

3025/24



18072 Davidson Drive
Milton, DE 19968
(302) 684-8030
www.pennoni.com



LETTER OF TRANSMITTAL

TO:
 DNREC, DIVISION OF WATER, SWDS
 89 KINGS HIGHWAY
 DOVER, DE 19901

DATE:	April 3, 2024	JOB NO.	RIBER21001
ATTENTION:	Mr. GORDON WOODROW		
RE:	FOUR WINDS FARM SUBDIVISION 235-25.00-39.00		

WE ARE SENDING YOU Attached Under separate cover via UPS the following items:

Shop Drawings Prints Plans Samples Specifications
 Copy of Letter Change Order _____

LIST OF ITEMS TRANSMITTED			
COPIES	DATE	NO:	DESCRIPTION
1			WPCC-Application
1			Check #24315 \$825.00
1			Check #24316 \$300.00
1			Notice of Decision Letter
1			Construction Plan
1			Offsite FM and Water Set
1			Pump Station Set
1			Record Plan Set
1			Wastewater Narrative
1			CD – PDF'S

THESE ARE TRANSMITTED as checked below:

- | | | |
|---|---|---|
| <input type="checkbox"/> For approval | <input type="checkbox"/> Approved as submitted | <input type="checkbox"/> Resubmit _____ copies for approval |
| <input type="checkbox"/> For your use | <input type="checkbox"/> Approved as noted | <input type="checkbox"/> Submit _____ copies for distribution |
| <input type="checkbox"/> As requested | <input type="checkbox"/> Returned for corrections | <input type="checkbox"/> Return _____ corrected prints |
| <input type="checkbox"/> For review and comment | <input type="checkbox"/> _____ | |
| <input type="checkbox"/> FOR BIDS DUE _____ | <input type="checkbox"/> PRINTS RETURNED AFTER LOAN TO US | |

REMARKS: Any questions please contact this office, Mr. Alan Decktor, adecktor@pennoni.com
 PENNONI Associates

COPY
TO:

SIGNED: Katherine E Davidson/file

If enclosures are not as noted, kindly notify us at once.



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) 739-8369

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/>

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

Application must be complete, typewritten or clearly printed

Date Application Submitted _____

PROJECT INFORMATION			
Project Name and Location/ Address FOUR WINDS FARM SUBDIVISION SOUTH SIDE OF SHINGLE POINT ROAD, MILTON DE BETWEEN GRAVILL HILL ROAD (RT. 30) AND HARBESON ROAD (RT. 5)			
Tax Parcel Number(s) 235-25.00-39.00			
County <input type="checkbox"/> Kent <input type="checkbox"/> New Castle <input checked="" type="checkbox"/> Sussex		Watershed (www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx) <input type="checkbox"/> Chesapeake Bay <input checked="" type="checkbox"/> DE Bay/Estuary <input type="checkbox"/> Inland Bays/Atl Ocean <input type="checkbox"/> Piedmont	
Sewer District or Interceptor N/A		Wastewater Treatment/Disposal Facility Name BEAVER CREEK REGIONAL WASTEWATER TREATMENT FACILITY	
Anticipated Construction Start Date AUGUST 2024		Treatment/Disposal Facility Owner and Operating Permit Number ARTESIAN WASTEWATER MANAGEMENT, INC. PERMIT # 202902-OP	
Please note, construction permits expire three (3) years from the date of permit issuance.			
Are you requesting plan review and comment or <u>WPCC Construction Permit issuance?</u> (circle one)			
Design Flow (gallons/day) Average 100,370	Peak 376,388	Peak Factor 3.75	Basis of Design based on EDU
Description FOUR WINDS FARM IS A 336 LOT RESIDENTIAL SUBDIVISION WITH CLUBHOUSE AND POOL BEING SERVED BY PUBLIC WATER AND SEWER EXTENDED FROM RT. 30 VIA ARTESIAN WATER AND WASTEWATER COMPANY. A SEWER COLLECTION SYSTEM, PUMP STATION, ARE PROPOSED TO COLLECT AND CONVEY WASTEWATER THROUGH A 6" FORCE MAIN ALONG SHINGLE POINT ROAD AND WEBB ROAD TO RT. 30 AND TIE INTO EX. 8" FORCE MAIN.			
OWNER/DEVELOPER			
Company Name RIBERA DEVELOPMENT, LLC			
Mailing Address 8684 VETERANS HIGHWAY , SUITE 203			
City MILLERSVILLE	State MD	Zip 21108	
Contact Name JOHN STAMATO			
E-Mail Address JSTAMATO@RIBERADEV.COM			
Telephone 443-871-0486	Cell	Fax	

ENGINEER						
Company Name PENNONI ASSOCIATES, INC.						
Mailing Address 18072 DAVIDSON DRIVE						
City MILTON		State DE		Zip 19968		
Contact Name ALAN DECKTOR, PE						
E-Mail Address ADECKTOR@PENNONI.COM						
Telephone 302-684-6241		Cell		Fax		
GRAVITY SEWER INFORMATION						
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		Type of Sewer System <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?			If Other, list below	
Type of Pipe SDR 26 PVC	Length (ft) 10,045+/-	Diameter (in) 8	Joint Specification ASTM D3212	Min. Slope (ft/ft) 0.28%	Min. Velocity (ft/sec) 2.50	
DIP CL 52	5,563+/-	8		0.28%	2.50	
DIP CL 52	28.50+/-	10		0.28%	2.50	
Minimum Pipe Cover (ft) 4'+/-	Number of Manholes 89	Drop manholes provided? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Maximum Distance Between Manholes (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:			
Explain any special challenges (for example, stream, highway and/or railroad crossings, directional drilling, elevated sewers, etc.)						
Comments						

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	Average 100,370	Peak 376,388	Peak Factor 3.75	
Basis of Design Based On No. EDUs		Pump Type Dual Submersible		
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) 7.50	Wet Well Detention Time (minutes) 5.87	
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	
What other provisions for emergency operations? REDUNDANT FLOW MONITORING WITH PRESSURE TRANSDUCER ANFD FLOATS				
Height of Influent Above Pump (suction head) (ft) 4.75	Height of Effluent Above Pump (discharge head) (ft) 30.34		Friction Loss (ft) 52.56	
Pump Design Point 261.4 gpm	Pump Operating Point 261.4 gpm	Static Head (ft) 30.34	Total Head (ft) 82.9	Required Motor Horsepower (hp) 23.0
FORCE MAIN INFORMATION				
Type of Pipe PVC SDR26 GREEN		Length (ft) 2,467+/-	Diameter (in) 6 INCH	
Hazen-Williams "C" Design Factor 150	Type of Joints PUSH ON GASKET	Velocity Under Design Conditions (ft/sec) 2.65	Minimum Pipe Cover (ft) 4.0	
Air relief valves specified? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Clean-outs provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Maximum distance between clean-outs (ft)		
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 Force main crosses Deldot roads on two occasions both in 12-inch steel sleeve installed by jack and bore methods. Design data in Narrative . System curve exhibited on the plans.				

Four Winds Sub-Division, Milton, DE

Introduction

Four Winds is a proposed sub-division located adjacent to Shingle Point Road in Milton Delaware. The property is identified by Tax parcel 235-25.00-39.00 totaling 168.90 acres. The site is bordered by Shingle Point Road in the NorthWest and undeveloped property either wooded or agricultural land on the left and right and the South East side.

Four Winds will consist of 336 single family lots. Additional facilities on site will consist of a Clubhouse and pool. The pumping station capacity has been increased to facilitate sewer service for 49 additional single-family units on an adjacent property still under design and awaiting County approval for the site plan. The sub-division will be developed in phases with the pumping station planned to be completed in the first phase of the development.

Sewer Collection System

The sewer collection system and disposal system will be public and will be managed, operated and maintained by Artesian Wastewater Management Inc. Treatment of sewage will be at the Beaver Creek Wastewater Treatment Facility managed and operated by Artesian Wastewater Management Inc. sewer pipe will be PVC SDR 26 or DIP CI 52 at selected locations due to excessive depth. Manholes will be precast concrete.

Sewer Conveyance and Disposal System

Average daily flow for the 336-unit sub-division is computed at 100370 gallons per day using an equivalent EDU of 240 gpd plus collection system infiltration of 250 gallons per mile per inch. Using the Artesian 1-hour peak factor of 3.75, the pump station design flow is computed at 261.4 gallons per minute. The pumps are designed to meet the design flow with the largest pump out of service. The collection system is capable of storing approximately 32 hours of sewage computed using the average daily flow rate without any sewer overflows.

The force main will be installed using C900 PVC SDR 18 -Green pipe. High points will include air release valves. The force main will generally follow Shingle Point Road public right of way running south westerly and terminates and connects to a current Artesian Wastewater Management 8-inch force main in Gravel Hill Road (Route 30) that conveys wastewater to the Beaver Creek Wastewater Treatment Facility. The wastewater pumping station will include a 8-foot diameter wet well with dual Flygt 23 HP motors submersible pumps with N series non clog impellers, above ground valve enclosure housing check valves, gate valves, flow meter, air release valve and bypass connection to the force main. Electrical cabinet houses VFDs, pump controller, and panel boards for lights, heaters and ancillary items requiring power, ventilation blowers and up generator panels and disconnects.

Pumps will operate in the traditional method of alternating pump starts to lead and lag with each cycle. Controls will include variable frequency drives (VFD) and will include redundant flow monitoring systems consisting of a primary pressure transducer and back up float switch. Wet well ventilation will utilize continuous operation forced air with a minimum of 12 wet well volume air changes per hour. Remote station monitoring will employ SCADA for monitoring power, motors, flow, and pump operation including high and low wetwell level alarms.

Back up electrical power will be provided by 60 KW diesel generator with automatic transfer switch (ATS), capable of operating the entire pumping station in the event of the loss of primary power.

The station will include an 8-foot diamond mesh security fence with vinyl plastic insert privacy strips with selected screening landscaping.

PLANNING & ZONING COMMISSION

ROBERT C. WHEATLEY, CHAIRMAN
KIM HOEY STEVENSON, VICE-CHAIRMAN
R. KELLER HOPKINS
J. BRUCE MEARS
HOLLY J. WINGATE



Sussex County

DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

January 17th, 2023

Mr. Alan M. Decktor, P.E., ENV, SP
Pennoni Associates Inc.
18072 Davidson Drive
Milton, DE 19968

By email to: adecktor@pennoni.com

Re: Notice of Decision letter for the Preliminary Subdivision Plan for Four Winds Farm (2021-25) for a proposed subdivision to consist of 336 single-family lots using the cluster subdivision development option and containing private roads and open space to be located on the east side of Shingle Point Road (S.C.R. 249)
Tax Parcel: 235-25.00-39.00

Dear Mr. Decktor,

At their meeting of **Thursday, January 12th, 2023**, the Planning & Zoning Commission **approved** the **Preliminary Subdivision Plan for Four Winds Farm (2021-25)** the establishment of a cluster subdivision to divide 168.9 acres +/- into three-hundred and four (336) single-family lots with private roads and open space. The property is located on the east side of Shingle Point Road (S.C.R. 249), approximately 0.88 mile south of the intersection of Shingle Point Road (S.C.R. 249) and Harbeson Road (Route 5). The properties are located in the Agricultural Residential (AR-1) Zoning District and also lie within the Low Density Area per Sussex County's 2018 Comprehensive Plan.

The Preliminary Subdivision Plan is valid for three (3) years from the date of Planning Commission decision. A Final Subdivision Plan shall be approved within three (3) years of the date of approval of the Preliminary Plan or the action of the Planning Commission shall be deemed canceled. Unless an extension is granted, approval shall be rendered null and void if substantial construction is not commenced within five (5) years of the date of recordation of the final plat.

As part of their motion, the Planning Commission acted to approve the development subject to the following conditions (which shall be clearly annotated on the Revised Preliminary and Final Subdivision Plans):

- A. There shall be no more than 336 lots within the subdivision.
- B. The developer shall establish a homeowner's association responsible for the maintenance of streets, buffers, stormwater management facilities, and other common areas.
- C. The stormwater management system shall meet or exceed the requirements of the State and County and the Final Site Plan shall contain the approval of the Sussex Conservation District. The system shall be maintained and operated using Best Management Practices.
- D. There shall be a forested and/or vegetated buffer strip that is at least 30-foot wide along the perimeter of the subdivision adjacent land of other ownership in accordance with Section 99-5 of the Subdivision Ordinance. This buffer shall be within the larger 50-foot buffer along the perimeter of the project. This buffer shall utilize existing forest or similar



- vegetation if it exists in the buffer area. Where trees currently exist in the buffer area, stump removal or construction activities that disturb the existing grade of the area within the buffer shall be prohibited. All silt fencing shall be located along the interior limit of the buffer area (the edge of the buffer nearest the interior development) and the Final Site Plan shall identify the "Limit of Disturbance" to prevent disturbance of the buffer area.
- E. The development shall comply with DelDOT entrance roadway improvement requirements.
 - F. Street design shall meet or exceed Sussex County standards.
 - G. Road naming and addressing shall be subject to the review and approval of the Sussex County Mapping and Addressing Department.
 - H. The subdivision shall be served by the Publicly Regulated Central Sewer System.
 - I. The subdivision shall be served by a Publicly Regulated Central Water System providing drinking water and fire protection.
 - J. Sidewalks shall be installed on at least one side of all internal streets. A system of fully shielded and downward-screened streetlighting shall also be provided.
 - K. Construction, site work, and deliveries shall only occur on the site between the hours of 7:00a.m. and 6:00p.m. Monday through Friday and 8:00a.m. through 2:00p.m. on Saturday. No Sunday hours are permitted. A 24 inch by 36 inch "NOTICE" sign confirming these hours in English and Spanish shall be prominently displayed at the site entrance during construction.
 - L. The Applicant shall coordinate with the local school district regarding the location of a school bus stop within the subdivision. If required by the school district, the location of the bus stop area shall be shown on the Final Site Plan.
 - M. There shall be on site recreational amenities including a clubhouse, outdoor pool and deck, a bathhouse and storage building, a tot lot, and pickleball courts. The size and dimensions of the clubhouse, pool, and deck shall be included on the Final Site Plan. These amenities shall be completed and open to use prior to the issuance of the 140th residential building permit.
 - N. As proffered by the Applicant, there shall be a buffer of at least 50 feet between the edge of any Federally Regulated Non-Tidal Wetlands and any lot lines. There shall be a minimum disturbance of trees and other vegetation within these buffer areas. Required silt fencing shall be installed upland of these buffer areas (using the edge of the buffer nearest the interior development) to avoid disturbance. Construction activities within the buffer area shall be minimum. Any disturbance in the buffer area shall be indicated on the Final Site Plan and the "Limits of Disturbance" shall be indicated on the Final Site Plan.
 - O. There shall be a 50-foot setback from all lands used for Agricultural Purposes.
 - P. The Final Site Plan and recorded Restrictive Covenants shall include the Agricultural Use Protection Notice and a similar notice advising that lands nearby are actively used for hunting.
 - Q. The Final Site Plan shall include a Landscape Plan depicting all landscaping to be provided, the preservation of all buffer areas and the forested areas that will be preserved. The Landscape Plan shall also identify all "Limits of Disturbance" within the site.
 - R. The Final Site Plan shall include a Grading Plan for the site. No building permit shall be issued for individual lots until an individual lot grading plan has been supplied to and approved by Sussex County. No certificate of occupancy shall be issued until a grading certificate is submitted to the Building Code Department demonstrating general conformity with the individual site grading plan.

- S. A Revised Preliminary Site Plan either depicting or noting these Conditions must be submitted to the Office of Planning and Zoning.
- T. The Final Site Plan shall be subject to the review and approval of the Planning and Zoning Commission.

The Final Subdivision Plan must comply with the County's Zoning and Subdivision Codes, including submission of agency approval letters to the Department of Planning and Zoning. The agency approvals required for Final Subdivision Plan approval include but are not limited to: the Sussex Conservation District, Office of the State Fire Marshal, Sussex County Engineering Department, Sussex County Geographic Information Office (formerly known as the Sussex County Mapping and Addressing Department), Delaware Department of Public Health (Office of Drinking Water), the Delaware Department of Transportation (DelDOT) and the local school district with regard to any proposed bus stop provisions.

Once all agency approvals have been obtained, please submit a minimum of **one (1) full-size (24 "x 36")** and **one (1) electronic PDF copy** of a **Revised Preliminary Subdivision Plan** to the Office of Planning and Zoning for consideration on the next available agenda for Planning Commission. It is recommended that **two (2) copies** of a Check Print are first submitted for purposes of staff review.

Please note that a \$10.00 per lot fee will be required to be paid prior to the approval of any Final Subdivision Plan. For 336 lots, the fee is \$3,360.00.

Please feel free to contact me during business hours with any question from 8:30 AM – 4:30 PM, Monday through Friday, at 302-855-7878.

Sincerely,



Ms. Lauren DeVore, AICP
Planner III

CC: Mr. Andy Wright, Chief Code Official – Building Code
Mr. John Ashman, Director of Utility Planning & Design – Engineering – Utility Planning
Ms. Susan Isaacs, Engineering Project Coordinator – Engineering – Public Works
Mr. Mark Davidson, P.E., Vice President & Office Director – Pennoni Associates, Inc.
Four Winds Farm (2021-25) Subdivision file

RECEIPT

April 4, 2024

35

RCVD FROM Ribera Development LLC \$825.00
FOR Eight Hundred twenty-five dollars and 00/100 DOLLARS
Plan review fee WPCC 3025/24 Four Winds Farm Subdivision

ACCT	\$	825.00	<input checked="" type="checkbox"/>	CHECK #	24315
PAYMENT	\$	825.00	<input type="checkbox"/>	CASH	
	\$	-	<input type="checkbox"/>	OTHER	BY <u>Kevin Bronson</u>

DNREC, Surface Water Discharges Section, 89 Kings Hwy, Dover, DE 19901

RECEIPT

April 4, 2024

36

RCVD FROM Ribera Development LLC \$300.00
FOR Three Hundred Dollars and 00/100 DOLLARS
WPCC Legal Notice Reimbursement 3025/24

ACCT	\$	300.00	<input checked="" type="checkbox"/>	CHECK #	24316
PAYMENT	\$	300.00	<input type="checkbox"/>	CASH	
	\$	-	<input type="checkbox"/>	OTHER	BY <u>Kevin Bronson</u>

DNREC, Surface Water Discharges Section, 89 Kings Hwy, Dover, DE 19901