STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

March 24, 2015

Mr. Colm DeAscanis
CDA Engineering, Inc.
6 Larch Ave, Suite 401
Wilmington, Delaware 19804

RE: PLUS review 2015-02-03, Troy Granite

Dear Mr. DeAscanis,

Thank you for meeting with State agency planers on February 25, 2015 to discuss the proposed plans for Troy Granite. According to the information received you are seeking review of a site plan for a 49,500 square foot office and warehouse in New Castle County.

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 1 according to *Strategies for State Policies and Spending.* This site is also located in the New Castle County Growth Zone. 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.

Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Bill Brockenbrough 760-2109

- Per Section 2.3.1 of the Standards and Regulations for Subdivision Streets and State Highway Access, Traffic Impact Studies (TIS) are warranted for developments generating more than 400 vehicle trip ends per day or 50 vehicle trip ends per hour.

Based on the applicants' estimate on the PLUS application, that the proposed development would generate 102 vehicle trip ends per typical weekday, a TIS would not be warranted.

- However, at the PLUS meeting, it was represented that employment at the site could double, from 35 to 70 people, within a relatively short time. With 70 employees, we would expect the site to generate more than 50 peak hour trips. Thus a TIS would be warranted. Per section 2.3.2 of the Standards and Regulations, the applicant would be eligible to pay the Area Wide Study Fee (AWSF) in lieu of doing the TIS. However, our understanding of New Castle County's Unified Development Code is that they would require a TIS and do not allow payment of a fee in lieu.

- We recommend that the applicant contact New Castle County to determine whether a TIS will be required given this larger number of employees. If the County requires that a TIS be done, we will support the County's requirement and not accept the AWSF.

- The site entrances on A Street must be designed in accordance with DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, which is available at http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf.

- As shown on the plan, the five-foot sidewalk proposed along A Street apparently would be built at the edge of the existing pavement. In accordance with Section 5.1.5.1 of the Standards and Regulations, the sidewalk should be set back at least five feet from the edge of the pavement if there is not a compelling reason for it to be closer.

- As shown on the Investment Level map associated with the Strategies for State Policies and Spending, the subject development is located in a Level 1 area. DelDOT's Shared-Use Path and/or Sidewalk Process policy (available at http://www.deldot.gov/information/business/subdivisions/SUP_Sidewalk_Process.pdf) states that a path or sidewalk shall be installed along the State-maintained road frontage of any development in a Level 1 or 2 area. Where the construction is not physically possible, a fee in lieu of construction is charged. For the site frontage on South College Avenue, it may be necessary to charge the fee due the existing grades beyond the edge of the pavement. However, the applicant should expect a requirement that they install a sidewalk or shared-use path along most of the site frontage to serve the development. The applicant should also expect a requirement that they provide curb ramps and a painted crosswalk to link the sidewalk on their frontage to the existing sidewalk in front of the self-storage business.

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 735-3495

Wetlands

- Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps. A wetland delineation by a consultant and contact with the U.S. Army Corps of Engineers is recommended. Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, where the use, degradation or destruction of these waters could affect interstate or foreign commerce. The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdictional. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm.

Catherine Bronson, (302) 739-9383, Catherine.Bronson@state.de.us

TMDLs.

- Total Maximum Daily Loads (TMDLs) for nitrogen, phosphorus, and bacteria have been promulgated through regulation in most of the State of Delaware's water bodies. 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. TMDLs are required by federal law (Section 303(d) of the 1972 Clean Water Act), and the states are charged with developing and implementing specific land use practices that support these goals. This project is located in the Piedmont drainage, specifically within the greater Christina River Basin. In the Christina River Basin, post-development nitrogen and phosphorus loading must be capped at the pre-development or baseline loading rate (or a 0% post-construction increase in N & P in Delaware's portion of the Christina River Basin) to meet the required TMDL for each nutrient. Moreover, reductions in bacteria that range from 29% to 95% (High Flow) is also required (depending upon location). The specific required nutrient and bacterial requirements for the various stream segments in the Basin, and background information is outlined in the report entitled "*Christina River Basin High-Flow TMDL*" by the EPA. This report can retrieved from the following web link:
http://www.epa.gov/reg3wapd/tmdl/pa_tmdl/ChristinaMeetingTMDL/index.htm

- 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. According to the submitted PLUS application, 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:
http://dda.delaware.gov/nutrients/index.shtml

  John Martin, (302) 739-9939, John.Martin@state.de.us

Water Supply.

- The project information sheets state water will be provided to the project by United Water DE via a public water system. Our records indicate that the project is located within the public water service area granted to United Water DE under Certificate of Public Convenience and Necessity 88-CPCN-03.

- 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.

- Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case, there is an underground Storage Tank associated with DuPont Glasgow, located within 1000 feet of the proposed project.

Rick Rios, (302) 739-9944, Ricardo.Rios@state.de.us

Source Water Protection Areas.

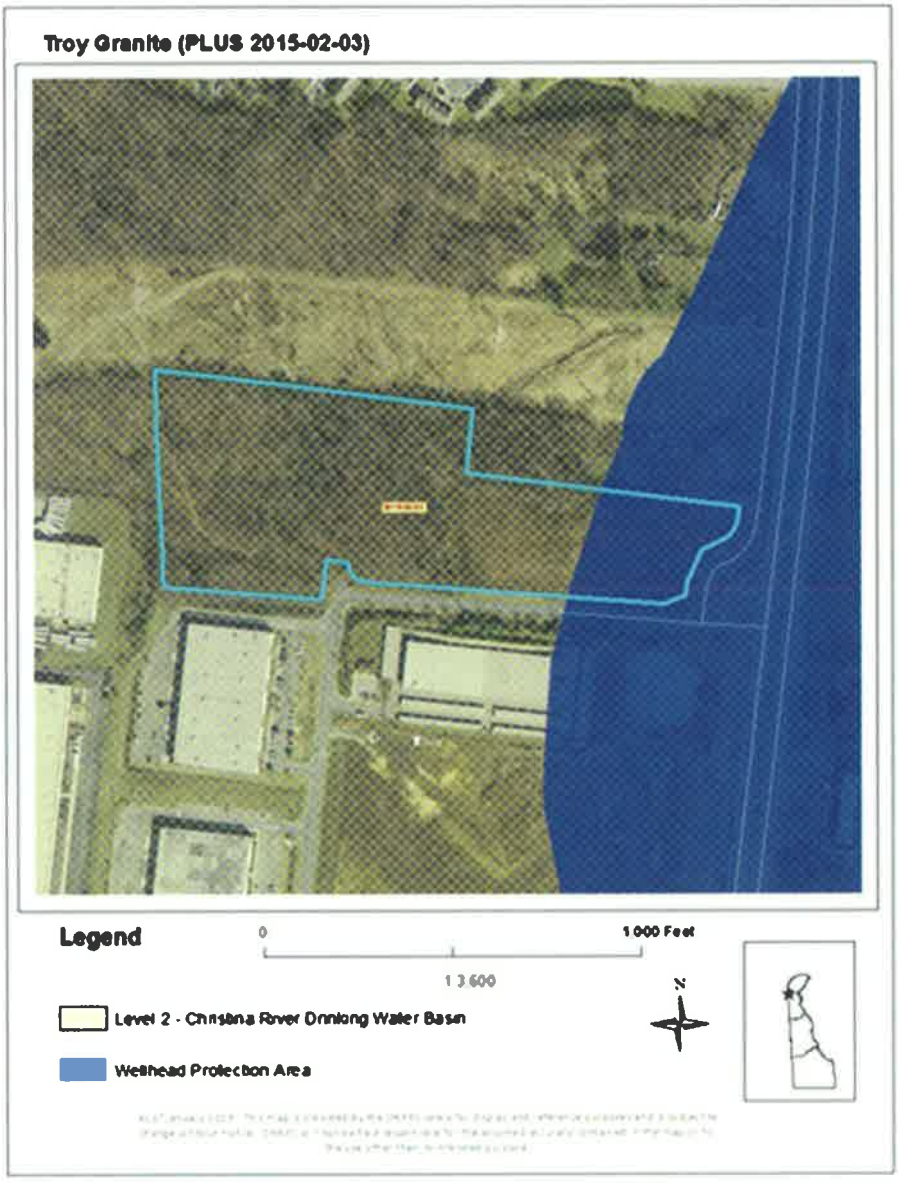
- The DNREC Groundwater Protection Branch (GPB) has determined that a significant portion of the eastern side of project falls within two wellhead protection areas for New Castle County. In addition, a significant portion of the northern portion of the project falls within a Level 2 Source Water Protection Area (Christina River Basin) for New Castle County (see map). No excellent groundwater protection areas were identified.

- Level 2 Source Water Protection Areas are the delineated watershed upstream from a surface water intake that supplies water to a drinking water system. Land use or land activity within this area has the potential to influence water quality or quantity to the public drinking water system. Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where land use activities or impervious cover may adversely affect the quantity and quality of ground water moving toward such wells.

- In addition, because the wellhead protection area is an existing source of public drinking water and the excellent ground-water recharge area so readily affects the underlying aquifer, the storage of hazardous substances or wastes should not be allowed within these areas unless specific approval is obtained from the relevant state, federal, or local program.

- DNREC recommends referring to NCC Unified Development Code for regulations regarding development in these areas.

Anne Mundel, (302) 739-9945, Anne.Mundel@state.de.us



Sediment and Stormwater Program.

- A sediment and stormwater plan will 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 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. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101).

James Sullivan, (302) 7390 9921, James.Sullivan@state.de.us

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:

Table 1: Potential Regulatory Requirements	
Regulation	**Requirements**
7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling	• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Use covers on trucks that transport material to and from site to prevent visible emissions.
7 DE Admin. Code 1113 – Open Burning	• Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibit the burning of land clearing debris. • Prohibit the burning of trash or building materials/debris.
7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan	• 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)
7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	• Use structural/ paint coatings that are low in Volatile Organic Compounds. • Use covers on paint containers when paint containers are not in use.
7 DE Admin. Code 1144 – Control of Stationary Generator Emissions	• Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO_2), carbon monoxide (CO), and carbon dioxide (CO_2) from emergency generators meet the emissions limits established. (See section 3.2). • Maintain recordkeeping and reporting requirements.
7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles	• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

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

Rachel Yocum, (302)739-9402, rachel.yocum@state.de.us

Tank Management. 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.

- The following confirmed leaking underground storage tank (LUST) projects are located within a quarter mile from the proposed project area:
  - DuPont Glasgow, Facility: 3-000083, Project: N8806021 and N9301004 (Inactive)
  - K&S Garage, Facility: 3-001452, Project: N9310182 (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 Section by calling 302-395-2500.

Elizabeth Wolff, (302) 395-2500, Elizabeth.Wolff@state.de.us

State Fire Marshal – Contact John Rudd 323-5365

- **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.
  - Where a water distribution system is proposed for Storage/Industrial sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

- **Fire Protection Features:**
  - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
  - Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

- **Accessibility**
  - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that both entrance drives from the service road to the south of the property must be constructed so fire department apparatus may negotiate it.
  - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
  - Any dead end more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
  - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
  - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

- **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"
  - Proposed Use
  - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
  - Square footage of each structure (Total of all Floors)
  - National Fire Protection Association (NFPA) Construction Type
  - Maximum Height of Buildings (including number of stories)
  - Note indicating if building is to be sprinklered
  - Name of Water Provider
  - Letter from Water Provider approving the system layout

- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Recommendations/Additional Information

Department of Transportation – Contact Bill Brockenbrough 760-2109

- If the proposed development would generate less than 200 vehicle trips per day, a Pre-Submittal Meeting would not be required before plans are submitted for review. However, given the proximity of the proposed east entrance to South College Avenue, we recommend that the developer's engineer contact our Subdivision Manager for this part of New Castle County, Mr. Kevin Hickman, to discuss the site access before developing the plans further. Mr. Hickman may be reached at (302) 760-2461. Preliminarily, it seems advisable to restrict the east access to exiting traffic only.

- Please be advised that DelDOT is about to advertise for adoption, in the March Register of Regulations, a comprehensive revision of the Standards and Regulations. While in most respects, the changes are incremental, they are located throughout the manual and could well have some effect on the entrance design. DelDOT anticipates holding training sessions for the consulting engineering community but those sessions have yet to be scheduled.

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 735-3495

Soils Assessment.

- Based on the NRCS soil survey mapping update, the only soil mapping unit in this parcel with significant limitations for development is Fallsington (FgA; See figure 1). Fallsington is a poorly-drained wetland associated hydric soil that is considered to have severe limitations and/or considered unsuitable for development.

- DNREC strongly discourage building on hydric soils (one of "key parameters" for identifying the presence of wetlands) because they are functionally important source of water storage (behaves as a "natural sponge"); the loss of water storage through excavation, filling, or grading of native intact hydric soils increases the probability for more frequent and destructive flooding events (Figure 1). The probability for flooding is further compounded by increases in surface imperviousness as building density in the area increases over time. Additionally, the destruction of hydric soils increases pollutant runoff (i.e., hydric soils sequester and detoxify pollutants) which has been linked to the monitored/observed declines in regional (e.g., watershed) water quality.

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

Bog Turtle.

- A review of our database has revealed that there may be suitable habitat for the federally listed bog turtle (*Glyptemys muhlenbergii*) adjacent to the proposed project area. Bog turtles typically occur in freshwater wetlands with open canopies, mucky soils, and tussock vegetation. However, they can occur in more marginal habitats as well. Because the bog turtle is a federally listed species, protected under the Endangered Species Act, its presence near the site can affect the scope of work. To ensure that the project will not impact bog turtles or their habitat, Phase I surveys for bog turtle habitat should be conducted.

- Phase I surveys can be conducted any time of year when ice and/or snow cover is not present. If potential habitat is found, however, please note there is a time of year restriction during which Phase II surveys for bog turtles must be conducted. *A Delaware approved bog turtle surveyor must be used to conduct the surveys.* Please contact Holly Niederriter (302-735-8670) to obtain a list of contacts to conduct Phase I and, if necessary, Phase II surveys.

- If potential bog turtle habitat is found during Phase I surveys, you are required to either:

  Completely avoid all direct and indirect project impacts to the wetland, in consultation with the U.S. Fish and Wildlife Service and Delaware Division of Fish and Wildlife;

  OR

  Have Phase II surveys conducted to determine if bog turtles are present. In accordance with Delaware's bog turtle site survey procedures, surveys must be conducted by a State-approved bog turtle surveyor between April 15 and June 15. Buffers surrounding the wetlands should be increased from 25 feet to 100 feet minimum. This recommendation is based on peer reviewed scientific literature that shows an adequately-sized buffer that effectively protects wetlands and streams - in most circumstances - is about 100-foot in width. Upland buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle. Lot lines, roadways, and infrastructure should not be placed within this buffer zone. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms.

  Kate Fleming, (302) 735-8658, Kate.Fleming@state.de.us

Forest Preservation.

- The project description indicates that forest clearing will be a conducted as a component of this project. In cases where clearing is proposed, New Castle County may require a tree survey to be conducted and/or a Woodland Management Plan to be developed. If a tree survey or Woodland Management Plan is an aspect of this project, the Wildlife Species Conservation and Research Program would like an opportunity to review these documents to confirm that appropriate forest resources are being retained. Please contact our plant biologist, Bill McAvoy, with this information (302-735-8668, William.McAvoy@state.de.us).

Nuisance Waterfowl.

- Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on

lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns surrounding ponds provide attractive habitat for these species.

- To deter waterfowl from taking up residence in these ponds, we recommend planting the surrounding open space with a mix of native wildflower plantings (to be planted in accordance with the Sediment and Stormwater Plan approval agency requirements). It is best to mow the open space area surrounding the pond only once a year, either in February or March. If mowing must occur more often, it would be helpful to leave a minimum buffer of 15-30 feet in width to be mowed annually. This area would be necessary to adequately deter the waterfowl from inhabiting the area (when the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond). In addition to deterring nuisance waterfowl, the native wildflower mix will also serve to attract bees, butterflies, and other pollinators, and reduce run-off, which can contain oil and other pollutants that homeowners may use on their lawns and driveways.

- Our program botanist, Bill McAvoy would gladly assist in drafting a list of plants suitable for this site. Bill can be contacted at (302) 735-8668 or William.McAvoy@state.de.us.

Additional information on TMDLs and water quality.

- A Pollution Control Strategy (PCS) to achieve the required TMDL nutrient and bacterial load reduction requirements has been established for the Christina Basin; the web link for the Christina watershed PCS strategies is as follows: http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx

We strongly encourage the applicant reduce nutrient and bacterial pollutants on their parcel through voluntary implementation of the following recommended BMPs:

- Maintain as much of the existing open space as possible; we further suggest additional native tree and native herbaceous planting, wherever possible.

- A United States Army Corps of Engineers (USACE) approved field wetlands delineation is strongly recommended before commencing any development activities on this parcel(s). The USACE can be reached by phone at 736-9763. According to the PLUS application, wetlands delineation was conducted but not approved by the USACE.

- 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. Upland buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants,

and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms. 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 (field delineated and approved by the USACE and the State of Delaware's Subaqueous Lands section). Lot lines, roadways, and infrastructure should not be placed within this buffer zone.

- Based on NRCS soil survey mapping, the area proposed for development is likely to contain poorly-drained wetland-associated (hydric) soils that are considered unsuitable for development. We strongly advise avoiding all hydric soils. We further suggest that a site-specific soils evaluation by a licensed soil scientist be conducted to verify if hydric soils are present.

- 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.

- Use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP to mitigate the impacts associated with surface imperviousness. The large amount of impervious surface proposed for this project makes this site an especially good candidate for the installation of pervious paving material.

- Use of green-technology storm water management (in lieu of open-water management structures) and rain gardens as BMPs for mitigating nutrient and bacterial pollutant runoff from increases in surface imperviousness. Please contact Lara Allison at 739-9939 for further information about the possibility for installing a rain garden(s) on this parcel.

- 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 John Martin or Jen Walls at 302-739-9939 for more information on the protocol.

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 TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

Additional information on air quality.

- New businesses 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; Delaware currently violates federal health-based air quality standards for ozone. New Castle County, Delaware is classified as non-attainment for not meeting federal and state 8-hour ozone standards. Compared to Kent and Sussex Counties, short term 1-hour average peak ozone levels are usually highest in New Castle County, as well,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from new businesses include emissions from the following activities:

- Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity, and
- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for the project could not be quantified. DAQ was able, however, to quantify the mobile emissions based on the proposed daily trip data presented in the application and data taken from the ITE Trip Generation Manual, 8th Edition. Table 2 represents the actual impact the Troy Granite project may have on air quality.

Table 2: Projected Air Quality Emissions for Troy Granite

Emissions Attributable to Troy Granite (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO_2)	Fine Particulate Matter ($PM_{2.5}$)	Carbon Dioxide (CO_2)
Mobile	0.34	0.45	*	*	*

(*) *Indicates data is not available.*

Note that emissions associated with the actual construction of the facility, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

DNREC encourages sustainable growth practices that:

- Control sprawl;
- Preserve rural and forested areas;
- Identify conflicting land use priorities;
- Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
- Coordinate transportation, environment, and climate protection plans with land use plans; and
- Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing with only energy efficient products.** Energy Star qualified products are up to 30% 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. The Energy Star Program is an excellent way to save on energy costs and reduce air pollution.

- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation and from the use of oil or gas heating equipment.

- **Constructing with high albedo, high solar reflectance materials**. This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.

- **Providing shade for parking areas.** 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. Such measures can also have the additional benefit of channeling or infiltrating stormwater.

- **Encouraging the use of safe multimodal transportation**. This measure can significantly reduce mobile source emissions. **For every vehicle trip that is replaced by the use of a sidewalk, bike path, or mass transit, 7 pounds of VOC and 11.5**

pounds of NOx are reduced each year. There is an existing DART bus stop within walking distance of the property along South College Avenue (DE 896).

- **Using retrofitted diesel engines during construction**. This includes equipment that is on-site as well as equipment used to transport materials to and from site.

- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc**. These measures can significantly reduce the emission of VOCs from typical architectural coating operations.

- **Planting trees in vegetative buffer areas**. 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.

This is a partial list, and there are additional things that can be done to reduce the impact of the development. The applicant should submit a plan to the DNREC DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Troy Granite project. The DAQ point of contact is Rachel Yocum, and she may be reached at (302) 739-9402 or Rachel.yocum@state.de.us.

State Fire Marshal – Contact John Rudd 323-5365

- 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.

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known cultural or historic resources on this parcel, such as an archaeological site, or National Register-listed property. However, there is a known archaeological site (N10903) adjacent to the parcel, which is across the street of S. College Avenue. If this development project proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law, Chapter 54 of Title 7, of the Delaware Code (7 Del. C. Ch. 54).

- 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 (7 Del. C. 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 know more information pertaining to unmarked human remains or cemeteries, please check the following websites for additional information: www.history.delaware.gov/preservation/umhr.shtml and www.history.delaware.gov/preservation/cemeteries.shtml

- Prior to any demolition or ground-disturbing activities, the developer may want to hire an archaeological consultant to examine the parcel for any potential archaeological site or archaeological resources, such as cemetery, burial site, or unmarked human remains. Furthermore, 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 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 www.achp.gov.

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