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 (paper copy), if applicable, signed and sealed by a Delaware-registered Professional Engineer, or a Delaware-registered Professional Land Surveyor for gravity systems only.

☒ 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.delaware.gov/water/commercial-government/

APPLICATION FOR THE CONSTRUCTION OF
WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS
Application must be complete, typewritten or clearly printed

Date Application Submitted 03/24/2025

PROJECT INFORMATION			
Project Name and Location/ Address Port St. Georges - Village Design			
Tax Parcel Number(s) 13-003.00-014 & 12-035.00-001			
County ☐ Kent ☒ New Castle ☐ Sussex	Watershed (www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx) ☒ Chesapeake Bay ☐ DE Bay/Estuary ☐ Inland Bays/Atl Ocean ☐ Piedmont		
Sewer District or Interceptor Central Core Sewer Basin	Wastewater Treatment/Disposal Facility Name MOT Water Farm No. 1 Treatment Plant		
Anticipated Construction Start Date 08/01/2025	Treatment/Disposal Facility Owner and Operating Permit Number New Castle County Department of Public Works Permit No. DE 0050547		
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: 197,322 / Peak: 789,288		Peak Factor 4	Basis of Design NCC Standards & 10 State Standards
Description Wastewater pumping and conveyance system to serve the proposed Port St. Georges development. The proposed system includes a North Pump Station that serves flow collected by the on-site sanitary sewer system on the northern portion of the development and discharges through a force main to sanitary manhole 138 on the southern portion of the development. The South Pump Station receives wastewater flows from the southern portion of the development and the pumped flows from the North Pump Station. The South Pump Station discharges through a force main to an off-site public sewer system located in the Crossland Neighborhood.			
OWNER/DEVELOPER			
Company Name Parkway Gravel, INC.			
Mailing Address 4048 New Castle Avenue			
City New Castle		State DE	Zip 19720
Contact Name Nicholas Ferrara IV			
E-Mail Address nicholasferrara34@gmail.com			
Telephone 302-658-5241	Cell		Fax

ENGINEER					
Company Name Verdantas, LLC					
Mailing Address 5400 Limestone Road					
City Wilmington		State DE		Zip 19808	
Contact Name Scott H. Parker, P.E.					
E-Mail Address sparker@verdantas.com					
Telephone 302-239-6634		Cell		Fax	

GRAVITY SEWER INFORMATION					
Ownership ☒ Public ☐ Private	Type of Sewer System ☒ Residential ☒ Commercial ☐ Industrial ☐ Other?			If Other, list below	
Type of Pipe	Length (ft)	Diameter (in)	Joint Specification	Min. Slope (ft/ft)	Min. Velocity (ft/sec)
PVC SDR-26	18,566	8	Bell Spigot	0.0050	2
PVC C900	102	8	Bell Spigot	0.0050	2
PVC SDR-26	2,917	10	Bell Spigot	0.0028	2

Minimum Pipe Cover (ft)	Number of Manholes	Drop manholes provided?	Maximum Distance Between Manholes (ft)
3	154	☒ Yes ☐ No	300

Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained?	If not, explain provisions to prevent cross-contamination:
☐ Yes ☒ No	Concrete encasement of gravity sewer

Explain any special challenges (for example, stream, highway and/or railroad crossings, directional drilling, elevated sewers, etc.)

Gravity sewer will cross Lorewood Grove Road, 60 linear feet of 24' steel casing pipe will be installed.

Comments

NORTH PUMP/LIFT STATION INFORMATION

Ownership	Type of Wastewater	If Other, list below
☒ Public ☐ Private	☒ Residential ☐ Commercial ☐ Industrial ☐ Other?	

Pump Station Flows (gallons/day) Design	Average	Peak	Peak Factor
331,200	70,037	280,150	4

Basis of Design	Pump Type
NCC Standards & 10 State Standards	Suction Lift Pump

Will peak flows be accommodated if largest unit fails?	Pump calc's and pump curves attached?	Cycle Time (minutes)	Wet Well Detention Time (minutes)
☒ Yes ☐ No	☒ Yes ☐ No	9.7	7.6

Check valves provided on discharge line?	Gate valves provided on discharge line?
☒ Yes ☐ No	☒ Yes ☐ No

If not, explain alternate procedure:

Ventilation provided in wet well?	Dry Well?	Is an alarm system included?	Alternate source of power?
☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No

What other provisions for emergency operations?

Bypass Force Main Connection

Height of Influent Above Pump (suction head) (ft)	Height of Effluent Above Pump (discharge head) (ft)	Friction Loss (ft)
-17.71	5.12	14.89

Pump Design Point	Pump Operating Point	Static Head (ft)	Total Head (ft)	Required Motor Horsepower (hp)
230 GPM @ 37.7 TDH	230 GPM @ 37.7 TDH	22.83	37.7	10

NORTH FORCE MAIN INFORMATION

Type of Pipe	Length (ft)	Diameter (in)
PVC DR 18 C900	1,239	6

Hazen-Williams "C" Design Factor	Type of Joints	Velocity Under Design Conditions (ft/sec)	Minimum Pipe Cover (ft)
120	Bell Spigot	2.53	3.5

Air relief valves specified?	Clean-outs provided?	Maximum distance between clean-outs (ft)
☒ Yes ☐ No	☒ Yes ☐ No	400

Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained?	If not, explain provisions to prevent cross-contamination:
☐ Yes ☒ No	Concrete encasement of force main

Comments

SOUTH PUMP/LIFT STATION INFORMATION

Ownership	Type of Wastewater	If Other, list below
☒ Public ☐ Private	☒ Residential ☐ Commercial ☐ Industrial ☐ Other?	

Pump Station Flows (gallons/day) Design	Average	Peak	Peak Factor
864,000	210,085	840,340	4

Basis of Design	Pump Type
NCC Standards & 10 State Standards	Suction Lift Pump

Will peak flows be accommodated if largest unit fails?	Pump calc's and pump curves attached?	Cycle Time (minutes)	Wet Well Detention Time (minutes)
☒ Yes ☐ No	☒ Yes ☐ No	10.6	8.1

Check valves provided on discharge line?	Gate valves provided on discharge line?
☒ Yes ☐ No	☒ Yes ☐ No

If not, explain alternate procedure:

Ventilation provided in wet well?	Dry Well?	Is an alarm system included?	Alternate source of power?
☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No

What other provisions for emergency operations?

Bypass Force Main Connection

Height of Influent Above Pump (suction head) (ft)	Height of Effluent Above Pump (discharge head) (ft)	Friction Loss (ft)
-18.13	-6.99	30.9

Pump Design Point	Pump Operating Point	Static Head (ft)	Total Head (ft)	Required Motor Horsepower (hp)
600 GPM @ 42.0 TDH	600 GPM @ 42.0 TDH	11.1	42.0	20

SOUTH FORCE MAIN INFORMATION

Type of Pipe	Length (ft)	Diameter (in)
PVC DR 18 C900	2,025	8

Hazen-Williams "C" Design Factor	Type of Joints	Velocity Under Design Conditions (ft/sec)	Minimum Pipe Cover (ft)
120	Bell Spigot	3.85	3.5

Air relief valves specified?	Clean-outs provided?	Maximum distance between clean-outs (ft)
☒ Yes ☐ No	☒ Yes ☐ No	400

Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained?	If not, explain provisions to prevent cross-contamination:
☒ Yes ☐ No	

Comments