
**SANITARY SEWER REPORT/
SANITARY SEWER DISTRICT EXTENSION
DUTCH MEADOWS SEWER DISTRICT #1
SEWER DISTRICT EXTENSION #1**

**FEBRUARY 7, 2020
REVISED APRIL 1, 2020**

Prepared For:

Brian Glick
94 Hubbs Road
Ballston Lake, NY 12019

Prepared By:



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

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I. PROJECT DESCRIPTION

The proposed sewer installation and improvements discussed in this report will provide public sewer service to the current and future residents located within the Hubbs Road Sanitary Sewer Extension and are proposed to be owned and maintained by the Town of Clifton Park Sewer Department. The sewer extension will provide service to five (5) single family unit homes via individual grinder pumps and low pressure forcemain sewer.

II. SITE DESCRIPTION

The Hubbs Road Sanitary Sewer Extension is comprised of five (5) parcels having a total area of approximately 67 acres and tax map numbers of 258.-1-43, 258.11-1-62, 258.-1-43.3, 258.-1-43.4 and 258.-1-43.5.

The project parcels are located on the southern side of Hubbs Road, approximately 600 feet west of the intersection of Hubbs Road and Heidis Path, in the Town of Clifton Park, Saratoga County, New York.

The Soil Survey of Saratoga County, New York prepared by the National Resources Conservation Service (NRCS) indicates the site is mantled with six (6) distinct soil units. These units consist of Burdett Silt Loam(BxB), Chenango Silt Loam(ChB), Claverack Loamy Fine Sand(CIA), Deerfield Loamy Fine Sand(DeA), Ilion Silt Loam(In), Nunda Silt Loam(NuB), Oakville Loamy Fine Sand(OaB) and Wareham Loamy Sand(Wa).

Hudson Silt Loam (HuB), Madalin Mucky Silty Clay Loam (Ma), Raynham Silt Loam (Ra), Rhinebeck Silt Loam (RhA), Scio Silt Loam (SeA/SeB), and Unadilla Very Fine Sandy Loam (UnB). The majority of the site is poorly and moderately well drained, with some well drained and poorly drained soils.

The site topography can be considered to be undulating, with the site generally sloping west to east toward the low area along the eastern boundary of the extension area.

Access to the project will be provided along the right of way of Hubbs Road and Heidis Path. Construction of the extension will progress from the proposed structure along Hubbs Road toward Heidis Path. The forcemain will then turn south along the right of way on Heidis Path and into the existing sanitary manhole. The focemain will be installed by means of directional drilling except for the section between the corner of Hubbs Road and Heidis Path and the existing structure.

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 extension 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 topography constraints, individual grinder pumps will be required for all lots to convey wastewater to the proposed low pressure forcemain to be located along Hubbs 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 Hubbs Road right-of-way. The 2” forcemain will ultimately discharge to an existing gravity manhole for collection along Heidis Path. 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 is comprised of one “zone” which illustrates the hydraulic characteristics 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 8” sanitary sewer gravity line exists along Heidis Path. The existing line is within the Dutch Meadows Sewer District and is owned and operated by the Clifton Park Sewer Department. All five (5) lots from the Hubbs Road Sanitary Sewer Extension are proposed to be serviced by the existing 8” gravity line via a connection to the existing manhole located on Heidis path and continues into the Dutch Meadows sewer system.

The peak hour flow from this project of 3.82 gpm represents 0.99% of the maximum capacity of the receiving 8” gravity line. Initial discussions with the Town of Clifton Park have indicated that sufficient capacity exists within the 8” gravity line for the proposed project. 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 capital 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 \$28,200. 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.

Individual property owners will be responsible for purchasing, installing and maintaining the E/One pump system along with the service lateral. A hook up fee of \$1,000 will be charged prior to connection. The cost to install a grinder pump and lateral is approximately \$10,000 or less depending on the distance of the lateral line between the main and the house. The first year cost to the individual property owner ranges from \$11,523.49 to \$11,674.58. After the first year the annual cost ranges from \$523.49 to \$674.58. Please refer to Appendix C for a breakdown of the costs to the individual property owner.

A questionnaire has been distributed to the property owners within the extension area, see Appendix E. The questionnaire breaks down the estimated annual cost to each property owner should they choose to connect to the sewer extension or not. All questionnaires distributed and returned show a favorable interest in connecting to the sewer extension.

VIII. SUMMARY

This sewer report, submitted on behalf of the proposed Hubbs Road Sanitary Sewer Extension outlines the expected wastewater contribution anticipated for the existing and future residences. 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 existing and future residences. 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

HUBBS ROAD SANITARY SEWER EXTENSION

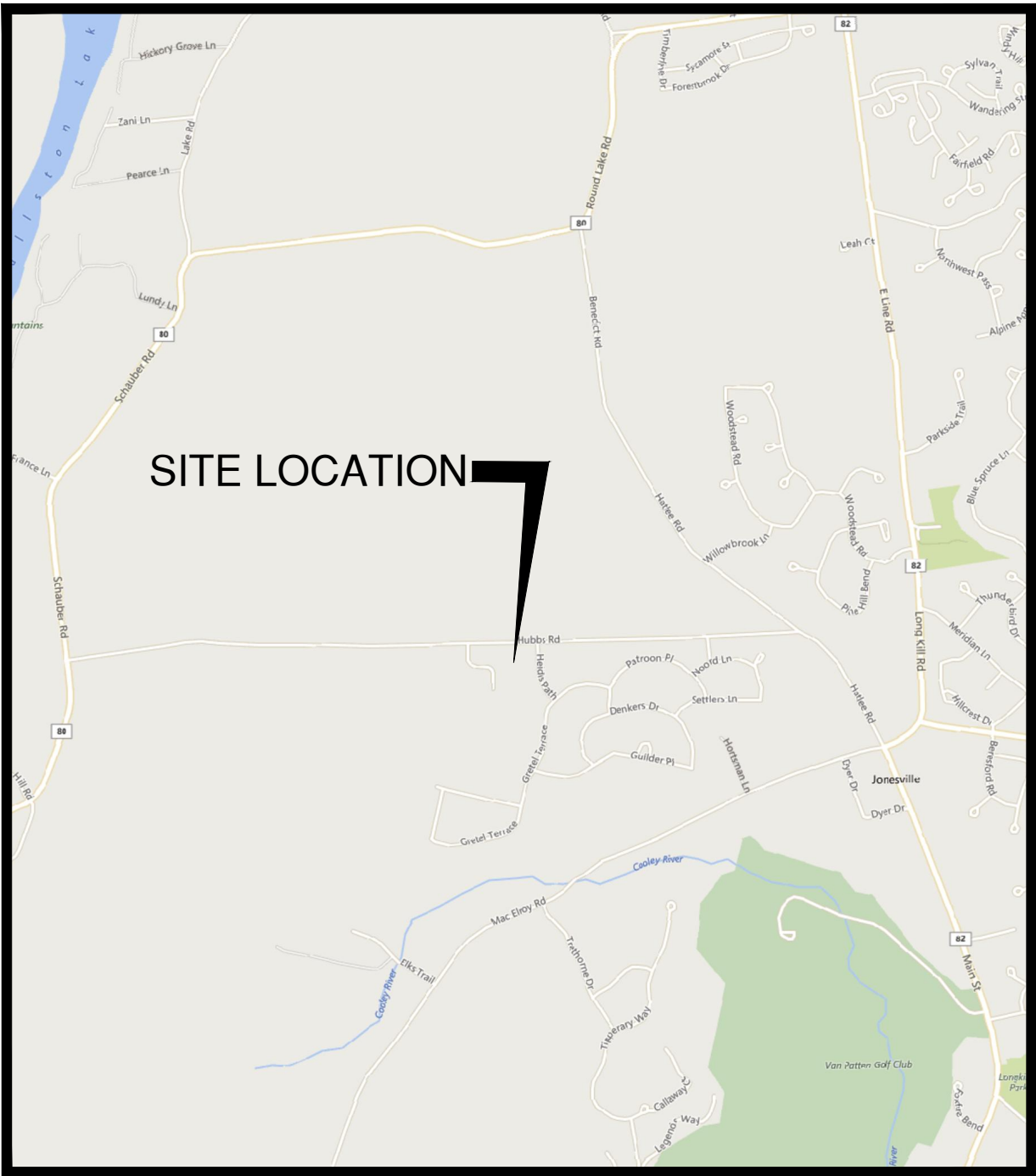
TOWN OF CLIFTON PARK * SARATOGA COUNTY * NEW YORK

GENERAL DRAWING NOTES:

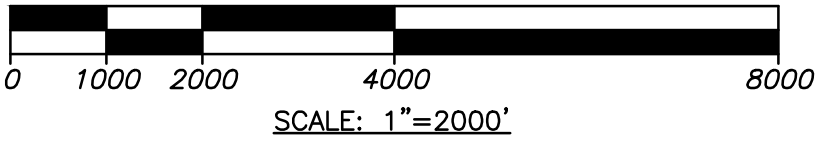
- 1. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR URBAN EROSION AND SEDIMENT CONTROL.
- 2. ALL DISTURBED AREAS TO RECEIVE TOPSOIL, SEED, FERTILIZER AND MULCH TO ESTABLISH A PERMANENT STAND OF GRASS.
- 3. ALL SANITARY SEWER MANHOLES LOCATED IN GRASSED AREAS SHALL HAVE RIM ELEVATIONS SET APPROXIMATELY 6" ABOVE FINISH GRADE TO PREVENT INFILTRATION.

GENERAL CONSTRUCTION NOTES:

- 1. SIZE AND LOCATION OF UNDERGROUND UTILITIES ARE SUBJECT TO VERIFICATION BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS.
- 2. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY DIG SAFELY N.Y. (1-800-962-7962) FOR VERIFICATION OF THE LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION.
- 3. NO ATTEMPT HAS BEEN MADE TO SHOW ALL OF THE UTILITIES THAT EXIST ON OR ADJACENT TO THE PROJECT SITE.
- 4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT AND PRESERVE EXISTING UTILITIES.
- 5. ALL UTILITIES DAMAGED OR DISTURBED BY THE WORK OF THIS CONTRACT SHALL BE REPLACED IN KIND BY THE CONTRACTOR.
- 6. CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITS FOR WORK WITHIN PUBLIC RIGHTS-OF-WAY AS REQUIRED BY THE MUNICIPALITY AND ALL PERMITS REQUIRED FOR UTILITY WORK ON-SITE FROM THE TOWN.
- 7. ALL PERMITS REQUIRED FOR WORK ON-SITE SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 8. THERE SHALL BE NO CHANGES ON THESE PLANS IN ADVANCE OF, OR CONSTRUCTION WITHOUT PRIOR APPROVAL OF THE DESIGN ENGINEER, THE OWNER AND THE MUNICIPALITY.
- 9. ALL CONSTRUCTION SHALL CONFORM TO GENERALLY ACCEPTED CONSTRUCTION STANDARDS OR A.O.B.E.
- 10. THE CONTRACTOR SHALL COMPLY WITH CONSTRUCTION INSPECTION REQUIREMENTS OF ALL AGENCIES, AND PHASE WORK ACCORDINGLY.
- 11. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- 12. FIELD ADJUSTMENT MUST BE REVIEWED BY A REPRESENTATIVE OF LANSING ENGINEERING PRIOR TO INSTALLATION.
- 13. PROTECT NEWLY GRADED WORK AREAS FROM TRAFFIC AND EROSION, AND KEEP THEM FREE FROM TRASH AND DEBRIS UNTIL PHYSICAL COMPLETION OF WORK.
- 14. CONTRACTORS OPERATIONS ON SITE WHICH SHALL INCLUDE BUT NOT BE LIMITED TO DUST CONTROL, MATERIAL HAULING, FIRE PROTECTION, EROSION CONTROL, ETC. SHALL BE CONDUCTED IN ACCORDANCE WITH TOWN OF CLIFTON PARK REQUIREMENTS.
- 15. LOCATE EXISTING UNDERGROUND UTILITIES IN AREAS OF WORK; IF UTILITIES ARE TO REMAIN IN PLACE, PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING EARTHWORK OPERATIONS.
- 17. GENERAL SOIL EXCAVATION ON SITE WILL NOT REQUIRE SOILS TO BE IMPORTED OR EXPORTED, OTHER THAN SPECIFICALLY REQUIRED MATERIAL (I.E. SUBBASE, ASPHALT ETC.).
- 18. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE TOWN OF CLIFTON PARK REGULATIONS AND CONSTRUCTION STANDARDS.
- 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND COORDINATE ANY REQUIRED BRACING OF ANY UTILITY POLE OR STRUCTURE WITH THE APPROPRIATE UTILITY COMPANY.
- 20. ALL GRINDER PUMPS WILL BE PRIVATELY OWNED BY THE HOMEOWNERS. THE CONTRACTOR/HOMEOWNER IS RESPONSIBLE FOR OBTAINING A GRINDER PUMP PERMIT FOR EACH INDIVIDUAL LOT/UNIT. EACH INDIVIDUAL GRINDER PUMP PERMIT MUST BE ISSUED BY SARATOGA COUNTY SEWER DISTRICT PRIOR TO THE INSTALLATION OF ANY GRINDER PUMPS. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING FLOW AT EACH SHUTOFF AT THE TIME OF INSTALLATION.
- 21. ALL DISTURBANCE LIMITS AND SETBACKS SHALL BE STAKED OR FLAGGED IN THE FIELD PRIOR TO BEGINNING OF CONSTRUCTION.
- 22. PRIOR TO CONSTRUCTION, THE LOCATION OF ALL EXISTING UTILITY POLES, OVERHEAD UTILITIES AND UNDERGROUND UTILITIES ON THE SITE SHALL BE DETERMINED BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE DESIGN ENGINEER. THE COORDINATION AND COST FOR THE RELOCATION OR MODIFICATION OF ANY UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE COSTS FOR THIS UTILITY WORK SHALL BE PROVIDED TO THE OWNER AND DESIGN ENGINEER FOR REVIEW.
- 23. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT THE SURFACE OF ALL EXISTING ROADWAYS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURFACE RESTORATION AND REPAIR RESULTING FROM THE CONTRACTORS ACTIVITIES. TREE TRIMMING SHALL BE PERFORMED BY THE CONTRACTOR AS NECESSARY WITHIN THE RIGHT-OF-WAY OR UTILITY EASEMENTS. ALL DISTURBED UTILITIES, DRIVEWAY CULVERTS, LAWNS, MAILBOXES, FENCES, SIGNS, DRIVEWAYS, DITCHES ETC. SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION, LINES, GRADES AND POSITIONS.



SITE LOCATION MAP



APPLICANT
BRIAN GLICK
94 HUBBS ROAD
BALLSTON LAKE, NY 12019

Sheet List Table		
SHEET NUMBER	SHEET DESIGNATION	SHEET DESCRIPTION
1	CV-1	COVER SHEET
2	LM-1	LAYOUT & MATERIALS PLAN
3	PP-1	PLAN & PROFILE - FORCE MAIN
4	DT-1	SANITARY DETAILS (1 OF 2)
5	DT-2	SANITARY DETAILS (2 OF 2)

NYSDEC REQUIRED NOTE:

THE CONSTRUCTION OF SANITARY SEWERS DEPICTED ON THESE PLANS SHALL BE UNDER THE SUPERVISION OF A PERSON OR FIRM QUALIFIED TO PRACTICE PROFESSIONAL ENGINEERING IN THE STATE OF NEW YORK UNDER THE EDUCATION LAW OF THE STATE OF NEW YORK. WITHIN THIRTY (30) DAYS FOLLOWING THE COMPLETION OF CONSTRUCTION, THE ENGINEER SHALL CERTIFY TO THE DEPARTMENT AND TO THE OWNER THAT THE CONSTRUCTED FACILITIES HAVE BEEN UNDER HIS SUPERVISION AND THE WORK HAS BEEN FULLY COMPLETED IN ACCORDANCE WITH THE APPROVED ENGINEERING REPORT AND PLANS. THE PROJECT DEVELOPER MUST RECEIVE WRITTEN ACCEPTANCE OF SUCH CERTIFICATION FROM THE DEPARTMENT PRIOR TO PLACING THE FACILITIES IN SERVICE.

SARATOGA COUNTY SEWER DISTRICT #1

These plans for _____

are hereby approved by the SCSD #1 and are subject to the conditions of all notices, regulations and requirements of the SCSD #1 at this time. Any changes, erasures, revisions and/or modifications to this plan as approved shall void this approval.

Signed the _____ day of _____, 20____

By _____
Dan Rourke, P.E., Executive Director

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

COVER SHEET

PROJ. NO: 893.00
SCALE: AS SHOWN
DATE: 1/20/20

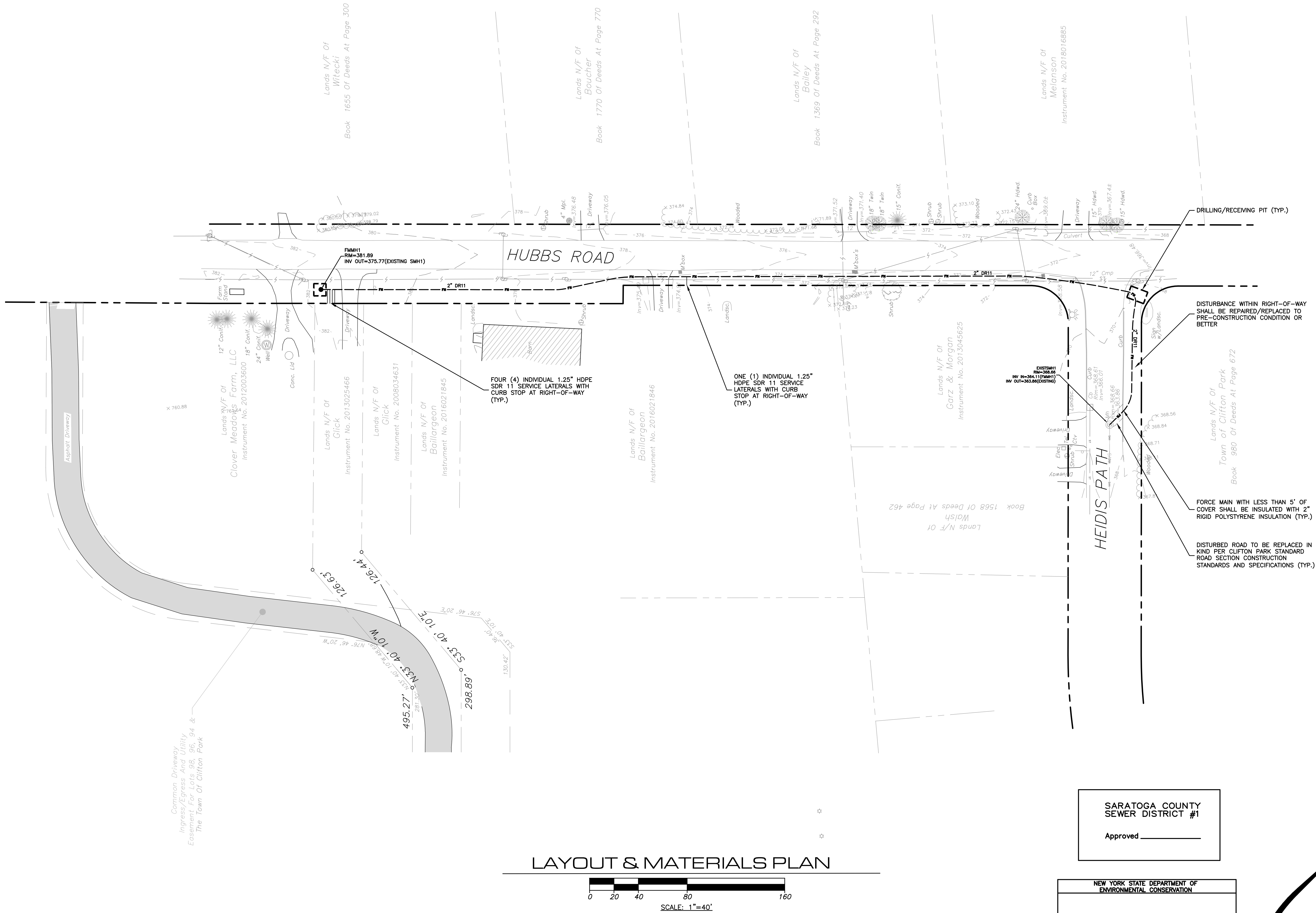
CV-1
SHEET 1 OF 5

HUBBS ROAD SANITARY SEWER EXTENSION
HUBBS ROAD, TOWN OF CLIFTON PARK, SARATOGA COUNTY, NEW YORK

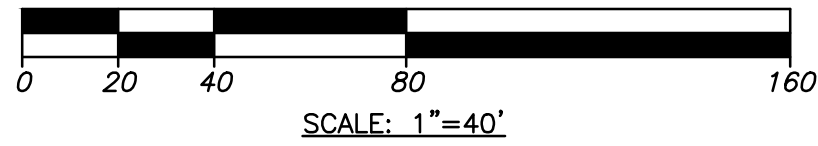


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DATE
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LAYOUT & MATERIALS PLAN



SARATOGA COUNTY
SEWER DISTRICT #1

Approved _____

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

LAYOUT &
MATERIALS PLAN

PROJ. NO: 893.00
SCALE: AS SHOWN
DATE: 1/20/20

LM-1
SHEET 2 OF 5

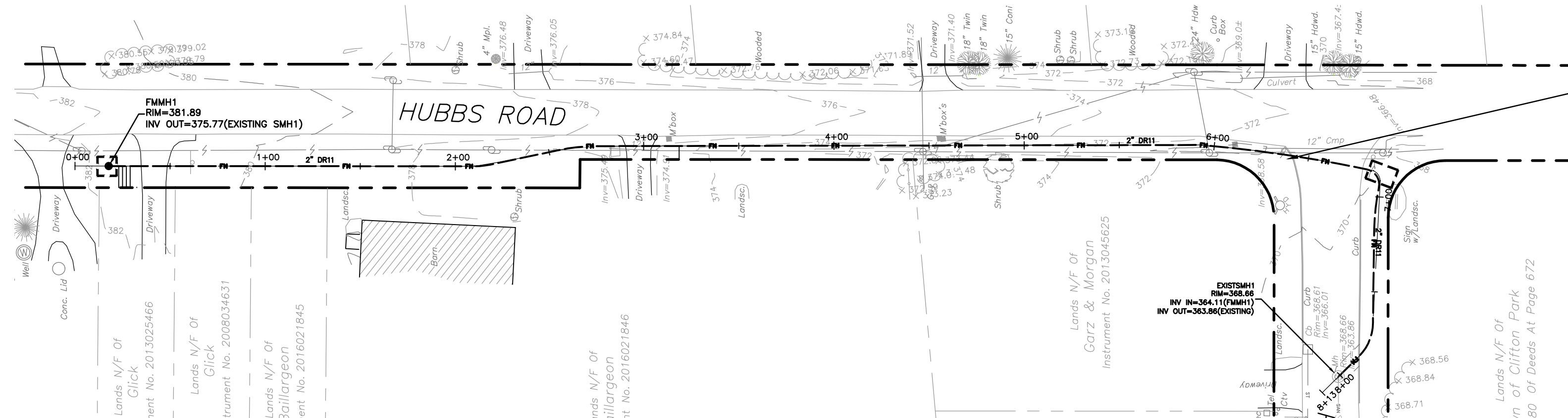
HUBBS ROAD SANITARY SEWER EXTENSION
HUBBS ROAD, TOWN OF CLIFTON PARK, SARATOGA COUNTY, NEW YORK



REVISIONS RECORD/DESCRIPTION
DATE

PRELIMINARY / NOT FOR CONSTRUCTION

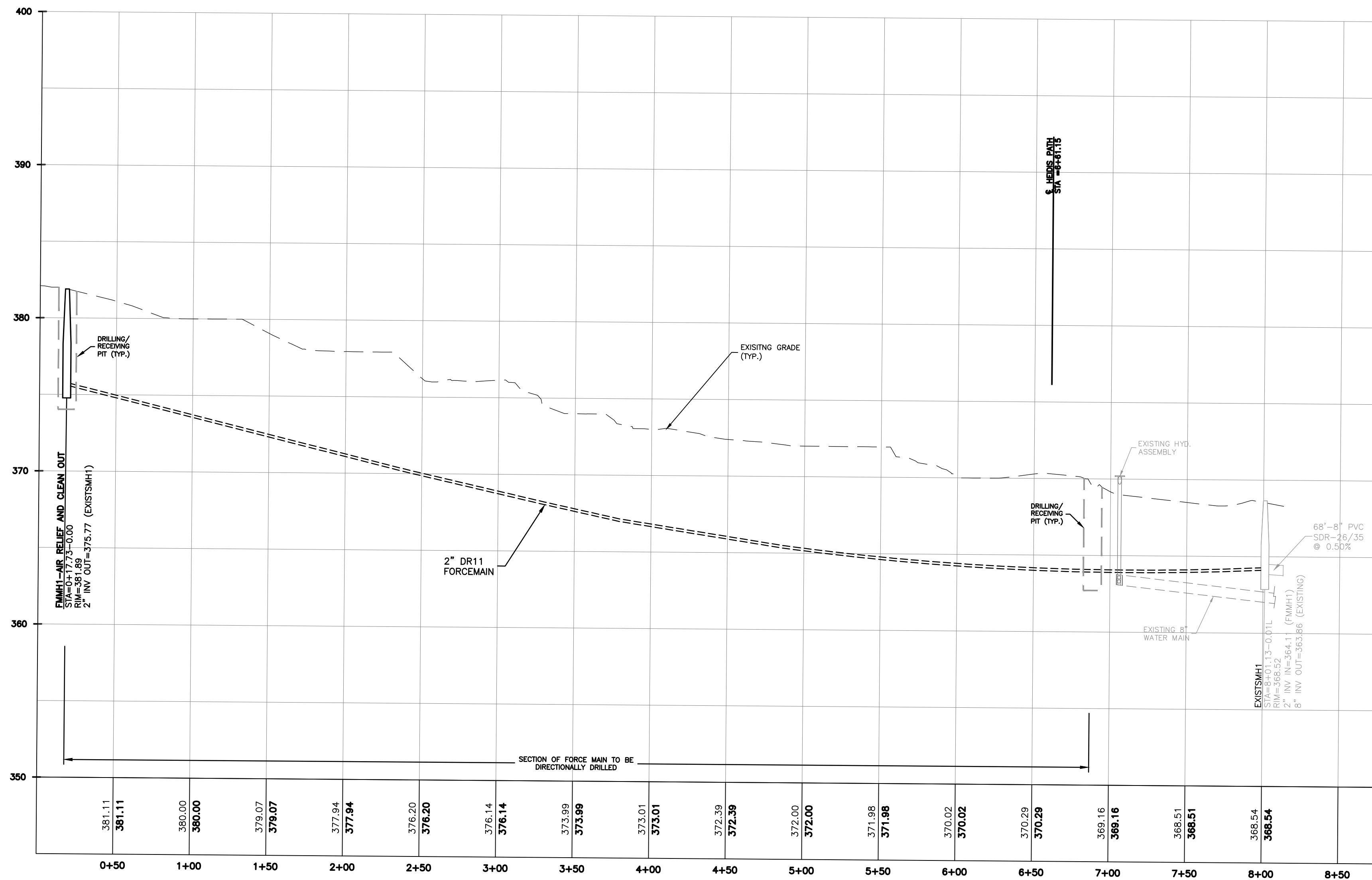
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1 PLAN - FORCEMAIN-HUBBS ROAD TO HEIDI'S PATH

0 25 50 100 200

SCALE: 1"=50'



2 PROFILE - HUBBS ROAD TO HEIDI'S PATH

VERTICAL SCALE: 1" = 5'

0 2.5 5 10 20

0 25 50 100 200

HORIZONTAL SCALE: 1" = 50'

NOTES:

1) A MINIMUM 18" OF VERTICAL SEPARATION REQUIRED BETWEEN SANITARY SEWER AND ANY WATER LINES.

3) MINIMUM OF 5' OF COVER REQUIRED OVER WATERLINE AND SANITARY SEWER

SARATOGA COUNTY
SEWER DISTRICT #1

Approved _____

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

HUBBS ROAD SANITARY SEWER EXTENSION
HUBBS ROAD, TOWN OF CLIFTON PARK, SARATOGA COUNTY, NEW YORK

LANSING
ENGINEERING

2492 SUTHERLAND AVE. SUITE 201
ALBANY, NY 12208
(518) 869-6243

PLAN &
PROFILE -
FORCE MAIN

PROJ. NO: 893.00
SCALE: AS SHOWN
DATE: 1/20/20

PP-1
SHEET 3 OF 5



SCALE: NTS



SCALE: NTS



- DT-2
SHEET 5 OF 5

Appendix B: Hydraulic Capacity Calculations

Hydraulic Capacity Calculations

Wastewater Flow Contributors

Hubbs Road Sanitary Sewer Extension – The network includes the proposed 5 single family residential units.

$$\text{Population} = (5 \text{ single family residences}) \times (2.5 \text{ residents/unit}) = 12.5 \text{ residents}$$

$$\text{Design Average Daily Wastewater Flow} = (12.5) \times (100 \text{ gpd/resident}) = 1,250 \text{ gpd}$$

Wastewater System Configuration

The sanitary sewer extension within the Hubbs Road Sanitary Sewer Extensions will collect the wastewater flow from the residents by means of individual grinder pumps which connect to a 2" low pressure forcemain. Wastewater will be conveyed by low pressure forcemain first along Hubbs Road then south along Heidis Path and connect to the northernmost existing sanitary structure. The collected wastewater will ultimately be conveyed to, and treated at, the Saratoga County Sewer District No.1 Wastewater Treatment Plant located in the Town of Halfmoon, Saratoga County, New York.

Wastewater System Capacity Design

Hubbs Road Sanitary Sewer Extension – The network includes the 5 single family residential units.

$$\text{Population} = 12.5 \text{ residents}$$

Cumulative Design Average Daily Wastewater Flow

$$= (\text{Population}) \times (100 \text{ gpd/residents})$$

$$= (12.5) \times (100 \text{ gpd/household})$$

$$= 1,250 \text{ gpd} = 0.86 \text{ gpm}$$

Peak Hour Factor (P = population in thousands)

$$= \frac{(18 + P^{1/2})}{(4 + P^{1/2})} = \frac{(18 + 0.0125^{1/2})}{(4 + 0.0125^{1/2})} = 4.40$$

$$\text{PHF} = 4.40$$

Cumulative Peak Hour Wastewater Flow

$$= (\text{Average Daily Wastewater Flow}) \times (\text{Peak Hour Factor})$$

$$= (1,250 \text{ gpd}) \times (4.40)$$

$$= 5,500 \text{ gpd}$$

$$= 3.82 \text{ gpm (calculated design flow, required flow)}$$

Low Pressure Forcemain Pipe Sizing

Individual grinder pumps at each residence will pump wastewater thru a low pressure forcemain system to sanitary manholes on and off the subdivision parcel. A 2" diameter DR 11 Forcemain pipe will handle the flow from the project. The pipe size analysis is below:

2" Diameter DR 11 Forcemain (actual average diameter = 1.917")

$$\text{Area} = 0.020 \text{ SF}$$

$$\text{Velocity} = 2.0 \text{ FPS minimum} \quad = 6.0 \text{ FPS maximum}$$

$$\text{Flow} = 0.040 \text{ CFS minimum} \quad = 0.12 \text{ CFS maximum}$$

= 17.95 gpm minimum
17.95 gpm > 3.82 gpm

= 53.86 gpm maximum
53.86 gpm > 3.82 gpm

It should be noted that the average flow of 0.86gpm and peak hour flow of 3.82 gpm are calculated flows. The proposed E-One grinder pumps will dictate the actual instantaneous flow rate to provide cleansing velocities within the proposed 2" forcemain pipe. See attached E-One analysis within Appendix C.

Downstream Analysis

Based on conversations with the Clifton Park Sewer Department, the existing 8" gravity main along Heidis Path has adequate capacity to accept the flows from the Hubbs Road Sanitary Sewer Extension.

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



Environment One Corporation

**Pressure Sewer Preliminary
Cost and Design Analysis
For
Hubbs Rd, NY
rev1**

Prepared For:

Lansing Engineering

2452 State Route 9, Suite 301

Malta

NY

12020

USA

Tel: 518-899-5243

Fax:

Prepared By: M. Crowley

February 5, 2020

Hubbs Rd, NY
rev1

Prepared by : M. Crowley

On: February 5, 2020

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".

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 peaks of 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.

Add 15ft static for worst case lateral loss (779ft).

<<<< END OF NOTES >>>>

Budgetary Low Pressure Sewer System Costs**Hubbs Rd, NY
rev1**

	<u>Quantity</u>	<u>Description</u>	<u>Unit Cost</u>	<u>Installation</u>	<u>Sub Total</u>
Valves	1	Clean Out	\$0.00	0.00	\$0.00
					<u>\$0.00</u>
Pumps	5	DH071-93	\$0.00	0.00	\$0.00
	5	Lateral Kits (Includes Ball\Check Valve Assembly)	\$0.00	0.00	\$0.00
	5	Lateral (Boundary) Installation	\$0.00	0.00	\$0.00
	5	Pump/Panel Installation	\$0.00	0.00	\$0.00
					<u>\$0.00</u>
Piping	734	2.00" Pipe	\$0.00	0.00	\$0.00
					<u>\$0.00</u>

Number of Connections	<u>5</u>		
Total Per Connection	<u>\$0.00</u>	Total (w/o other)	<u>\$0.00</u>
Grand Total Per Connection	<u>\$0.00</u>	Grand Total (including other)	<u>\$0.00</u>

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

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS

Prepared By:
M. Crowley

Hubbs Rd, NY
rev1

February 5, 2020

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 Friction 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	1.00	5	5	250	11.00	3	33.00	2.00	3.57	734.00	2.52	18.49	18.49	398.00	378.00	20.00	38.49

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME(HR)

Prepared By:
M. Crowley

Hubbs Rd, NY
rev1

February 5, 2020

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		250	
1.00	1.00	5	2.00	15.40	734.00	113.06	1,250	11.06	2.17	2.17

DUTCH MEADOWS SEWER DISTRICT #1 EXTENSION #1**SANITARY SEWER EXTENSION COST ESTIMATE**

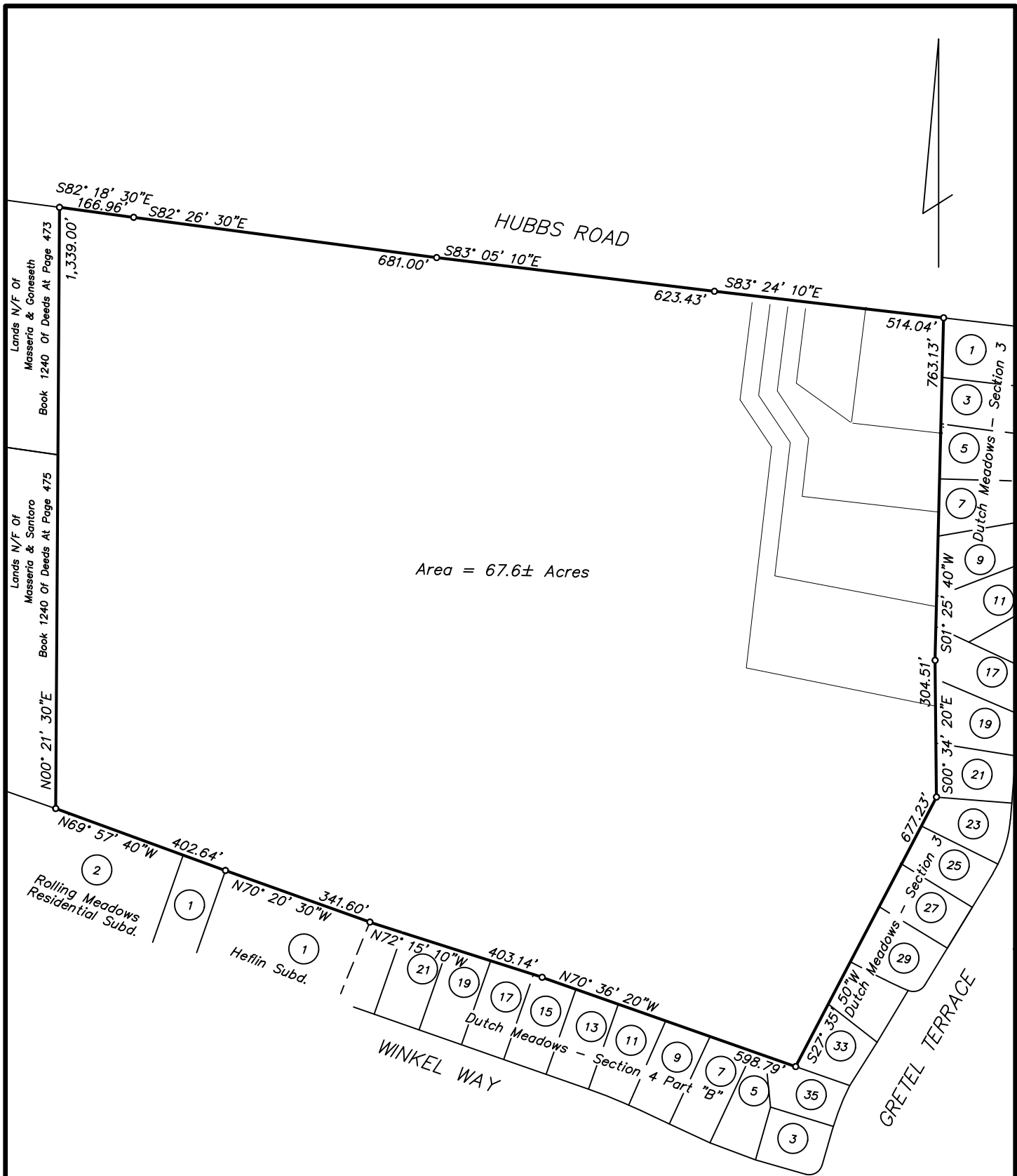
CATEGORY	ITEM	QUANTITY	UNITS	UNIT COST	ITEM COST
2" Diameter Off-Site Forcemain					
<i>Structures</i>					
	Air Release/Clean Out Manhole	1	EA	\$ 10,000	\$ 10,000
<i>Pipe Network</i>					
	2" DR11 HDPE/Fittings/Valves/etc.	782	LF	\$ 5	\$ 3,910
<i>Directional Drilling</i>					
	Horizontal Directional Drilling	680	LF	\$ 12	\$ 8,160
<i>Traffic Protection</i>					
	Work Zone Traffic Control & Shoulder Closure	1	DAY	\$ 675	\$ 675
<i>Miscellaneous</i>					
	Mobilization & Setup	1	LS	\$ 5,000	\$ 5,000
	Construction Stakeout	2.0%	LS	\$ 22,745	\$ 455
Total Cost					
					\$ 28,200

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.

DUTCH MEADOWS SEWER DISTRICT #1 EXTENSION #1						
INDIVIDUAL PROPERTY OWNER COST ESTIMATE						
PARCEL ID	258.-1-43.1	258.11-1-62	258.-1-43.3	258.-1-43.4	258.-1-43.5	
PARCEL ADDRESS	92 HUBBS RD	102 HUBBS RD	98 HUBBS RD	96 HUBBS RD	94 HUBBS RD	
OWNER	CLOVER MEADOWS FARM LLC	BAILLARGEON, PAUL W	BAILLARGEON, SANDRA A	GLICK, BRIAN H	GLICK, BRIAN H	
FULL ASSESSED VALUE	\$ 218,700.00	\$ 134,400.00	\$ 309,700.00	\$ 309,700.00	\$ 309,700.00	
DUTCH MEADOWS UNIT CHARGE	\$ 160.15	\$ 160.15	\$ 160.15	\$ 160.15	\$ 160.15	
ADVELORUM \$0.861891/\$1,000	\$ 188.50	\$ 115.84	\$ 266.93	\$ 266.93	\$ 266.93	
SCSD#1 UNIT CHARGE	\$ 247.50	\$ 247.50	\$ 247.50	\$ 247.50	\$ 247.50	
INITIAL HOOK UP FEE	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	
INSTALLATION OF GRINDER PUMP & LATERAL	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	
FIRST YEAR COST	\$ 11,596.15	\$ 11,523.49	\$ 11,674.58	\$ 11,674.58	\$ 11,674.58	
FIRST YEAR MONTHLY COST	\$ 966.35	\$ 960.29	\$ 972.88	\$ 972.88	\$ 972.88	
SECOND YEAR COST	\$ 596.15	\$ 523.49	\$ 674.58	\$ 674.58	\$ 674.58	
SECOND YEAR MONTHLY COST	\$ 49.68	\$ 43.62	\$ 56.21	\$ 56.21	\$ 56.21	

* Parcels 258.-1-43.3 and 258.-1-43.5 are currently vacant, assessed value based upon adjacent parcel's assessed value, 96 Hubbs Road.

Appendix D:
Legal Description of Sewer District Extension



Gilbert VanGuilder
Land Surveyor, PLLC

Professional Land Surveyors
 988 Route 146, Clifton Park, New York 12065
 gvglandsurveyors.com

DUTCH MEADOWS SEWER DISTRICT NO. 1
EXTENSION NO. 1

TOWN OF CLIFTON PARK

SARATOGA COUNTY, NEW YORK

SCALE: 1" = 300'

DATE: MARCH 24, 2020

TELEPHONE NO.: (518) 383-0634

MAP NO.:

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

Members:

Gilbert G. VanGuilder, PLS
Robert A. Wilklow, PLS

Associate:

Duane J. Rabideau, PLS

March 24, 2020

SUGGESTED DESCRIPTION
DUTCH MEADOW SEWER DISTRICT #1
EXTENSION #1

All that certain sewer district extension situate in the Town of Clifton Park, County of Saratoga, State of New York, lying along the southerly line of Hubbs Road and being further bounded and described as follows:

Beginning at the point of intersection of the common division line between lands of Clover Meadows Farm, LLC as described by Instrument No. 2012003600 to the East and lands of Masseria & Goneseth as described in Book 1240 of Deeds at Page 473 to the West with the southerly line of Hubbs Road, thence from said point of beginning along said southerly line of Hubbs Road the following four (4) courses: 1.) South 82° 18' 30" East, 166.96 feet to a point, thence 2.) South 82° 26' 30" East, 681.00 feet to a point, thence 3.) South 83° 05' 10" East, 623.43 feet to a point, thence 4.) South 83° 24' 10" East, 514.04 feet to the point of intersection with the westerly line of Lot 1, "Dutch Meadows-Section 3", thence along said Lot 1 and Lots 3, 5, 7, 9, 11, 17, 19, 21, 23, 25, 27, 29, 31 and 33 "Dutch Meadows Section 3" the following three (3) courses: 1.) South 01° 25' 40" West, 763.13 feet to a point, thence 2.) South 00° 34' 20" East, 304.51 feet to the point, thence 3.) South 27° 35' 50" West, 677.23 feet to the point of intersection with the northerly line of Lot 35 "Dutch Meadows-Section 3", thence along said northerly line and the northerly line of Lots 5, 7, 9, 11, 13, 15, 17, 19, 21 "Dutch Meadows-Section 4 Part B the following two courses: 1.) North 70° 36' 20" West, 598.79 feet to a point, thence 2.) North 72° 15' 10" West, 403.14 feet to a point in the northerly line of Lot 1 "Survey Map and Subdivision of Lands of Garry R. Heflin, Inc.", prepared by Santo Association, P.C. and filed in the Saratoga County Clerk's Office as G-286, thence along said northerly line and the northerly line of Lots 1 & 2 "Rolling Meadows Residential Subdivision" the following two (2) courses: 1.) North 70° 20' 30" West, 341.60 feet to a point, thence 2.) North 69° 57' 40" West, 402.64 feet to a point in the easterly line of lands of Masseria & Santoro as described in Book 1240 of Deeds at Page 475, thence along said easterly line and the aforesaid lands of Masseria & Goneseth North 00° 21' 30" East, 1,339.00 feet to the point of beginning and containing 67.6± acres of land.

Todd Westerveld
PLS 50,319

Appendix E:
Property Owner Questionnaire

C. Menoee
Claxdale Farms

2/12/20

Re: 4 lot sewer district extension

As you know, it has been requested that the Town extend the Dutch Meadows Sewer Districts westward to serve 5 lots on Hubbs Road including **92 Hubbs Road**. I would like to take this time to give you a general idea of annual costs to a typical homeowner. These numbers are estimated based on current information subject to modification as the Engineers analysis occurs. Please review the below information and indicate if you are in favor of this extension moving forward. This is in no way a binding questionnaire. We are simply gauging interest before moving forward. As you may already know, the cost of installing the pipe is being borne by one of the property owners.

The Town will accept dedication of this pipe to facilitate multiple connection to the main. The annual costs are listed below:

Dutch Meadows Unit Charge: \$160.15

Dutch Meadows advalorem: \$.861891 per \$1,000 assessment

Saratoga County Sewer District # 1: \$247.50

Estimated first year sewer charge (tax) for **92 Hubbs Road** if hooked up to sewer: \$597

92 Hubbs Road not connected to sewer but in the extension would pay \$189. (homes in the extension not connected but that have frontage on a sewer main must pay debt.)

Upon connection to a low-pressure sewer main a \$1000 hook up fee is required paid to the Dutch Meadows Sewer District.

Additionally, a Saratoga County Grinder Pump permit fee of \$500 would be required at time of installation.

If you understand the costs listed above, please select whether you are in favor of this extension or not.

☒ I am in favor of proceeding with the Sewer District Extension

☐ I am not in favor of the Sewer District Extension

2/12/20

Paul + Sandy
Baillargeon

Re: 4 lot sewer district extension

As you know, it has been requested that the Town extend the Dutch Meadows Sewer Districts westward to serve 5 lots on Hubbs Road including **102 Hubbs Road**. I would like to take this time to give you a general idea of annual costs to a typical homeowner. These numbers are estimated based on current information subject to modification as the Engineers analysis occurs. Please review the below information and indicate if you are in favor of this extension moving forward. This is in no way a binding questionnaire. We are simply gauging interest before moving forward. As you may already know, the cost of installing the pipe is being borne by one of the property owners. The Town will accept dedication of this pipe to facilitate multiple connection to the main. The annual costs are listed below:

Dutch Meadows Unit Charge: \$160.15

Dutch Meadows advalorem: \$.861891 per \$1,000 assessment

Saratoga County Sewer District # 1: \$247.50

Estimated first year sewer charge (tax) for **102 Hubbs Road** if hooked up to sewer: \$523.65

102 Hubbs Road not connected to sewer but in the extension would pay \$116. (homes in the extension not connected but that have frontage on a sewer main must pay debt.)

Upon connection to a low-pressure sewer main a \$1000 hook up fee is required paid to the Dutch Meadows Sewer District. Additionally, a Saratoga County Grinder Pump permit fee of \$500 would be required at time of installation.

If you understand the costs listed above, please select whether you are in favor of this extension or not.



I am in favor of proceeding with the Sewer District Extension



I am not in favor of the Sewer District Extension

2/12/20

Sandy Baillargeon
Trustee

Re: 4 lot sewer district extension

As you know, it has been requested that the Town extend the Dutch Meadows Sewer Districts westward to serve 5 lots on Hubbs Road including **98 Hubbs Road**. I would like to take this time to give you a general idea of annual costs to a typical homeowner. These numbers are estimated based on current information subject to modification as the Engineers analysis occurs. Please review the below information and indicate if you are in favor of this extension moving forward. This is in no way a binding questionnaire. We are simply gauging interest before moving forward. As you may already know, the cost of installing the pipe is being borne by one of the property owners. The Town will accept dedication of this pipe to facilitate multiple connection to the main.

The annual costs are listed below:

Dutch Meadows Unit Charge: \$160.15

Dutch Meadows advalorem: \$.861891 per \$1,000 assessment

Saratoga County Sewer District # 1: \$247.50

Estimated first year sewer charge (tax) for **98 Hubbs Road** if hooked up to sewer: \$440.

98 Hubbs Road not connected to sewer but in the extension would pay \$32. (homes in the extension not connected but that have frontage on a sewer main must pay debt.

Upon connection to a low-pressure sewer main a \$1000 hook up fee is required paid to the Dutch Meadows Sewer District. Additionally, a Saratoga County Grinder Pump permit fee of \$500 would be required at time of installation.

If you understand the costs listed above, please select whether you are in favor of this extension or not.



I am in favor of proceeding with the Sewer District Extension



I am not in favor of the Sewer District Extension

Brian and Cheryl Glick

2/12/20

Re: 4 lot sewer district extension

As you know, it has been requested that the Town extend the Dutch Meadows Sewer Districts westward to serve 5 lots on Hubbs Road including **96 Hubbs Road**. I would like to take this time to give you a general idea of annual costs to a typical homeowner. These numbers are estimated based on current information subject to modification as the Engineers analysis occurs. Please review the below information and indicate if you are in favor of this extension moving forward. This is in no way a binding questionnaire. We are simply gauging interest before moving forward. As you may already know, the cost of installing the pipe is being borne by one of the property owners. The Town will accept dedication of this pipe to facilitate multiple connection to the main. The annual costs are listed below:

Dutch Meadows Unit Charge: \$160.15

Dutch Meadows advalorem: \$.861891 per \$1,000 assessment

Saratoga County Sewer District # 1: \$247.50

Estimated first year sewer charge (tax) for **96 Hubbs Road** if hooked up to sewer: \$675

96 Hubbs Road not connected to sewer but in the extension would pay \$267. (homes in the extension not connected but that have frontage on a sewer main must pay debt.)

Upon connection to a low-pressure sewer main a \$1000 hook up fee is required paid to the Dutch Meadows Sewer District. Additionally, a Saratoga County Grinder Pump permit fee of \$500 would be required at time of installation.

If you understand the costs listed above, please select whether you are in favor of this extension or not.



I am in favor of proceeding with the Sewer District Extension



I am not in favor of the Sewer District Extension

Brian and Cheryl Glick

2/12/20

Re: 4 lot sewer district extension

As you know, it has been requested that the Town extend the Dutch Meadows Sewer Districts westward to serve 5 lots on Hubbs Road including **94 Hubbs Road**. I would like to take this time to give you a general idea of annual costs to a typical homeowner. These numbers are estimated based on current information subject to modification as the Engineers analysis occurs. Please review the below information and indicate if you are in favor of this extension moving forward. This is in no way a binding questionnaire. We are simply gauging interest before moving forward. As you may already know, the cost of installing the pipe is being borne by one of the property owners. The Town will accept dedication of this pipe to facilitate multiple connection to the main. The annual costs are listed below:

Dutch Meadows Unit Charge: \$160.15

Dutch Meadows advalorem: \$.861891 per \$1,000 assessment

Saratoga County Sewer District # 1: \$247.50

Estimated first year sewer charge (tax) for **94 Hubbs Road** if hooked up to sewer: \$448.

94 Hubbs Road not connected to sewer but in the extension would pay \$40. (homes in the extension not connected but that have frontage on a sewer main must pay debt.

Upon connection to a low-pressure sewer main a \$1000 hook up fee is required paid to the Dutch Meadows Sewer District. Additionally, a Saratoga County Grinder Pump permit fee of \$500 would be required at time of installation.

If you understand the costs listed above, please select whether you are in favor of this extension or not.



I am in favor of proceeding with the Sewer District Extension



I am not in favor of the Sewer District Extension