, asphalt, concrete, etc.).*

- Since this is a commercial project that will likely generate large amounts of impervious cover, we strongly advise the use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP to reduce the impacts associated with surface imperviousness, wherever practicable.

*Thank you for the suggestion, the Applicant will review the feasibility of this request based upon operational and financial parameters of the project.*

- Utilize rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts via runoff from impervious surfaces.

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 15

***Infiltration practices with pre-treatment are the proposed method of stormwater management. This should aid in the mitigation of nutrient and bacterial pollutants from impervious areas.***

- Voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To that end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

***Thank you for the suggestion, the Applicant will review the feasibility of this request based upon operational and financial parameters of the project.***

### **Key Wildlife Habitat**

- The wetlands within this project area are mapped as Key Wildlife Habitat (KWH) in the Delaware Wildlife Action Plan<sub>1</sub> (DEWAP) because they are part of a larger wetland complex that supports Species of Greatest Conservation Need<sub>2</sub> (SGCN). KWH can support the full array of species across the landscape and the maps in DEWAP show areas of the state where conservation efforts can be focused. Although designation as KWH is non-regulatory, these maps are intended to help guide site-specific conservation planning efforts.

These wetlands will be most impacted by a roadway to the isolated MOB proposed on the easterly side of the project area. It is recommended that the applicant consider reconfiguring the site plan to accommodate this building in the main part of the development rather than on this ‘island’. Perhaps a closer look at parking facilities and the current configuration will reveal an area better suited to accommodate this building without impacting wetlands and wildlife habitat.

***Thank you for the suggestion, the Applicant will review the feasibility of this request based upon operational and financial parameters of the project.***

### **Appoquinimink River Natural Area**

- The forested marshlands surrounding the site are part of the Appoquinimink River Natural Area. The site plan, for the most part, does not remove much Natural Area, except in the case of crossing the marsh to locate buildings and associated parking at the north east part of the site. We respectfully request that the applicant not fragment and /or further disrupt

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 16

the Natural Area by relocating the buildings and associated parking on the northeast portion of the property. The use of additional parking garages may assist in achieving this request.

*Thank you for the suggestion, the Applicant will review the feasibility of this request based upon operational and financial parameters of the project.*

#### **Additional information on hazardous waste sites**

- SIRB strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (**including a title search to identify environmental covenants**) 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.

*A Phase I Environmental Site Assessment was performed in July 2008.*

- 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.

*DNREC will be contacted should a release or imminent threat of a release of hazardous substances be discovered during the course of development.*

#### **Additional information on tank management.**

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

*Thank you for the suggestion, should contamination be encountered, PVC pipe materials will be replaced with ductile iron with rubber gaskets.*

- 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 Tank Management Branch (TMB).

*Any aboveground storage tanks will be approved by the Tank Management Branch of DNREC.*

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 17

- 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.

***Should above ground storage tanks be proposed, the Applicant will consult with the Town of Middletown during design and permitting.***

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

- Since this project involves Health Care occupancies, it is best that periodic updates be submitted to Department of Health & Social Services, Office of Health Facilities Licensing & Certification, including submission of plans and drawings as they become available.

***Thank you for the suggestion, we will provide the Department of Health & Social Services, Office of Health Facilities Licensing & Certification with plans as they become available.***

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

***Thank you for the suggestion, we have had a preliminary meeting with the Fire Marshal and will be meeting with them again just prior to final Fire Site Plan submission.***

Delaware Department of Education – Contact John Marinucci 735-4199

- The subject parcel borders the Brick Mill Elementary School property. It is recommended that the applicant coordinate with the Appoquinimink School District.

***Thank you for the suggestion, the Applicant has been in contact with the Appoquinimink School District during the design of this project.***

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 reduce heating and cooling costs. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property

Mr. Morris Deputy  
RE: Project No. 7486.CE  
July 25, 2011  
Page 18

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.

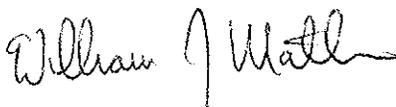
***Thank you for the suggestion, we will share these concerns with the Landscape Architect for the project.***

- The Delaware Department of Agriculture and the Delaware Forest Service encourage 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 our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

***Thank you for the suggestion, the site design maintains the vast majority of the perimeter forested areas; however, the Applicant will investigate the feasibility of adding additional native trees and shrubs along the property.***

We appreciate the opportunity to present this project to the State Planning Office and the designated agencies. We have attempted to incorporate comments and suggestions provided during the State Planning Office review in the site design for the project.

Sincerely,



William J. Mather, P.E.  
Project Manager

cc: Office of State Planning Coordination  
Christiana Care Health Systems