



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF STATE PLANNING COORDINATION

August 23, 2017

Mr. Bill Krapf  
Woodin & Associates  
111 Patriots Drive  
Middletown, DE 19709

RE: PLUS review 2017-07-06; Westown Apartments

Dear Bill,

Thank you for meeting with State agency planners on July 26, 2017 to discuss the Westown Apartments project. According to the information received, you are seeking review of a site plan for a 288 unit apartment complex on 20 acres along Patriot Drive in Middletown.

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 the Town of Middletown and New Castle County have governing authority over this land the developers will need to comply with any and all regulations/restrictions set forth by the Town and County.**

**Strategies for State Policies and Spending**

- This project is located in Investment Levels 1 and 2 according to the *Strategies for State Policies and Spending*. Investment Level 1 reflects areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where future redevelopment or infill projects are expected and encouraged by State policy. 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.

**Code Requirements/Agency Permitting Requirements**

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

- Delaware Code Title 17, Section 134 details DelDOT's authority for streets in incorporated municipalities. Merrimac Avenue, Kohl Avenue, Patriot Drive and Hedgelawn Way should be labelled as Town streets with regard to maintenance. New  
122 Martin Luther King Jr. Blvd. South – Haslet Armory · Third Floor · Dover, DE 19901  
Phone (302)739-3090 · Fax (302) 739-5661 · [www.stateplanning.delaware.gov](http://www.stateplanning.delaware.gov)

Castle County tax parcel maps show the Merrimac Avenue and Patriot Drive as public streets under Town maintenance but still show Kohl Avenue and Hedgelawn Way as privately maintained. DeIDOT understands from discussion at previous PLUS meetings that they are now public streets under Town maintenance but DeIDOT recommends that the Town follow up with the County in this regard.

- If the Town requires a DeIDOT Letter of No Objection to Recordation (LONOR), DeIDOT will review the record plan for the site in accordance with Section P.3 of the Development Coordination Manual. As Merrimac Avenue, Kohl Avenue, Patriot Drive and Hedgelawn Way are or will be Town-maintained streets, DeIDOT will not participate in the Town's entrance permitting process.
- Per Section 2.2.2.1 of the Development Coordination Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. The subject development would be located in the Westown Business Park, which would have warranted a TIS. However, per Section 2.2.2.4 of the Manual, if a development is located within a Transportation Improvement District (TID) and is consistent with the Land Use and Transportation Plan for that TID, then under certain conditions DeIDOT may require participation in the TID in lieu of conducting a TIS and making improvements based on the TIS. The Business Park is located in the Westown TID, is consistent with the plan for that TID and the conditions in Section 2.2.2.4 are met.

The Westown TID pre-dates Section 2.4 of the Manual, so its administration is somewhat different from what is described there. The proposed development would owe a contribution to the Westown Transportation Infrastructure Fund of \$320,832. This contribution would be payable to the Town and due at Building Permit application. The amount just specified is calculated based on payment in 2017 and would escalate each January if not paid.

Technical or procedural questions regarding the TIS may be directed to DeIDOT's consultant, Mr. Ray Harbeson, at [h4designllc@yahoo.com](mailto:h4designllc@yahoo.com). Any substantive questions or concerns should be directed to Mr. Marc Coté, DeIDOT's Assistant Director for Development Coordination. Mr. Coté may be reached at (302) 760-2165.

**Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352**

**Executive Summary.**

Development of this parcel will result in increased impervious surface and new sources of greenhouse gas emissions. Opportunities exist to reduce the environmental impact on-site. DNREC recommends increased protection of the excellent groundwater recharge area, on which the parcel is located. Due to this source water concern, DNREC has outlined a number of best

management practices to assist in protecting the resource and the overall health of the community.

The State of Delaware is threatened by climate change and has a goal of reducing greenhouse gas emissions by 30 percent by 2030. Appropriate development and re-development that provides access to public transportation, opportunities to walk and bike to shopping and recreation, and that employs energy efficient building standards are among key strategies to meet these goals. DNREC encourages the use of high performance building standards and consideration of alternative energy sources to promote clean sustainable energy and reduce greenhouse gas emissions. This could mean siting the buildings to take advantage of solar and geothermal systems, and/or including infrastructure for electric vehicle charging stations (funding assistance may be found at [www.de.gov/cleantransportation](http://www.de.gov/cleantransportation)). DNREC further recommends an abundant use of native vegetation and shade trees throughout the landscape, as well as pervious pavement and green infrastructure, where practicable, to absorb carbon dioxide, protect water quality and provide relief to residents on hot days.

The following pages provide information about applicable regulations and detailed recommendations associated with this project, from various DNREC Divisions. DNREC would like to be a partner in creating appropriate development that protects and highlights the environment as a natural amenity of the landscape. The Department has resources and expertise that are available to help make this a reality, often at no expense to the landowner.

#### **Source Water Protection.**

- DNREC has identified that the entire project falls within an area of excellent groundwater recharge potential for the Town of Middletown. The application indicates open infiltration and existing wet ponds will manage stormwater.

Although the Town of Middletown's Source Water Protection Ordinance meets the minimum standards of protection, this protection does not limit impervious cover in excellent groundwater recharge potential areas. Impervious cover prevents precipitation from infiltrating through the soil to the water table aquifer. Impervious cover refers to structures including but not limited to roads, sidewalks, parking lots, and buildings. Any impervious cover within an area of excellent groundwater recharge potential has the potential to have a negative effect the quality and quantity of drinking water available. Excellent groundwater recharge potential 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 groundwater recharge potential may adversely affect ground water in these areas.

- Perform an environmental assessment report showing that *water quality* as well as *water quantity* of post development recharge is equal to or greater than pre-development recharge (Kaufmann, 2005).

- Quantify amount of recharge lost due to impervious cover and provide for onsite infiltration of water at least equal to or greater than pre-development recharge (Kaufmann, 2005).
  - Pretreatment of parking area runoff to remove dissolved chemical load prior to infiltration
  - Use best management practices in the design, construction, and maintenance of a storm water management system designed to address water quality with respect to pollutant load.
- 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.

*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>

Kauffman, G.J., Wozniak, S.L., and Vonck, K.J., 2005, *Delaware Ground-Water Recharge Design Manual*: Newark, DE, Water Resources Agency, University of Delaware, p. 31.

<http://www.wr.udel.edu/swaphome/Publications/SWPguidancemanual.html>

**Sediment and 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. 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 Town of Middletown. Contact the Town of Middletown at (302) 378-9120 for details regarding submittal requirements and fees.

**Water Supply.**

- Should an on-site 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, stormwater management ponds, 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 four weeks to process, which allows the necessary time for technical review and advertising.

#### **Water Quality and TMDLs.**

- The project is located in the greater Delaware River and Bay drainage areas, specifically within the Appoquinimink River watershed. In this watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets which call for a 60 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for an 8 percent (freshwaters) reduction in bacteria from baseline conditions. TMDLs are required by federal law, under the auspices of Section 303(d) of the Clean Water Act. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited waterbody” 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 specific TMDL nutrient and bacterial load reductions for the Appoquinimink watershed can be viewed here:  
<http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessmentTMDLs.aspx>
- A nutrient management plan is required under the *Delaware Nutrient Management Law* (3 *Del.C., Chapter 22*) for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres; the area of open space may exceed this 10 acre threshold. Please contact the Delaware Nutrient Management Program at (302) 739-4811 for further information concerning compliance requirements, or view additional information here: <http://dda.delaware.gov/nutrients/index.shtml>

#### **Air Quality.**

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply to your project:

<b>Table 1: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106</b> - Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> <li>• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</li> <li>• Use covers on trucks that transport material to and from site to prevent visible emissions.</li> </ul>
<b>7 DE Admin. Code 1113</b> – Open Burning	<ul style="list-style-type: none"> <li>• Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</li> <li>• Prohibit the burning of land clearing debris.</li> <li>• Prohibit the burning of trash or building materials/debris.</li> </ul>
<b>7 DE Admin. Code 1135</b> – Conformity of General Federal Actions to the State Implementation Plan	<ul style="list-style-type: none"> <li>• Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)</li> </ul>
<b>7 DE Admin. Code 1141</b> – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	<ul style="list-style-type: none"> <li>• Use structural/ paint coatings that are low in Volatile Organic Compounds.</li> <li>• Use covers on paint containers when paint containers are not in use.</li> </ul>
<b>7 DE Admin. Code 1144</b> – Control of Stationary Generator Emissions	<ul style="list-style-type: none"> <li>• Ensure that emissions of nitrogen oxides (NO<sub>x</sub>), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) from emergency generators meet the emissions limits established. (See section 3.2).</li> <li>• Maintain recordkeeping and reporting requirements.</li> </ul>
<b>7 DE Admin. Code 1145</b> – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> <li>• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</li> </ul>

For a complete listing of all Delaware applicable regulations, please look at our website: <http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

### **Recycling.**

- Delaware Law (7 *Del.C.*, §6053) and Regulations (7 *Del. Admin. C.* §1305) specify that the ‘commercial sector’ shall participate in a comprehensive recycling program. As such, all those involved with the planning of new development should give consideration to space for collection of recyclables that would be typically generated. For example, space for a recycling dumpster should be provided adjacent to each trash dumpster. For more information or assistance related to recycling requirements, benefits, tools, and assistance, please call (302) 739-9403.

### **Tank Management.**

- 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.
- No environmental impacts are anticipated; however, 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 (800) 662-8802; and
  - The DNREC Tank Management Section (302) 395-2500.
- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the DNREC Tank Management Section.
- For more information, go to: <http://www.dnrec.delaware.gov/tanks/Pages/default.aspx> or contact Ross D. Elliott with further questions at (302) 395-2500, or [Ross.Elliott@state.de.us](mailto:Ross.Elliott@state.de.us)

### **State Historic Preservation Office – Contact Terrence Burns 736-7404**

- This parcel has no known archaeological site or National Register property. However, north of the parcel was Hedgelawn (N-118), which is listed on the National Register but was recently demolished. If the proposed project or development proceeds, be aware of the Unmarked Human Burials and Human Skeletal Remains Law.
- Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Del. C. Title 7, Ch. 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner

association or development. If you would like to see more information, please review the following websites: [www.history.delaware.gov/preservation/umhr.shtml](http://www.history.delaware.gov/preservation/umhr.shtml) and [www.history.delaware.gov/preservation/cemeteries.shtml](http://www.history.delaware.gov/preservation/cemeteries.shtml).

Therefore, prior to any demolition or ground-disturbing activities, the developer should hire an archaeological consultant, to examine the parcel for archaeological resources and plan to avoid those sites or areas. If there is federal involvement, 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 cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Furthermore, any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at the following: [www.achp.gov](http://www.achp.gov).

### **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**

- DelDOT recommends that the Town require the developer to provide separate left and right turn lanes at either end of Kohl Avenue and on the site access to Kohl Avenue to prevent left-turning vehicles from blocking right turns. The grid layout of this portion of Westtown facilitates traffic flow for right-turn and through movements but left turn movements may be difficult during peak periods.

### **Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352**

#### **Additional information on TMDLs and water quality.**

- In response to concerns about the need for reducing nonpoint source nutrient (nitrogen and phosphorus) and bacterial pollutants to levels sufficient to meet the prescribed

TMDL reduction requirements in the Appoquinimink watershed, a multifaceted and comprehensive process known as a pollution control strategy (PCS) has been developed to enable such reductions. Specifically, a PCS is a combination of best management practices and control technologies that reduce nutrient and bacterial pollutant runoff loading in waters of a given watershed to level(s) consistent with the TMDL(s) reduction levels specified for that watershed. The PCS for the Appoquinimink River watershed consists of recommendations from the following four areas: agriculture, land preservation (open space), stormwater, and wastewater. Additional information about Appoquinimink River PCS is available here:

<http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx>.

In further support of the PCS, the applicant is also strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended best management practices:

- Maintain as much of the existing open space as possible in this parcel. DNREC further suggests additional native tree, shrub and/or native herbaceous vegetation plantings in available open space, wherever possible.
- Employ green-technology storm water management and a rain gardens (in lieu of open-water management structures) as best management practices to mitigate or reduce nutrient and bacterial pollutant runoff.
- 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 resulting from the conversion of individual or combined land parcels to a changed land use; thus providing applicants and governmental entities with quantitative information about the project’s impact(s) on baseline water quality. DNREC strongly encourages the applicant/developer use this protocol to design and implement the most effective best management practices. Please contact John Martin of the Division of Watershed Stewardship for more information on the protocol, at (302) 739-9939.

**Additional information on air quality.**

- New developments may emit, or cause to be emitted, additional air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:
  - Emissions that form ozone and fine particulate matter;
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.
- Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) were quantified. Table 2 – Projected Air Quality Emissions represents the potential impact the Westown Apartments Parcel may have on air quality.

Emissions Attributable to the Westown Apartments (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NO <sub>x</sub> )	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Area source emissions	8.9	1.0	0.8	1.1	36.1
Power emissions	*	3.5	12.3	*	1,812.7
Mobile emissions	13.2	13.8	0.4	0.2	8,511.8
Total emissions	22.1	18.3	13.5	1.3	10,360.6

(\*) Indicates data is not available.

Note that emissions associated with the actual construction of the apartment community, including automobile and truck traffic from working in, or delivering products to the site, as well as heavy truck activity from the Amazon Fulfillment Center and Johnsons Control facilities directly to the south of this parcel, site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above. \*\*

- Recommendations for this project:
  - Use only the minimum number of parking spaces needed for this facility in order to facilitate the transition from vehicle-centric travel to other modes (walking, biking, transit, etc.)
  - Planting of native shade trees to clean the air of localized pollutants and cut down on energy/cooling costs.
  - Inclusion of bike racks in common areas and expansion of the bicycle/pedestrian network through sidewalks and bike lanes which also promote alternative forms of transportation.
  - The use of reclaimed asphalt pavement (RAP) with an open-grade aggregate. Open-grade aggregates reduce heat island effects on paved surfaces. The use of RAP reduces landfill waste, is a sustainable pavement and more economically feasible than other pavement types. Sustainable pavements (or cool pavement choices with higher albedo) reflect 40 percent more sunlight than warm pavements which only reflect 10 percent.
  - Use of energy efficient products in construction to lessen the power source emissions of the project and costs.
  - Take advantage of compact building design to preserve open space. Open space protects animals and plants and conserves their habitat as well as moderates temperatures and combats air pollution.
  - At least two parking spaces in common areas such as near the clubhouse, dedicated to alternative fueled vehicle (electric vehicle (EV), hybrid electric vehicle (HEV), low emission vehicle (LEV)) use and charging.

- Beautification and landscaping to generate a context-sensitive design that would blend in well with surrounding land uses while also helping to mitigate the pollution potential of the project
- Tree Buffer or Canopy: Some green streetscape elements that the Westown Apartments project could incorporate area tree buffer or expansion of the Town of Middletown's tree canopy. According to the Delaware Forest Service, in 2014, the Town of Middletown's tree canopy percentage was only at a mere 12.5 percent. Native trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs. All urban trees that are selected should be native to Delaware and preferably low VOC emitting trees. As a general reminder, the best trees to plant are those that have a large leaf surface area at maturity, contain leaf characteristics that are amenable to particle collection from particulate matter (PM) such as those that have hairy or sticky leaves and have high transpiration rates which result in relatively high temperature reduction.
- Energy Efficient Options: Constructing with only energy efficient products can help your housing units immensely, not only in terms of environmental sustainability but financially. Energy Star qualified products are up to 30 percent more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. Optimize Energy Performance by implementing on-site renewable energy while taking advantage of natural lighting and LED light fixtures. The Energy Star Program is an excellent way to save on energy costs and reduce air pollution as well as third-party certifications and building materials (i.e. LEED, Greenseal, EcoLogo).

Providing shade for parking areas can also be of added benefit to this facility. Some approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. For more about energy efficient options, please see: <https://www.energystar.gov/> or <https://www.epa.gov/greeningepa/energy-efficiency-epa>.

Economic benefits include:

- Reduced operating costs
  - Enhanced asset value and profits
  - Enhanced occupant comfort and health
  - Improved air, thermal, and acoustic environments
- Multi-modal travel: A component of improving existing air quality levels is to maximize multi-modal travel through bike lanes, sidewalks and convenient access to transit opportunities. DNREC encourages the developer to incorporate sidewalks, crosswalks and bike racks, and to add sharrows or bike lanes where needed to facilitate multi-modal

travel opportunities. Sharrows and striping are the easiest and most cost effective option. Multi-modal travel can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk or bike path, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.

The developer is encouraged to work with DART to expand transit service to this growing area. For more information on DART Bus Routes in your area, please visit: [www.dartfirststate.com](http://www.dartfirststate.com).

Also, for more information on the impacts of multimodal access on air quality please see the EPA's website at: <https://www3.epa.gov/otaq/>

- Clean Fuel Measures: Reduce localized air pollution by supporting the use of clean diesel powered vehicles and electric charging infrastructure. It would be ideal to include electric vehicle (EV) or hybrid vehicle (HV) parking and at least one charging station in common parking areas. This could be used as a unique feature of the residential development and pave the way for alternative vehicle use in Delaware.

For a site map of local alternative fueling sites, please visit the Alternative Fuels Data Center website here: <http://www.afdc.energy.gov/locator/stations/>.

- Native Landscaping: The developer is encouraged to beautify the site with landscaping that would not only make the high school expansion more attractive but also help to clean the air of any pollutants that could be emitted or transported by sources around the development area such as pollutants from mobile sources, construction or neighboring activities. This would reduce air quality impacts on local residents while also incorporating a context-sensitive design that blends well with the surrounding and existing land uses.
- Should the developer have any more questions or concerns, the DNREC Division of Air Quality (DAQ) point of contact is Lauren DeVore, and she may be reached at (302) 739-9437 or [lauren.devore@state.de.us](mailto:lauren.devore@state.de.us). The applicant is encouraged to contact DAQ to discuss the emission mitigation measures that will be incorporated into the Westtown Apartment community. DNREC looks forward to working together with you on this project to achieve our shared air quality goals.

**Additional information on recycling and reducing water use.**

- Materials and resources utilized for new development should be considered, including regionally available recycled content (i.e. carpet, concrete, countertops, furniture, siding, etc.), rapidly renewable material and certified woods.
- Construction Waste Management should include policies which promote efficient material use and recycling of project debris).
- Employ systems and appliances that increase water efficiency and reduce water use.
  - Low-flow and high-efficiency items
  - Waterless urinals

- graywater recycling systems
- Rainwater catchment

**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.

**State Housing Authority – Contact: Karen Horton 739-4263**

- DSHA supports the site plan review to develop a 288-unit rental community on 20 acres within the Westown Business Park in Middletown. This site is in close proximity to services, markets, and employment opportunities. In addition, DSHA's recent 2015-2020 Housing Needs Assessment identified a growing demand for rental housing as more households wait to purchase a home, or have transitioned into the rental market.

It is important to note that while large suburban homes have dominated development in Delaware for several decades, a growing body of research indicates that we are in the midst of a significant market shift. The baby boomers that once drove suburban development are now aging and are looking to downsize into something more manageable. The Delaware Population Consortium (DPC) projections for the next ten years indicate that not only will there be a large amount of suburban homes placed on the market by baby boomers, but that there will be a *decline* in households in age ranges that typically seek large homes. These same DPC projections show growth in younger age ranges most likely at stages in their life and income to support apartments, condominiums and entry level homes.

The combination of excess suburban housing supply currently on the market, additional supply being added by aging baby boomers, more stringent lending standards, along with a changing market indicate that it is *critical* that communities move away from large lot single family-detached housing and *proactively* provide a variety of housing options to meet market demand.

If you have any questions or would like more information, please feel free to call me at (302) 739-4263 ext. 251 or via e-mail at [karenh@destatehousing.com](mailto:karenh@destatehousing.com).

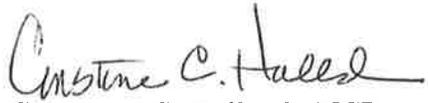
**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments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

PLUS review 2017-07-06

Page 14 of 14

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

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP

Director, Office of State Planning Coordination

CC: New Castle County  
Town of Middletown