



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

September 25, 2014

Mr. Colm DeAscanis
CDA Engineering, Inc.
6 Larch Avenue, Suite 401
Wilmington, DE 19804

RE: PLUS review 2014-08-03, West 7th Street

Dear Mr. DeAscanis,

Thank you for meeting with State agency planners on August 27, 2014 to discuss the proposed plans for West 7th Street. According to the information received, you are seeking review of a subdivision for the development of 120 unit apartments and 9,000 sf commercial space in New Castle.

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 City of New Castle is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the City.**

Strategies for State Policies and Spending

This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. This site is also located in the City of New Castle 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

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known archaeological sites or National Register-listed property on this parcel. However, if there will be any development or construction project on this parcel, the developer should still be aware of Delaware's Unmarked Human Burials and Human Skeletal Remains Law, which is outlined in Chapter 54 of Title 7 of the Delaware Code.

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 (Delaware Code Title 7, Chapter 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.

Therefore, 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 (historic or pre-historic), historic cemetery 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.

- The location of this project (Tax Parcel 21-014.00-398) lies within the regulated airspace zones of New Castle Airport, which is a public-use facility. Federal Aviation Regulation (FAR) Part 77 imposes height restrictions on any structures within these zones. DelDOT requires that the applicant for this project submits a “Proposed Construction/Alteration in Airport Zones Notification Form” in accordance with Delaware Code (*2 Del. C. § 602*).

This notification form can be submitted during the Record Plan review, but DelDOT’s Office of Aeronautics is willing to test hypothetical height numbers to prevent any future project complications. Please contact the Office of Aeronautics at (302) 760-2119 with any questions or concerns. A copy of the form is attached to this letter.

- 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. However, Section 2.3.2 provides that for developments generating less than 2,000 vehicle trip ends per day and less than 200 vehicle trip ends per hour, DelDOT may accept an Area Wide Study Fee of \$10 per daily trip in lieu of a TIS.

DelDOT estimates that the proposed development would generate 1,250 vehicle trip ends per typical weekday and 108 vehicle trip ends per hour during the peak hour of that day. Therefore, a TIS would be warranted but that the applicant would qualify to pay the Area Wide Study Fee in lieu of doing a study. To obtain a scope of work for a TIS, the applicant may have their engineer contact Mr. Troy Brestel of this office. Mr. Brestel may be reached at (302) 760-2167.

Because the site’s trip generation would be less than 2,000 vehicles per day and 200 vehicles per hour, payment of the Area Wide Study Fee would be acceptable. If the developer chooses this option, payment would be due when the site plan is submitted for review. Payment of the fee would not relieve the developer of responsibility for making off-site improvements or contributing to DelDOT capital projects. In accordance with Section 3.10.2 of DelDOT’s Standards and Regulations for Subdivision Streets and State Highway Access, needed off-site improvements or contributions would need to be shown on the record plan by illustration or note.

- The site entrance on West 7th 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.
- A pre-submittal meeting was held for this project on June 17, 2014. The developer’s engineer should submit the site plan for an initial stage review in accordance with Section 3.4

of the Standards and Regulations when they are ready to do so. As necessary, they may contact Mr. Kevin Hickman at (302) 760-2461 with questions regarding the submission and review of plans.

- Referring to Section 1.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Initial Stage review fee shall be assessed to this project.
- Referring to Section 1.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Construction Stage review fee shall be assessed to this project.
- West 7th Street in this location is classified as a Major Collector. In accordance with the minimum standards provided in Section 3.6.5 and Figure 3-3 of the Standards and Regulations for Subdivision Streets and State Highway Access, this classification requires 40 feet of right-of-way, measured from the road centerline. The plans need to clearly identify the dimension of the existing right-of-way from the centerline to determine whether the proposed 3-foot dedication is adequate.
- In accordance with Section 3.6.5 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on West 7th Street. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **“A 15-foot wide permanent easement is hereby established to the State of Delaware, as per this plat.”**
- In accordance with Section 5.2 of the Standards and Regulations for Subdivision Streets and State Highway Access, the minimum curb radius is 25 feet. The curb radius should be dimensioned on the entrance plan.
- Sight distance triangles, in accordance with Section 5.4 of the Standards and Regulations for Subdivision Streets and State Highway Access are required for the entrance.
- In accordance with Sections 3.6.4 and 6.3 of the Standards and Regulations for Subdivision Streets and State Highway Access, the following notes should be added to the Record Plan:
 - MONUMENT NOTE: Please add the following note to the plans: The developer shall be required to furnish and place right-of-way monuments on the dedicated subdivision street right(s)-of-way in accordance with DelDOT’s Standards and Regulations for Subdivision Streets and State Highway Access, and the requirements of the land use agency.
 - C/O NOTE: Please add the following note to the Record Plan: Construction will not be permitted until construction plans have been approved, surety has been received and complete. At DelDOT’s discretion, a temporary construction entrance permit may be issued for demolition, clearing, grubbing, temporary entrance construction, bulk grading and perimeter erosion and sediment controls up to 30 days prior to plan approval. No

building construction will be permitted under a temporary entrance construction permit. If plan approval is not received within 30 calendar days, all construction activities shall be stopped. DelDOT will not provide a C/O approval for a commercial entrance to City of New Castle until the entrance(s) are completed to the satisfaction of the Department.

- DAMAGED CURB/SIDEWALK NOTE: Place the following note on the Record Plan: At the discretion of the Public Works inspector, any damaged or missing curb or sidewalk found on site will need to be repaired or replaced to meet current DelDOT standards.

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

Wetlands

- State regulated wetlands ARE located on this property based on a review of the State wetland maps. State regulated wetlands are those wetlands identified on the State's official State Regulated Wetland Maps. Additional information about State regulated wetlands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>. New Castle county buffers are 100 feet from tidal wetlands.
- State regulated subaqueous lands ARE NOT likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps. Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps. 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>. New Castle county buffers are 50 feet from nontidal wetlands.

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 should apply to the entirety of the project area.

Flood Management

- This entire parcel is located in a Zone AE floodplain. FEMA has conducted a coastal study and updated the floodplain designation for this area. The preliminary map shows this entire parcel seaward of the Limit of Moderate Wave Action (LimWA) line and susceptible to 1.5 to 3 feet of wave action. The City of New Castle enforces floodplain regulations with specific foundation, floor elevation, and other flood damage reduction requirements which must be followed, including a one foot freeboard requirement, and requirements limiting impact of filling activities on adjacent properties.

Water Supply

- The information provided indicates that public water will be provided to the proposed project by Municipal Services Commission via a public water system. DNREC records reflect that the project is located within the public water service area granted to New Castle County Water & Light Company under Certificate of Public Convenience and Necessity 88-WS-05. It is recommended that the developer contact New Castle County Water & Light 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 CPCNs and the application process can be obtained by contacting the Public Service Commission at 302-736-7547. 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.
- 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 are (2) Underground Storage Tanks associated with: (1)Auto Collision Service and (2)Deemer Steel Casting Company; (2) Landfills associated with: (1) ABEX and (2) Deemer Steel; and (2) Superfund sites associated with: (1) Deemer Steel and (2) Ninth & Washington located within 1,000 feet of the proposed project.

Sediment and Stormwater Program

- 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 preliminary meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post- development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the New Castle Conservation District. Contact the New Castle Conservation District at (302) 832-3100, Ext. 3 for details regarding submittal requirements and fees (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101).

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:

Table 1: Potential Regulatory Requirements	
Regulation	Requirements

<p>7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling</p>	<p>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.</p>
<p>7 DE Admin. Code 1113 – Open Burning</p>	<p>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.</p>
<p>7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan</p>	<p>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)</p>
<p>7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products</p>	<p>Use structural/ paint coatings that are low in Volatile Organic Compounds. Use covers on paint containers when paint containers are not in use.</p>
<p>7 DE Admin. Code 1144 – Control of Stationary Generator Emissions</p>	<p>Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO₂), carbon monoxide (CO), and carbon dioxide (CO₂) from emergency generators meet the emissions limits established. (See section 3.2). Maintain recordkeeping and reporting requirements.</p>
<p>7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles</p>	<p>Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</p>

For a complete listing of all Delaware applicable regulations, please look at the website:

<http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

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 are five Site Investigation and Restoration Section (SIRS) sites within a ½ miles radius of the property in question:

- New Castle Gas Co (DE-0167) is located on the project property. Two leaking storage tanks were removed from the Site in August 1994 and March 1995 under the Tanks Management Section and given No Further Action designations. The Site became a Certified Brownfield in July 2010 to further investigate Site conditions for redevelopment. The BFI report concluded that the Site soils were slightly impacted by the former uses of the Site however it did not pose any danger to human or environmental health. A Proposed Plan of Remedial Action was published in February 2013 followed by the Final Plan in March of 2013. The Site was given a Certification of Completion of Remedy (COCR) for Operating Unit 1 of the Site. The wetland portion is being addressed under another Site.
- Seeds of Greatness Church (DE-1474) is located adjacent east of the project property. The site was operated as a foundry from at least 1912 to 1985. A Preliminary Assessment was conducted in December 1983 followed by a Toxicological Evaluation in March 1985. A Site Inspection was conducted in April 1985. The SI determined that the Site groundwater was not a concern and was in compliance with DNREC and was given a No Further Action designation from the EPA. The Site was certified as a Brownfield in July 2009 with the intention of redeveloping the Site into a church complex. The Site is currently being investigated under the Brownfields Program however construction has ceased until further notice.
- ABEX Corp Amsco Landfill (DE-0065) is located adjacent north of the project property. The Site was the location of a small landfill that was used to dispose of foundry waste and casting sands. A Preliminary Assessment was conducted in December 1983 and it was found that the landfill was operating on an expired permit. In order to get the landfill back in to compliance, a Foundry Waste Landfill Management Plan was developed in June 1984. A Site Inspection was conducted in April 1985 and determined that the Site was not impacting the groundwater or any public or private wells. The site is currently vacant and not used for more than equipment storage.
- Deemers Steel New Castle Plant (DE-0045) is located 0.076 miles north of the project property. The Site is a former low alloy foundry that began operations in 1956. A Preliminary Assessment was conducted in October 1981 due to the disposal of ash from the furnace baghouse. A Site Inspection was conducted in July 1982 and determined there was no indication of an impact on human health or the environment. An Endangerment Assessment was conducted in May 1988 and concluded the Site posed no threat. Another Phase I was conducted in December 1990 to assess the parcels north and south of the Site (the Deemers foundry and landfill). Two, five year reviews were conducted in 1995 and 2001. The reviews were conducted to ensure that the remedial action is still protective to human health and the environment. The five years reviews were discontinued do to the closure of an active area on the Site. Additional soil and groundwater samples were collected during a Site Inspection in December 2002 followed by a Remedial Action in 2005. The Final Plan of Remedial Action was published in March of 2007 and required that the Site be capped with 2

feet of clean topsoil, the establishment of a Groundwater Management Zone and erosion controls. The Site was given a COCR in July 2012.

- Dobbinsville Ball Field (DE-1150) is located 0.37 miles west of the project property. The Site is part of a 27.45 acre parcel located on both sides of Route 9 in which portions are used as open space, play areas and ball fields. During a visit to the Army Creek Marsh, located adjacent to the ball field, a white polymer was noted in several locations. The Facility Evaluation was performed to determine if waste materials generated by the Former Amoco Polymer Plant was disposed of on the Site. The results of the Facility Evaluation could not determine a link between the site and the Former Amoco Polymer Plant. The Site was given a No Further Action designation.

Solid & Hazardous Waste Management

- The project site lies approximately 450 feet northeast of the former ABEX-AMSCO landfill. Records in our office indicate ABEX was in the business of manufacturing Manganese and low alloy steel castings. The US EPA generator DED002342376, reported for the year 1981, generated approximately 176 tons of F012 wastes (Quenching wastewater treatment sludges from metal heat treating operations which Cyanides were used in the process) and 54 tons of K061 (Emission control dust/sludge from the primary production of steel in electric furnaces) wastes. Subsequently, based on the operations and absence of Cyanide in the process, the hazardous waste listings were removed.
- The ABEX landfill (Permit SW-86/04), containing mostly “furnace dust” along with slag, sand and old grinding wheels from the steel foundry. The landfill however remains intact and as of the latest inspection in November, 1989, the pre-RCRA permeable cap was in satisfactory condition. Vegetation in the form of trees was removed, as allowed by the closure requirements. Since closure of the facility in the late 1980’s, there has been no recent activity regarding the condition of the landfill, cap, or soil cover.

Tank Management Section

- Please be aware:
 - If a release of a Regulated Substance occurs at the proposed project site, compliance with 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:
 - Gambacorta Buick Inc, Facility: 3-000045, Project: N9103040, N9812209 (Inactive)
 - Potts Welding & Boiler Repair, Facility: 3-001310, Project: N9209233, N9805080 (Inactive)
 - ABEX Corp AMSCO Division, Facility: 3-000183, Project: N8711055 (Inactive)
 - Auto Collision Service, Facility: 3-001343, Project: N9504083 (Inactive)

- 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 by calling 800-662-8802; and
 - The DNREC Tank Management Section by calling 302-395-2500.

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

- Please be advised that DelDOT has advertised for comment a comprehensive revision of the Standards and Regulations. The comment period ran through June 30 and DelDOT could adopt this revision as soon as November 2014. Implementation guidance has not been developed but DelDOT recommends that the developer’s engineer become familiar with the proposed changes and assess whether any of them could be relevant to this project. Information on the proposed revision is available in the Register of Regulations and at http://www.deldot.gov/information/pubs_forms/revisions_to_ASR/index.shtml.
- Expect a requirement for a separate turning template plan that verifies vehicles can enter and exit safely. The entrance shall be designed for the largest vehicle using the entrance.

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

Sea Level Rise

- A significant portion of the planned development area lies within an area that will be subject to direct and permanent inundation from sea level rise (<http://de.gov/slrmap>). Sea levels in Delaware have risen by about a foot over the past century (NOAA, 2014). This rate of sea level rise is likely to accelerate in the coming decades as a result of global climate change and local subsidence. Accelerated sea level rise will result in permanent flooding of low-lying coastal areas and increased risk of flood damage during storms (DNREC, 2012).

- DNREC Preliminary Land Use Service maps depicting future inundation risk from sea level rise indicate that approximately 8.08 acres of this site out of 8.16 acres or 99 percent could be inundated by sea level rise of 1 meter. In the short-term, sea level rise on this parcel, combined with periodic coastal flooding events, may result in repetitive flood damage to homes within this neighborhood and significant difficulties maintaining stormwater, drainage and other infrastructure. In the long-term, this increased flood and inundation risk could result in costly public and private flood abatement and drainage projects and an eventual abandonment of homes.
- Recommendations:
 - Lots within flood prone areas should be eliminated.
 - Any structures that are built within an area mapped as both floodplain and sea level rise zone should be constructed with 18” of freeboard plus additional freeboard to accommodate future sea levels.
 - Filling lots to elevate them to above base flood elevation is discouraged.
 - Access roads should be designed to be flood resilient for the entirety of its design life span. This includes ensuring that the roadway functions for the 1% chance flood plus anticipated future sea level rise.

References:

NOAA (National Oceanic and Atmospheric Administration). (2014). Mean Sea Level Trend, Lewes, DE. Retrieved from http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8557380.

DNREC Delaware Coastal Programs. (2012). Preparing for Tomorrow’s High Tide: Sea Level Rise Vulnerability Assessment for the State of Delaware, Dover, DE: Department of Natural Resources and Environmental Control. Retrieved from <http://dc.gov/slrva>.

Soils Assessment

- Based on soils survey mapping update, Tranquaking and Mispillion soils (TP) are the most environmentally- sensitive soil mapping unit mapped in the vicinity of the proposed project (Figure 1). TP is a very poorly-drained wetland associated hydric soil that has severe limitations for development and should be avoided.
- The Statewide Wetland Mapping Project (SWMP) often uses the soil survey as the basis for mapping and delineating wetlands. The presence of a hydric soil is one of three key parameters that must be met in order to meet jurisdictional wetland requirements (as specified by the USACE). The other parameters are hydrophytic vegetation and hydrology. Hence the presence of hydric soils is a correlate with wetland presence. Although the removal of hydrophytic vegetation may change the jurisdictional status (i.e., from a regulated to a non-regulated wetland) in a given area of wetlands, the existing soils are still hydric and, therefore, still retain much of their functional significance (i.e., water storage and/or retention of nutrients and other pollutants, etc.) that is attributed to undisturbed wetland ecosystems. In other words, potential wetland conditions still remain – increasing the probability for future cumulative on-site and off-site flooding events, while increasing pollutant runoff in the greater Inland Bays watershed. Therefore, DNREC strongly recommends the applicant contact a certified and licensed (ARCPACS & Class D) soil scientist to make a site specific assessment (i.e., soil

survey) of the actual depth to a seasonal high water table in the TP soil mapping unit. A list of licensed soil scientists can be obtained from the Ground Water Discharges Branch; the Branch can be reached by phone at 739-9947.

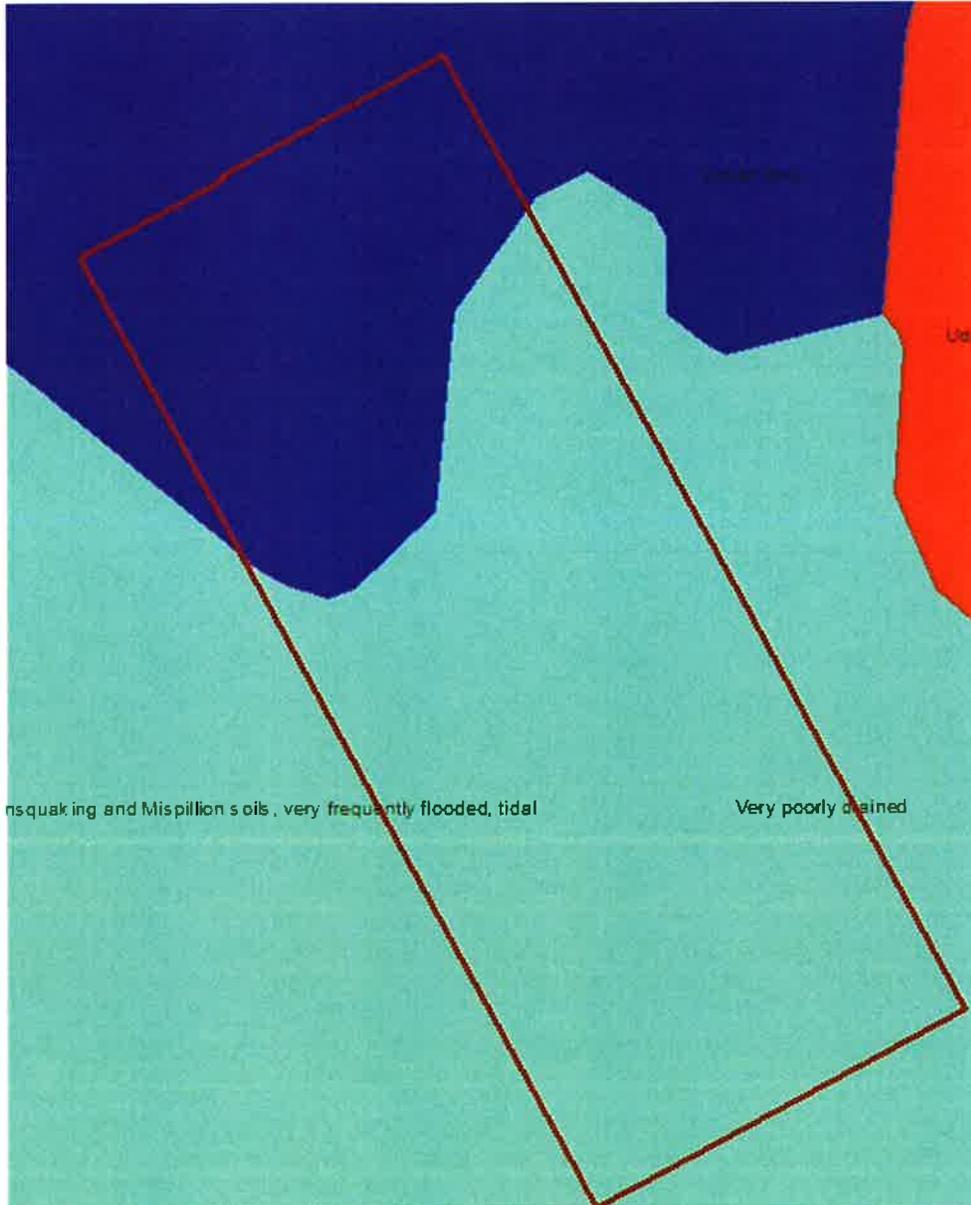


Figure 1: NRCS soil mapping update in the immediate vicinity of the proposed project.

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, DNREC recommends 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 March or November. 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. 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 not been established for the C&D Canal & Red Lion Creek watersheds to date. DNREC strongly encourages the applicant to reduce nutrient and bacterial pollutants through voluntary implementation of the following recommended BMPs:
 - Complete a United States Army Corps of Engineers (USACE) approved field wetlands delineation 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. Also note, compliance with Federal wetland regulatory requirements does not preclude compliance with State wetland-regulatory requirements.
 - 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 waterbodies (including ditches) and wetlands (field delineated and approved by the USACE and the State of Delaware's Subaqueous Lands section). The applicant's proposed 10-foot buffer from wetlands is not sufficient to protect water quality.
- Based on soil survey mapping update, the applicant is proposing an open-water stormwater management structure in wetland associated (hydric) soils. The type and location of this stormwater practice is not considered, by DNREC, an environmentally-

acceptable practice. Therefore, DNREC strongly urges the applicant employ green-technology stormwater management instead of open-water management structures, and site a green-technology stormwater management structure in non-hydric instead of hydric soils as currently proposed. As mentioned previously in the soil assessment section, the presence of hydric soils can be field verified by a certified and licensed soil scientist.

- Calculate post-construction surface imperviousness with all forms of created 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), wherever practicable, for mitigating negative impacts from pollutant runoff.
- Use of green-technology storm water management structures (in lieu of open-water management structures) and raingardens as BMPs to reduce nutrient pollutant impacts. Please contact Lara Allison for further information on raingardens at 739-9922.
- 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. DNREC strongly encourages the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Jen Walls or John Martin 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 hazardous waste sites

- DNREC strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) 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.

- Additional remediation may be required if the project property or site is re-zoned by the City.
- 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). SIRS should also be contacted as soon as possible at 302-395-2600 for further instructions.

Additional information on air quality

- New homes and businesses may emit, or cause to be emitted, 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; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
 - The emission of greenhouse gases which are associated with climate change, and
 - The emission of air toxics.
- Air emissions generated from new homes and 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 needed to support your home or business, and
 - All transportation activity.
- 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 actual impact the West 7th Street project may have on air quality.

Emissions Attributable to West 7 th Street (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Area source emissions	5.5	5.7	0.2	0.1	3546.6

Power emissions	*	0.4	0.3	0.4	15.1
Mobile emissions	3.7	1.5	5.1	*	755.3
Total emissions	6.2	7.6	5.6	0.5	4317.0

(*) Indicates data is not available.

- Note that emissions associated with the actual construction of the road, 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;
 - Coordinate transportation, housing, 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 which 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 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.
 - Providing tie-ins to the nearest bike paths and links to any nearby mass transport system. These measures can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, a bike path or mass transit, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.
 - Using retrofitted diesel engines during construction. This includes equipment that are 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. Trees 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 project. 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 West 7th Street project.

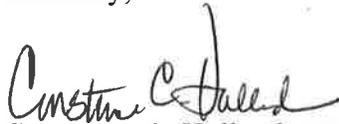
Division of Public Health – Contact: Laura Saperstein 744-1011

- The Delaware Division of Public Health (DPH) is pleased to be able to participate in the PLUS application process. In keeping with its mission to protect and promote the health of all people in Delaware, DPH looks for opportunities to encourage and enhance our population's health behaviors that will result in healthy people and healthy communities.
- Community design can impact the health of a population. Studies show that persons in lower-income communities, the elderly, and children often suffer more from consequences of inadequate land-use and transportation. Additionally, physical activity has a direct correlation to many chronic diseases, including hypertension, diabetes and obesity. In 2012, 39.1% of Delawareans reported a BMI of "overweight," and 26.9% reported a BMI as "obese." To that end, DPH looks to make recommendations for land-use that can empower Delawareans to make good health behaviors a part of their daily lives.
- DPH is pleased to see the inclusion of proposed sidewalks in the West 7th Street development plan. The inclusion of this infrastructure will enable residents to choose walking as a recreational and/or active transportation option(s). Additionally, locating housing developments within a reasonable distance to active recreation facilities enables residents the option of active recreation as part of their everyday life. Mearfield is well positioned to offer its residents access to commercial and mixed use areas within 1 mile of its location.
- DPH feels the West 7th Street in New Castle has the opportunity to increase positive health behaviors for its residents by incorporating the following recommendations into its land development proposal:
 - State Route 9 is a bike route – consider including a right bike-turn lane, and maintain the existing bike lane along the frontage of the property.
 - Since commercial development is intended for the development's frontage, consider the design and development of a complete street:
(<http://www.ipa.udel.edu/healthyDEtoolkit/completestreets/statepolicy.html>)
 - Include crosswalks at all key intersections
 - Include pedestrian lighting on all paths and walkways to enhance the usability of active transportation options.

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,

A handwritten signature in cursive script, appearing to read "Constance C. Holland".

Constance C. Holland, AICP

Director, Office of State Planning Coordination

CC: City of New Castle



Proposed Construction/Alteration in Airport Zones: Notification Form (page 1 of 2)



revision date: 1/7/2013

Instructions for Applicant

Why do I need to do this?

If you have been asked to complete this form, it means that your building permit is for a property that is located near an airport¹. All public-use airports are surrounded by areas where airspace is protected by state and federal regulations. If a structure is built too high on a property within one of these areas, it is considered an airspace obstruction.

These obstructions create serious public safety hazards due to the potential for crashes. Therefore, The Delaware Department of Transportation (DelDOT) is required by Title 2 of the Delaware Code² to test the proposed structure against criteria³ from the Federal Aviation Administration (FAA).

What does DelDOT need from me?

These required items⁴ are to be submitted to the Office of Aeronautics, at least 45 days prior to the start of construction:

- Page 2 of this form, completed and signed
- Site plan clearly stating highest point of structure
- Any other supporting information (optional)

How do I get this form to DelDOT?

All required materials can be sent to DelDOT in 1 of 3 ways:

- e-mail to: deldot_aeronautics@state.de.us
- fax to: Josh Thomas at (302) 739-2251
- mail to: DelDOT Planning
Office of Aeronautics
PO Box 778
Dover, DE 19903

What happens during the review?

The structure(s) location and height are tested against the airspace heights³ at the nearby airport(s). Once a decision has been made, you and the appropriate county or municipality will be notified. **Please allow 5-7 business days for the review to be completed.**

Who do I contact for help?

Delaware Department of Transportation (DelDOT)
Division of Planning
Office of Aeronautics
Josh Thomas
(302) 760-4834
deldot_aeronautics@state.de.us

Where is the fine print?

Definitions: AGL = above ground level, AMSL = above mean sea level, NAD = North American Datum

¹ All properties within the geographic areas that encompass the entire FAR Part 77 imaginary surfaces for public-use airports in Delaware will require an obstruction review. DelDOT will provide county and municipal officials with maps depicting these boundaries.

² See Title 2, Chapters 1, 3, and 6 for details. For information about obstruction and notice criteria, see Chapter 6, § 602.

³ FAA imaginary airspace surfaces are used to evaluate the structures. See 14 CFR Part 77, § 77.19 for details. These imaginary surfaces are based on airport facilities and operations, and are subject to change.

⁴ The Delaware Department of Transportation (DelDOT) is not responsible for the accuracy of the provided information. It is the responsibility of the provider to supply accurate information for the evaluation (obstruction review). All required items are marked with a *, therefore **incomplete forms will be returned to the applicant for completion**. In addition, site plans and other materials given to DelDOT as a part of this review process will not be returned.





Proposed Construction/Alteration in Airport Zones: Notification Form (page 2 of 2)



Applicant Information: (items with a * are required)

revision date: 1/7/2013

*First Name: _____	*Last Name: _____
Company: _____	*Phone: (____) _____-_____
*Street Address: _____	
*City: _____	*State: _____ *Zip: _____
E-mail: _____	Fax: (____) _____-_____

Project Site Information: (items with a * are required)

*Owner First Name: _____	*Owner Last Name: _____						
*Site Address: _____	*City: _____ *Zip: _____						
* Notice of: <input type="radio"/> New Construction <input type="radio"/> Alteration	* Duration: <input type="radio"/> Permanent <input type="radio"/> Temporary						
* Structure Type: <input type="radio"/> Residential Building <input type="radio"/> Commercial Building <input type="radio"/> Tower/Pole <input type="radio"/> Other _____	*Tax Parcel ID: _____						
* Description of Project and/or Comments: <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	Coordinates of highest point above ground: (Latitude/Longitude, NAD 83 datum) _____ ° _____ ' _____ " N, _____ ° _____ ' _____ " W						
<table style="width: 100%;"> <tr> <td>* Site Elevation (AMSL):</td> <td style="text-align: right;">+ <input style="width: 50px;" type="text"/> feet</td> </tr> <tr> <td>* Final Structure Height (AGL):</td> <td style="text-align: right;"><input style="width: 50px;" type="text"/> feet</td> </tr> <tr> <td>*Total Structure Elevation (AMSL):</td> <td style="text-align: right;"><input style="width: 50px;" type="text"/> feet</td> </tr> </table>		* Site Elevation (AMSL):	+ <input style="width: 50px;" type="text"/> feet	* Final Structure Height (AGL):	<input style="width: 50px;" type="text"/> feet	*Total Structure Elevation (AMSL):	<input style="width: 50px;" type="text"/> feet
* Site Elevation (AMSL):	+ <input style="width: 50px;" type="text"/> feet						
* Final Structure Height (AGL):	<input style="width: 50px;" type="text"/> feet						
*Total Structure Elevation (AMSL):	<input style="width: 50px;" type="text"/> feet						
<input type="checkbox"/> *I hereby certify that all of the information above is complete and correct to the best of my knowledge. I also certify that I have included all the necessary information for this review (including a site plan). I agree to comply with the decision of this review.							
*Applicant Signature: _____	*Date: _____						

Obstruction Review Decision: *(DeIDOT office-use only)*

Date Received: _____ County: _____ Nearest public-use airport: _____ Distance to nearest public-use runway: _____ FAA 7460 required: Previous FAA Case Number: Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, number: _____	Decision: <input type="checkbox"/> Approve <input type="checkbox"/> Disapprove <input type="checkbox"/> Approve with Conditions [†] [†] This approval is contingent upon the applicant(s) meeting one or more of the following conditions: <input type="checkbox"/> = Applicant(s) must notify the FAA by submitting a 7460 form prior to and after construction <input type="checkbox"/> = Other condition(s) as described in detail in attached, signed letter
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Office of Aeronautics Representative Name: _____	
Authorized Signature: _____	Date: _____

