



**STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION**

January 21, 2011

Mr. Ted Williams
Landmark JCM
100 W. Commons Blvd.
New Castle, DE 19720

RE: PLUS 2010-12-04; Meridian Crossing

Dear Mr. Williams:

Thank you for meeting with State agency planners on December 22, 2010 to discuss the proposed plans for the Meridian Crossing project to be located on the west side of Church Road, 2,400 feet southeast of US Route 40.

According to the information received, you asked that we review a plan to convert 43 previously approved single-family detached lots to 82 twin lots. Because the approved plan required a rezoning by the NCC Council and the original plan was changed you are required to seek the rezoning approval again.

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 New Castle 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.**

Strategies for State Policies and Spending

This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. This site is also located in the New Castle County Growth area. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed conversion of 43 single family homes lots into 82 twin homes provided the project is in accordance with the relevant New Castle County codes and ordinances.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known cultural or historic resources such as an archaeological site or listed National Register property on this parcel (property). Although there are no known cultural or historic resources on this parcel, it is important that the developer be aware of the Delaware Unmarked Human Remains Act of 1987, outlined in Chapter 54 of Title 7 of the Delaware Code, which pertains to the discovery and disposition of such remains, because the unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. Prior to any demolition or ground-disturbing activities, the developer may want to consider hiring an archaeological consultant to examine the parcel for archaeological sites, such as a cemetery or unmarked human remains.
- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential historic or cultural resources.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The subdivision streets must be designed in accordance with DeIDOT's Standards and Regulations for Subdivision Streets and State Highway Access. This manual is available on-line at http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf.
- In accordance with Section 7.2.3.8 of the Standards and Regulations, sight distance should be checked for vehicles entering and exiting driveways in the development. Lots 305, 306, 313, 314, 335 and 336 are of particular concern in this regard.
- DeIDOT anticipates that New Castle County will require a "Letter of No Objection" from the Department for this project. Per Section 3.4 of DeIDOT's Standards and Regulations for Subdivision Streets and State Highway Access, the developer must submit **three (3) signed and sealed paper copies and one electronic (pdf) copy** of the **record plan**, with an Initial Stage Fee Calculation Form and the Initial Stage Fee. Please make all submissions to Mr. Joshua Schwartz, Subdivision Manager. The entrance plan will not be reviewed until after the "Letter of No Objection" has been issued. Mr. Schwartz may be reached at (302) 760-2768.

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

Wetlands

- The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C. Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.
- In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Please contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

TMDLs

- The project is located in the greater Delaware River and Bay drainage area, specifically within the C & D Canal and Red Lion Creek watersheds. In the Red Lion Creek watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nutrients (e.g., nitrogen, phosphorus), and bacteria (under the auspices of Section 303(d) of the Federal Clean Water Act). A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; *State of Delaware Surface Water Quality Standards, as amended July 11, 2004*) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the Red Lion Creek watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 38 percent reduction in bacteria from baseline conditions. Although a TMDL has not been developed for the C&D Canal watershed to date, the existing TMDL developed for the Red Lion Creek will apply to the entirety of the project area.

A nutrient management plan is required under the *Delaware Nutrient Management law (3 Del. Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project's open space may exceed this 10-acre threshold.

Please contact the Delaware Nutrient Management Program at 739-4811 for further information concerning compliance requirements or view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>

Water Supply

- The project information sheets state that public water will be provided to the project by United Water Delaware 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 (CPCN) 85-WS-03. It is recommended that the developer contact Artesian Water Company to determine the availability of public water. Any public water utility providing water to the site must obtain a CPCN from the Public Service Commission. Information on CPCN's and the application process can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site Public/Miscellaneous Public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area, and it must also 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 on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.
- Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.
- All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Sediment and Stormwater Program

- A new sediment and stormwater plan may be required for the site. Contact the reviewing agency to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the revised plan as soon as possible. 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 New Castle County Department of Land Use Engineering

Section. Contact the Department of Land Use at (302) 395-5470 for details regarding submittal requirements and fees (Delaware Code, Title 7, Chapter 40; Delaware Regulations, Administrative Code, Title 7, 5101).

Hazardous Waste Sites

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C. Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware *Regulations Governing Hazardous Substance Cleanup* shall be followed.”
- There is one SIRB site found within a ½-mile radius of the proposed project:
 - Parkway Gravel Site (DE-0086) located 0.30 miles west of the project area. This is a former gravel borrow pit site; however, no further action is required.

Tank Management Branch Please be aware:

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 7 Del.C. Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.
- There is one (1) LUST project sites located within a quarter mile of the project site:
 - Eastern Shore Concrete Pipe Co, Facility: 3-002191, Project: N0207060 (Inactive)
- Per the **UST Regulations: Part E, § 1. Reporting Requirements:**
 - “Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:

The Department’s 24-hour Release Hot Line by calling 800-662-8802; and the DNREC, Tank Management Branch by calling 302-395-2500.”

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

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

- **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for one and two 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 infrastructure for fire protection water shall be provided, including the size of water mains.

- **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. Where a “center island” is placed in the subdivision, such as Meridian Blvd, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus within the subdivision.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

- **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

- **Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire 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
- Maximum Height of Buildings (including number of stories)

- Provide Road Names, even for County Roads

Delaware Department of Education – Contact John Marinucci 735-4199

- This project is subject to the Voluntary School Assessment Statutes 14 Del. C. § 103 (c) and 9 Del. C., Chapter 26, § 2661. There currently exists an executed and recorded Voluntary School Assessment Agreement in place for this development.

Recommendations/Additional Information

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- As proposed, the subject development would not meet DelDOT’s volume warrants for a traffic impact study (TIS), as contained in Section 2.3.1 of DelDOT’s Standards and Regulations for Subdivision Streets and State Highway Access. The table below compares the expected trip generation of 43 single-family detached houses (presently recorded development) and 82 townhouses. The Institute of Transportation Engineers’ Trip Generation report does not have a separate land use code for twin or semi-detached houses. Section 2.9.6 of the Standards and Regulations provides that until that changes, DelDOT will decide whether to treat such dwellings as townhouses or single-family detached houses based on the physical characteristics of the buildings. From discussion with the developer’s engineer we understand that the proposed duplex units would more closely resemble townhouses.

	Existing	Proposed	Net
	43 Single-Family Detached Houses	82 Townhouses	Increase
Weekday	478	541	63
AM Peak Hour	40	44	4
PM Peak Hour	49	51	2

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

Soils Assessment.

- According to the NRCS soil survey update, hydric Fallsington soils (FaA) comprise a significant portion of the proposed project area (See figure 1). These soils are poorly drained with have severe limitations for development; thus they should be avoided.



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

Additional wetlands information

- When designing a project on a site with regulated watercourses, any extensive piping, filling or burying of streams or ditches in excess of the minimum needed for road crossings should be avoided. Where road crossings are necessary, bridge spans which avoid significant impacts to stream banks and channels should be used wherever possible. Where placement of culverts is unavoidable, culvert designs which utilize multiple barrels at different elevations to preserve a low flow channel are usually preferred. Contact the Wetlands and Subaqueous Lands Section for further information regarding preferred designs.
- The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they may be subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987

United States Army Corps of Engineers (USACE or “the Corps”) manual is the acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware.

- The applicant is advised that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations. To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant’s consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763.
- Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands.

Additional TMDLs information

- A pollution control strategy (PCS) is the regulatory directive requiring the implementation of various best management practices (BMPs) that help reduce transport of nutrient and bacterial pollutant runoff from all waters draining into a “greater” common watershed, with the ultimate objective of achieving the obligatory TMDL reduction requirements for that watershed. However, the PCS for the C&D canal and Red Lion creek watersheds have not been formally completed to date. In absence of a final PCS, the applicant is strongly urged to reduce nutrient and bacterial pollutants through the voluntary commitment to the implementation of the following recommended BMPs:
 - Maximize open space by retaining the existing native tree cover and/or planting of additional native trees and/or native herbaceous plant cover on this parcel.
 - The applicant should calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation. 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 via the application/use of pervious paving materials (“pervious pavers”) in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation (or establishment of additional forest cover acreage) are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

- The applicant should voluntarily limit paved surface imperviousness through substitution of pervious paving materials instead of conventional paving materials (e.g., asphalt and concrete).
- Consider constructing a rain garden(s) and green-technology storm water management structure(s) (in lieu of open-water management structures) as additional BMPs to mitigate or reduce nutrient and bacterial pollutant runoff from impervious surfaces.
- The applicant should voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

Rare, Threatened, Endangered and Species of Greatest Conservation Need (SGCN¹)

- The Division of Fish and Wildlife scientists have not surveyed this project area; therefore, they are unable to provide information pertaining to the potential for this

¹ Species of greatest conservation need (SGCN) are indicative of the overall diversity and health of the State’s wildlife resources. Some may be rare or declining, others may be vital components of certain habitats, and still others may have a significant portion of their population in Delaware. SGCN are identified in the Delaware Wildlife Action Plan (DEWAP) which is a comprehensive strategy for conserving the full array of native wildlife and habitats-common and uncommon- as vital components of the state’s natural resources. Congress challenged the states to demonstrate comprehensive wildlife conservation. Delaware, along with all of the other states and provinces throughout the country are working to implement their wildlife action plans. DEWAP can be viewed via the Natural Heritage and Endangered Species program website at <http://www.dnrec.state.de.us/nhp>. This document also contains a list of species of greatest conservation need, Key Wildlife Habitat Maps, and species-habitat associations.

project to impact State-rare or federally listed plants, animals or natural communities at this project site.

According to the DNREC database, State-rare *Lampropeltis triangulum triangulum* (eastern milk snake) and State-rare *Ambystoma maculatum* (spotted salamander) occur in the vicinity and could occur within the forested wetlands within the project area. These two species are also listed as a Species of Greatest Conservation Need¹ (SGCN) in the Delaware Wildlife Action Plan¹ (DEWAP). Eastern milk snake occurs in fields or woodlands where it hides under rocks, fallen trees or in man-made structures. Spotted salamanders occur in moist, mature or young deciduous or mixed deciduous-coniferous woodlands with isolated wetlands.

- The applicant noted that no forest was to be cleared by this project and the forest is adjacent to a wetland area that is protected by a conservation easement. Will there be any clearing for stormwater facilities or utilities? The forest buffer should be left intact to protect water quality of the wetlands as well as provide habitat for wetland dependent species which utilize the buffer zone during a portion of their life cycle. It would also be best to leave woody debris, rotten logs and rock piles because of the shelter and breeding habitat it provides for many species of amphibians and reptiles, including those mentioned above.

Additional information on hazardous waste sites

- SIRB strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Assessment in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

Water Resource Protection Areas

- The DNREC Water Supply Section GPB has determined that the southeastern section of the project falls within an excellent ground-water recharge potential area for New Castle County (see attached map).

Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are

exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category (excellent) is an indicator of how fast contaminants will move and how much water may become contaminated (Andres, 2004). Land use activities or impervious cover on areas of excellent ground-water recharge potential may adversely affect ground water in these areas.

In addition, because the excellent ground water recharge area can readily affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

SWAPP Recommends:

- Reducing impervious cover to 20% in the lots within the excellent ground-water recharge potential area
- Consider dedicating these lots to a park or playground

References

Andres, A. Scott, 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware: Delaware Geological Survey Report of Investigations No. 66, p. 14.
<http://www.udel.edu/dgs/Publications/pubform.html#investigations>
Anne Mundel, (302) 739-9945, Anne.Mundel@state.de.us

Meridian Crossing (PLUS 2010-12-04)



100 50 0 100 200 300 400 500 Feet

1:2,500



Legend

 Excellent Ground-Water Recharge Potential

Additional information on tank management.

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.
- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.
- Should the county anticipate being more restrictive than Delaware's Regulations Governing Underground Storage Tank Systems or Delaware's Regulations Governing

Aboveground Storage Tanks, please be aware that the municipality shall be responsible for enforcing the more restrictive rules.

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

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

Delaware Department of Education – Contact John Marinucci 735-4199

- DOE will initiate the needed Agreement addendum.

Delaware State Housing Authority – Contact Karen Horton 739-4263

- DSHA supports the rezoning of a previously approved plan for 43 single family detached lots on 21 acres into 82 twin lots (duplexes) that will provide more affordable housing opportunities.

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, Office of State Planning Coordination

CC: New Castle County