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# Map, Plan and Report for Lincoln Drive Sewer District

Town of Glenville, Schenectady County, New York

June 14, 2016

MJ#: 704.15

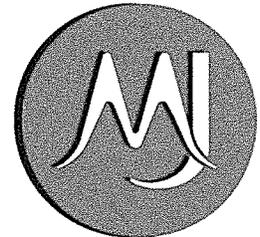
*Prepared For:*

**Town of Glenville Town Board**  
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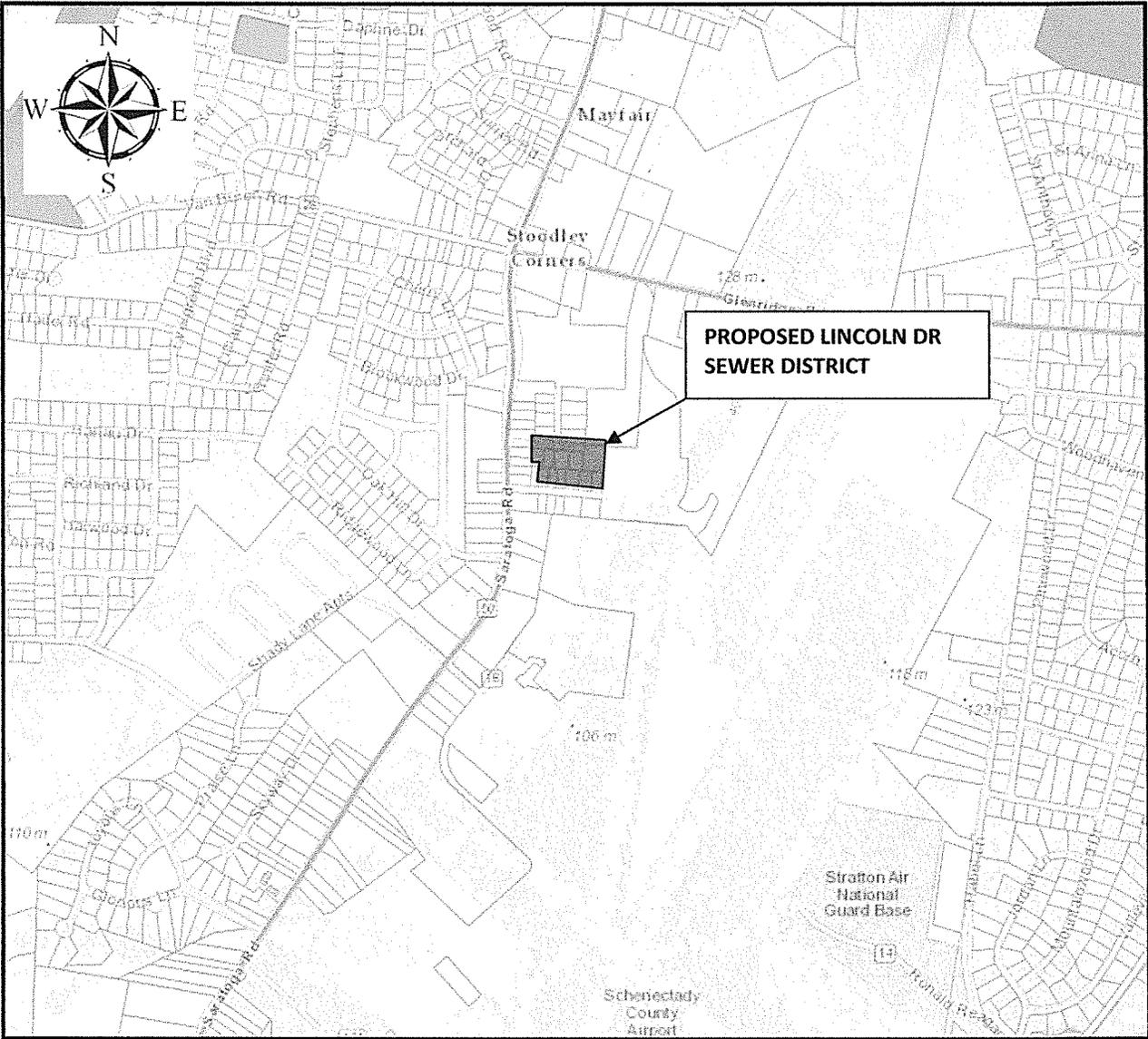
Appendix C Sewer District Facilities

Appendix D: Probable Project Costs

**1.0 BACKGROUND AND AUTHORIZATION**

The Town of Glenville is examining the feasibility of providing public sewers to portions of Lincoln Drive within the Town. The proposed sewer district encompasses existing residential lots located along Lincoln Drive, which is generally located immediately off of U.S. Route 50. The sewer district will encompass twelve (12) existing residential lots all of which are currently serviced by public water, and on-site septic systems. Figure 1 illustrates the general location of the sewer district being considered.

**Figure 1:  
Proposed Sewer District Service Area**



The Town Board has received a petition from the residents of Lincoln Drive to consider the formation of a sewer district due to reported failures of the on-site septic systems located on individual lots.

The Town Board of the Town of Glenville has authorized M.J. Engineering and Land Surveying, P.C. to prepare a Map, Plan and Report for the creation of the proposed sewer district in accordance with Article 12-A of New York State Town Law, "District Formation by Order of the Town Board."

This Map, Plan and Report provides the information necessary for the Town Board to create the sewer district in accordance with Article 12-A of New York State Town Law.

## 2.0 PROPOSED DISTRICT BOUNDARIES AND BENEFITED PROPERTIES

A total of twelve (12) existing residential lots will be benefited from the formation of the sewer district and generally include those lots with legal frontage along Lincoln Drive, with the exception of two corner lots that also have legal frontage on U.S. Route 50. These two parcels already have municipal sewer service. A map of the proposed sewer district and list of benefited properties is included as Appendix A.

## 3.0 PROJECTED WASTEWATER FLOWS

Estimated wastewater flows were considered in the design of the proposed infrastructure. Table 1 summarizes estimated average daily and peak hourly flows for the proposed sewer district.

**Table 1**  
**Estimated Wastewater Flows**  
**Lincoln Drive Sewer District**

Use	Average Daily Flows GPD (GPM)	Peak Hourly Flows GPD (GPM)
12 Parcels @ 450 GPD	5,400 (3.75)	21,600 (15)

The flows rates have been derived from NYSDEC's typical per unit hydraulic loading rates for single family homes. It has been assumed that all existing homes within the sewer district were constructed prior to 1980 and therefore would result in a loading rate of 150 GPD/bedroom with most homes having three bedrooms.

## 4.0 PROPOSED SEWER SYSTEM FACILITIES

The proposed sewer system is illustrated in Appendix C and would include the following elements:

- 660 linear feet of 8-inch gravity sewer
- 340 linear feet of 6-inch laterals to service each of the 12 users
- 2 sanitary manholes
- Connection to the Sewer District No. 9 sewer system at Route 50
- Pavement removal and restoration
- Lawn removal and restoration

## 5.0 OWNERSHIP, OPERATION AND MAINTENANCE

All facilities to be constructed will be owned and operated by the Town of Glenville with the Town responsible for maintenance and operation of the system.

All wastewater generated from the proposed sewer district will be discharged to the City of Schenectady's wastewater treatment plant for processing.

Individual home owners / lot owners will be responsible for maintaining the individual sewer laterals if provided to for specific lots. These laterals are considered privately owned from the point of connection to the installed sewer main.

## 6.0 ESTIMATED PROBABLE PROJECT COSTS / MAXIMUM AMOUNT TO BE EXPENDED

The estimated probable project costs, inclusive of labor and material for the physical installation of proposed facilities, professional consultation (i.e. engineering, legal), and permitting is \$147,420. The opinion of probable project costs have been developed anticipating construction by competitive bid and utilizing posted wage rates for construction in accordance with the NYS Municipal Law. A detailed breakdown of construction costs for the improvements is presented in Appendix D, with a summary as follows:

**Table 2**  
**Estimated Probable Project Costs**

<b>Direct Project Costs</b>	
General Construction	\$126,000
<b>Indirect Project Costs</b>	
Survey, Engineering & Construction Admin (12%)	\$15,120
Bonding, Administrative & Legal (4%)	\$5,040
Permit Allowance (1.0%)	\$1,260
<i>Subtotal</i>	\$21,420
<b>Opinion of Probable Project Costs (2016 Dollars)</b>	<b>\$147,420</b>

The cost opinions are based upon our understanding of the project and have been developed using 2016 construction budgeting values with an applied escalation of 2.5% to account for a future bid date. Subsequent changes in the project scope or timeframe may change project costs. Since there is no control over cost of labor, materials, competitive bidding and market conditions, the opinion of probable project costs is made on the basis of past experience and limited available data. These opinions represent our best judgment as a consultant familiar with the construction industry. There is no guarantee that proposals, bids or construction costs will not vary from the opinion of probable costs.

## 7.0 ONE TIME USER COSTS

One-time user costs for lots proposing to connect to the sewer system include abandonment of existing on-site sewage disposal systems, installation of new sewer laterals from existing building plumbing and connection to the installed lateral designated for that lot at the public right-of-way.

Individual users would need to pay related fees for required Town permits to connect to the municipal sewer since the district cannot incur any of these costs. The current permit fees assessed by the Town of

Glenville for sewer connections are \$350, which includes \$250 City of Schenectady connection fee and a \$100 Town of Glenville connection fee.

Based upon the review of a majority of current on-site sewage disposal systems and location of laterals that would be connected to the proposed municipal sewer, it is estimated that costs to be borne by individual users on a one-time basis may range from \$2,000 to \$5,000.

## **8.0 EXPLANATION OF USER COSTS**

General Municipal Law requires that all costs associated with a sewer district are to be borne by users in the district. The proposed costs to the typical user are based on a shared debt service by the property owners in the proposed district and operation and maintenance (O&M) of the sewer district. The user cost consists of two components; debt retirement and operation and maintenance, both of which are to be charged on a benefit basis.

### **8.1 Debt Service Costs**

Debt service represents the cost to pay down the various bond charges that relate to a district. Generally these costs include such items as engineering and construction of the proposed improvements together with the associated legal/finance charges for bonds used to finance the project. Debt service charges are billed in accordance with the Town requirements.

The current Town EDU schedule for residential lots is 5 EDUs per lot. The proposed district includes 12 residential lots, resulting in a total of 60 EDUs. Refer to Appendix B for the equivalent dwelling unit assignment.

The Town of Glenville Comptroller has indicated a 30-year financing period at a 2.5% interest rate is available to the Town. This would result in an annual debt service payment of \$7,047, which is inclusive of principal and interest. The new debt service would be assessed at a rate of 5 EDUs per lot. This results in a debt service of \$117.44 per EDU or \$587.22 per residence.

### **8.2 Operation and Maintenance Costs**

The Town of Glenville will be responsible for the O&M of the proposed sewer system, with individual property owners responsible for the O&M of the sewer laterals extending from the sewer mains. The Town of Glenville will not assess O&M charges to users within this proposed sewer district.

## **9.0 ESTIMATED SEWER DISTRICT USER COSTS**

The total annual sewer use rate will be composed of the debt service for the outstanding debt of Sewer District No. 9, new debt associated with the new collection system of the proposed sewer district and the O&M charged by the Town of Glenville for transportation of the waste and City of Schenectady for the treatment of wastewater received. The expected cost to the typical single family home within the district is \$587.22, which covers that annual debt payment per user.

## **10.0 PROJECT FINANCING**

At present time, the Town has not applied for subsidized loans or grants that may be available from a variety of sources. Absent such external sources of funds, government agencies have the ability to self-finance capital projects through issuance of bonds. The interest rates will vary based upon market

conditions and the governmental body's current bond rating. As noted in Section 8.1 the Town is capable of securing a 30 year loan at 2.5% interest.

The approval of the Office of the State Comptroller is required for the establishment of extension of a sewer district if, debt is to be issued or assumed by the Town for the improvements proposed and the cost of the district or extension to the typical property as stated in the notice of public hearing on the formation or extension, is above the average annual threshold for similar types of districts as computed by the State Comptroller. For 2016, the threshold for Town Sewer Districts as established by the State Comptroller is \$798. The cost on a per user basis is \$587.22 and therefore does not require State Comptroller approval to allow the district to be approved.

## **11.0 DISTRICT FORMATION PROCESS**

The following are the procedural requirements for the creation of a district, which are in accordance with New York State Town Law – Article 12A. The district formation and charges are subject to permissive referendum.

- The submission of this report, representing a Map, Plan and Report to the Town Board, which encompasses the proposed district.
- The Town accepting and filing of this report and scheduling of a public hearing in accordance with Town Law.
- The Glenville Town Board schedules and holds a public hearing in accordance with NYS Town Law and Town of Glenville public notice requirements.
- The Glenville Town Board takes action on the State Environmental Quality Review (SEQR) by making a determination if the proposed action (district formation) will or will not have an adverse impact on the environment.
- Assuming the Glenville Town Board finds that the action will not have an adverse impact on the environment, a SEQR negative declaration shall be made by board resolution.
- The Glenville Town Board will consider acting on the proposed district formation by board resolution.

The Glenville Town Board, in its review of the creation of the district shall validate that the following criteria has been satisfied:

- All the property and property owners within the proposed district are benefited thereby;
- All the property and property owners benefited are included within the limits of the proposed district;
- The cost of the proposed improvements (if any proposed) is to be assessed against the benefited area and all real property to be assessed will be benefited by the proposed improvements and no benefited property will be excluded;

- It is in the public interest to form the district and will not constitute an undue burden on the property that will bear the cost thereof.

## **12.0 REGULATORY PERMITS AND APPROVALS**

Once the district has been created by Town Board resolution, the following approvals and permits will be necessary:

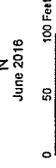
- SPDES permit from the NYSDEC;
- Phase II Construction Stormwater permit from the NYSDEC;
- Approval of engineering plans and specifications by the NYSDEC;
- Highway Work Permit for work on Town roads.
- Potential NYSDOT Highway Work Permit for work within or adjacent to the Route 50 right-of-way;
- Potential easements or fee title from private land owners necessary for construction of proposed infrastructure; and
- Bonding and funding arrangements with Town's financial institution/consultant.

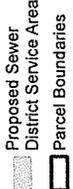
# Appendix A

## Sewer District Map Benefited Parcels of the Sewer District

# Lincoln Drive Sewer District Proposed Boundaries


  
 June 2016


  
 0 50 100 Feet


  
 Proposed Sewer  
 District Service Area  
 Parcel Boundaries

Sources:  
 Google, 2015 Imagery  
 Screenshot Copy


  
 This map was prepared for illustrative  
 purposes only and is not suitable for  
 engineering, surveying or other purposes.

Tax ID	Owner	Land Use Class	Land Use Type
22.15-3-9	Rymski, Aleshia	210	One Family Year-Round Residence
22.15-3-10	Ruggiero, Sandra L.	210	One Family Year-Round Residence
22.15-3-11	Pereyra, Carlos & Paula	210	One Family Year-Round Residence
22.15-3-12	Rogers, Joan	210	One Family Year-Round Residence
22.15-3-13	Sanders, Harold	210	One Family Year-Round Residence
22.15-3-14	Smith, John H & Irene	210	One Family Year-Round Residence
22.15-3-15	Pajak, Dennis P.	210	One Family Year-Round Residence
22.15-3-16	Alibozek, Robert S.	210	One Family Year-Round Residence
22.15-3-17	McLaughlin, Brian P.	210	One Family Year-Round Residence
22.15-3-18	Jeanotte, David	210	One Family Year-Round Residence
22.15-3-19	Benincasa, Joey	210	One Family Year-Round Residence
22.15-3-20	Campisi, Anthony J & June	210	One Family Year-Round Residence



# Appendix B

## Equivalent Dwelling Unit Assignment

Town of Glenvile  
 Lincoln Avenue Sewer District  
 Equivalent Dwelling Unit Assignment

TAX ID	Owner	Land Use Class	Land Use Type	EDUs
22.15-3-9	Rymski, Aleshia	210	One Familiiy Residence	5
22.15-3-10	Ruggiero, Sandra L.	210	One Familiiy Residence	5
22.15-3-11	Pereyra, Carlos & Paula	210	One Familiiy Residence	5
22.15-3-12	Rogers, Joan	210	One Familiiy Residence	5
22.15-3-13	Sanders, Harold	210	One Familiiy Residence	5
22.15-3-14	Smith, John H & Irene	210	One Familiiy Residence	5
22.15-3-15	Pajak, Dennis P.	210	One Familiiy Residence	5
22.15-3-16	Alibozek, Robert S.	210	One Familiiy Residence	5
22.15-3-17	McLaughlin, Brian P.	210	One Familiiy Residence	5
22.15-3-18	Jeannotte, David	210	One Familiiy Residence	5
22.15-3-19	Benincasa, Joey	210	One Familiiy Residence	5
22.15-3-20	Campisi, Anthony J & June	210	One Familiiy Residence	5
Total EDUs				60

EDU Schedule 5 / residential lot

# Appendix C

## Sewer District Facilities

# Lincoln Drive Sewer District Proposed Facilities

- Proposed Sewer
- Proposed Sewer District Service Area
- Parcel Boundaries



June 2016



This map was prepared for the purpose of engineering surveying or legal purposes.

Tax ID	Owner	Land Use Class	Land Use Type
22.15-3-9	Rymski, Aleshia	210	One Family Year-Round Residence
22.15-3-10	Ruggiero, Sandra L.	210	One Family Year-Round Residence
22.15-3-11	Pereyra, Carlos & Paula	210	One Family Year-Round Residence
22.15-3-12	Rogers, Joan	210	One Family Year-Round Residence
22.15-3-13	Sanders, Harold	210	One Family Year-Round Residence
22.15-3-14	Smith, John H & Irene	210	One Family Year-Round Residence
22.15-3-15	Pajak, Dennis P.	210	One Family Year-Round Residence
22.15-3-16	Albozek, Robert S.	210	One Family Year-Round Residence
22.15-3-17	McLaughlin, Brian P.	210	One Family Year-Round Residence
22.15-3-18	Jeanotte, David	210	One Family Year-Round Residence
22.15-3-19	Benincasa, Joey	210	One Family Year-Round Residence
22.15-3-20	Campisi, Anthony J & June	210	One Family Year-Round Residence



EXISTING SANITARY SEWER SYSTEM

PROPOSED 8" GRAVITY SEWER

# Appendix D

## Probable Project Cost



# Engineering and Land Surveying,

Civil Site Environmental Transportation Structural Bridge Inspection Construction Inspection Architecture Land Surveying High-Definition Scanning

## ESTIMATE FORM

Town of Glenville	To: MJELS	Project No.:	704.15
Lincoln Avenue Sewer District	Trade: C	Date:	7/11/16
Schenectady County, New York	New/Rehab: New	Phase:	Concept
		Client Agency:	Town of Glenville
		Prepared By:	MJELS

<b>DIV 1. GENERAL CONDITIONS &amp; ADMINISTRATION</b>			
Bonds	2%		\$1,771
SUPERVISION	0 days	\$550 /day	\$0
Permits			\$500
Insurance	1.5%		\$1,328
Home Office Overhead	6.0%		\$5,312
Profit	10.0%		\$8,854
Equipment			
Field Office Equipment			
Field Office Maintenance			
Mobilization/Demobilization			\$6,040
Survey			\$4,000
017716 Contract Closeout	5.0%		\$4,427
012100 FIELD ORDER ALLOWANCE	6.0%		\$5,300
Other Allowance (describe)			

CSI NUM	DESCRIPTION:	QUANT	UNIT	MATERIAL		LABOR		TOTAL HRS	TOTAL UNIT COST	M & L TOTAL COST	
				UNIT PRICE	TOTAL COST	MAN HRS PER UNIT	WAGE				TOTAL COST
	Utility Locating	1	LS	3000	3,000	0.000	53.69	0.00	0.0	3000.00	\$3,000
	Maintenance & Protection of Traffic	8	Week		0	5.000	53.69	2147.60	40.0	268.45	\$2,148
	Remove Asphalt Pavement	200	SY		0	0.095	53.69	1020.11	19.0	5.10	\$1,020
	Excavation	675	CY		0	0.150	53.69	5436.11	101.3	8.05	\$5,436
	Bedding & Backfill	550	CY	10	5,500	0.250	53.69	7382.38	137.5	23.42	\$12,882
	8" SDR26 Sanitary (gravity)	656	LF	12	7,872	0.200	53.69	7044.13	131.2	22.74	\$14,916
	6" SDR26 Sanitary (gravity)	345	LF	9	3,105	0.250	53.69	4630.76	86.3	22.42	\$7,736
	8X8X6 Tye Wye	12	EA	150	1,800	0.005	53.69	3.22	0.1	150.27	\$1,803
	Sanitary Manhole- SMH- precast concrete	2	EA	2500	5,000	12.000	53.69	1288.56	24.0	3144.28	\$6,289
	Connect to existing Manhole	1	EA	900	900	8.000	53.69	429.52	8.0	1329.52	\$1,330
	Light duty asphalt paving & subbase (Complete t	0	SF	2.5	0	0.015	53.69	0.00	0.0	#DIV/0!	\$0
	6" Topsoil	4900	SF	0.4	1,960	0.020	53.69	5261.62	98.0	1.47	\$7,222
	Seed & Mulch (Complee by Town)	0	SY	0.25	0	0.100	53.69	0.00	0.0	#DIV/0!	\$0
	Erosion Control Measures (Install)	1	LS	2500	2,500	20.000	53.69	1073.80	20.0	3573.80	\$3,574
	Erosion Control Measures (maintain)	8	Week	100	800	3.000	53.69	1288.56	24.0	261.07	\$2,089
	Remove/Replace 12" driveway culverts (Comple	0	EA	200	0	5.00	53.69	0	0.0	#DIV/0!	\$0
Subtotals					32,437			37,006	689.3 hrs		
				Escalation to Current Bid Date	2.50%	811		925			1,736
				Design Development Contingency	25%	8,109		9,252			17,361

General Conditions & Administration	\$32,232	25.6%	
Allowance	\$5,300	4.2%	
Material Cost	\$41,357	32.8%	
Total Labor	\$47,183	37.4%	
<b>Total Cost</b>	<b>\$126,073</b>	<b>100.0%</b>	<b>SAY: \$126,000</b>



# Lincoln Drive Sewer District Fact Sheet

## Maximum Annual Cost for Sewers

**\$587.22**

The above is based upon the total project costs (design and construction), the amount the Town would have to borrow and then make annual payments towards the loan on an annual basis. Under New York State Town Law, all costs must be borne by the users within the district that directly benefit from the proposed improvements. These costs cannot be paid for out of the Town's General Fund.

## Additional One Time Costs

**\$2,000 to \$5,000 with cost based upon several factors**

The project would provide a sewer lateral to each lot, up to the front property line. In order to make the final connection to the installed sewer system, the user is responsible for:

1. Abandonment of the existing septic system
2. Reconnecting the house plumbing to the sewer lateral installed by the Town at the street.

The cost of this work can vary anywhere from \$2,000 to \$5,000 based on several factors such as:

1. Location of the existing septic system
  - a. If the septic system is in the back yard, the cost to run a gravity line to the sewer at the street will cost more than if the septic system was in the front yard.
  - b. If the sewer coming out of the house is deep, then there is a potential that a pump would be needed to get to the sewer lateral installed at the street. It is not expected this will occur as the plan calls for sewers to be a least 8 feet deep within the road. But this condition can add to the one time user costs.
2. Size of existing septic system and extent to which it needs to be abandon
  - a. If the existing septic system is a cesspool (drywells), the cost of abandonment is expected to be less than a leach field with laterals.
  - b. The method of abandonment, if there is a leach field and there is a desire to remove it and installation of something in its place like a pool, this adds cost.

The users would need to follow and permitting required of the Town to perform the above work. The Town does not control who performs the above work. It can be performed by the homeowner or contractor.

## Process

The process that the Town must follow for considering the formation of a sewer district is described in New York State Town Law (Article 12A). The general steps are as follows:

1. The preparation of a Map, Plan and Report
2. The Town Board accepts the Map, Plan and Report and schedules a Public Hearing
3. The Town Board holds a public hearing
4. The Town Board acts on SEQR (New York State Environmental Quality Review)
5. The Town Board by resolution determines that:
  - a. Approves the district as the formation is in the best interest of the public, or
  - b. Disapproves the District as the formation is not in the best interest of the public.