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March 30, 2006

Ms. Constance C. Holland, AICP
State of Delaware Executive Department
Office of Management and Budget
State Planning Coordination
122 William Penn Street, Third Floor
Dover, DE 19901

RE: PLUS Review – PLUS 2006-02-02; Messick Property

Dear Ms. Holland:

The following comprises our response to the PLUS agency comments issued on March 15, 2006 of the Messick Property:

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

This project represents a major land development that will result in 145 residential units in an Investment Level 4 area according to the 2004 strategies for State Policies and Spending. This project is also located outside of a designated growth area in relevant municipal and county certified comprehensive plans. 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 environmental 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 360 new residents to an area where the State has no plans to invest infrastructure upgrades or additional services. These residents will need access to such services and infrastructure as schools, police, and transportation. To provided 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.

Response: While the developer recognizes the Department's concern with developing in an Investment Level 4 area, he feels the proposed residential development is consistent with land use in

adjacent parcels and in the general site area. The proposed subdivision is partially located in an Investment Level 3 area and is directly across Route 24 from Investment Levels 2 and 3.

Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685

We are not in favor of this development in Level IV, which will further destroy the historic agricultural landscape of this area, where the Thematic Resources of Nanticoke Indian Community have been listed in the National Register of Historic Places since 1979. There is a historic dwelling complex (S-3129) within the parcel, which appears to be located where the T. Rust House (as shown on Beers Atlas of 1868) is. It is adjacent to Harmony Church (S-753) and the site of the Ames Hitchens Chicken Farm (S-755), both of which are listed in the National Register as part of the Nanticoke Indian Community. There are other historic agricultural and dwelling complexes as well as another church (S-2963, S-3105, S3130, S-3131, and S-2973) north, west, and south of the parcel as well. Much of the wooded area is mapped as wet soils; there is some potential for prehistoric-period archaeological sites on the adjacent drier soils.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Rust House, usually a good distance behind or to the side of the house. The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. We will be happy to discuss these issues with the developer; the contact person for this program is Fay Stocum, 302-736-7400.

The DHCA would like the opportunity to document the dwelling complex prior to any demolition activities. They recommend that the development be substantially landscaped to block the view of this development from the neighboring historic properties. They would also like the opportunity to check the area to see if any archaeological sites, in fact exist, and to learn something about their location, size, and nature before any ground-disturbing activities take place.

Response: The proposed subdivision will incorporate a 30' minimum buffer around the entire perimeter. The portion of the site that borders Harmony Church is heavy wooded. Only 14.7 of the existing 53.8 acres of wooded area will be cleared. The developer proposed to clear only the area within the right of way and that necessary to construct the proposed dwellings. The lots located within the existing treeline will be sold as wooded lots. This natural, wooded buffer will substantially block the view from the neighboring properties.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

MBM Construction, Inc. seeks to develop 145 single-family detached houses on approximately 81.3-acre parcel (Tax Parcel 2-34-28.00-154.00). The land is located on the north side of Delaware Route 24 opposite Gull Point Road (Sussex Road 313), the east side of Streets Road (Sussex Road 310) and the south side of Cordrey Road (Sussex Road 308) but excludes the corners where these intersect. Access is proposed on Streets Road. The land is zoned AR-1 and would be developed under the County's cluster Development option. Presently the site is in agriculture.

The response to Item 10 on the PLUS application states that the project is located in an Environmentally Sensitive Developing Area. According to the *Strategies for State Policies and Spending*, this development is proposed for an area designated as Level 4. The *Strategies* have deemed the type of development being proposed inappropriate for this area. 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.

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.

If this development proposal is approved, notwithstanding inconsistencies with the relevant plans and policies, DelDOT will provide technical review and comments.

Response: While the developer understands DelDOT's opposition to development in a Level 4 area, the proposed subdivision is partially located in an Investment Level 3 area and is directly across Route 24 from Investment Levels 2 and 3, indicating that this type of development is appropriate for this area. Access for the proposed subdivision is on Streets Road to minimize traffic impacts to Route 24.

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

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.

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 investment in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly support 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: the loss/fragmentation of 32 out of 54 acres (59%) of forest, an increase in the amount of impervious cover (25%), and the project's location in a high reduction zone for TMDLs. 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.

Response: The proposed subdivision is designed to preserve as much of the wooded area as feasible; clearing only what is necessary to construct the right of way and dwellings. The plan has been revised to preserve 74% of existing forested area. More than 51% of the subdivision is designed as open space and many of the homes back to open space areas. In addition to the preserved forested area, landscaping and a 30' forested perimeter buffer will be provided. Finally, partial reforestation is proposed in the open space areas.

Soils

Based on the Sussex County soil survey update as Fort Mott, Pepperbox, Keyport, Matawan, and Lenni. Fort Mott is well-drained upland soil that, generally, has few limitations for development. Pepperbox, Keyport, and Matawan are moderately well-drained soil of low-lying uplands that has moderate limitations for development. Lenni is a very poorly-drained wetland associated (hydric) soil that has a high severity level for development.

It should also be noted that some of the soils on this parcel are likely to have a seasonal high water table within a depth of one-foot from the soil surface. Building in such soils may leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding. The issue is of particular concern during periods of high-intensity long duration rainfall events associated with tropical storms/hurricanes or "nor" easters". Flooding probabilities may be further augmented by surface water runoff emanating from created forms of structural imperviousness (roof tops, roads, and sidewalks). Therefore, the applicant should refrain from building on lots containing mapped hydric soils or soils delineated as such by their consulting soil scientist, and reduce the amount of created surface imperviousness to the greatest extent possible.

Response: The developer concurs with the assessment of soils at the site. A soils reconnaissance was performed on the site to isolate areas of poorly drained soils. The site will be designed to mimic the natural hydrology of the site while reducing post-development peak discharge rates, thus reducing any existing flooding problems.

Impervious cover

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly declines. Based on analyses of 2002 aerial photography by the University of Delaware, the Inland Bays watershed (Indian River Bay), at that time, had about 8.6 percent impervious cover. Although this data is almost 4 years old and likely an underestimate, it illustrates the importance of a proactive strategy to mitigate for predictable and likely cumulative environmental impacts. Since the amount of imperviousness generated by this project is likely to be much higher than the desirable watershed threshold of 10 percent, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of the most likely adverse impacts. Using 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 examples of practical BMPs that could easily be implemented to reduce surface imperviousness.

Response: As part of the required stormwater management plan, the developer proposes to use Green Technology Best Management Practices (GTBMP's) to prevent adverse water quality impacts to the receiving water bodies. Specifically, most surface water runoff from the site will be directed through the GTBMP's that will likely consist of a series of biofiltration swales and bioretention facilities. These practices will effectively remove: sediments (typically beyond the 80% removal rate required by DNREC); oils and greases (including those associated with automobile

fluids); and nutrients such as nitrogen and phosphorous. The use of GTBMP's will adequately minimize the potential impacts of the proposed development.

ERES Waters

This project located adjacent to receiving waters of the Inland Bays designated as water having Exceptional Recreational or Ecological Significance (ERES). ERES water are recognized as special assets of the State, and shall be protected and/or restored, to the maximum extent practicable, to their natural conditions. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES water 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.

Response: As previously mentioned, the developer propose to use Green Technology Best Management Practice (GTBMP's) to prevent adverse water quality impacts to the receiving water bodies. These practices are the most effective methods to remove sediments, oils and greases, and nutrients such as nitrogen and phosphorous. The use of GTBMP's will adequately minimize the potential impacts of the proposed development.

TMDLs

In the Inland Bays watershed, the primary source of water quality impairment is associated with nutrient runoff from agricultural and/or residential development. In order to mitigate for the aforementioned impairments, a post-development TMDL reduction level of 85 and 65 percent will be required for nitrogen and phosphorus, respectively.

Response: See response above.

TMDL Compliance through the PCS

The proposed pollution control strategy will require the completion of a nutrient budget to estimate nutrient load changes following development; documentation of these load changes will be assessed through a nutrient budget protocol. The nutrient budget protocol is a computer-based model that quantifies post-development nutrient loading under a variety of land use scenarios in combination with variety (or absence) of BMP types and intensities. The post-development loading rate is then compared with the pre-development loading rate to assess whether the project meets the prescribed TMDL nutrient load reductions. Based on preliminary evaluation of this project using this model (using information submitted and some our own assumptions in lieu of some missing information) the development as currently conceived, does **not** meet the Inland Bays watershed TMDL nutrient reduction requirements for nitrogen and phosphorus – the applicant is strongly advised to consider the use of appropriate BMPs and Best Available Technologies (BATs) to ensure compliance. Examples of BMPs or BATs that should be used to significantly reduce nutrient loading from this project include practices that prevent or mitigate surface imperviousness, maintenance of recommended wetland and water body buffer width, and utilization of innovative or "green-technology" stormwater methodologies.

The applicant should be made aware that the accurate assessment of a given project's environmental impacts and its ability to meet the prescribed TMDL load reductions in highly dependent on an accurate accounting and inventory of all land uses, natural resources and their proposed management. Since it was

apparent that some of this aforementioned nutrient budget calculation (via the nutrient budget protocol) actually understates this project's environmental assessment can be made. The following are concerns we feel that need to be addressed before a reasonably accurate nutrient budget can be calculated:

1) Since it is likely that jurisdictional wetlands may be found on this parcel, it is strongly recommended that USACOE approved wetlands delineation be conducted. It should be noted that a wetland delineation cannot be conducted via a "desk review" of existing NWI or SWMP mapping.

DNREC then suggest that the applicant verify their project's compliance after correcting all our concerns and/or using realistic assumptions) with the specified TMDL loading rates by running the model themselves. As mentioned previously, DNREC strongly recommends that the applicant consider the use of the aforementioned BMPs to help ensure compliance with the required TMDLs. Please contact Lyle Jones of the Watershed Section at 739-9939 for the acceptable model protocol.

Response: A wetland delineation has previously been performed for the site and indicated that no wetlands were present. The developer will contact the Army Corps of Engineers to schedule a jurisdictional determination for the site.

As previously mentioned, Green Technology Best Management Practice (GTBMP's) will be incorporated in the proposed site to prevent adverse water quality impacts to the receiving water bodies. These practices will effectively remove: sediments (typically beyond the 80% removal rate required by DNREC); oils and greases (including those associated with automobile fluids); and nutrients such as nitrogen and phosphorous. The use of GTBMP's will adequately minimize the potential impacts of the proposed development.

Water Supply

The information provided indicates that Tidewater Utilities will provide water to proposed projects through a central public water system. DNREC and PSC records reflect that Tidewater Utilities does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to fill an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallon per day at any time during operation.

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

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

Response: The proposed subdivision will provide water through a community system maintained by Tidewater Utilities Inc. The developer will coordinate with Tidewater Utilities to apply for the CPCN. All appropriate permits for these wells will be submitted to DNREC.

Sediment and Erosion Control/Stormwater Management

The Sediment and Stormwater plan review and approval as well as construction inspection will be coordinated through Sussex Conservation District.

Green technology BMPs such as bioretention, filtration, or infiltration must be considered prior to ponds for management of stormwater quality.

If infiltration is proposed for this project:

- The bottom of the infiltration practices must be no less than three (3) above seasonal high water table.
- The minimum measured field infiltration rate at the hydraulically most restrictive zone between the bottom of the infiltration practices and three feet below is 1.02 inches per hours.
- One half of the measured infiltration rate shall be used in the design of the infiltration systems.
- Infiltration systems should have a defined overflow location.

Each stormwater management facility should have an adequate outlet for release of stormwater:

- Discharge to the DeIDOT system will require approval of DeIDOT prior to approval the Sediment and Stormwater Plan.
- This site does not appear to have a natural drainage outlet other than what may be available as a roadside swale.

Response: A detailed stormwater management and erosion and sediment control plan will be prepared to address stormwater runoff quality, quantity, and volume. All sediment and stormwater management practices will be designed in accordance with the State Stormwater Regulations. Green Technology BMP's will be incorporated throughout the site. Infiltration will be maximized where possible throughout the site in accordance with the above mentioned criteria. If discharge to the DeIDOT system is required, the developer will coordinate with DeIDOT to obtain necessary approvals.

Forest Preservation

According to the application there is going to be a loss of 31.8 acres of forest out of 54 acres. Considering the current development pressure throughout the state and the fact that this development is in a level 4 area, the site plan should be changed to allow for greater forest preservation. Eliminating the cul-de-sac in the northern part of the plan, reducing the number of lots on the eastern edge of the road leading to this cul-de-sac, and eliminating the cul-de-sac and lots leading to it in the southeastern area of the plan would allow for greater forest connectivity. The current plan serves to fragment the forest and eliminate wildlife travel corridors between areas south of the development and north of "the development. Forest fragmentation separates wildlife populations, and increases "edge effects" that leave many forest-dwelling species vulnerable to predation and allows the infiltration of invasive species. This also can lead to an increase in human/animal conflicts, including interaction on the roadways. This type of forest loss can also put pressure on nearby State protected lands such as wildlife areas, State forests and other public-owned properties.

Response: The proposed subdivision has been redesigned to preserve as much of the wooded area as possible, clearing only what is necessary to construct the right of way and dwellings. The plan

has been revised to preserve 74% of existing forested area. In addition, more than 51% of the subdivision is designed as open space and many of the homes back to open space areas. In addition to the reserved forested area, landscaping and a 30' forested perimeter buffer will be provided.

Nuisance Waterfowl

Stormwater management ponds in the site plan may attract waterfowl like resident Canada geese and mute swans. High concentrations of water fowl in ponds create water-quality problems, leave dropping on lawn and paved areas and can become aggressive during the nesting season. Short manicured grasses around ponds provide an attractive habitat for these species. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area around the perimeter. Waterfowl do not feel safe when they can not see the surround area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, property managers or owners 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, gees problems can be minimized.

Response: The proposed stormwater management plan will include GTBMP's rather than open water ponds. If open water ponds are deemed necessary to meet the State Stormwater Regulations, native plantings of tall grasses and proper landscaping will be incorporated into the stormwater management pond construction details to minimize the attraction of waterfowl.

Solid Waste

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

Response: The developer recognizes the solid waste impacts associated with land development and will minimize the amount of construction waste associated with land development and will minimize the amount of construction waste associated with the site to the extent feasible.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 11.1 tons (22,256.0 pounds) per year of VOC (volatile organic compounds), 9.2 tons (18,426.4 pounds) per year of NO_x (nitrogen oxides), 6.8 tons (13,595.4 pounds) per year of SO₂ (sulfur dioxide), 0.6 ton (1,210.2 pounds) per year of fine particulates and 930.0 tons (1,861,684.9 pounds) per year of CO₂ (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_x; 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 emission, 77 tons per year of NO_x emissions and 1 ton per year of particulate emission 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 4.5 tons (.8 ,976.9 pounds) per year of VOC (volatile organic compounds), 0.5 ton (987.7 pounds) per year of NO x (nitrogen oxides), 0.4 ton (819.7 pounds) per year of S02 (sulfur dioxide), 0.5 ton (1,057.7 pounds) per year of fine particulates and 18.2 tons (36,390.1 pounds) per year of C02 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.8 tons (3,557.8 pounds) per year of NO x (nitrogen oxides), 6.2 tons (12,374.9 pounds) per year of S02 (sulfur dioxide) and 912.6 tons (1,825,294.8 pounds) per year of C02 (carbon dioxide).

	VOC	NOx	S02	PM2.5	CO2
Mobile	11.1	9.2	6.8	0.6	930.8
Residential	4.5	0.5	0.4	0.5	18.2
Electrical Power		1.8	6.2		912.6
TOTAL	15.6	11.5	13.4	1.1	1861.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.8 tons of nitrogen oxides per year and 6.2 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 P9llution. 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 Energy Office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

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

Response: The developer recognizes the potential impacts to air quality associated with land development. However, the proposed project is designed to attract homeowners greater than 55 years of age that typically generate less vehicle trips (approximately 1/3) resulting in less emissions than traditional residential subdivisions and increased use of public transportation. In addition, the project is located immediately adjacent to the growth areas, resulting in much lower emission than outlined above for a development 10 miles outside the growth zone.

To reduce energy consumption, the developer will consider the use of Energy Star qualified homes.

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

a. **Fire Protection Water Requirements:**

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

b. **Fire Protection Features:**

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

c. **Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all building on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Streets Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 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 or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
 - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
 -
- d. **Gas Piping and System Information**
- Provide type of fuel proposed, and show locations of bulk containers on plan.
- e. **Required Notes**
- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple building/units
 - Square Footage of each structure (Total of all Floors)
 - National Fire Protection Association (NFPA) Construction Type
 - Maximum Height of Buildings (including number of stories)
 - Note Indicating if building is to be sprinklered
 - Name of Water Provider
 - Letter from Water Provider approving the system layout
 - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
 - Provide Road Names, even for County Roads

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

Response: The proposed project will comply with the State Fire Marshal requirements as outlined above.

Department of Agriculture – Contact: Milton Melendez 698-4500

The proposed development is in an area designated as Level 4 under the Strategies for State Policies and Spending. The Strategies and the Sussex County Comprehensive Plan do not support this type of isolated development in this area. The intent of these plans 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 development 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. They 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. This site is also a designated as a “Good Recharge” area, meaning that the area has valuable ground water recharge qualities. Additionally, this site overlaps with the State’s Green Infrastructure Investment Strategy Plan. The Forest Lands layer is present in this site; this designation identifies areas that possess unique natural features that are valuable for preservation.

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, they will support these efforts and work with developer to implement these measures. If this project is approved we will work with the developers to minimize impacts to the agricultural and forestry industries. This site is a part of a “recharge” area. DNREC has mapped all ground water potential recharge areas. A “good” rating is the second highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in “Excellent” and “Good” recharge areas is crucial for the overall environmental health of our state and extremely important to our efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as “excellent” and “good” recharge areas adversely impacts the future prospects for agriculture in Delaware.

Response: The proposed subdivision will incorporate Green Technology BMP’s which promote infiltration to take advantage of the good recharge potential on the site.

The proposed subdivision has been redesigned to preserve as much of the forested area as possible, clearing only what is necessary to construct the right of way and dwellings. The plan has been revised to preserve 74% of existing forested area. In addition, more than 51% of the subdivision is designed as open space and many of the homes back to open space areas. In addition to the preserved forested area, landscaping and a 30’ forested perimeter buffer will be provided.

Public Service Commission – Contact: Andrea Maucher 739-4247

Project is not in a certificated service territory for water or wastewater. The utility selected to serve will need to apply to the Commission for a CPCN.

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.

Response: The proposed subdivision will provide water through a community system and wastewater through an on-site community septic system, both maintained by Tidewater Utilities. All appropriate permits for these wells will be submitted to DNREC.

The developer concurs that any expansion of natural gas or installation of a closed propane system must comply with Pipeline Safety guidelines.

Delaware State Housing Authority – Contact Jimmy Atkins 739-4263

This proposal is to develop 145 units on 81 acres, east of Millsboro. According to the State Strategies Map, the proposal is located in 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.

Response: While the developer recognizes the State's concern with developing in an Investment Level 4 area, the proposed subdivision is partially located in an Investment Level 3 area and is directly across Route 24 from Investment Levels 2 and 3. In addition, the development is consistent with the surround areas, as it borders the Indian Summer Village subdivision.

Sussex County – Contact: Richard Kautz 855-7878

There is insufficient information in the PLUS application to offer comments concerning compliance with the County Cluster Ordinance and the Environmentally Sensitive Developing Area overlay. There is no supporting information concerning the land area or number of lots lying within the ESDA and the number of lots and area within the AR-1 district. On the face of the application, 145 lots appear to exceed the new limitation under the Cluster option with central sewer. The design does not reflect the ESDA overlay. The open space data is conflicting. The following comments are based upon the PLUS documents provided before the meeting.

This year Sussex County will be considering implementation of a Source Water Protection Program required by the State. Depending on the requirements adopted by the County Council this project might be affected. Any well location should insure that the wellhead protection area is entirely on site.

Because part of this project is situated in an Environmentally Sensitive Development Area, the required report should include how this requirement and the PLUS comments have been addressed and how that part of the plan has been revised accordingly.

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C). For example, the reduction of 122 lots (allowed as opposed to the 145 proposed) from 20,000 sq. ft. to 8712 sq. ft. (as proposed in the PLUS application) allows for more than 32 acres of open space yet only 12 acres of "useable" open space is provided. 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 application an explanation of how the developer plans to mitigate the issues raised by the State agencies.

Response: The plan has been revised to reflect the Environmentally Sensitive Developing Area (ESDA) overlay and density calculations.

Because the project is an AR-1 Cluster subdivision, the plan includes more than 40 acres (51%) of open space, as opposed to the required 30%. The majority of the open space will remain as undisturbed forested area. The open space area outside the existing woodland will be usable open space areas. Including a community club house, swimming pool, and walking trail. The proposed layout was designed such that the majority of homes back to large open space areas.

The proposed subdivision is designed to preserve as much of the forested area as possible, clearing only what is necessary to construct the right of way and dwellings. In addition to preserved forested area, landscaping and a 30' forested perimeter buffer will be provided.

The Sussex County Engineer Comments:

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

A 600 foot strip of the of the project along Route 24 will be considered in the Environmentally Sensitive Developing Zone (ESDZ) and Sussex County will consider serving that portion of the project within the Inland Bays Planning Area for sewer service. The study will conclude approximately May 2006. The study will develop options for sewer service and make a recommendation.

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

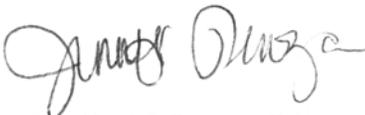
When Sussex County provides sewer services, it its required that the treatment system be abandoned and a direct connection made to the County System at the developer and/or homeowners association expense.

Response: The proposed private sanitary sewer collection and conveyance system will be designed in accordance with Sussex County Standards and specifications. A sewer concept plan will be submitted to Sussex County for approval prior to the design of the system. All disposal fields will be clearly identified on the recorded plan and will not be counted as open space.

All comments of the PLUS review of the Messick Property have been addressed.

Should you have any questions, please feel free to contact me at our office (302) 765-3150.

Sincerely,



Jennifer M. Penozza, P.E.

JMP/gnw

cc: Sussex County
Mr. Rick Banning, Westbay Investment Group LLC

S:\Projects\0251-Mesick Property\docs\PLUS response letter 03-22-06.doc

Green Stone

ENGINEERING

GREEN STONE ENGINEERING LLC

LETTER OF TRANSMITTAL

TO: Sussex County Council

RE: Preliminary Submission for the Indian Landing Subdivision
(also known as The Messick Property)

PROJECT NO.: #0251

DATE: March 30, 2006

WE ARE SENDING YOU:

COPIES	DATE	DESCRIPTION
25 Sets		Preliminary Site Plans for Indian Landing (The Messick Property) Sheet 1 thru 3) Signed/Sealed
1	03-30-06	Check in the amount of \$500.00 (Review Fee) Check #5405
1 Set		Sussex County Planning and Zoning Commission Application for Major Subdivision w/Checklist
1	3/23/06	Wetland Investigation Report
1	3/30/06	PLUS Response Letter
1	3/16/06	Groundwater Monitoring Well Installation Report
1	11/15/05	Soils Reconnaissance Report
1	3/14/06	Topographic and Boundary Survey (Signed/Sealed)

These are transmitted as checked below:

For approval For your use As requested For review and comment

REMARKS:

Dear Sir or Madam:

Enclosed please find the above referenced information for your review and comment on the Indian Landing (aka The Messick Property) Subdivision.

This package is our Preliminary submission to the Planning and Zoning Commission.

Should you have any questions, please feel free to contact our office.

Sincerely,
Jennifer M. Penozza, P.E.

Cc: Mr. Rick Banning, MBM Construction Company
S:\Projects\0251-Messick Property\docs\prelim submission 03-30-06.doc
