# THREE CHORD C.E.M., LLC

# Civil • Environmental • Marine

July 14, 2024

Mr. Derrick Caruthers
Environmental Engineer
DNREC - Ground Water Discharges Section
89 Kings Highway
Dover, Delaware 19901

RE: Twin Masts Ph 1 Temporary Holding Tank Permit Application Associated with State Construction Permit No. WPCC 3062/24

Dear Mr. Caruthers,

Attached for your review is a temporary holding tank permit application associated with the wastewater collection and conveyance system to service phase 1 of the Twin Masts subdivision. A check for the application fee and advertisement fee has been mailed to your office.

Phase 1 of the Twin Masts subdivision is a fully approved and recorded subdivision that is commencing construction in Sussex County. The application requests the utilization of the wet well and the phase 1 collection system as a temporary holding tank in order to provide wastewater service for up to 29 lots. Permanent wastewater service will be provided via an off-site force main to Artesian Wastewater Management's facilities.

Based on the collection system components that will provide storage capacity, the collection system pipes and manholes provide a storage volume of approximately 17,566 gallons including the volume from the wet well. I have attached a chart with my calculations. Upon your request, I would be glad to e-mail the excel spreadsheet to you.

Information included in the application package includes:

- On-site Wastewater System Permit Application
- Collection System Volume Calculations
- Pump and Haul Contract with Clean Delaware
- Sussex County Engineering Department Agreement No. 1188-1 Letter
- Artesian Wastewater Management Ability to Serve Letter
- DNREC State Permit WPCC 3001/24
- Notated excerpts from the Approved Subdivision Plans highlighting the proposed collection system infrastructure to be utilized as a temporary holding tank

Upon your review, if you should have any questions or need additional information, please feel free to contact me at (302) 740-4442 or e-mail at jkalmbacher@threechordcem.com.

Sincerely,

Jeremy M. Kalmbacher, P.E.



# APPLICATION - PERMIT ON-SITE WASTEWATER SYSTEM



(Please Type or Print Legibly) OWNER'S NAME: Twin Masts LLC	PHONE: (410) 861-7159
ADDRESS: 5950 Symphony Woods Rd, Ste 408 Colombia, MD 21044	
PROJECT LOCATION: Twin Masts Development - Intersection of Hudson Rd a	nd Round Pole Bridge Rd
Sussex County TAX/MAP #:	235-16.00-68.00
APPLICATION PREPARER: Jeremy Kalmbacher, P.E.	DNREC LICENSE #: 6093
PREPARER'S ADDRESS: P.O. Box 203 Georgetown, DE 19947	
PHONE: 302-740-4442	
I hereby affirm that the information provided on this document is a	accurate and complete.
Preparer's Signature: Date: 7/10/2 By signing this permit application, the preparer further certifies the	<del></del>
-SEPTIC DESIGN CRITE	
(Please check all boxes that apply)	CKIA-
System Type: (CF = Cap & Fill / FD = Full Depth)	Type of Construction:
Gravity (FD) Permanent Holding Tank	Replacement
Gravity (CF) Elevated Sand Mound	✓ New Construction
☐ Pressure Dose (FD) ☐ Wisconsin At-Grade	Component Replacement
☐ Pressure Dose (CF) ☐ Subsurface Micro Irrigation	Component:
☐ Low Pressure Pipe (FD) ☐ Peat Bio- Filter	Repair to Existing System
Low Pressure Pipe (CF) Other	2 0
	Reason:
✓ Temporary Holding Tank	A sett sois at a Hear Ferinting Court so
□Bed or □Trench	Authorization to Use Existing System
	Permit #:Present Condition:
Gravelless Chamber Stone/Gravel Tire Chips	
Sand-lined Yes No	Structure to be connected:
Existing System Malfunctioning  Yes No N/A	
Zinoing 2 jaroni 11 milanoisening 🗀 1 ea 🗀 1 ea 🗀 1 ea	# of Bedrooms:
Pre-Treatment Units	Avg. Percolation Rate:
☐ Septic Tank	Gallons Per Day Flow:
Other	Minimum Sq. Ft. Rcq'd:
	Sq. Ft. Proposed:
	1 1
Central Water Available    ✓ Yes    No	
(If yes, please state Utility Name: Artesian Water Company	)
· · · -	

- SITE PLAN & CROSS SECTION -	
(INDICATE DIRECTIONS OF NORTH & SCALE OF SITE PLA	N)

Draw a general location map of project location and give distance to nearest road junction.

FULL SIZE SCALED APPROVED PLANS HAVE BEEN ATTACHED FOR REFERENCE

OWNER'S/AUTHORIZED AGENT SIGNATURE:

• A copy of this page must be submitted with both septic system and well construction report(s)

7.10.25

# TWIN MASTS HOLDING TANK CALCULATIONS BASED UPON GRAVITY COLLECTION SYSTEM

# Wet Well & Manhole Volume

	DIA (ft)	d (ft)	Vol (gal)	Inv (ft)	Rim (ft)
SS-PS	8	18.79	7064.77	-10.83	13.12
SS-B1	4	2.10	197.39	5.86	12.58
SS-A1	4	12.53	1177.78	-4.57	11.18
SS-A2	4	11.99	1127.02	-4.03	10.10
SS-A3	4	11.49	1080.02	-3.53	11.08
SS-A4	4	10.90	1024.56	-2.94	10.44
SS-A5	4	10.26	964.40	-2.30	9.96
SS-11	4	2.94	276.35	5.02	11.02
SS-12	4	2.26	212.43	5.70	12.16
SS-13	4	1.76	165.43	6.20	12.72
SS-14	4	1.04	139.11	6.92	11.92

Sub-total 13429.27 gal

# Gravity Pipe Volume SDR 26

Crarry ripe voicine con ac				
	ID (in)	L (ft)	Vol (gal)	
PB1	7.754	119.89	294.08	
PA1	9.692	78.23	299.80	
PA2	7.754	123.00	301.69	
PA3	7.754	148.99	365.46	
PA4	7.754	179.12	439.36	
PA5	7.754	197.19	483.69	
P11	7.754	265.47	651.17	
P12	7.754	211.20	518.05	
P13	7.754	151.22	370.93	
P14	7.754	168.44	413.17	

Sub-total 4137.40 gal

Total Storage Volume	17566.68 gal
High Water Level	7.96 ft
Free Board	2.00 ft
Flow	300.00 gpd/edu
Storage Time	2.00 days
EDUs	29.28



1.888.637.1517 · 302.684.4221 · Fax: 302.684.1850

www.cleandelaware.com

# PUMP AND HAUL SEWAGE MAINTENANCE CONTRACT

PROPERTY OWNER: Twin Masts LLC

5950 Symphony Wood Rd, Suite 408

Columbia, MD 21044

TELEPHONE: 301-806-3009

TAX MAP NUMBER: 2-35 16.00 68.00

PROPERTY LOCATION: Twin Masts

(Pump Station manhole SS-PS)

Hudson Road @ State Route 1

Milton, DE

HOLDING TANK SIZE: 9,000 gallons

DISPOSAL SITE: Clean Delaware, LLC

Route 30

Milton, DE 19968

CONTRACT EXPIRES: March 31, 2026

#### TERMS OF CONTRACT:

1. Pumping frequency will be such that the waste level is maintained to prevent overflowing.

2. Pumping will be scheduled to maintain low levels. A high-level alarm will also be installed.

3. Duration of the contract is one year or that part of, until expiration date.

4. A fleet of vacuum trucks ranging from 4000 to 7000 gallons is available for emergency response.

Gerry Desmond

June 10, 2025

Clean Delaware, LLC

Date

Property Owner/Agent

#### **ENGINEERING DEPARTMENT**

JOHN J. ASHMAN DIRECTOR OF UTILITY PLANNING & DESIGN REVIEW

(302) 855-7370 T (302) 854-5391 F jashman@sussexcountyde.gov



# Sussex County

DELAWARE sussexcountyde.gov

MIKE HARMER, P.E. SUSSEX COUNTY ENGINEER

September 10, 2024

Solutions Integrated Planning Engineering and Management, LLC. 303 North Bedford St. Georgetown, DE 19947 Attn: Jim Eriksen, P.E.

REF:

**TWIN MASTS** 

NORTH COASTAL PLANNING AREA

SUBDIVISION NO. 2023-06

SUSSEX CNTY. TAX MAP NUMBERS 235-16.00-68 & 69.00 - CLASS-3

AGREEMENT No. 1203

Dear Mr. Eriksen:

The above referenced project was approved on September 10, 2024, and one (1) set of the approved plans are enclosed. This approval is valid for three (3) years, unless prior to expiration of that three (3) year period, a time extension is requested and approved by the Department. Plans granted an extension beyond the three (3) period will be required to meet updated standards and specifications.

Also, it is your responsibility to secure approvals and/or permits that may be required by other regulatory agencies.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

SUSSEX COUNTY ENGINEERING DEPARTMENT

Alex H. Kansak

Engineering Technician II

CC:

Mr. Keith Bryan, w/1 enclosures

SCED Field File, w/1 enclosures

Owner/Developer: Megan Conner, Stonemark Ventures LLC.





Artesian Water Company \, 🛕 Artesian Wastewater Management 🛕 Artesian Utility Development 🛕 Artesian Water Pennsylvania

Artesian Water Maryland A Artesian Wastewater Maryland

August 26, 2024

Twin Masts, LLC 5950 Symphony Woods Road, Suite 408 Columbia, Maryland 21044 C/O Megan Conner

RE: Twin Masts Ability to Serve and Construction Plan Approval Letter

With reference to your request concerning Water and Wastewater Service (collectively, "Service") for the Twin Masts project near Coastal Highway and Round Pole Bridge Road in Broadkill Hundred, Sussex County, Delaware known as Tax Parcel No. 235-16.00-68.00 & 235-16.00-69.00 (the "Property"), please be advised as follows:

Subject to the following conditions, Artesian Water Company, Inc. and Artesian Wastewater Management, Inc. (collectively, "Artesian") are willing and able to provide Service to the Property that meets all applicable State of Delaware, Delaware Department of Natural Resources and Environmental Control, and Sussex County standards.

Based on current conditions and subject to the development entity and Artesian entering Water and Wastewater Service Agreements (collectively, "Agreements") that addresses the financial terms of the provision of Service for the Property, in accordance with Artesian's respective tariffs as approved by the Delaware Public Service Commission, Artesian is willing and able to provide the required Service for this Property.

Certificates of Public Convenience and Necessity ("CPCNs") for the Property have been granted to Artesian from the Delaware Public Service Commission.

Furthermore, we have reviewed and approved the Water Plans prepared by Solutions IPEM dated March 12, 2024 last revised May 23, 2024. We have reviewed and approved the Sanitary Sewer, Pump Station and Forcemain Plans prepared by Solutions IPEM dated March 12, 2024 last revised July 1, 2024.

This letter shall expire if Agreements are not executed within one year of the date of this letter.

If you have any questions, please do not hesitate to contact us.

Yours very truly,

Katherine E. Garrison

Katherine E. Garrison Senior Planning Designer



89 Kings Highway Dover, DE 19901 (302) 739-9000 dnrec.delaware.gov

August 15, 2024

Megan Conner Twin Masts, LLC 5950 Symphony Woods Road, Suite 408 Columbia, MD 21044

Ref: Twin Masts

State Wastewater Construction Permit No. WPCC 3062/24

To Megan Conner:

Please find enclosed a copy of the construction permit that was issued for the referenced project.

We expect the permitted construction to be completed within the permit term. If the construction cannot be completed by the permit expiration date, a one-time, no-cost two-year permit extension is available, as long as the request is received in writing prior to the expiration date and as long as the scope of the project has not changed significantly, as determined by the Department.

Per Part II.A.2.a of the enclosed permit, notify the Department of any changes to the construction authorized therein. Per Part II.B.1, submit a set of "as-built" plans of the constructed wastewater facilities within ninety (90) days of construction completion. The as-built plans must be signed and sealed by a Professional Engineer licensed in Delaware.

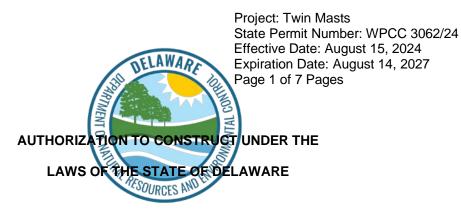
If you have any questions, please contact me at (302) -739-9946 or via email at Wenjia.Fan@delaware.gov.

From,

Wenjia Fan, PhD, P.E. Engineer IV Commercial and Government Services Section DNREC Division of Water

#### **Email Enclosure:**

- 1. <u>Jim Eriksen</u> Solutions IPEM (jeriksen@solutionsipem.com)
- 2. Christin Scott Sussex County Planner (Christin.Scott@sussexcountyde.gov)
- 3. Scott Thornton Sussex County Engineering (scott.thornton@sussexcountyde.gov)
- 4. Lisa Walls Sussex Co. Engineering Project Coordination (<a href="mailto:lwalls@sussexcountyde.gov">lwalls@sussexcountyde.gov</a>)
- 5. Keith Bryan Sussex County Utility Construction (KBryan@sussexcountyde.gov)
- 6. Susan Isaacs Sussex Co. Planning & Zoning Department Planner (SIsaacs@sussexcountyde.gov)



#### **PARTI**

1. In compliance with the provisions of 7 Del. C., §6003,

Sussex County Council P.O. Box 589 Georgetown, DE 19947

and

Twin Masts, LLC 5950 Symphony Woods Road, Suite 408 Columbia, MD 21044

are authorized, jointly and individually, to construct facilities consisting of the following:

Approximately one thousand seven hundred and forty-one linear feet (1741 LF) of four (4) inch diameter sanitary sewer force main, seventy-eight linear feet (78 LF) of ten (10) inch diameter gravity sewer main, one hundred twenty-three linear feet (123 LF) of eight (8) inch diameter gravity sewer main, ten thousands two hundred and twenty-two linear feet (10,222 LF) of eight (8) inch diameter gravity sewer main, forty-eight (48) gravity manholes, one (1) non-clog pump station and related appurtenances to serve 249 single family lots and a pool/pool house in the proposed subdivision. The proposed pump station will discharge via a 4" force main and tie into an 8" existing force main along Coastal Highway – Route 1 (SCR-14). The sewer system will be owned and maintained by Artesian Wastewater Management, Inc. The project is located on the 28500 block of Round Pole Bridge Road, Delaware.

The subject project will be constructed in accordance with plans and specifications as described below and limitations, requirements and other conditions set forth in Parts I, II and III hereof.

2. The plans, specifications, municipality standards and other documents submitted with the construction permit application consist of the following, which are incorporated by reference and made part of this authorization:

Nineteen (19) drawings\*\* prepared by Solutions IPEM, titled "ROAD, STORM DRAIN, SEWER, WATER, & ESC FOR TWIN MASTS", dated 08-01-24, signed and stamped by Jim R. Eriksen, P.E. and the current Sussex County Engineering Standards, Specifications and Details.

John Rebar Jr., Program Manager II

Commercial and Covernment Services Section

Commercial and Government Services Section
State of Delaware Department of Natural Resources

and Environmental Control

#### \*\*Drawings include:

Sheet 1 – Cover Sheet Sheet 34 – Sanitary Sewer Index Sheets 35-40 – Sanitary Sewer Plans A-F Sheets 41-46 – Sanitary Sewer Profiles 1-6 Sheets 47-48 – Sanitary Sewer Details 1-2 Sheet 49 – Pump Station Site Plan Sheets 50-51 – Pump Station Details 1-2

3. The wastewater will be conveyed through an existing collection and transmission system to the Beaver Creek Regional Wastewater Treatment Facility for treatment and subsequent discharge via RIBs in accordance with DNREC State Permit No. 359014-06.

#### A. Effluent Limitations on Pollutants Attributable to Industrial Users

The use of the constructed facility is conditioned on meeting all applicable pretreatment standards under 40 CFR, Part 403, or toxic pollutant discharge limitations under Section 307(a) of the Clean Water Act of 1977, PL 95-217.

#### B. Flow and Usage Limitations

This permit authorizes a daily average discharge of N/A gallons\*. The flow in the system shall be measured at least every N/A.

The estimated average daily discharge for the subject project is 60,240 GPD, which is based on 249 single family lots and a pool/pool house to interconnect at 240GPD/EDU.

\* This permit authorizes only the construction of the wastewater collection and conveyance facilities referenced herein.

#### C. Monitoring and Reporting (When Required)

1. Representative sampling of the volume and nature of the monitored discharge shall be conducted at the request of the Division of Water.

#### 2. Reporting

Monitoring results shall be reported to the:
Delaware Department of Natural Resources and Environmental Control
Division of Water, Commercial and Government Services Section
89 Kings Highway
Dover, DE 19901
302-739-9946

#### Definitions

- a. "Daily average flow" means the total flow during a calendar month divided by the number of days in the month that the facility was operating.
- b. "Daily maximum flow" means the highest total flow during any calendar day.
- c. "Daily Peak Flow" means the flow which can be safely transported within the sewage system without causing an overflow or a backup into the building(s) or residence(s).

- d. "Bypass" means the intentional diversion of wastes from any portion of a treatment facility.
- e. "Measured flow" means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.
- f. "Estimate" means a value to be based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

#### 4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The date, exact place and time of sampling or measurement;
- b. The person(s) who performed the sampling and/or measurement;
- c. The date(s) and time(s) analysis was performed;
- d. The individual(s) who performed each analysis;
- e. The analytical technique(s) or method(s) used;
- f. The results of each analysis; and
- g. Appropriate quality assurance information.

#### 5. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed, all records of instrument calibration and maintenance and all charts from continuous monitoring instruments, shall be retained for three (3) years. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.

#### 6. Test Procedures

Test procedures for the analysis of pollutants shall conform to the applicable test procedures identified in 40 CFR, Part 136, unless otherwise specified in this permit.

END OF PART I

# PART II

#### A. <u>Management Requirements</u>

#### 1. <u>Duty to Comply</u>

The permittee must comply with the terms and conditions of this permit. Failure to do so constitutes a violation of this permit, which is grounds for enforcement and the imposition of penalties as provided in 7 <u>Del.C.</u>, Chapter 60, grounds for permit termination or loss of authorization to discharge or operate pursuant to this permit, grounds for permit revocation and reissuance or permit modification, or denial of a permit renewal application.

#### 2. Notification

#### a. Changes in Authorized Activities

The permittee shall notify the Department of any proposed change in the activity authorized herein, of any proposed substantive change in the operation of the facility or facilities authorized herein, or of any anticipated facility expansions, production increases, or process modifications. Notification is required only when such alteration, addition or change may justify the inclusion of conditions that are absent or different from those specified in this permit. This includes, for example, the construction of additional wastewater collection, transmission or treatment facilities and changes which will result in new, different, or increased discharges of pollutants. Following such notice, the Department may require the submission of a new permit application and this permit may be reopened and modified to address the proposed changes.

#### b. Noncompliance

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this permit, the permittee shall provide the Department with the following information, in writing, within five (5) days of becoming aware of such condition:

A description of the discharge and cause of noncompliance; and

The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

#### 3. Facilities Operation

The permittee shall, at all times, maintain in good working order and operate as efficiently as possible all collection and treatment facilities and systems (and related appurtenances) installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective management, adequate operator staffing and training and adequate laboratory process controls, including appropriate quality assurance procedures.

#### 4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the State resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and extent of the noncomplying discharge.

### 5. Bypassing

Any bypass or intentional diversion of waste streams from the facilities authorized by this permit, or any portion thereof, is prohibited, except (i) where unavoidable to prevent loss of human life, personal injury or severe property damage, or (ii) where excessive storm drainage or run-off would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Department, in writing, of each such diversion or bypass.

# 6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the surface water or groundwater.

#### B. Responsibilities

 Within 90 days following the completion of construction, the permittee shall submit to the Department an "as-built" set of plans of the facility or facilities constructed, bearing the seal and signature of a licensed Professional Engineer registered in the State of Delaware.

# 2. Right of Entry

The permittee shall allow the Secretary of the Department of Natural Resources and Environmental Control, or his authorized representative(s), upon the presentation of credentials:

- a. To enter upon the permittee's premises for inspection of any records, flow measurements, construction or other activity authorized by this permit or any condition required under the terms of this permit; and
- At reasonable times, to have access to and to copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and
- c. To sample any discharge.

#### 3. <u>Transferability</u>

This permit is transferable with the Department's consent, provided that an intention to transfer accompanied by a copy of the permit is provided to the Department, signed by both the transferor and the transferee at least ten (10) days prior to the actual transfer.

#### 4. Availability of Reports

All reports submitted with the application and those reports required under the terms of this permit shall be available for public inspection at the offices of the Department of Natural Resources and Environmental Control. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in 7 Del. C., §6013. Any person who causes or contributes to the discharge of a pollutant into State waters either in excess of any conditions specified in this permit or in absence of a specific permit condition shall report such an incident to the Department required

under 7 Del. C. §6028.

#### 5. Permit Modification

This permit may be modified, suspended or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any term or condition of this permit;
- b. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized activity; or
- Information that the permitted activity poses a threat to human health or welfare, or to the environment.

#### 6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under 7 Del. C., Chapter 60.

# 7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

#### 8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

#### 9. Severability

The provisions of this permit are severable. If any provision of this permit is held invalid, or if the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**END OF PART II** 

# **PART III**

#### A. Special Conditions

- 1. This permit authorizes only the construction of the wastewater facilities and related work referenced herein.
- 2. If well pointing is required during construction, the wells must be installed by a licensed well driller, and a permit to construct such wells must first be obtained from the Well Permits Branch of the Water Supply Section.
- 3. All construction shall be in agreement with plans and specifications submitted under this project and approved by the Department of Natural Resources and Environmental Control.
- 4. All construction shall be in accordance with Ten States Standards and other applicable local utility construction specifications and standards.
- 5. Connections or additions to the proposed system, other than those proposed on the plans, will not be allowed without prior approval from the Department.

**END OF PART III**