Resolution No. 93 of 2023, a resolution establishing the Clifton Park Sewer District No. 1, Extension No. 6, Pursuant to Article 12-a of the New York State Town Law.

Introduced by Councilwoman Reid who moved its adoption, seconded by Councilwoman Walowit.

WHEREAS, the Town Board proposes to create Extension No. 6 (the "Extension") to Clifton Park Sewer District No. 1, and

WHEREAS, a Sewer Report containing maps, and plans (the "Maps and Plans") have been prepared by Lansing Engineering and dated September 1, 2022, in a manner and detail sufficient for consideration by the Town Board regarding the proposed Extension, and

WHEREAS, the Maps and Plans have been filed in the Town Clerk's Office and are available for public inspection during regular business hours, and

WHEREAS, the Town Board intends to include within the Extension, properties served by sewer infrastructure accepted for dedication to the Town through Resolution No. 202 of 2019, described in a sewer inventory letter by Lansing Engineering dated July 10, 2019, included as Exhibit "C", and

WHEREAS, the boundaries of the proposed Extension are as described in Exhibit A to this Resolution, and includes property currently known as 989 Hatlee Road, also identified by the SBL designation 258.-1-22, and particularly described in Exhibit "A", attached, as well as properties at 995, 997, 999 and 1001 Hatlee Road, as depicted in Exhibit "B", attached, and

WHEREAS, the sewer system improvements (the "Improvements") proposed to be constructed in and for the Extension consist of the construction and installation of pipes, conduits, pumps, and related facilities and subsequent restoration, to connect the property to an existing force main system along the east side of Hatlee Road, sufficient to connect three separate users to the Sewer District facilities to accommodate subdivision of the subject property, as well as existing sewer infrastructure listed in Exhibit "C", and

WHEREAS, the estimated maximum amount to be expended for the Improvements, including design, construction and administrative costs, is estimated to be $27,848, and will be borne by the project owner/developer without capital costs or bonded indebtedness to the new Extension, and

WHEREAS, the proposed method of financing the cost of the Improvements consists of private by the developer, with subsequent dedication to the Town, as Commissioners of the Clifton Park Sewer District No. 1, and

WHEREAS, the annual cost of the proposed Extension, to the typical property in the Extension, is estimated to be $440.50 per year, consisting of Town sewer assessments, and $260.50 in sewer charges payable to the Saratoga County Sewer District No. 1, and $ 180 for the Clifton Park Sewer District No. 1, and

WHEREAS, the estimated cost of the hook-up fees to the typical property, as part of the Extension is anticipated to be $1,000 and

WHEREAS, the grinder pumps installed within the project will be owned, operated and maintained by the homeowner/property owner, to make the system compatible with Clifton Park Sewer District force main facilities on Hatlee Road; now, therefore, be it

RESOLVED, that the Town Board will hold a public hearing to hear all persons interested in the Extension and the proposed sewer system Improvements, which public hearing shall be held in the Wood Memorial Room, One Town Hall Plaza, in the Town of Clifton Park on May 1, 2023, at 7:05 pm; and be it further

RESOLVED, and ordered that the Town Clerk give notice of such hearing by publishing the attached Notice of Public Hearing in the official Town newspaper and by posting a copy of this Resolution on the Town's Official Sign Board, not less than ten nor more than twenty days before such hearing.

ROLL CALL VOTE

Ayes: Councilwoman Reid, Councilman O'Hara, Councilwoman Walowit, Supervisor Barrett

Noes: None

Absent: Councilman Morelli

DECLARED ADOPTED

April 10, 2023

_____

Teresa Brobston, Town Clerk

EXHIBIT A

Gilbert VanGuilder
Land Surveyor, PLLC
988 Route 146, Clifton Park, NY 12065
383-0634
FAX 371-8437

Members:
Robert A. Wilklow, PLS
Kevin H. Weed, PLS

September 1, 2022

SUGGESTED DESCRIPTION
CLIFTON PARK SEWER
DISTRICT #1 EXTENSION #3
HATLEE ROAD

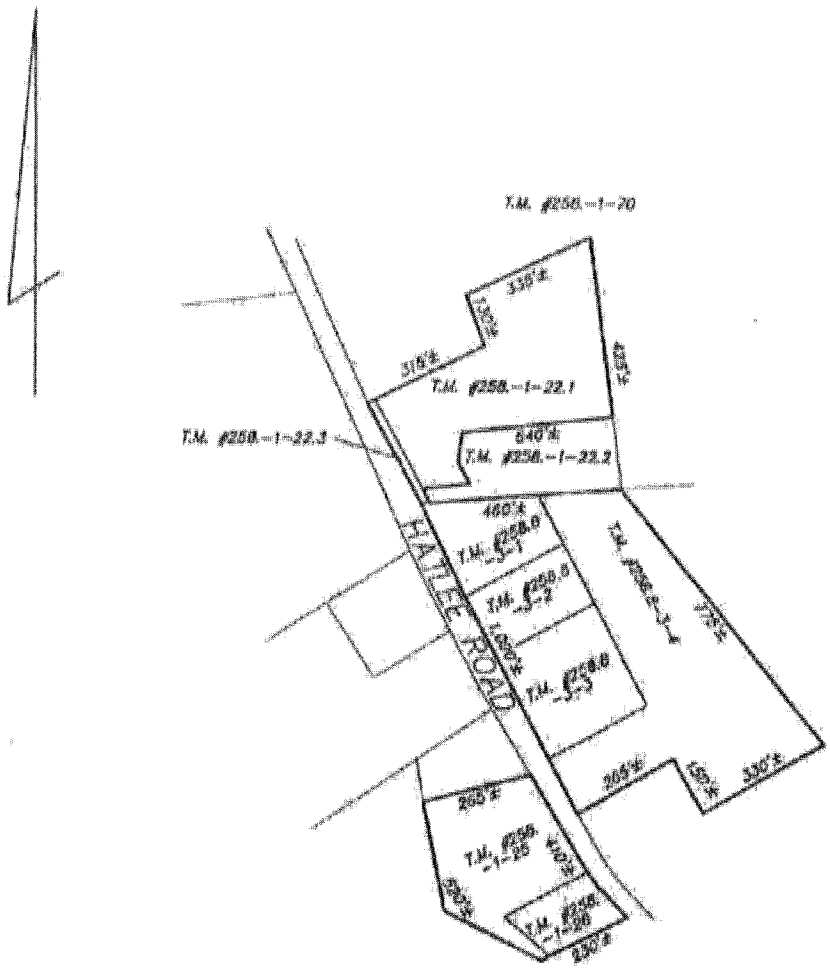
All that certain piece, parcel or tract of land situate in the Town of Clifton Park, County of Saratoga, State of New York, lying along the easterly line of Hatlee Road, being further bounded and described as follows:

Beginning at the point of intersection of the southeasterly line of tax map parcel (TMP) #258.8-3-4 with the easterly line of Hatlee Road, thence from said point of beginning northerly along said easterly line of Hatlee Road 1,090± feet to the point of intersection with the northwesterly line of TMP #258.-1-22.1, thence northeasterly and northerly along said northwesterly and westerly lines of TMP #258.-1-22.1 780± feet to a point, thence southerly along the easterly line of said TMP #258.-1-22.1 425± feet to a point, thence westerly and southerly along the southerly and easterly lines of said TMP #258.-1-22.1 and TMP #258.-1-22.3 640± feet to a point in the northerly line of TMP #258.8-3-1, thence easterly along said northerly line and the northerly line of TMP #258.8-3-4 460± feet to a point in the easterly line of TMP #258.8-3-4, thence southerly along said easterly line 775± feet to a point in the southeasterly line of said TMP #258.8-3-4, thence southwesterly and northwesterly along said TMP #258.8-3-4 745± feet to the point of beginning. Intending to include all of TMP #258.-1-22.1 & 22.3, TMP #258.8-3-1, 2, 3 & 4.

Also, all that certain piece, parcel or tract of land situate in the Town of Clifton Park, County of Saratoga, State of New York, lying along the westerly line of Hatlee Road, being further bounded and described as follows:

Beginning at the point of intersection of the northerly line of TMP #258.-1-25 with the westerly line of Hatlee Road, thence southerly along said westerly line 410± feet to the point of intersection with the southeasterly line of TMP #258.-1-26, thence southwesterly along said southeasterly line and the southeasterly line of TMP #258.-1-25 230± feet to a point, thence northwesterly and northerly along said TMP 258.-1-25 520± feet to the point of intersection with the northerly line of said TMP 258.-1-25, thence easterly along said northerly line 265± feet to the point of beginning. Intending to include all of TMP #258.-1-25 & 26.

Todd Westerveld



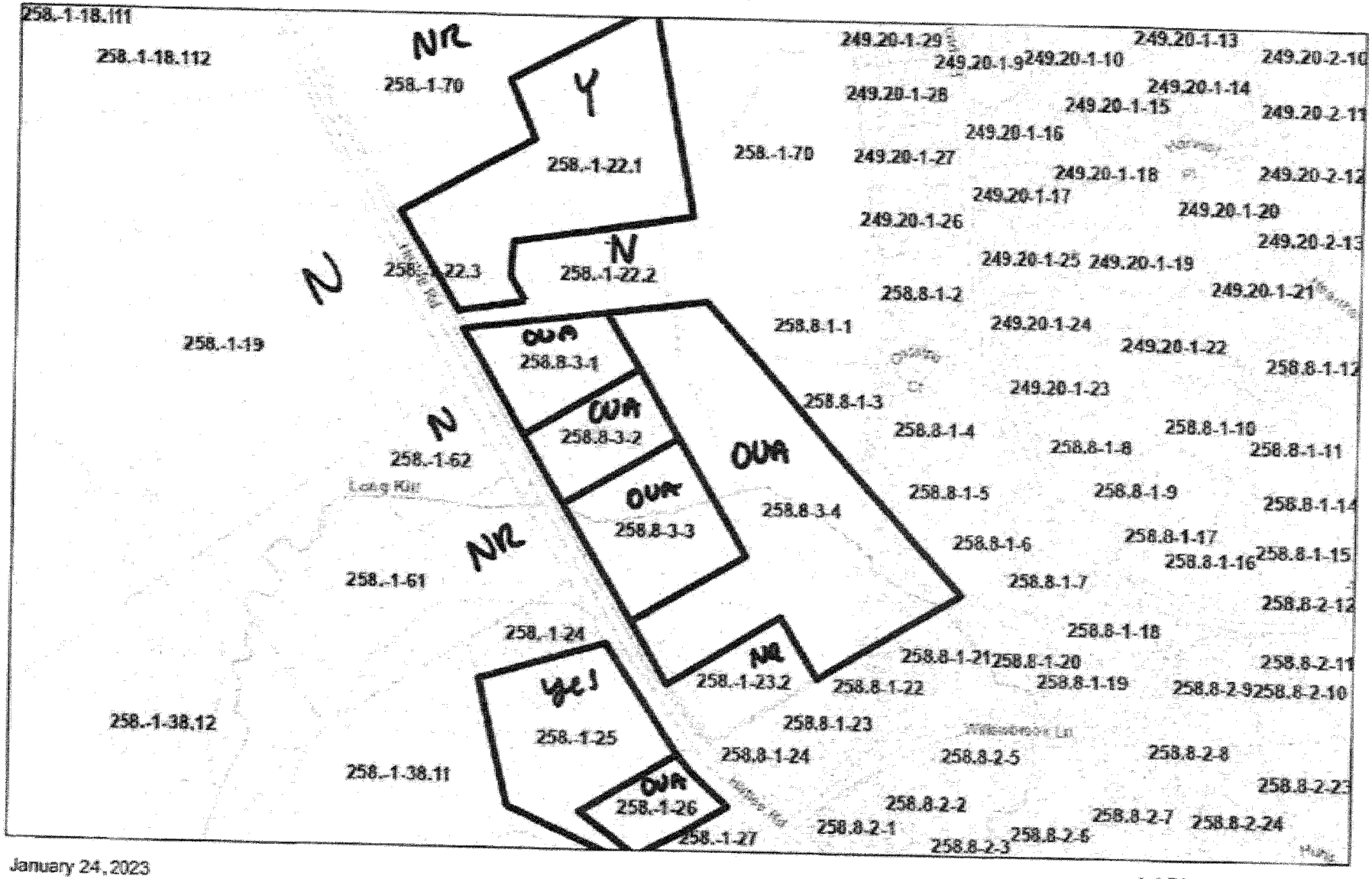
CLIFTON PARK SEWER DISTRICT #1 EXTENSION #3 HATLEE ROAD

TOWN OF CLIFTON PARK	SARATOGA COUNTY, NEW YORK
SCALE 1" = 400'	DATE SEPTEMBER 1, 2022
TELEPHONE NO.: (518) 383-0634	MAP NO.: 22 - 08 - 01SEW

Gilbert VanGuilder
Land Surveyor, PLLC
Professional Land Surveyors
965 Route 146, Clifton Park, New York 12065
gvglandsurveyors.com

EXHIBIT B

CPSD#1EXT3



January 24, 2023

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA

EXHIBIT C

LANSING ENGINEERING, PC

2452 STATE ROUTE 9
SUITE 301
MALTA, NY 12020
T (518) 899-5243
F (518) 899-5345

July 10, 2019

Mr. Mike O'Brien
Collection Systems Manager
Town of Clifton Park Sewer Dept.
One Town Hall Plaza
Clifton Park, NY 12065

RE: **Hatlee Road Subdivision Sewer Extension**
Sanitary Sewer Dedication, Inventory Letter
Clifton Park (T), Saratoga County

Dear Mr. O'Brien:

It is the intent of the owner of the Hatlee Road Subdivision to dedicate the newly construction sanitary sewer system serving the 4-lot subdivision. This letter serves as an inventory of the sewer system that is to be offered for dedication.

The constructed sewer extends from the existing sanitary manhole located at the intersection of Willowbrook Lane and Hatlee Road toward the northwest approximately 1,080 feet to the newly constructed Forcemain Manhole 1 (End of Line Cleanout).

The infrastructure offered for dedication includes approximately 1,080 linear feet of 2" DR 11 forcemain and 2 forcemain manholes.

The sanitary sewer was installed during June and July of 2018 and was inspected under the Saratoga County Sewer District's QA/QC procedures. The construction of the sewer was inspected and certified by SMV Engineering, PLLC. SMV Engineering also provided an "As-Built" plan along with the certification. The certification and "As-Built" are attached to this letter.

The estimated installation value of the pressure sewer system is approximately $35,000.00 (contractor provided cost).

If additional information is required, please contact our office at your earliest convenience. Thank you.

Sincerely,
LANSING ENGINEERING, PC

Jason M. Dell, PE, CPESC, CPSWQ

CC:

SMV ENGINEERING, PLLC
Civil Engineering & Environmental Professionals
385 Wilton Road, Greenfield Center, NY 12833
518.852.3902

HATLEE ROAD SUBDIVISION-TOWN OF CLIFTON PARK

SMV Engineering, PLLC certifies to Saratoga County Sewer District No. 1 that the sanitary sewer facilities described in the approved drawing, specifications and addenda thereto have been constructed and installed in accordance with these documents and in conformance with the standards of Saratoga County Sewer District No. 1, and the facilities meet the infiltration/exfiltration and hydrostatic tests and requirements set by accepted industry standards and applicable ASTM Specifications.

SMV ENGINEERING, PLLC

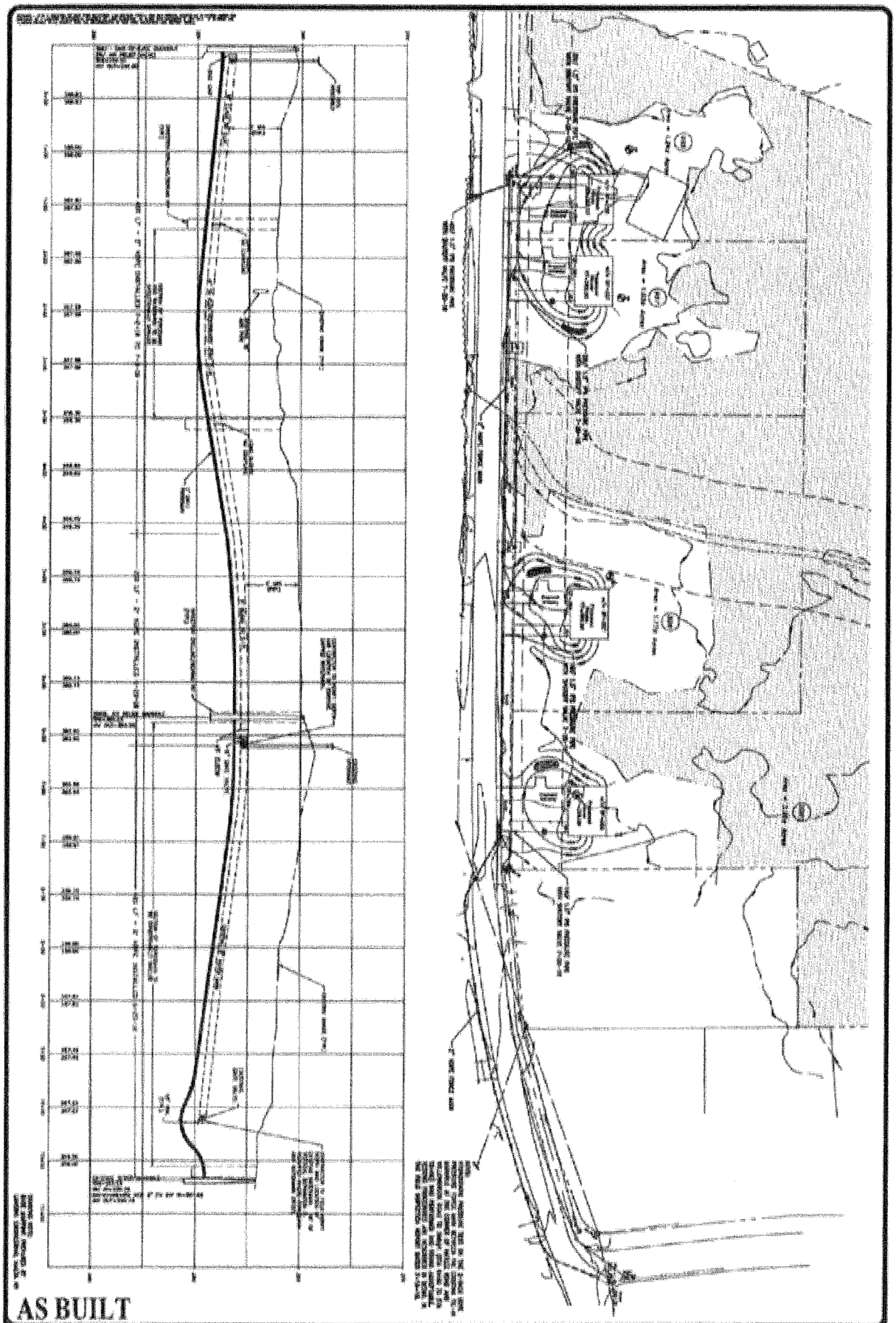
BY: Stephanie Vetter
Stephanie M. Vetter, PE

STATE OF NEW YORK)
COUNTY OF SARATOGA)

Sworn and subscribed to before me this 24 day of October, 2018

Lisa Doyle
Notary Public

LISA DOYLE
NOTARY PUBLIC
STATE OF NEW YORK
WASHINGTON COUNTY
Reg. No. 01DO6170204
COMM. EXP. 07/02/2019



AS BUILT

PP-1	PLAN AND PROFILE SANITARY SEWER AS-BUILT	HATLEE ROAD SUBDIVISION 993 HATLEE ROAD, TOWN OF CLIFTON PARK, SARATOGA COUNTY, NY		SMV ENGINEERING, PLLC	

SANITARY SEWER REPORT/
SANITARY SEWER DISTRICT EXTENSION

CLIFTON PARK SEWER DISTRICT #1

989 HATLEE ROAD RESIDENTIAL SUBDIVISION

SEPTEMBER 1, 2022

Prepared For:

Prediletto Electric
36 Beechwood Drive
Clifton Park, NY 12065

Prepared By:

LANSING ENGINEERING

2452 State Route 9, Suite 301
Malta, New York 12020

Table of Contents

Appendices

I. PROJECT DESCRIPTION

The proposed sewer installation and improvements discussed in this report will provide public sewer service to future residents of the 989 Hatlee Road Residential Subdivision and are proposed to be owned and maintained by the Town of Clifton Park. The sewer extension will provide service to two (2) new single family unit homes and one (1) existing single family unit home via individual grinder pumps and low pressure forcemain sewer.

II. SITE DESCRIPTION

The 989 Hatlee Road Residential Subdivision is situated on one parcel having a total area of approximately 4.06 acres and a tax map number of 258-1-22.1. The project parcel is located on the eastern side of Hatlee Road, approximately 1,400 feet north of the intersection of Hatlee Road and Willowbrook Lane, in the Town of Clifton Park, Saratoga County, New York. The applicant is proposing to subdivide the parcel for the construction of two (2) single family homes.

Soils consist of a mix of predominately loamy fine sand. The Soil Survey of Saratoga County, New York prepared by the National Resources Conservation Services (NRCS) indicates the site is predominately one distinct soil unit. This unit consists of Oakville Loamy Fine Sand (OaB). The majority of the site is well drained. The site topography ranges from nearly level to rolling with slopes ranging from 0 to 25 percent.

Access to the project will be provided by two (2) new driveways connecting to Hatlee Road, and the existing home's driveway will continue to be utilized. Construction of the project will progress in two phases, with the construction of the utility extensions first, followed by the construction of the single family homes second. The property will be cleared to allow for construction and installation of all necessary utilities. Following the general infrastructure installation, construction will then begin on the individual homes.

III. ALTERNATIVE SELECTION

Selection of this alternative is based on engineering analysis of the proposed site. The surrounding sites have been analyzed based on the likelihood of growth that may potentially result in an increased burden on the proposed wastewater system.

IV. ENGINEERING CRITERIA

As outlined in 11.24 of the "Recommended Standards for Wastewater Facilities" published by the Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 2014 Edition, all wastewater conveyance piping has been sized to accommodate the peak hourly flow from the proposed residential subdivision and the potential surrounding area.

Pursuant to the design standards set forth in Chapter 30 of the "Recommended Standards for Wastewater Facilities", the capacity of all sewer conveyance piping shall be designed to accommodate the ultimate tributary population. The sewer piping will be sized to accommodate the design peak hourly flow. All low pressure forcemain sewer piping in the public right-of-way will be 2" in diameter and all service lines will be 1.25".

Due to existing forcemain infrastructure within Hatlee Road, individual grinder pumps will be required for all lots to convey wastewater to the existing forcemain sewer on Hatlee Road.

Individually owned external grinder pumps manufactured by Environment One (E-One) pumps will be used on all lots. Wastewater from the individual grinder pumps will be conveyed by 1.25" service laterals to a new 2" diameter forcemain located in the Hatlee Road right-of-way. The 2" forcemain will ultimately discharge to an existing forcemain manhole for collection on the east side of Hatlee Road. The exterior grinder pump shall be DH071-93 by E-One or equivalent.

A hydraulic analysis was performed by E-One using their model DH071-93 grinder pump and DR-11 forcemain. The forcemain system was broken down into seven "zones" which illustrate the hydraulic characteristics of all sections of the system during the occurrence of maximum contribution of flow into the system. The analysis shows that 1.25" DR-11 service laterals will be installed on the individual lots and utility easements and a 2" DR-11 forcemain will be installed within the public right-of-way. The analysis is included in Appendix C.

For forcemain sewage conveyance, a cleansing velocity of at least 2 feet per second must be maintained. Air and vacuum relief valves must be installed on all force main piping to relieve negative pressures where necessary. In addition, all pipe materials must be of sufficient strength for use as a water main.

All sewage piping shall be installed to minimize damage to the piping and all joints. Trenches shall be dug and pipe shall be laid to minimize any bending. According to 33.82 (b) of the Recommended Standards, rocks, boulders and large stones will be removed to provide minimum clearance of 4 inches on all sides of the pipe.

V. EXISTING SANITARY SEWER CONVEYANCE SYSTEM

An existing 2" sanitary sewer forcemain exists along the east side of Hatlee Road, within the Clifton Park Sewer District #1, and is owned and operated by the Clifton Park Sewer Department. All three (3) lots from the 989 Hatlee Road Residential Subdivision are proposed to be serviced by the existing 2" forcemain via a connection to the existing manhole along the east side of Hatlee Road. The 2" forcemain conveys wastewater south along Hatlee Road before connecting to an 8" gravity sewer owned and maintained by the Clifton Park Sewer District, near Willowbrook Lane.

The peak hour flow from this project of 4.58 gpm represents 3.93% of the maximum capacity of the receiving 2" forcemain. Initial discussions with the Town of Clifton Park have indicated that sufficient capacity existing within the 2" forcemain for the proposed project. Currently, the only known contributors to the forcemain are the four single family units. A wastewater analysis of the existing contributors to the existing 2" forcemain has been performed and is included in Appendix B. Sewage waste is ultimately conveyed and treated at the SCSD #1 treatment plant located in Halfmoon, New York.

VI. ENVIRONMENTAL REVIEW

The sewer network for the proposed development has been carefully designed to minimize any potential impacts associated with wastewater conveyance. All joints and piping will be inspected and tested prior to use using the appropriate ASTM standards to ensure the network will limit infiltration and contamination of surface water bodies as well as ground water. Performing a hydrostatic test will ensure the infiltration

and exfiltration rates do not exceed required limits. Air tests will conform to ASTM C-924 for concrete pipe and ASTM F-1417 for plastic pipe.

According to the "Recommended Standards for Wastewater Facilities", all sewers must be placed at least 10 feet in the horizontal direction from all existing and proposed water mains. A vertical distance of 18" must be maintained between sewer lines and existing or proposed water mains. Pipe joints in both the water and sewer mains will be installed so the water and sewer joints will be "equidistant and as far as possible from the water main joints." (Recommended Standards for Wastewater Facilities pg. 30-11).

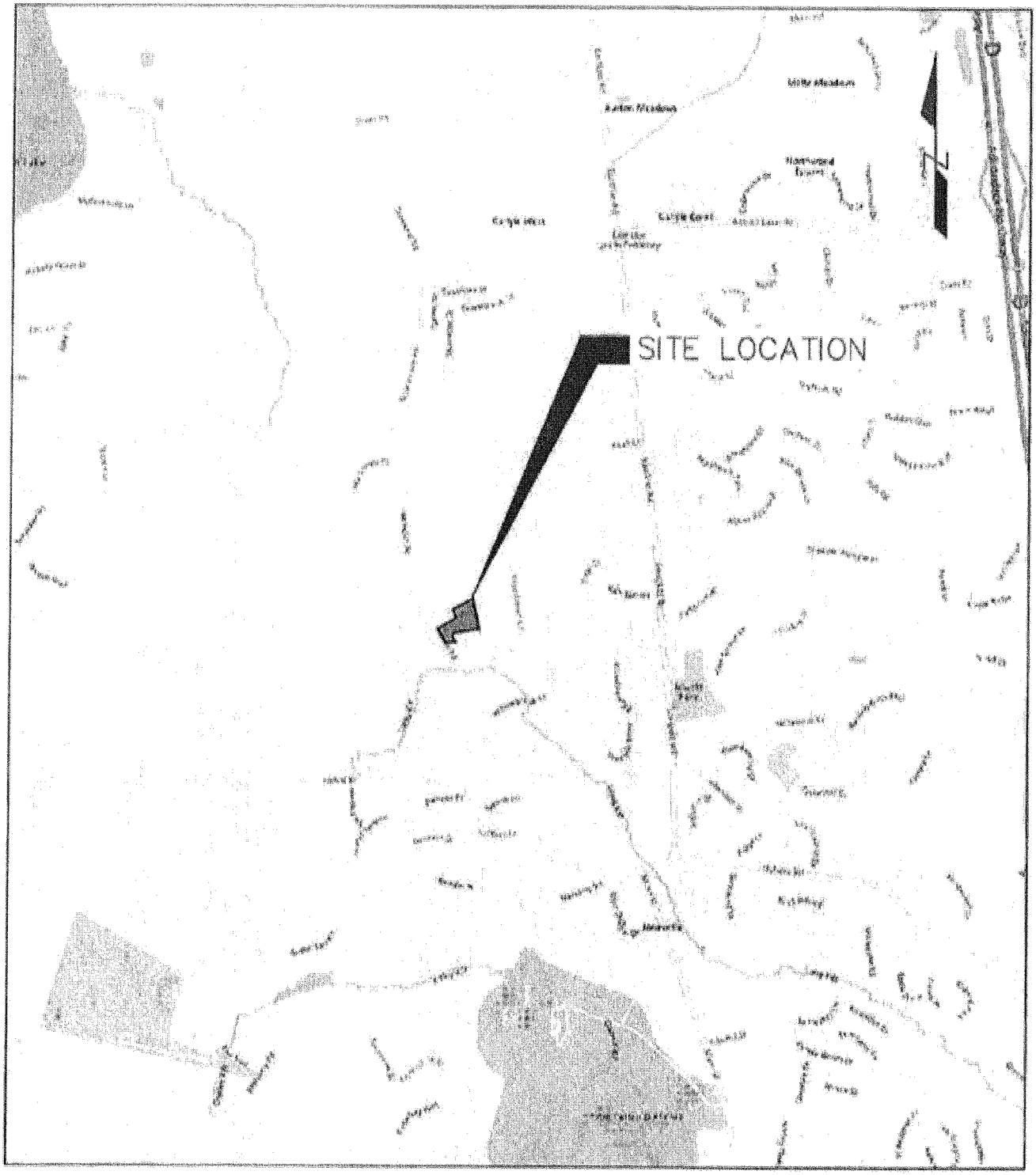
VII. FINANCING

The cost of the sewer system includes all piping, manholes, grinder pumps, directional drilling, backfill, and restoration necessary for the construction of the sewer district extension. The total estimated cost for this installation is $27,848. Please refer to Appendix C for the Project Cost Estimate. All capital costs for all sewer system improvements will be born entirely by the project owner/developer.

VII. SUMMARY

This sewer report, submitted on behalf of the proposed 989 Hatlee Road Residential Subdivision outlines the expected wastewater contribution anticipated for the proposed subdivision. The calculations illustrated in the text of this report and in the appendices confirm the site conditions are favorable for the addition of sewer lines to service the proposed subdivision. The size and location of the sewer line conforms with the "Recommended Standards for Wastewater Facilities, 2014 Edition", published by the Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers and all provisions set forth by the New York State Department of Environmental Conservation.

Appendix A:
Maps



PRELIMINARY / NOT FOR CONSTRUCTION

989 HATLEE ROAD RESIDENTIAL SUBDIVISION

989 HATLEE ROAD, TOWN OF CLIFTON PARK, SARATOGA COUNTY, NEW YORK

LANSING ENGINEERING
2459 STATE ROUTE 9, SUITE 301
MALTA, NY 12020
(518) 899-5243

SITE LOCATION MAP

PROJ. NO: 975.00
SCALE: 1"=2,000'
DATE: 5/18/22

SL-1
SHEET 1 OF 1

Appendix B:
Hydraulic Capacity Calculations

Hydraulic Capacity Calculations

Project:	989 Hatlee Road Residential Subdivision
Date:	5/11/2022

Gravity:	No
Forcemain:	Yes

Project Design Average Wastewater Flow

gpd = Gallons Per Day
Residential Flow = Units x Residents per Unit x Per Capita Flow
Comercial Flow = Square Feet x Flow per Square Feet
Restaurant Flow = Number of Seats x Flow Per Seat

Per Capita Flow	100	gpd
Flow Per Sq Ft	0.08	gpd
Flow Per Seat	35	gpd
Total Population	8	

Project Area	Type	Residents/Unit	Units	Square Feet	Seats	Flow	
1	Residential	2.5	3			750	gpd
2						0	gpd
3						0	gpd
4						0	gpd
5						0	gpd
		Total Design Average Daily Wastewater Flow =				750	gpd

Contributing Area Design Average Wastewater Flow

gpd = Gallons Per Day
Residential Flow = Units x Residents per Unit x Per Capita Flow
Comercial Flow = Square Feet x Flow per Square Feet
Restaurant Flow = Number of Seats x Flow Per Seat

Per Capita Flow	100	gpd
Flow Per Sq Ft	0.1	gpd
Flow Per Seat	35	gpd
Total Population	10	

Contributing Area	Type	Residents/Unit	Units	Square Feet	Seats	Flow	
1	Residential	2.5	4			1,000	gpd
2						0	gpd
3						0	gpd
4						0	gpd
5						0	gpd
		Total Design Average Daily Wastewater Flow =				1,000	gpd

Project Wastewater System Capacity Design

gpm = Galons Per Minute
gpm = gpd / 1,440 (Minutes Per Day)
PHF = Peak Hour Factor
P = Population in Thousands

Total Design Average Daily Wastewater Flow =	750	gpd
Total Design Average Daily Wastewater Flow (gpm) =	0.52	gpm
Total Population =	8	
Total Population in Thousands (P)=	0.0075	

Peak Hour Factor

$$PHF = \frac{(18 + P^{1/2})}{(4 + P^{1/2})}$$

PHF = 4.43

Cumulative Peak Hour Wastewater Flow

Cumulative Peak Hour Wastewater Flow = Total Design Average Daily Flow x Peak Hour Factor

Cumulative Peak Hour Wastewater Flow =	3,323	gpd
Cumulative Peak Hour Wastewater Flow =	2.31	gpm

Hydraulic Capacity Calculations

Project + Contributing Area Wastewater System Capacity Design			
gpm = Galons Per Minute	PHF = Peak Hour Factor		
gpm = gpd / 1,440 (Minutes Per Day)	P = Population in Thousands		
Total Design Average Daily Wastewater Flow =	1,750	gpd	Peak Hour Factor: $PHF = \frac{(18 + P^{1/2})}{(4 + P^{1/2})}$
Total Design Average Daily Wastewater Flow (gpm) =	**1.22**	**gpm**	
Total Population =	17.5		**PHF =** **4.39**
Total Population in Thousands (P)=	**0.0175**		

Cumulative Peak Hour Wastewater Flow		
Cumulative Peak Hour Wastewater Flow = Total Design Average Daily Flow x Peak Hour Factor		
Cumulative Peak Hour Wastewater Flow =	**7,683**	**gpd**
Cumulative Peak Hour Wastewater Flow =	**5.34**	**gpm**

Gravity Pipe not Proposed					
Based on Mannings Equation $Q_f = (k/n)AR^{2/3}S^{1/2}$					
Trial Pipe Size =	8	in			
Mannings Number (n) =	0.013		**Provided**		**Required**
Slope (S) =	0.005	ft/ft	**384.50**	>	**5.34**
k =	1.49				
Flow Area (A) =	0.349	sf			
Hydraulic Radius (R)=	0.167	ft			
Full Velocity =	2.45	fps			
Full Capacity (Q_f) =	0.86	cfs			
Full Capacity =	**384.50**	**gpm**			

Forcemain Pipe Size Required					
Based on Mannings Equation $Q_f = (k/n)AR^{2/3}S^{1/2}$ and 2fps Cleansing Velocity					
Trial Pipe Size =	2	in			
k =	1.49		**Provided**	**Min**	**Required**
Flow Area (A) =	0.022	sf	**19.58**	>	**5.34**
Full Velocity (min) =	2.00	fps	**Provided**	**Max**	**Required**
Full Velocity (max)=	6.00	fps	**58.75**	>	**5.34**
Full Capacity ($Q_f$min) =	0.04	cfs			
Full Capacity ($Q_f$max) =	0.13	cfs	**Adjust Pipe Size**		
Full Capacity (min) =	**19.58**	**gpm**			
Full Capacity (max) =	**58.75**	**gpm**			

Hydraulic Capacity Calculations

Inflow & Infiltration (Gravity Sewer)					
Pipe Excess Capacity = Full Design Capacity - Calculated Design Flow					
Full Design Capacity =	384.50	gpm			
Calculated Design Flow =	5.34	gpm	Provided		Required
Excess Capacity =	379.17	gpm	379.17	>	0.13
	546002	gpd	OK		
	98.61	%			
Length of Pipe for Local Network =	2516	LF			
	0.48	Miles			
Maximum Allowable Infiltration =	50	Gallons/Inch of Pipe Diameter/Mile/ Day)			
	0.13	gpm			

Appendix C:
Environment One Corporation
Pressure Sewer Preliminary Cost and Design Analysis

LANSING ENGINEERING, PC
2452 State Route 9 - Suite 201, Malta NY 12020 Tel: 899-5243 Fax: 899-5245

989 HATLEE ROAD RESIDENTIAL SUBDIVISION

SANITARY SEWER EXTENSION COST ESTIMATE

CATEGORY	ITEM	QUANTITY	UNITS	UNIT COST	ITEM COST
2" Diameter Off-Site Forcemain					
Structures					
	Air Release Manhole	1	EA	$ 10,000	$ 10,000
Pipe Network					
	2" DR11 HDPE/Fittings/Valves/etc.	460	LF	$ 6.25	$ 2,875
Traffic Protection					
	Work Zone Traffic Control & Shoulder Closure	3	DAY	$ 675	$ 2,025
Miscellaneous					
	Mobilization & Setup	1	LS	$ 5,000	$ 5,000
	Construction Stakeout	2.0%	LS	$ 14,900	$ 298
				Total Cost	**$ 20,198**

Item costs were determined by referencing the "RS Means Site Work and Landscape Cost Data", "RS Means Heavy Construction Cost Data", the New York State Department of Transportation weighted average bid price program, as well as similar projects, professional experience, and contractor quotes.

SEWER SYSTEMS

Environment One Corporation

Pressure Sewer Preliminary Cost and Design Analysis For Hatlee Rd, NY Rev2

Prepared For:
Lansing Engineering
2452 State Route 9, Suite 301
Malta NY 12020 USA
Tel: 518-899-5243
Fax: 518-899-5245
Prepared By: M. Crowley
May 20, 2022

Hatlee Rd, NY
Rev2

Prepared by : M. Crowley **On:** May 20, 2022

Notes :
Analysis based upon drawings and data provided. Station recommendations are preliminary.

GPD values impact retention times only, not line sizing or hydraulics. GP laterals to be 1.25".

Analysis valid only with pipe type listed.

General recommendations for valve placement are: clean out valves at intervals of approximately 1,000 ft and at branch ends and junctions; isolation valves at branch junctions; and air release valves at changes in grade of 20 to 25 ft or more and/or at intervals of 2,000 to 2,500 ft. Lateral kits comprised of a ball and check valve are required to be installed between the pump discharge and street main on all installations. Laterals should be located as close to the public right of way as possible.

Quantities of grinder pumps, pipe, and valves are indicated on the cost page. The model of grinder pump(s) indicated is based upon the initial information provided to us but may not be the most appropriate for the specific location or requirements of the project. Costs of these items and their installation are best obtained from sources in your region. We recommend you contact your local distributor of Environment One products for additional recommendations.

Zones 1-2 - proposed extension.
Zone 3 - existing force main.

<<<<< E N D O F N O T E S >>>>>

May 20, 2022

Budgetary Low Pressure Sewer System Costs

Hatlee Rd, NY
Rev2

	Quantity	Description	Unit Cost	Installation	Sub Total
Valves	1	Clean Out	$0.00	0.00	$0.00
					$0.00
Pumps	4	DH071-93	$0.00	0.00	$0.00
	4	Lateral Kits (Includes Ball\Check Valve Assembly)	$0.00	0.00	$0.00
	4	Lateral (Boundary) Installation	$0.00	0.00	$0.00
	4	Pump/Panel Installation	$0.00	0.00	$0.00
	200	LF of 1.25" Lateral Pipe	$0.00	0.00	$0.00
					$0.00
Piping	1,534	2.00" Pipe	$0.00	0.00	$0.00
					$0.00

Number of Connections	**8**		
Total Per Connection	**$0.00**	**Total (w/o other)** >>>>>>>>>>>>>	**$0.00**
Grand Total Per Connection	**$0.00**	**Grand Total (including other)** >>>>>>>>>>>>>	**$0.00**

Note: The System Costs above are based on piping sized for, and Grinder Pumps manufactured by Environment One Corporation.

Prepared By:
M. Crowley

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS

Hatlee Rd, NY

Rev2

May 20, 2022

Zone Number	Connects to Zone	Number of Pumps in Zone	Accum Pumps in Zone	Gals/day per Pump	Max Flow Per Pump (gpm)	Max Sim Ops	Max Flow (GPM)	Pipe Size (inches)	Max Velocity (FPS)	Length of Main this Zone	Friction Loss Factor (ft/100 ft)	Friction Loss This Zone	Accum Fric Loss (feet)	Max Main Elevation	Minimum Pump Elevation	Static Head (feet)	Total Dynamic Head (ft)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE												Friction loss calculations were based on a Constant for inside roughness "C" of:				150	
1.00	2.00	3	3	200	11.00	2	22.00	2.00	2.38	257.00	1.19	3.06	35.23	362.00	353.00	9.00	44.23
2.00	3.00	1	4	200	11.00	3	33.00	2.00	3.57	202.00	2.52	5.09	32.17	358.00	358.00	0.00	32.17
3.00	3.00	4	8	200	11.00	3	33.00	2.00	3.57	1,075.00	2.52	27.08	27.08	355.00	352.00	3.00	30.08

Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One.

Prepared By:
M. Crowley

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME (HR)

Hatlee Rd, NY
Rev2

May 20, 2022

Zone Number	Connects to Zone	Accumulated Total of Pumps this Zone	Pipe Size (inches)	Gallons per 100 lineal feet	Length of Zone	Capacity of Zone	Average Daily Flow	Average Fluid Changes per Day	Average Retention Time (Hr)	Accumulated Retention Time (Hr)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE								Gals per Day per Dwelling		200
1.00	2.00	3	2.00	15.40	257.00	39.59	600	15.16	1.58	5.00
2.00	3.00	4	2.00	15.40	202.00	31.11	800	25.71	0.93	3.42
3.00	3.00	8	2.00	15.40	1,075.00	165.58	1,600	9.66	2.48	2.48

Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One

Appendix D:
Legal Description of Sewer District Extension

Gilbert VanGuilder
Land Surveyor, PLLC
988 Route 146, Clifton Park, NY 12065
383-0634
FAX 371-8437

Members:
Robert A. Wilklow, PLS
Kevin H. Weed, PLS

September 1, 2022

SUGGESTED DESCRIPTION
CLIFTON PARK SEWER
DISTRICT #1 EXTENSION #3
HATLEE ROAD

All that certain piece, parcel or tract of land situate in the Town of Clifton Park, County of Saratoga, State of New York, lying along the easterly line of Hatlee Road, being further bounded and described as follows:

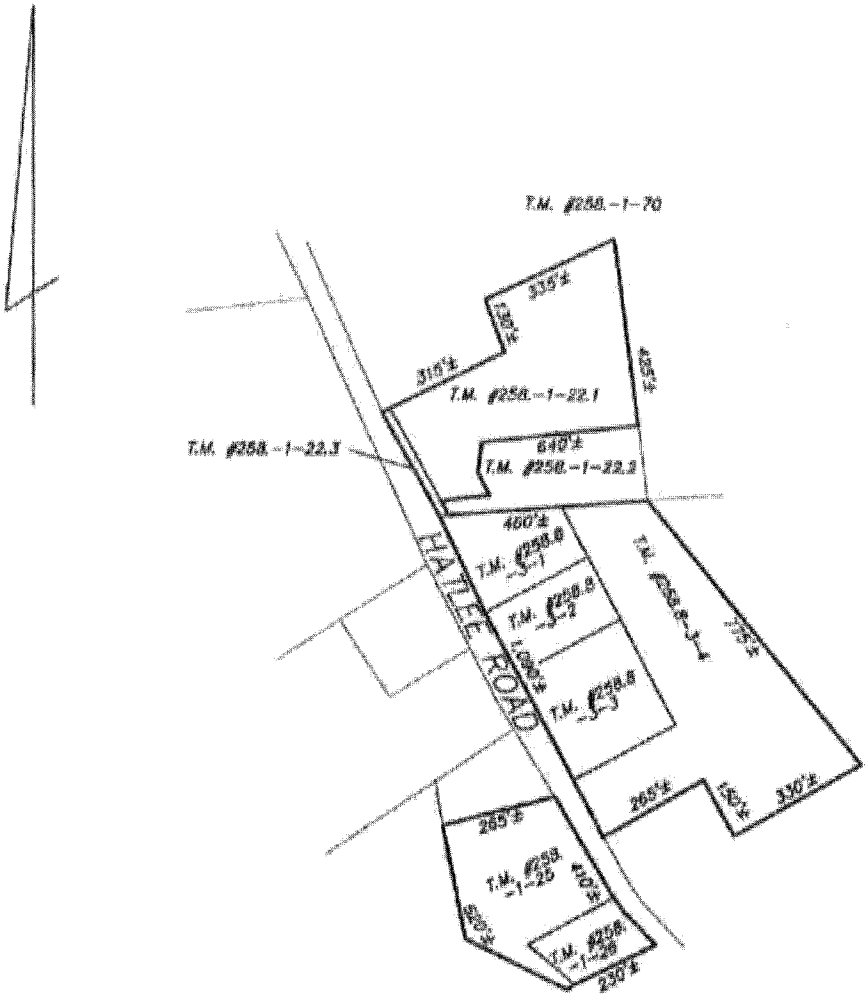
Beginning at the point of intersection of the southeasterly line of tax map parcel (TMP) #258.8-3-4 with the easterly line of Hatlee Road, thence from said point of beginning northerly along said easterly line of Hatlee Road 1,090± feet to the point of intersection with the northwesterly line of TMP #258.-1-22.1, thence northeasterly and northerly along said northwesterly and westerly lines of TMP #258.-1-22.1 780± feet to a point, thence southerly along the easterly line of said TMP #258.-1-22.1 425± feet to a point, thence westerly and southerly along the southerly and easterly lines of said TMP #258.-1-22.1 and TMP #258.-1-22.3 640± feet to a point in the northerly line of TMP #258.8-3-1, thence easterly along said northerly line and the northerly line of TMP #258.8-3-4 460± feet to a point in the easterly line of TMP #258.8-3-4, thence southerly along said easterly line 775± feet to a point in the southeasterly line of said TMP #258.8-3-4, thence southwesterly and northwesterly along said TMP #258.8-3-4 745± feet to the point of beginning. Intending to include all of TMP #258.-1-22.1 & 22.3, TMP #258.8-3-1, 2, 3 & 4.

Also, all that certain piece, parcel or tract of land situate in the Town of Clifton Park, County of Saratoga, State of New York, lying along the westerly line of Hatlee Road, being further bounded and described as follows:

Beginning at the point of intersection of the northerly line of TMP #258.-1-25 with the westerly line of Hatlee Road, thence southerly along said westerly line 410± feet to the point of intersection with the southeasterly line of TMP #258.-1-26, thence southwesterly along said southeasterly line and the southeasterly line of TMP #258.-1-25 230± feet to a point, thence northwesterly and northerly along said TMP 258.-1-25 520± feet to the point of intersection with the northerly line of said TMP 258.-1-25, thence easterly along said northerly line 265± feet to the point of beginning. Intending to include all of TMP #258.-1-25 & 26.

Todd Westerveld

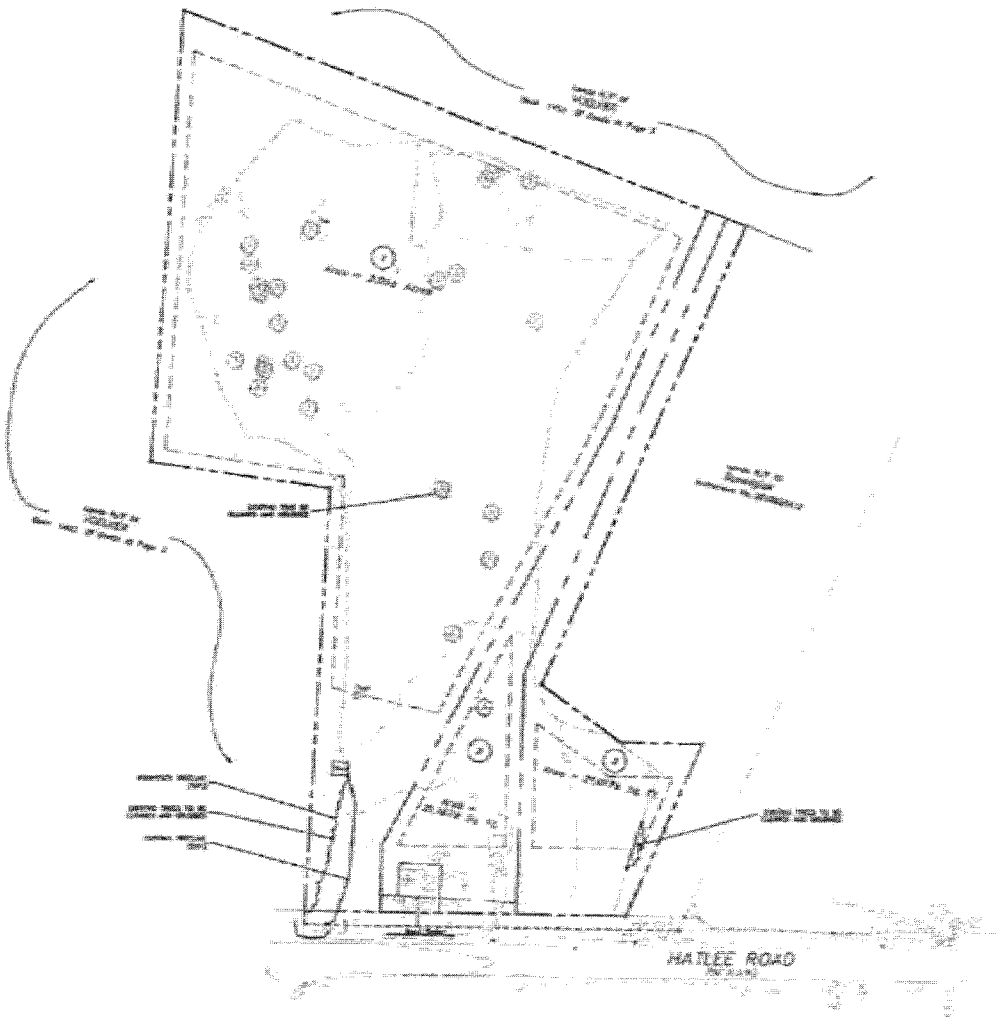
PLS 50,319



CLIFTON PARK SEWER DISTRICT #1 EXTENSION #3 HATLEE ROAD

TOWN OF CLIFTON PARK	SARATOGA COUNTY, NEW YORK
SCALE: 1" = 400'	DATE: SEPTEMBER 1, 2022
TELEPHONE NO.: (518) 393-0834	MAP NO.: 22 - 08 - 01SEW

Gilbert VanGuilder
Land Surveyor, PLLC
Professional Land Surveyors
888 Route 146, Clifton Park, New York 12065
gvglandsurveyors.com



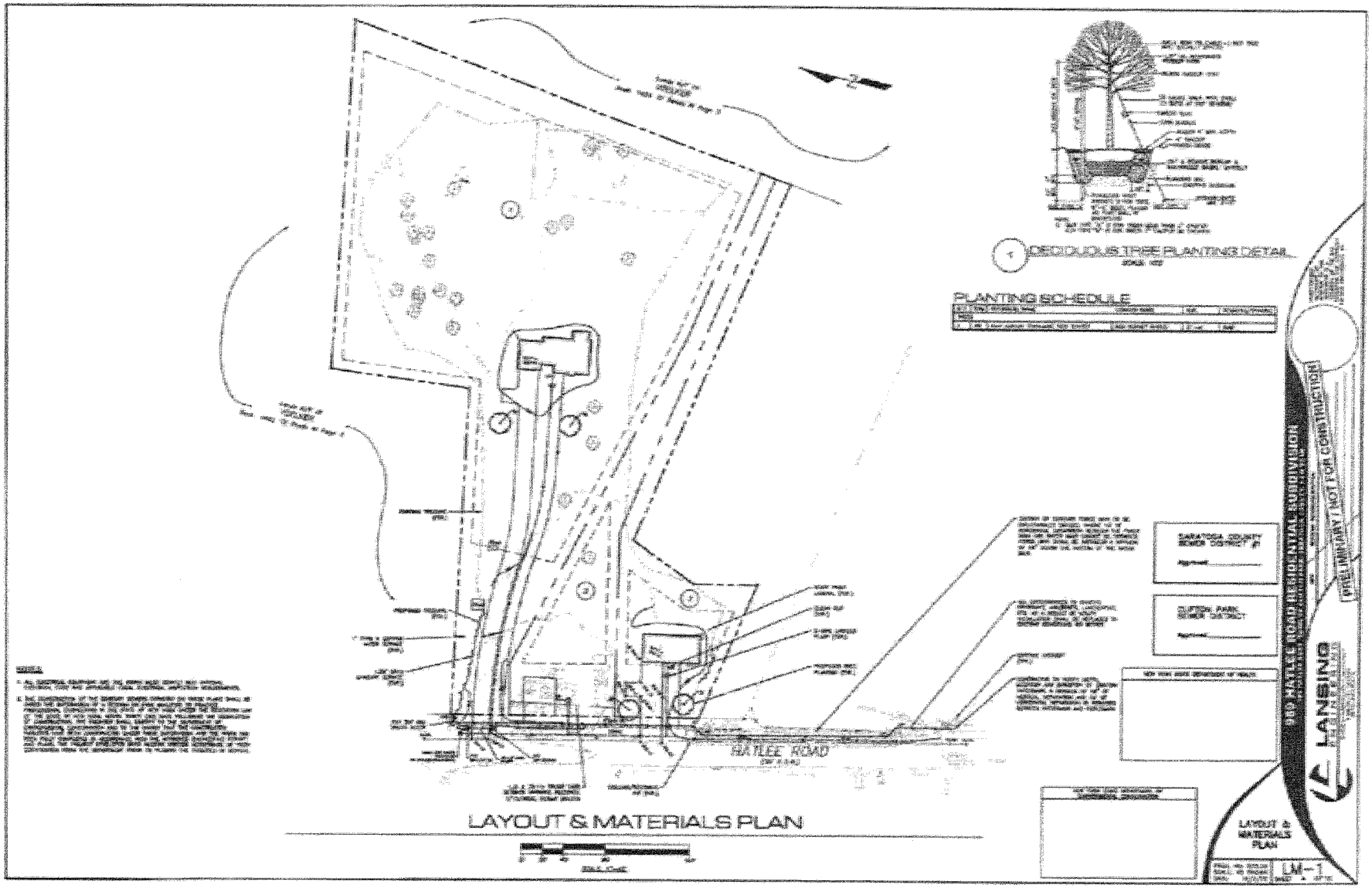
EXISTING CONDITIONS AND DEMOLITION PLAN

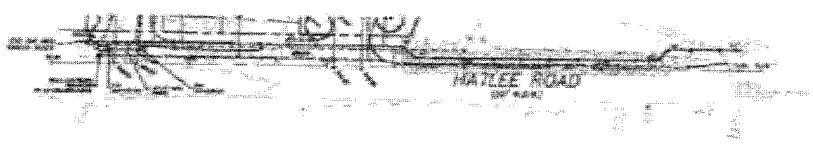
LANDING ENGINEERING

PRELIMINARY | NOT FOR CONSTRUCTION

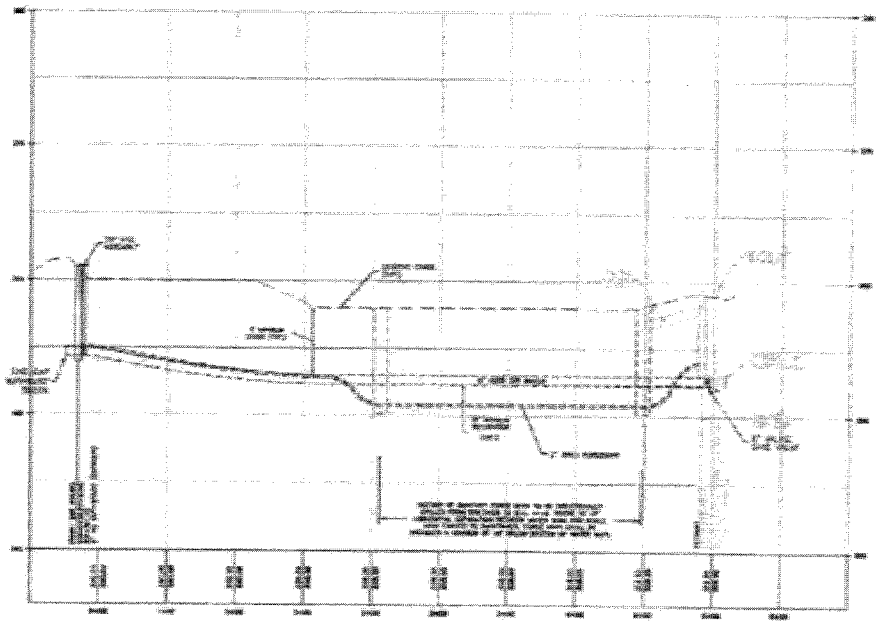
EXISTING CONDITIONS AND DEMOLITION PLAN

ECD—1

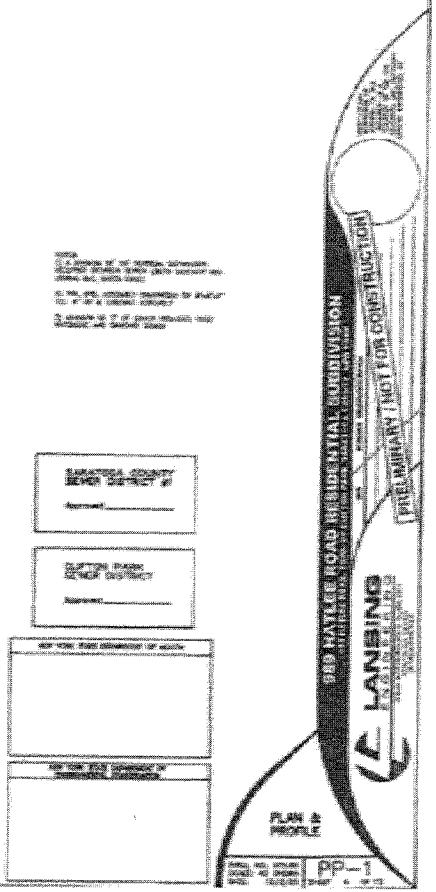

HATTLEE ROAD
1 DECIDUOUS TREE PLANTING DETAIL
PLANTING SCHEDULE
LAYOUT & MATERIALS PLAN
LANSING ENGINEERING
LAYOUT & MATERIALS PLAN
LM-1

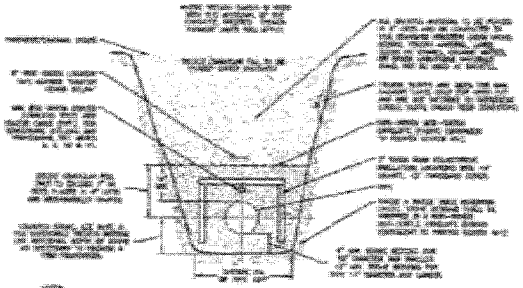


1 PLAN - WATERMAIN AND FORCEMAIN STA 00+00 TO 5+16

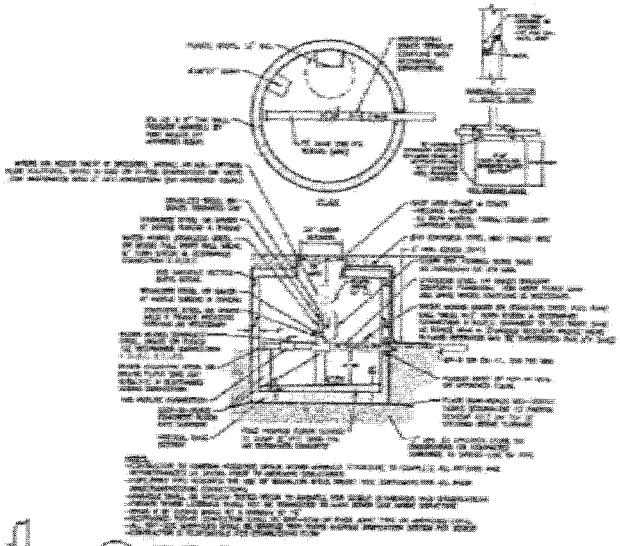


2 PROFILE - WATERMAIN AND FORCEMAIN STA 00+00 TO 5+16

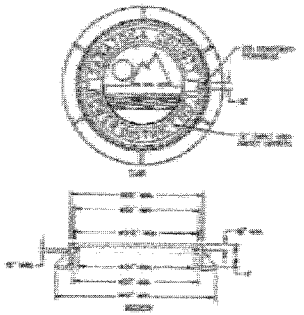




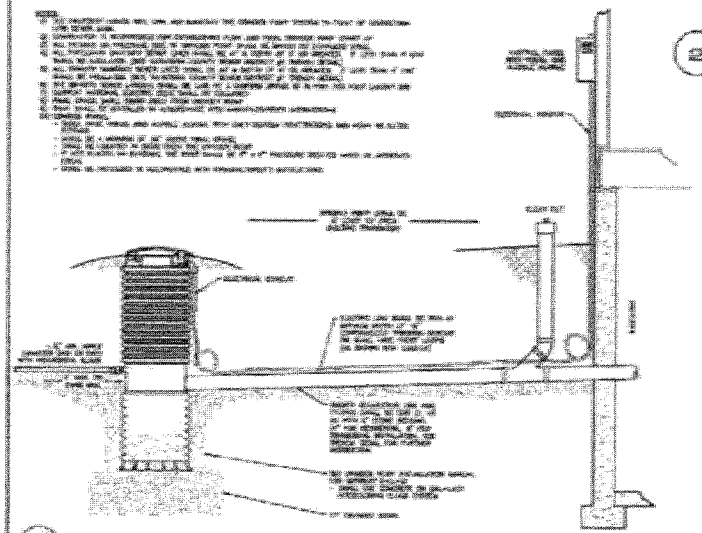
1 TYPICAL TRENCH DETAIL



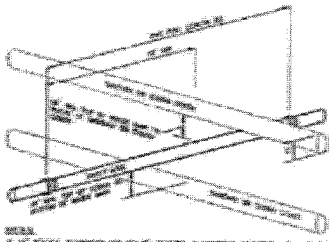
2 END-OF-LINE FORCEMAIN CLEAN OUT



3 MANHOLE COVER DETAIL



4 GRINDER PUMP INSTALLATION DETAIL



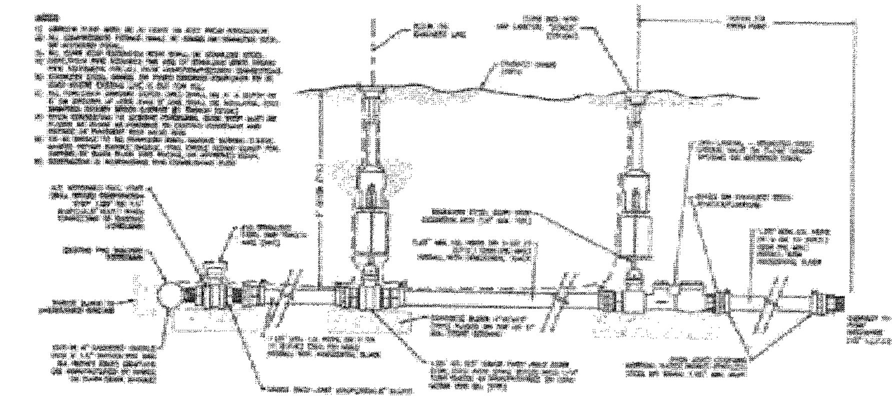
5 TYP. SEPARATION REQUIREMENTS

PRELIMINARY / NOT FOR CONSTRUCTION

LANSING ENGINEERING

SANITARY SEWER DETAILS (1 OF 2)

DT-2



1 OUTDOOR GRINDER PUMP TO SANITARY FORCE MAIN CONNECTION
NOT TO SCALE

SARATOGA COUNTY SEWER DISTRICT #1
Approved:__________

CLIFTON PARK SEWER DISTRICT
Approved:__________

989 HATLEE ROAD RESIDENTIAL SUBDIVISION

PRELIMINARY / NOT FOR CONSTRUCTION

LANSING ENGINEERING

SANITARY SEWER DETAILS (2 OF 2)

DT-3