

Electronically Filed in TPUC Docket Room
on January 19, 2023 at 2:06 p.m.

January 19, 2023

Karen H. Stachowski
Senior Assistant Attorney General
Financial Division, Consumer Advocate Unit
Office of the Attorney General
P.O. Box 20207
Nashville, TN 37202

VIA Email: karen.stachowski@ag.tn.gov

RE: Docket No. 22-00134 - *Petition of Tennessee Wastewater Systems, Inc. to Amend its Certificate of Convenience and Necessity to Include Lake Haven Subdivision*

Dear Ms. Stachowski,

The following are responses to your MFR letter dated January 5, 2023, related to the CCN Petition in the above referenced docket.

Rule 1220-04-13-.17(2)(a) – Higher resolution maps have been electronically filed with the Commission.

Rule 1220-04-13-.17(2)(d)2 – A copy of the renewed operator's license is included with this response.

Rule 1220-04-13-.17(2)(d)4 -

- (i) I have followed up with the TDEC office in East TN and they were not aware of the complaint. They are following up and will update the record in their database.
- (ii) TPUC was already aware of Mr. McCabe's complaint as a docket has been opened to address his concerns. His letter to TDEC does fall within the scope of the TPUC rule.

Rule 1220-04-13-.17(2)(e) – TWSI and the Consumer Advocate have discussed and resolved this concern.

Rule 1220-04-13-.17(2)(e)8 – Updated tariff pages are included with this response.

Please let me know if you have any outstanding questions or concerns relating to this matter.

Kind regards,



Jeff Riden
General Counsel

cc: Patsy Fulton – patsy.fulton@tn.gov
Cole McCormick – cole.mccormick@tn.gov
Kelly Cashman-Grams – kelly.grams@tn.gov

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
WATER AND WASTEWATER OPERATOR CERTIFICATION BOARD

I.D. NO.
15046

EXPIRATION DATE
12/31/2023

THIS IS TO CERTIFY THAT
Tracy A. Nichols
IS IN GOOD STANDING WITH THE BOARD FOR THE CLASSIFICATIONS
LISTED:

BNS, CS2



WASTEWATER UTILITY SERVICE**SECTION 4 – RESIDENTIAL RATES SHEET**

	Base	Escrow	Bonding	Environmental Rider (D)	Total
Rate Class 1	\$ 40.48	\$ 7.27	\$0.12 (R)	\$0.00	\$ 47.87(R)
Rate Class 2	\$ 40.48	\$ 7.27	\$0.12 (R)	\$0.00	\$ 47.87(R)
Rate Class 5	\$ 36.66	\$ 5.69	\$0.12 (R)	\$0.00	\$ 42.47(R)
Rate Class 6	\$ 36.66	\$ 5.69	\$0.12 (R)	\$0.00	\$ 42.47(R)
Rate Class 9	\$ 20.55	\$ 3.39	\$0.12 (R)	\$0.00	\$ 24.06*(R)

* Southridge customers will have a pass-through treatment cost assessed to their monthly bill. The pass-through treatment cost is calculated using the water meter readings as provided to TWSI by the East Montgomery Water Co. and the multiplier charged to TWSI by Clarksville Gas and Water to provide wastewater treatment. This cost will be filed annually with TPUC in June and effective upon approval. The current pass through treatment cost is 0.0096296082 per gallon.

** Each condominium unit will be billed as a residential customer and be individually billed.

*** Customers in the City of Coopertown will be billed a 3% franchise fee (applied to the base rate only).

**** The bonding fee will be updated with an annual filing with TPUC in August and effective upon approval.

Fees:

Non-Payment – 5% of total bill amount

Disconnection – \$40

Reconnection – \$50

Returned Check (NSF Fee) – \$25

Returned ACH - \$25

Capacity Reservation Fee – \$10 per month (See Rules and Regulations for Explanation)

Credit Card Convenience Fee: 2.45% with a \$1.25 minimum fee (R)(N)

City of Coopertown Franchise Fees: 3%

Issued: December 13, 2022**Effective: December 13,
2022****Issued by: Matthew Nicks, President**

WASTEWATER UTILITY SERVICE**SECTION 6 – COMMERCIAL RATE SHEETS****COMMERCIAL RATES SHEET
without FOOD SERVICE**

The monthly sewer charge per customer is based on the daily design flow expected from the type of establishment being served. The utility will periodically check actual flow to determine whether billing adjustments will need to be made.

	Base	Escrow	Bonding	Environmental Rider	Total
Tier 1 (0 - 300 GPD)	\$95.93	\$14.87	\$0.12(R)	\$0.00	\$110.92(R)
Tier 2.1 (301 - 400 GPD)	\$115.07	\$17.98	\$0.12(R)	\$0.00	\$133.17(R)
Tier 2.2 (401 - 500 GPD)	\$134.21	\$21.09	\$0.12(R)	\$0.00	\$155.42(R)
Tier 2.3 (501 - 600 GPD)	\$153.34	\$24.21	\$0.12(R)	\$0.00	\$177.67(R)
Tier 2.4 (601 - 700 GPD)	\$172.48	\$27.32	\$0.12(R)	\$0.00	\$199.92(R)
Tier 2.5 (701 - 800 GPD)	\$191.62	\$30.43	\$0.12(R)	\$0.00	\$222.17(R)
Tier 2.6 (801 - 900 GPD)	\$210.76	\$33.54	\$0.12(R)	\$0.00	\$244.42(R)
Tier 2.7 (901 - 1,000 GPD)	\$229.89	\$36.66	\$0.12(R)	\$0.00	\$266.67(R)
Tier 3.1 (1,001 - 2,000 GPD)	\$381.18	\$56.37	\$0.12(R)	\$0.00	\$437.67(R)
Tier 3.2 (2,001 - 3,000 GPD)	\$533.29	\$76.11	\$0.12(R)	\$0.00	\$609.52(R)
Tier 3.3 (3,001 - 4,000 GPD)	\$685.41	\$95.84	\$0.12(R)	\$0.00	\$781.37(R)
Tier 3.4 (4,001 - 5,000 GPD)	\$837.53	\$115.57	\$0.12(R)	\$0.00	\$953.22(R)
Tier 3.5 (5,001 - 6,000 GPD)	\$989.64	\$135.31	\$0.12(R)	\$0.00	\$1,125.07(R)
Tier 3.6 (6,001 - 7,000 GPD)	\$1,141.76	\$155.04	\$0.12(R)	\$0.00	\$1,296.92(R)
Tier 3.7 (7,001 - 8,000 GPD)	\$1,293.88	\$174.77	\$0.12(R)	\$0.00	\$1,473.77(R)
Tier 3.8 (8,001 - 9,000 GPD)	\$1,446.00	\$194.50	\$0.12(R)	\$0.00	\$1,640.62(R)
Tier 3.9 (9,001 - 10,000 GPD)	\$1,598.11	\$214.24	\$0.12(R)	\$0.00	\$1,812.47(R)
Unknown 25,000 GPD	\$ 3,879.87	\$10.23	\$0.22(R)	\$0.00	\$ 4,390.32(R)

Excess water usage

Additional surcharges will apply when customers exceed their expected design flows. For any month that a customer's water meter reading exceeds the expected design flow, the following surcharges will apply:

If usage exceeds 10,000 gallons per day, the charge will be \$1628.40 plus applicable escrow, bonding, and rate rider amount plus \$171.85 per 1000 gallons.

Issued: December 13, 2022

**Effective: December 13,
2022**

Issued by: Matthew Nicks, President

WASTEWATER UTILITY SERVICE

If the water meter readings exceed the design flow for any three consecutive months, the monthly charge will be revised to reflect the increased usage and any capital costs associated with increasing the capacity of the system will be paid by the customer.

Fees:

Nonpayment – 5%

Disconnection - \$40

Reconnection - \$50

Returned Check - \$25

Returned ACH - \$25

City of Coopertown Franchise Fees: 3%

Credit Card Convenience Fee: 2.45% with \$1.25 minimum fee (R)(N)

Issued: December 13, 2022

**Effective: December 13,
2022**

Issued by: Matthew Nicks, President

WASTEWATER UTILITY SERVICE**COMMERCIAL RATES SHEET
with FOOD SERVICE**

The monthly sewer charge per customer is based on the design daily flow expected from the type of establishment being served. The utility will periodically check actual flow to determine whether billing adjustments will need to be made.

	Base	Escrow	Bonding	Environmental Rider	Total
Tier 1 (0 - 300 GPD)	\$127.88	\$19.82	\$0.12	\$0.00	\$147.92(R)
Tier 2.1 (301 - 400 GPD)	\$151.18	\$23.17	\$0.12	\$0.00	\$174.47(R)
Tier 2.2 (401 - 500 GPD)	\$174.49	\$26.51	\$0.12	\$0.00	\$201.12(R)
Tier 2.3 (501 - 600 GPD)	\$197.80	\$29.85	\$0.12	\$0.00	\$227.77(R)
Tier 2.4 (601 - 700 GPD)	\$221.11	\$33.19	\$0.12	\$0.00	\$254.42(R)
Tier 2.5 (701 - 800 GPD)	\$244.42	\$36.53	\$0.12	\$0.00	\$281.07(R)
Tier 2.6 (801 - 900 GPD)	\$267.73	\$39.87	\$0.12	\$0.00	\$307.72(R)
Tier 2.7 (901 - 1,000 GPD)	\$291.03	\$43.22	\$0.12	\$0.00	\$334.37(R)
Tier 3.1 (1,001 - 2,000 GPD)	\$475.73	\$67.97	\$0.12	\$0.00	\$543.82(R)
Tier 3.2 (2,001 - 3,000 GPD)	\$661.37	\$92.73	\$0.12	\$0.00	\$754.22(R)
Tier 3.3 (3,001 - 4,000 GPD)	\$847.00	\$117.50	\$0.12	\$0.00	\$964.62(R)
Tier 3.4 (4,001 - 5,000 GPD)	\$1,032.63	\$142.27	\$0.12	\$0.00	\$1,174.92(R)
Tier 3.5 (5,001 - 6,000 GPD)	\$1,218.26	\$167.04	\$0.12	\$0.00	\$1,385.52(R)
Tier 3.6 (6,001 - 7,000 GPD)	\$1,403.89	\$191.81	\$0.12	\$0.00	\$1,595.82(R)
Tier 3.7 (7,001 - 8,000 GPD)	\$1,589.53	\$216.57	\$0.12	\$0.00	\$1,806.22(R)
Tier 3.8 (8,001 - 9,000 GPD)	\$1,775.16	\$241.34	\$0.12	\$0.00	\$2,016.62(R)
Tier 3.9 (9,001 - 10,000 GPD)	\$1,960.79	\$266.11	\$0.12	\$0.00	\$2,227.02(R)
Unknown 25,000 GPD	\$4,745.27	\$637.63	\$0.12	\$0.00	\$5,383.12(R)

Excess water usage

Additional surcharges will apply when customers exceed their expected design flows. For any month that a customer's water meter reading exceeds the expected design flow, the following surcharges will apply:

Issued: December 13, 2022**Effective: December 13,
2022****Issued by: Matthew Nicks, President**

WASTEWATER UTILITY SERVICE

If usage exceeds 10,000 gallons per day, the charge will be \$1997.95 plus applicable escrow, bonding, and rate rider amount plus \$210.40 per 1000 gallons.

If the water meter readings exceed the design flow for any three consecutive months, the monthly charge will be revised to reflect the increased usage and any capital costs associated with increasing the capacity of the system will be paid by the customer.

Fees:

Nonpayment – 5%

Disconnection - \$40

Reconnection - \$50

Returned Check - \$25

Returned ACH - \$25

City of Coopertown Franchise Fees: 3%

Credit Card Convenience Fee: 2.45% with \$1.25 minimum fee

Issued: December 13, 2022

**Effective: December 13,
2022**

Issued by: Matthew Nicks, President

WASTEWATER UTILITY SERVICE

**COMMERCIAL RATES SHEET
CABINS**

The monthly sewer charge per customer is based on the square footage of the cabin as recorded with the Register of Deeds office.

	Base	Escrow	Bonding	Environmental Rider	Total
Small 0-2000	\$60.85	\$13.15	\$0.12	\$0.00	\$74.12(R)
Medium 2001-4000	\$69.68	\$16.32	\$0.12	\$0.00	\$86.12(R)
Large 4001-6000	\$82.44	\$19.56	\$0.12	\$0.00	\$102.12(R)
Extra Large 6001+	\$102.07	\$22.93	\$0.12	\$0.00	\$125.12(R)

Fees:

Nonpayment – 5%

Reconnection - \$50

Disconnection - \$40

Returned Check - \$25

Returned ACH - \$25

Credit Card Convenience Fee: 2.45% with \$1.25 minimum fee

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Lake Haven Wastewater Treatment, STEP System, Collection and Drip Dispersal Plans JEFFERSON AND SEVIER COUNTY, TN

SOP - _____ Sewer Plans

Drawing Index

Sheet No.	Title
C0.0	Cover Sheet
C0.1	Master Plan
C1.0 - C1.4	Wastewater Collection Plans
C2.0 - C2.4	Details



Owner/Developer:

LH Sewer 100, LLC
209 E. Main St.
Sevierville, TN 37862

Floodplain Note:

A Portion Of This Site Lies Within The 100 Year Flood Plain
Per F.E.M.A. Community Panel No. 47147C0270C, Dated
4/18/03.

Total Site Land Data:

Total Area = 112± Acres

Deed Reference:

The property shown herein is Tax Maps:
Map 45, Group A Parcel 00.02
Magisterial District in Jefferson County,
as recorded in Record P.Bk. 1953, Pg 281.

STEP Design:

Design Flow = 72,000 gpd
Design = 108 Lots
Design Loading Soil Rate = 0.28 gal/sf
Required Land Application Area = 8.20 Acres
Proposed Land Application Area = 8.20 Acres

Contacts:

Engineer:

Site Engineering Consultants, Inc.
800 Middle Tennessee Blvd.
Murfreesboro, TN 37129
Phone: (615) 890-7901
Contact: Jamie Reed

Shady Grove Utility District:

830 TN-139
Dandridge, TN 37725
Phone: (866) 367-5790

AEC Appalachian Electric:

P.O. Box 400
New Market, TN 37820
Phone: (866) 475-2082

Tennessee Wastewater Systems, Inc.:

849 Aviation Parkway
Smyrna, TN 37167
Contact: Matt Nickle
Phone: (888) 423-5667

SEC, Inc. SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE

450 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: JREED@SEC-CIVIL.COM FAX: (615) 895-2507

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By: James F. Reed III Date: Sept. 13, 2022
James F. Reed III, P.E. TN. Reg. #109036

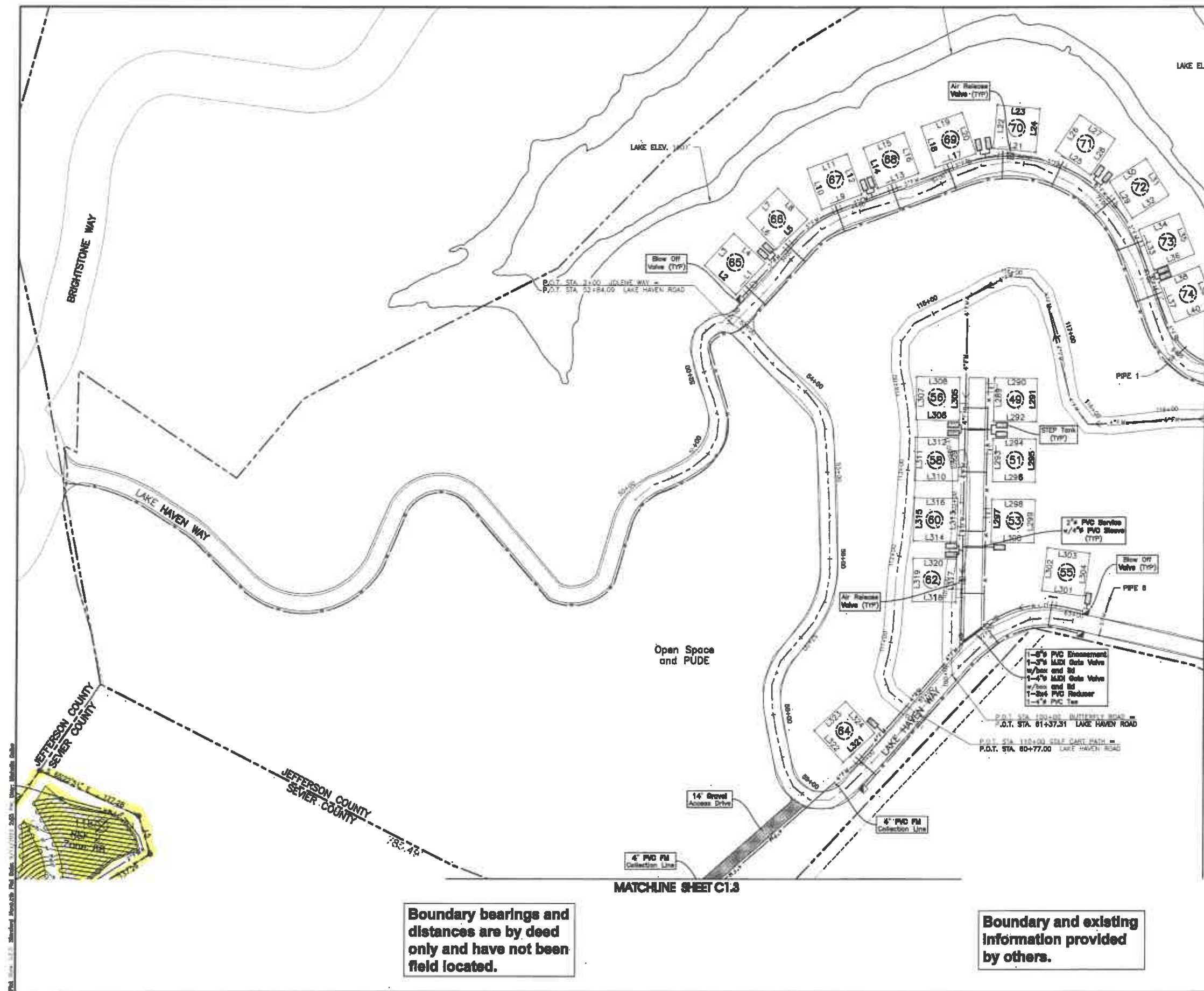


LOCATION MAP
NOT TO SCALE



Sheet C0.0
Lake Haven
S.E.C. Project #22086
Date: 9-12-2022

ADENUS SOLUTIONS GROUP 849 AVIATION PARKWAY SMYRNA, TN 37167



Legend:			
	EXIST. CONCRETE UNDERLAY		SEWER/STORM
	NON PM SET (A.P.C.)		SHOULDER SYMBOL
	NON PM FOUND (A.P.C.)	V.A.	NOT ACCESSIBLE (MEDICAL DESIGNATION)
	EXIST. MAIN POLE		NO SIGN
	EXIST. UNDER CLOSURE		PROPOSED MAIN POLE
	EXIST. MANHOLE (SEWER & STORM)		CONCRETE BOLLARD
	EXIST. DRAIN SIGN (CROWN SIGN)		WHEEL STOP
	EXIST. WATER/OIL VALVE		CONCRETE BOLLARD
	EXIST. TELEPHONE POLE		EXCLUDED CURB
	EXIST. GAS METER		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	EXIST. WATER METER		TURN LANE ARROWS
	EXIST. KELLY POLE		ARBORER NUMBER
	EXIST. FIRE HYDRANT		DRAINAGE STRUCTURE ORIENTATION
	POST INDICATOR PLANS		DRAINAGE PIPE DISCONNECT
	BLIND OFF VALVE		TOP INP.
	REINFORCER		REINFORCER FLOW ARROW
	REINFORCER PIPE GUY, CONNECTION		INLET FILTER PROTECTION
	CONCRETE TRUNKLINE BLOCK		PROPOSED SPOUT ELEVATION
	DOUBLE DETECTOR CHECK VALVE		EXIST. SPOUT ELEVATION
	FIRE DEPT. CONNECTION		SEWER/STORM FLOW ORIENTATION
	FIRE HYDRANT		CURB BUSH
	GAS VALVE & BOX		GAS GUY
	WATER METER		AMP. GUY
	WATER METER		WINDMILL
	SEWER TRAP		WINDED HIGHWALL
	EXTENDED (ELEMENT)		CONCRETE BOLLARD
	MANHOLE		TYPE II-MANHOLE
	LIGHT POLE		CANOPY LIGHT
EXISTING PHONE	_____	PM	_____
EXISTING ELECTRIC	_____	OH	_____
PROPERTY LINE	_____		_____
WATERMETER	_____		_____
RIGHT OF WAY	_____	ROW	_____
INDOOR CONTROL SIDE PAVEMENT	_____	SP	_____ SP
SEWER GEL	_____	E	_____ E
EXISTING THIRDLANE	_____		_____
EXISTING FORECLOSURE	_____	X	_____ X
MANHOLE INCLUDING OUTSIDE LANE	_____	MSL	_____
PAVEMENT BOUNDARY	_____		_____
EXISTING GAS LINE	_____	GAS	_____ GAS
PROPOSED GAS LINE	_____		_____
PROPOSED SEWER	_____	STM	_____ STM
EXISTING CONDUIT LINES	_____	CON	_____
PROPOSED CONDUIT LINES	_____	CON	_____
EXISTING CANTERED SIGN	_____	CS	_____ CS
PROPOSED CANTERED SIGN	_____	CS	_____
EXISTING SIGN	_____	W	_____ W
PROPOSED SIGN	_____	W	_____
FORCERAIN	_____	FM	_____ FM
FORCERAIN RETURN	_____	FM	_____
RAINWAY	_____	FW	_____ FW
JOINT TROUGH	_____		_____

Lake Haven

Wastewater Treatment, STEP System, Collection and Drip Dispersal Plans

Jefferson County, Tennessee

WW Treatment Addition

Site Plan

DATE: 8-11-2021

FILE NAME: 22086

SCALE: 1"=50'

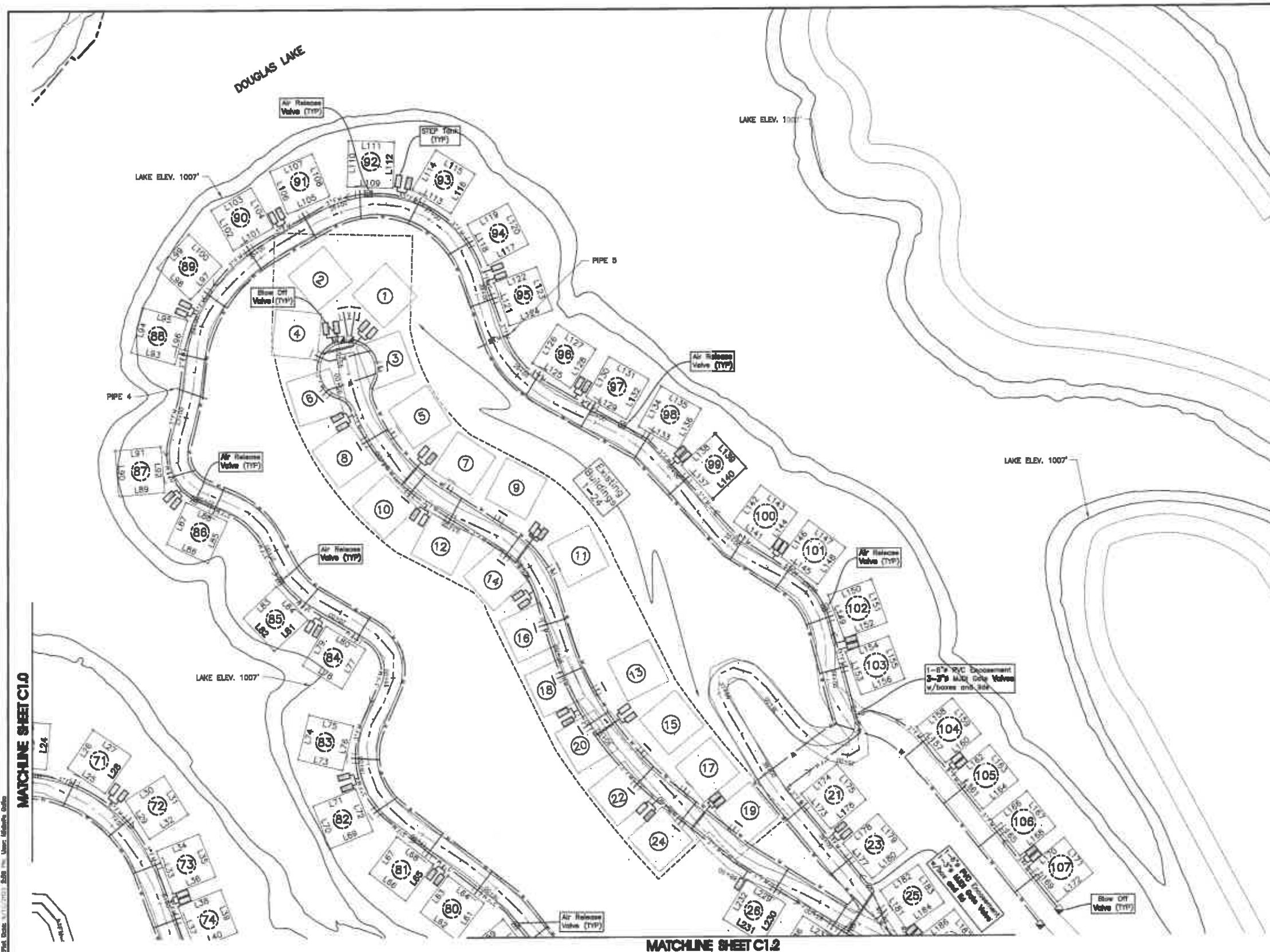
JOB NO. 22086

REVISIONS:

DATE: 8-11-2021

BY: M.B.

C1.0



Boundary bearings and distances are by deed only and have not been field located.

Boundary and existing information provided by others.

Legend:			
	EXIST. CONCRETE MANHOLE		REINFORCED
	NON PN BKT (A.P.)		MANHOLE SYMBOL
	NON PN FOUND (A.P.)	V.A.	VAN ACCESSIBLE MANHOLE IDENTIFICATION
	EXIST. MAN POINT		NO SIGN
	EXIST. MANHOLE		PROPOSED MAN POINT
	EXIST. MANHOLE (A.P. & F.P.)		CONCRETE ROLL
	EXIST. GATED MANHOLE (CROWN SIGN)		WHEEL STOP
	EXIST. WATER-TIGHT VALVE		CONCRETE RIGIDITY
	EXIST. TELEPHONE CABLE		EXTENDED CURB
	EXIST. GAS MAIN		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	EXIST. WATER METER		TURN LANE ARROWS
	EXIST. UTILITY POLE		REDUCED FLANDED
	EXIST. FIRE HYDRANT		DRAINAGE STRUCTURE IDENTIFICATION
	PORT MANHOLE VALVE		DRAINAGE PIPE CONNECTION
	BLow OFF VALVE		UP RAMP
	RELOCATOR		BLIND FLOW ARROW
	RELOCATE FIRE DEPT. CONNECTION		WAST FILTER PROTECTION
	CONCRETE THREAT BLOCK		PROPOSED SFT ELEVATION
	DOUBLE DETECTOR CHECK VALVE		CONT. SFT ELEVATION
	FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION
	PIPE HYDRANT		CURB SIGN
	ONE VALVE & BOX		SLAB DILET
	UNDER WATER		AREA DOWN
	ONE METER		NOISY WALL
	ORANGE TWP		WINDY HILLSIDE
	EXISTING CULVERT		CONCRETE SINK
	MANHOLE		TYPE N-MANHOLE
	LIGHT POLE		QUICKY LIGHT
EXISTING FENCE		_____ PH _____	
EXISTING FENCING		_____ ON _____	
PROPERTY LINE		_____	
EXISTING'S		_____	
REST OF WAY		_____ ROW _____	
EXISTING CONTROL BLY FENCE		_____ BF _____ SF _____	
EXISTING RD		_____ E _____ E _____	
EXISTING TRAILLINE		_____	
EXISTING FENCELINE		_____ X _____ X _____ X _____ X _____	
MANHOLE BUILDING SETBACK LINE		_____ MBRL _____	
PAVED BOUNDARY		=====	
EXISTING GAS LINE		_____ GAS _____ GAS _____	
PROPOSED GAS LINE		_____ GAS _____ GAS _____	
EXISTING STORM		_____	
PROPOSED STORM		_____ STM _____ STM _____	
EXISTING CONCRETE LANE		_____ 60' _____	
PROPOSED CONCRETE LANE		_____ 60' _____	
EXISTING SANDWY BARRIER		_____ SB _____ SB _____	
PROPOSED SANDWY BARRIER		_____ 3' FM _____	
EXISTING WATER		_____ W _____ W _____	
PROPOSED WATER		_____ W _____ W _____	
FORCERAIN		_____ FM _____ FM _____	
FORCERAIN RETURN		_____ FMR _____ FMR _____	
FLOORWAY		_____ FE _____ FE _____	
JOINT TRENCH		=====	



**Know what's below.
Call before you dig.**



SFC, Inc.
 500 MADISON AVENUE, SUITE 1000, NEW YORK, NY 10022
 212-691-1000
 212-691-1001
 212-691-1002
 212-691-1003
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Lake Haven
Wastewater Treatment, STEP System,
Collection and Drop Dispersal Plans
Jefferson County, Tennessee

Jefferson County, Tennessee

WW Treatment Addition:
Site Plan

C1:1

Line #	Routing	Distance
L1	N 59°45' E	66.57
L2	N 59°30' E	72.69
L3	N 62°00' E	78.07
L4	N 45°45' E	79.57
L5	S 59°00' E	69.07
L6	S 54°30' E	67.81
L7	N 59°00' W	61.03
L8	N 69°00' W	77.11
L9	S 69°00' W	56.09
L10	S 70°00' W	70.79
L11	N 60°00' E	7.26
L12	S 70°00' E	69.30

Boundary and existing information provided by others.

Boundary bearings and distances are by deed only and have not been field located.

RIP 2 (Rimes 5-6)						
Zone	L.F. Drp	Distal Brds	Mid. Drp L.F.	Mem. Drp L.F.	Tight Line L.F.	Sp. Pl.
Zone 1A	260	4	70	329	0	4796
Zone 1B	1400	6	130	381	0	7440
Zone 1C	630	3	270	940	0	3030
Zone 1D	4130	25	100	107	0	3000
Zone 1E	4030	26	100	107	107	3150
Zone 1FA	2320	8	100	300	0	2110
Zone 1B	2000	6	300	302	0	9140
Zone 1C	2770	11	100	307	0	20070
Zone 1D	2000	10	201	301	0	20000
Zone 1E	3440	12	170	401	0	17010
Zone 1F	4000	14	251	401	0	20040
Zone 1GA	1300	7	302	370	0	0000
Zone 1B	1700	8	370	374	0	0000
Zone 1C	0070	11	210	000	0	00000
Total	20190					100770

RIP 2 (Rimes 5-6)						
Zone	L.F. Drp	Distal Brds	Mid. Drp L.F.	Mem. Drp L.F.	Tight Line L.F.	Sp. Pl.
Zone 1C	4030	13	300	400	0	20130
Zone 1E	2200	17	300	370	0	20000
Zone 1F	0430	18	100	050	0	27000
Zone 1A	3700	10	170	400	0	20000
Zone 1BA	2407	0	200	301	0	22000
Zone 1B	1000	5	300	300	0	0170
Zone 1C	4037	11	302	300	00	20230
Zone 1D	0040	10	100	400	0	10010
Zone 1E	2072	7	211	307	0	10000
Zone 1B	0000	6	207	300	100	0000
Total	20230					200100

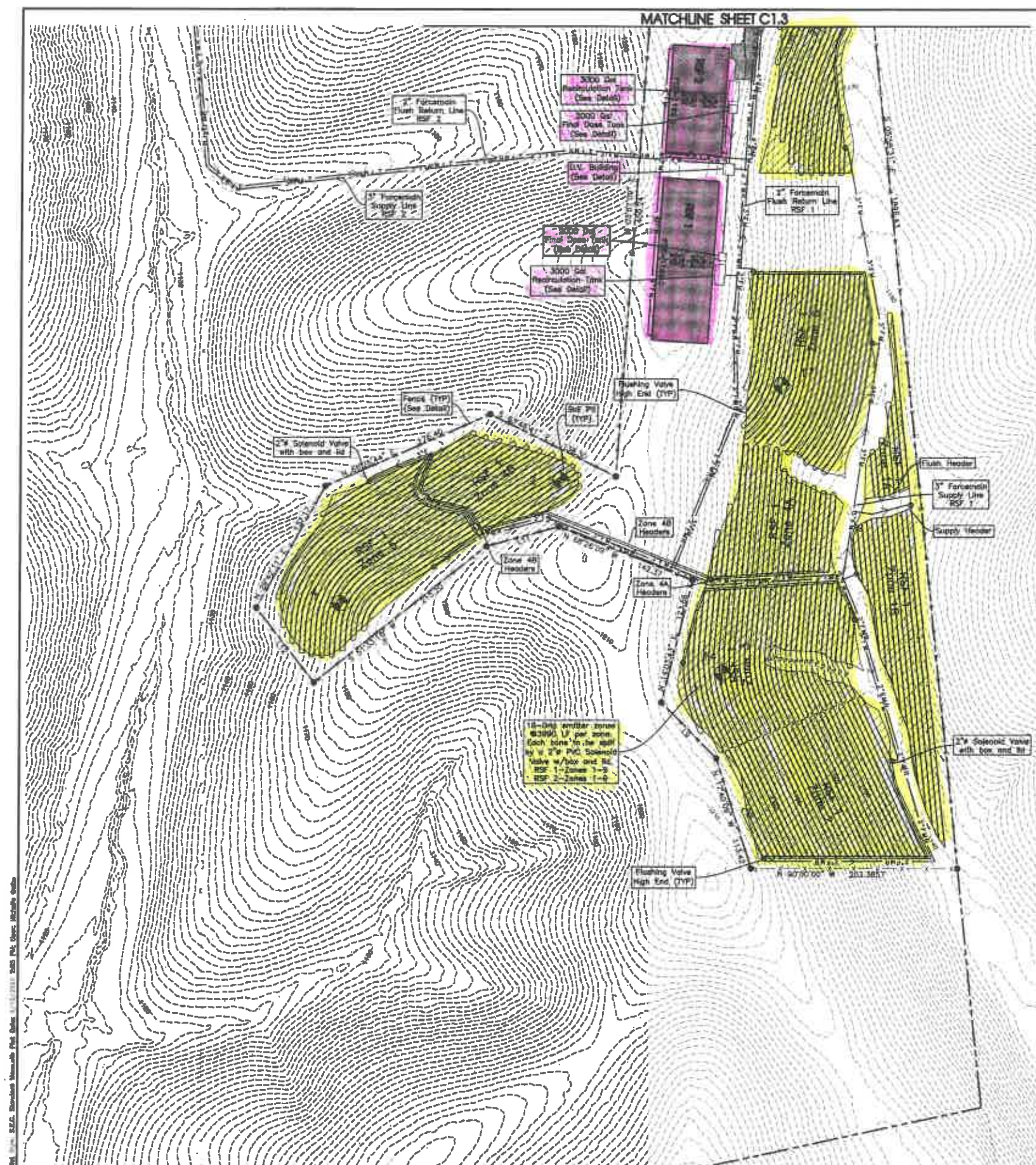
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LAKE HAVEN
**Wastewater Treatment, STEP System,
 Collection and Drip Dispersal Plans**
 Jefferson County, Tennessee

**WW Treatment Addition
 Site Plan**

DATE: 9-1-2008
 CHECKED: JPM
 FILE NAME: 22088LakeHaven_WTP
 SCALE: 1"=50'
 JOB NO. 22088

22088



NW 1 (Rows 5-6)						
Zone	L.A. Bldg	Global Bldg	Mina. Bldg L.A.	Mina. Bldg L.K.	Yigot Uza L.A.	Ag. PL
Zone 11A	880	4	70	880	0	4795
Zone 11B	1488	6	130	242	0	7640
Zone 11C	838	8	220	348	0	5080
Zone 12	4138	18	588	887	8	20501
Zone 13	4818	18	458	837	887	20003
Zone 14A	2822	8	188	388	8	13330
Zone 14B	3888	8	388	388	0	8545
Zone 15	9778	33	1380	887	0	18878
Zone 16	8888	33	383	883	0	20888
Zone 17	8848	33	378	408	0	23738
Zone 18	4088	36	384	408	0	28048
Zone 19A	1888	7	388	878	0	8888
Zone 19B	1708	8	222	374	0	8888
Zone 11D	8872	11	222	386	0	18888
Total	38184					188878
NW 3 (Rows 5-6)						
Zone	L.A. Bldg	Global Bldg	Mina. Bldg L.A.	Mina. Bldg L.K.	Yigot Uza L.A.	Ag. PL
Zone 11	4088	33	388	408	0	28178
Zone 12	3228	33	388	408	0	28888
Zone 13	9488	33	388	888	0	17888
Zone 14	3788	33	378	488	0	18888
Zone 15A	2487	9	288	384	0	22488
Zone 15B	1888	8	308	388	0	8175
Zone 16	4827	15	332	588	88	28588
Zone 17	3842	23	380	488	0	28888
Zone 18A	2872	7	333	387	0	18888
Zone 18B	2888	8	287	388	288	3888
Total	88226					188138

Legend			
	ADULT, CONCRETE MONUMENT		HEADMARK
	IRON PIN SET (A.P.S.)		HANDICAP SYMBOL
	IRON PIN FOUND (A.P.S.)	V.A.	VIA ACCESSIBLE HANDICAP DESIGNATION
	DRINK, SIGN POST		NO SIGN
	DRINK, SIGN CLOSURE		PROPOSED SIGN POST
	EXIST. GRASSHOLE		CONCRETE BOLLARD
	EXIST. CATCH BASIN (STORM SEWER)		WATER STOP
	DRINK, WATER/RAIN VALVE		CONCRETE SIDEWALK
	DRINK, TELEPHONE ARM		EXTENDED CURB
	DRINK, GAS METER		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	DRINK, WATER METER		TURN LANE ARROWS
	DRINK, VALVE PILE		NEEDLE BLINDER
	DRINK, FIRE HYDRANT		DRAINAGE STRUCTURE
	FOOT INDICATOR VALVE		DRAINAGE PIPE
	BLOW OFF VALVE		SP ROP
	POLEMAN		RUNOFF FLOW ARROW
	REMOVE FIRE DEPT. CONNECTION		RAINFILTER PROTECTION
	CONCRETE THIRST BLOOM		PROPOSED SPOT ELEVATION
	DOUBLE DIRECTION CROSS VALVE		EXIST. SPOT ELEVATION
	FIRE DEPT. CONNECTION		SEMI-TRAFFIC FLOW DIRECTION
	FIRE HYDRANT		CURB BUSH
	OPEN VALVE & BOX		CHAIN FILET
	WATER METER		AREA DRAIN
	GAS METER		HEADWALL
	GRASS TRAP		TRAFFIC HEADWALL
	EXTENDED GLENNY		CONCRETE SINK
	MANHOLE		TYPE N-MANHOLE
	LIGHT POLE		CHERRY LIGHT
EXISTING PHONE		_____ PH	
EXISTING ELECTRIC		_____ OH	
PROPERTY LINE		_____	
CEMENT		_____	
ROAD OF WAY		_____ ROW	
STREETWAY CONTROL SET POINTS		_____ SP _____ SP	
SECTION REL.		_____ E _____ E	
EXISTING TIE LINE		_____	
EXISTING FIRE LINE		_____ X _____ X _____ X _____ X	
MANHOLE BUILDING SERVICE LINE		_____ MBOL	
PHONE BOUNDARY		_____	
HOISTING CAR LINE		_____ SP _____ SP _____	
PROPOSED CAR LINE		_____	
EXISTING DRAIN		_____	
PROPOSED DRAIN		_____ STM _____ STM	
EXISTING CONTOUR LINES		_____ -80'- _____ -80'-	
PROPOSED CONTOUR LINES		_____ -80'- _____ -80'-	
EXISTING SURVEY MARK		_____ 34 _____ 34	
PROPOSED SURVEY MARK		_____ 3'PM _____	
SECTION MARK		_____ W _____ W	
PROPOSED WATER		_____ W _____ W	
PERMANENT		_____ PH _____ PH	
PERMANENT RETURN		_____ PHR _____ PHR	
FLORIDIAN		_____ FW _____ FW	
JOINT TIE MARK		_____	

Boundary and existing information provided by others.

Boundary bearings and distances are by deed only and have not been field located.

Grading and Drainage Notes:

1. The site contractor shall coordinate the installation of all underground utilities with the work. All underground utilities (water, sanitary sewer, storm sewer, electrical conduit, irrigation systems, and any other miscellaneous underground utilities, devices, or structures), shall be in-place prior to the placement of base course materials.
2. The contractor shall not submit pavement as necessary to ensure a smooth fit and continuous grade.
3. The contractor shall verify horizontal and vertical location of all existing storm sewer structures, place and all utilities prior to construction.
4. Clearing and grubbing limits shall include all areas disturbed by grading operation.
5. Any graded or disturbed areas shall have 4 inches of topsoil, seed, mulch, fertilizer and water applied until a healthy stand of grass is obtained. The restoration shall closely follow construction.
6. The property shown herein is in the Maps Map 46, Parcel 98.02, Highland District in Jefferson County, as recorded in Record P.D. 1983, Pg. 251.
7. All cut/slope and drainage areas shall be stabilized to the satisfaction of the Jefferson County Engineering Department. If stabilization is not achieved by seeding or sodding, then more stringent measures such as erosion control fabric, permanent turf reinforcement matting or concrete lining shall be used.
8. Contact the Jefferson County and Sevier County Engineering Department to request permits to perform work within the public right-of-way.
9. Any improvements or modifications within the public right-of-way require the approval of the Jefferson County and Sevier County Highway Department.

Erosion Control Notes:

1. The site contractor is responsible for establishing and maintaining suitable erosion and sediment control devices on-site during construction as required to prevent silt from leaving site. Silt will not be allowed beyond construction limits.
2. The contractor is responsible for removing silt from site if not removable on-site and ensuring plan alignment and grade is as of design at completion of construction.
3. The contractor is responsible for clearing out all storm drainage structures, including storm, pipe, etc., prior to completion of this project.
4. Erosion control shall be provided for all cut and fill operations within the limits of the construction site throughout the construction period to provide the site with maximum protection from erosion at all times.
5. Erosion control measures are to be installed prior to any grading on-site and are to be maintained in place until stabilization of erodible soils has been accomplished.

General Utility Notes:

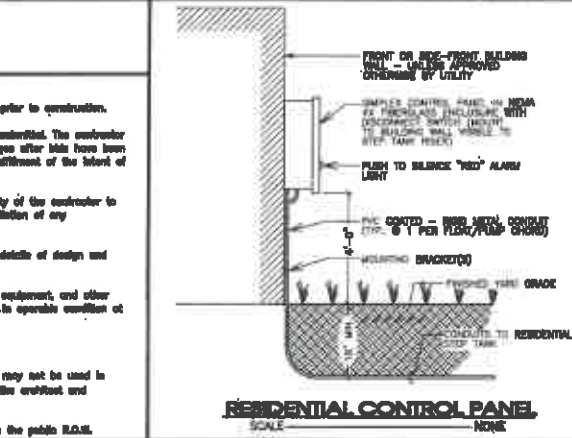
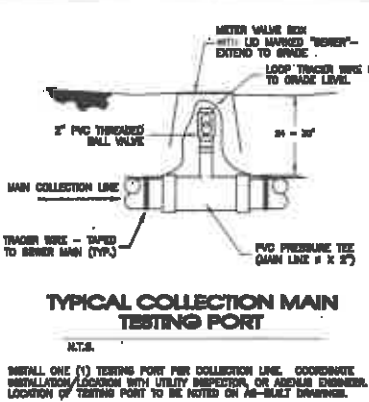
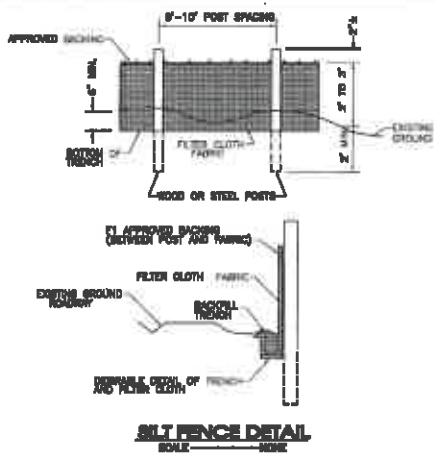
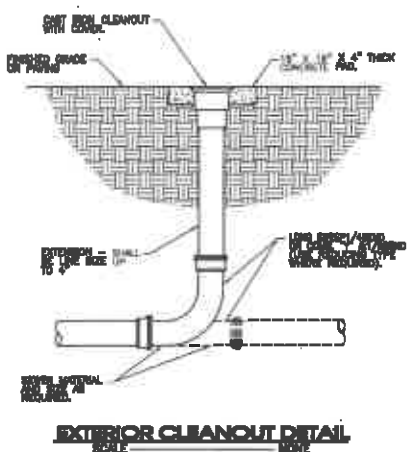
1. Existing utility lines shown are approximate location only. The contractor shall field verify all existing utility line locations prior to any construction. Any deviations from the design locations shall be reported to the owner or engineer prior to beginning construction.
2. The contractor will provide all necessary protection measures to safeguard existing utilities from damage during construction of this project. In the event that special equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment. The cost of protecting utilities from damage and furnishing special equipment will be included in the price bid for other items of construction.
3. The contractor shall notify each existing utility owner of his plan of operation in the area of the utilities, prior to commencing work. The contractor shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility.
4. The contractor shall refer to engineer's plans and specifications for actual location of all utility structures to include sanitary sewer, storm sewer, electrical service, and irrigation systems. The contractor shall coordinate installation of utilities in such a manner as to avoid conflicts and ensure proper depths are achieved as well as coordinating with the regulatory agency as to location and scheduling of tie-ins/connections to their facilities.
5. All underground utilities (water, sewer, storm sewer, electrical conduit, irrigation systems, and any other miscellaneous), shall be in-place prior to the placement of base course material.
6. Location of site utilities shall be verified with proper utility company providing services.
7. In Tennessee it is a requirement per "the underground utility damage prevention act" that anyone who engages in excavation work, notify all known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds (these utility owners who participate in the Tennessee one call system can be notified but not at 1-800-361-1111).

S.T.E.P. System General Notes:

1. The location of treatment system components as shown are general in nature. Minor field adjustments may be necessary. The contractor may request to modify the location of the components through the owner and the Tennessee Division of Water Pollution Control.
2. This design is for the disposal of wastewater collected from Lake Haven Treatment Facility design flow.
3. All flows for this system shall be controlled and monitored by FTK-1185-80-1802 model control panel and compatible with Hamilton Monitoring System. This monitoring shall be coordinated with the owner for this system.
4. The minimum horizontal separation between the closest two points of the water and sewer line is ten (10) feet. The minimum vertical separation between the closest two points of the water and sewer line shall be 18 inches, with waterlines being above sewerlines.
5. Contractor shall comply with the most current requirements, specifications and detail drawings for the installation of STEP system collection lines as outlined per specifications of 1.9.2.
6. All trenches, pipe laying, and handling shall be in accordance with federal OSHA regulations.
7. Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.
8. All tanks shall be one-piece, structurally sound, watertight tanks as manufactured by Jerrak Concrete Products, or approved equal.
9. Testing procedure for water tightness is as follows. Fill tank 2" into the floor. After a period of 24 hours, the water level should have lowered no more than 1/8".
10. Collection flowmeters shall be 1" and 4" RSRT17 green PVC pipe (refer to be coordinated with Tennessee Waterways). Flowmeters shall be tested and rated for a 100 PSI working pressure.

Site Notes:

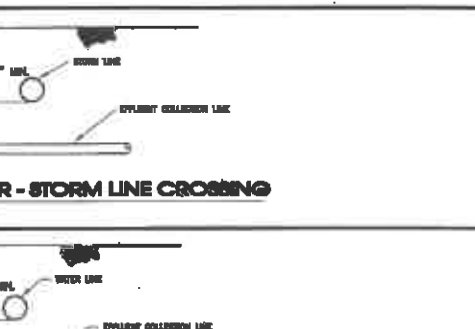
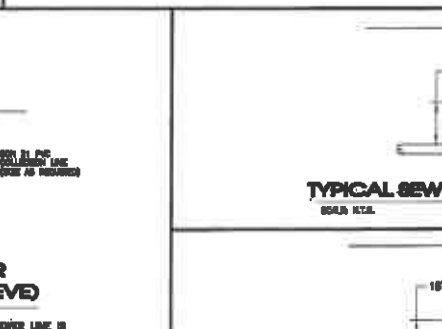
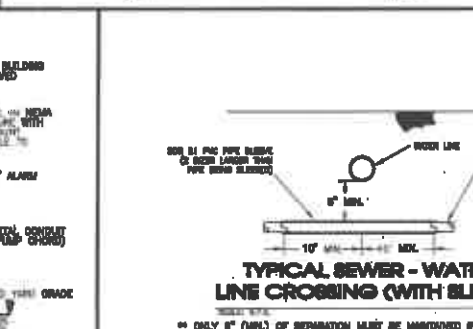
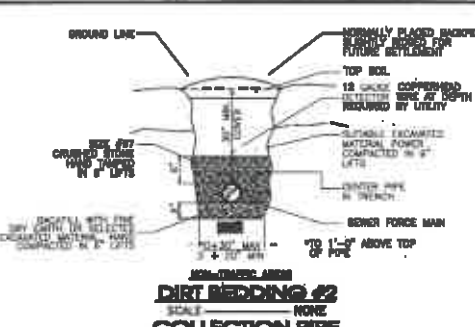
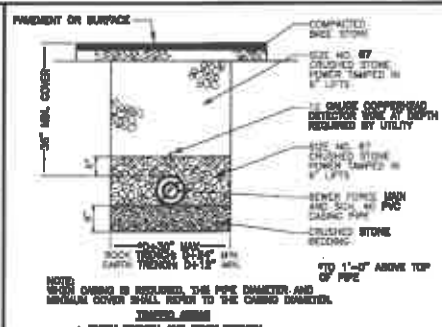
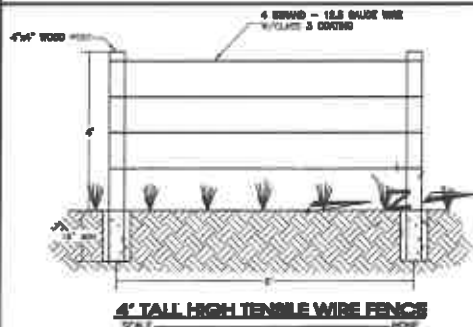
1. Contractor shall immediately notify the engineer of any discrepancies found between these plans, and/or field conditions prior to construction.
2. Apparent errors, discrepancies, or omissions on the drawings shall be brought to the attention of the owner prior to bid submission. The contractor may not use apparent errors, discrepancies, or omissions present on the drawings presented for bidding for additional charges after this have been submitted. The architect shall be permitted to make corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the contract documents.
3. The contractor shall obtain all improvements using the general data provided in the drawings. It is the sole responsibility of the contractor to completely obtain and check all improvements to ensure adequate positioning, both horizontal and vertical, prior to the installation of any improvements. No digital file will be provided.
4. The notes and plans shown call attention to certain required features of the construction but do not claim to cover all details of design and construction. The contractor shall furnish and build the work complete and ready for operation.
5. After completion of construction, the contractor shall perform site cleanup to remove all trash, debris, excess materials, equipment, and other deleterious materials associated with construction. The contractor is especially responsible for ensuring the site is clean and in operable condition at the time of final completion.
6. The contractor is responsible for the protection and replacement of all property plus on this site.
7. These drawings are intended for use on this site only and as an integral part of this specific project. These drawings may not be used in whole or in part on any other project under the professional engineer's seal. The owner shall hold harmless and indemnify the architect and engineer from and against any and all claims of any nature whatsoever arising from such use.
8. A separate R.O.M. Sanitation Permit issued from Robertson County shall be required for any excavation or construction in the public R.O.M.



RECIRCULATING SAND FILTER GRADING PLAN

SCALE 1"=30'

SCALE 1"=30'

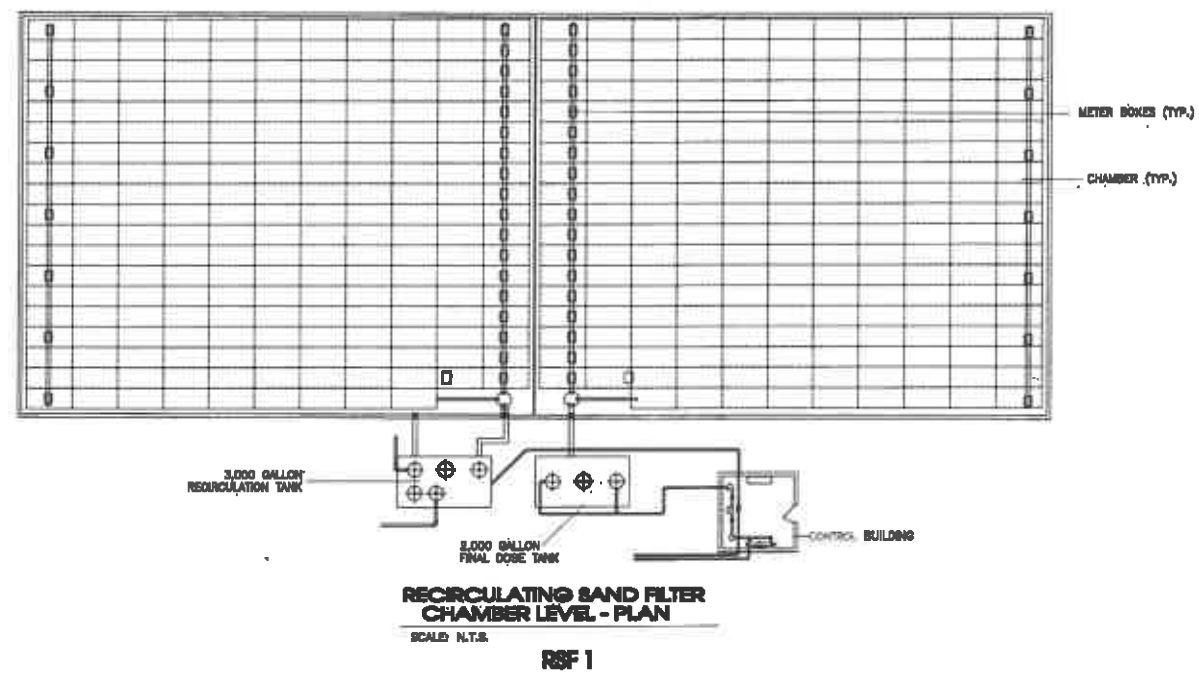
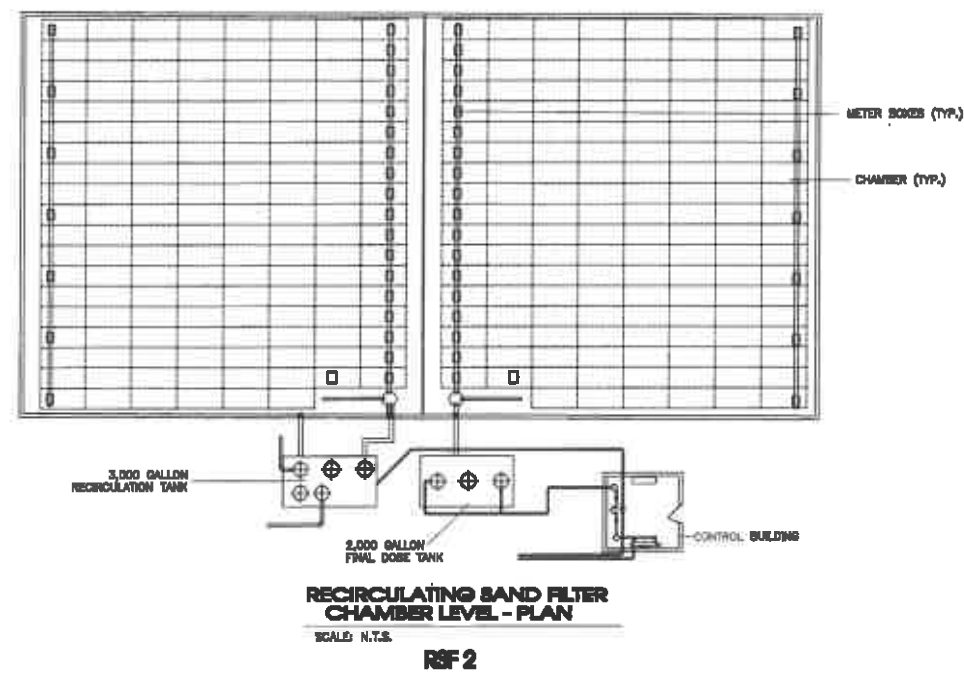
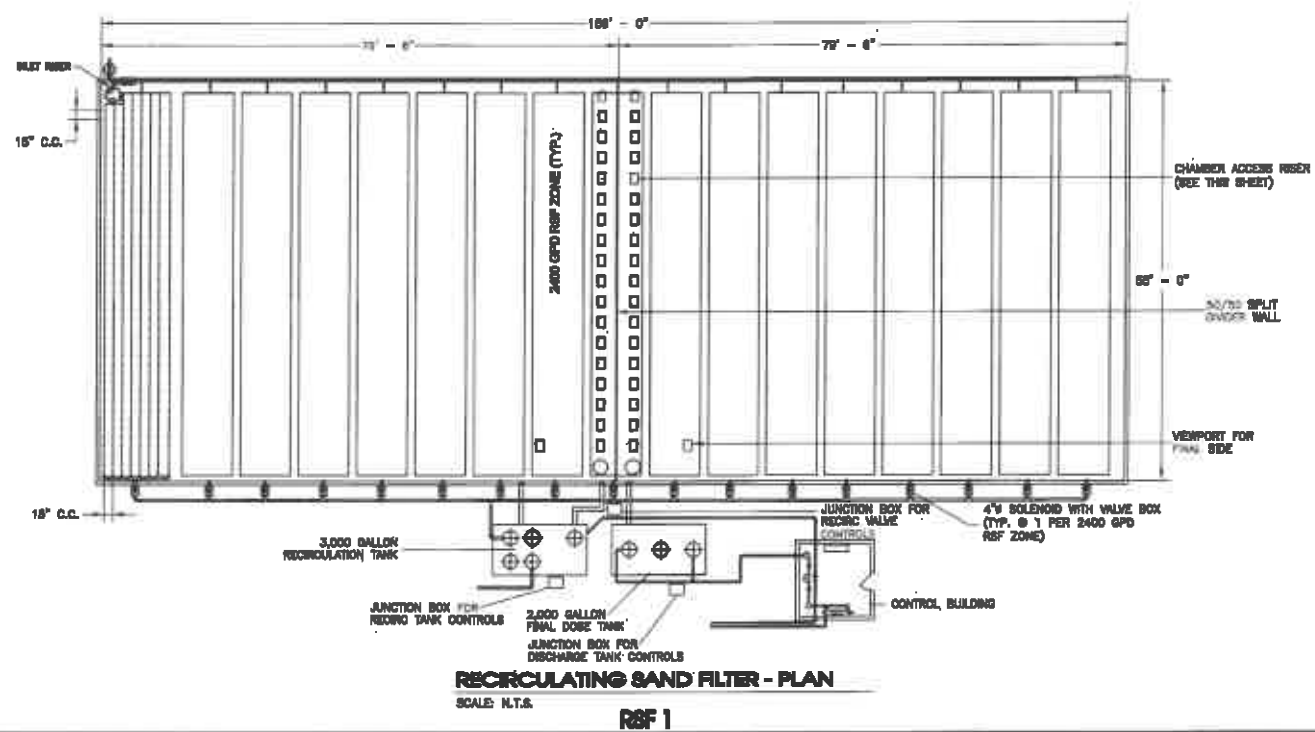
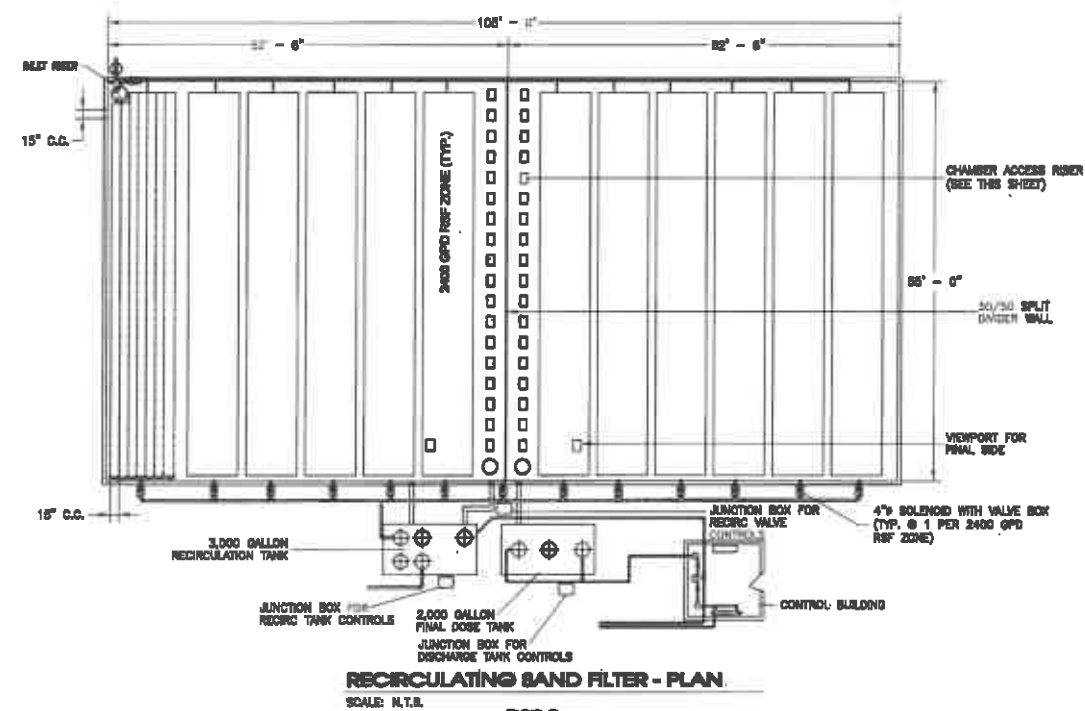


SEC, Inc.
SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
1800 MIDDLE TENNESSEE BOULEVARD, SUITE 200
MURFREESBORO, TENNESSEE 37055
PHONE: (615) 898-7951 FAX: (615) 898-0267
E-MAIL: TRADER@SEC-CIVIL.COM
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Lake Haven
Wastewater Treatment, STEP System,
Collection and Drip Disposal Plans
Jefferson County, Tennessee

Details
SHEET NO. 22086
C2.0



SEC, Inc.
SITE ENGINEERING CONSULTANTS
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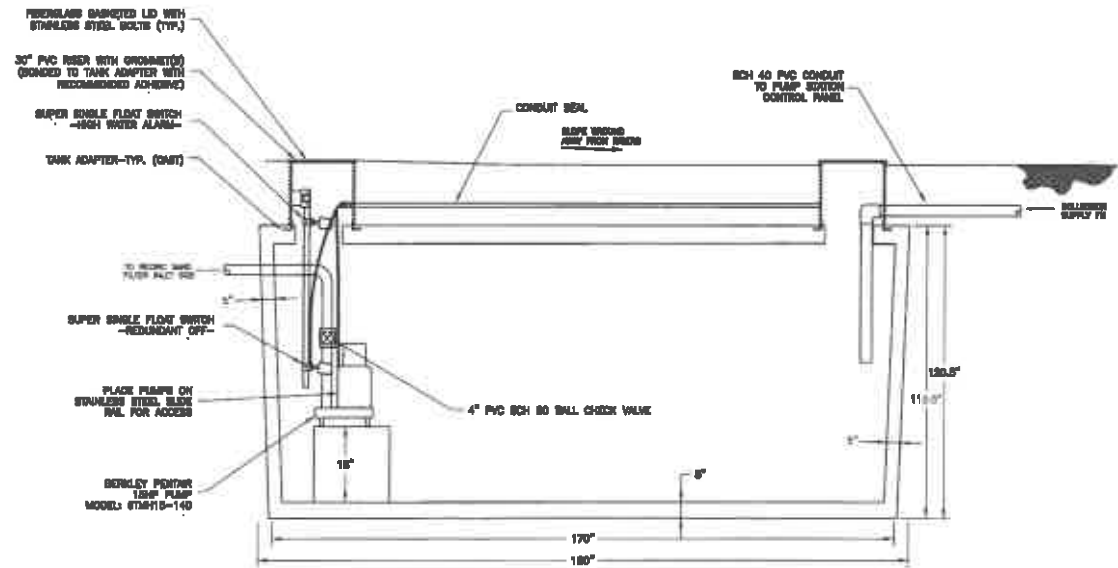


Lake Haven
Wastewater Treatment, STEP System,
Collection and Drip Dispersal Plans
Jefferson County, Tennessee

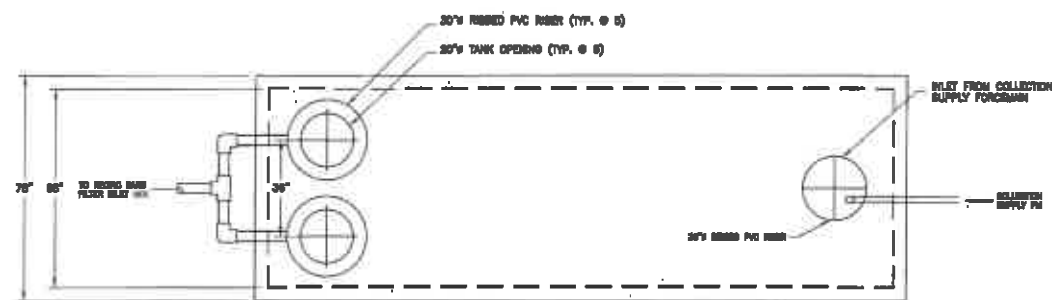
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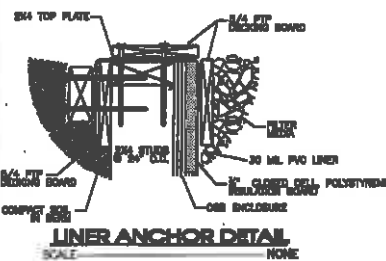
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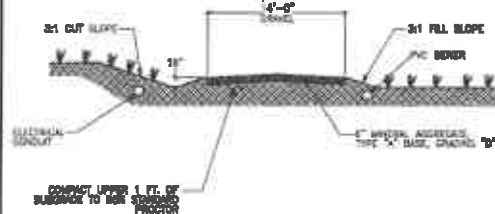
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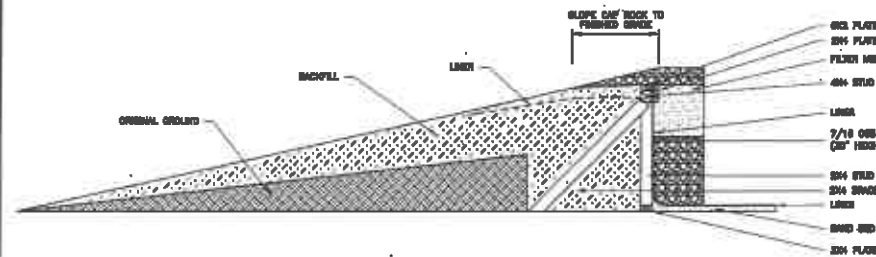
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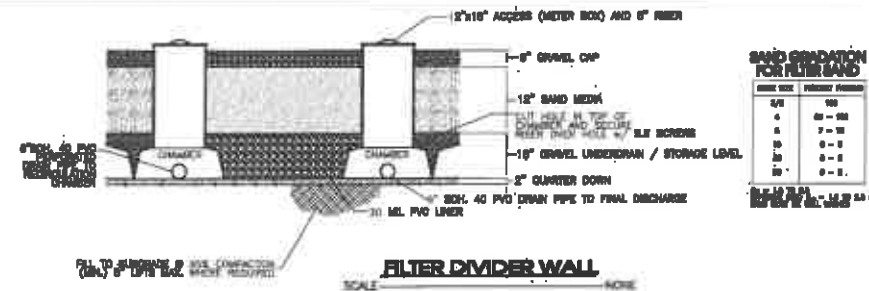
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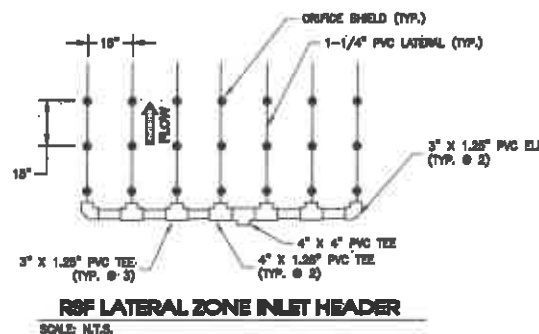
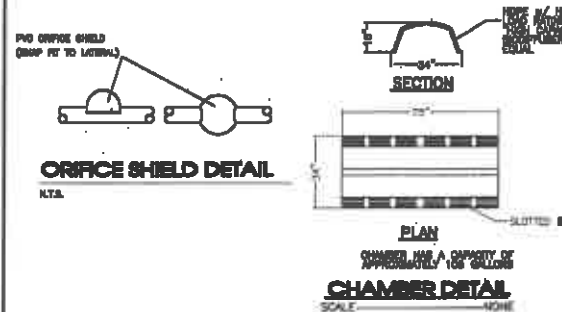
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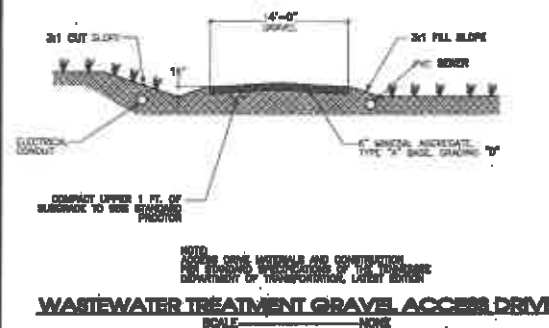
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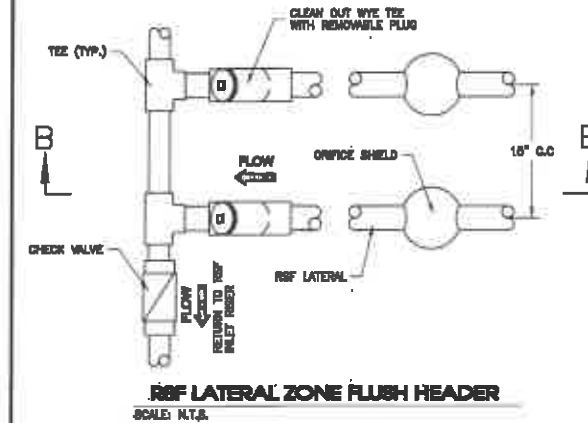
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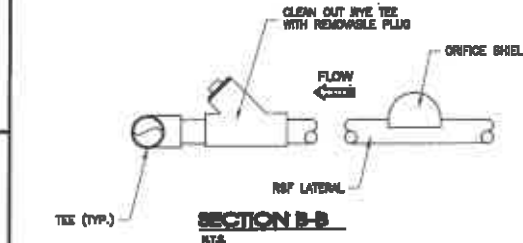
RSP LATERAL ZONE INLET HEADER
SCALE: N.T.S.



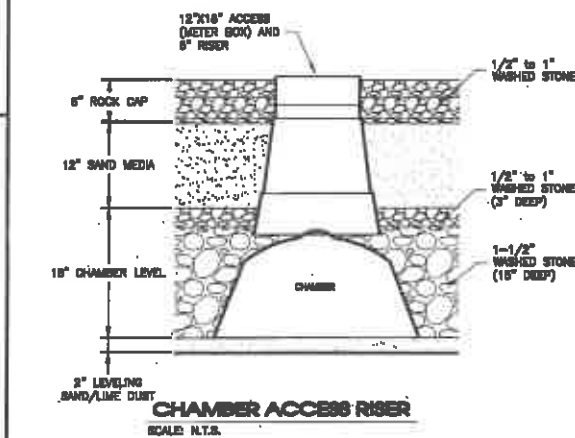
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RSP LATERAL ZONE FLUSH HEADER
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SECTION B-B
N.T.S.

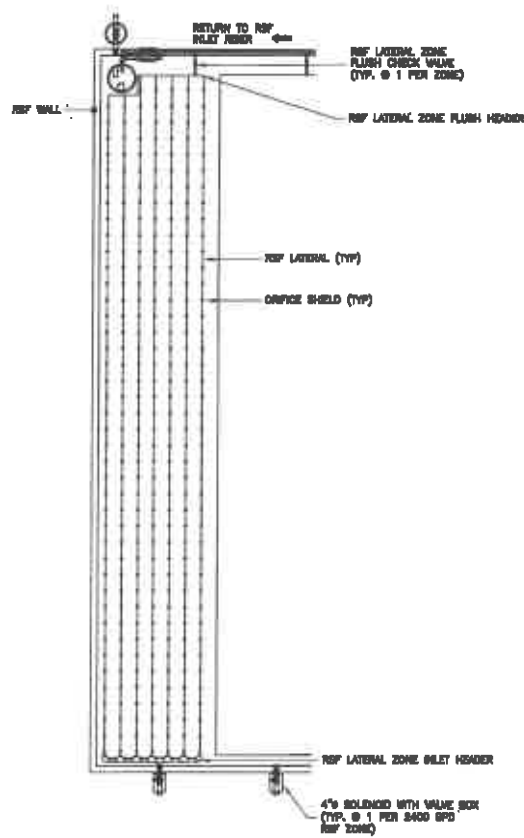


CHAMBER ACCESS RISER
SCALE: N.T.S.

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LANDSCAPE ARCHITECTURE
SEC, Inc.
1035 N. MIDDLE TENNESSEE BOULEVARD, SUITE 100, JEFFERSON, TENNESSEE 37139
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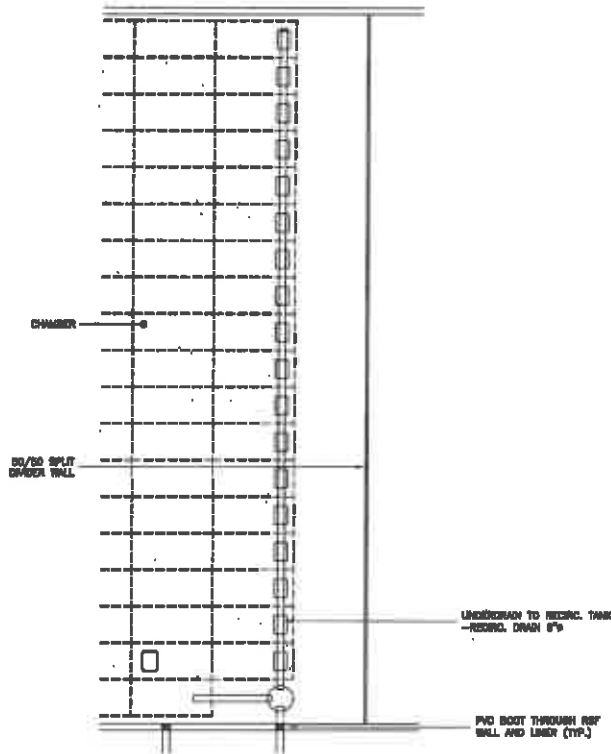
Lake Haven
Wastewater Treatment, STEP System,
Collection and Drip Dispersal Plans
Jefferson County, Tennessee

Details
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SHEET: C2.2

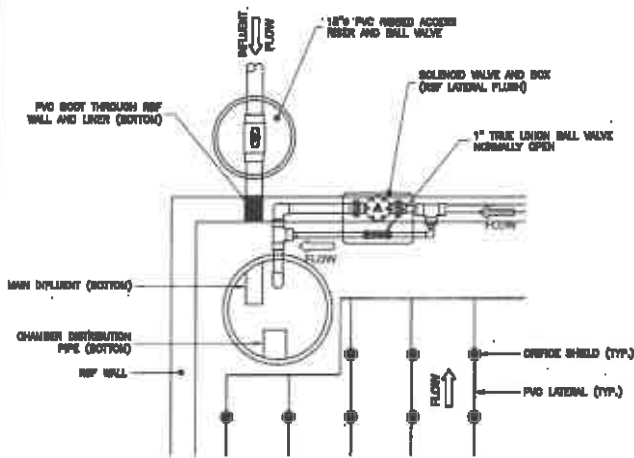


2400 GPD RSF ZONE(55) - PLAN
SCALE: N.T.S.

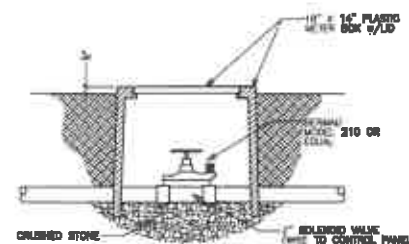
STANDARD 8000 GPD RSF TREATMENT ZONE - 55 FT. DIA.
NUMBER OF LATERALS: 7
LATERAL DIAMETER: 1-1/8"
NUMBER OF ORIFICE/LATERAL (1/ZONE): 48 (284)
4\"/>



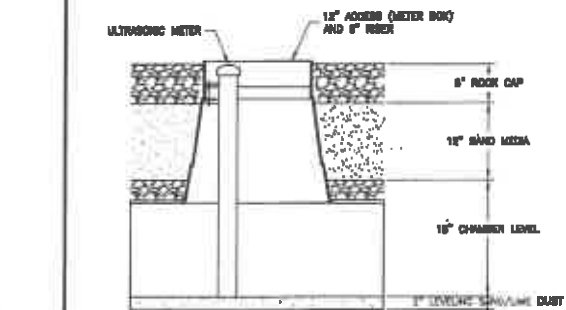
2400 GPD RSF ZONE(55) - CHAMBERS
SCALE: N.T.S.



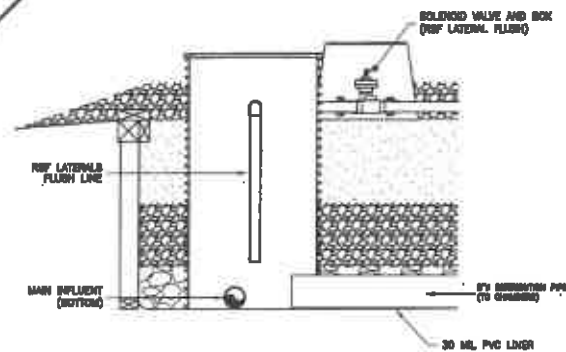
INLET RISER - PLAN
SCALE: N.T.S.



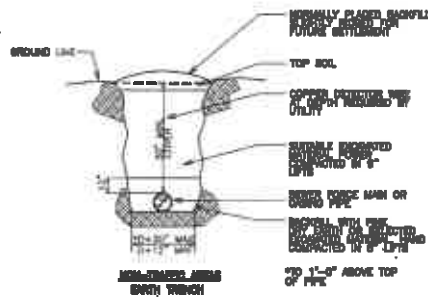
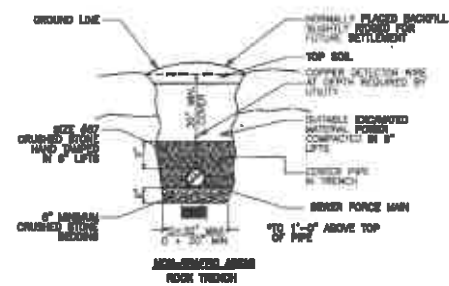
ELECTRIC SOLENOID VALVE
SCALE: NONE



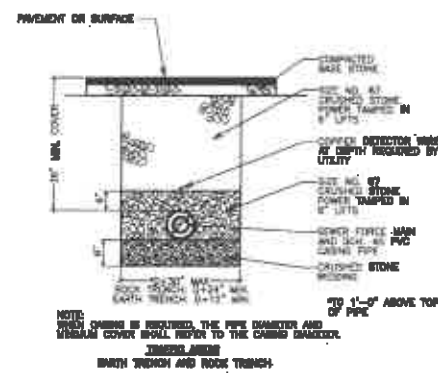
**LEVEL CONTROL
ULTRASONIC METER**
N.T.S.



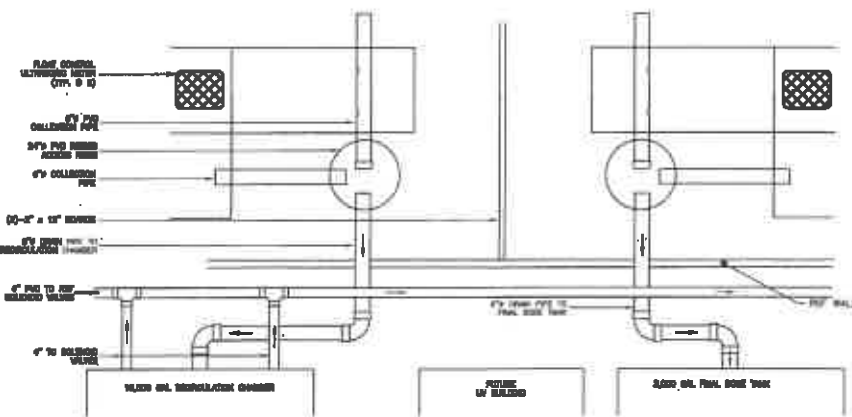
INLET RISER
N.T.S.



PIPE TRENCH DETAILS
SCALE: NONE



NOTE: WHEN ORDERING, BE SURE TO INCLUDE THE PIPE DIAMETER AND TRENCH COVER SHALL REFER TO THE CHAMBER DIMENSIONS.
TRENCHES
BIRTH TRENCH AND ROCK TRENCH



EFFLUENT RISER - PLAN
N.T.S.

SEC. Inc.
SITE ENGINEERING CONSULTANTS
ENGINEERING - SURVEYING - LAND PLANNING
LANDSCAPE ARCHITECTURE
400 MICHELLE TENNESSEE BOULEVARD, SUITE 200, JEFFERSON, TENNESSEE 37087
PHONE: (615) 880-1961 FAX: (615) 880-1962
E-MAIL: BRIDGES@SEC-CIVIL.COM
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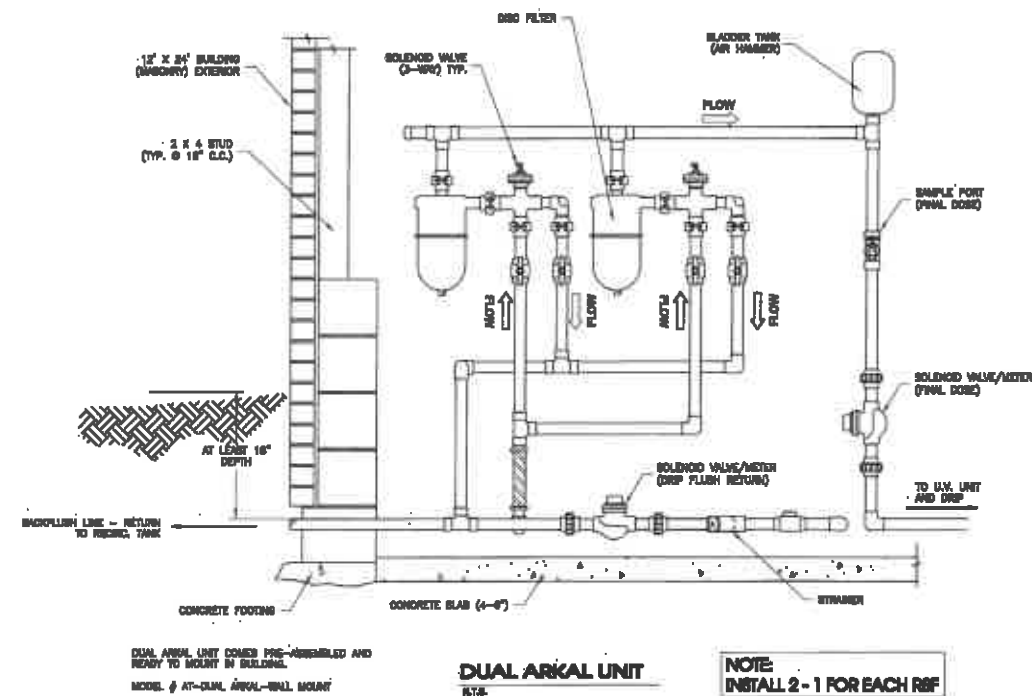
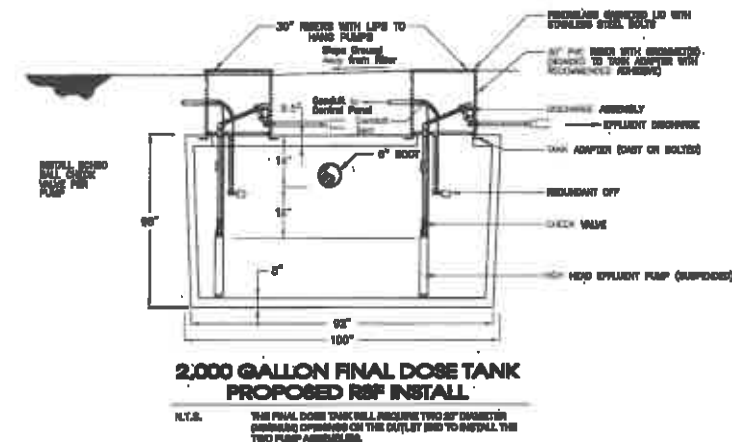
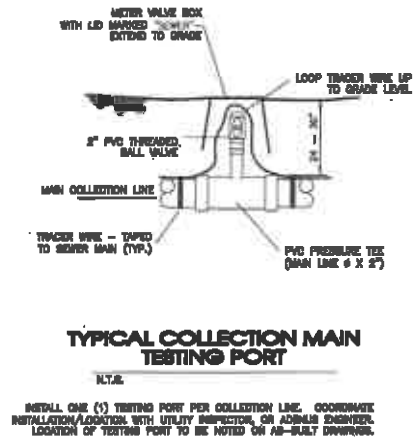
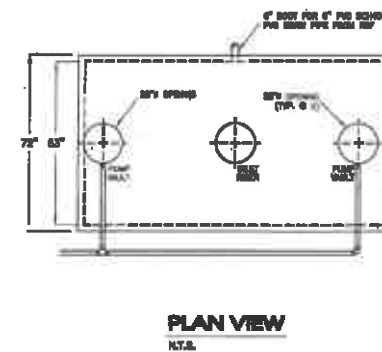
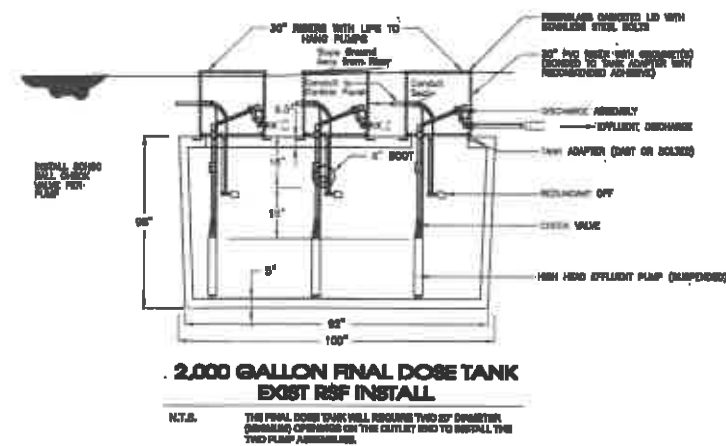
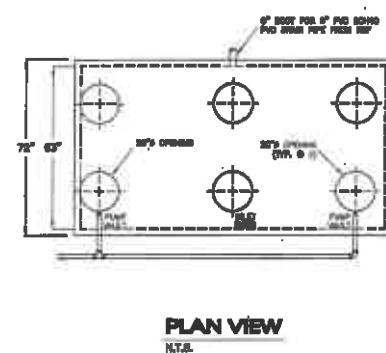
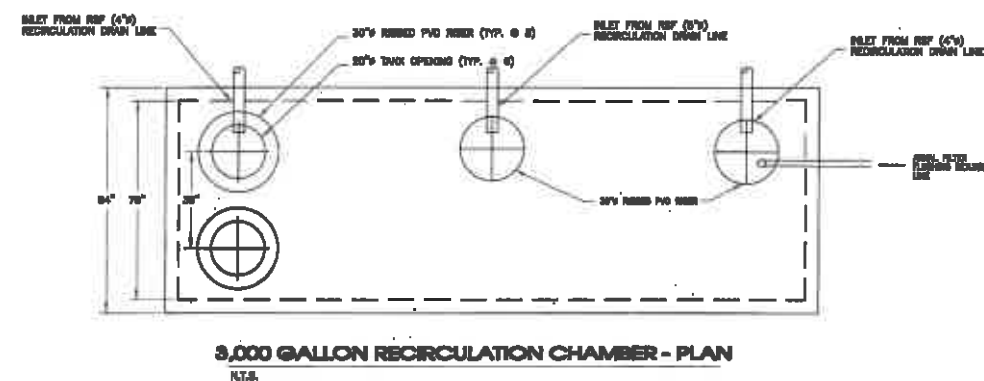
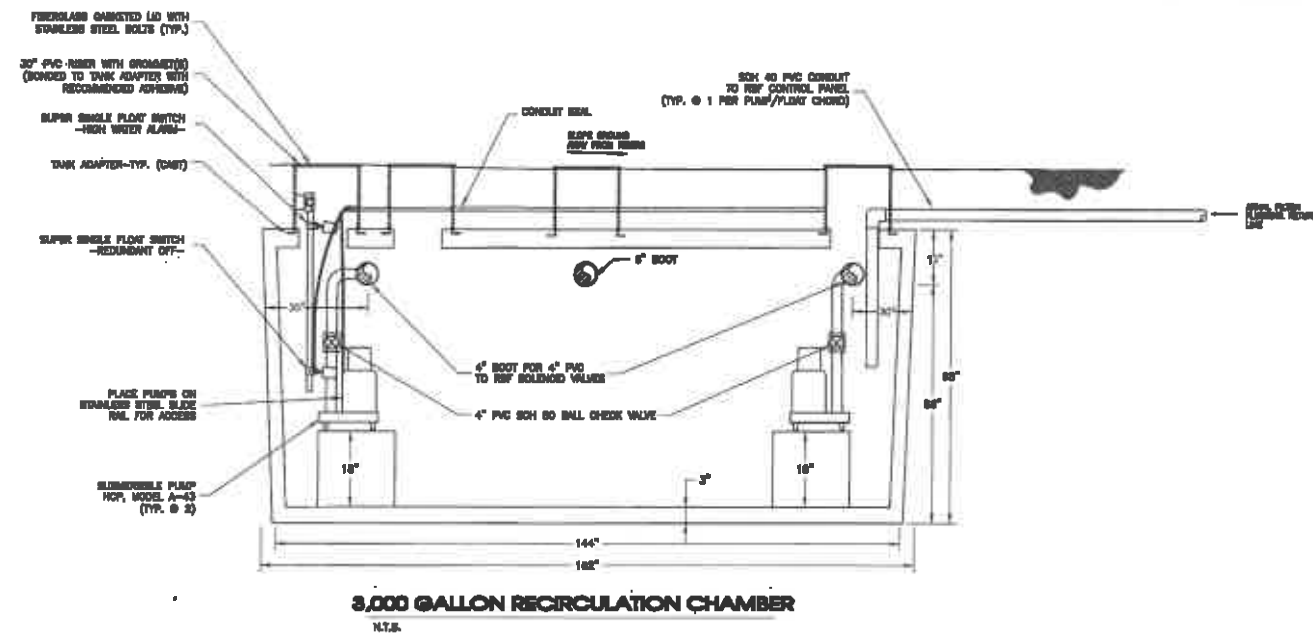


Lake Haven
Wastewater Treatment, STEP System,
Collection and Drip Disposal Plans
Jefferson County, Tennessee

DATE: 6-11-2001
CHECKED: JAW
FILE NAME: C:\SEC\Projects\Lake Haven\STEP\STEP.dwg
SCALE: N.T.S.
JOB NO.: 22086
SHEET: 6/20

C2.3

Details



SEC, Inc.
SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING



Lake Haven
Wastewater Treatment, STEP System,
Collection and Drip Dispersal Plans
Jefferson County, Tennessee

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