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December 8, 2014

Office of State Planning Coordinator
122 William Penn Street
Third Floor
Dover, Delaware 19901

Attn: Constance C. Holland, AICP

Re: PLUS review 2014-07-04, Lighthipe Subdivision
DBF #1443F001

Dear Ms. Holland:

We have read and reviewed the comments provided during the PLUS Review of the Project on July 23, 2014, and received from the Office of State Planning dated August 20, 2014. We offer the following item-by-item narrative for your review:

Strategies for State Policies and Spending

- *This project is located in Investment Level 2 according to the State Strategies for Policies and Spending. This site is also located in the Sussex County Growth Zone. 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 Terrence Burns 736-7404

- *There are no known archeological sites or National Register-listed property on this parcel. However, according to the Pomeroy and Beers Atlas of 1868 (19th century historic map), it appears that there were a couple of dwellings on the parcel, which were associated with a Captain T. Daisey and Captain J. James. Furthermore, there is a possibility that there could be archaeological resources associated with those dwellings as well. With this in mind, the developer should be aware of Delaware's Unmarked Human Burials and Human Skeletal Remains Law, which is outlined in Chapter 54 of Title 7 of the Delaware Code.*

Abandoned or unmarked family cemeteries are very common in the State of Delaware, and often they are on historic farm sites, rural areas or open space lands. Disturbing unmarked burials triggers Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Delaware Code Title 7, Chapter 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area for the presence of such a cemetery. If a cemetery is discovered, it is very costly to have it archaeologically excavated and the burials moved. In the event of such a discovery, the Division of Historical & Cultural Affairs recommends that the plans be re-drawn to leave the cemetery on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with a homeowners association or development. If you need or would like to read more information that pertains to cemeteries or unmarked human remains, please go to the following websites for additional information: www.history.delaware.gov/preservation/umhr.shtml and www.history.delaware.gov/preservation/cemeteries.shtml.

Prior to any demolition or ground-disturbing activities (such as development or construction activities), the developer should consider hiring an archaeological consultant to examine the parcel for archaeological sites, such as a cemetery or unmarked human remains. The developer should also include consider maintaining the early 20th-century house/dwelling (S-2344) within the development if possible.

- *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 cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the national Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Furthermore, any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit of funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at www.achp.gov.*

We are aware of Delaware's Unmarked Human Burials and Human Skeletal Remains Law and will comply with all federal regulations associated with development activity.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- *DelDOT estimates that the proposed development would generate 1,576 vehicle trips per day on a typical weekday and 157 trips during the weekday evening peak hour. Therefore, in accordance with the traffic volume warrants found in Section 2.3.1 of our Standards and Regulations for Subdivision Street and State Highway Access, the proposed development warrants a Traffic Impact Study (TIS). However, because it would generate fewer than 2,000 vehicle trips per day and less than 200 vehicle trips in any peak hour, DelDOT would be willing to accept an Area-Wide Study Fee of \$15,760 in lieu of a TIS, in accordance with Section 2.3.2 of the Standards and Regulations.*

If the developer wishes to proceed with a TIS, then in accordance with Section 2.5.1 of the Standards and Regulations, the developer's engineer should contact Mr. Troy Brestel of the DelDOT Planning Office at (302) 760-2167 to arrange for a scoping meeting prior to beginning work on the TIS. Because summer season traffic counts would be needed to conduct the TIS and the season ends in late August, DelDOT recommends that the developer not delay in obtaining a scope of work and counting traffic.

Payment of the Area-Wide Study Fee would not exempt the developer from making or contributing to off-site improvements or conducting a Traffic Operational Analysis if DelDOT determines that one is needed during review of the entrance plans. With regard to off-site improvements DelDOT would be guided by the August 15, 2012 letter to the Town of Ocean View regarding Ocean View Beach Club. A copy of that letter is attached.

- *Because the proposed development would take access through Ocean View Beach Club, that development's entrances on Muddy Neck Road would serve as the site entrances. Those entrances must be designed in accordance with DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access to accommodate all of the dwellings they would serve. A copy of the Standards and Regulations is available at [http://www.deldot.gov/information/ubx_forms/manuals/subdivision/pdf/Subdivision Manual Revision 1 proposed_060110.pdf](http://www.deldot.gov/information/ubx_forms/manuals/subdivision/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf).*
- *Please be advised that DelDOT has advertised for comment a comprehensive revision of the Standards and Regulations. The comment period ran through June 30 and DelDOT could adopt this revision as soon as September 2014. Implementation guidance has not been developed but we recommend that the developer's engineer become familiar with the proposed changes and assess whether any of them could be relevant to this project. Information on the proposed revision is available in the Register of Regulations and at http://www.deldot.gov/information/pubs_forms/revisions_to_ASR/index.shtml.*
- *Referring to Section 1.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Initial Stage review fee shall be assessed to this project.*

- Referring to Section 1.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Construction Stage review fee shall be assessed to this project.
- In accordance with Section 3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, any off-site improvements and when those improvements are warranted need to be noted on the record plan.
- In accordance with Section 3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, a site plan shall be prepared prior to issuing "Letter of No Objection". The following information will be required for the "Letter of No Objection" review:
 - Copy of the Initial Stage Fee Calculation Form
 - Copy of the Initial Stage Review Fee
 - Gate-Keeping Checklist – Site Plan
 - Design Checklist – Record Plan*
 - Owners and Engineer's name and e-mail address
 - Three (3) paper sets of the Record Plan
 - Conceptual Entrance Plan
 - CD with a pdf of the Site Plan
 - Submission of the Area-Wide Study Fee (if applicable)
*For the design checklist for the site plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, pages D-2 and D-3.
- As specified in Section 3.4.1.1 of the Standards and Regulations for Subdivision Streets and State Highway Access, a traffic generation diagram is required on the record plan.
- Referring to where the pipestem of the remainder parcel accesses Muddy Neck Road, in accordance with section 3.6.5 and Figure 3-3 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require dedication of the right-of-way along the site's frontage on Muddy Neck Road to provide a minimum of 40 feet and right-of-way from the road centerline. The right-of-way dedication note has been revised to the following, "An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat."
- Referring to where the pipestem of the remainder parcel accesses Muddy Neck Road, in accordance with Section 3.6.5 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Muddy Neck Road. The location of the easement shall be outside the limits of the ultimate right-of-way. 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 is hereby established to the State of Delaware, as per this plat.”

- *Referring to Section 4.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review;*
 - *Copy of the Construction Stage Fee Calculation Form*
 - *Copy of the Construction Review Fee*
 - *Gate-Keeping Checklist – Entrance Plan*
 - *Design Checklist – Entrance Plan***
 - *Three (3) paper sets of the Entrance Plan*
 - *SWM Report and Calculations (if applicable)*
 - *CD with a pdf of the Entrance Plan*

**For the design checklist for the entrance plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, pages D-9 and D-13.
- *Metes and bounds and total areas need to be shown for any drainage easements. Section 5.7.2.5 of DelDOT’s Standards and Regulations for Subdivision Streets and State Highway Access requires, in part, a minimum 20-foot wide drainage easement for storm drainage systems, open or closed, that fall outside the existing right-of-way or the drainage/utility easement. These easements must be shown and noted on the record plan.*

We thank DelDOT for the required information and will incorporate it into the design.

Department of Natural Resources and Environmental Control – Contact Bahareh Van Bokehold 735-3495

Wetlands

- *State regulated wetlands ARE located on this property based on a review of the State wetland maps. This area is within state regulated mapped wetland area. State regulated wetlands are those wetlands identified on the State’s official State Regulated Wetland Maps. Additional information about State regulated wetlands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or online at <http://www.denrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>. The application states that a jurisdictional determination has been done and there will be no direct impacts to these wetlands.*
- *State regulated subaqueous lands ARE likely to be located adjacent to this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps but do not look to be impacted by the planned construction. This property is adjacent to Assawoman Canal. State subaqueous lands include all tidal waters (up to the mean high water line), most non-tidal rivers, streams, lakes, ponds,*

bays and inlets (up to the ordinary high water line), most perennial streams and ditches and many intermittent streams and ditches. Additional information about State regulated subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or online at <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>.

- *Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE possibly located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps. Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, where the use, degradation or destruction of these waters could affect interstate or foreign commerce.*
- *The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdictional. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at <http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm>.*

Professional Wetland Scientists will be retained to conduct a detailed delineation of state and federally regulated waters and wetlands. Project plans will depict these boundaries and will include a statement from a qualified professional wetland scientist certifying the accuracy of these boundaries. Agency coordination and onsite review of these boundaries will be conducted as part of authorizing any unavoidable impact to regulated water or wetlands. The project goal is to minimize impacts to wetlands and waters to the maximum extent possible.

TMDLs

- *The project is located in the low nutrient reduction zone of the greater Inland Bays watershed. In this watershed, Total Maximum Daily Load (TMDL) pollutant reduction targets have been developed by the State of Delaware (under the auspices of Section 303(d) of the 1972 Federal Clean Water Act) 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 low reduction zone of the Inland Bays watershed calls for 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 40 percent reduction (17 percent for marine waters) in bacteria from baseline conditions.

*A nutrient management plan is required under the Delaware Nutrient Management Law (3 Del. C., 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>*

We thank you for providing us with the required reductions for this site. A nutrient management plan will be prepared for this project should it meet the threshold for requiring the plan during the construction document preparation. The site will comply with the Inland Bays Pollution Control Strategy Regulation.

Flood Management

- *The entire project parcel currently contains a moderate risk, 0.2% annual chance flood hazard area, as shown on the current effective FEMA Flood Insurance Rate Map (FIRM). A coastal study was recently done by FEMA, and it has been determined that 43% of this parcel has been placed in the 1% annual chance flood zone (Zone AE, a high risk flood zone) on the preliminary FIRM; 41% of the parcel remains in the moderate risk flood zone. These preliminary maps are available to view at maps.riskmap3.com/DE/Sussex*

The maps are scheduled to become effective in early 2015. DNREC encourages any development to take into account the flood risk of this parcel and to build the structures so that flood damage is minimized. For example, flood insurance would be required in the high risk area if there is a mortgage, and having the first floor elevated 18 inches above the base flood elevation significantly reduces the flood insurance for a potential buyer.

We thank you for providing us with this information. We will consult the proposed flood mapping in the project design.

Water Supply

- *The information provided indicates that Tidewater Utilities will provide water to the proposed project via a public water system. DNREC records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 08-CPCN-10.*
- *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.*

We will obtain a Willing and Able letter from Tidewater Utilities, Inc. for the project. Well permits will be obtained if needed for dewatering and in accordance with all rules and regulations and understand if permits require longer review based on local potential contamination.

Sediment and Stormwater Program

- *A detailed sediment and storm water 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 storm water 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 storm water management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101).*

We have held a pre-application meeting with the Sussex Conservation District for this project. We will continue to work with the District in obtaining approval of a detailed sediment and stormwater management plan.

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. There are no SIRS sites or salvage yards found within a ½-mile radius of the proposed project.*

The Owner / Developer will perform mediation if a release of a hazardous material is determined by the Department.

Tank Management

- *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.*
- *No confirmed leaking underground storage tanks (LUST) projects are located within a quarter mile of the project boundary.*
- *No environmental impacts are anticipated; however, 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 Section by calling 302-395-2500..

The project will comply with all requirements regarding reporting and releases of Regulated Substances.

Air Quality

- *The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply to your project:*

Table 1: Potential Regulatory Requirements	
Regulation	Requirements
7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling	Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. Use covers on trucks that transport material to and from site to prevent visible emissions.
7 DE Admin. Code 1113 – Open Burning	Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. Prohibit the burning of land clearing debris. Prohibit the burning of trash or building materials/debris.
7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan	Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)

7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	Use structural/ paint coatings that are low in Volatile Organic Compounds. Use covers on paint containers when paint containers are not in use.
7 DE Admin. Code 1144 – Control of Stationary Generator Emissions	Ensure that emissions of nitrogen oxides (NO _x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO ₂), carbon monoxide (CO), and carbon dioxide (CO ₂) from emergency generators meet the emissions limits established. (See section 3.2). Maintain recordkeeping and reporting requirements.
7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles	Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

- *For a complete listing of all Delaware applicable regulations, please look at DNREC website: <http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.*

The project will comply with all regulatory requirements.

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.*
- *Where a water distribution system is proposed for townhouse type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.*

Fire Protection Features:

- *For townhouse building, provide a section / detail and UL design number of the 2-hour fire rated separation wall on the 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 to the subdivision from the main thoroughfare must be constructed so fire department apparatus may negotiate it. If a "center island" is placed at an entrance into the subdivision, it*

shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.

- *Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.*
- *Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.*
- *The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.*
- *The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.*

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 land, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”

- *Proposed Use*
- *Square Footage of each structure (Total of all Floors)*
- *National Fire Protection Association (NFPA) Construction Type*
- *Maximum Height of Buildings (including number of stories)*
- *Name of Water Provider*
- *Letter from Water Provider approving the system layout*
- *Townhouse 2-hr separation wall details shall be shown on site plans*
- *Provide Road Names, even for County Roads.*

We thank the State Fire Marshal for the required information and will incorporate it into the design.

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.

Office of State Planning Coordination – Contact Dorothy Morris 739-3090

The Office of State Planning recommends the developer seek annexation into the Town of Ocean View to eliminate the existing enclave.

The developer has met with the Town of Ocean View to discuss this matter. Future consideration is being explored with the Town outside the planned approval process within the County.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- *DelDOT recommends that the developer pursue annexation into the Town of Ocean View. Functionally, the subject development would be an enclave of land under County jurisdiction accessible only through the Town. Residents would likely expect Town services, such as water, trash collection and police protection, and would use Town amenities, such as the Town Park, to the extent that they could.*
- *The response to Item 27 on the PLUS application mentions that the subject development could connect to Ocean Way Estates and the plan accompanying the application shows an unmarked gap between Lots 13 and 14 that could be opposite where Riga Drive, a privately maintained stub street in Ocean Way Estates, abuts the property line. DelDOT recommends that a bicycle and pedestrian connection be provided to Riga Drive if possible. This connection should be designed with gates or bollards such that it can also be used for emergency vehicle access.*
- *There is a 20-foot forested buffer proposed around the perimeter of the development, in part to separate it from Ocean Way Estates. In the area of Lots 33 through 37, that buffer would widen significantly to create a triangular area about 150 feet wide and accessible only by traveling down the 20-foot buffer behind Lots 30, 31 and 32. DelDOT recommends that a more direct access to this area be provided, perhaps between Lots 35 and 36, for ease of maintenance.*
- *Because the proposed development would generate more than 200 vehicle trips per day, a Pre-Submittal Meeting is required before plans are submitted for review. Guidance on what will be covered at this meeting and how to prepare for it is located at http://www.deldot.gov/information/business/subdivisions/Pre-Submittal_Meeting_Requirements.doc. The form needed to request this meeting is available at http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.doc.*
- *As shown on the Investment Level map associated with the Strategies for State Policies and Spending, the subject development is located in a Level 2 area. DelDOT's Shared-Use Path and/or Sidewalk Process policy (available at http://www.deldot.gov/information/business/subdivisions/SUP_Sidewalk_Process.pdf) requires that a path or sidewalk be installed along the State-maintained road frontage of any development in a Level 1 or 2 area. Therefore, the applicant should*

expect a requirement that a path or sidewalk be installed along Muddy Neck Road where the pipestem of the remainder parcel accesses that road.

- *Be advised that the standard general notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of November 26, 2013 for the Record/Site Plan and Construction Plan general notes and the Temporary Traffic Control general notes. The notes can be found at http://www.deldot.gov/information/business/subdivisions/DelDOT_Development_Coordination_Plan_Sheet_notes.doc*
- *The applicant should expect a requirement that all PLUS and/or TAC comments be addressed prior to submitting record, subdivision or entrance plans for review.*
- *Please check to determine whether any utilities will need to be relocated as part of this project.*
- *Please use the Auxiliary Lane Worksheet to determine whether the planned auxiliary lanes at the ocean View Beach Club site entrances are sufficient for the additional traffic. The worksheet can be found at http://deldot.gov/information/business/subdivisions/auxiliary_lane_worksheet.xls.*
- *Please be advised DelDOT's check handling procedures changed in 2012. For specific information, see the letter available at: <http://www.deldot.gov/information/business/subdivisions/PaymentProcedure.pdf>*

The Developer/Owner will schedule a pre-submittal meeting with DelDOT to discuss improvements and requirements mentioned above and also other anticipated comments from DelDOT to incorporate into the design.

Department of Natural resources and Environmental Control – Contact Bahareh Van Boekhold 735-3495

Buffers

- *The current site plan shows a 20-foot buffer surrounding the development. DNREC recommends a 100-foot buffer around the development to avoid compromising the environmental features that are so important to this area of our State and to address TMDLs and water quality; a 50-foot buffer would provide valuable wildlife habitat. Specific program recommendations are discussed later in the letter.*

Sea Level Rise

- *A significant portion of the planned development area lies within an area that will be subject to direct and permanent inundation from sea level rise (<http://de.gov/slrmap>). Sea levels in Lewes have risen by about a foot over the past century (NOAA, 2014). This rate of sea level rise is likely to accelerate in the coming decades as a result of global climate change and local subsidence. Accelerated sea level rise will result in permanent flooding of low-lying coastal areas and increased risk of flood damage*

during storms (DNREC, 2012).

- *DNREC Preliminary Land Use Service maps depicting future risk from sea level rise indicate that approximately 24 acres of this site could be inundated by sea level rise by 2100. In the short-term, sea level rise on this parcel, combined with periodic coastal flooding events, may result in repetitive flood damage to homes within this neighborhood and significant difficulties maintaining storm water and drainage infrastructure. In the long-term, this increased flood and inundation risk could result in costly public and private flood abatement and drainage projects and an eventual abandonment of homes.*
- *Recommendations:*
 - *Lots within flood prone areas should be eliminated.*
 - *Any structures that are built within an area mapped as both floodplain and sea level rise zone should be constructed with 18" of freeboard plus additional freeboard to accommodate future sea levels.*
 - *Filling lots to elevate them to above base flood elevation is discouraged.*
 - *Access roads should be designed to be flood resilient for the entirety of its design life span. This includes ensuring that the roadway functions for the 1% chance flood plus anticipated future sea level rise.*

References:

NOAA (National Oceanic and Atmospheric Administration). (2014). Mean Sea Level Trend, Lewes, DE. Retrieved from http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8557380.

DNREC Delaware Coastal Programs. (2012). Preparing for Tomorrow's High Tide: Sea Level Rise Vulnerability Assessment for the State of Delaware. Dover, DE: Department of Natural Resources and Environmental Control. Retrieved from <http://de.gov/slrva>.

- ***Fish and Wildlife Buffers***

DNREC recommends increasing the 20-foot buffer surrounding the development, as depicted in the proposed project plans to a minimum 50-foot buffer. This buffer could be composed of a 25-foot herbaceous strip that is mowed annually, either in March or November, followed by a 25-foot forested strip. This diversity of habitat provides more wildlife values and water quality protection than a 20-foot forested buffer would provide. Moreover, the native wildflower mix will also serve to attract bees, butterflies, and other pollinators. Our program botanist, Bill McAvoy (William.McAvoy@state.de.us, (302) 735-8668), would gladly provide guidance as to what native species can be added to the wildflower mix and which native trees and shrubs to plant.

Dredge Program

- *The northwestern portion of the subdivision was utilized as a dredge spoil disposal site. No contaminants of concern were noted in the spoil. It is recommended to check the compaction of the site.*

Soils Assessment

- *Based on soils survey mapping update, Hurlock and Mullica are mapped in the immediate vicinity of the proposed project. Hurlock and Mullica are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development (considered unsuitable; figure 1). DNREC strongly discourages building on hydric soils as they are functionally important source of water storage (functions as a “natural sponge”); loss of water storage increases the probability for more frequent and destructive flooding events. The probability for flooding is further compounded by increases in surface imperviousness as building density increases in the area over time.*

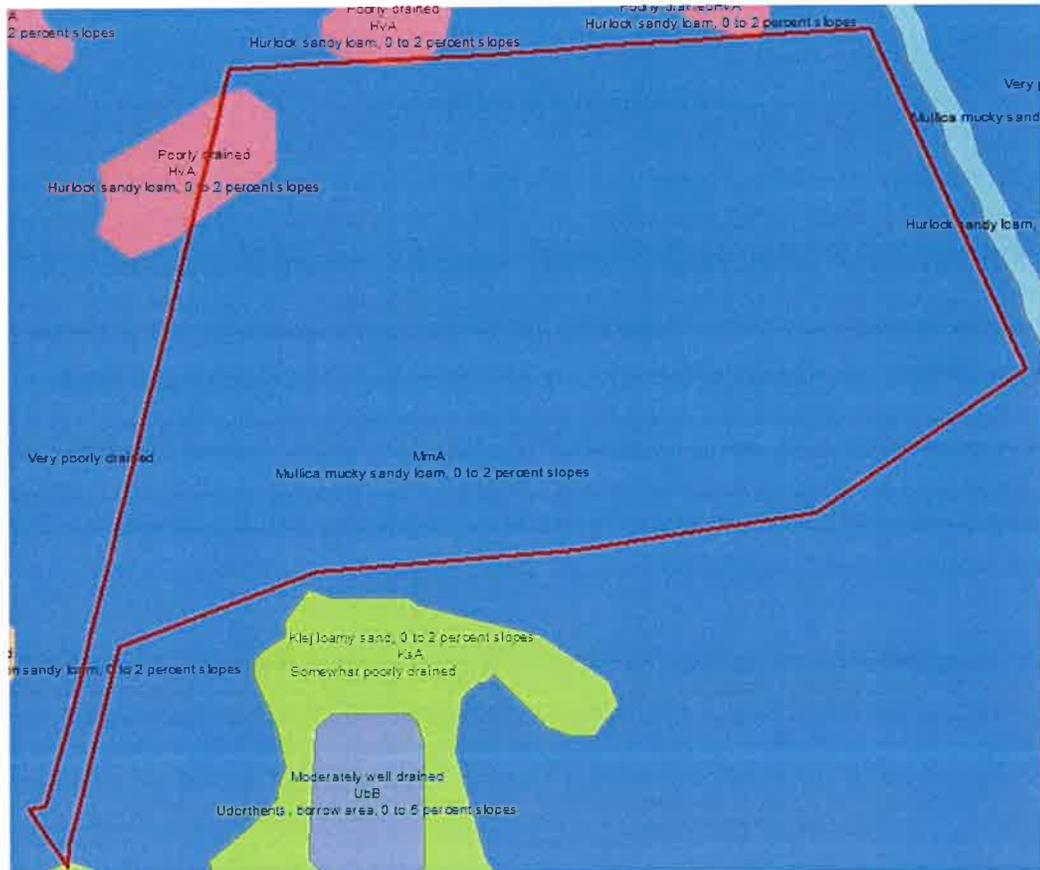


Figure 1: NRCS soil mapping update in the immediate vicinity of the proposed project.

Additional Information on TMDLs and water quality

- *Compliance with the specified TMDL nutrient and bacterial reduction requirements specified for the Inland Bays watershed can be facilitated by the strategies and requirements described in the Inland Bays Pollutant Control Strategy, and the implementation/adherence to the following recommended BMPs:*
- *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 which appear to bisect and/or bound much of the perimeter of subject parcel), hydric soils, and wetlands (field delineated and approved by the United States Army Corps of Engineers). The USACE can be reached by phone at 736-9763.

- *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.*
- *Use of 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/discharges from impervious surfaces. Please contact Lara Allison at 739-9939 for further information about the possibility for installing a rain garden(s) on this parcel.*
- *DNREC strongly recommends that the applicant 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, ponds, and roads) included in the calculation.*
- *Wherever practicable, DNREC strongly advises the use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP(s) to reduce the impacts from all forms of created surface imperviousness. Since the project proposed for this parcel is a commercial shopping center that will significantly increase surface imperviousness, it is especially important that the applicant consider pervious paving materials in lieu of conventional asphalt or concrete here.*
- *DNREC strongly encourages the applicant to voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this 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) resulting from the conversion of individual or combined land parcels to a changed land use(s); thus providing applicants and governmental entities with quantitative information about the project's impact(s) on baseline water quality. DNREC strongly encourages the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Jen Walls or John Martin at (Division of Watershed Stewardship) at 302-739-9939 for more information on the protocol.*

We will work with the Sussex Conservation District to develop a plan to incorporate BMP(s) and BAT(s) in the design process to address environmental sensitivities and regulations.

- ***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. If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS. 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.

If contamination is encountered PVC piping will be utilized, also any tank installed per above guidelines will be registered or approved by TMS.

- ***Additional information on hazardous waste sites***

DNREC 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.

- *Additional remediation may be required if the project property or site is re-zoned by the county. 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.*

- ***Additional information on air quality***

New homes may emit, or cause to be emitted, air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- *Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,*
- *The emission of greenhouse gases which are associated with climate change, and*
- *The emission of air toxics.*
- *Air emissions generated from new homes include emissions from the following activities:*

- *Area Sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.*

- *The generation of electricity needed to support the new homes, and*
 - *All transportation activity.*
- *Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for the development could not be quantified. DNREC was able, however, to quantify the mobile emissions based on the proposed daily trip data presented in the application and data taken from the ITE Trip Generation manual, 8th Edition. Table 2 represents the actual impact the Lighthipe development may have on air quality.*

Table 2: Projected Air Quality Emissions for Lighthipe

<i>Emissions Attributable to Lighthipe (Tons per Year)</i>	<i>Volatile Organic Compounds (VOC)</i>	<i>Nitrogen Oxides (NOx)</i>	<i>Sulfur Dioxide (SO₂)</i>	<i>Fine Particulate Matter (PM_{2.5})</i>	<i>Carbon Dioxide (CO₂)</i>
<i>Mobile</i>	5.5	7.2	*	*	*

() Indicates data is not available.*

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

- *DNREC encourages sustainable growth practices that:*
 - *Control sprawl;*
 - *Preserve rural and forested areas;*
 - *Identify conflicting land use priorities;*
 - *Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;*
 - *Coordinate transportation, housing, environment, and climate protection plans with land use plans; and*
 - *Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.*
- *Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:*
 - *Constructing with only energy efficient products. Energy Star qualified products are up to 30% more energy efficient. 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 energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.*
 - *Offering geothermal and/or photo voltaic energy options. These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.*

- *Providing tie-ins to the nearest bike paths and links to any nearby mass transport system. These measures can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, a bike path or mass transit, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.*
- *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 in vegetative buffer areas. Trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, thereby 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. The applicant should submit a plan to the DNREC DAQ which addresses the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Lighthipe development.

Contrary to the promotion of sprawl, this project is located on a tract which is surrounded by existing development. While it is not currently a forested tract, trees will be planted throughout the development as well as in open spaces and buffers. Utility and transportation infrastructure already exists in the area to serve this development. The developer intends to provide tie-ins for bicycle and pedestrian access to adjoining communities.

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

- *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.*

The Developer/Owner will schedule a pre-submittal meeting with the Fire Marshal's Office.

Department of Education-Contact Despina Wilson 739-4040

- *The DOE requests that the developer work with the affected School District's transportation department to establish developer supplied bus stop shelter within the right of way.*
- *The DOE recognizes the integral role of educational facilities within communities. As such, the DOE seeks to assure that residential growth, that generates additional*

demand on educational facilities, is managed with adequate educational infrastructure being made a part of subdivision plans as appropriate, such as adequate width of roads to accommodate school buses and designated pick up and drop off sites.

- *As per DOE formula, this development would potentially add 83 students to the school district. DOE records indicate that the Indian River School Districts' schools are nearing or exceeding capacity based on the September 30, 2013 elementary enrollment. As such, the DOE requests that the developer contact the affected School District administration to address the issue of school over-crowding that this development has the potential to cause.*

The Developer/Owner will contact the Indian River School District to discuss their needs regarding the generation of additional students as well as bus service.

Division of Public Health – Contact: Laura Saperstein 744-1011

The Delaware Division of Public Health (DPH) is pleased to be able to participate in the PLUS application process. In keeping with its mission to protect and promote the health of all people in Delaware, DPH looks for opportunities to encourage and enhance our population's health behaviors that will result in healthy people and healthy communities.

- *Community design can impact the health of a population. Studies show that persons in lower- income communities, the elderly, and children often suffer more from consequences of inadequate land-use and transportation. Additionally, physical activity has a direct correlation to many chronic diseases, including hypertension, diabetes and obesity. In 2012, 39.1% of Delawareans reported a BMI of "overweight," and 26.9% reported a BMI as "obese." To that end, DPH looks to make recommendations for land-use that can empower Delawareans to make good health behaviors a part of their daily lives.*
- *DPH is pleased to see the inclusion of sidewalks which are connected to existing adjacent development. The inclusion of this pedestrian infrastructure will enable residents to choose walking as a recreational option. Locating housing developments within a reasonable distance to active recreation facilities enables residents the option of active recreation as part of their everyday life.*
- *DPH feels the Lighthipe Subdivision has the opportunity to increase positive health behaviors for its residents by incorporating the following recommendations into its land development proposal:*
 - *Provide pedestrian connection to the existing development to further active transportation (walking/Biking) among residents.*
 - *Include pedestrian lighting on all paths and walkways to enhance the usability of active transportation options.*
 - *Enhance and improve the connectivity of internal trail networks.*
 - *Include crosswalks at all key intersections*
 - *Further consider SCORP regional priorities by including the proposed swimming pool; playground and or bike path mentioned at the PLUS meeting.*

It is the developers desire to establish bicycle and pedestrian access throughout the community as well as providing connections to neighboring communities. The development will incorporate amenities which provide SCORP resources.

On behalf of the Developer, we thank the State for providing us with these comments. Please contact me at (302) 424-1441 if you have any questions or need additional information.

Sincerely,
DAVIS, BOWEN & FRIEDEL, INC.

A handwritten signature in black ink, appearing to read 'W. Zachary Crouch', with a long horizontal flourish extending to the right.

W. Zachary Crouch, P.E.
Principal

CC: Town of Ocean View – Charlie McMullen
Sussex County Planning & Zoning – Lawrence Lank