



Department of Natural Resources
and Environmental Control
89 Kings Hwy
Dover, DE 19901
dnrec.delaware.gov

Division of Water
Commercial and Government Services Section

Phone: (302) 739-9946
Fax: (302) 739-2296

INSTRUCTIONS FOR COMPLETING THE PERMIT APPLICATION FOR THE CONSTRUCTION OF WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS

The following items must accompany the application. **Please note that incomplete application packages will be returned in their entirety and not reviewed until such time as all required information is received.**

- 1. A narrative summary of the intended purpose and design of the proposed facilities.
- 2. One (1) set of final construction plans and specifications, if applicable, signed and sealed by a Delaware-registered Professional Engineer, or a Delaware-registered Professional Land Surveyor for gravity systems only. One (1) electronic copy of final Plans.
- 3. One (1) electronic copy of final Plans.
- 4. The final plans must be drawn to scale showing slopes, inverts, pipe types and sizes, existing and proposed ground surfaces, tops of manholes, water lines, stormwater and stream crossings, encasements shown in plan and profile, and other information if pertinent or requested.
- 5. For pump/lift stations and force mains, include all calculations and pump/performance curves.
- 6. A check made payable to the State of Delaware for eight hundred twenty-five dollars (\$825.00), the non-refundable permit review fee. This fee covers the initial review and one follow-up review of any corrections or changes made to address the Division's comments. An additional eight hundred twenty-five dollars (\$825.00) non-refundable review fee must be submitted for resubmission of the plans if changes are made to the project which trigger a complete review of the permit application.
- 7. Your permit will have a public notice requirement if your system includes force mains or pump/lift stations. Include a check made payable to the State of Delaware for three hundred dollars (\$300.00) for the reimbursement of legal notices if the system has a force main connection or a pump/lift station.
- Please submit the completed application package, as outlined above, to DE DNREC, Division of Water, Commercial and Government Services Section, 89 Kings Highway, Dover, DE 19901. Please note, a new application, including the review fee, must be submitted if the Division's comments are not addressed or if requested supplemental information is not provided within one (1) year of the comment or request date.
- The following items must be submitted prior to permit issuance:
 - 8. Verification from the appropriate county or municipal planning authority that the project has the proper zoning approval.
 - 9. A letter from the owner/operator of the wastewater facilities to which the proposed collection and conveyance facilities connect. The letter must include confirmation that the owner/operator has approved the project, that the owner/operator will take responsibility for treating and disposing of the wastewater to be conveyed and that the downstream facilities have the capacity to manage the additional flows without causing or contributing to violations of Delaware's Environmental Protection Act (7 Del. C., Chapter 60) and the regulations promulgated thereafter. This includes, but is not limited to, unauthorized discharges such as overflows at manholes and violations of the treatment system's operating permit (for example, the National Pollutant Discharge Elimination System (NPDES) permit).

- Visit us on the web at: <https://dnrec.alpha.delaware.gov/water/surface-water/>

NCC

**APPLICATION FOR THE CONSTRUCTION OF
WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS**

Application must be complete, typewritten or clearly printed

Date Application Submitted 3/20/2024; Resubmitted 4/9/2024

PROJECT INFORMATION			
Project Name and Location/ Address Quarry Walk 838 Yorklyn Road Hockessin, DE 19707			
Tax Parcel Number(s) 08-008.10-135 (Pump Station)			
County <input type="checkbox"/> Kent <input checked="" type="checkbox"/> New Castle <input type="checkbox"/> Sussex		Watershed (www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx) <input type="checkbox"/> Chesapeake Bay <input type="checkbox"/> DE Bay/Estuary <input type="checkbox"/> Inland Bays/Atl Ocean <input checked="" type="checkbox"/> Piedmont	
Sewer District or Interceptor Northern-ASMT sewer district		Wastewater Treatment/Disposal Facility Name Quarry Walk	
Anticipated Construction Start Date Foremain is installed; pump station is being installed by NCC		Treatment/Disposal Facility Owner and Operating Permit Number New Castle County	
Please note, construction permits expire three (3) years from the date of permit issuance.			
Are you requesting plan review and comment or WPCC Construction Permit issuance? (circle one)			
Design Flow (gallons/day) Average 15,750 GPD (per plan)		Peak 63,000 GPD	Peak Factor 4
Basis of Design 63 SF Dwellings (per plan)			
Description Quarry walk is a 63 lot subdivision with 61 townhomes to be constructed. The sanitary sewer is gravity to the proposed pump station (owned and operated by NCC) and pumped by forcemain to the NCC sewer in Yorklyn Road.			
OWNER/DEVELOPER			
Company Name Quarry Walk LLC			
Mailing Address PO Box 115			
City Yorklyn		State DE	Zip 19736
Contact Name Drake Cattermole			
E-Mail Address drakecat@comcast.net			
Telephone (302)545-8575		Cell	Fax

* Apex Engineering, Inc. is assisting the owner and developer with the Temporary Holding Tank Design and application and Apex has completed this application based on information provided on the approved plans.

ENGINEER (of Record for FM and Pump Station Plans)					
Company Name Duffield Associates					
Mailing Address 5400 Limestone Road					
City Wilmington		State DE		Zip 19808-1232	
Contact Name Scott C. Hoffman					
E-Mail Address Duffield@Feffnet.com					
Telephone (302)239-6634		Cell		Fax (302)239-8485	
GRAVITY SEWER INFORMATION					
Ownership <input type="checkbox"/> Public <input type="checkbox"/> Private	Type of Sewer System <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?			If Other, list below	
Type of Pipe	Length (ft)	Diameter (in)	Joint Specification	Min. Slope (ft/ft)	Min. Velocity (ft/sec)
Minimum Pipe Cover (ft)	Number of Manholes	Drop manholes provided? <input type="checkbox"/> Yes <input type="checkbox"/> No		Maximum Distance Between Manholes (ft)	
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input type="checkbox"/> Yes <input type="checkbox"/> No			If not, explain provisions to prevent cross-contamination:		
Explain any special challenges (for example, stream, highway and/or railroad crossings, directional drilling, elevated sewers, etc.)					
Comments The construction application for the gravity sewer has already been submitted and the construction permit issued (copy attached)					

PUMP/LIFT STATION INFORMATION				
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		Type of Wastewater <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?		If Other, list below
Pump Station Flows (gallons/day) Design 15,250 GPD		Average	Peak 61,000 GPD	Peak Factor 4
Basis of Design <i>Submersible Pumps</i>			Pump Type PENTAIR MYERS, MODEL 4VHA100M4-43	
Will peak flows be accommodated if largest unit fails? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Pump calc's and pump curves attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cycle Time (minutes) <i>1.1 min</i>	Wet Well Detention Time (minutes) 15
Check valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Gate valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
If not, explain alternate procedure:				
Ventilation provided in wet well? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Dry Well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is an alarm system included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Alternate source of power? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>12V DC SUPPLY FROM ENGINE ALTERNATOR</i>
What other provisions for emergency operations? <i>Diesel Generator Back-up Pump System.</i>				
Height of Influent Above Pump (suction head) (ft) 0'		Height of Effluent Above Pump (discharge head) (ft) 59.12'		Friction Loss (ft) 14.6'
Pump Design Point <i>250 GPM</i>	Pump Operating Point <i>250 GPM</i>	Static Head (ft) <i>62</i>	Total Head (ft) <i>73.40</i>	Required Motor Horsepower (hp) <i>10HP</i>
FORCE MAIN INFORMATION				
Type of Pipe C900 DR 18		Length (ft) 1,713 LF		Diameter (in) <i>6</i> 6"
Hazen-Williams "C" Design Factor <i>150</i>	Type of Joints <i>Cast</i>	Velocity Under Design Conditions (ft/sec) <i>2.75</i>	Minimum Pipe Cover (ft) <i>3 1/2'</i>	
Air relief valves specified? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Clean-outs provided? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Maximum distance between clean-outs (ft) 400'		
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If not, explain provisions to prevent cross-contamination:		
Comments				

251

101