

# MERESTONE

*Consultants, Inc.*

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## Civil Engineers - Land Surveyors - Site Planners

27 July 2009

Constance C. Holland, AICP, Director  
Office of State Planning Coordination  
122 William Penn Street, Suite 302  
Haslet Building, Third Floor  
Dover, DE 19901

**Re: #PLUS 2007-12-01; Batson Creek Estates  
Tax Parcel No. 5-33-11.00-84.00**

Dear Ms. Holland:

Enclosed for your review and consideration please find one (1) copy of a revised Preliminary Subdivision Plan for the above referenced site, attached in PDF format and our response to the PLUS review (#2007-12-01).

This approximate 55-acre site is located on the west side of Bayard Road (County Road No. 384) north of Zion Church Road, in Sussex County, Delaware. Across Bayard Road to the east is the subdivision of the Hamlet at Dirickson Pond, a development containing 81 single-family units with a possible expansion to 90 lots pending Sussex County sewer availability. The Developer and owners, Mathew and Ira Brittingham, are applying for subdivision approval in accordance with the County's AR-1 Cluster Development Option and the requirements of Sussex County. The site lies within the County's Environmentally Sensitive District Overlay Zone.

According to the Strategies for State Policies and Spending, this project is located in an Investment Level 4. Delaware's Investment Level 4 areas are predominantly agricultural. However it is our belief that this site is more adequately characterized as a Level 3 area due to its proximity to existing and committed developments; its location within the Environmentally Sensitive Development District Overlay Zone; and the site's ability to connect to centralized public sewer and water systems. In fact as development pressures increase, it seems like this area would be the most likely extension of that growth. According to the State's Strategies for State Policies and Spending map Investment Level 3 areas exist along the easterly side of Bayard Road.

Level 3 areas are characterized by lands which are adjacent to or intermingled with fast growing areas within counties or municipalities which are otherwise categorized as Investment Levels 1 or 2. These lands are most often impacted by environmentally sensitive features, agricultural preservation issues, or other infrastructure issues. The State will consider investing in these areas once the Investment Level 1 and 2 areas are substantially built out, or when the infrastructure or facilities are logical extensions of existing systems and deemed appropriate to serve a particular area.

This project was reviewed by the office of State Planning Coordination through their PLUS review process on January 2nd 2008 (PLUS #2007-12-01). The proposal is to develop the site with 110 single-family building lots, at a gross density of 1.99 units per acre, with a development community area, a perimeter walking trail and related site improvements in accordance with the concepts depicted on the Preliminary Subdivision Plan. The revised preliminary Subdivision Plan submitted for consideration reflects the Developer's proposal at revising the plan to address the PLUS review comments.

It is my belief the revised plan provides for an element of creativity in regards to design concepts which provides a superior design over and above a standard lot development option while affording a degree of protection of significant natural features and resources and therefore satisfactorily address the PLUS review. By utilizing the County's Cluster Development Option the developer has been able to design the subdivision layout to provide for the protection of wetlands; provide for the preservation of a substantial amount of forested areas (83 percent); maximize inter-connectivity within the community by utilizing sidewalks and pathways; and create community areas consisting of a club house and pool for social and recreational activities.

Sincerely,  
Merestone Consultants, Inc.

Roger A. Gross, P.E.  
w/Encl.Cc: Matthew Brittingham, James Fuqua, Jr., Esq.

**"The Extra Measure People"**

19633 Blue Bird Lane, Suite 7, Rehoboth Beach, DE 19971 - (302) 226-5880 - Fax (302) 226-5883  
5215 West Woodmill Drive, Suite 38 - Wilmington, DE 19808 - (302) 992-7900 - Fax (302) 992-7911

January 28, 2008

Mr. Roger Gross  
Merestone Consultants, Inc.  
19633 Blue Bird Lane, Ste 7  
Rehoboth Beach, DE 19971

RE: PLUS review – 2007-12-01; Batson Creek Estates

Dear Mr. Gross

Thank you for meeting with State agency planners on January 2, 2008 to discuss the proposed plans for the Batson Creek Estates project to be located on Bayard Road, approximately 1800 ft. northwest of Zion Church Road.

According to the information received, you are seeking site plan approval for 110 residential units on 55.2 acres located in Level 4.

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.

This proposal is located in Investment Level 4 according to the *Strategies for State Policies and Spending*, and is within the Low Density area according to the Sussex County certified comprehensive plan. **The comments in this letter are technical, and are not intended to suggest that the State supports this development proposal. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to construct the development you indicate or any subdivision thereof on these lands.**

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

**Office of State Planning Coordination – Contact: David Edgell 739-3090**

This project represents a major land development that will result in 110 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This proposal is located in Investment Level 4 according to the *Strategies for State Policies and Spending*, and is within the Low Density area according to the Sussex County certified comprehensive plan. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4 areas. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. The project as proposed is likely to bring more than 260 new residents to an area where the State has no plans to invest in infrastructure upgrades or additional services. These residents will need access to such services and infrastructure as schools, police, and transportation. To provide some examples, the State government funds 100% of road maintenance and drainage improvements for the transportation system, 100% of school transportation and paratransit services, up to 80% of school construction costs, and about 90% of the cost of police protection in the unincorporated portion of Sussex County where this

development is proposed. Over the longer term, the unseen negative ramifications of this development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases.

Because the development is inconsistent with the *Strategies for State Policies and Spending*, the State is opposed to this proposed subdivision. *[As previously mentioned, we recognize that this project lies within a Level 4 Area according to the Strategies for State Policies and Spending and that the State will not support this proposal. However it is our belief that this site is more adequately characterized as a Level 3 area do to its proximity to existing and committed developments; its location within the Environmentally Sensitive Development District Overlay Zone; and the sites ability to connect to centralized public sewer and water systems. In fact, the site is adjacent to Level 3 lands along the east side of Bayard Road and as development pressures increase, it seems like this area would be the most likely extension of that growth.]*

**Division of Historical and Cultural Affairs – Contact: Terrance Burns 739-5685**

- There did not appear to be no historic or cultural resource sites, no archaeological site, and no listed national register property on this parcel/property, but the developer should be aware that there are a few known historic or cultural resource sites nearby. *[Acknowledged.]*
- The developer should be aware and remember is that this parcel/property in a Level 4 area. The nature or context of Level 4 areas are often or usually environmentally sensitive areas. The State Historic Preservation Office of the Division of Historical & Cultural Affairs is not in favor of any type of zoning change, construction, building project, or development in Level-4 areas. *[Acknowledged.]*
- The developer should also be aware that this parcel/property is within the historic vicinity of Baltimore Hundred. According to the historic Beers Atlas/Map of 1868, there is evidence on the atlas/map that indicates that the vicinity of Baltimore Hundred does have some historical areas. The developer should also be aware that it is a possibility that there could potentially be historic or cultural resources on this parcel/property because of the historical background of the area or vicinity. These historic or cultural resources could be archaeological resources such as be a cemetery, burial ground, unmarked human remains, or the parts or pieces or something demolished, destroyed, or ruined historically. *[ A review of the National Register of Historic Places for Sussex County, Delaware indicates that there are no historical, cultural or archaeological resource buildings or sites within the subject parcel listed (Beers Atlas of 1868). Furthermore, although there is evidence of a family cemetery plot along the east side of Bayard Road across from this site, there was no evidence of any family cemetery plots located on this parcel. If, however, through the course of development the unexpected discovery of unmarked human remains occurs, the developer understands that the discovery and disposition of such remains will be governed by the Delaware’s Unmarked Human Remains Act of 1987.]*
- The State Historic Preservation Office of the Division of Historic & Cultural Affairs recommends the prior to or before any demolition, ground-disturbing activities or construction on this parcel/property that the developer show review Chapters 53 and 54, in Title 7, of the Delaware State Code. Chapter 53 pertains to the discovery and disposition of “Conservation of Archaeological Resources In or On State Lands”. Chapter 54 pertains to the “Delaware Unmarked Human Remains Act of 1987”, such as the discovery and disposition of Unmarked Human Burials or Skeletal Remains”. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. *[There was no evidence of any family cemetery plots associated with the existing residence. If, however, through the course of development the unexpected discovery of unmarked human remains occurs, the developer understands that the discovery and disposition of such remains will be governed by the Delaware’s Unmarked Human Remains Act of 1987.]*
- The State Historic Preservation Office of the Division of Historic & Cultural Affairs also recommends that prior to or before any demolition, ground-disturbing activities, or construction that the developer should consider hiring an archaeological consultant to check or examine parcel/property thoroughly, and see if there is any evidence or indication of potential historic or cultural resources, or archaeological resources on it, such as a cemetery, burial ground, unmarked human remains, or the parts or pieces or something demolished, destroyed, or ruined historically. *[The developer*

*acknowledges that it is recommended that an archaeological consultant be retained to inspect the site prior to construction.]*

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

Matthew Brittingham seeks to develop 110 single-family detached houses on a 55.2-acre parcel (Tax Parcel 5-33-11.00-84.00) located on the west side of Bayard Road (Sussex Road 384) north of Delaware Route 20. The land is zoned AR-1 and would be developed under Sussex County's cluster development option.

Because this development is proposed for a Level 4 Area it is inconsistent with the *Strategies for State Policies and Spending*. As part of our commitment to support the *Strategies*, DelDOT refrains from participating in the cost of any road improvements needed to support this development and is opposed to any road improvements that will substantially increase the transportation system capacity in this area. DelDOT will only support taking the steps necessary to preserve the existing transportation infrastructure and make whatever safety and drainage related improvements are deemed appropriate and necessary. The intent is to preserve the open space, agricultural lands, natural habitats and forestlands that are typically found in Level 4 Areas while avoiding the creation of isolated development areas that cannot be served effectively or efficiently by public transportation, emergency responders, and other public services. *[As previously mentioned, we recognize that this project lies within a Level 4 Area according to the Strategies for State Policies and Spending and that the State will not support this proposal. However it is our belief that this site is more adequately characterized as a Level 3 area do to its proximity to existing and committed developments; its location within the Environmentally Sensitive Development District Overlay Zone; and the sites ability to connect to centralized public sewer and water systems. ]*

DelDOT strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in approved Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available. *[Currently, Sussex County does not have a TDR ordinance in place that would afford property owners an alternative to developing their property in accordance with their current zoning rights.]*

If this development proposal is approved, notwithstanding inconsistencies with the relevant plans and policies, DelDOT will provide further technical review and comments. *[It is anticipated that the development will require roadway improvements along Bayard Road, improved drainage, improved intersection designs, and multi-modal facilities for pedestrian circulation. The Developer acknowledges that formal entrance plan approval will be required from Del DOT as part of the construction improvement process.]*

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

**Investment Level 4 Policy Statement**

This project is proposed for an Investment Level 4 area as defined by the *Strategies for State Policies and Spending* and is also located outside of a designated growth area in the relevant municipal and County certified comprehensive plans. According to the *Strategies*, this project is inappropriate in this location. In Investment Level 4 areas, the State's investments and policies, from DNREC's perspective, should retain the rural landscape and preserve open spaces and farmlands. Open space investments should emphasize the protection of critical natural habitat and wildlife to support a diversity of species, and the protection of present and future water supplies. Open space investments should also provide for recreational activities, while helping to define growth areas. Additional State investments in water and wastewater systems should be limited to existing or imminent public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development. *[As previously mentioned, we recognize that this project lies within a Level 4 Area according to the Strategies for State Policies and Spending and that the State will not support this proposal. However it is our belief that this site is more adequately characterized as a Level 3 area do to its proximity to existing and committed developments; its location within the Environmentally Sensitive Development District Overlay Zone; and the sites ability to connect to centralized public sewer and water systems. ]*

With continued development in Investment Level 4 areas, the State will have a difficult, if not impossible, time attaining water quality (e.g., TMDLs) and air quality (e.g., non-attainment areas for ozone and fine particulates) goals. Present and future investments in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in certified Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available.

This particular development certainly compromises the integrity of the State Strategies and the preservation goals inherent in many of DNREC's programs. Of particular concern are potential impacts to wetlands (road crossings, utilities, etc.), the loss/fragmentation of forest (2 out of 13 acres or 15.4%), the project's location in the floodplain, and tax ditch rights-of-way. While mitigating measures such as conservation design, central wastewater systems instead of individual on-site septic systems, and other best management practices may help mitigate impacts from this project, not doing the project at all is the best avenue for avoiding negative impacts. As such, this project will receive no financial, technical or other support of any kind from DNREC. Any required permits or other authorizations for this project shall be considered in light of the project's conflict with our State growth strategies. *{Not doing the project is not an option. I'm sure that if the State was willing to pay a negotiated fair market price for the property my client may entertain this idea, until then my client is only asking for what is afforded him by current zoning laws, nothing more. This design recognizes that there are environmentally sensitive areas within the site and utilizing the County's Cluster Development Option allows for the protection of these areas.}*

### Soils

According to the Sussex County soil survey update, Pepperbox-Rosedale complex, Hurlock, Mullica, and Longmarsh were mapped in the immediate vicinity of the proposed construction. Pepperbox-Rosedale complex is a moderately well-drained to well-drained soil with moderate limitations for development. Hurlock, Mullica, and Longmarsh (associated with floodplains) are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development, and should be avoided. Approximately 15-20% of the soils mapped on subject parcel are wetland associated (hydric) soils. *{We acknowledge that there are areas onsite that are mapped as poorly drained soils and may have limitations regarding development. Soils testing will be performed to determine the extent of these areas and appropriate flood proofing and building techniques will be implemented in those areas. Most of the proposed lots are situated outside of the anticipated poor soils area and the stormwater management and bulk grading design will insure that lot flooding from the regulatory design rainfall events will be avoided.}*

### Wetlands

Based on the Statewide Wetland Mapping Project (SWMP) mapping, palustrine forested riparian wetlands were mapped along most of the southern boundary of subject parcel. Additionally, it is likely that some unmapped riparian wetlands may be associated with the Batson Branch ditch bisecting the parcel from north to south. *{A wetlands reconnaissance survey by Ben Kulp of Merestone Consultants, Inc. has determined that federal "404 non-tidal" wetlands exist within the parcel boundary. These areas have been delineated, located and are shown on the plan. The plan proposes no disturbance to these wetland areas other than roadway crossings necessary to provide access to proposed lots. The wetland area adjacent to Batson Branch appears to be a more significant palustrine forested riparian wetlands area which continues offsite.}*

Impacts to Palustrine wetlands are regulated by the U.S. Army Corps of Engineers (USACE, or "the Corps") through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Corps 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 Management Program (DCMP) Section. Each of these certifications represents a separate permitting process. Please be advised that nationwide permits have been suspended in Delaware and are pending further coordination with the Corps. Therefore, contrary to past practices, Coastal Zone Management approval can no longer be assumed. Individual certifications must be granted from the DCMP office for each project intending to utilize a

Nationwide Permit. For more information on the Federal Consistency process, please contact the DCMF office at 302.739.9283. 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) 739-9943 to schedule a meeting. *[If, through the JD process, it is determined that the wetlands fall under the jurisdiction of the Army Corps of Engineers, the appropriate federal and/or state permits will be obtained for any proposed impacts to those wetland areas, as required.]*

Based on a review of existing buffer research by Castelle et al. (1994), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100-foot in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches). *The plan proposes to protect the wetland areas with no forest removal proposed for stormwater purposes. No wetlands exist within any lot boundaries and with lots 34-53 required to have a twenty-foot rear yard setback no houses or structures, with the exception of lots 49 & 50, could be erected nearer than 50-feet to these wetlands. In fact, a majority of the structure setbacks from these wetlands will be more than 100-feet. The depths of lots 19-23, 49 & 50 have been reduced to increase the upland buffer to a minimum of 25-feet.*

As mentioned previously, a significant portion of this parcel contains poorly to very poorly-drained hydric Hurlock, Mullica, and Longmarsh soils (estimated 15-20%). Hydric soils typically have a seasonal high water table at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or “nor’easters.” This is in addition to increased flooding probabilities from surface water runoff emanating from future created forms of structural imperviousness (roof tops, roads, sidewalks, and stormwater management structures). *[We acknowledge that there are areas onsite that are mapped as poorly drained soils and may have limitations regarding development. Soils testing will be performed to determine the extent of these areas and appropriate flood proofing and building techniques will be implemented in those areas. Most of the proposed lots are situated outside of the anticipated poor soils area and the stormwater management and bulk grading design will insure that lot flooding from the regulatory design rainfall events will be avoided.]*

Based on the Chapter 99, Section 16A of the Sussex County Code (paraphrased), lands compromised by improper drainage or flooding potential pose significant threats to the safety and general welfare of future residents and, therefore, shall not be developed. Soils mapped as Hurlock, Mullica and Longmarsh fit the criterion for improper drainage or high flooding potential, and should be avoided. The Watershed Assessment Section believes permitting development on such soils would be inconsistent with above-mentioned regulatory guidelines in the Sussex County Code.

### **Impervious Cover**

Based on information provided by the applicant in the PLUS application form, the applicant’s projected estimate of post-construction surface imperviousness should not exceed 23 percent. However, given the scope and density of this project, this estimate appears to be significant underestimate. The applicant should realize that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, open-water stormwater management structures, and roads) should be included in the calculation for surface imperviousness - this will ensure a realistic assessment of this project’s likely post-construction environmental impacts. Therefore, estimates of the pre and post-development surface imperviousness should be recalculated with all of the above-mentioned concerns included. *[I understand what constitutes impervious surface material and as previously estimated our new estimate is within percentage points of our original estimates. However, at an additional cost to my client, we’ve recalculated the anticipated impervious area for the site based on this revised plan and offer the following:]*

- *There is approximately 4.6 acres of impervious areas within the street right-of-ways which include roads, curbs and sidewalks.*
- *There will be approximately 7.6 acres of impervious areas within the lots assuming approximately 3,000 square feet of impervious per lot for dwellings, sidewalks and driveways.*

- *There will be approximately 0.3 acres of impervious area devoted to the community area.*
- *There is estimated to be approximately 1.5 acres for stormwater management surface area. That's assuming a stormwater wet pond is utilized as the main stormwater management feature.*
- *Total anticipated impervious area will be 14.0 acres (25.4% of site).*

*Currently, Sussex County ordinances allow for the inclusion of wetlands and stormwater management areas as part of the open space calculation.]*

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness. *[Where site and soil conditions allow, best management practices (BMP's) will be incorporated into the overall stormwater management system. A formal landscape plan which will require the planting of trees and shrubs will help to augment the loss of forested lands will be submitted as part of the final subdivision plan. We have revised the nature trail on the plan from an impervious surface to an open graded pervious surface.]*

### **ERES Waters**

This project is located adjacent to receiving waters of the Little Assawoman Bay designated as having waters of 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 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Best

Management Practices as defined in subsection 5.6.3.5 of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

### **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Little Assawoman 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. The TMDL nutrient reduction requirements for the Little Assawoman watershed require a 40 percent reduction in nitrogen and phosphorus. Additionally, the TMDL reduction requirement for bacteria is also 40 percent. *[DNREC approved stormwater management systems including the use of Green Technology BMP's will be incorporated into the overall stormwater management strategy further reducing pollutants such as nitrogen and phosphorus prior to reaching receiving waters and wetlands. A significant riparian buffer adjacent to Batson Creek of widths greater than 100 feet will be protected and left in its natural state.]*

### **Compliance with TMDLs through the Pollution Control Strategy (PCS)**

As stated above, Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Little Assawoman watershed. The TMDL calls for a 40% reduction in nitrogen and phosphorus from baseline conditions. Additionally, a 40 percent reduction in bacteria will also be required from baseline conditions. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses or ditches, increasing passive, wooded open space, use of pervious paving materials to reduce surface imperviousness, connection to a central sewer (if available), and the use of green-technology stormwater management treatment trains. The Department has developed an assessment tool to evaluate how your

proposed development may reduce nutrients to meet the TMDL requirements. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool. *[At the time that this application was filed with Sussex County, a Pollution Control Strategy (PCS) for the Inland Bays had not been adopted and therefore it is our understanding that compliance with TMDL's is voluntary. We will work to minimize TMDL's and incorporate BMP's into the overall stormwater management system but are not mandated to create a Nutrient Budget Analysis.]*

### **Water Supply**

The project information sheets state water will be provided to the project by Artesian Water Company via a public water system. DNREC records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity 03-CPCN-26.

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. *[If, through the course of construction, it's determined that dewatering will be required, the required dewatering well construction permits will be acquired from DNREC.]*

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

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. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees. *[A detailed sediment and stormwater management plan will be prepared and submitted for review and approval by the Sussex Conservation District (SCD).]*

Because of the parcel's location in an impaired watershed and the amount of impervious surface, consider incorporating more green technology BMPs and low impact development practices to reduce stormwater flow and to meet water quality goals. *[The developer will investigate the use of BMP's as part of the overall stormwater design and implement the appropriate stormwater practices according to site conditions and maintenance considerations. The plan provides for the protection of an existing forested riparian buffer adjacent to the wetland areas of Batson Branch which will contribute to the reduction in pollutants such as phosphorous, nitrogen, suspended solids, hydrocarbons and heavy metals from entering our receiving wetlands and water courses.]*

The Sediment and Stormwater Management Program ensures sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, DNREC does not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice. *[The stormwater management facility is located outside of the wetlands and 100-year flood boundary; and no tree removal is proposed for its installation other than that which may be required to install the pond outfall to Batson Branch.]*

## Floodplain

We appreciate the fact that both the 1% and 0.2% chance flood elevations are shown on the site plan. However, the 1% elevation is very hard to follow. It appears that all the lots would be located outside the 1% chance flood area (100 year floodplain). Is the detention pond located outside the 1% chance flood area? It is recommended that none of these homes have basements as quit a few of them are located in the 0.2% chance flood area (500 year floodplain). *{The plan has been revised to more clearly show the 1% and 0.2% chance flood elevations. All lots and the stormwater management facility will be located outside of the 1% chance flood elevation. Basements will be allowed subject to the appropriate soils and geotechnical testing that will support their installation.}*

## Drainage

This project is located within the Batson Branch Tax Ditch. Continue to work with the DNREC Drainage Program in Georgetown at (302) 855-1930 on the release of stormwater into the Tax Ditch.

In addition:

- Consider future maintenance needs for the private ditch on the western side of the property. Establish a spoil disposal area within the open space to the rear of lots 22-26 and note on the record plan. Adjust the rear lot lines of lots 22 and 23 to allow for 25 feet between the top of the ditch bank and the lot line. *{The plan has been revised to include a spoils disposal area behind lots 25 & 26. The depths of lots 19-23, 49 & 50 have been reduced to increase the upland buffer to a minimum of 25-feet from their respective lot lines.}*
- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them. *{The outfall from the stormwater management system will be into the receiving wetlands of Batson Branch through an enclosed storm sewer system. Runoff from adjacent properties and roadways will be accounted for in the overall stormwater management design. An inspection of the outfall area will be performed and pictures will be included as part of the stormwater management report. The downstream crossing under Bayard Road will be inspected for blockages and if required appropriate maintenance and/or remediation efforts will be prescribed. We don't anticipate any noticeable increases in water volumes or peak discharges downstream.}*
- The Drainage Program encourages the elevation of rear yards to direct water towards the streets and alleyways where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain cases. Therefore, catch basins placed in rear and side yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, pools, and kennels can hinder drainage patterns as well as future maintenance to the storm drain or catch basin. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access. *{The development will be served by a curb & gutter street section that will require the use of inlets and storm sewer for stormwater conveyance. We anticipate that most of this can be taken care of within the street right-of-ways. If there is the occasion that cross drainage through lots cannot be avoided and catch basins are required to be located on private lot areas, the appropriate easements will be shown on the record plan and any restrictions prohibiting structures within those easements will be addressed in the Covenants and Restrictions.}*
- An increase of the side yard setback to 15 feet may be needed on all properties with a drainage easement on the side. The increase will allow room for equipment to utilize the entire easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction. The side yard setback would only increase on the side with the drainage

easement. *{If it is determined that drainage easements will be required on side lot lines, the side yards adjacent to those easements will have a fifteen (15) foot side yard setback which will be graphically depicted and recorded on the final record plan.}*

- All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides. Place restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being placed next to the catch basin. Record the easement on the deed. *{If it is determined that catch basins are required to be located on private lots, a ten (10) foot easement will be provided and any restrictions prohibiting structures within those easements will be addressed in the Covenants and Restrictions.}*
- Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property. *{All drainage easements will be recorded on the final record plan and any restrictions on obstructions in drainage easements will be addressed in the Covenants and Restrictions which will also be recorded.}*

### Rare Species

DRNEC has never surveyed this property; therefore, it is unknown if there are State-rare or federally listed plants, animals or natural communities at this project site that would be impacted by project activities. There is a population of State-rare *Enneacanthus obesus* (banded sunfish), within Dirickson Creek. This species could also occur within Batson Branch as the two systems are connected.

### Recommendation:

1. In the interest of water quality and to protect rare species, there should be at least a 100-foot upland buffer left intact along Batson Branch and associated wetlands. The application states that only 25-foot buffers will be left between lot lines and wetlands. This is highly inadequate from a scientific standpoint. We recommend that lots within 100 feet of wetlands be pulled back or omitted from the plan. Cumulative impacts to water quality are a real concern considering the level of development (existing, in-progress, and future) along this water system. *{The plan proposes no disturbance to these wetland areas other than roadway crossings necessary to provide access to proposed lots. The wetland area adjacent to Batson Branch appears to be a more significant palustrine forested riparian wetlands area which continues offsite. The plan proposes to protect this area with no forest removal proposed for stormwater or infra-structure purposes to this area. No wetlands exist within any lot boundaries and with lots 34-48 & 51-53 required to have a twenty-foot rear yard setback no houses or structures, with the exception of lots 49 & 50, could be erected nearer than 50-feet to these wetlands. In fact, a majority of the structure setbacks from these wetlands will be more than 100-feet.}*

### Forest Preservation

DNREC appreciates that the forested area along Batson Branch is going to be left mostly intact and that stormwater facilities will not require tree removal. This is especially important as a Bald Eagle nest occurs downstream and the pair likely utilizes Batson Branch for foraging and roosting. This forested riparian buffer is also important for protecting water quality and providing a wildlife travel corridor. However, in the western portion of the parcel there are nine lots and a road with an 'eyebrow' and cul-de-sac that will require tree removal.

Cumulative forest loss throughout the State is of utmost concern to the Division of Fish and Wildlife which is responsible for conserving and managing the State's wildlife (see [www.fw.delaware.gov](http://www.fw.delaware.gov) and the

Delaware Code, Title 7). Because of an overall lack of forest protection, DNREC has to rely on applicants and/or the entity that approves the project (i.e. counties and municipalities) to consider implementing measures that will aide in forest loss reduction.

Recommendations:

- 1) DNREC recommends that lot #s 27-35 be omitted so that tree removal is minimal and a larger area of forest open space can remain for wildlife habitat and travel. *{The plan proposes the preservation of approximately 10.4 acres (83%) of forested lands. A minimal amount of forest removal will be required for the infra-structure improvements for lots 27-35. The plan provides for the protection of a significant existing forested riparian buffer adjacent to the wetland areas of Batson Branch in its entirety.}*
  - *Approximately 2.2 acres (17%) will be removed for infra-structure improvements for lots 27-35 (this does not include those wooded areas within lots which may be protected from clearing through either deed restrictions or lot owner preference.*
  - *There are only 9 wooded lots existing within the subdivision. The developer feels that this is a reasonable compromise considering the degree of protection given to the riparian buffer afforded to Batson Creek.}*
- 2) Trees should not be cleared from April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This clearing recommendation would only protect those species during one breeding season; once trees are cleared the result is an overall loss of habitat. *{It is not known at this time what the anticipated construction schedule will be. All tree clearing will be performed according to local and state requirements, limits of clearing will be staked in the field to insure that only the minimum amount of trees necessary for improvements are cleared.}*

**Nuisance Geese**

Wet ponds for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. 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.

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.

Recommendation:

- 1) DNREC recommends plantings of native species of tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds. When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to congregate and nest in the area of the pond. *{If the stormwater management pond is designed as a wet pond, its location is situated such that the eastern and southern exposures are adjacent to an existing woodland area. The developer will provide landscaping in the form recommended by DNREC along the western and northern exposures to deter waterfowl such as Canada Geese and Mute Swans from utilizing these ponds as desirable habitat.}*

At this time, they do not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) may become a burden to the homeowners association or land manager. *{The developer will consider the implementation of DNREC recommended techniques and systems as part of the overall operations and maintenance of all stormwater management systems.}*

## Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 8.4 tons (16,883.9 pounds) per year of VOC (volatile organic compounds), 7.0 tons (13,978.7 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 5.2 tons (10,313.7 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 0.5 ton (918.1 pounds) per year of fine particulates and 706.2 tons (1,412,312.7 pounds) per year of CO<sub>2</sub> (carbon dioxide).

***However, because this project is in a level 4 area, mobile emission calculations should be increased by 118 pounds for VOC emissions for each mile outside the designated growth areas per household unit; by 154 pounds for NO<sub>x</sub>; and by 2 pounds for particulate emissions. A typical development of 100 units that is planned 10 miles outside the growth areas will have additional 59 tons per year of VOC emissions, 77 tons per year of NO<sub>x</sub> emissions and 1 ton per year of particulate emissions versus the same development built in a growth area (level 1, 2 or 3).***

Emissions from area sources associated with this project are estimated to be 3.4 tons (6,810.0 pounds) per year of VOC (volatile organic compounds), 0.4 ton (749.3 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 0.3 ton (621.8 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 0.4 ton (802.4 pounds) per year of fine particulates and 13.8 tons (27,606.3 pounds) per year of CO<sub>2</sub> (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.3 tons (2,699.0 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 4.7 tons (9,387.8 pounds) per year of SO<sub>2</sub> (sulfur dioxide) and 692.4 tons (1,384,706.4 pounds) per year of CO<sub>2</sub> (carbon dioxide).

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.3 tons of nitrogen oxides per year and 4.7 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.”

The DNREC Energy Office 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. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes. *[At this time it is not known who will be building the homes, in an effort to mitigate the stated impacts of new construction and related vehicle emissions the Builder should construct ENERGY STAR qualified homes for this development. Sidewalks and nature trails have been proposed to encourage alternate transportation modes in the form of walking and bicycling to further help reduce vehicle emissions.]*

DNREC also recommends 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, links to mass transit, and fund a lawnmower exchange program for their new occupants. *[At this time it is not known who will be building the homes, energy alternatives in the form of geothermal and photo voltaic should be made available to home buyers. Nature trails, sidewalks*

*and multi-use paths along the public road have been proposed to provided alternate modes of transportation.}*

**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):

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: *{Through the construction improvement process the developer will submit the required application, fee and plans for review and approval.}*

a. **Fire Protection Water Requirements:**

- 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. *{The site lies within Artesian Water Company's service area. They will provide the required domestic and fire flow requirements.}*
- The infrastructure for fire protection water shall be provided, including the size of water mains. *{Water distribution plans will be provided which will depict water main sizes, valves and fire hydrant locations. These plans will be required to be reviewed and approved by the utility provider, the State Fire marshal and the Department of Public Drinking Water.}*

b. **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 Bayard Rd. must be constructed so fire department apparatus may negotiate it. If a "center island" is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision. *{The entrance and internal roads for the subdivision will be designed to meet accessibility requirements in accordance with State Fire Marshal requirements.}*
- 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. *{Internal road layout, front yard setbacks and lot configurations will allow for fire apparatus to locate within 100 feet of the dwellings.}*
- 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. *{There is one (1) proposed cul-de-sac street which will have a minimum paved cul-de-sac radius of 38 feet.}*
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements. *{There are no proposed speed bumps or other traffic calming devices.}*
- 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. *{A gated community is not proposed.}*

c. **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan. *{At this time it is not known if centralized gas will be utilized. If the development will be serviced with a centralized propane gas system, plans will be submitted to the State Fire Marshal for review and approval.}*

d. **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”
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Townhouse 2-hr separation wall details shall be shown on site plans
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

*{The required notes will be placed on the State Fire Marshal Plans.}*

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

**Department of Agriculture - Contact: Scott Blaier 698-4500**

The proposed development is in an area designated as Investment Level 4 under the *Strategies for State Policies and Spending*. The *Strategies* do not support this type of isolated development in this area. The intent of this plan is to preserve the agricultural lands, forestlands, recreational uses, and open spaces that are preferred uses in Level 4 areas. The Department of Agriculture opposes the proposed development which conflicts with the preferred land uses, making it more difficult for agriculture and forestry to succeed, and increases the cost to the public for services and facilities.

More importantly, the Department of Agriculture opposes this project because it negatively impacts those land uses that are the backbone of Delaware’s resource industries - agriculture, forestry, horticulture - and the related industries they support. Often new residents of developments like this one, with little understanding or appreciation for modern agriculture and forestry, find their own lifestyles in direct conflict with the demands of these industries. Often these conflicts result in compromised health and safety; one example being decreased highway safety with farm equipment and cars competing on rural roads. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. We oppose the creation of isolated development areas that are inefficient in terms of the full range of public facilities and services funded with public dollars. Public investments in areas such as this are best directed to agricultural and forestry preservation. *{As previously mentioned, we recognize that this project lies within a Level 4 Area according to the Strategies for State Policies and Spending and that the State will not support this proposal. However it is our belief that this site is more adequately characterized as a Level 3 area do to its proximity to existing and committed developments; its location within the Environmentally Sensitive Development District Overlay Zone; and the sites ability to connect to centralized public sewer and water systems. In fact, the site is adjacent to Level 3 lands along the east side of Bayard Road and as development pressures increase, it seems like this area would be the most likely extension of that growth.}*

Section 1, Chapter 99, Code of Sussex Section 99-6 may also apply to this subdivision. The applicant should verify the applicability of this provision with Sussex County. This Section of the Code states:

G. Agricultural Use Protections.

- (1) Normal agricultural uses and activities conducted in a lawful manner are preferred. In order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land uses adjacent to land used primarily for agricultural purposes shall be subject to the following restrictions:
  - (a) For any new subdivision development located in whole or in part within three hundred (300) feet of the boundary of land used primarily for agricultural purposes, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:

“This property is located in the vicinity of land used primarily for agricultural purposes on which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities.”

(b) For any new subdivision development located in whole or in part within fifty (50) feet of the boundary of land used primarily for agricultural purposes no improvement requiring and occupancy approval for a residential type use shall be constructed within fifty (50) feet of the boundary of land used primarily for agricultural purposes. *[The appropriate agricultural use protection notice is shown on the preliminary plan and the proposed deed restrictions as required by Sussex County.]*

The developer should also coordinate with Sussex County to ensure their project is in compliance with the County’s forested buffer requirements. *[In accordance with Sussex County requirements, thirty-foot wide forested buffers are shown along the westerly property boundary adjacent to lands used for agricultural purposes.]*

Additionally, this site overlaps with the State’s Green Infrastructure Investment Strategy Plan. The Crop Land layer is present on this site; this designation identifies areas of the state that are viable and valuable cropland which should be preserved. *[We recognize that the site currently contains valuable resources in the form of crop, wetland and forested areas. Although the developer recognizes the importance of these valuable resources he is exercising his development property rights in accordance with County zoning and land use laws. It is reasonable to expect residential development within these areas will occur as evidenced by existing and committed developments in the area. Utilization of the County’s Cluster Development Option has enabled the developer to design the subdivision layout to provide for the protection of wetlands and provide for preservation of most of the forested areas. The revised plan provides for an element of creativity in regards to design concepts which provides a superior design over and above the standard lot development option while affording a degree of protection of significant natural features and resources.]*

The Delaware Department of Agriculture supports growth which expands and builds on existing urban areas and growth zones in approved State, county and local plans. Where additional land preservation can occur through the use of transfer of development rights, and other land use measures, we will support these efforts and work with developers to implement these measures. If this project is approved we will work with the developers to minimize impacts to the agricultural and forestry industries. *[Currently, Sussex County does not have a TDR ordinance in place that would afford property owners an alternative to developing their property in accordance with their current zoning rights.]*

#### *Right Tree for the Right Place*

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. *[A formal landscape design and plan will be provided as part of the final record subdivision submission. The Developer will utilize the “Right Tree for the Right Place” approach as part of that design.]*

#### *Do Not Plant List*

Due to the high risk of mortality from insects and disease, the Delaware Forest Service does not recommend planting any of the following species: *[The developer will follow the recommendations of the Delaware Forest Service in the development of the landscape plan.]*

Callery Pear  
Leyland Cypress  
Red Oak (except for Willow Oak)  
Ash Trees

Please contact the Delaware Forest Service for more information at (302) 698-4500.

#### *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. *[The developer will follow the recommendations of the Delaware Department of Agriculture and the Delaware Forest Service in the development of the forested buffer.]*

#### **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.

#### **Delaware State Housing Authority – Contact Vicki Powers 739-4263**

This proposal is for a site plan review of 110 residential units on 55.2 acres located on Bayard Road, approximately 1,800 ft. northwest of Zion Church Road, near Selbyville. According to the *State Strategies Map*, the proposal is located in an Investment Level 4 area. As a general planning practice, DSHA encourages residential development only in areas where residents will have proximity to services, markets, and employment opportunities, such as Investment Level 1 and 2 areas outlined in the State Strategies Map. Since the proposal is located in an area targeted for agricultural and natural resource protection, and therefore inconsistent with where the State would like to see new residential development, DSHA does not support this proposal. *[As previously mentioned, we recognize that this project lies within a Level 4 Area according to the Strategies for State Policies and Spending and that the State will not support this proposal. However it is our belief that this site is more adequately characterized as a Level 3 area do to its proximity to existing and committed developments; its location within the Environmentally Sensitive Development District Overlay Zone; and the sites ability to connect to centralized public sewer and water systems. In fact, the site is adjacent to Level 3 lands along the east side of Bayard Road and as development pressures increase, it seems like this area would be the most likely extension of that growth.]*

#### **Department of Education – Contact: John Marinucci 735-4055**

DOE recognizes that this development project is in level 4 of the State Strategies for Policies and Spending and as such, DOE does not support the approval of this project.

This proposed development is within the Indian River School District boundaries. DOE offers the following comments on behalf of the Indian River School District.

1. Using the DOE standard formula, this development will generate an estimated 55 students.
2. DOE records indicate that the Indian River School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2007 elementary enrollment.
3. DOE records indicate that the Indian River School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2007 secondary enrollment.
4. In multiple correspondences from the Indian River School District administration, the district asserts that while the Indian River High Schools have capacity, the Indian River Middle Schools' student population exceeds student capacity.

5. This development will create additional elementary school and middle school student population growth which will further compound the existing shortage of space. The developer is strongly encouraged to contact the Indian River School District Administration to address the issue of elementary and middle school over-crowding that this development will exacerbate. *[Since this review, planned or committed developments are not building out like they were because of the turn down in the residential market. This subdivision is located adjacent to beach resort communities and it is anticipated that a substantial portion of the home buyers in this development will be either second home buyers or retirees.]*
6. DOE requests developer work with the Indian River School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district. *[The Developer will work with the Indian River School District transportation department to incorporate any bus stop shelter ROW and shelter structures as determined and recommended by the school district.]*
7. **Cautionary Note:** Reviewer noticed a "Tot Lot" identified on the development plan. If the developer is planning to install public use playground equipment and turn it over to the HOA for ultimate control and maintenance, that playground equipment should be installed and maintained in accordance with ASTM Designation F-1487 and CPSC PUB 325 to reduce developer liability for playground injuries. *[The developer will insure that all playground equipment, installation and maintenance will be pursuant to the required minimum regulations and standard specifications.]*

**Sussex County – Contact: Richard Kautz 855-7878**

Because this project is an AR-1 Cluster subdivision and partially within the ESDA, 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). For example, the reduction of \_\_\_\_ lots from 20,000 sq. ft. to an average lot size of 9,900 sq. ft. allows for more than 25 acres of open space yet only 20 acres of "useable" open space is provided. As a result, at least 23 of the lots do not have direct access to open space. The remaining open space is that which would otherwise be required with or without the clustering (i.e. stormwater management, buffers, and utilities). These issues can be addressed by including in the County application an explanation of how the developer plans to mitigate them and the issues raised by the State agencies during this review. *[An Exhibit Booklet addressing Chapter 99-9(C) of the Subdivision Code and Chapter 115-25 (E) & (F) of the Zoning Code pertaining to cluster development design requirements will be submitted to the Planning & Zoning Commission and made a part of the public record.]*

The State Wetlands map indicates the possibility of wetlands impacting the location of proposed subdivision lots and roads. Therefore a jurisdictional determination letter should be provided to support the proposed design for that area and that the lot layout does not contain any wetlands. This letter should be obtained prior to the request for approval of any final plan. *[A wetlands reconnaissance survey by Ben Kulp of Merestone Consultants, Inc. has determined that federal "404 non-tidal" wetlands exist within the parcel boundary. These areas have been delineated, located and are shown on the plan. There are no wetlands within any of the proposed lots and the plan proposes no disturbance to these wetland areas other than roadway crossings necessary to provide access to proposed lots. A Jurisdictional Determination (JD) has been filed with the Army Corps for their determination and will be provided prior to obtaining final subdivision plan approval from the County.]*

The Sussex County Engineer Comments:

The project proposes 75 **[110]** residential units on 34 **[55]** acres, which results in a density of 2.2 **[2.0]** EDUs per acre. The number of units is within the allocation based on the South Coastal Area Planning Study, Update 2005. The proposed project is within the boundaries of the Johnson's Corner Sanitary Sewer District (JCSSD) and connection to the system is mandatory. A referendum was held on July 21, 2007 to determine if the district would be established. Area residents were in favor of the sewer district and

approved the referendum. The preliminary schedule indicates sewer service could become available to the area as early as the summer of 2010. The developer will be required to complete or participate in offsite sewer construction and upgrades, at the developer's expense. Developers could install off-site infrastructure to an approved connection point to expedite service. Conformity to the South Coastal Area Planning Study 2005 Update and the Johnson's Corner Sanitary Sewer District Preliminary Engineering Report will be required.

Sussex County requires design and construction of the collection and transmission system to meet Sussex County Engineering Department's sewer standards and specifications. The Sussex County Engineer must approve the connection point. A sewer concept plan must be reviewed and approved prior to any sewer construction. A checklist for preparing sewer concept plans was handed to the applicant at the PLUS meeting. Also, please note system connection charges will be required. Please contact Mrs. Christine Fletcher at 302 854-5086 for additional information on charges. *{The site lies within the Johnson's Corner Sanitary Sewer District. The design and collection of the transmission system will be in accordance with Sussex County sewer standards and specifications and a sewer concept plan will be submitted for review and approval prior to the design of the sewer system. The developer acknowledges that he will be required to complete or participate in offsite sewer construction and system upgrades.}*

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department

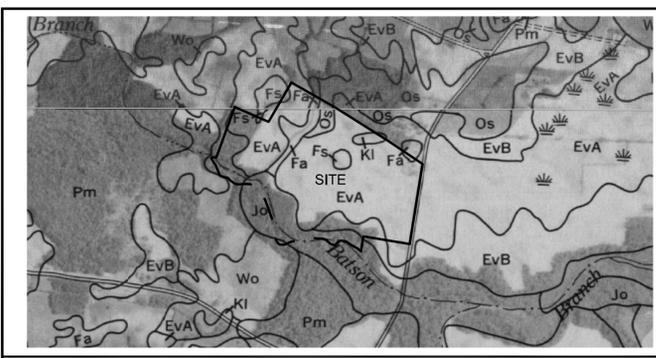
**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments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



U.S.D.A. SOIL SURVEY MAP No. 69 & 77 NOT TO SCALE

# PRELIMINARY SUBDIVISION PLAN AR-1 CLUSTER DEVELOPMENT OPTION FOR PROPERTY KNOWN AS: **BATSON CREEK ESTATES**

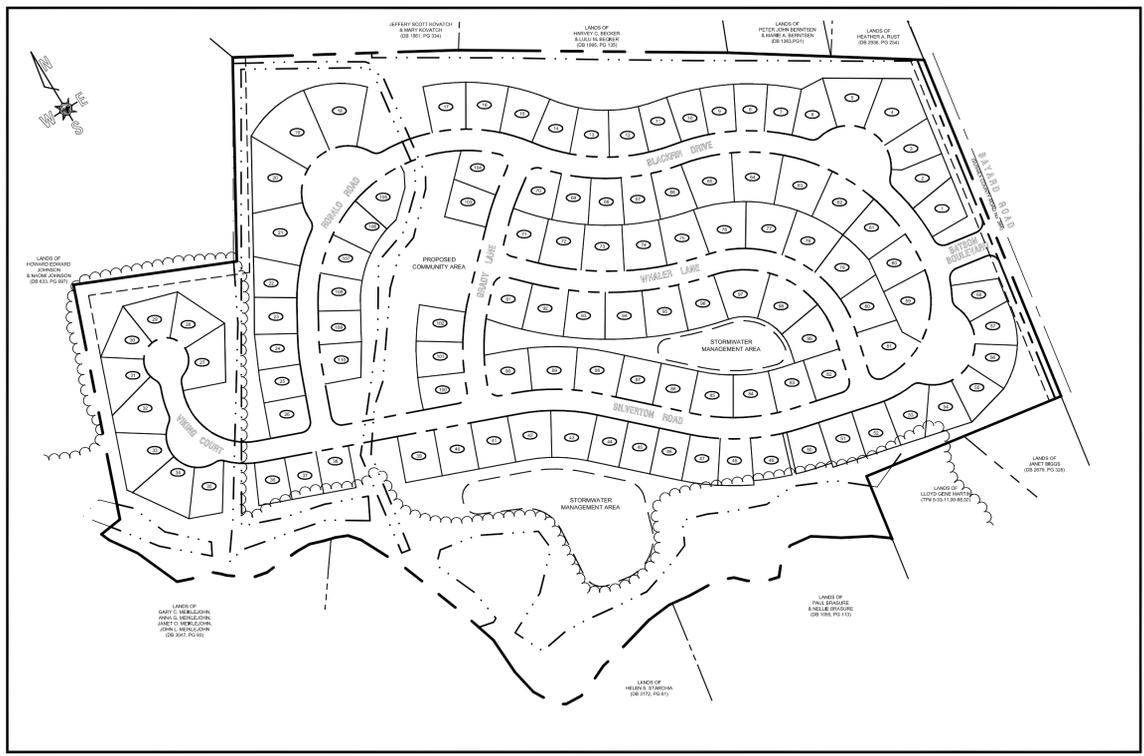
**NOTES:**

- FOR THE MAINTENANCE AND OPERATION OF STREET AND ROAD IMPROVEMENTS, SURFACE DRAINAGE FACILITIES, EROSION AND SEDIMENT CONTROL FACILITIES, SANITARY SEWER FACILITIES, WATER SUPPLY FACILITIES OR OTHER IMPROVEMENTS WHICH MAY BE APPLICABLE REFER TO THE DECLARATION OF COVENANTS AND RESTRICTIONS.
- EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONTACT "MISS UTILITY" 1-800-282-8555 (3) THREE DAYS PRIOR TO CONSTRUCTION IN ORDER TO VERIFY AND ALLOW FOR THEIR LOCATION AND DEPTH IN THE FIELD.
- THE CONTRACTOR SHALL PRESERVE ALL TREES ON THE SITE EXCEPT WHERE NECESSARY TO CONSTRUCT PROPOSED STREETS, BUILDINGS, STORMWATER MANAGEMENT FACILITIES, UTILITIES, DRIVEWAYS, OR PARKING AREAS.
- NO DEBRIS WILL BE BURIED ON THIS SITE.
- THE STREETS WITHIN THIS SUBDIVISION ARE TO REMAIN PRIVATE AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH SUSSEX COUNTY MINIMUM STANDARDS.
- MAINTENANCE OF THE STREETS WITHIN THIS SUBDIVISION WILL BE THE RESPONSIBILITY OF THE DEVELOPER. THE PROPERTY OWNERS WITHIN THIS SUBDIVISION OR BOTH, WHEN ALL LOTS ARE PURCHASED, THE PROPERTY OWNERS WILL BE SOLELY RESPONSIBLE FOR THE MAINTENANCE OF THE INTERIOR STREETS. THE STATE ASSUMES NO RESPONSIBILITY FOR FUTURE MAINTENANCE OF THE STREETS.
- ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
- THE MINIMUM CUL-DE-SAC PAVED RADIUS SHALL BE THIRTY EIGHT FEET (38').
- ALL INTERIOR LOT LINES ARE RESERVED FOR THE CENTERLINE OF A TEN (10) FOOT WIDE DRAINAGE AND/OR UTILITY EASEMENT. ALL PERIMETER LOT LINES SHALL HAVE TEN (10) FOOT EASEMENTS ALONG THE INTERIOR SIDE OF THE PERIMETER BOUNDARY. ALL PRIVATE STREET RIGHT-OF-WAYS SHALL HAVE A TEN (10) FOOT EASEMENT ALONG THE EXTERIOR SIDE OF THE RIGHT-OF-WAY.
- WHEN LAND BEING SUBDIVIDED CONTAINS WETLANDS, EITHER STATE OR FEDERAL, THE DEEDS FOR THOSE LOTS SHALL CONTAIN A DISCLOSURE STATEMENT THAT READS "THIS SITE CONTAINS REGULATED WETLANDS. ACTIVITIES WITHIN THESE WETLANDS MAY REQUIRE A PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS AND/OR THE STATE OF DELAWARE."
- MOBILE HOMES ARE PROHIBITED FROM BEING USED AS DETACHED SINGLE FAMILY DWELLINGS ON INDIVIDUAL LOTS.
- THIS PROPERTY MAY BE LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT SUCH AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES.
- THIS SITE IS LOCATED WITHIN ZONE "X". AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, ZONE "X", AREAS OF 0.2% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE; AND AREAS PROTECTED FROM LEVEES FROM 1% ANNUAL CHANCE FLOOD, AND ZONE "AE", BASE ELEVATION DETERMINED (ELEVATION 5) AS DESIGNATED ON THE FLOOD INSURANCE RATE MAP NUMBER 10005C0635J LAST REVISED 06 JANUARY 2005.
- NO SITE PREPARATION, SITE DISTURBANCE, EXCAVATION OR OTHER CONSTRUCTION ACTIVITY SHALL TAKE PLACE UNTIL ALL PERMITS HAVE BEEN ACQUIRED BY THE DEVELOPER AND THE FINAL SUBDIVISION PLAT HAS BEEN APPROVED AND RECORDED.
- THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THEREOF APPLICABLE.
- LOT NOS. 1, 4 & 56-58 SHALL BE REQUIRED TO TAKE ACCESS FROM AN INTERNAL SUBDIVISION STREET ONLY. NO DIRECT ACCESS TO SUSSEX COUNTY ROAD NO. 384 WILL BE PERMITTED.
- TAX DITCH RIGHT-OF-WAYS ARE SHOWN IN ACCORDANCE WITH AN AGREEMENT REACHED AT A MEETING WITH MR. BROOKS CAHALL OF THE STATE OF DELAWARE, DIRECTOR, ON OCTOBER 16, 2007. THE REVERSED SHOWS ARE THE SUBJECT OF A COURT ORDER REVISION INITIATED BY VIRTUE OF SAID MEETING. A 25' WIDE PERMANENT BUFFER ZONE IS HEREBY CREATED AND SHALL BE MAINTAINED FROM TOP OF BANK ALONG ALL TAX DITCHES. NO BUILDINGS, SHEDS, STRUCTURES, LANDSCAPING OR PEDESTRIAN WALKWAYS, GENERALLY MANMADE OBSTRUCTIONS OF ANY KIND, SHALL OCCUPY ANY SPACE WITHIN THE 25' WIDE ZONE.

BY ALL ACCOUNTS, BATSON CREEK IS THE ONLY PERENNIAL NON-TIDAL STREAM ONSITE REQUIRING A FIFTY-FOOT BUFFER ZONE FROM THE ORDINARY HIGH WATER LINE IN ACCORDANCE WITH SECTION 115-193 OF THE SUSSEX COUNTY CODE. THERE ARE NO LOTS, BUILDINGS OR STRUCTURES PROPOSED WITHIN THE FIFTY-FOOT BUFFER AND NO VEGETATION OR TREE REMOVAL IS PROPOSED OTHER THAN THAT WHICH MAY BE REQUIRED FOR A STORMWATER DISCHARGE INTO THE CREEK FROM THE STORMWATER MANAGEMENT FACILITY.

**DELDOT NOTES:**

- ALL CONSTRUCTION AND MATERIALS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED AUGUST 2001 AND ANY ADDENDA THERETO.
- ALL DISTURBED AREAS WITHIN THE STATE RIGHT OF WAY, BUT NOT IN PAVEMENT, SHALL BE TOPSOILED (6" MINIMUM), FERTILIZED, AND SEEDED.
- A 72 HOUR (MINIMUM) NOTICE SHALL BE GIVEN TO DELDOT'S PUBLIC WORKS ENGINEER PRIOR TO STARTING ENTRANCE CONSTRUCTION.
- MISS UTILITY OF DELMARVA SHALL BE NOTIFIED THREE (3) CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION AT 1-800-282-8555.
- ALL SIGNING AND MAINTENANCE OF TRAFFIC IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL FOLLOW THE GUIDELINES SHOWN IN "TRAFFIC CONTROL FOR STREETS AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND EMERGENCY OPERATIONS" (LATEST EDITION).
- DESIGN, FABRICATION, AND INSTALLATION OF ALL PERMANENT SIGNING SHALL BE AS OUTLINED IN THE "GUIDE FOR FABRICATION AND INSTALLATION OF TRAFFIC CONTROL DEVICES."
- FOR FINAL PERMANENT PAVEMENT MARKINGS, EPOXY RESIN PAINT SHALL BE REQUIRED FOR LONG LINE STRIPING AND THERMO WILL BE REQUIRED FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
- EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48 HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HISHER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (SEE NOTE #4).
- ALL TRAFFIC CONTROL DEVICES SHALL BE IN NEW OR REFURBISHED CONDITION, SHALL COMPLY WITH THE TRAFFIC CONTROL MANUAL AND SHALL BE MCHRP - 350 APPROVED AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED IN GOOD CONDITION FOR DURATION OF USE.
- ALL ENTRANCES SHALL CONFORM TO DELDOT'S STANDARDS AND REGULATIONS FOR SUBDIVISION STREETS AND STATE HIGHWAY ACCESS AND SHALL BE SUBJECT TO ITS APPROVAL.
- BREAKAWAY POSTS SHALL BE USED WHEN INSTALLING ALL SIGNS.
- PLAN LOCATION AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE PUBLIC WORKS ENGINEER.
- MULTIUSE PATH SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. THE PROPERTY OWNERS IN THE SUBDIVISION, OR BOTH, THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE MULTIUSE PATH.



SITE LOCATION PLAN  
SCALE: 1"=200'

TAX PARCEL NO.:  
**5-33-11.00-84.00**

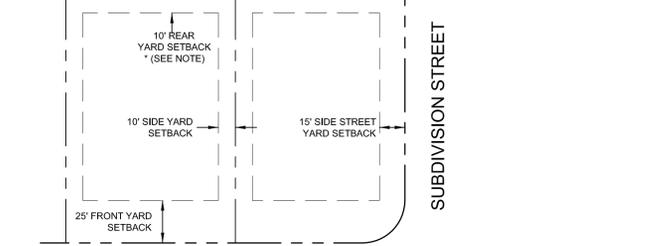
SITUATE IN  
**BALTIMORE HUNDRED  
SUSSEX COUNTY \* STATE OF DELAWARE**



LOCATION MAP © ADC THE MAP PEOPLE - PERMITTED USE NUMBER 20408130 SCALE: 1 INCH = 4,000 FEET

**PLAN DATA:**

PARCEL I.D. No.	* 5-33-11.00-84.00
DEED REFERENCE	* DB 2190, PG 325
ZONING DISTRICT	* AR-1 (AGRICULTURAL / RESIDENTIAL) (ENVIRONMENTALLY SENSITIVE DEVELOPMENT DISTRICT OVERLAY ZONE)
SEWAGE DISPOSAL	* SUSSEX COUNTY SANITARY SEWER SYSTEM (JOHNSON'S CORNER SANITARY SEWER DISTRICT)
WATER SUPPLY	* ARTESIAN WATER COMPANY (CENTRAL WATER SYSTEM)
DEVELOPER	* MATTHEW BRITTINGHAM 19711 BERNARD DRIVE LEWES, DE 19958 (302) 344-9026
OWNER	* IRA B. BRITTINGHAM, JR TRUSTEE 22339 SUSSEX PINES ROAD GEORGETOWN, DE 19947
VERTICAL DATUM	* NAVD 1988
HORIZONTAL DATUM	* DELAWARE STATE PLANE COORDINATE SYSTEM NAD 1983 - BY GPS
LOT AREA RATIONALE	* GROSS AREA = 55.20 ACRES (100.00%) AREA DEDICATED TO BAYARD ROAD = 0.29 ACRES (0.52%) AREA IN SINGLE FAMILY LOTS = 24.76 ACRES (44.86%) AREA DEDICATED TO PRIVATE STREETS = 8.20 ACRES (14.86%) AREA IN PRIVATE OPEN SPACE / STORMWATER (AREA IN WETLANDS) = 21.95 ACRES (39.76%) (AREA RESERVED FOR COMMUNITY AREA) = 5.78 AC. (AREA RESERVED FOR COMMUNITY AREA) = 0.58 AC.)
WOODLAND PRESERVATION RATIONALE	* EXISTING GROSS WOODLAND AREA = 12.61 AC. (100.00%) WOODLAND AREAS TO BE PRESERVED = 10.44 AC. (82.79%) WOODLAND AREAS TO BE REMOVED = 2.17 AC. (17.21%)
PROJECT DENSITY	* NO. OF SINGLE FAMILY LOTS = 110 GROSS AREA (AR-1 CLUSTER) = 55.2 AC. GROSS DENSITY = 1.99 D.U./AC.
HEIGHT, AREA & BULK TABLE	* MINIMUM LOT AREA = 7,556 SF AVERAGE LOT SIZE = 9,805 SF MAXIMUM LOT SIZE = 18,285 SF MINIMUM REQUIRED OPEN SPACE = 30% MINIMUM FRONT YARD SETBACK = 25 FEET MINIMUM SIDE YARD SETBACK = 10 FEET MINIMUM REAR YARD SETBACK = 10 FEET *(SEE NOTE) MINIMUM LOT WIDTH = 60 FEET

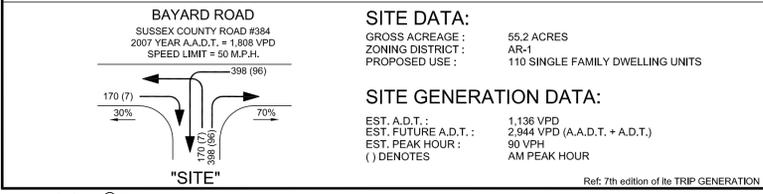


SUBDIVISION STREET  
\* LOT Nos. 34-48 & 51-54 SHALL BE REQUIRED TO HAVE A REAR YARD SETBACK OF TWENTY FEET.  
**BUILDING SETBACK DETAIL**  
(SCALE: 1" = 50')

**SHEET INDEX:**

COVER PLAN	SHEET No. P-1
PRELIMINARY SUBDIVISION PLAN	SHEET No. P-2
REVISED DATE: 24 JULY 2009	PER PLUS AND P & Z RESUBMISSION
REVISED DATE: 13 FEBRUARY 2008	INCREASED REAR YARD LOT Nos. 34-54
DATE: 17 OCTOBER 2007	SHEET No. P-1

**SITE TRAFFIC GENERATION DIAGRAM & GENERAL INFORMATION**



**WETLANDS CERTIFICATION**

I, BEN KULP, CERTIFY THAT THIS PROPERTY HAS BEEN EXAMINED FOR JURISDICTIONAL AND NON-JURISDICTIONAL WETLANDS IN ACCORDANCE WITH CRITERIA FOUND IN THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND REGULATORY GUIDANCE DOCUMENTS RELEASED ON OCTOBER 7, 1991 AND MARCH 6, 1992. THE DELINEATION HERE SHOWN, IN MY BEST PROFESSIONAL JUDGMENT ACCURATELY DEPICTS BOTH STATE AND FEDERAL WETLANDS PRESENT WITHIN THE SUBJECT PROPERTY.

**DEVELOPER'S CERTIFICATION**

I, MATTHEW BRITTINGHAM, HEREBY CERTIFY THAT I AM THE LEGAL REPRESENTATIVE OF THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE DEVELOPED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

**ENGINEER'S CERTIFICATION**

I, ROGER A. GROSS, P.E., HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, AND THAT THE PLAN SHOWN AND DESCRIBED HEREON, CONSISTING OF TWO SHEETS, HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED STANDARDS AND PRACTICES AND BY THE SUSSEX COUNTY SUBDIVISION AND ZONING REGULATIONS.

BEN KULP  
MERESTONE CONSULTANTS, INC.  
5215 WEST WOODMILL DRIVE  
WILMINGTON, DE 19808  
PHONE : (302) 992-7900  
FAX : (302) 992-7911

MATTHEW BRITTINGHAM  
19711 BERNARD DRIVE  
LEWES, DE 19958  
PHONE : (302) 344-9026

ROGER A. GROSS, P.E.  
MERESTONE CONSULTANTS, INC.  
19633 BLUE BIRD LANE, SUITE 7  
REHOBOTH BEACH, DELAWARE 19971  
PHONE : (302) 226-5880  
FAX : (302) 226-5883

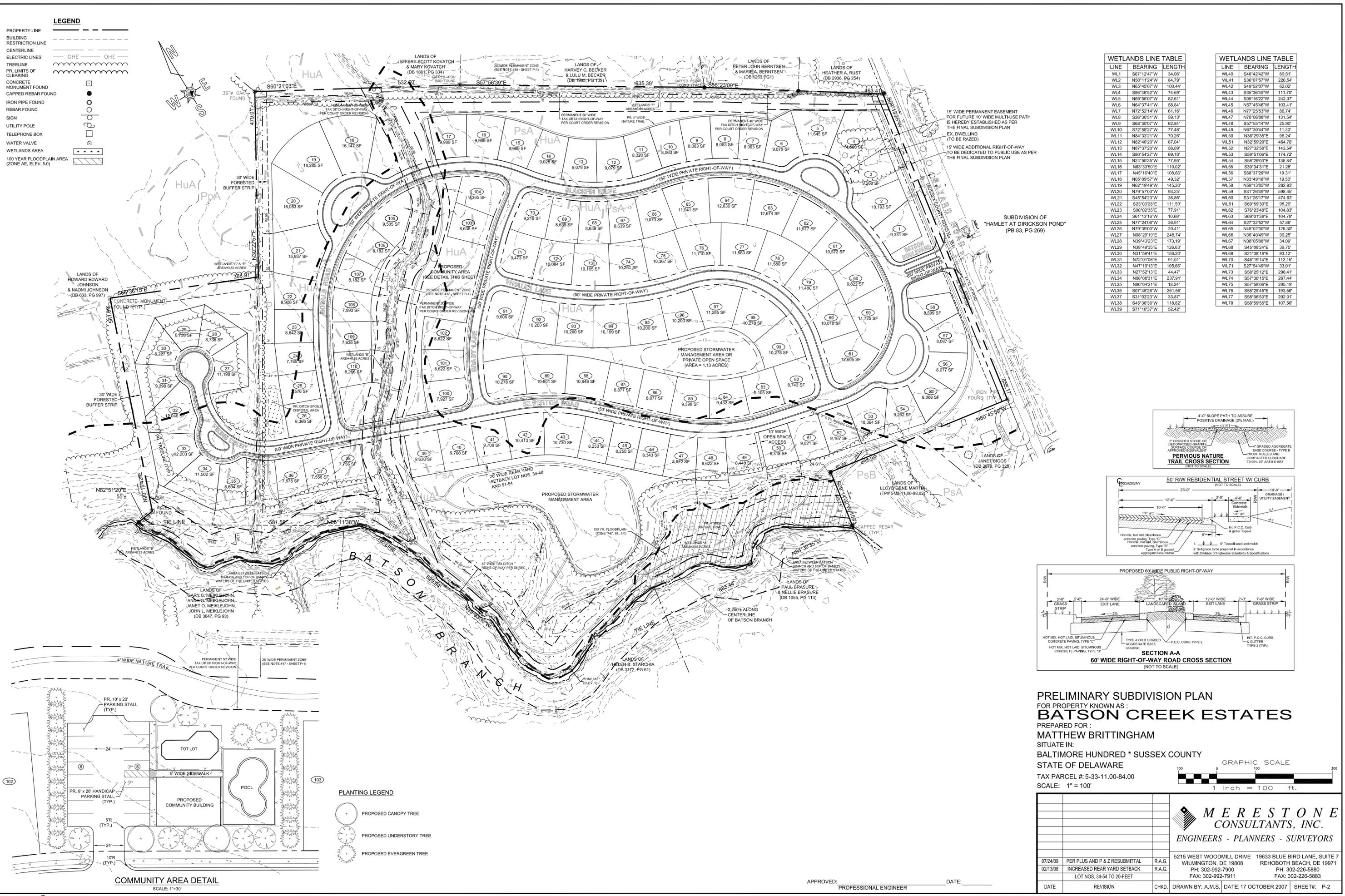
**MERESTONE CONSULTANTS, INC.**  
ENGINEERS - PLANNERS - SURVEYORS

5215 W. WOODMILL DRIVE  
WILMINGTON, DE 19808  
PHONE: 302-992-7900  
FAX: 302-992-7911

19633 BLUE BIRD LANE, SUITE 7  
REHOBOTH BEACH, DE 19971  
PHONE: 302-226-5880  
FAX: 302-226-5883

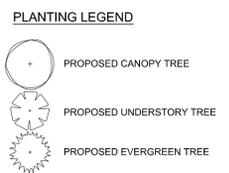
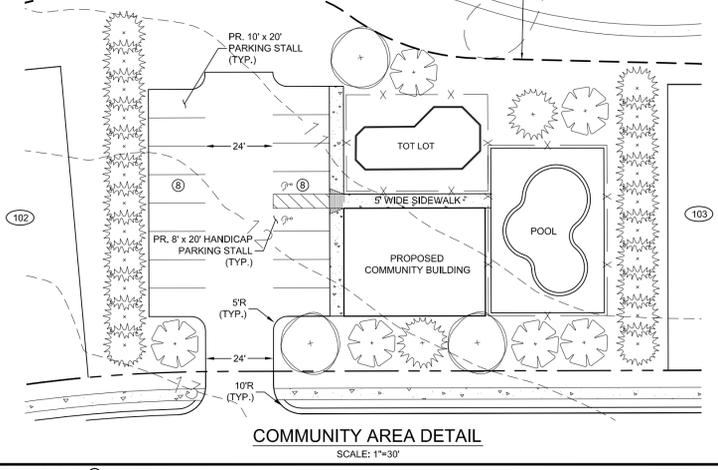
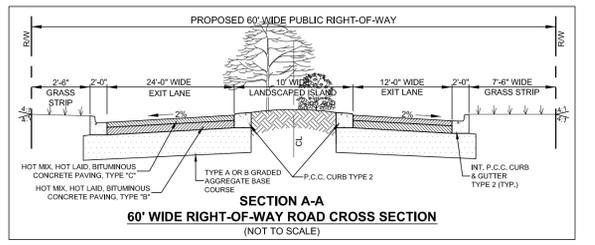
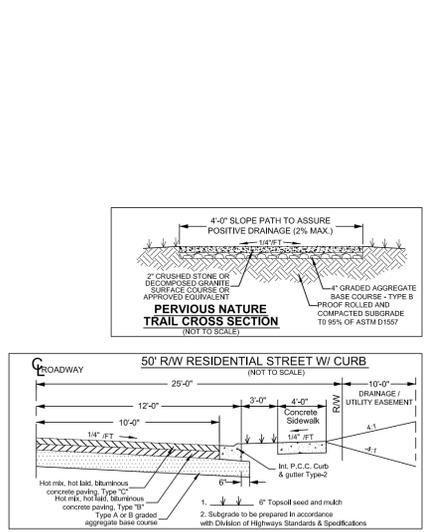
**LEGEND**

PROPERTY LINE	---
BUILDING RESTRICTION LINE	---
CENTERLINE	---
ELECTRIC LINES	OHE OHE
TREELINE	---
PR. LIMITS OF CLEARING	---
CONCRETE MONUMENT FOUND	□
CAPPED REBAR FOUND	●
IRON PIPE FOUND	○
REBAR FOUND	○
SIGN	○
UTILITY POLE	○
TELEPHONE BOX	□
WATER VALVE	○
WETLANDS AREA	---
100 YEAR FLOODPLAIN AREA (ZONE AE, ELEV. 5.0)	---

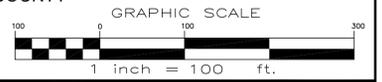


**WETLANDS LINE TABLE**

LINE	BEARING	LENGTH
WL1	S67°12'47"W	34.06'
WL2	N50°11'24"W	84.79'
WL3	N65°45'07"W	100.44'
WL4	S86°46'52"W	74.69'
WL5	N69°56'07"W	62.61'
WL6	N64°37'41"W	58.84'
WL7	N72°52'14"W	61.16'
WL8	S26°30'51"W	59.13'
WL9	S68°30'07"W	62.84'
WL10	S72°58'27"W	77.48'
WL11	N84°33'21"W	70.26'
WL12	N62°40'20"W	67.64'
WL13	N87°37'20"W	58.09'
WL14	S80°54'27"W	69.10'
WL15	N24°55'35"W	77.95'
WL16	N63°33'50"E	110.02'
WL17	N45°16'40"E	108.66'
WL18	N05°09'57"W	49.32'
WL19	N62°19'49"W	145.20'
WL20	N79°57'03"W	83.25'
WL21	S45°54'23"W	36.86'
WL22	S23°03'28"E	111.59'
WL23	S08°02'35"E	77.91'
WL24	S61°13'16"W	10.68'
WL25	N77°24'06"W	36.91'
WL26	N79°39'00"W	20.41'
WL27	N08°29'19"E	248.74'
WL28	N38°43'23"E	173.19'
WL29	N38°49'35"E	126.63'
WL30	N31°59'41"E	158.20'
WL31	N72°01'06"E	91.01'
WL32	N47°19'13"E	105.86'
WL33	N27°52'13"E	44.47'
WL34	N08°08'31"E	237.91'
WL35	N86°04'21"E	18.24'
WL36	S07°45'26"W	261.56'
WL37	S31°03'23"W	33.87'
WL38	S45°36'36"W	118.82'
WL39	S71°10'37"W	52.42'



**PRELIMINARY SUBDIVISION PLAN**  
 FOR PROPERTY KNOWN AS:  
**BATSON CREEK ESTATES**  
 PREPARED FOR:  
**MATTHEW BRITTINGHAM**  
 SITUATE IN:  
 BALTIMORE HUNDRED \* SUSSEX COUNTY  
 STATE OF DELAWARE  
 TAX PARCEL #: 5-33-11.00-84.00  
 SCALE: 1" = 100'



APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PROFESSIONAL ENGINEER

DATE	REVISION	CHKD.	DRAWN BY: A.M.S.	DATE: 17 OCTOBER 2007	SHEET#: P-2
07/24/09	PER PLUS AND P & Z RESUBMITTAL	R.A.G.			
02/13/08	INCREASED REAR YARD SETBACK	R.A.G.			
	LOT NOS. 34-54 TO 20-FEET				

**MERESTONE CONSULTANTS, INC.**  
 ENGINEERS - PLANNERS - SURVEYORS

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 WILMINGTON, DE 19808 REHOBOTH BEACH, DE 19971  
 PH: 302-992-7900 PH: 302-226-5880  
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PLAN #: 20745RA-325701