



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

February 28, 2005

Mr. Tom Ford
Land Design, Inc.
Oak Square
Suite 3, Central Avenue
Ocean View, DE 19970

RE: PLUS review – PLUS 2005-01-03; Marsh Island

Dear Mr. Ford:

Thank you for meeting with State agency planners on January 26, 2005 to discuss the proposed plans for the Marsh Island project to be located along SCR 279 (Camp Arrowhead Road, approximately ½ miles south of DE Route 24.

According to the information received, you are seeking a site plan review to place 138 single family residential units on 103.86.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies

- This project is located mostly within an Investment Level 3 area according to the Strategies for State Policies and Spending, with the wetland and flood plain portions of the site within Investment Level 4. Investment Level 3 generally indicates longer term growth areas or growth areas with environmental limitations. Investment Level 4, especially in the Environmentally Sensitive Developing Area, indicates the presence of sensitive natural resources that should be preserved on the site.
- While we have no objection to the development of portions of the site, we recommend that the more sensitive portions on the site, those within the 100-year flood plain and those within and surrounding wetlands, remain undisturbed.

Natural and Cultural Resources

- There is a high probability for archaeological sites, especially on the east half of the property and near Love Creek. Contact the SHPO at 302-739-5685 and speak with an archaeologist about the probability of sites.
- Lots should be removed from of the 100-year flood plain area of the site.
- Vegetated buffers comprised of native trees, shrubs or no-mow grasses, of no less than 100 feet should be employed from the edge of the wetland complex.
- All lot lines should be moved away from the wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.
- Any existing ponds on site that will be used to meet the stormwater management requirements must meet the safety requirement set forth in Pond Code 378, including 3:1 or flatter side slopes and safety benches. Since they will be located within a residential area, even if a pond is not constructed to fulfill stormwater management requirements, it is recommended that they be constructed with the same safety features. A 100-foot minimum buffer distance is recommended from all stormwater ponds and wetlands or waterbodies.
- The portion of the site along Love Creek lies within a State designated Natural Area and a State Resource Area. It is recommended that lots be reconfigured so that most open space be relocated to forested areas and areas adjacent to the riparian corridor of Love Creek and that plans include forest and meadow restoration in these areas.

Street Design and Transportation

- A stub street should be provided to the adjoining parcel on the north (Wandendale Farm, Inc.). A bike/pedestrian connection to that parcel should also be provided to increase non-motorized mobility beyond this project's boundaries.
- DelDOT will require right-of-way dedication to provide any additional width needed to bring the right of way to from this project.

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

Office of State Planning Coordination – Contact: Ann Marie Townshend 302-739-3090

The Office of State Planning Coordination notes that this project is located mostly within an Investment Level 3 area according to the Strategies for State Policies and Spending, with the wetland and flood plain portions of the site within Investment Level 4. Investment Level 3 generally indicates longer term growth areas or growth areas with environmental limitations. Investment Level 4, especially in the Environmentally Sensitive Developing Area, indicates the presence of sensitive natural resources that should be preserved on the site.

The PLUS application indicates that there is no reason at this time to consider a stub street connection to the adjoining parcel to the north. We strongly encourage you to include such a connection. In the event that the adjacent parcel develops, such a connection would allow travel between the adjacent neighborhoods without using Camp Arrowhead Road.

We also note that the site plan presented shows about 25 lots either in or partially in the 100-year flood plain. We recommend that as many lots as possible be removed from the floodplain. In addition to providing flood protection, this would allow for a more continuous and adequate buffer of the wetlands on the site.

State Historic Preservation Office (SHPO) – Contact: Alice Guerrant 739-5685

There are older buildings on the north side of the development. The developer's representatives are not certain on their plans for these building. If they are to be demolished, please contact our office at 302-739-5685 to schedule a time we can access the buildings for documentation before they are destroyed.

There is a high probability for archaeological sites, especially on the east half of the property and near Love Creek. The developer should contact the SHPO at 302-739-5685 and speak with an archaeologist about the probability of sites.

If there is federal involvement in the form of permits, licenses, or funds, the federal agency is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800).

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) DelDOT noted that they support the comments from the Office of State Planning Coordination regarding interconnections between developments. It is recommended that the County require that a stub street be provided to the adjoining parcel on the north (Wandendale Farm, Inc.). The response to Item 39 on the PLUS form, states that the developer sees “no reason at this time to propose such a connection.” DelDOT can suggest two reasons. First, when the property to the north is developed, the residents of the two subdivisions could visit each other without using Camp Arrowhead Road. Second, the connection would provide an alternative access to the subject development, which could prove critical in an emergency if the entrance were blocked.
- 2) Camp Arrowhead Road is classified as a local road. Local roads in rural Delaware typically have right-of-way widths ranging from 33 to 50 feet. DelDOT’s policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore, DelDOT will require right-of-way dedication to provide any additional width needed from this project.
- 3) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site.
- 4) There is a DelDOT project under development to improve Camp Arrowhead Road. DelDOT recommends that the developer contact the project engineer, Mr. George Spadafino, to become familiar with the project, and as necessary coordinate their entrance improvements with that work. Mr. Spadafino may be reached at (302) 760-2356.
- 5) DelDOT is aware that an existing drainage course runs through Parcels 19 and 132.01 and a corner of the golf course. The golf course owners have been filling it and in the process have created a flooding problem upstream on both sides of Camp Arrowhead Road. DelDOT asks that the developers of the subdivision regrade this area to correct the situation and keep the proposed lots out of the low area.
- 6) The developer’s site engineer should contact the Subdivision Manager for Sussex County, Mr. John Fiori, regarding our requirements for access. Mr. Fiori may be reached at (302) 760-2260.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-3091

Soils

According to the soil survey update, Greenwich, Downer, Askecksy, Mispillion-Transquaking complex, Broadkill, and Manahawkin were mapped in the immediate vicinity of the proposed construction. Greenwich and Downer are both well-drained upland soils that, generally, have

few limitations for development. Askecksy is poorly drained wetland associated (**hydric**) that has severe limitations for development. Mispillion-Transquaking complex and Broadkill are wetland associated (**hydric**) wetlands associated with tidally-influenced waters.

Although most of the soils on subject parcel are fairly well drained, they have limitations associated with rapidly permeable sandy surface and subsurface horizons. Such soils are conducive to nutrient leaching via groundwater or surface runoff into the surrounding watershed. In soils containing shallow water tables or found in close proximity to waterbodies, these impacts are greatly intensified.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of estuarine and palustrine tidal and palustrine forested wetlands on this site. Because there is strong evidence that federally regulated wetlands exist on site, a wetland delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified by the Corps of Engineers through the Jurisdictional Determination process.

From the site plans provided, it appears that there will be no impact to wetlands. If wetland disturbances are deemed necessary please note that impacts to wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act; impacts to tidal wetlands are also regulated by the DNREC Division of Water Resources, Wetlands and Subaqueous Lands Section. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the Wetlands and Subaqueous Lands Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process. To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

Vegetated buffers comprised of native trees, shrubs or no-mow grasses, of no less than 100 feet should be employed from the edge of the wetland complex. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

ERES Waters

This project is located adjacent to receiving waters of Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 11.5 of Delaware's "Surface Water Quality Standards" (as amended August 11, 1999), specify that all designated ERES

waters and receiving tributaries develop a “pollution control strategy” to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 11.5(e) of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no discharge of pollutants.

TMDLs

With the adoption of Total Maximum Daily Loads (TMDLs) as a “nutrient-runoff-mitigation strategy” for reducing nutrients in the Inland Bays Watershed, reduction of nitrogen and phosphorus loading will be mandatory. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are authorized under federal code, states are charged with developing and implementing standards to support those desired use goals. The Jurisdictional authority for attaining these use goals will fall under the auspices of Section 11.5 of the State of Delaware’s Surface Water Quality Standards (as amended August 11, 1999), and will be achieved via nutrient reductions referred to as “pollution control strategies.”

Nutrient reductions prescribed under TMDLs are assigned on basis of water quality concerns – that is, the those regions deemed to be of greatest environmental concern will require correspondingly higher levels of nutrient reduction than those regions deemed less environmentally sensitive. In this watershed, these regions are demarcated as high and low reduction zones. The high reduction zone corresponds to the western portion of the watershed, and requires a reduction of nitrogen and phosphorus by 85 and 65 percent, respectively. The low reduction zone corresponds to the eastern portion of the watershed, and requires a reduction of nitrogen and phosphorus by 40 percent. **This project is proposed within the low nutrient reduction zone.**

Since the TMDL for the Inland Bays mandates reducing nutrient loading to waters of the Inland Bays significant nitrogen and phosphorus loading must be realized from all sources, including onsite/community wastewater systems. The Department has developed performance standards based on research by Departmental staff and Dr. Mike Hoover (North Carolina State University) for on-site wastewater treatment and disposal systems. Due to the size of a development’s system, the performance standard dictates that the effluent concentration levels can not exceed average annual nitrogen and phosphorus concentration levels of 5 and 2 mg/l, respectively. The phosphorus standard only applies when applicable. These performance standards are included in the proposed Pollution Control Strategy for the Inland Bays, which is currently under public review.

In order for the applicant to verify compliance with the TMDL mandate, a full nutrient accounting process known as nutrient budget should be prepared. The developer/consultant should contact Lyle Jones in the Department’s Watershed Assessment Section for further

information regarding the acceptable protocol for calculating a nutrient budget. He can be reached as 739-4590.

Water Supply

Any wells associated with irrigating the existing golf course must either be put to an approved use or abandoned by a Delaware licensed water well driller.

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

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

Should you have any questions concerning these comments, please contact Dale Annis at 302-739-3665.

Sediment and Erosion Control/Stormwater Management

Applying practices to mimic the pre development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique.

Any existing ponds on site that will be used to meet the stormwater management requirements must meet the safety requirement set forth in Pond Code 378, including 3:1 or flatter side slopes and safety benches. Since they will be located within a residential area, even if a pond is not constructed to fulfill stormwater management requirements, we recommend that they be constructed with the same safety features. A 100-foot minimum buffer distance is recommended from all stormwater ponds and wetlands or waterbodies.

Further, the Department strongly recommends that the periphery of any proposed ponds (including stormwater management ponds) contain a 50-foot buffer of native woody and/or herbaceous vegetation. This buffer will serve to reduce nutrient runoff into the pond and reduce the problems associated with nuisance algae.

Each stormwater management facility must have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties (i.e. the southeast corner of the site) must be adequately conveyed through the site to the discharge point without interruption.

This site may be eligible for a waiver of stormwater quantity management if a non-erosive conveyance to tidal water can be demonstrated. Many options for stormwater management exist for quality treatment only.

All stormwater management facilities, including ponds, biofiltration swales, bioretention areas, etc., must be placed within open space and not within easements on lots.

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through Sussex Conservation District. Contact Jessica Watson, Program Manager, at (302) 856-7219 for details regarding submittal requirements and fees.

It is strongly recommended that you contact Sussex Conservation District to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan. 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.

A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to DNREC Division of Soil and Water Conservation along with the \$195 NOI fee prior to plan approval.

A Certified Construction Reviewer (CCR) will be required for the site during construction. You should contact Sussex Conservation District for details regarding the CCR requirement.

Floodplains

Large portions of the site are within the 100-year floodplain. Sussex County's floodplain regulations will require compliant building designs

Forests

According to 2002 aerial photos there are forested areas within this parcel and it appears that the proposed lot lines avoid impacts to these areas. This parcel may present a unique opportunity for restoration due to the configuration of the wooded area. Removal of lots and reforestation of the turf grass areas between existing forest may help improve habitat for wildlife and water quality. It is suggested that the current lots shown in this area be moved into the central open space area; and additional open space be designated along this corridor.

Forested areas on-site set aside for conservation purposes should be placed into a permanent conservation easement or other binding protection. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

Open Space

Site plans show an area of community open space within the middle of this development. In many cases, large open space areas abutting back yards are not well used by the community and are expensive to maintain. According to the discussion during the PLUS meeting, a portion of this will likely be used for wastewater disposal. It is recommended that open space not needed for wastewater disposal be relocated to areas adjacent to the riparian corridor of Love Creek and that plans include forest and meadow restoration in these areas. Enlarging and enhancing community open space near Love Creek will increase its value for birds and wildlife and create recreational opportunities for residents by allowing all residents access to and views of the forest and stream. It may also help reduce the long term cost of open space maintenance for the community.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

Rare/Threatened/Endangered Species and State Natural Heritage Site

A review of the Delaware Natural Heritage and Endangered Species database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities on the land based areas of this project. However, they have records of fourspine stickleback (*Apeltes quadracus*) within Love Creek adjacent to the project parcel. This rare fish is dependent on aquatic vegetation for a portion of its life history. There is a Bald Eagle nest along Love Creek and the creek corridor serves as a foraging area. There is also a 'sea level fen' community containing over 29 rare species on an adjacent parcel that could be affected by detrimental changes to water quality.

A portion of the project area is within a state designated Natural Area. Please contact Rob Line, Natural Areas Program Manager, at (302) 739-3423 for further information about this area for your project. Because of the existence of this state Natural Area, your project lies within a State Natural Heritage Site. However, it does not lie within a Delaware National Estuarine Research Reserve. This is one of the criteria used to determine the presence of Critical Resource Waters. The final decision regarding Critical Resource Waters – if this is an issue – will be made by the U.S. Army Corps of Engineers (ACOE). The information in this letter will aid the ACOE in their determination

Nuisance Waterfowl

The stormwater ponds scattered throughout the subdivision will likely attract waterfowl like resident Canada geese and mute swans that will create a nuisance for community residents. Although small numbers of these species are enjoyed by residents, geese and swans can quickly multiply and overwhelm the area. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during

the nesting season. Ponds that remain in the subdivision plan should be landscaped to deter nuisance species. Short manicured lawns around ponds provide an attractive habitat for these species. However, native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area around ponds, are not as attractive to geese because they do not feel as safe from predators and other disturbance when their view of the area is blocked. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Community Crabbing Pier

A rare fish species, fourspine stickleback (*Apeltes quadracus*) is present within Love Creek in the vicinity of the proposed pier. This species typically spawns in aquatic vegetation during the spring. If aquatic vegetation is prevalent in the construction area, then a spawning window of April 1 to May 30 should be observed.

State Resource Areas/Natural Areas Inventory

This project contains land currently identified as part of a State Resource Area. State Resource Areas are comprised of lands that contain a variety of natural, cultural and open space resources significant to the state. Consideration should be given to protecting these resources along Love Creek during design and construction of this project. For more information, please contact Ron Vickers, Land Preservation Office, 739-3423.

This project also contains land currently listed on Delaware's Natural Areas Inventory. Natural Areas contain lands of statewide significance identified by the Natural Area Advisory Council as the highest quality and most important natural lands remaining in Delaware. Consideration should be given to protecting the resources along Love Creek during design and construction of this project. The developer should investigate dedicating the Natural Area as a Nature Preserve through a conservation easement or donation of land. For more information, please contact the Office of Nature Preserves at 739-3423.

Recreation

It is recommended that sidewalks be built fronting every residence and stub streets. DNREC appreciates that some of the existing bridges and pathways will remain. A complete system of sidewalks and pathways will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, public mass transit stops, schools, stores, work, etc. DNREC encourages a bike/pedestrian connection to the adjacent parcel to the north be established to increase non-motorized mobility beyond this project's boundaries.

Underground Storage Tanks

There is one active LUST site(s) located near the proposed project:

Shore Stop #254, Facility # 5-000709, Project # S0409109

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

Air Quality

Air pollution threatens the health of human beings and other living things on our planet. While often invisible, pollutants in the air create smog and acid rain, cause cancer or other serious health effects, diminish the protective ozone layer in the upper atmosphere, and contribute to the potential for world climate change. Breathing polluted air can have numerous effects on human health, including respiratory problems, hospitalization for heart or lung disease, and even premature death. Some can also have effects on aquatic life, vegetation, and animals.

Once complete, vehicle emissions associated with this project are estimated to be 10.6 tons (21,181.6 pounds) per year of VOC (volatile organic compounds), 8.8 tons (17,536.9 pounds) per year of NO_x (nitrogen oxides), 6.5 tons (12,939.0 pounds) per year of SO₂ (sulfur dioxide), 0.6 ton (1,151.8 pounds) per year of fine particulates and 885.9 tons (1,771,810.5 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 4.3 tons (8,543.5 pounds) per year of VOC (volatile organic compounds), 0.5 ton (940.0 pounds) per year of NO_x (nitrogen oxides), 0.4 ton (780.1 pounds) per year of SO₂ (sulfur dioxide), 0.5 ton (1,006.7 pounds) per year of fine particulates and 17.3 tons (34,633.4 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.7 tons (3,386.0 pounds) per year of NO_x (nitrogen oxides), 5.9 tons (11,777.5 pounds) per year of SO₂ (sulfur dioxide) and 868.6 tons (1,737,177.1 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	10.6	8.8	6.5	0.6	885.9
Residential	4.3	0.5	0.4	0.5	17.3
Electrical Power		1.7	5.9		868.6
TOTAL	14.9	11.0	12.8	1.1	1771.8

The Department of Natural Resources and Environmental Control is asking that local jurisdictions consider mitigation to help resolve this issue. Because this project is located within the Environmentally Sensitive Developing Area of Sussex County, you are encouraged to consider as much mitigation for Air Quality as possible. Mitigation might involve limiting large new developments to growth zones, focusing development to urban areas capable of providing mass transit services, requiring more energy efficient homes which would lessen air quality impacts, and promoting walkability and bikability within and between developments and town centers.

State Fire Marshal's Office – Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- a. **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Treatment Bld)
 - Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. (One & Two- Family Dwelling)
 - Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

- b. **Fire Protection Features:**
 - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
 - Buildings greater than 10,000 sq.ft., 3-stories of more or over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.
 - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
 - Show Fire Lanes and Sign Detail as shown in DSFPR

- c. **Accessibility**
 - All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Camp Arrowhead Road must be constructed so fire department apparatus may negotiate it.
 - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.

- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
 - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
 - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
- d. **Gas Piping and System Information:**
- Provide type of fuel proposed, and show locations of bulk containers on plan.
- e. **Required Notes:**
- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
 - Square footage of each structure (Total of all Floors)
 - National Fire Protection Association (NFPA) Construction Type
 - Maximum Height of Buildings (including number of stories)
 - Note indicating if building is to be sprinklered
 - Name of Water Provider
 - Letter from Water Provider approving the system layout
 - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
 - Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Mark Davis 739-4811

Overall Comments

The Delaware Department of Agriculture and the Delaware Forest Service recognize this site is within a designated growth area and have no objections to the further development of this site. However, they encourage the developer to use as many best management practices as possible and to work with the state and county to meet the clean water requirements for the Inland Bay Watershed.

Right Tree for the Right Place

The Delaware Department of Agriculture and the Delaware Forest Service encourage the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Department of Agriculture Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Open Space Considerations

The Delaware Department of Agriculture Forest Service supports comments made by DNREC Parks & Recreation Department to allow for improved design to open space and provide areas of connectivity to both passive and open space areas within the planned community. The Delaware Department of Agriculture Forest Service offers its assistants to the developer to implement these practices, please contact Bryan Hall of our office at (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

The PLUS application states that water will be provided to the project by Tidewater Utilities via a central water system. PSC records indicate that Tidewater Utilities possesses a Certificate of Public Convenience and Necessity to provide water service to the area.

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

If wastewater services are provided by a non-governmental entity, and there are more than 50 customers served, the provider will need to apply to the PSC for a Certificate of Public Convenience and Necessity (CPCN). Additional requirements may apply if the provider has not previously been awarded a CPCN by the Commission.

Delaware State Housing Authority – Contact Karen Horton 739-4263

The proposal is to develop 138 units on 103 acres of land on Camp Arrowhead Road, approximately ½ mile south of route 24. The 2003 Statewide Housing Needs Assessment

indicates that much of the housing in the coastal resort area is outside of the affordability level of low- and moderate-income households. For example, real estate data collected by DSHA for the third quarter of 2004 indicated that the median home price was \$315,000, which is outside the affordability level of low- and moderate-income households. Conversely, the affordability price for low- and moderate-income households is estimated to be \$130,476. Moreover, of the 10,128 units in this CCD, 908 are substandard, and 2,711 are occupied by low-income households. Households that cannot afford to live in the coastal resort area have been displaced to western Sussex County. The provision of moderately priced units for first time homebuyers would help support the housing needs of low- and moderate-income families employed by the local retail, service, and tourism economy.

Delaware Emergency Management Agency – Contact: Don Knox 659-3362

Due to the number of residential units being proposed, an impact to public safety is foreseen by implementation of this project. The developer should notify the police, fire service, and emergency medical response organization serving this portion of Sussex County, to keep them apprised of all development activities.

Portions of this property are located in the Special Flood Hazard Area inundated by the 100 and 500-year flood. This area could also experience possible flooding from a category 2 or greater hurricane. Routes 1, 5, 9, and 24 are coastal storm evacuation routes and this development will be affected by traffic volume on these routes during a coastal storm event.

Sussex County – Contact: Richard Kautz 855-7878

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C).

This project is situated in an Environmentally Sensitive Development Area. The required report should include how the PLUS comments have been addressed and how the plan has been revised accordingly.

This summer Sussex County will be considering implementation of a Source Water Protection Program required by the State. Depending on the requirements adopted by the County Council this project might be affected.

The Sussex County Engineer Comments:

The proposed project is located in the Inland Bays Regional Planning Area for sewer service. The North Coastal Area Planning Study will consider sewer service for parcels in the Inland

Bays Regional Planning Area. The study started in November 2004 and is expected to take 18 months to complete. The study will develop options for sewer service and make a recommendation.

The Marsh Island conversion project proposes to develop using a private central community wastewater system. It is recommended that the wastewater system be operated under a long-term contract with a capable wastewater utility that meets TMDL limits for Delaware's Inland Bays.

Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A sewer concept plan must be submitted to the Sussex County Engineering Department for review and approval prior to the design of the sewer system. A checklist for concept plans is attached and a copy was given to the applicant at the PLUS meeting. A review and approval of the treatment and disposal system by the Sussex County Engineering Department is also required. Disposal fields should not be counted as open space. Wastewater disposal fields should be clearly identified on recorded plots.

When Sussex County provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or homeowners association expense.

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

CHECKLIST FOR PREPARING CONCEPT PLAN DRAWINGS

Concept plans should show that the proposed system is in harmony with present and future water and/or sanitary sewer development plans and should include the following information:

Project name

Sewer District

Project Summary Box

- * Tax Map & Parcel Numbers
- * Gross Acres
- * Number of Residential Units by Type
- * Community Buildings & Estimated EDUs
- * Density Calculation
- * Commercial Uses by Type & Square Footage
- * Owners
- * Developer/Applicant

Date

Location Map

Scale

North Arrow

Applicant's P.E. Stamp and signature

Pipeline sizes and alignments
Adjacent parcels and Property owners
Proposed phasing plan
Documentation of existing inverts at connection point to existing pipelines
or manholes
Subdivision layout, including:
 Lot lines
 Open spaces
 Stormwater management areas
 Wastewater treatment and disposal areas, if applicable
Existing sewer easements or pipelines
Existing Right-of-ways
Pump station locations
Flow arrows
Topography (at 5 foot intervals) or spot elevations (at 100 foot intervals)
 along pipeline alignments
Waterways and ditches
State & Federal wetland delineations
100-year flood plain
Lot area

May 6, 2004

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

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

Sincerely,



Constance C. Holland, AICP
Director

CC: Sussex County
Underhill Properties, LLC