
Response to August 3, 2005 Office of State Planning Coordination Request for Review Letter

August 18, 2005

J. Kevin McBride Morris & Ritchie Associates, Inc. 404 South Bedford St., Ste. 5 Georgetown, DE 19947

RE: PLUS review – PLUS 2005-07-16; Harlton Property

Dear Mr. McBride:

Thank you for meeting with State agency planners on August 3, 2005 to discuss the proposed plans for the Harlton Property project to be located south of Old Mill Road and East of Murray Road.

According to the information received, you are seeking site plan review for 197 residential units on 90.56 acres located in the Environmentally Sensitive Developing Area.

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

Executive Summary

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

State Strategies/Project Location

- This project is proposed for an Investment Level 3 area (with a small portion of Investment Level 2 on the easternmost portion of the site) according to the Strategies for State Policies and Spending and the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas, the State supports development that is sensitive to the natural environment. In this regard, we note the DNREC and Department of Agriculture comments specifically address forest preservation and ask that you consider design changes to address these comments.

The following is a response to various State Agency comments on plans presented in Dover on August 3, 2005 for the proposed Harlton Property development.

Street Design and Transportation

- Right-of-way dedication will be required along the frontage of Old Mill Road and Murray Road.

Necessary right of way along the frontage of Old Mill road will be dedicated to the state. Right of way along Murray road will be considered if appropriate. The developer will work with DeIDOT to provide right-of-way and pedestrian trails per DeIDOT's request during the Entrance Permit phase.

- A sidewalk or paved multi-modal path will be required across the frontage of the site on Old Mill Road.

An 8' bituminous multi-modal path will connect to the proposed open space network.

- The developer will be required to share in the improvements to be done in support of Bethany Ridge.

The entrances to both properties are in the process of being coordinated along with utilities and off-site cost sharing responsibilities.

- A bicycle/pedestrian connection should be provided to Murray Road.

A 6' bituminous path will connect Harlton Property open space to Murray Road.

- A stub street should be provided to parcel 1-34-12.00-1.00.

All on site roads are private and will be constructed by the developer and maintained by the HOA. The developer is uncomfortable opening the site to other unknown potential adjacent Communities and putting a potential future liability on the Homeowners Association. The privacy and containment of the Proposed Community is a design feature that is further reinforced by a 30' buffer between the adjacent properties to help contain and emphasize this private feature.

- Four of the eight cul-de-sacs should be eliminated by reconfiguring some of the cul-de-sacs into loops.

Upon considering the redesign of the street layout, it was found that replacing the cul-de-sacs with loops would increase impervious surface and forest clearing. The current layout is the most efficient way to provide access and preserve forest. Characteristically, these roads have been conventional features of land plans for decades and desirable locations within developments for many homeowners seeking the benefits of low traffic volume, vehicular speed and accompanying safety for children associated with such. The lengths of roads are within reasonable standards and provide alternative no thru traffic homesites readily available to the main traffic pattern and pedestrians.

Natural and Cultural Resources

- The stormwater management pond should be removed from the forested wetland area of the site for the following reasons:

a.-The sand ridge next to these wetlands indicates an area of high potential for prehistoric period archaeological sites.

This area will remain untouched. To relocate the storm water pond from its current location to an adjacent upland slope would require more grading and tree clearing resulting in disturbance of the specific prehistoric area you want to protect.

b.- It is not advisable to remove trees to construct stormwater management facilities considering the benefit that trees have in flood abatement and sediment control.

The forest canopy and understory vegetation in this area have a low basal area and sparse density within the central portion of this low lying area.

c.- Even if it is not jurisdictional, the wetland provides water quality benefits and important habitat for plants and wildlife.

The wetlands are non-jurisdictional and in the natural low spot of the site facilitating it as a stormwater management location. Placing a similar feature in the adjacent area would not be prudent. It would disturb the natural water table and inevitably affect the wetlands regardless, requiring more extensive tree clearing and grading.

- The western end of the development along Murray Road should be landscaped to screen the view of this development from the nearby historic properties.

A minimum 30' landscape buffer is provided, however the distance from Murray Road to the lots and roadway is an average 400'.

- The project's design should be modified to focus more effort on preserving forested areas on-site. As currently proposed, at least 39 of the 66 acres of forest would be cleared.

As it stands, the design places 35% of the lots in the area of the site that is currently not wooded which accounts for only 27% of the site. The smaller lots, in combination with the efficient and compact road layout, provide the developer with the best plan while saving the most forest. The preservation of 41% of the existing forest is configured to encourage more tree preservation on lots through selective clearing versus clear cutting to the rear property line as would be done with parallel roads and lots in forested areas. Preservation of the trees in the large open space area in Hardgeton Circle will provide wind breaks for homes, visual buffers between homes and thermal protection on shaded roadways.

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

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

This project is proposed for an Investment Level 3 area (with a small portion of Investment Level 2 on the easternmost portion of the site) according to the Strategies for State Policies and Spending and the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas, the State supports development that is sensitive to the natural environment. In this regard, we note the DNREC and Department of Agriculture comments specifically address forest preservation and ask that you consider design changes to address these comments.

Division of Historic and Cultural Affairs (DHCA) – Contact: Alice Guerrant 739

Nothing is known on this parcel. There are a number of late-19th-century and early-20th-century houses and farmsteads in the area, with three immediately adjacent to the parcel on the west end along Murray Rd. (S-2448, S-2418, and S-2422). There is also an 18th century house, Spring Banke (S-454), on Rt. 26 just south of this parcel. Beers Atlas of 1868 shows the Capt. P. Nichols House and possibly the M. Townsend House within this parcel. The USGS 1918 Rehoboth quadrangle shows three houses probably within the parcel, one of which may be the Nichols House. There may be archaeological resources associated with these houses.

An assessment of Cultural Resource Potential (Appendix E) was prepared by Mr. Edward Otter, PhD. The location of the site of the Parker Nichols house and his burial site are noted. There are no remaining buildings or out structures remaining on the property. There are two marked graves and the appearance of a third grave all enclosed with concrete markers. The area is noted on the topographical survey. The proposed plan adds a significant fenced buffer beyond the existing site.

While the prehistoric model shows only one area of moderate potential for prehistoric-period archaeological sites here, the presence of a sand ridge next to wetlands indicates an area of high potential for such sites, especially very early sites. For this reason, the DHCA would like to see the storm water management pond proposed for this area moved somewhere else.

Examination of state and federal registers found no previously recorded prehistoric archeological sites. The ridge line within the forest has a low potential for prehistoric archeological sites and is proposed to remain only slightly altered by the current plan. While the area found to have the greatest potential for prehistoric archeological sites and nearest the general area of Captain Parker Nichol's house will remain undisturbed by lots or roadways.

The developer informed DHCA at the meeting that there is a cemetery on the parcel and an archaeologist has been retained to investigate it and produce a background historical report on the parcel. The developer is leaving the general area of the cemetery as open space, which is an excellent idea as the discovery of unmarked human remains triggers the provisions of Delaware's Unmarked Human Remains Act of 1997 and can lead to delays in construction and additional costs to excavate and re-bury individuals. appreciate the developer undertaking this study ahead of the development. The DHCA will need a copy of the report for their files and to see the cemetery's exact location, size, and associations, so that we can be sure the buffer area around the cemetery is sufficient. The contact person for unmarked human remains issues is Faye Stocum (302-739-5685), who will be happy to discuss this further with the developer and/or his archaeologist.

Prior to construction the developer will conduct additional exploratory investigations to determine if any remains exist outside of the defined cemetery.

It is recommended that the western end of the development along Murray Rd. be landscaped to screen the view of this development from the nearby historic properties. The DHCA would also like an opportunity to check the parcel for archaeological sites and learn something about their location and character before any ground-disturbing activities take place.

Additional landscaping will be installed to supplement existing hedge rows along the ditch and Murray Road.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) Old Mill Road and Murray Road are both classified as local roads. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. DeIDOT'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 DeIDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.

Necessary right of way along the frontage of Old Mill road will be dedicated to the state. Murray road is currently a dead end with primarily pedestrian and little to no vehicular traffic. A 30-foot right of way along Murray road is excessive for it's current use, but the developer will work with DeIDOT to provide adequate right-of-way as part of the Entrance Permit Process.

- 2) DeIDOT will also require that a sidewalk or a paved multi-modal path be provided across the frontage of the site on Old Mill Road. The developer's site engineer should contact the project manager for Sussex County, Mr. John Fiori, regarding specific requirements. Mr. Fiori may be reached at (302) 760-2260.

An 8-foot bituminous multi-modal path will connect to the proposed open space network.

At the PLUS Meeting, the developer's representative indicated that they did not own the frontage where their access is proposed; the entrance would be in an easement through a strip owned by the developers of Bethany Ridge. DeIDOT acknowledges the need to obtain the concurrence of Bethany Ridge if the land is to be used for that purpose, but given that the same developer is responsible for both projects, that should be possible.

Coordination for design and simultaneous construction schedules will ensure minimal disruption to traffic and provide for a smooth even road surface.

- 3) As the applicant indicated through their attachments to the PLUS form, DeIDOT has already advised Sussex County that a separate traffic impact study is not necessary for this development, but they will require the developer to share in the improvements to be done in support of Bethany Ridge (formerly known as Bay Forest West).

Will Comply

- 4) It is recommended that a bicycle and pedestrian connection be provided from the subdivision streets to Murray Road.

A 6-foot bituminous multi-modal path will connect Harlton Property open space to Murray Road.

- 5) It is recommended that a stub street be provided to Parcel 1-34-12.00-1.00.

All on site roads are private and will be constructed by the developer and maintained by the HOA. The developer is uncomfortable opening the site to other unknown potential adjacent Communities and putting a potential future liability on the Homeowners Association. The privacy and containment of the Proposed Community is a design feature that is further reinforced by a 30-foot buffer between the adjacent properties to help contain and emphasize this private feature.

6) Based on the current plan for Bethany Ridge, there is the potential for the left turn queues entering Bethany Ridge and the proposed development to overlap. At the PLUS meeting, the developer's representative indicated that the Bethany Ridge entrance would be relocated opposite the subject site's entrance. This relocation would be an acceptable solution. If it does not happen, other measures may be necessary.

Entrances will align per DeIDOT requirements.

7) DeIDOT recommends that four of the eight proposed cul-de-sacs be eliminated in favor of loops. Specifically, they recommend that Road G be looped back into Road A and that the three cul-de-sacs along Road B from Road C to Road D be reconfigured into a loop. They understand that cul-de-sacs are necessary in some instances to make efficient use of the land where there are environmental constraints. However, they are not conducive to good traffic flow or a sense of community. Where possible they should be eliminated.

Upon considering the redesign of the street layout, it was found that replacing the cul-de-sacs with loops would increase impervious surface and forest clearing. The current layout is the most efficient way to provide access and preserve forest. All on site roads are private and will be constructed by the developer and maintained by the HOA. The developer is uncomfortable opening the site to other unknown potential adjacent Communities and putting a potential future liability on the Homeowners Association. The privacy and containment of the Proposed Community is a design feature that is further reinforced by a 30' buffer between the adjacent properties to help contain and emphasize this private feature.

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

Soils

According to the soil survey update, wetland associated (hydric) soils mapped as Mullica-Berryland complex and Fallsington were mapped on subject parcel.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine forested and palustrine scrub-shrub wetlands over much of the northern portion of subject parcel. Materials shared by the applicant indicate that the wetlands on the northern portion of the site are isolated and non-jurisdictional; however, it is recommended that a jurisdictional determination be obtained prior to any ground disturbance.

An application for a Letter of Non-Jurisdiction was submitted to the USACOE on January 11, 2005 and the Corps responded with a Letter of Non-Jurisdictional Determination dated September 30, 2005 for the isolated low lying area to the north. The design intends to keep existing riparian edge vegetation and most of the low lying forest area.

These wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Vegetated buffers of no less than 100 feet should be employed from wetlands. 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.

The pond will be excavated to create areas of dense aquatic vegetation around the perimeter bench and provide adequate sunlight to increase forest canopy and understory wetland species in the remaining forest. Supplemental forest planting will be provided for in any disturbed areas. There are no lots proposed on any wetlands. A 100' – 240' buffer is maintained between the existing forested ditch and any proposed lots.

Wetland Permitting Information

Impacts to palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land 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.

At this point no permits are expected to be required. Should a permit be required, appropriate mitigation will be provided.

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 Corps of Engineers through the Jurisdictional Determination process.

A wetland delineation was completed and USACOE letter has been obtained.

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.

We are currently awaiting for a letter of Jurisdiction from the Army Corps of Engineers concerning the forested ditch. All other wetlands have been determined non-jurisdictional. We are willing to concede this ditch is jurisdictional and will wait until the USACOE begins to make decisions on these ditches or apply for permits if necessary, which ever occurs first.

Impervious Cover

Since residential development significantly increases the amount of impervious cover - leading to large volumes of contaminant-laden runoff which ultimately drain into streams or waterways - the applicant is strongly urged to pursue both natural and constructed Best Management Practices (BMPs) to reduce such impacts. Reducing the amount of impervious surfaces by planting more trees and/or the use of

pervious paving surfaces (“pavers”) in lieu of asphalt or concrete, are examples of ways to reduce such impacts. Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline.

Will consider where appropriate. Would like to see this study in its entirety.

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

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. This project is located in the low reduction area requiring a 40 percent reduction in both nitrogen and phosphorus. Currently, we request that in order to verify your project’s compliance with specified TMDL loading rates, a full nutrient budget be calculated. The applicant should be aware that the inclusion of stormwater management, wastewater treatment, buffers and wetlands as metrics for open space calculations may understate the actual TMDL nutrient loading and, subsequently, the actual nutrient runoff as calculated from the nutrient budget protocol. Please contact Lyle Jones of Watershed Section at 739-4590 for the acceptable protocol.

The development complies with the Pollution Control Strategies and TMDL reduction requirements in its current draft form.

Water Supply

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

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well

permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Will comply.

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

Sediment and Erosion Control/Stormwater Management

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 at (302) 856-7219 for details regarding submittal requirements and fees.

Will comply.

As of April 11, 2005, stormwater best management practices must also consider water quality as well as quantity in impaired water bodies.

Drainage

The western portion of this parcel benefits from drainage provided by the St. Georges Tax Ditch; however, there are no tax ditch rights-of-ways associated with this property. The following guidelines for proposed development is advised as follows.

Will comply.

The Drainage Section requests all existing ditches on the property be checked for function and cleaned if needed prior to the construction of homes. Wetland permits may be required before cleaning ditches.

The Drainage Section requests that all precautions be taken to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

Will comply.

The Drainage Section strongly recommends any drainage conveyance between two parcels within a subdivision be dedicated as a drainage easement and such easement be designated as passive open space, not owned by individual landowners. The easement should be of sufficient width to allow for future drainage maintenance as described below.

- . Along an open ditch or swale, the Drainage Section recommends a maintenance equipment zone of 25 feet measured from the top of bank on the maintenance side, and a 10-foot setback zone measured from top of bank on the non-maintenance side. These zones

should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be native species spaced to allow for drainage maintenance at maturity. Trees should not be planted within 5 feet of the top of ditch to avoid future blockages from roots.

Will comply.

- . Along a stormwater pipe, the Drainage Section recommends a maintenance equipment zone of 15 feet on each side of the pipe as measured from the pipe centerline. This zone should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be spaced to allow for drainage maintenance at maturity.

The Drainage Section recommends any drainage/utility easement owned by a individual landowner should not have structures, decks, buildings, sheds, kennels, fences or trees within the drainage easement to allow for future drainage maintenance.

Will comply.

Forest Loss

According to the application there are 66.19 acres of forest and 39.58 acres are to be removed. In reality, the amount of forest that will be removed is probably higher once this site is built out and homes, driveways, sidewalks, roadways, and stormwater management ponds are constructed. Future landowner activities (construction of playgrounds, sheds, swimming pools, etc.) also result in further clearing. Considering the fact that over 5,000 acres of forest has been lost in Delaware since 1990, this development should allow for greater forest preservation. In addition, when forested areas are cleared, displaced wildlife must disperse into surrounding areas which often results in human/animal conflicts, including interactions on the roadways.

In order for this development to “respect the existing environment,” changes to the site plan will need to be made. First of all, consideration should be given to reducing the number of lots and infrastructure in the forested area and creating a larger area of forested open space. The small, fragmented areas of forest located in ‘islands’ behind lots, on corners, and in other irregular spaces provide little benefit to wildlife or to residents as these areas are often underutilized and become a maintenance problem. Greater efforts to cluster the development in the area of the project that is already cleared could be accomplished as well. Forest fragmentation separates wildlife populations, increases road mortality, and increases “edge effects” that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species.

There are no state or county forest conservation regulations governing the clearing of trees. Redesign to remove lots from forested areas would reduce the buffers provided

around the drainage ditch to the west in order to maintain the allowable density. This buffer, around the Waters of the US, is needed to protect a direct conduit to the bay. Forest canopy will be more extensive than that shown on the plan which represents limit of grading, not tree canopy. Studies have found that purchasers of wooded lots adjacent to forest areas have supplemental understory and herbaceous planting installed by the owner, especially when central amenities such as pools, community center, and village greens linked by paths are provided.

Secondly, there is a stormwater management pond proposed in the wooded area adjacent to wetlands. This pond should be removed as it does not make sense to clear trees to create ponds considering the benefit trees have in flood abatement and erosion control. Also, stormwater management ponds should not be located within 100 feet of wetlands. The water quality within the wetlands could be detrimentally affected by infiltration or overflow of water from adjacent ponds. The water quality within these ponds are often high in nutrients and contain run-off from landowner activities (car washing, oil changes, chemicals used in home maintenance, etc.).

The wetlands are in the natural low spot of the site facilitating it as a stormwater management location. Placing a similar feature in the adjacent area would not be prudent. It would disturb the natural water table, require clearing more trees, and inevitably affect the wetlands regardless. We agree that for wooded buffers, poorly drained forest plots have been found to provide greater denitrification than well-drained forest plots by creating better living and growth conditions for denitrifying microbes as well as by keeping water within the organically enriched surface soil layer and close to root systems of resident vegetation.

The concept for the forested pond is to direct more of the developed site runoff into the pond. By increasing the water volume and perimeter subaqueous vegetation, more water quality will be provided. A dense forest fringe resulting from increased sunlight and periodic inundation of the more permeable soils around the aquatic bench through storm events will increase the microbial denitrification potential. Additionally, by including more periodically inundated forested fringe accessible by equipment, one could selectively harvest woody-stemmed species thereby permanently removing nitrogen stored in plant tissues that would otherwise reenter the system through decomposition under the current conditions.

Thirdly, there are areas along the perimeter of the site plan designated as “landscaped buffer”. To the extent possible, the existing forest should be left in tact, not converted into a newly planted landscaped buffer that will need to be maintained (and often composed on non-native, invasive plants).

The only newly planted landscaped buffer is included where there is currently no existing forest.

Rare Species

Delaware Natural Heritage Program staff have not surveyed this parcel, so it is unknown if there are any state-rare or federally listed plants, animals or natural communities at or adjacent to this project site. Their program botanist and zoologist requests the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. Their observations would allow the program to make more informed comments on this project and would allow the applicant the opportunity to reduce potential

impacts to rare species. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.

Will comply.

Potential Hunting Issue

Because the project parcel is part of a larger forest block, legal hunting activities may take place on adjacent properties. Hunting within 100 yards of a dwelling is prohibited and the applicant may want to contact adjacent landowners to determine if this is going to be an issue. In effect, the adjacent landowner will be losing 100 yards of their property for hunting if there is not a buffer between lot lines and the adjacent property line.

We've provided a minimum 30' landscaped buffer where required that averages 115' around the perimeter of the parcel.

Nuisance Waterfowl

Stormwater management ponds that remain in the site plan may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. 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 proper landscaping, monitoring, and other techniques, geese problems can be minimized.

By locating the pond to the east in a forested zone, flight paths have been disrupted. Vegetative buffers around both ponds will make them less attractive for water fowl.

Recreation

It is recommended that sidewalks be built fronting at least one side of residential streets and stub streets. A complete system of sidewalks 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, parks, public mass transit stops, schools, stores, work, etc. It is recommended that a sidewalk be provided along the entrance at Old Mill Road and a pedestrian access to Murry Road.

A 6' bituminous path will connect Harlton Property open space to Murray Road. An 8' bituminous path will connect to the proposed open space network along Old Mill Road resulting in over 6350 linear feet of pathways. There will be over 20,800 linear feet of concrete sidewalks on both sides of the interior roads per Sussex County standards.

Parks appreciates the consideration given to pedestrian trails throughout the project. They recommend that a series of stacking trail loops be designed with access points in each subdivision "pod" and connections to adjacent communities. Community trail systems with long continuous trails, perimeter-only trails, and systems with few access points, often go unused and neglected. For trail design/construction specifications, contact Susan Moerschel at (302) 739-9235.

Trails are looped and interconnected with sidewalks in over 20 locations.

The Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings are the foundation of the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. The high facility needs in Eastern Sussex County are Walking and Jogging, Bike Paths and Fishing Areas. The moderate facility needs are Picnic Areas, Skate Facilities, Canoe/Kayak Access, Hiking Trails, Swimming Pools, Playgrounds, Soccer Fields, Tennis Courts, Power Boat Access and Baseball/Softball Fields. Consideration should be given to incorporate some of these recreation opportunities into the project. For additional information about the outdoor recreation priorities, contact Bob Ehemann at 739-9235.

All of these facilities are proposed for this project with the exception of water dependant activities, like boating.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

The developer anticipates chipping and mulching trees and other organic materials. Recycled milled materials, if available, will be used for bituminous concrete and concrete paving. Use of pre-cast and engineered components such as roof trusses and stairs will result in less scrap lumber. Modular dimensional standards for room dimensions ensure minimal waste in drywall, trim and flat goods. One of the primary benefits of forested open space behind and on lots is for the residents to participate in composting and retention of leaf and grass clippings that would otherwise end up in off-site land fills.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 15.1 tons (30,237.4 pounds) per year of VOC (volatile organic compounds), 12.5 tons (25,034.6 pounds) per year of NOx (nitrogen oxides), 9.2 tons (18,471.0 pounds) per year of SO2 (sulfur dioxide), 0.8 ton (1,644.2 pounds) per year of fine particulates and 1,264.7 tons (2,529,323.7 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 6.1 tons (12,196.1 pounds) per year of VOC (volatile organic compounds), 0.7 ton (1,341.9 pounds) per year of NOx (nitrogen oxides), 0.6 ton (1,113.6 pounds) per year of SO2 (sulfur dioxide), 0.7 ton (1,437.1 pounds) per year of fine particulates and 24.7 tons (49,440.4 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 2.4 tons (4,833.7 pounds) per year of NOx (nitrogen oxides), 8.4 tons (16,812.8 pounds) per year of SO2 (sulfur dioxide) and 1,239.9 tons (2,479,883.3 pounds) per year of CO2 (carbon dioxide).

VOC	NOx	SO2	PM2.5	CO2	
Mobile	15.1	12.5	9.2	0.8	1264.7
Residential	6.1	0.7	0.6	0.7	24.7
Electrical Power	2.4	8.4	1239.9		
TOTAL	21.2	15.6	18.2	1.5	2529.3

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 2.4 tons of nitrogen oxides per year and 8.4 tons of sulfur dioxide per year.

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

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

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

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

The developer will encourage energy efficient construction by the builder. The site plan utilizes passive energy design achieved by locating lots and roads in forested areas to serve as windbreaks and to provide shade to roofs, driveways, and roads reducing electric and gas consumption in cooling housing units and cars.

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

This community is designed with an extensive internal path system and interconnected roads and walks to Bethany Ridge to the north. On-site central school bus stops will be provided that is convenient for children to walk rather than drive to a state road location.

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

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

a. Fire Protection Water Requirements:

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

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 or 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 Old Mill 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.

Will comply with all Fire Marshal requirements.

Department of Agriculture - Contact: Milton Melendez 698-4500

The Delaware Department of Agriculture Agricultural does not object to the Harlton Property application. The site is located on a designated controlled development area which is supportive of the Strategies for State Policies and Spending encouraging responsible development in areas within an Investment Level 3 area. The Department of Agriculture encourages the developer to implement an environmentally sensitive design which preserves the unique historical and environmental features of this site.

The Delaware Forest Service (DFS) opposes the removal of so many trees from the site. It is their hope that a more environmentally friendly design that conserves existing forested areas will be considered and implemented on this site. Discussion during the PLUS meeting on August 3, 2005, left DFS staff concerned that the trees are a low priority to the developer and are viewed as a potential cost liability in the development of this site. If this is in fact the case, the Forest Service in keeping with the intent of the Governor's Livable Delaware Programs, suggests the following thoughts and actions.

The site plan strives to keep the most trees practicable give all other requirements. Primary emphasis was placed on preserving perimeter tree buffers and agricultural open space areas visible from the adjacent state roads in order to screen the development while maintaining current view sheds into the property but not the housing.

Improved Landscape Design

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

Trees will be selected from the state approved lists with an emphasis on native species and no invasive vegetation.

Native Landscapes

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

Public Service Commission - Contact: Andrea Maucher 739-4247

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

Will comply with applicable regulations.

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.

Most state comments seemed to be contradictory. The design team has strived to balance the requests of all agencies to provide an environmentally sensitive plan meeting the needs of social interaction and community design core values as stated in the “Better Models for Development in Delaware”.

The Sussex County Engineer Comments:

The proposed project is within the North Millville Expansion of the Bethany Beach Sanitary Sewer District. However, the project is not located in an immediate service area. The project request is for 197 single-family lots on 90 acres resulting in a gross density of 2.19 EDUs/acre. Significant off site sewer infrastructure must be installed by the developer. The schedule for installing said infrastructure will take 3 - 5 years as significant coordination with other proposed projects is required. Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications, as well as the South Coastal Area Planning Study (Update 2004). A sewer concept plan must be approved prior to the submission or review of any construction plans. System Connection Charges will be due prior to connection to the sanitary sewer.

If this plan is approved by the planning commission, the developer intends to move forward with County Engineering to prepare a sewer concept plan and refinements to the North Millville Expansion Plan by coordinating pump station, force main and gravity system alignments.

For questions regarding these comments, contact Chris Calio, Sussex County Engineering Department at (302) 855-7839.

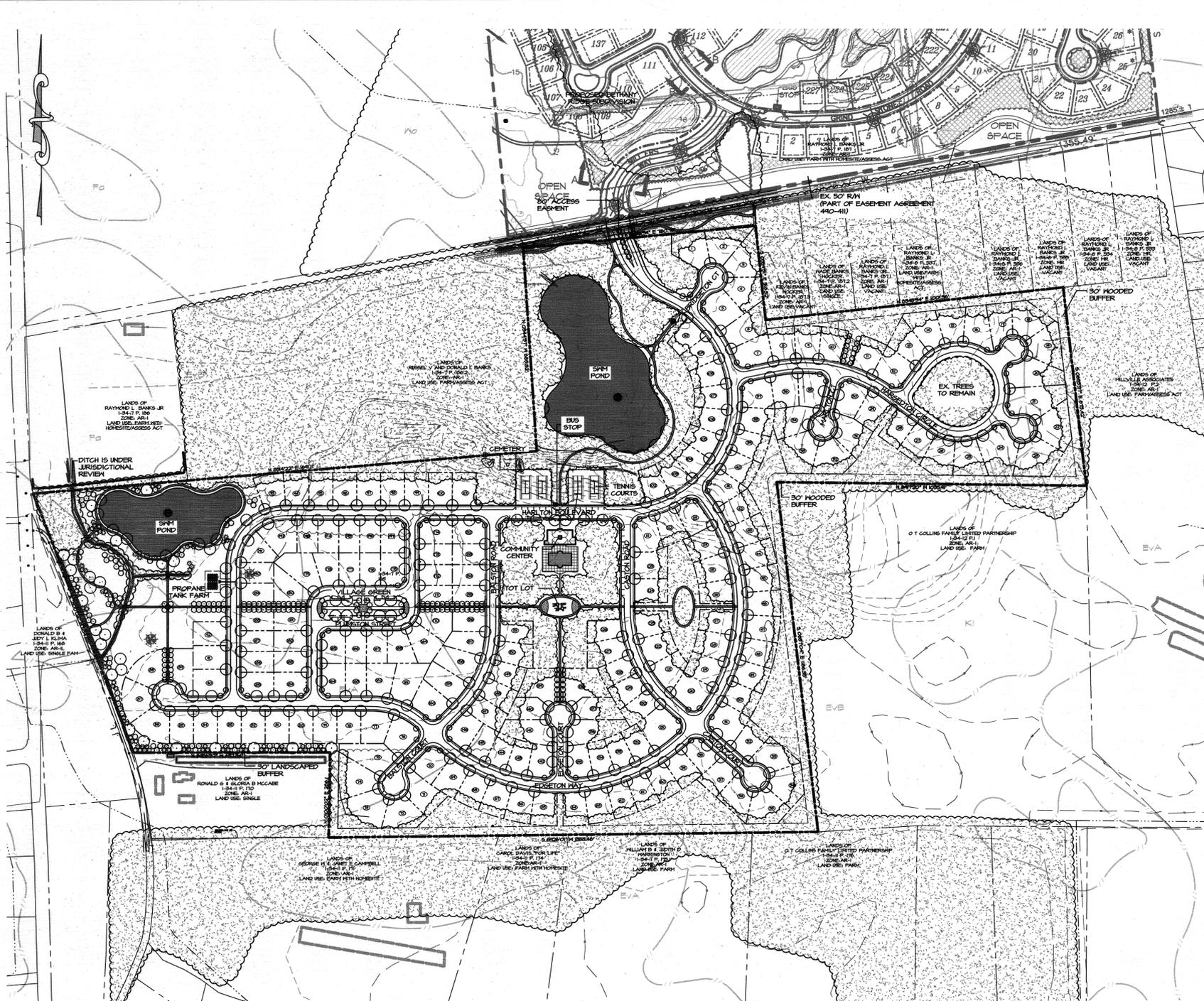
Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments 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



SITE DATA:

- PROJECT TITLE/NAME:** HARLTON PROPERTY
ADDRESS: SR 348, 348A, 344
 MILLVILLE, DELAWARE
- OWNER INFORMATION:**
OWNER: TAX MAP/
 PARCEL # GROSS AC.
 HARLTON ASSOCIATES, LP. 1-34-11/P.169 90.56±
- DEVELOPER:** HARLTON ACQUISITIONS, LLC,
 506 MAIN STREET - SUITE 300
 GAITHERSBURG, MD 20878
- ZONING INFORMATION:** PRESENT ZONING: AR-1 (SUSSEX CO.)
 PROPOSED ZONING: AR-1 (ENVIRONMENTALLY
 SENSITIVE DEVELOPMENT DISTRICT)
- LAND USE INFORMATION:**
 PRESENT USE: AGRICULTURE/FOREST
 PROPOSED USE: RESIDENTIAL
- NET DEVELOPMENT COMPUTATIONS:**
 TOTAL SITE AREA = 90.56 AC.±
 ISOLATED NON-JURISDICTIONAL WETLANDS = 3.75 AC.± (4.10%)
 TOTAL ROADS R.O.W. = 14.37 (15.86%)
 NET DEVELOPMENT ACREAGE = SITE AREA - STREET R.O.W.
 NET DEVELOPMENT ACREAGE = 90.56 AC.± - 14.37 AC.± = 76.19 AC.±
 ALLOWABLE DENSITY = 2.17 UNITS/AC. x 90.56 AC.± = 197 UNITS
 PROPOSED DENSITY = 197 UNITS/ 90.56 AC.± = 2.17 UNITS/AC.±
- BULK AREA REQUIREMENTS:**
 SINGLE FAMILY DETACHED HOMES:
 MINIMUM SETBACKS:
 FRONT: 25'
 SIDE: 10'
 REAR: 10'
 LOT WIDTH: 60' MIN
 LOT DEPTH: 100'±
 MIN LOT AREA: 7500 S.F.
 MAX BLDG. HT: 42'
- OPEN SPACE AREAS:**
 REQUIRED: 9.06± AC (10%)
 PROPOSED:
 VILLAGE GREEN 0.32± AC
 TOT LOT 0.15± AC
 TENNIS COURTS 0.66± AC
 POOL & COMMUNITY CENTER 0.34± AC
 PASSIVE O.S. & TRAILS 30.48± AC
 TOTAL: 31.95± AC (35.28%)
- BOUNDARY SURVEY DATED 11-10-02 PROVIDED BY MORRIS & RITCHIE ASSOCIATES**
- FOREST COVER:**
 1. EXISTING FOREST 66.14 AC.± (73% OF TOTAL TRACT)
 2. FOREST CLEARED - 34.29 AC.± (38%)
 3. FOREST REMAINING 26.96 AC.± (41%)
- WETLANDS:**
 WETLAND UNDER JURISDICTIONAL REVIEW BY U.S.A.C.O.E. 2.5 AC.± (0.022%)
- WATER SERVICE:** PUBLIC
 SERVICE PROVIDER: TIDEWATER UTILITIES, INC.
- SANITARY SERVICE:** PUBLIC
 SERVICE PROVIDER: SUSSEX CO. SOUTH COASTAL PLANNING DISTRICT
- PROPOSED LOTS:** 125 80'X110' LOTS 8,800 S.F. MIN.(63%)
 72 10'X110' LOTS 1,100 S.F. MIN.(97%)
 197 TOTAL LOTS
- BOUNDARY SURVEY DATED 11-10-02 PROVIDED BY MORRIS & RITCHIE ASSOCIATES**
- WETLANDS LINE FLAGGED BY GEO-TECHNOLOGY ASSOC., INC., ABINGSDON, MD, AND LOCATED BY MORRIS AND RITCHIE ASSOC., ABINGSDON, MD.**
- THIS SITE LIES WITHIN FLOOD ZONE X, PER FEMA MAP NO. 10050C0421 EFFECTIVE JANUARY 5, 2005. THERE IS NO 100 YR FLOODPLAIN ASSOCIATED WITH THIS SITE.**

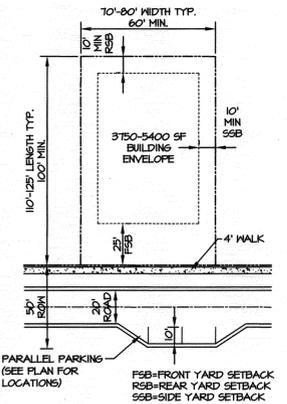


LOCATION MAP
 SCALE: 1" = MILE

MRA
MORRIS & RITCHIE ASSOCIATES, INC.
 ENGINEERS, PLANNERS,
 SURVEYORS, AND
 LANDSCAPE ARCHITECTS
 404 S. BEDFORD STREET
 SUITE 5
 GEORGETOWN, DE. 19947
 302-855-5734
 302-855-0157 FAX

OWNER:
 HARLTON ASSOCIATES, LP
 59 NORTH ATLANTIC AVENUE
 OCEAN VIEW, DE 19870

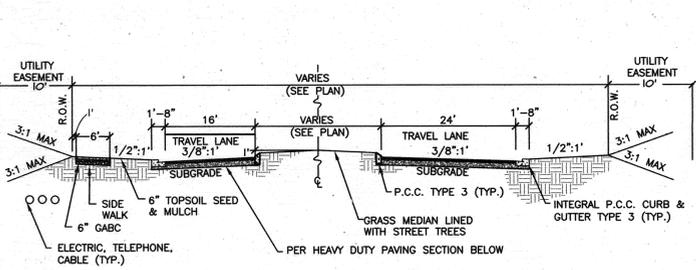
DEVELOPER:
 HARLTON ACQUISITIONS, LLC
 506 MAIN STREET - SUITE 300
 GAITHERSBURG, MD 20878



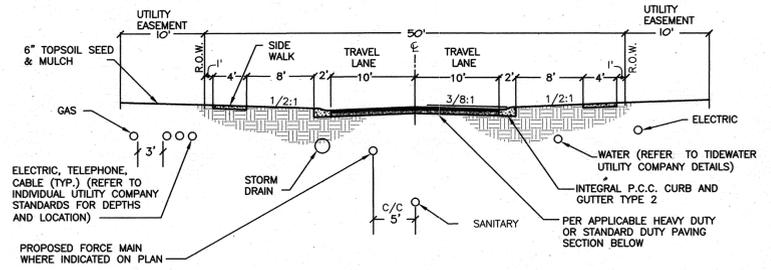
TYPICAL LOT LAYOUT
 SCALE 1" = 50'

LEGEND:

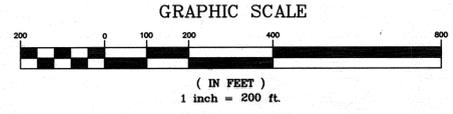
- - - - - EXISTING CONTOUR
- — — — EXTERIOR PROPERTY LINE
- — — — EXISTING PAVED ROAD
- DENOTES EXISTING TREE LINE & COVER



1 TYPICAL ENTRANCE BOULEVARD-PRIVATE
 NOT TO SCALE



2 TYPICAL CLOSED SECTION ROAD-PRIVATE
 NOT TO SCALE



OWNER'S PLAN DEVELOPMENT APPROVAL:
 I, as owner of the property shown, hereby approve these plans for development as shown or otherwise noted.
Gerald F. Layton 1/29/07
 Date

DEVELOPER'S PLAN DEVELOPMENT APPROVAL:
 I, as developer of the project, hereby approve these plans for development as shown or otherwise noted.
Richard D. Bault 1/29/07
 Date

ENGINEER'S CERTIFICATION:
 I, the undersigned, hereby certify that I am a registered professional engineer in the state of Delaware and that the plan shown and described hereon, other than the property boundary and topography, is true and correct to the accuracy required by accepted standards and practices and by the Sussex County Subdivision and Land Development regulations to the extent that it does not conflict with the proposed manner and layout of the subdivision.
Kenneth Marth Usde 1/30/07
 Date
 Kenneth Marth Usde
 DE LICENSE NO. #10692

HARLTON
 SUSSEX COUNTY, DELAWARE 19947



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1	CORRECT OWNER'S SIGNATURE	02/05/07
	ADD LOT NUMBERS	02/05/07
	ADD STREET LIGHTS	02/05/07

NO.	REVISION	DATE
JOB NO. 14354	DRAWN BY SKM	ISSUED 11/28/05

SHEET TITLE: **PRELIMINARY PLAN**

SHEET NUMBER: **PP-01**