

**IN THE TENNESSEE PUBLIC UTILITY COMMISSION
AT NASHVILLE, TENNESSEE**

| | | |
|-------------------------------------|---|----------------------------|
| IN RE: |) | |
| |) | |
| PETITION OF TENNESSEE |) | |
| WASTEWATER SYSTEMS, INC., TO |) | DOCKET NO. 18-00107 |
| AMEND ITS CERTIFICATE OF |) | |
| CONVENIENCE AND NECESSITY |) | |

TWSI's RESPONSE TO TPUC's SECOND DATA REQUEST

Tennessee Wastewater Systems, Inc. ("TWSI") files this response to the Tennessee Public Utility Commission's Second Data Request:

1. Please provide the copy of the contract or intent to sell between Bryce Powers and Riverland Partners and Powers & Atkins, LLC stating the property will be sold to Bryce Powers for development pending Commission and TDEC approval.

RESPONSE: Riverland Partners and Powers & Atkins, LLC are the developers of the Warrioto Hills subdivision and are developing the project as a joint venture. Bryce Powers is a partner in Riverland Partners and one of the developers for Warrioto Hills. There will not be a contract to sell the property to Bryce Powers as the joint venture is the developer.

2. Provide a list of all partners/members of Riverland Partners and Powers and Atkins, LLC.

RESPONSE: Riverland Partners is comprised of partners Bryce Allen Powers and John Andrew Wyatt. Powers and Atkins, LLC is comprised of members Robert Sydney Powers and James Michael Atkins.

3. Provide a copy of the current deed in place for the proposed Warrioto Hills Subdivision development.

RESPONSE: See attached Exhibit 3.

4. Provide a complete copy of the TDEC SOP application, inclusive of the Preliminary Engineering Report, filed at TDEC with all maps, etc. Maps provided as Exhibit C, page 18, were not included with the Petition as indicated in Data Response #1, (#1).

RESPONSE: See attached Exhibits 4A (Revised Application) and 4B (Engineering Report) and 4C (Map included with Original SOP Application and referred to as Exhibit C, Page 18).

5. Based on the maps included with the permit used for the engineering of the treatment plant/system that are posted on TDEC's Data Viewer, Staff cannot determine the exact territory being requested in this Docket to support the 57 homes in Warrioto Hills Subdivision. As previously requested, please include the following on the map:

A. Provide a clearly mark border of the proposed service area for the requested amendment to the CCN. Identify the border by plotting the street names that surround the requested territory. (The information provided in the email from Jeff Risdien to Staff on January 17, 2019 referred to 98.3 acres as being the property owned by Riverland Partners and the site where Warrioto Hills Subdivision will be built. Is TWS requesting the entire 98.3 acres as the territory? If not, then provide the territory specifically within the 98.3 acres that is being requested.)

B. Within the border, please provide the location of the 57 lots, the treatment plant location (# acres should be noted for treatment plant), drip field(s) to be installed (# acres to be conveyed by Riverland Partners/Powers and Atkins, LLC /Bryce Powers should be noted for drip fields, equipment shed location, and collection lines along with notes where easements are conveyed).

C. Please plot on the map the exact locations the property that will be deeded to TWS by the Developer and the locations of the easements that will be assigned to the Utility (maybe color coding these areas, one color for deeds and the other for easements.)

D. Provide the name of the access road or provide it on the platted information "access road(s)".

E. Identify any areas within the proposed area that will not be serviced when the system becomes operational.

RESPONSE: See attached Exhibits 5A, 5B, 5C, and 5D. TWSI is presently only requesting to serve the area identified on these maps.

6. Provide a copy of any preliminary plan (or final plan if approved) by the Regional Planning Commission or Montgomery County for Warrioto Hills Subdivision development, along with the supporting documentation submitted to the Planning Commission or Montgomery County.

RESPONSE: See attached Exhibit 6.

7. Provide the name of the company that will be building/constructing the treatment plant and constructing the drip fields? Also, provide a copy of the contractor's license to do business in Tennessee for the contractor building the wastewater system pursuant to Commission Rule 1220-04-13-.17(2)(c)(4).

RESPONSE: The company building/constructing the treatment plant and drip fields has not been selected yet. Their identity and a copy of their contractor's license will be provided in this docket prior to the commencement of construction.

8. Provided a copy of the performance bond required by Commission Rule 1220-04-13-.17(2)(e)(11).

RESPONSE: The performance bond, if necessary, will be provided in this docket prior to the commencement of construction.

9. Provide an updated organization chart for TWS listing each officer and all other key personnel by name and title.

RESPONSE: See attached Exhibit 9

10. Provide a copy of the revised LOU.

RESPONSE: There is no revised LOU. Any necessary changes to the agreement between TWSI and the developer will be addressed in the Sewer Service Agreement.

11. Provide a copy of the letter from TDEC to TWS indicating the receipt of a complete SOP application.

RESPONSE: See Exhibit 11.

12. Please provide a copy of the Engineer's Final Engineering Report and Final Plans as presented to TDEC for permitting. The preliminary report provided with this Petition and the plans on TDEC's Data Viewer (with the same dates of issuance) have differences. Please explain. If the permit application that was filed with TDEC is the correct application, please file the same one in this docket file, along with all the documentation to support the permit application.

RESPONSE: Exhibit 4 to this response is the revised SOP Application and Engineering Report filed with TDEC accurately reflecting the request to permit the construction and operation of a treatment facility for 17,100 gpd.

13. Please provide financial statements covering the most recent year-end for Tennessee Wastewater Systems, Inc., inclusive of Balance Sheet, Income Statement and Statement of Cash Flows.

RESPONSE: See Exhibit 13.

14. Item #3 of the LOU states that *"TWS will accept, own, and operate the wastewater treatment facility to serve this property under the terms and conditions contained in this LOU and as stated more fully in the Sewer Service Agreement to be executed by and between the Developer and TWS"*. Provide an affidavit signed by Bryce Powers/Developer stating that he will gift the system and the land for the system over to TWS at plat signing. Alternative to the above identify in the LOU or in the letter from Bryce Powers, a statement where Mr. Powers, as the Developer, agrees that the property/land for the drip field(s) and the treatment plant will be deeded over to TWS, and that TWS will be provided entitlement to the wastewater system at the signing of the plat.

RESPONSE: See attached Exhibit 14.

15. Item #17 of the LOU provides that the developer will be responsible for all costs associated with obtaining any easements required to provide service. If the Developer is responsible for developing the property and will own the property, why would TWS incur the costs associated with obtaining easements, particularly condemnation costs as stated?

RESPONSE: That clause is a standard clause in TWSI's LOU but is not applicable to this project.

16. The TDEC SOP states that TDEC approved 4.56 acres of soils for drip installation to support 43,000 gpd; however, the treatment system is being built to support 19,100 gpd. Which amount will have soils availability as well as treatment support? Will the remainder of the drip be installed now in order to support the 43,000 gpd for future use? If so, who will fund the remainder of the drip installation?

RESPONSE: TDEC will only approve soils to accommodate 17,100 gpd of flow. Only those soils will be conveyed to TWSI from the developer. No additional drip will be installed.

17. Please provide a copy of the contract of the build-out for the expansion of the development at Oakwood Subdivision.

RESPONSE: See attached Exhibit 17.

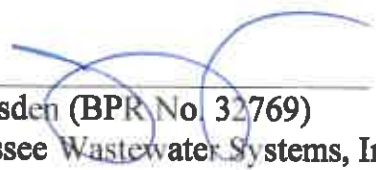
18. Please provide a copy of the sewer service agreement for the expansion of the development at the Oakwood Subdivision.

RESPONSE: See attached Exhibit 18.

19. Please provide the itemized cost for build-out of the expansion of the system at the Oakwood Subdivision, including calculations for contributions in aid of construction to be paid by the developer.

RESPONSE: See attached Exhibit 19.

RESPECTFULLY SUBMITTED,



Jeff Riden (BPR No. 32769)
Tennessee Wastewater Systems, Inc.
851 Aviation Parkway
Smyrna, TN 37167
615-220-7171
Jeff.riden@adenus.com

CERTIFICATE OF SERVICE


I hereby certify that a true and correct copy of the foregoing was serviced via U.S. Mail or electronic mail upon:

Karen H. Stachowski
Assistant Attorney General
Office of the Attorney General
Financial Division, Consumer Advocate Group
PO Box 20207
Nashville, TN 37202
Karen.Stachowski@ag.tn.gov

This the 21st day of February 2019



Jeff Riden

| | | |
|---|--|-------------------------------|
|  | State of Tennessee County of Montgomery THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS \$307,500.00. | |
| | SUBSCRIBED AND SWORN TO before me, this the 10th DAY OF April, 2017. | |
| Notary Public MY COMMISSION EXPIRES: 11/2/21 | | |
| This instrument prepared by: Freedom Title Services, LLC, 116 Center Ct, Clarksville, TN 37040 | | |
| ADDRESS NEW OWNER(S) AS FOLLOWS RIVERLAND PARTNERS & POWERS & ATKINS, LLC | SEND TAX BILLS TO: New Owner | MAP/PARCEL: P/O 090/054.00 |
| (NAME) 2503 WILMA RUDOLPH BLVD | (NAME) | |
| (ADDRESS) CLARKSVILLE, TN 37040 | (ADDRESS) | |
| (CITY) (STATE) (ZIP) | (CITY) (STATE) (ZIP) | |

WARRANTY DEED

FOR AND IN CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, I, GON "KEVIN" HUH, HEREINAFTER CALLED GRANTOR, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO RIVERLAND PARTNERS, A TENNESSEE GENERAL PARTNERSHIP AND POWERS & ATKINS, LLC, HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN MONTGOMERY COUNTY, TENNESSEE, DESCRIBED AS FOLLOWS TO-WIT:

Property Description, Kevin Huh Property, State Route 13 and Ramblewood Drive, Portion of Record Volume 1104, Page 1818, R.O.M.C.T., being further described as follows:

Being a parcel of land shown as Parcel 54.00 on Montgomery County Tax Map 90, Clarksville, Montgomery County, Tennessee, generally located south of Bayview Drive, east of State Route 13, and north of Ramblewood Drive, and more particularly described as follows:

COMMENCING at a point being the southwest corner of the subject property, in the northerly right-of-way of Ramblewood Drive, said point also being N 67°50'01" E 433.95 feet from the intersection of Ramblewood Drive and State Route 13;

THENCE leaving said right-of-way, along the common lines with property conveyed to H&S Properties, of record in ORV 1087, Page 457, R.O.M.C.T., the following calls:

N 03°24'38" E 336.20 feet to a point;

N 86°33'35" W 303.12 feet to a point in the easterly right-of-way of State Route 13;

THENCE along said right-of-way N 03°23'56" E 710.82 feet to a point;

THENCE leaving said right-of-way, along the easterly boundary of property conveyed to Bobby Smith, of record in ORV 891, Page 643, R.O.M.C.T., the following calls:

N 56°24'12" E 87.70 feet to a point;

N 29°37'28" E 321.98 feet to a point;

THENCE along the easterly boundary of property conveyed to Robert Wyatt, of record in ORV 1097, Page 1205, R.O.M.C.T., N 07°15'17" E 227.78 feet to a point;

THENCE along the southerly boundary of property conveyed to Bobby Smith, of record in

ORV 891, Page 643, R.O.M.C.T., the following calls:
N 87°54'36" E 24.90 feet to a point in a tree;
N 55°03'12" E 448.78 feet to a point;

THENCE along the southerly boundary of property conveyed to Robert Ladd, of record in ORV 1564, Page 772 and ORV 1573, Page 29, R.O.M.C.T., the following calls:
S 78°38'26" E 376.58 feet to an iron pin set;
S 77°42'08" E 416.43 feet to a point;

THENCE along a severance line of the Huh Property S 78°17'02" E 1332.45 feet to a point;

THENCE along the westerly boundary of property conveyed to Alfred Pace, of record in ORV 957, Page 442, R.O.M.C.T., S 07°00'41" W 1083.51 feet to a point;

THENCE along the northerly boundary of property conveyed to CBP Properties, of record in ORV 1696, Page 1129, R.O.M.C.T., S 80°55'47" W 850.07 feet to a point;

THENCE along the northerly boundary of property conveyed to Ramblewood II, LP, of record in ORV 1061, Page 2405, R.O.M.C.T., the following calls:

N 37°31'55" W 713.47 feet to a point;
N 76°23'21" W 121.75 feet to a point;
S 26°07'35" W 164.70 feet to a point in the north terminus of the southeasterly right-of-way of Ramblewood Drive;
N 63°51'54" W 50.01 feet to a point in the north terminus of the northwesterly right-of-way of Ramblewood Drive;
N 26°08'11" E 52.64 feet to a point;
N 63°52'54" W 501.28 feet to a point;
S 26°03'39" W 238.95 feet to a point;
S 63°52'45" E 500.96 feet to a point in the northerly right-of-way of Ramblewood Drive;

THENCE along said right-of-way S 25°39'24" W 206.32 feet to a point at the beginning of a curve to the right;

THENCE continuing along said right-of-way, along said curve 100.00 feet to a point, said curve having a radius of 6,758.23 feet, a delta of 00°50'52", and a chord bearing of S 26°04'50" W 100.00 feet;

THENCE continuing along said right-of-way S 26°30'16" W 91.12 feet to a point at the beginning of a curve to the right;

THENCE continuing along said right-of-way, along said curve 231.49 feet to a point, said curve having a radius of 219.50 feet, a delta of 60°25'27", and a chord bearing of S 56°42'57" W 220.91 feet;

THENCE continuing along said right-of-way S 86°55'38" W 240.56 feet to a point at the beginning of a curve to the left;

THENCE continuing along said right-of-way, along said curve 177.36 feet to the point of beginning, said curve having a radius of 464.02 feet, a delta of 21°53'58", and a chord bearing of S 75°58'40" W 176.28 feet;

CONTAINING 76.71 acres more or less.

Property description taken from a Boundary Survey prepared by Robert Crabtree, dated April 18, 2014.

This being a portion of the same property conveyed to Gen Kevin Huh and Anthony R. Suggs by deed from First Federal Savings Bank, dated January 4, 2006 and recorded in ORBV 1080, Page 841, ROMCT. Further reference is hereby made to a Quitclaim Deed from Anthony R. Suggs to Gen Kevin Huh, dated May 19, 2006 and recorded in ORBV 1104, Page 1818, ROMCT and a Quitclaim Deed from Darlene Suggs to Gen Kevin Huh, dated May 19, 2006 and recorded in ORBV 1104, page 1808, ROMCT.

This is unimproved property, known as 0 RAMBLEWOOD DR, CLARKSVILLE, TN 37040.

TO HAVE AND TO HOLD the said tract or parcel of land, with appurtenances, estate, title, and interest thereto belonging to said Grantees. Grantor covenants with Grantees that he is lawfully seized and possessed of said land in fee simple, possessing a good right to convey it, and that the said land is unencumbered, except for current taxes, and restrictions and easements of record.

GRANTOR further covenants and binds himself, his heirs, successors, and representatives to warrant and defend the title to the said land to Grantees, their heirs, successors, and assigns against the lawful claims of all persons whatsoever.

Witness our hands this 10th day of April, 2017.


GON "KEVIN" HUH

STATE OF TENNESSEE
COUNTY OF MONTGOMERY

PERSONALLY appeared before me, the undersigned authority, GON "KEVIN" HUH, with whom I am personally acquainted, and made oath that he executed the foregoing instrument as a free act and deed and for the purposes therein contained.

DONE at office in Clarksville, Tennessee, on this the 10th day of April, 2017.


NOTARY PUBLIC

My commission expires: 1/12/21



Connie E. Bennett, Register
Montgomery County, Tennessee
Doc #: 577757 Instrument #: 1118768
Rec'd: 15.00 Recorded
State: 1157.75 4/27/2017 at 12:49 PM
Client: 1.00 In Volume
Other: 2.00 1735
Total: 1155.75 Pgs 2686-2688



Tennessee Department of Environment and Conservation
 Division of Water Pollution Control
 William R. Snodgrass Tennessee Tower
 312 Rosa L. Parks Avenue, 11th Floor
 Nashville, Tennessee 37243
 (615) 532-0625

APPLICATION FOR A STATE OPERATION PERMIT (SOP)

Type of application: ☒ New Permit ☐ Permit Reissuance ☐ Permit Modification

Permittee Identification: (Name of city, town, industry, corporation, individual, etc., applying, according to the provisions of Tennessee Code Annotated Section 69-3-108 and Regulations of the Tennessee Water Quality Control Board.)

Permittee

Name: Tennessee Wastewater Systems, Inc.
 (applicant):

Permittee Address: 849 Aviation Parkway Smyrna, TN 37167

Official Contact:

Jeff Riden

Title or Position:

Vice President

Mailing Address:

849 Aviation Parkway

City:

Smyrna

State:

TN

Zip:

37167

Phone number(s):

615-220-7200

E-mail:

Jeff.riden@adensus.com

Optional Contact:

Matt Nicks

Title or Position:

Utility Manager

Address:

849 Aviation Parkway

City:

Smyrna

State:

TN

Zip:

37167

Phone number(s):

615-220-7200

E-mail:

Matthew.nicks@adensus.com

Application Certification (must be signed in accordance with the requirements of Rule 1200-4-5-.05)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and title; print or type

Jeff Riden, Vice President

Signature

Date

2/4/19

| Facility Identification: | | Existing Permit No. N/A 18024 | |
|--|------------------------|--------------------------------------|------------|
| Facility Name: Warriote Hills Treatment Facility | County: Montgomery | | |
| Facility Address or Location: Located off Ramblewood Drive Montgomery Co. TN 37040 | Latitude: 36.4694444 | | |
| | Longitude: -87.371388 | | |
| Name and distance to nearest receiving waters: Unnamed tributary to Cumberland River- 1,800' | | | |
| If any other State or Federal Water/Wastewater Permits have been obtained for this site, list their permit numbers: N/A | | | |
| Name of company or governmental entity that will operate the permitted system: Tennessee Wastewater Systems, Inc. | | | |
| Operator address: 849 Aviation Parkway, Smyrna, TN 37167 | | | |
| Has the owner/operator filed for a Certificate of Convenience & Necessity (CCN), or an amended CCN, with the Tennessee Regulatory Authority (TRA) (may be required for collection systems and land application treatment systems)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | | | |
| If the applicant listed above does not yet own the facility/site or if the applicant will not be the operator, explain how and when the ownership will be transferred or describe the contractual arrangement and renewal terms of the contract for operations. Owner of property for the proposed treatment and drip irrigation site has committed to transfer the land to Tennessee Wastewater Systems Inc. in the event a State Operating Permit is issued for the proposed facility. The land will be transferred by warranty deed, or recorded plat. | | | |
| Complete the following information explaining the entity type, number of design units, and daily design wastewater flow: | | | |
| Entity Type | Number of Design Units | | Flow (gpd) |
| <input type="checkbox"/> City, town or county | No. of connections: | | |
| <input checked="" type="checkbox"/> Subdivision | No. of homes: 57 | Avg. No. bedrooms per home: 3 | 17,100 |
| <input type="checkbox"/> School | No. of students: | Size of cafeteria(s): | |
| | | No. of showers: 0 | |
| <input type="checkbox"/> Apartment | No. of units: | No. units with Washer/Dryer hookups: | |
| | | No. units without W/D hookups: | |
| <input type="checkbox"/> Commercial Business | No. of employees: | Type of business: | |
| <input type="checkbox"/> Industry | No. of employees: | Product(s) manufactured: | |
| <input type="checkbox"/> Resort | No. of units: | | |
| <input type="checkbox"/> Camp | No. of hookups: | | |
| <input type="checkbox"/> R V Park | No. of hookups: | No. of dump stations: | |
| <input type="checkbox"/> Car Wash | No. of bays: | | |
| <input type="checkbox"/> Other | | | |
| Describe the type and frequency of activities that result in wastewater generation: Residential Subdivision | | | |

| | |
|---|---|
| Engineering Report (required for collection systems and/or land application treatment systems): | <input type="checkbox"/> N/A |
| <input type="checkbox"/> Prepared in accordance with Rule 1200-4-2-.03 and Section 1.2 of the Tennessee Design Criteria (see website for more information). | |
| <input checked="" type="checkbox"/> Attached, or | |
| <input type="checkbox"/> Previously submitted and entitled: _____ | |
| Approved? | <input type="checkbox"/> Yes, Date: _____ <input type="checkbox"/> No |

| | |
|---|------------------------------|
| Wastewater Collection System: | <input type="checkbox"/> N/A |
| System type (i.e., gravity, low pressure, vacuum, combination, etc.): STEP/STEG small diameter sewer system | |
| System Description: STEP/STEG small diameter sewer system | |
| Describe methods to prevent and respond to any bypass of treatment or discharges (i.e., power failures, equipment failures, heavy rains, etc.): Tanks and sewers are watertight. There are no bypass points in the system. TWSI also has emergency generators to run the pumps. | |
| In the event of a system failure describe means of operator notification: Cellular telemetry notification | |
| List the emergency contact(s) (name/phone): Matt Nicks - 615-220-7200 | |
| For low-pressure systems, who is responsible for maintenance of STEP/STEG tanks and pumps or grinder pumps (list all contact information)? There are no grinder pumps. All notifications come to TWSI at 615-220-7200 | |
| Approximate length of sewer (excluding private service lateral): As Needed | |
| Number/hp of lift stations: 0 / 0 | Number/hp of lift pumps: 0/0 |
| Number/volume of low pressure and or grinder pump tanks: 0/0 | |
| Number/volume septic tanks: 57 / 1,500 | |
| Attach a schematic of the collection system. <input checked="" type="checkbox"/> Attached | |
| If this is a satellite sewer and you are tying in to another sewer system complete the following section, listing tie-in points to the sewer system and their location (attach additional sheets as necessary): | |
| <u>Tie-in Point</u> | <u>Latitude (xx.xxxx°)</u> |
| <u>Longitude (xx.xxxx°)</u> | |
| N/A | |
| | |
| | |

| | |
|---|------------------------------|
| Land Application Treatment System: | <input type="checkbox"/> N/A |
| Type of Land Application Treatment System: <input checked="" type="checkbox"/> Drip <input type="checkbox"/> Spray <input type="checkbox"/> Other, explain: | |
| Type of treatment facility preceding land application (recirculating media filters, lagoons, other, etc.): | |
| Recirculating Media Filter | |
| Attach a treatment schematic: <input checked="" type="checkbox"/> Attached | |
| Describe methods to prevent and respond to any bypass of treatment or discharges (i.e., power failures, equipment failures, heavy rains, etc.): Same as above | |
| For New or Modified Projects: | |
| Name of Developer for the project: Bryce Powers -- Providence Builders | |
| Developer address and phone number: 46 Union Street, Clarksville TN 37040 (931) 245-0037 | |
| For land application, list: | |
| Proposed acreage involved: 4.97 +/- acres | |
| Inches/week gpd/sq. ft loading rate to be applied: 2 inches/week | |
| Is wastewater disinfection proposed? | |
| <input type="checkbox"/> Yes Describe land application area access: | |
| <input checked="" type="checkbox"/> No Describe how access to the land application area will be restricted: Fence | |
| Attach required additional Engineering Report Information (see website for more information) | |
| <input checked="" type="checkbox"/> Topographic map (1:24,000 scale presented at a six inch by six inch minimum size) showing the location of the project including quadrangle(s) name(s) GPS coordinates, and latitude and longitude in decimal degrees. should also be included. | |
| <input checked="" type="checkbox"/> Scaled layout of facility showing the following: lots, buildings, etc. being served, the wastewater collection system routes, the pretreatment system location, the proposed land application area(s), roads, property boundaries, and sensitive areas such as streams, lakes, springs, wells, wellhead protection areas, sinkholes and wetlands. | |
| <input checked="" type="checkbox"/> Soils information for the proposed land disposal area in the form of a Water Pollution Control (WPC) Soils Map per Chapter 16 and 17 State of Tennessee Design Criteria for Sewage Work. The soils information should include soil depth (borings to a minimum of 4 feet or refusal) and soil profile description for each soil mapped. | |
| <input checked="" type="checkbox"/> Topographic map of the area where the wastewater is to be land applied with no greater than ten foot contours presented at a minimum size of 24 inches by 24 inches. | |
| <input type="checkbox"/> Describe alternative application methods based on the following priority rating: (1) connection to a municipal/public sewer system, (2) connection to a conventional subsurface disposal system as regulated by the Division of Groundwater Protection, and/or (3) land application. | |

For Drip Dispersal Systems Only: Unless otherwise determined by the Department, sewage treatment effluent wells, i.e. large capacity treatment/drip dispersal systems after approval of the SOP Application, will be issued an UIC tracking number and will be authorized as Permit by Rule per UIC Rule 1200-4-6-.14(2) and upon issue of a State Operating Permit and Sewage System Construction Approval by the Department.

☐ N/A

Describe the following:

The area of review (AOR) for each Drip Dispersal System shall, unless otherwise specified by the Department, consist of the area lying within a one mile radius or an area defined by using calculations under 1200-4-6-.09 of the Drip Dispersal System site or facility, and shall include, but not be limited to general surface geographic features, general subsurface geology, and general demographic and cultural features within the area. Attach to this part of the application a general characterization of the AOR, including the following: (This can be in narrative form)

- ☒ A general description of all past and present groundwater uses as well as the general groundwater flow direction and general water quality.
- ☒ A general description of the population and cultural development within the AOR (i.e. agricultural, commercial, residential or mixed)
- ☒ Nature of injected fluid to include physical, chemical, biological or radiological characteristics.
- ☒ If groundwater is used for drinking water within the area of review, then identify and locate on a topographic map all groundwater withdrawal points within the AOR, which supply public or private drinking water systems. Or supply map showing general location of publicly supplied water for the area (this can be obtained from the water provider).
- ☐ If the proposed system is located within a wellhead protection area or source water protection area designated by Rule 1200-5-1-.34, show the boundary of the protection area on the facility site plan.
- ☒ Description of system, Volume of injected fluid in gallons per day based upon design flow, including any monitoring wells.
- ☒ Nature and type of system, including installed dimensions of wells and construction materials

Pump and Haul:

☒ N/A

Reason system cannot be served by public sewer:

Distance to the nearest manhole where public sewer service is available:

When sewer service will be available:

Volume of holding tank: gal.

Tennessee licensed septage hauler (attach copy of agreement):

Facility accepting the septage (attach copy of acceptance letter):

Latitude and Longitude (in decimal degrees) of approved manhole for discharge of septage:

Describe methods to prevent and respond to any bypass of treatment or discharges (i.e., power failures, equipment failures, heavy rains, etc.):

| | |
|---|---|
| Holding Ponds (for non-domestic wastewater only): | <input checked="" type="checkbox"/> N/A |
| Pond use: <input type="checkbox"/> Recirculation <input type="checkbox"/> Sedimentation <input type="checkbox"/> Cooling <input type="checkbox"/> Other (describe): | |
| Describe pond use and operation: | |
| If the pond(s) are existing pond(s), what was the previous use? | |
| Have you prepared a plan to dispose of rainfall in excess of evaporation? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| If so, describe disposal plan: | |
| Is the pond ever dewatered? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| If so, describe the purpose for dewatering and procedures for disposal of wastewater and/or sludge: | |
| Is (are) the pond(s) aerated? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Volume of pond(s): | gal. Dimensions: |
| Is the pond lined (Note if this is a new pond system it must be lined for SOP coverage. Otherwise, you must apply for an Underground Injection Control permit.)? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Describe the liner material (if soil liner is used give the compaction specifications): | |
| Is there an emergency overflow structure? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| If so, provide a design drawing of structure. | |
| Are monitoring wells or lysimeters installed near or around the pond(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| If so, provide location information and describe monitoring protocols (attach additional sheets as necessary): | |

[illegible]

PRELIMINARY ENGINEERING REPORT

FOR



WARRIOTO HILLS TREATMENT FACILITY & DRIP DISPOSAL MONTGOMERY COUNTY, TN

SOP – APPLICATION

February 6, 2019



**WARRIOTO HILLS
TREATMENT FACILITY & DRIP DISPOSAL
MONTGOMERY COUNTY, TN**

Overview

The proposed Warrioto Hills Treatment Facility will be sited off HWY-48, south of HWY-12, in Montgomery County, Tennessee. The proposed Warrioto Hills Treatment Facility will consist of one 5,000-gallon recirculation chamber, one recirculating media filter (RMF), one 1,500-gallon final dose tank, and approx. 216,330± SF of drip disposal irrigation. This facility will be designed to serve the sewage needs of the proposed Warrioto Hills Subdivision, consisting of approximately 57 proposed residential Equivalent Dwelling Units (EDU's). Each EDU will have a STEP tank to convey the effluent to the inlet of the RMF via watertight PVC collection system. Flow for the proposed development is figured thus:

| | |
|--|-------------------|
| Equivalent Dwelling Units or Single-Family Homes (EDU's) | |
| 57 EDU's @ 300 GPD / EDU: | 17,100 GPD |
| Total | 17,100 GPD |

This RMF will be designed @ 5GPD/SF with a 2:1 recirculation rate.
17,100 GPD / 5 GPD/SF = 3,420 SF media area (min)

The nearest standard sizing for this media area requirement is:

| | |
|---------------------|-----------------------|
| 70 LF x 55 LF | = 3,850 SF media area |
| 3,850 SF x 5 GPD/SF | = 19,250 GPD capacity |

RMF Sizing

The RMF will be designed in 7-2400 GPD zones. Each zone will have 7 laterals spaced at 15" on center, with 1/8" diameter orifices spaced at 15" on center. Therefore:

| | |
|-------------------------------|--------------|
| Lateral length | 52.5 feet |
| Lateral diameter | 1.25 inches |
| Lateral spacing | 15 inches |
| Orifice spacing | 15 inches |
| Orifice diameter | 1/8 inch |
| Minimum flow rate per Orifice | 0.75 gpm |
| Number of Orifice per zone | 294 orifices |

Calculations continued on next page

| | |
|---|------------------|
| Number of Laterals per zone | 7 laterals |
| Total actual flow rate (accounting for losses in lateral) | 224.5 GPM |
| Losses: | |
| Minimum residual head at last orifice | 15 feet |
| Transport pipe diameter | 4 inches |
| Transport pipe length (pump to zone inlet) | 60 feet |
| Losses in Transport pipe | 2.5 ft/100 ft |
| Total Head loss in Transport pipe | 1.5 feet |
| Lateral Distribution header diameter | 3 inches |
| Total head loss in Distribution header | 0.1 feet |
| Head loss elevation (pump to zone) | 2.5 feet |
| Head loss in laterals | 2.4 feet |
| Total Head losses | 21.5 feet |

The recirculation pumps will be sized to produce:
224.5 GPM @ 21.5 feet of head

Use: HCP Model A-43, 4" Discharge, 3HP, 2 pumps total

A 5,000-gallon pre-cast tank will be used as a recirculation chamber. The recirculation chamber will house 2 effluent pumps that will pump effluent to the top of the RMF after it has traveled through the bottom of the RMF. The effluent will be distributed over the entire surface area of the RMF using solenoid valves and a PVC piping system. During normal operation, the final discharge pumps will dispose of 50% of each recirculation cycle. When treated water is dosed to drip fields, it will be filtered through an Adenus dual arkal filtration system before dispersal. The filtration system will contain two (2) disc filters that will filter out particles larger than 100 micron. Dripper lines will periodically be flushed, and flush water will be returned to the recirculation tank.

Drip Irrigation Disposal Soils

Hydraulic Loading: The proposed drip fields will be installed in Sengtown/Sengtown-Ironcity soils. The Sengtown-Ironcity series consists of very deep, very well drained soils that formed in a residuum weathered from cherty limestone. The Netafim design manual (which has been adopted by ADENUS) recommends a loading rate of 0.2 – 0.5 gpd/sf/day for silt loams with weak to moderate structures. Therefore, the design loading rate will be 0.2 gpd/sf/day.

| | |
|--------------------------------|----------------------------|
| Design daily flow for disposal | = 17,100 GPD |
| Design loading rate | = 0.20 gal/sf/day (gpd/sf) |

17,100 GPD ÷ 0.20 gpd/sf = 85,500 SF TOTAL soil area REQUIRED

This site has ~216,330 SF+/- suitable soils available

The drip system will be constructed using Netafim Bioline 0.570 ID (1/2") pipe, with 2-foot orifice spacing of emitters, will be plowed-in-place on approximately 5-foot pipe centers. Actual installation will be dictated by existing grade, and at the direction of the design engineer. Actual installed LF of piping should be expected to range from a minimum of 39,000± LF of pipe, to a maximum of 43,000± LF of pipe.

This system will be built in cells of 7,000 LF of dripper line (maximum), per cell. The installed number of total cells will be dictated by the existing site contours, and at the direction of the engineer.

The drip system will be supplied with filtered effluent via an Adenus dual arkal filtration system. Drip irrigation fields will have automatic flushing capabilities, controlled by the PLC panel. The drip piping will automatically flush a minimum of once per month, or more often as directed by the operator. During periods of low, or no flows (when the water level in the recirculation side of the RMF falls below 8" in depth), the PLC panel will turn "off" the final dose pumps and go into 100% recirculation mode, until the water level in the recirculation side of the RMF returns (rises) to 8" in depth.

Bioline Drip Emitter Piping Calculations

General Design

Drip system will be constructed using Netafim Bioline .570 I.D tubing, with 0.61GPH emitters. All design calculations are based on the Netafim design literature. Normal dosing pressure will be minimum of 25 PSI (58 ft of head) and a maximum of 60 PSI (138 ft of head). If possible, design will stay in this range without pressure reducers and multiple pumps. The proposed pumps are **two L50P4FH (1.5 HP, single phase pump, 220V).**

Bioline piping requires 1.6 GPM per distal end to properly flush the emitters. This system will be built in cells of 7,000 LF of dripper line (maximum), per cell. The installed number of total cells will be dictated by the existing site contours, and at the direction of the engineer. The maximum number of distal ends in any cell shall be 18 lines. Therefore:

18 distal ends * 1.6 GPM/distal end = 28.8 GPM minimum to achieve flushing.

Use: 29 GPM

Using a 24" spacing with the Bioline 0.61, the head loss in laterals up to 400 LF in length is approximately 7 ft. This number is to be called Δ P. (From manufacturer's info.) Therefore:

Δ P = 7 (From Netafim)

Using ΔP = 7, the minimum inlet pressure required for proper flushing is 37 PSI (30 PSI for drip flush, 7 PSI for flush solenoid). The return lines are generally an uphill hydraulic grade. The flush solenoid valve will be in the control building above the system.

Calculations continued on next page

37 PSI * 2.3 = 85 feet of head (approx.) at lateral entrance (top of drip field)

Size pumps for normal operation:

Regular Min dosing flow: (per cell) 7,000 LF / 2' centers = 3,500 emitters

3,500 emitters * 0.61 gph = 2,135 gph

2,135 gph / 60 min / hour = 35.58 gpm **Use: 36 gpm**

Head Losses:

Flow – 36 GPM

Transport Pipe: 1,872 lf @ 0.46 ft/100 = 9 ft (3" Pipe)

H_L for Disc. Filter @ 36 gpm = 2 ft

Misc. for Bends Etc: 5 ft

Minimum Pump Requirements:

TDH = 69 ft. + 8 (elev.) + 9 (friction) + 2 (Arkal) + 5 misc. = 93 ft

Size Pumps for Flushing-Dosing Requirements:

Normal Dosing + Flushing Flow: 36 GPM + 29 GPM (Flushing) = 65 GPM

Head Losses:

Transport Pipe: 1,872 lf @ 0.256 ft/100 = 4.8 ft (4")

H_L for Disc. Filter @ 65 GPM = 4 ft

Misc. for Bends Etc: 5 ft

Flushing Solenoid: 16 ft

TDH = 69 ft + 8 (elev.) + 4 (Arkal) + 4.8 (friction) + 16 (solenoid) + 5 misc. = 106.8 ft

Total head required for flushing: 106.8 ft

Size pumps for min: 65 GPM (combined flow) @ 106.8 ft. head

Use both pumps for Dosing-Flushing cycle:

Therefore, in order to adequately dose and flush the Bioline tubing, each pump must produce:

36 GPM @ 106.8 TDH (use two pumps at the same time to get 68 GPM)

Final Discharge Pumps:

Two (2) L50P4FH, 1.5 HP, single phase pumps, 220V. A pressure reducing valve may be required on lower elevation zones – to be determined by Engineer.

Collection Lines

The proposed sewer collection system will consist of SDR21 schedule 40 watertight PVC ranging from 2"Ø in size to 4"Ø in size.

Hydraulic Gradient (Collection Lines):

The collection system for the proposed subdivision will be pressurized by STEP tanks at each EDU.

Line A

Station 0+00 – 16+69

EDU's

57 (1 + Lines A, B, & C)

57 EDU's @ 0.25 GPM/EDU

14.25 GPM

LF (ft):

1,669 LF

Pipe Ø:

3 inch

Dynamic Head:

0.9 ft

Slope

0.054%

Line A

Station 16+69 – 20+79

EDU's

8

8 EDU's @ 0.25 GPM/EDU

2GPM

LF (ft):

410 LF

Pipe Ø:

3 inch

Dynamic Head:

0.0 ft

Slope

N/A

Line B

Station 0+00 – 2+89

EDU's

48 (9 + Lines B & C)

48 EDU's @ 0.25 GPM/EDU

12 GPM

LF (ft):

289 LF

Pipe Ø:

3 inch

Dynamic Head:

0.1 ft

Slope

0.035%

Line B

Station 2+89 – 9+05

EDU's

13

13 EDU's @ 0.25 GPM/EDU

3.25 GPM

LF (ft):

616 LF

Pipe Ø:

3 inch

Dynamic Head:

0.0 ft

Slope

N/A

Line C**Station 0+00 – 12+00**

| | |
|-------------------------|----------|
| EDU's | 26 |
| 26 EDU's @ 0.25 GPM/EDU | 6.5 GPM |
| LF (ft): | 1,200 LF |
| Pipe Ø: | 3 inch |
| Dynamic Head: | 0.1 ft |
| Slope | 0.008% |

STEP Systems:

Each EDU will require one 1,500-gal STEP tank that will pump to the RMF via collection system. The following pumping system will be used, or equal as approved by the Service Provider (Tennessee Wastewater Systems, Inc.)

- PUMP – model S10P4JP05121, 115V, 7-stage pump, as manufactured by Sta-Rite
- MOTOR – model P42B0005A1 as manufactured by Sta-Rite
- 1500 GALLON STEP TANK - 1500 gallon, structurally sound, watertight tank as manufactured by Jarrett Concrete Products
- SF1-ETM Control Panel - as manufactured by Adenus Technologies

Additional Consideration:

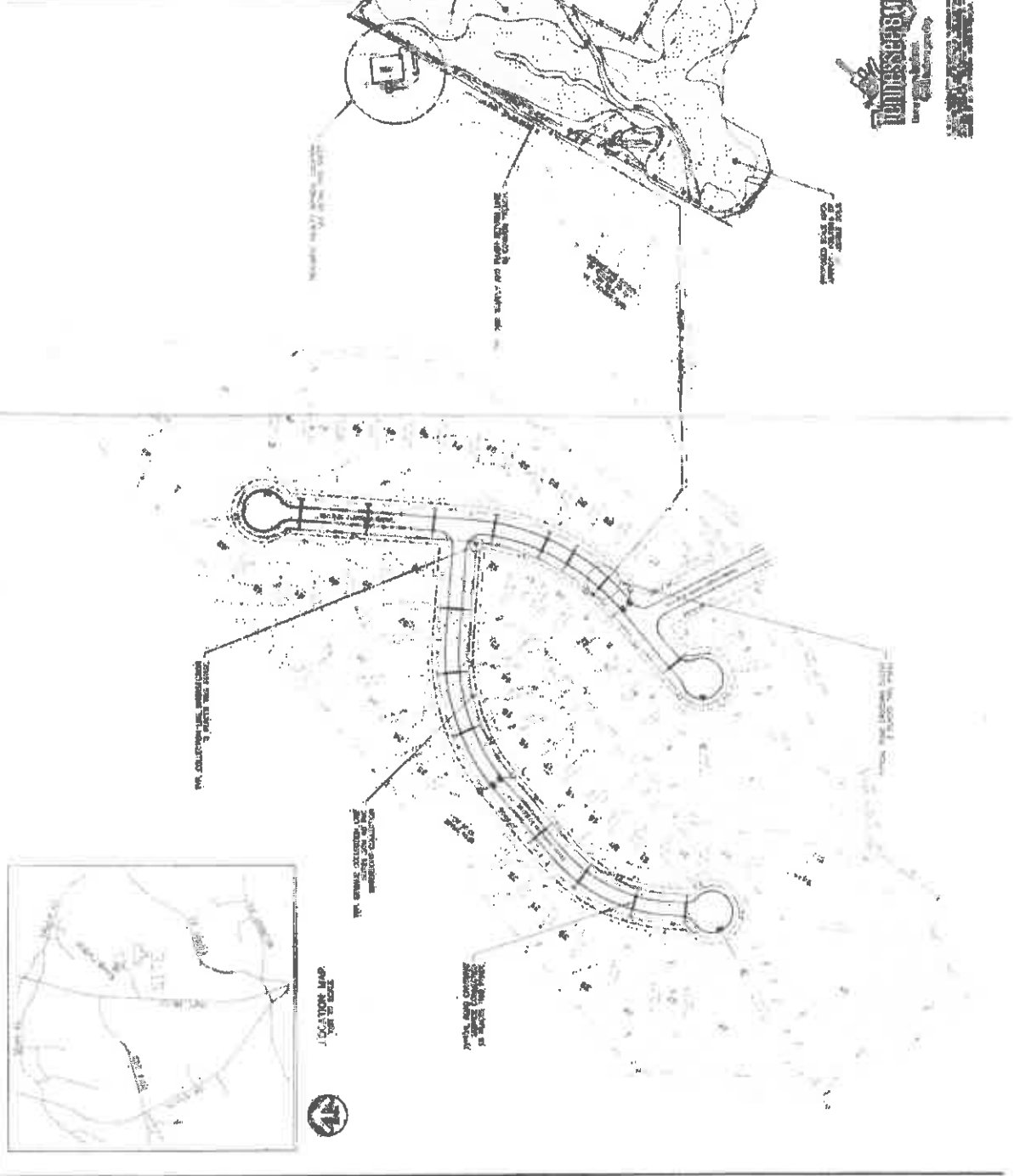
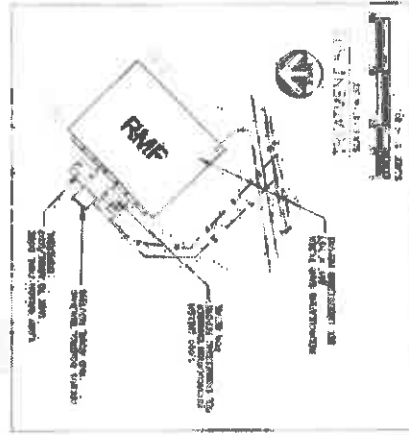
No additional consideration is necessary for energy saving solutions, odor control, or corrosion control. Operation will be conducted with optimum efficiency as a uniform goal.

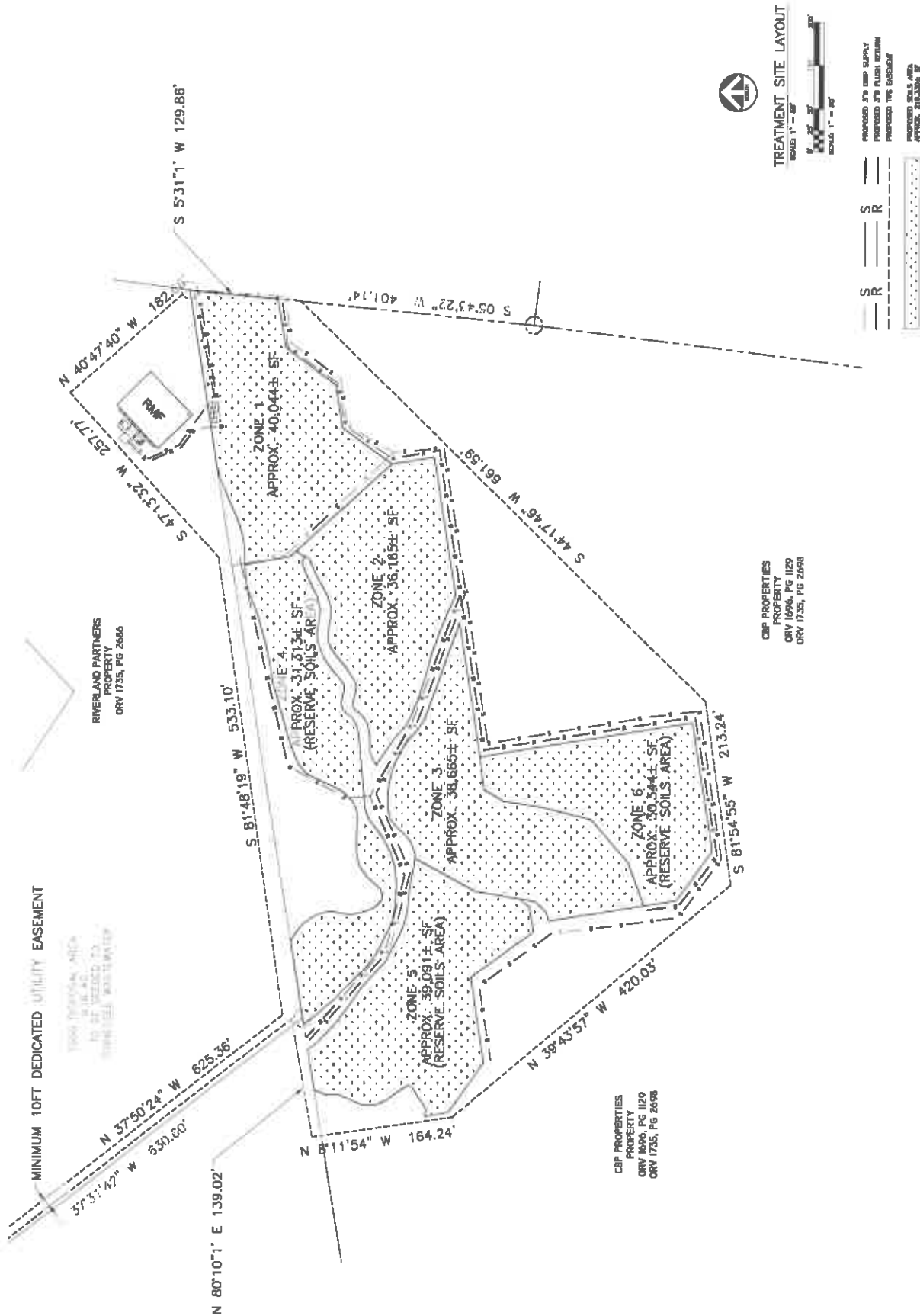
Installation Specifications:

Installation of all components of the wastewater collection system will conform to the specifications of Tennessee Wastewater Systems, Inc.

Installation contractors should contact David Foster at:

david.foster@adenus.com, or at (615) 220-7200 ext. 135 - for a PDF copy of the specifications.





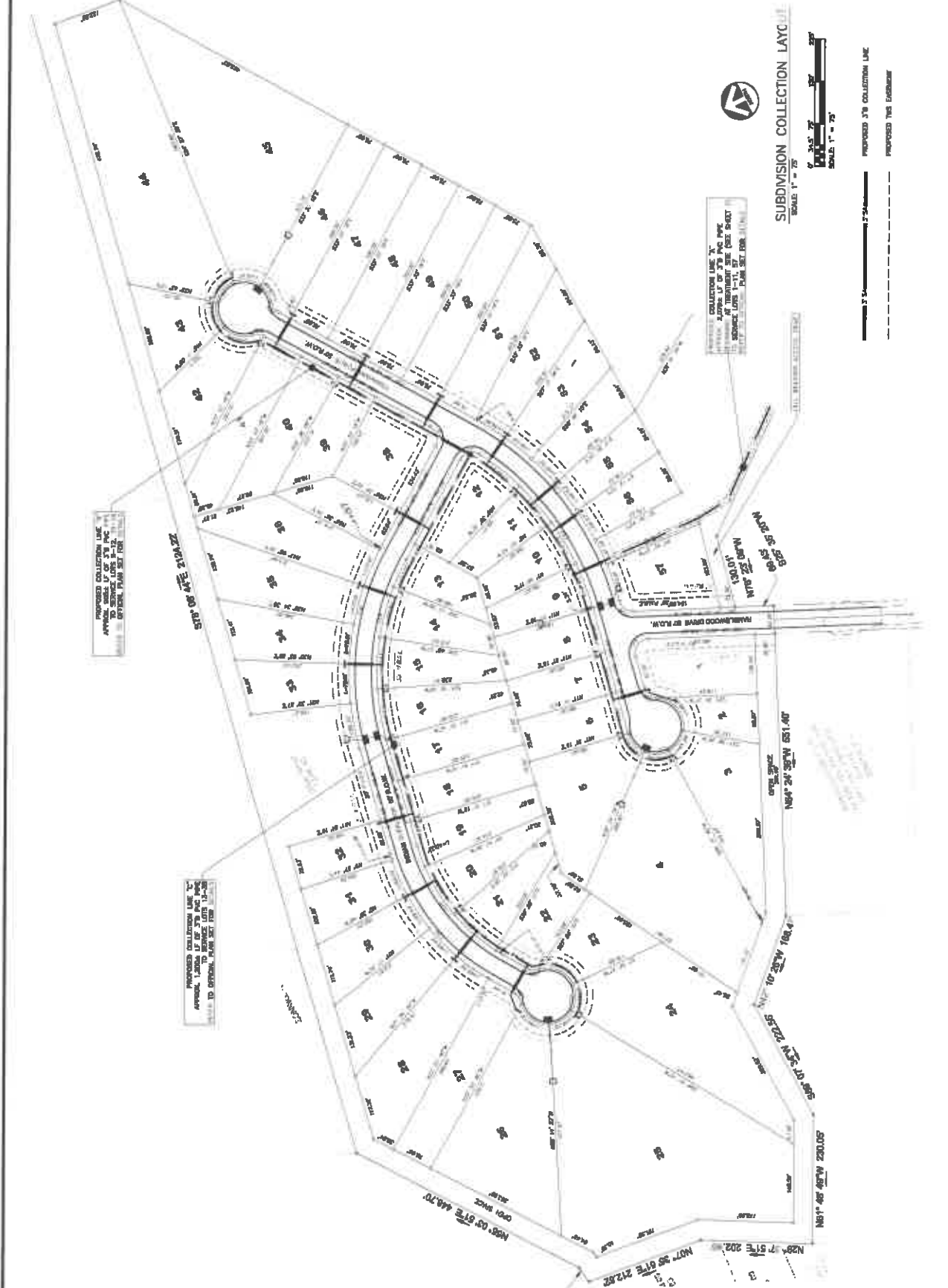
WARRIOTO HILLS TREATMENT FACILITY
SUBDIVISION COLLECTION LAYOUT



PLANS PREPARED BY:

DATE: 05/17/2017
BY: [Signature]

SHEET NO. 4 OF 4



SUBDIVISION COLLECTION LAYOUT
SCALE: 1" = 25'



PROPOSED 3RD COLLECTION LINE
SCALE: 1" = 75'



PROPOSED COLLECTION LINE
APPROVED LAYOUT OF 3RD PDC PDC
APPROVED LAYOUT OF 3RD PDC PDC
APPROVED LAYOUT OF 3RD PDC PDC

PROPOSED COLLECTION LINE
APPROVED LAYOUT OF 3RD PDC PDC
APPROVED LAYOUT OF 3RD PDC PDC
APPROVED LAYOUT OF 3RD PDC PDC

PROPOSED COLLECTION LINE
APPROVED LAYOUT OF 3RD PDC PDC
APPROVED LAYOUT OF 3RD PDC PDC
APPROVED LAYOUT OF 3RD PDC PDC

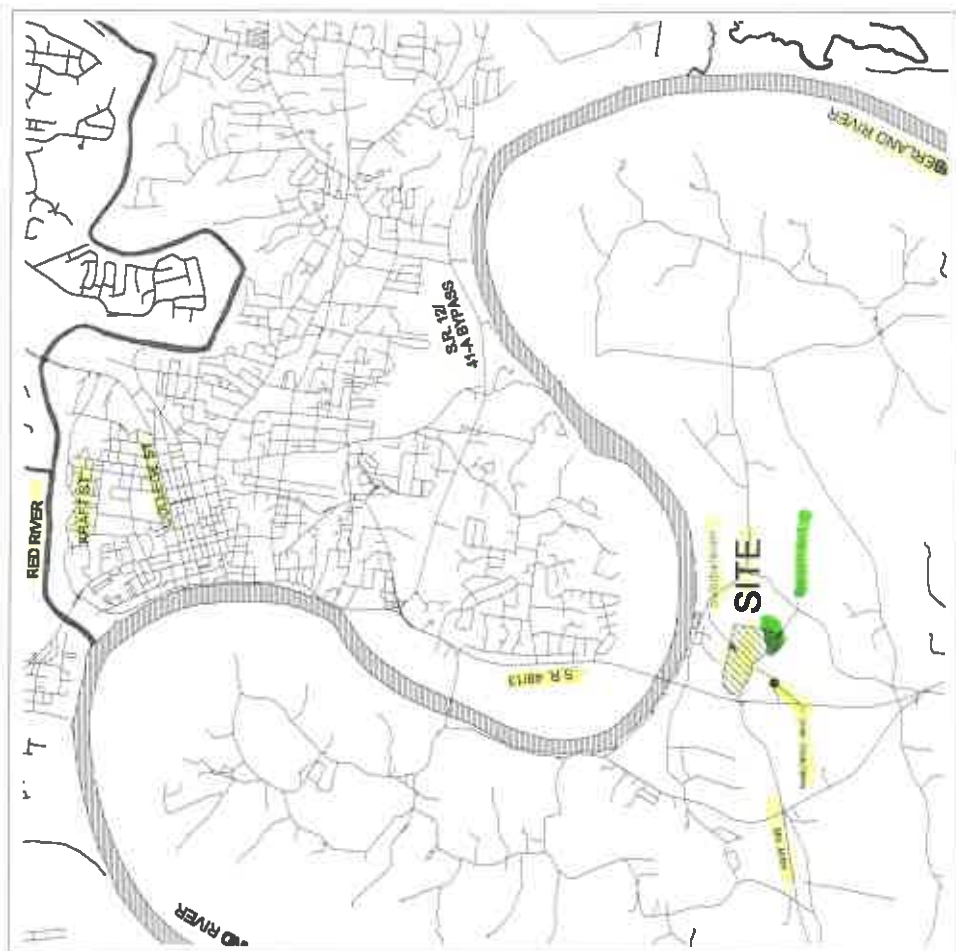
EX. 5D

VICINITY MAP
WARRIOTO HILLS TREATMENT FACILITY
WARRIOTO HILLS SUBDIVISION



PLANS PREPARED BY:

| | | |
|-----|------|----|
| NO. | DATE | BY |
| | | |
| | | |
| | | |



Tennessee Wastewater Systems, Inc.

Organizational Chart

Jeff Ridsen, CEO

Matthew Nicks, President

Thomas Pickney, Secretary

William Pickney, Treasurer

Marshall Fall, CTO

Suzanne Christman, Controller

Billy Dranes, Operations Manager, Middle TN

John Norton, Operations Manager, East TN



State of Tennessee
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

February 11, 2019

Mr. Jeff Ridsen
VP & General Counsel
Tennessee Wastewater Systems, Inc.
e-copy: jeff.ridsen@adenus.com
849 Aviation Pkwy
Smyrna, TN 37167

Subject: Notice of Complete Application and Public Notice Requirements
Permit No. SOP-18024
Tennessee Wastewater Systems, Inc.- Warrioto Hills Treatment Facility
Clarksville, Montgomery County, Tennessee

Dear Mr. Ridsen:

The Division of Water Resources (the division) acknowledges the receipt of a permit application in our office on October 4, 2018. Our review of the SOP permit application showed that you have submitted all the information required to initiate processing of the application. You are advised that this notice of complete application does not imply that the application will be approved or that a permit will be issued. Also, in accordance with rules of the Tennessee Department of Environment and Conservation, Division of Water Resources, Chapter 0400-40-5-.05 (2):

"This provision does not preclude the commissioner from later requesting additional material that subsequent to the notice of completeness is determined to be necessary for permit processing."

If this is an application for a new or expanded discharge, please find attached a template of a public notice you must complete and post for a period of 30 days. This is required in accordance with Chapter 0400-40-5-.06 (1), which states:

"For an individual application for a new or expanded discharge, the applicant shall notify the public of the application by posting a sign near the point of entrance to such facility and within view of a public road. The sign shall contain provisions as specified by the commissioner. The sign shall be of such size that is legible from the public road. Also the sign shall be maintained for at least thirty days following submittal of the application to the division."

If you have questions, please contact the Nashville Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact me at (615) 532-5819 or by E-mail at *Allen.Rather@tn.gov*.

Sincerely,

A handwritten signature in dark ink that reads "Allen Rather". The signature is written in a cursive, slightly slanted style.

Allen Rather
Land-Based Systems

cc: Permit File
Nashville Environmental Field Office

PUBLIC NOTICE OF APPLICATION FOR PERMIT TO DISCHARGE/ DISPOSE OF WASTEWATER

Applicant Name and Address: _____

Permit Tracking Number: _____

Date this Notice was Posted: _____

Wastewater Source, Treatment, and Discharge/Disposal Description: _____

Discharge/Disposal is to/near the following stream: _____

TO WHOM IT MAY CONCERN: The application described above has been submitted for wastewater facility operation and discharge/disposal permit pursuant to The Tennessee Water Quality Act of 1977, TCA 69-3-108. The purpose of this notice is to advise all concerned of the proposal for which a permit is sought and to solicit comments and information necessary to evaluate the probable impact of the activities upon the respective water resources. The decision whether to issue or deny will in part be based upon that evaluation.

Persons wishing to comment on or object to the issuance of a proposed permit are invited to submit comments in writing to the address listed below. The applicant's name and permit number should be referenced. Written statements received on or before the date of expiration of the comment period will become part of the record and will be considered in the determination.

Interested persons may also request in writing that the Division hold a public hearing on any application. The request must be filed within the comment period and must indicate the interest of the person requesting and the reasons why a hearing is warranted. When there is sufficient public interest, the director shall hold a hearing in accordance with Rule 0400-40-5-.06 (12).

After consideration of comments submitted during the public comment period, the hearing record, if any, and the requirements of federal and State law, the director of the Division will make a determination regarding the final action on the permit. Permit applications, supporting documentation, and related comments are available for review and/or copying.

**Division of Water Resources
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102**

Instructions for the Public Notice of Application Sign

This sample Public Notice Sign is being provided for you to use. A Public Notice of Application sign must be displayed for a period of 30 days minimum. The purpose of the sign is to notify the public of its opportunity to comment, object, or to request a public hearing on the proposed permit action.

Pursuant to T.C.A. Rules, Chapter 0400-40-5-.06 (1) and (10), effective July 23, 2004, applicants for new or expanded discharges must notify the public by posting a sign near the point of the proposed facility entrance within view of a public road. The size must be of such size as to be legible from the public road.

It is recognized that it is impracticable print all of the required sign wording at a size that it can be read from the carriage way. Thus, to meet the intent of the rule, only the words "PUBLIC NOTICE" and "APPLICATION TO DISCHARGE/ DISPOSE OF WASTEWATER" must be readable from the carriage way. The remainder of the wording must be legible from the shoulder of the roadway.

Applicants should maintain some proof of sign posting and their compliance with the 30-day minimum posting period. Examples of proof could be dated photographs of the posted sign, an affidavit prepared by a witness of the posted sign, or confirmation by Division field staff.

Please be advised that in addition to this public notice of application, the Division will issue a Public Notice at the time a draft permit is proposed. Persons receiving this mailing include, but are not limited to, the applicant, governmental agencies with jurisdictions over the facility, federal and state agencies with jurisdiction over fish and wildlife resources and historic preservation, and interested persons having asked to be included on the public notice list.

3:23 PM

02/12/19

Accrual Basis

Tennessee Wastewater Systems, Inc.

Balance Sheet

As of December 31, 2018

| | Dec 31, 18 |
|--|---------------------|
| ASSETS | |
| Current Assets | |
| Checking/Savings | |
| 131 - Cash | |
| 131.1 - AmSouth - CD | 1,403.65 |
| 131.5 - Pinnacle CIAC (010294705) | 959.83 |
| 131.7 - Pinnacle Checking | 2,841.84 |
| 131.14 - FirstBank - Checking | 495,998.48 |
| 131.15 - FirstBank - Rider Depository | 64,816.80 |
| 131.16 - FirstBank - CIAC | 709,959.03 |
| Total 131 - Cash | 1,275,777.73 |
| Total Checking/Savings | 1,275,777.73 |
| Accounts Receivable | |
| 141 - Customer A/R | |
| 141.1 - Sewer Service | |
| 141.12 - East TN | 141,267.65 |
| 141.1 - Sewer Service - Other | 231,805.12 |
| Total 141.1 - Sewer Service | 372,872.77 |
| 143 - Bad Debt Reserve | 244,860.96 |
| 141 - Customer A/R - Other | 69,148.00 |
| Total 141 - Customer A/R | 686,881.73 |
| Total Accounts Receivable | 686,881.73 |
| Other Current Assets | |
| Allowance for Bad Debt | -230,422.63 |
| 99.99 - Customer Count Offset | |
| 99.01 - Customer Count - Rate Class 1 | 22,455.00 |
| 99.02 - Customer Count - Rate Class 2 | 424.00 |
| 99.03 - Customer Count - Rate Class 5 | 804.00 |
| 99.04 - Customer Count - Rate Class 6 | 1,894.00 |
| 99.05 - Customer Count - Rate Class 9 | 2,398.00 |
| 99.06 - Customer Count - Comm Cabin | 8,363.00 |
| 99.07 - Customer Count - Comm w/ Food | 294.00 |
| 99.08 - Customer Count - Comm Nonfood | 512.00 |
| 99.99 - Customer Count Offset - Other | -37,144.00 |
| Total 99.99 - Customer Count Offset | |
| 151.00 - Plant Material & Supplies | 83,895.69 |
| 133 - Deposit - Williamson County | 5,000.00 |
| 174 - Misc. Current and Accrued Asset | |
| 174.2 - Construction Pass-Maple Green | -13,693.01 |
| Total 174 - Misc. Current and Accrued Asset | -13,693.01 |
| Total Other Current Assets | -155,219.95 |
| Total Current Assets | 1,807,439.51 |
| Fixed Assets | |
| 105.0 - Construction In Process | |
| 105.1 - Smoky Village | 14,167.34 |
| 105.2 - Maple Green | 65,365.24 |
| 105.3 - Cedar Hill | 135,112.55 |
| 105.0 - Construction In Process - Other | 418,210.42 |
| Total 105.0 - Construction In Process | 630,855.55 |
| 101 - Utility Plant In Service | |
| 354 - Structures & Improv - Capital | 18,566.95 |
| 360.6 - Sewer Force Main - Capital | 93,346.43 |
| 353.5 - Land - Capital Asset | 41,830.50 |
| 353 - Land | 2,772,270.89 |

3:23 PM
02/12/19
Accrual Basis

Tennessee Wastewater Systems, Inc.
Balance Sheet
As of December 31, 2018

| | Dec 31, 18 |
|--|----------------------|
| 360 • Collection Sewers-Force | 210,000.00 |
| 361 • Collection Sewers-Gravity | 2,371,714.00 |
| 380 • Treatment and Disposal Equip | 17,309,794.72 |
| 390 • Office Furniture & Misc. Equip | 271,184.69 |
| 391 • Transportation Equipment | 379,259.27 |
| Total 101 • Utility Plant in Service | 23,467,967.35 |
| 108 • Accum. Deprec.-Utility Plant | -9,126,625.54 |
| 108.1 • Accum. Deprec.- Equip | -340,868.14 |
| 108.2 • Accum. Deprec.Cap. - Buildings | -1,053.99 |
| 108.3 • Accum. Deprec.Cap. - Force Main | -2,594.89 |
| Total Fixed Assets | 14,627,680.34 |
| Other Assets | |
| Deferred Tax Benefits | 600.29 |
| Total Other Assets | 600.29 |
| TOTAL ASSETS | 16,435,720.14 |
| LIABILITIES & EQUITY | |
| Liabilities | |
| Current Liabilities | |
| Accounts Payable | |
| 231 • Accounts Payable | 149,681.08 |
| Total Accounts Payable | 149,681.08 |
| Other Current Liabilities | |
| 238.12 • Tax from CIAC | 3,828.00 |
| 2110 • Direct Deposit Liabilities | 0.01 |
| 241 • Misc. Current & Accrued Liab. | |
| 241.1 • Payroll Liabilities | |
| 241.1.6 • Aflac Payable | 89.72 |
| 241.1.6 • Workers Comp Payable | 800.47 |
| 241.1.1 • SUI | 37.87 |
| 241.1.3 • FUTA | 45.45 |
| 241.1.4 • Simple IRA Payable | 1,847.86 |
| Total 241.1 • Payroll Liabilities | 2,831.37 |
| Total 241 • Misc. Current & Accrued Liab. | 2,831.37 |
| 242 • Intercompany Liabilities | |
| 242.1 • Intercompany-Adenus Group | -492,168.46 |
| 242.10 • Intercompany-ALWW | -5,475.02 |
| 242.5 • Intercompany-Adenus Operations | 2,538,118.30 |
| 242.6 • Adenus Technologies | 191,534.25 |
| 242.7 • Intercompany-Commonwealth | -2,074.76 |
| 242.9 • Intercompany Cash | -1,487,957.74 |
| Total 242 • Intercompany Liabilities | 741,976.57 |
| Total Other Current Liabilities | 748,633.95 |
| Total Current Liabilities | 898,315.03 |
| Long Term Liabilities | |
| 232 • Notes Payable | |
| 232.3 • Wilson B&T (2) 2016 Chevy Truck | 18,859.62 |
| 232.6 • First Bank - Truck | 3,847.89 |
| 232.7 • First Bank - Mini X | 14,621.33 |
| 232.8 • First Bank - Truck - ETN | 8,395.63 |
| 232.9 • Wilson B&T - (2) Skid Steers | 63,481.56 |
| 232.10 • Wilson B&T - ETN Truck | 31,340.27 |
| 232.11 WB&T - Truck | 33,591.42 |

3:23 PM

02/12/19

Accrual Basis

Tennessee Wastewater Systems, Inc.

Balance Sheet

As of December 31, 2018

| | Dec 31, 18 |
|---|----------------------|
| 232.12 • FB Environmental Loan - RR | 193,148.79 |
| Total 232 • Notes Payable | 367,286.51 |
| 265 • Misc. Operating Reserves | |
| 265.1 • Inspection Costs | 129,515.00 |
| 265.2 • Sewer Sys/Comp Repl - Post 2006 | -128,579.51 |
| 265.4 • Eudaily Reserve | 53,855.25 |
| Total 265 • Misc. Operating Reserves | 56,790.74 |
| Total Long Term Liabilities | 424,077.25 |
| Total Liabilities | 1,322,392.28 |
| Equity | |
| 215 • Retained Earnings | 272,551.23 |
| 271 • Cont. In Aid of Construction | |
| 271.1 • CIAC - Williamson County | 1,519,200.00 |
| 271.5 • CIAC -ETN Capital | 28,020.00 |
| 271 • Cont. In Aid of Construction - Other | 22,604,451.72 |
| Total 271 • Cont. In Aid of Construction | 24,151,671.72 |
| 272 • Accum. Amort. on CIAC | -9,143,048.91 |
| Net Income | -167,846.18 |
| Total Equity | 15,113,327.86 |
| TOTAL LIABILITIES & EQUITY | 16,435,720.14 |

3:22 PM
02/12/19
Accrual Basis

Tennessee Wastewater Systems, Inc.
Profit & Loss
January through December 2018

| | Jan - Dec 18 |
|--|--------------|
| Ordinary Income/Expense | |
| Income | |
| 400 · Operating Revenues | |
| 521 · Flat Rate Revenues | |
| 521.1 · Residential-Flat Sewer | |
| 521.1.1 · Residential Rate 1 | 801,467.32 |
| 521.1.2 · Residential Rate 2 | 14,964.27 |
| 521.1.3 · Residential Rate 5 | 30,600.90 |
| 521.1.4 · Residential Rate 6 | 58,923.27 |
| 521.1.5 · Residential Rate 9 | 150,175.19 |
| 521.1 · Residential-Flat Sewer - Other | -12.27 |
| Total 521.1 · Residential-Flat Sewer | 1,056,118.68 |
| 521.2 · Commercial Sewer | |
| 521.2.1 · Commercial Cabin | 454,754.43 |
| 521.2.2 · Commercial w/ Food | 219,946.94 |
| 521.2.3 · Commercial Nonfood | 86,821.73 |
| 521.2 · Commercial Sewer - Other | |
| Total 521.2 · Commercial Sewer | 761,523.10 |
| Total 521 · Flat Rate Revenues | 1,817,641.78 |
| 536 · Other Wastewater Revenues | |
| 536.1 · Sewer Access Fees | 173,122.72 |
| 536.3 · Operations & Maintenance | 362.57 |
| 536.4 · Billing & Collections | -160.87 |
| 536.5 · Bonding | 4,181.83 |
| 536.6 · Franchise Income | 3,389.55 |
| 536.7 · Bloxide | |
| 536.9 · Penalty Fees | 14,651.23 |
| 536.10 · Disconnect/Reconnect Charges | 3,689.20 |
| 536.12 · Legal Expense Rate Rider | 7,473.15 |
| 536.13 · Environmental Repairs Rider | 61,953.28 |
| 536 · Other Wastewater Revenues - Other | 60.00 |
| Total 536 · Other Wastewater Revenues | 268,722.46 |
| Total 400 · Operating Revenues | 2,086,364.24 |
| 421 · Nonutility Income | |
| 421.5 · Developer Income | 206,250.00 |
| Total 421 · Nonutility Income | 206,250.00 |
| Total Income | 2,292,614.24 |
| Gross Profit | 2,292,614.24 |
| Expense | |
| 401 · Operating Expenses | |
| 701.6 · Salary & Wages - Construction | 67,303.56 |
| 701 · Salaries and Wages - Employees | 574,853.72 |
| 704 · Employee Benefits | |
| 704.2 · Life Insurance | 2,091.02 |
| 704.1 · Workers Compensation | 16,198.48 |
| Total 704 · Employee Benefits | 18,287.50 |
| 705 · Simple IRA | 14,610.54 |
| 710 · Purchased Wastewater Treatment | 118,597.48 |
| 715 · Purchased Power | 160,663.11 |
| 716 · Telemetry Monitoring | 173,192.27 |
| 718 · Bloxide | 3,680.00 |
| 720 · Materials and Supplies | 190,518.70 |
| 731 · Contractual Svc - Professional | 25,594.09 |
| 735 · Contractual Svc - Testing | 7,932.30 |

3:22 PM

02/12/19

Accrual Basis

Tennessee Wastewater Systems, Inc.
Profit & Loss
 January through December 2018

| | Jan - Dec 18 |
|---|---------------------|
| 736 · Contractual Services | |
| 736.02 · Contract Maintenance | 12,247.24 |
| 736.03 · Contractual Svc | 1,505.00 |
| 736.04 · Subcontract Work | 1,700.00 |
| 736.08 · Lawn Mowing | 28,082.60 |
| 736.10 · One-Call Expenses | 5,831.15 |
| 736.12 · AUG - MGMT Fees | 321,256.63 |
| 736.13 · IT Expenses | 74,236.35 |
| Total 736 · Contractual Services | 444,840.97 |
| 740 · Rent | 60,945.00 |
| 750 · Transportation Expense | |
| 750.3 · Registration Renewal | 617.65 |
| 750.1 · Fuel | 66,022.50 |
| 750.2 · Vehicle Maintenance | 25,954.53 |
| Total 750 · Transportation Expense | 92,594.68 |
| 755 · Insurance | |
| 755.10 · Dental Insurance | 2,255.45 |
| 755.8 · Auto Insurance | 18,330.95 |
| 755.9 · Health Insurance | 10,659.97 |
| 755 · Insurance - Other | 6,916.03 |
| Total 755 · Insurance | 38,162.40 |
| 765 · Regulatory Commission Exp. | |
| 765.3 · Inspection Fee | 8,279.28 |
| Total 765 · Regulatory Commission Exp. | 8,279.28 |
| 770 · Bad Debt | 7,875.07 |
| 775 · Miscellaneous Expenses | |
| 775.21 · Website and Internet Hosting | 726.21 |
| 775.27 · Equipment Maintenance | 7,177.18 |
| 775.26 · Equipment Rental | 19,405.66 |
| 775.25 · Small Equipment Purchase | 329.58 |
| 775.1 · Telephone | 10,315.09 |
| 775.10 · Office Supplies | 1,033.90 |
| 775.11 · Letter of Credit - Fees | |
| 775.111 · LC Fee - State Wide | 10,500.00 |
| Total 775.11 · Letter of Credit - Fees | 10,500.00 |
| 775.12 · Depreciation Expense | 124,529.88 |
| 775.2 · Postage | 9,939.26 |
| 775.20 · Software Licenses | 23,132.50 |
| 775.3 · Licenses & Permits | 43,246.18 |
| 775.4 · Membership Dues | 40.00 |
| 775.6 · Franchise Fees | 3,382.73 |
| 775 · Miscellaneous Expenses - Other | 1,800.03 |
| Total 775 · Miscellaneous Expenses | 255,558.20 |
| 401 · Operating Expenses - Other | 314.41 |
| Total 401 · Operating Expenses | 2,261,703.28 |
| 408 · Taxes Other than Income | |
| 408.1 · Property Taxes | 59,155.14 |
| 408.3 · Franchise & Excise | 58,000.00 |
| 408.12 · Payroll Taxes | 49,702.65 |
| Total 408 · Taxes Other than Income | 166,857.79 |
| 426 · Misc. Nonutility Expenses | |
| 426.91 · Lodging | 155.07 |
| 426.9 · Meals and Entertainment | 6,236.67 |

3:22 PM

02/12/19

Accrual Basis

Tennessee Wastewater Systems, Inc.

Profit & Loss

January through December 2018

| | Jan - Dec 18 |
|--|---------------------|
| 426.1 • Dues and Subscriptions | 2,580.33 |
| 426.2 • Bank & NSF Fees | 8,288.72 |
| 426.3 • Miscellaneous | 7,246.61 |
| 426.7 • Construction Expense | 1,200.00 |
| 426 • Misc. Nonutility Expenses - Other | 362.59 |
| Total 426 • Misc. Nonutility Expenses | 26,067.99 |
| 427 • Interest Expense | |
| 427.2 • Loan Interest | 10,451.36 |
| Total 427 • Interest Expense | 10,451.36 |
| Total Expense | 2,485,080.42 |
| Net Ordinary Income | -172,486.18 |
| Other Income/Expense | |
| Other Income | |
| 421.6 • Misc. Income | 4,620.00 |
| Total Other Income | 4,620.00 |
| Net Other Income | 4,620.00 |
| Net Income | -167,846.18 |

Tennessee Wastewater Systems, Inc.
Statement of Cash Flows
January through December 2018

| | Jan - Dec 18 |
|---|-------------------|
| OPERATING ACTIVITIES | |
| Net Income | -167,846.18 |
| Adjustments to reconcile Net Income to net cash provided by operations: | |
| 141 - Customer A/R | -32,222.25 |
| 141 - Customer A/R:141.1 - Sewer Service | 87,189.49 |
| 141 - Customer A/R:141.1 - Sewer Service:141.12 - East TN | 163,254.38 |
| 141 - Customer A/R:143 - Bad Debt Reserve | -244,860.97 |
| 99.99 - Customer Count Offset | 37,144.00 |
| 99.99 - Customer Count Offset:99.01 - Customer Count - Rate Class 1 | -22,455.00 |
| 99.99 - Customer Count Offset:99.02 - Customer Count - Rate Class 2 | -424.00 |
| 99.99 - Customer Count Offset:99.03 - Customer Count - Rate Class 5 | -804.00 |
| 99.99 - Customer Count Offset:99.04 - Customer Count - Rate Class 6 | -1,894.00 |
| 99.99 - Customer Count Offset:99.05 - Customer Count - Rate Class 9 | -2,398.00 |
| 99.99 - Customer Count Offset:99.06 - Customer Count - Comm Cabin | -8,363.00 |
| 99.99 - Customer Count Offset:99.07 - Customer Count - Comm w/ Food | -294.00 |
| 99.99 - Customer Count Offset:99.08 - Customer Count - Comm Nonfood | -512.00 |
| 151.00 - Plant Material & Supplies | 29,990.13 |
| 174 - Misc. Current and Accrued Asset:174.2 - Construction Pass-Maple Green | 15,884.51 |
| 174 - Misc. Current and Accrued Asset:174.5 - UMS Undeposited Funds | 0.23 |
| 174 - Misc. Current and Accrued Asset:174.6 - Prepaid Expenses | 6,546.41 |
| 231 - Accounts Payable | -32,268.23 |
| 236.12 - Tax from CIAC | 3,826.00 |
| 2110 - Direct Deposit Liabilities | 0.01 |
| 241 - Misc. Current & Accrued Liab.:241.1 - Payroll Liabilities:241.1.8 - Affec Payable | 99.72 |
| 241 - Misc. Current & Accrued Liab.:241.1 - Payroll Liabilities:241.1.5 - Workers Comp Payable | -352.41 |
| 241 - Misc. Current & Accrued Liab.:241.1 - Payroll Liabilities:241.1.1 - SUI | -30.03 |
| 241 - Misc. Current & Accrued Liab.:241.1 - Payroll Liabilities:241.1.2 - Payroll Taxes Payable | 550.58 |
| 241 - Misc. Current & Accrued Liab.:241.1 - Payroll Liabilities:241.1.3 - FUTA | -7.81 |
| 241 - Misc. Current & Accrued Liab.:241.1 - Payroll Liabilities:241.1.4 - Simple IRA Payable | 286.08 |
| 242 - Intercompany Liabilities:242.1 - Intercompany-Adenus Group | 248,857.41 |
| 242 - Intercompany Liabilities:242.5 - Intercompany-Adenus Operations | 74,304.16 |
| 242 - Intercompany Liabilities:242.8 - Adenus Technologies | -499.25 |
| 242 - Intercompany Liabilities:242.9 - Intercompany Cash | -20,000.00 |
| Net cash provided by Operating Activities | 131,511.88 |
| INVESTING ACTIVITIES | |
| 105.0 - Construction In Process | 71,237.47 |
| 105.0 - Construction In Process:105.1 - Smoky Village | -14,167.34 |
| 105.0 - Construction In Process:105.2 - Maple Green | -85,365.24 |
| 105.0 - Construction In Process:105.3 - Cedar Hill | -135,112.55 |
| 101 - Utility Plant In Service:363 - Land | -59,327.89 |
| 101 - Utility Plant In Service:390 - Office Furniture & Misc. Equip | -2,578.63 |
| 101 - Utility Plant In Service:391 - Transportation Equipment | -57,770.49 |
| 108 - Accum. Deprec.-Utility Plant | 650,744.37 |
| 108.1 - Accum. Deprec.- Equip | 210,532.08 |
| 108.2 - Accum. Deprec.Cap. - Buildings | 742.68 |
| 108.3 - Accum. Deprec.Cap. - Force Main | 1,866.93 |
| Net cash provided by Investing Activities | 600,801.39 |
| FINANCING ACTIVITIES | |
| 232 - Notes Payable:232.3 - Wilson B&T (2) 2016 Chevy Truck | -27,309.52 |
| 232 - Notes Payable:232.4 - Wilson B&T - (2) 2014 F250 | -13,705.95 |
| 232 - Notes Payable:232.5 - James A Lyon - Dyer's Hollow | -9,846.88 |
| 232 - Notes Payable:232.6 - First Bank - Truck | -8,996.14 |
| 232 - Notes Payable:232.7 - First Bank - Mini X | -18,923.88 |
| 232 - Notes Payable:232.8 - First Bank - Truck - ETN | -9,720.95 |
| 232 - Notes Payable:232.9 - Wilson B&T - (2) Sidd Steers | -24,161.68 |
| 232 - Notes Payable:232.10 - Wilson B&T - ETN Truck | -9,686.71 |
| 232 - Notes Payable:232.11 WB&T - Truck | 33,591.42 |
| 232 - Notes Payable:232.12 - FB Environmental Loan - RR | 193,148.79 |
| 265 - Misc. Operating Reserves:265.2 - Sewer Sys/Comp Repl - Post 2006 | 273,685.33 |
| 265 - Misc. Operating Reserves:265.4 - Eudally Reserve | -64,064.88 |
| 271 - Cont. In Aid of Construction:271.1 - CIAC - Williamson County | 777,800.00 |
| 271 - Cont. In Aid of Construction:271.5 - CIAC -ETN Capital | 14,420.00 |

3:27 PM

02/12/19

Tennessee Wastewater Systems, Inc.
Statement of Cash Flows
January through December 2018

| | |
|--|----------------------------|
| | Jan - Dec 18 |
| 272 - Accum. Amort. on CIAC | -739,356.18 |
| Net cash provided by Financing Activities | 388,872.77 |
| Net cash increase for period | 1,099,186.04 |
| Cash at beginning of period | 176,591.69 |
| Cash at end of period | <u>1,275,777.73</u> |

**AFFIDAVIT
OF
POWERS AND ATKINS, LLC
AND
RIVERLAND PARTNERS,
A TENNESSEE GENERAL PARTNERSHIP**

WHEREAS, the members, Robert S. Powers and J. Michael Atkins of Powers and Atkins, LLC, (being hereinafter referred to individually as "Member" and collectively as the "Members" and the Partners, Bryce Allen Powers and John Andrew Wyatt, III of Riverland Partners, a Tennessee General Partnership (being hereinafter referred to individually as "Partner" and collectively as the "Partners" do hereby state:

NOW, THEREFORE, BE IT AFFIRMED, the following statements:

1. The above listed Members and Partners of Powers and Atkins, LLC and Riverland Partners are the developers of the proposed Warrioto Hill Subdivision.
2. The Developers have engaged Tennessee Waste Water, Inc. to provide sanitary sewer service to the proposed Subdivision.
3. The Developers will convey, fee simple via Warranty Deed, the property/land for the drip fields and the treatment plant associated with the sanitary sewer system to Tennessee Waste Water, Inc. upon the signing of the Final Plat of the Subdivision.
4. Tennessee Waste Water, Inc. will be provided entitlement to the wastewater systems at the signing of the Final Plat of the Subdivision.

Dated this 13th day of February, 2019.


Powers and Atkins, LLC

By: Robert S. Powers, Member


Riverland Partners, TN GP

By: Bryce A. Powers, Partner

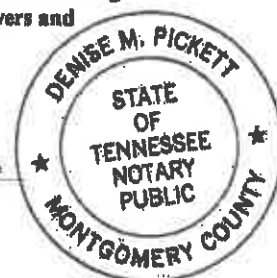
**STATE OF TENNESSEE
COUNTY OF MONTGOMERY**

Before me, a Notary Public in and for said County and State, the within named personally appeared ROBERT S. POWERS and BRYCE A. POWERS, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath acknowledged the execution of the within instrument for the purpose contained therein, and who further acknowledge that they are Members and Partners as stated above and are authorized to execute this documents on behalf of Powers and Atkins, LLC and Riverland Partners, a TN GP.

Witness my hand and official seal this the 13th day of February 2019.

My Commission expires: 8-16-2022


Notary Public



CONSTRUCTION - DESIGN / BUILD AGREEMENT

THIS DESIGN / BUILD AGREEMENT (this "Agreement") is made and entered into as of this 14th day of February 2018 (the "Effective Date"), by and between Echo Development, a Tennessee General Partnership ("Developer"), and Adenus Solutions Group, LLC, a Tennessee Limited Liability Company ("Contractor").

RECITALS:

WHEREAS, Developer is the owner of a certain tract of real property (the "Property") consisting of approximately 44.07 acres of unimproved land, located at Hardison Road & Oak Trail Drive in Columbia, Maury County, Tennessee, which Property is more particularly identified on the Legal Description attached to this Agreement as Exhibit A, and depicted on the Site Map attached to this Agreement as Exhibit B;

WHEREAS, Developer desires and intends: (i) to develop (1) certain wastewater sewer collection, treatment, and disposal system (the "System") on the Property (the development of the System; hereinafter, the "Project"), the location, configuration, scope, size and description of which System and Project are more particularly detailed and set forth on the Plans and Specifications attached to this Agreement as Exhibit C; and (ii) to engage Contractor to provide to Developer certain design, engineering, construction, and development services (as more particularly described and identified in Section 1 below, the "Services") with respect to the Project; and

WHEREAS, Contractor desires and intends to provide the Services for the consideration and upon and subject to the terms, provisions and conditions set forth in this Agreement, and

WHEREAS Developer and Contractor each desire and intend to set forth their understandings and agreements with respect to the Project in this Agreement;

AGREEMENT:

NOW, THEREFORE, for and in consideration of the sum of One Hundred Twenty Two Thousand Four Hundred and 00/100 Dollars (\$ 122,400.00), the foregoing, the terms, provisions and conditions set forth below, and of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Developer and Contractor hereby agree as follows:

1) **SERVICES.** Contractor agrees to perform, provide or cause to be performed or provided the permitting, engineering and design, construction, and coordination of the Project as follows:

- a) **Permitting:** Coordinate and receive permits from the State of Tennessee ("State").
- b) **Engineering and Design:** Design the System and receive approval of the System from the State and Tennessee Wastewater Systems Inc., as per the Utility specifications.

- c) **Construction Services:** Construct the System per the plans approved by the State.
- Work:** Contractor shall furnish all labor, supervision, materials, equipment, tools, scaffolding, machinery, transportation, and supplies necessary to complete the installations and improvements (all of the foregoing, the "Work") shown and/or described in:
- (i) those certain plans, dated as of _____, drafted by _____, and attached hereto as Exhibit C; and
 - (ii) those certain specifications, dated as of _____, entitled "Tennessee Wastewater Systems, Inc. - Rules and Regulations Governing the Design and Installation of Effluent Collection Systems and Recirculating Sand Filters," and attached hereto as Exhibit D.

The Work shall be performed in accordance with such plans and specifications in a good and workmanlike manner, shall be of the best quality, and shall meet all industry standards, and all material and equipment used in the Work shall be new and the best of their respective kinds, except as otherwise expressly specified or agreed in writing. Contractor warrants that the equipment manufactured by it shall be free from defects in material and workmanship arising from normal usage for a period of one (1) year from delivery of said equipment, or if installed by Contractor, for a period of one (1) year from installation. Contractor warrants that for equipment furnished and/or installed but not manufactured by Contractor, Contractor will extend the same warranty terms and conditions which Contractor receives from the manufacturer of said equipment. For equipment installed by Contractor, if Owner provides written notice to Contractor of any such defect within thirty (30) days after the appearance or discovery of such defect, Contractor shall, at its option, repair or replace the defective equipment. These warranties do not extend to any equipment which has been repaired by others, abused, altered or misused, or which has not been properly and reasonably maintained. THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THOSE OF MERCHANTABILITY AND FITNESS FOR A SPECIFIC PURPOSE, AND MAY BE PASSED THROUGH TO THE UTILITY.

- d) **Acceptance:** Guarantee acceptance of the system by Tennessee Wastewater Systems, Inc. and passing of the final inspection by the State, and any other applicable agencies.
- e) **General Coordination:** As required and mutually agreed.
- f) **No Liens:** Contractor shall complete the Work in accordance with the Plans and Specifications and the Work shall be free of any laborers', materialmens', mechanics', or any other liens on any part of the Work and Contractor shall not permit any such lien to be filed or otherwise imposed on any part of the Work. In the event any such lien is filed against the Work, Contractor shall promptly cause such lien to be discharged or in lieu thereof file a bond or other security for the payment of such lien in form and amount satisfactory to Developer.

2) COMPENSATION.

a) **Payment for Services.** Developer and Contractor agree that Contractor will be paid for providing the Services in phases according to the schedule below in 2b.

b) **Schedule of Payment.** Developer will pay Contractor according to the following schedule:

a. \$ 30,600.00 due 10 days prior to the start of construction of the treatment facility

b. \$ 61,200.00 due at 50% complete

c. \$ 30,600.00 due within 15 days of approval and acceptance of the Work by Tennessee Wastewater Systems, Inc.

3) **DEVELOPER RESPONSIBILITY.** Developer agrees that the following are specifically the financial responsibilities and obligations of Developer and agrees to perform the following as specified by Contractor:

a) **Site Assessment.** Developer will provide Contractor with the following prior to any of the Services being rendered:

i) 2" Interval Topographic Survey prepared by Registered Surveyor in the State of Tennessee, Extra High Intensity Soils Map prepared by a Certified Soil Scientist in the State of Tennessee, Boundary Survey and Preliminary Plat of the above-mentioned project, and any other relative site assessment information as required.

ii) N/A Other (specify) _____

b) **Site Condition.** Developer is responsible to stake the boundaries of "construction activity" and areas that are soil mapped for the System and maintain the grid staking references until construction activity has begun. Developer must provide a clean (mowed, cleared, etc.) area for construction activity, as determined by Contractor. Contractor will clear RSP footprint and wooded drip areas.

c) **Access Road.** Developer is responsible for properly constructing and maintaining an access road, to include any permanent or temporary bridges or creek crossings, for construction activities on the Property and with respect to the Project that is capable of accommodating 80+ triple axle dump trucks. This access road must be constructed and passable for the intended purpose prior to the Contractor starting the Work. This access road is to be maintained by Developer until such time that Tennessee Wastewater Systems, Inc. accepts the system.

d) **Electrical Service.** Developer is responsible for providing Single Phase, 220V service (200-amp service) to the Project, as designated on the Site Map and/or on the site plan to be prepared by Contractor, which electrical service shall be underground.

c) **Amenities.** Developer is financially responsible for any upgrades/amenities that are not specified as general construction activity according to the treatment site plan to be prepared by Contractor (e.g., Vinyl fencing, landscaping, custom brick/block work, etc.). Contractor will install four (4) foot high chain link fence around primary drip field disposal areas.

f) **Collection System.** Developer is responsible for the installation of any and all aspects of the sewer collection system, to include the installation of any required Pump Stations, including excavation, plumbing, electrical service, setting any required meters and control panels, and finished grading. Developer agrees to install the forcemain from the outlet of any Pump Station(s) installed by the Developer, to the inlet of the Treatment Facility.

4) REPRESENTATIONS, WARRANTIES AND COVENANTS OF DEVELOPER.
Developer represents, warrants and covenants to, for and with Contractor as follows:

- a) Developer is a Tennessee General Partnership duly organized and validly existing under the laws of the State of Tennessee and is authorized to do business in the State of Tennessee and is legally entitled to own and lease its properties and to carry on its business as and in the places where such properties (including the Property) are now owned or operated;
- b) Developer is the equitable owner of the Property, which has not been conveyed, either a fee simple interest or leasehold interest, in whole or in part, to any other party, all contingent upon closing of the Property by the Developer;
- c) Developer has the authority to execute this Agreement and perform its obligations hereunder, and the execution of this Agreement and performance of any duties hereunder will not conflict with, result in a breach by, constitute a default under or accelerate the performance provided by the terms of any law, or any rule or regulation of any governmental agency or authority or in any judgment, order, or decree of any court or other governmental agency to which Developer may be subject, any contract, agreement or instrument to which Developer is a party or by which Developer is bound or committed or constitute an event, which, with a lapse of time, action by a third-party and/or giving of notice, could result in the default under any of the foregoing or result in the creation of any lien, charge, or encumbrance upon any of the assets or properties of Developer;
- d) Developer shall cooperate with Contractor in Contractor's performance of its obligations under this Agreement;
- e) Developer shall deliver to Contractor copies of all notices and other material information relating to the Project or any portion thereof promptly after the receipt thereof by Developer;
- f) Developer shall pay compensation to Contractor at the times and in the manner set forth above; and

- g) Developer shall duly comply with and perform in all material respects the terms and provisions on its part to be complied with or to be performed under this Agreement.
- 5) **DEFAULT OF DEVELOPER or CONTRACTOR.** Any one or more of the following events shall constitute an "Event of Default" by Developer or Contractor:
- a) If Developer or Contractor fails to comply with or perform in any material respect any of the terms and provisions on its part to be complied with or to be performed under this Agreement;
 - b) If any one or more of the representations, warranties and/or covenants set forth above shall become untrue or be breached; and/or
 - c) If Developer or Contractor commits a fraud, makes a material misrepresentation, or commits an action involving gross negligence or willful misconduct in connection with its duties or obligations under this Agreement.
- 6) **REMEDIES IN EVENT OF DEFAULT.** Upon the occurrence of an Event of Default which remains uncured by Developer for a period of more than five (5) days, Contractor shall have the following rights:
- a) To terminate this Agreement immediately upon written notice to Developer and to receive immediate payment for all Services performed as of such date (including all reimbursables and incurred expenses [including with respect to ordered materials]);
 - b) To sue for monetary damages and/or injunctive relief; and/or
 - c) To pursue any other remedy available at law or in equity.
- 7) **REUSE OF DOCUMENTS.** All documents including any drawings and/or specifications prepared by Contractor relative to this Agreement are instruments of service. They are not intended or represented to be suitable for reuse by Developer or others on extensions of the Project or on any other project, and there shall be no reuse of any kind whatsoever without the prior written consent of Contractor (which consent may be withheld by Contractor in its sole and absolute discretion). Any reuse without written consent by Contractor is prohibited and will be at Developer's sole risk and without liability or legal exposure to Contractor; and Developer shall indemnify and hold harmless Contractor from all claims, damages, losses and expenses including attorney's fees arising out of or resulting therefrom. Any verification or adaptation will entitle Contractor to further compensation at rates to be agreed upon by Contractor, and any breach of this section by Developer will entitle Contractor to pursue its legal and equitable remedies against Developer for such breach. The provisions of this section shall survive completion of the Project and/or expiration or termination of this Agreement.
- 8) **ACCESS TO THE SITE/JOBSITE SAFETY.** Unless otherwise stated, Contractor will have access to the Property for activities necessary for the performance of the Services. Developer understands and agrees that Contractor is not responsible, in any way, for the

means, methods, sequence, procedures, techniques, or jobsite safety of any activity (construction or otherwise) other than the Services.

9) INDEMNIFICATION:

- a) Developer shall indemnify, defend, and hold Contractor, its employees, officers, directors, and affiliates harmless from any loss, cost, expense, or damage claimed by third parties for property damage and/or bodily injury, including death, to the proportionate extent such loss, cost, expense, or damage arises from the negligence or willful misconduct of Developer, its employees, officers, or directors in connection with the Contract or project.
- b) Contractor shall indemnify, defend, and hold Developer, its employees, officers, directors, and affiliates harmless from any loss, cost, expense, or damage claimed by third parties for property damage and/or bodily injury, including death, to the proportionate extent such loss, cost, expense, or damage arises from the negligence or willful misconduct of Contractor, its employees, officers, or directors in connection with the Contract or project.
- c) In addition to the above, Developer shall further indemnify and hold Contractor harmless of, from, against and in respect of:
 - i) Any tax lien, levy, assessment, payment, liability, penalty or other deficiency, whether disputed or not, suffered or incurred by Contractor as a result of or arising out of Developer's ownership of the Property;
 - ii) Any judgment, award, payment, settlement, cost or expense arising out of Developer's ownership of the Property, and rendered against or suffered or incurred by Contractor as a result of or with respect to any lawsuit or cause of action against or involving the Property;
 - iii) Any and all liabilities, whether disputed or not, suffered or incurred by Contractor as a result of or arising out of Developer's ownership of the Property; and/or
- d) The indemnifying party shall be responsible for any and all costs and expenses, including reasonable attorney's fees, arising in connection with any of the foregoing.
- e) The provisions of this section shall survive completion of the Project and/or expiration or termination of this Agreement.

10) ENVIRONMENTAL INDEMNITY. In addition to the above, Developer represents, warrants and covenants to, for and with Contractor that there are no Hazardous Materials which have been generated and disposed of by Developer or which have been generated and disposed of by Developer and have migrated to the Property (including the ground water thereon) from any adjacent real estate owned, leased, or otherwise controlled by Developer, (except for those Hazardous Materials which may be stored on or about the Property in

accordance with the Applicable Environmental Laws), as such terms are defined in the Applicable Environmental Laws, or in any regulations promulgated pursuant thereto, (ii) there are no underground storage tanks which are owned or operated by Developer located in or about the Property; (iii) Developer has not received any notice and to the best knowledge of Developer no notice has been given to any party in the chain of title to the Property, by any person claiming any violation of, or requiring compliance with, any Applicable Environmental Laws, demanding payment or contribution for environmental damage; and (iv) to the best knowledge of Developer no investigation, administrative order, consent order or agreement, litigation, or settlement with respect to Hazardous Materials located, on about or under all or a portion of the Property or contiguous or adjacent to the Property (provided that such contiguous or adjacent property is owned or controlled by Developer) is pending, or, to the knowledge of Developer, proposed, threatened or anticipated. To the extent that Developer breaches any of the aforementioned representations and Contractor is required by law to undertake any remedial or removal actions in connection therewith, as defined in the Applicable Environmental Laws, or to the extent that Contractor is otherwise liable to incur costs or may otherwise be held liable to any third party in connection with such breach or for any removal or remedial actions taken with respect thereto, then, within a reasonable period of time following receipt of notice thereof from Contractor, Developer shall indemnify Contractor and hold Contractor harmless from all liabilities, damages and costs incurred by Contractor with respect to such breach including, without limitation, all claims, liabilities, loss, costs or expenses arising from the incurrence of any penalties, charge or expenses with respect thereto in defending itself against any suit or action brought by such third party, and in paying or satisfying any judgment obtained by such third party against Contractor. The obligations of Developer under this section and the indemnity given hereunder shall survive the Closing.

- 11) **INSURANCE.** Contractor shall secure and maintain such insurance as will protect Contractor from claims of negligence, bodily injury, death, or property damage which may arise from the performance of Services. Developer shall maintain at all times during the Project and keep in force for the mutual benefit of Developer and Contractor, commercial general liability insurance against claims for personal injury, death or property damage occurring in, on or about the Property and/or areas adjacent to the Property, to afford protection to the limit of not less than \$2,000,000 combined single limit, and such insurance shall name Contractor as an additional insured.
- 12) **DISPUTES RESOLUTION.** It is agreed by both parties that all unsettled claims, counterclaims, disputes or other matters in question arising out of or related to this Agreement shall first be attempted to be resolved by mediation. This provision can be waived by the mutual consent of the parties, or by either party if a delay in initiating arbitration or the right to file a lawsuit would prejudice its rights.
- 13) **MATERIALS.** If the materials or equipment necessary for the Services and/or the Project to be completed in accordance with this Agreement shall become temporarily or permanently unavailable for reasons beyond the control of Contractor, then in the case of such temporary unavailability, the time for performance of the Services and/or completion of the Project shall be extended to the extent thereof, and, in the case of a permanent unavailability, Developer shall have the right, in its sole discretion, either to terminate this Agreement or allow Contractor to proceed with the Services; provided, that if Developer elects to allow Contractor to proceed with the Services, Contractor (i) shall be excused from furnishing said

materials or equipment, and (ii) shall be reimbursed for the difference between the cost of the materials or equipment permanently unavailable and the cost of a reasonably available substitute therefor.

14) MISCELLANEOUS.

- a) **Entire Agreement.** This Agreement shall constitute the entire contract between the parties and may not be modified except by an instrument in writing and signed by both of them.
- b) **Construction.** This Agreement shall be construed and enforced in accordance with the laws of the State of Tennessee.
- c) **Notices.** Any notice, demand, waiver or consent required or permitted hereunder shall be in writing and shall be given by hand delivery, national overnight courier service for delivery on the next business day, facsimile, telegram or prepaid registered or certified mail, with return receipt requested, addressed as follows:

If to Developer:

Echo Development
Attn: Scott Kalishman
502A Lancaster Avenue
Nashville, Tennessee 37212

If to Contractor:

Adenus Solutions Group, LLC
Attn: Matthew Nicks
849 Aviation Parkway
Smyrna, TN 37167

Any such notice shall be deemed received when sent, if sent by overnight courier, email or by facsimile, or three (3) days after posting if sent by any other method. Any party may change its address for the purpose of notice by giving written notice in accordance with the provisions of this section.

- d) **Attorney's Fees.** In the event of litigation arising out of this Agreement, the prevailing party shall be entitled to recover, in addition to the relief granted, all costs incurred, including reasonable attorney's fee.
- e) **Section Headings.** The article or section headings of this Agreement are for convenience of reference only and do not form a part hereof and do not in any way modify, interpret or construe the intentions of the parties.
- f) **Waivers.** Waiver by either party of any right for any default of the other party, including a waiver determined to occur as the result of an action or inaction, shall not constitute a

waiver of any right for either a subsequent default of the same obligation or for any other default, past, present or future.

- g) **Partial Invalidity.** If any term, covenant or condition of this Agreement, or the application thereof to any person or circumstance, shall ever be held to be invalid or unenforceable, then in each event the remainder of this Agreement or the application of such term, covenant or condition to any other person or any other circumstance (other than those as to which it shall be invalid or unenforceable) shall not be thereby affected and each term, covenant, condition and provision hereof shall remain valid and enforceable to the fullest extent permitted by Laws.
- h) **Survival of Representations and Warranties.** All warranties, representations, covenants, indemnities, and other agreements made in this Agreement shall survive completion of the Project and/or expiration or termination of this Agreement.
- i) **Time.** Time is of the essence with respect to every provision of this Agreement.
- j) **Counterparts.** To facilitate execution, this Agreement may be executed in as many counterparts as may be required. It shall not be necessary that the signatures on behalf of all parties appear on each counterpart hereof. All counterparts hereof shall collectively constitute a single agreement.
- k) **Exhibits.** THE EXHIBITS TO THIS AGREEMENT ARE AN INTEGRAL PART HEREOF AND BY THIS REFERENCE ARE INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

IN WITNESS WHEREOF, the parties have executed this Agreement to be effective as of the Effective Date.

DEVELOPER:

Echo Development
A Tennessee General Partnership

By: Scott Kalishman
Name: Scott Kalishman
Title: Partner

CONTRACTOR:

Adenus Solutions Group, LLC
a Tennessee Limited Liability Company

By: _____
Name: _____
Title: _____

Exhibit A

Legal Description - Property

[See Attached]

Exhibit B

Site Map

[See Attached]

Exhibit C

Project Description - Plans

[See Attached]

Exhibit D

Specifications

[See Attached]



851 Aviation Parkway
Bryna, TN 37187

LETTER OF UNDERSTANDING

This Letter of Understanding (LOU) outlines the fundamental terms of agreement and intentions between Tennessee Wastewater Systems, Inc. (TWS), and Echo Development, a Tennessee General Partnership (ECHO), Developer. Signatures represent acceptance of the terms of this LOU, pending final contract.

Questions and comments should be directed to Matthew Nicks at (615) 220-7166, or matthew.nicks@adenus.com

Dated: February 6, 2018

The fundamental terms of agreement and intention between TWS and ECHO are as follows:

1. ECHO is a developer in Maury County, TN, and desires to develop a residential subdivision on approximately 44.07 +/- acres of property, located at Hardison Road & Oak Trail Drive in Columbia, TN (being Tax Map 030, Parcel 002.07, in Maury County, TN). This property is proposing to accommodate approximately 17 single-family residential lots (Equivalent Dwelling Units, or EDUs). This lot count will be used for this Letter of Understanding.
2. TWS is a wastewater utility and has a Certificate of Convenience and Necessity (CCN) issued by the Tennessee Public Utility Commission (TPUC) to serve this property.
3. ECHO understands a State Operating Permit (SOP) issued by the Tennessee Department of Environment and Conservation (TDEC) is required for TWS to provide for wastewater service on the property. TWS will prepare, or cause to be prepared, the required SOP application to TDEC.
4. This agreement is contingent upon TDEC issuing a SOP to TWS permitting the utility to provide service to the subdivision for the requested development density and TPUC granting TWS a CCN to serve this property.
5. ECHO understands that a Design Development Report (DDR) and a Detailed Soils Investigation Report (DSIR) must be obtained to develop property utilizing a drip irrigation system for the disposal of treated wastewater in Maury County, TN. TWS will prepare, cause to be prepared, the DDR/DSIR and ensure the reports comply with Maury County and TWS requirements. The Engineer/Site Planner for ECHO is responsible for preparing the landscape profile and plan required by Maury County.

Letter of Understanding
Oakwood Subdivision
Echo Development, LLC
February 6, 2018

6. ECHO agrees to require its site engineer to design the development site plan to accommodate the wastewater collection system, the reuse distribution system, and the project site disposal system including easements, buffers, etc. (collectively, the wastewater system) to the specifications of TWS and to provide a copy of the site plans to TWS for review. Once accepted by the utility, the site plans will be included in the wastewater system plans.
7. TWS will prepare, or cause to be prepared, the wastewater system plans and will submit the wastewater system plans to TDEC for review and approval.
8. TWS agrees to prepare, or cause to be prepared, all necessary reports and applications, including but not limited to SOPs and zoning certificates for TWS to operate the wastewater treatment and disposal system. TWS will ensure the reports comply with State and Maury County requirements for the provision of wastewater service to the proposed development.
9. TWS will submit all plans and reports to the regulatory agencies (State and/or County).
10. ECHO agrees to provide the following for engineering and construction of the treatment, disposal, and sewer collection system:
 - 2250 SF of good soil (soil must provide 0.2 gpd/SF disposal capacity to meet this requirement) per proposed EDU for disposal/recycling (this totals at a minimum approximately 38,250 SF, plus required buffers). These soils will be transferred to TWS by warranty deed at the platting of Phase I of the proposed development.
 - Topographic map (digital AutoCAD .dwg file) of the entire proposed property at a 2-foot contour interval for inclusion in the DDR/DSIR.
 - Overall site plan of the proposed project, to include proposed residential lots with building envelopes and proposed stormwater drainage plans for inclusion in the DDR/DSIR (digital AutoCAD .dwg file).
 - Lay/install and pay all costs associated with the installation of residential collection lines per the approved plans and specifications, including any required pump stations, residential service taps, and any force mains required to connect any pump station to the collection main lines returning to the Treatment Facility (TF).
 - Construct an all-weather access driveway to the treatment facility site capable of accommodating 80+ gravel/media trucks.

**Letter of Understanding
Oakwood Subdivision
Echo Development, LLC
February 8, 2018**

- Single phase, 100 amps underground electrical service to any required pump stations.
 - Single phase, 200 amps underground electrical service to the treatment facility building.
 - Maintain, including mowing, the area of soil map grid staking, which stakes are not be removed, until construction has begun.
 - Dedicate easements from a public roadway as dictated by the final design plans, in a form acceptable to TWS as required by TWS for ingress/egress access to the collection, treatment and reuse/disposal system, the storage impoundment, and for each residence proposed to be served by the wastewater system identified on the final plat.
11. TWS may require the installation of additional piping infrastructure through the ECHO development to accommodate future development and/or expansion of the collection, treatment, or disposal system. ECHO agrees to provide TWS any easements necessary for the extension of this infrastructure. TWS has the right to extend the piping infrastructure at any time and in its sole discretion. TWS will be responsible for any costs associated with extending the piping infrastructure.
12. TWS will provide treatment and disposal capacity to the project for the per lot capacity development fee of \$7200.00 per lot. Payment of the capacity development fees will be due per the following schedule for construction of the treatment facility: 17 EDUs
* \$7,200.00 per EDU = \$122,400.00.
- 25% (\$30,600.00 U.S. Dollars) of fees will be due 10 days prior to the start of construction of the treatment and disposal facility.
 - 50% (\$61,200.00 U.S. Dollars) of fees will be due at 50% completion of construction of the treatment and disposal facility.
 - 25% (\$30,600.00 U.S. Dollars) of fees will be due within 15 days of completion of construction and approval and acceptance of the system by TWS and the Tennessee Department of Environment and Conservation.

Construction of the wastewater treatment and disposal facilities must be completed prior to recording the plat for the development.

13. TWS agrees to perform the following:

Letter of Understanding
Oakwood Subdivision
Echo Development, LLC
February 6, 2018

- Surveying and mapping of the soils required for the SOP application and the DDR/DSIR application.
- Design by TWS of the wastewater treatment, disposal, and residential collection system piping infrastructure.
- Construction by TWS of treatment and disposal capacity for the project, including the TF construction, the drip field disposal installation, and fencing of the constructed components with an appropriate fence.
- Both parties agree to work diligently to start and complete the TF, drip fields, and fencing to meet mutually agreed-upon construction timelines.
- Regulatory coordination, new customer accounts database set-up, engineering review, and construction inspection (including, but not limited to sewer collection/reuse mains, subdivision collections mains, individual residential tank and lot services).

*No home will be released to connect to the sewer collection system, or to the treatment and disposal system, until the Developer has paid all capacity development fees.

14. TWS will assume ownership of the treatment, disposal, and collection system once inspections are approved and accepted by TWS. ECHO will transfer ownership of the land required for the wastewater treatment, storage, and disposal system, and dedicate all required easements at the execution of the final plat, and prior to recording.
15. ECHO agrees and understands the wastewater treatment system will not be placed into operation until all easements and deeds have been transferred to TWS.
16. ECHO agrees to post any bond amounts required by TWS, the County, and any other interested parties for the components of the wastewater collection, treatment, and disposal system as required for that phase of the development prior to TWS signing the final plat.
17. This agreement does not relate to the responsibilities and costs of tankage, components, etc., for each individual residence site, nor the installation of sewer collection/reuse main lines, pump stations, and lot services. These items are outside the scope of this agreement.
18. ECHO acknowledges and agrees that any changes to TDEC regulations, TPUC rules, and/or Maury County regulations after the date of the execution of this agreement are beyond the control of TWS and may cause a change to the proposed costs, processes, or TWS's ability to provide services to the proposed property. Assuming that no

Letter of Understanding
Oakwood Subdivision
Echo Development, LLC
February 6, 2018

regulation changes occur, the costs and fees presented in this understanding shall be valid for a period of not more than one (1) year from the date of this agreement, regardless of the date this agreement is executed by the parties. Any further contracts or agreements required to be executed between the parties for the provision of wastewater services not executed within this one-year time limit will be revised to reflect any change in costs in effect at that time.

19. In the event the property fails to be developed, either Party may terminate this agreement upon written notice to the other. In the event the property fails to be developed and the agreement is terminated, ECHO agrees to reimburse TWS for all out-of-pocket costs related to all services that have been performed in the effort to provide wastewater services to the proposed development including, but not limited to, reimbursement for DDR/DSIR expenses, filing and review fees, regulatory fees, construction costs, and all legal fees incurred in the pursuit of obtaining regulatory approval to provide wastewater services to the development.

{intentionally left blank, signature page follows}

Letter of Understanding
Oakwood Subdivision
Echo Development, LLC
February 6, 2018

Tennessee Wastewater Systems, Inc.
Utility - Charles Hyatt

Charles Hyatt

Title: President

Date: 2-8-18

Echo Development, LLC
Developer - Scott Kalishman

Scott Kalishman

Title: Partner

Date: 2/7/18

**Oakwood Subdivision
Maury County
02/19/201**

Design, Engineering & Construction Budget

| <u>Task</u> | <u>Units</u> | <u>Cost</u> | <u>Sub-Total Budget</u> |
|---|---------------------|--------------------|--------------------------------|
| <u>Design & Engineering</u> | | | |
| Engineering Report | 1 | \$ 2,500.00 | \$ 2,500.00 |
| Grid Staking | 1 | \$250 per acre | \$ 250.00 |
| State Operating Permit | 1 | \$ 1,500.00 | \$ 1,500.00 |
| Engineering Coordination | 1 | \$ 1,500.00 | \$ 1,500.00 |
| | SUBTOTAL | | \$ 5,750.00 |
| <u>Construction of Treatment System & Drip</u> | | | |
| Infrastructure Access | 1 | \$ 3,000.00 | \$ 3,000.00 |
| Treatment Method | 1 | \$ 13,500.00 | \$ 13,500.00 |
| Monitoring System | 1 | \$ 22,000.00 | \$ 22,000.00 |
| Tanks | 1 | \$ 14,000.00 | \$ 14,000.00 |
| Pumps & Equipment | 1 | \$ 18,900.00 | \$ 18,900.00 |
| Drip Field | 1 | \$ 15,000.00 | \$ 15,000.00 |
| Fence - high tensile | 800 | \$ 4.50 foot | \$ 3,600.00 |
| | SUBTOTAL | | \$ 90,000.00 |
| <u>Construction Inspections</u> | | | |
| Line Inspections | 17 | \$ 500.00 each | \$ 8,500.00 |
| Tank Inspections - Preliminary | 17 | \$ 150.00 each | \$ 2,550.00 |
| Tank Inspections - Final | 17 | \$ 150.00 each | \$ 2,550.00 |
| | SUBTOTAL | | \$ 13,600.00 |
| <u>Regulatory TDEC and TPUC</u> | | | |
| Filing Fees | 1 | \$ 1,000.00 | \$ 1,000.00 |
| Legal Fees | 1 | \$ 2,000.00 | \$ 2,000.00 |
| Coordination & Revisions | 1 | \$ 3,500.00 | \$ 3,500.00 |
| | SUBTOTAL | | \$ 6,500.00 |
| | | | \$ 115,850.00 |
| Overhead - 12% | \$ 115,850.00 | 12% | \$ 13,902.00 |
| Profit - 6% | \$ 129,752.00 | 6% | \$ 7,785.12 |
| | | | \$ 21,687.12 |
| | TOTAL | | \$ 197,537.12 |