

## APPENDIX E

The Village of Westhampton Beach Main Street Sewer Study  
prepared by A. Andreoli, P.E., dated June 2003.

and

The Village of Westhampton Beach – Projected Sewage Requirements  
prepared by A. Andreoli, P.E., dated July 2005.



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June 12, 2003

Hon. Robert Strebel  
Mayor  
Village Hall  
Westhampton Beach, NY 11978

Re: Main Street Sewer Study

Dear Mayor Strebel:

Based on my most recent discussion with staff members of the Suffolk County Department of Public Works(DPW), new information has been assembled with regard to the design, capacity and service area commitments for the Gabreski sewage treatment plant.

The treatment plant is designed and permitted for 100,000 gpd while the current flow is 15,000gpd or less. The current flows are attributed to the Air National Guard(ANG), County Aviation facility and a temporary arrangement to treat truck-in waste from the Suffolk County Community College Eastern Campus, minor flows from Belle's Café and the AHRC building. Once the temporary Community College flow is deleted, it is expected that the average monthly flow will be less than 10,000gpd.

The allocation of flow is as follows: 60,000gpd for the ANG, 30,000gpd for the undeveloped 50 acre parcel for commercial and industrial units and 10,000gpd for the remainder.

At this time DPW expects that the only potential excess available capacity would be a portion of the ANG 60,000gpd flow. Recently DPW contacted the ANG in this regard and they are open to discussion of their real needs, but it is understood that both Albany and Washington are involved in the final decision in this matter.

As a result of my discussions with DPW, it seems that they would be pleased to pursue with the Village the possibility of committing the excess capacity of the sewage treatment plant to the Village since the 60,000gpd allocation to the ANG may not actually be needed by them. Discussions are open to structure a connection agreement between the Village and DPW which would require all parties connected to the plant to share in the cost if future expansion were necessary. In light of this possibility, consideration should be given to the installation of a force main from the Main Street



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area to the sewage treatment plant. As indicated in the report, this would require the formation of a district and an initial capital investment of + \$860,000.

The alternate would be the formation of a district with the use of transfer development rights to provide expansion for those properties within the district. The waste in this alternative would be disposed via conventional septic tank and leaching pool systems as outlined. The initial capital cost of this approach would be significantly less than the first and could be staged according to demand.

Should you have any questions on the above material or on the report, I would be pleased to meet with you and the Trustees.

Thank you.

Sincerely yours:

Aldo Andreoli , P.E.

THE VILLAGE OF WESTHAMPTON BEACH

MAIN STREET SEWER STUDY

A. Andreoli, P.E.

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## INTRODUCTION

It is universally recognized that there is a major need for more economical methods of collecting, transporting and treating domestic sewage. In areas where there is a high rate of septic tank soil absorption system failure, due to tight soils, high ground water, limited area for expansion, etc. Such conditions have resulted in over flow of sanitary systems, thereby increasing the potential of health hazard and the possibility of polluting of surrounding watersheds. These are the conditions to be found along Main Street of Westhampton Beach Village.

It is usually recommended that sewage collection and centralizing treatment be installed to alleviate these water pollution problems. However the cost of the conventional approach has increased dramatically, therefore conventional gravity sewer systems as well as alternative collection and treatment systems have been investigated.

## DESCRIPTION OF SEWER SYSTEMS

### CONVENTIONAL SEWER SYSTEM (CS)

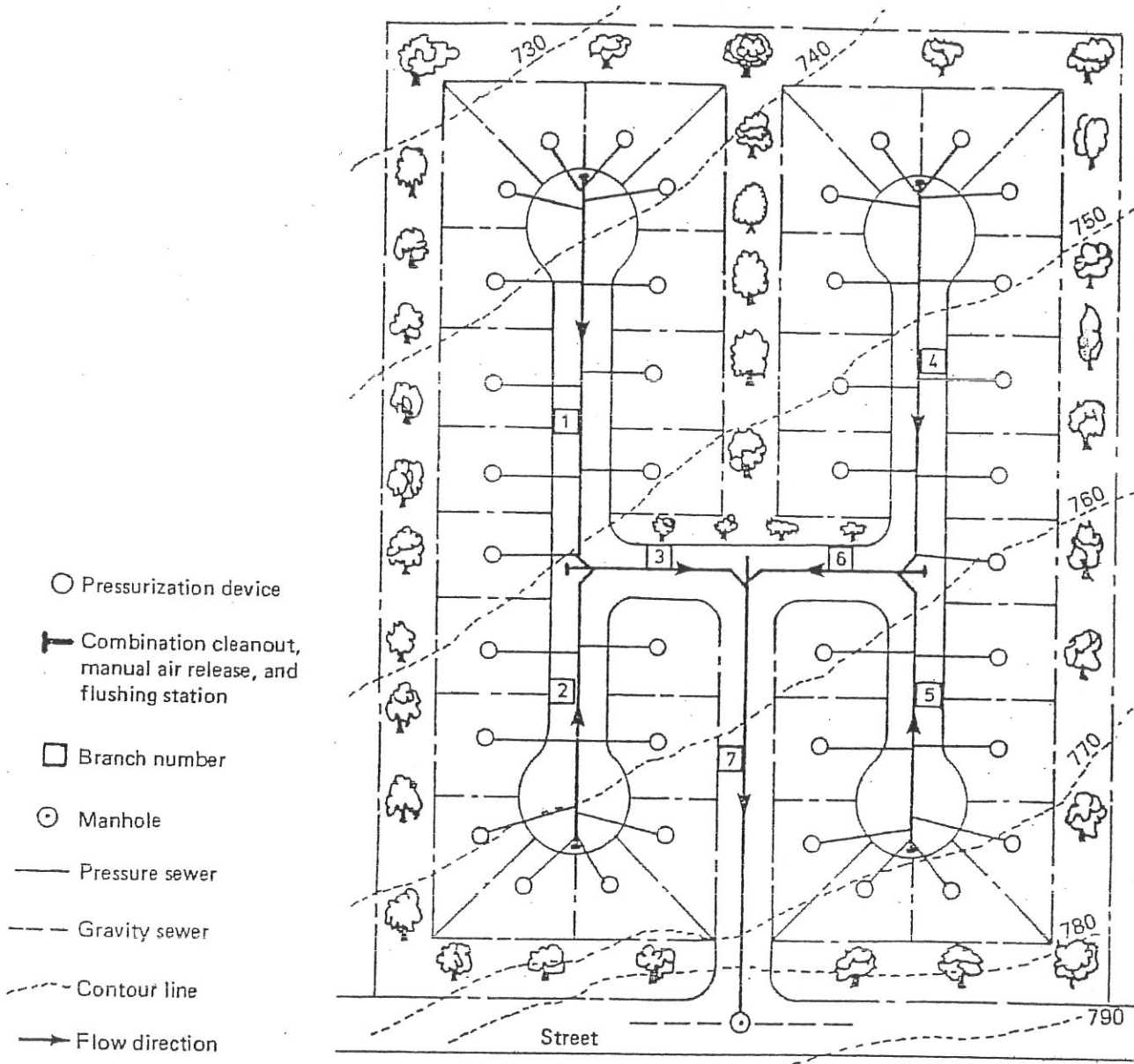
Conventional gravity sewers are designed to carry sewage at sufficient velocity to avoid excessive depositing of solids. They are typically designed according to legal regulations or professional standards such as "Ten State Standards". The basic design constraints provides that the minimum pipe diameter should be 8" and that the minimum slopes should be such that a pipe flowing full would have a fluid velocity of at least 2 fps. (For example an 8" pipe requires a slope of at least 0.4%) The minimum slopes may lead to deep excavations and /or the use of lift (pumping) stations.

## **FLAT GRADE SEWERS (FGS)**

Flat Grade sewers are essentially conventional gravity sewers designed with smaller slopes and diameters than are allowed by "Ten State Standards" flat grade sewers have been used in Nebraska, but apparently have not been used extensively elsewhere. A minimum diameter of 6" is allowed and slopes as small as 0.1%. These variations from standard practices can lead to considerable savings of excavation and lift station costs in flat topography, and have not lead to major difficulties with solid deposition (GIDLEY, 1987).

## **GRINDER PUMP PRESSURE SEWERS (GP)**

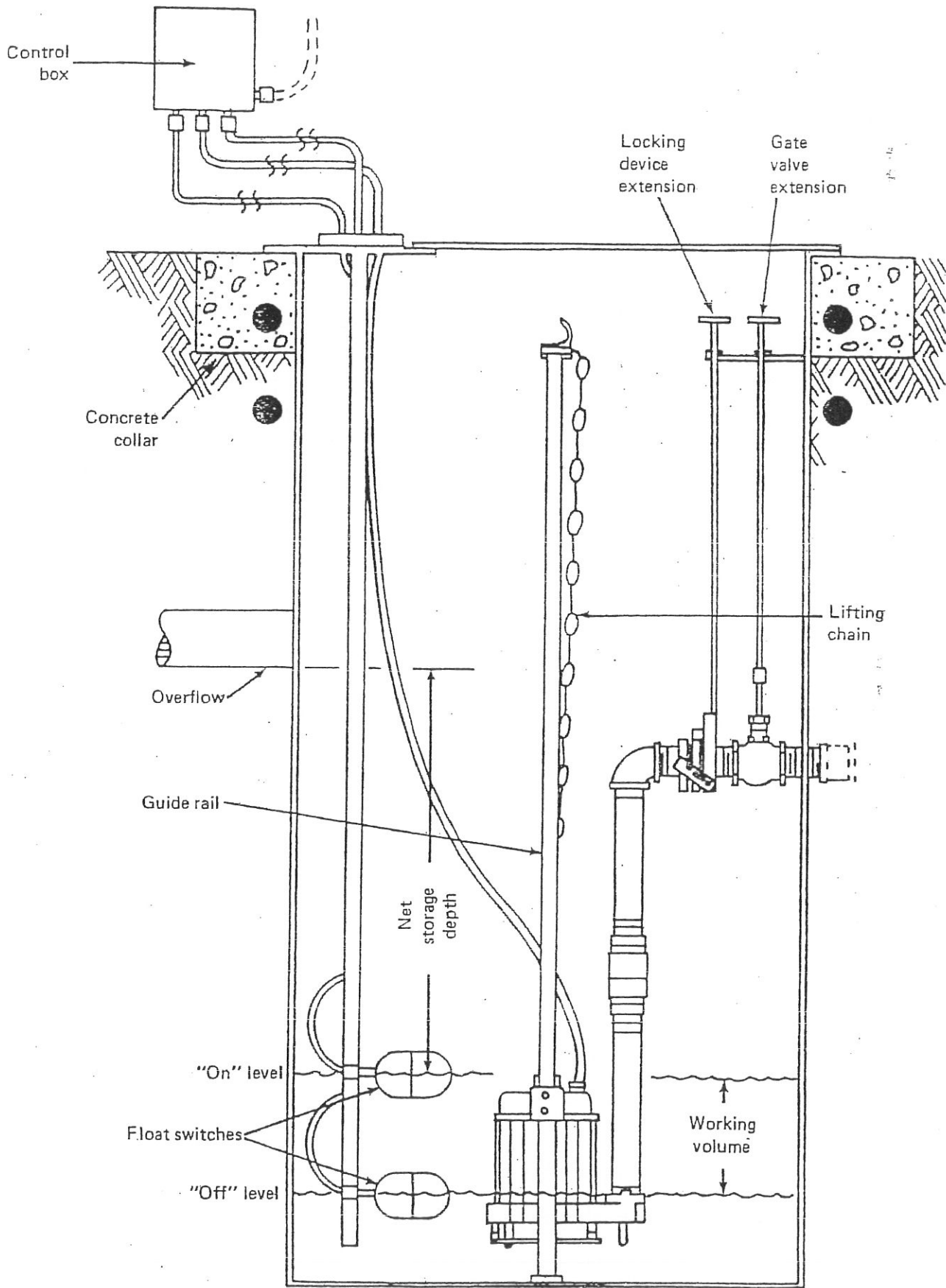
In the GP system, sewage flows by gravity from the house to a pumping well somewhere on the property. The well typically has a working volume of 10 to 30 gallons. The pump is operated by level controls. When the working volume is full, the pump is activated and macerates the solids and pumps them into a completely pressurized collection system. Since the solids are ground up, the pipes are in no danger of clogging, and so minimum diameters as small as 1 1/4" are used. Minimum velocities of approximately 2fps to prevent solids deposition are generally recommended. The pumps operate only about 10-30 minutes per day, and several studies have shown that their power usage is comparable to an electric coffee maker. (WPCF, 1986). See Fig.1,2 & 3



Typical pressure sewer layout.

Fig. 1





Typical effluent pump chamber.

Fig.2

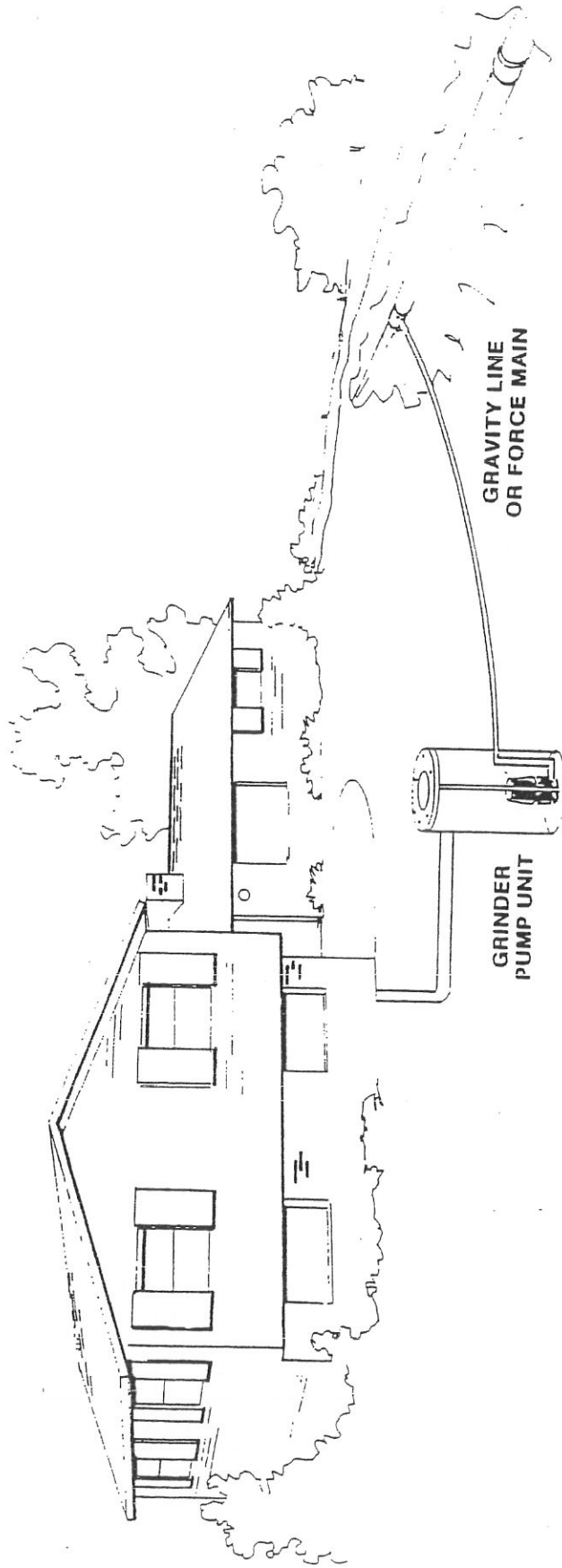


Fig. 3

### **SEPTIC TANK EFFLUENT PUMP SEWERS (STEP)**

In the STEP system, sewage flows into a septic tank at each facility where solids settle and grease and scum float. The effluent from the septic tank is relatively free of solids and grease. A small, corrosion-resistant pump pumps the effluent into a completely pressurized collection system. The pump vault can be an integral part of the septic tank or separate wet well. Level controls typically provide a working volume of 10-50 gallons. Minimum velocities are not highly important in the STEP sewers because the septic tank effluent is so low in solids and grease; however, a minimum velocity of 1 fps is recommended. Diameters as small as 1 1/4" can be used. All materials in contact with the septic tank effluent must be corrosion-resistant. See Fig. 4,5 & 6

### **VACUUM SEWERS (VS)**

In the V S system sewage is collected by gravity from the house to a "buffer volume", which may be either a length of gravity sewer line or a sump pit. When a critical volume of sewage typically 3-10 gallons has accumulated, a vacuum interface valve automatically opens. The pneumatically operated vacuum interface valve separates the gravity service line (at atmospheric pressure) from the vacuum collection system, which is maintained at sub-atmospheric pressure by vacuum pumps at a centralized collection station. When the valve opens, the difference between atmospheric pressure behind the partial vacuum ahead, sucks the sewage into the mains at about 15fps, disintegrating sewage solids. As valves successfully open, the sewage is pushed towards the central

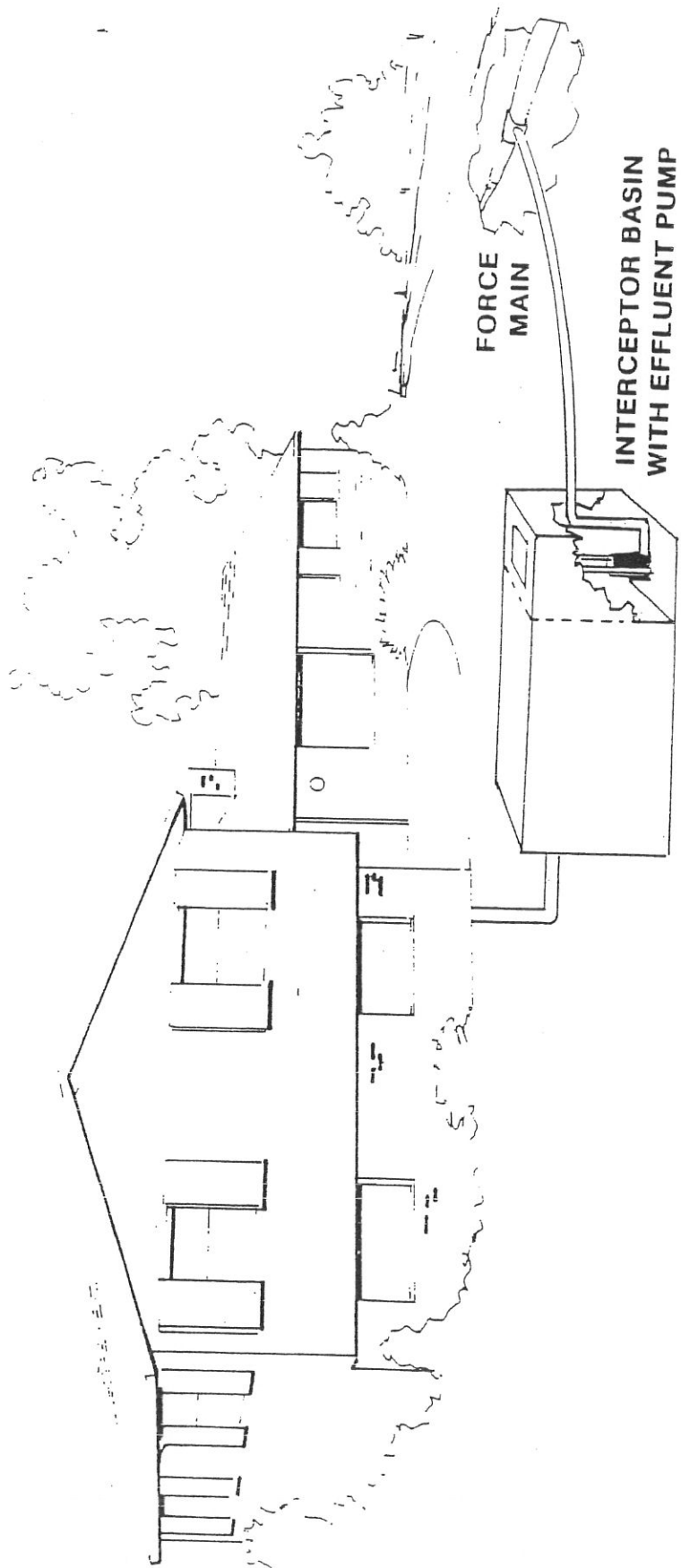


Fig. 4

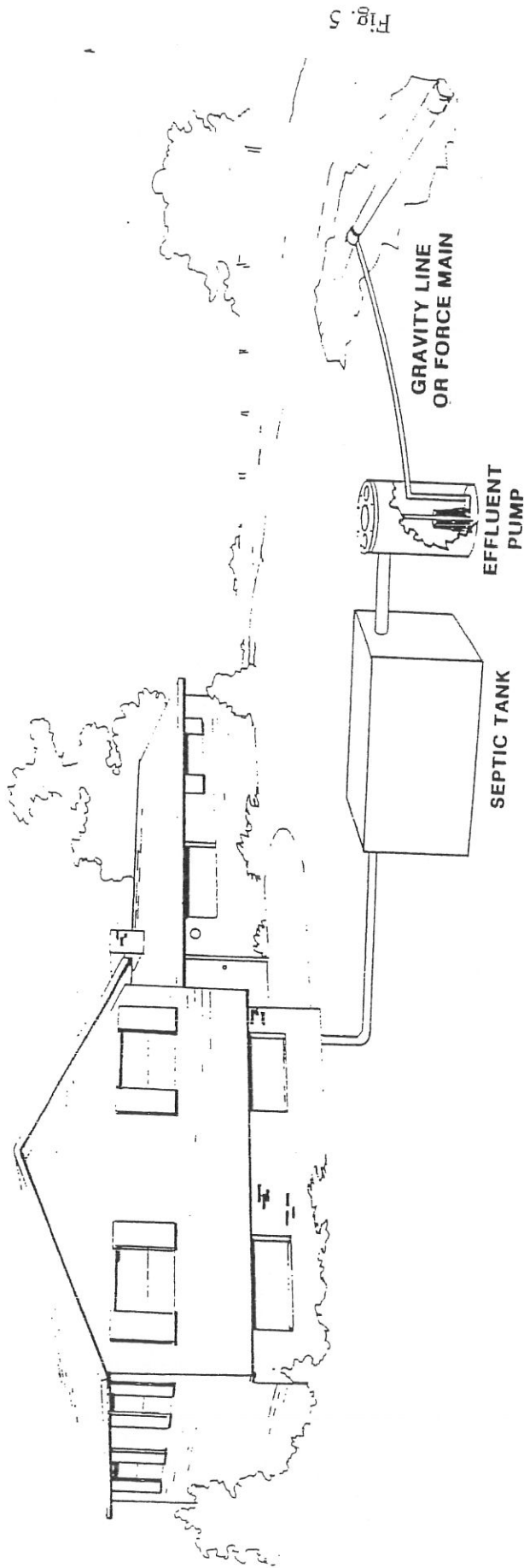


Fig. 5

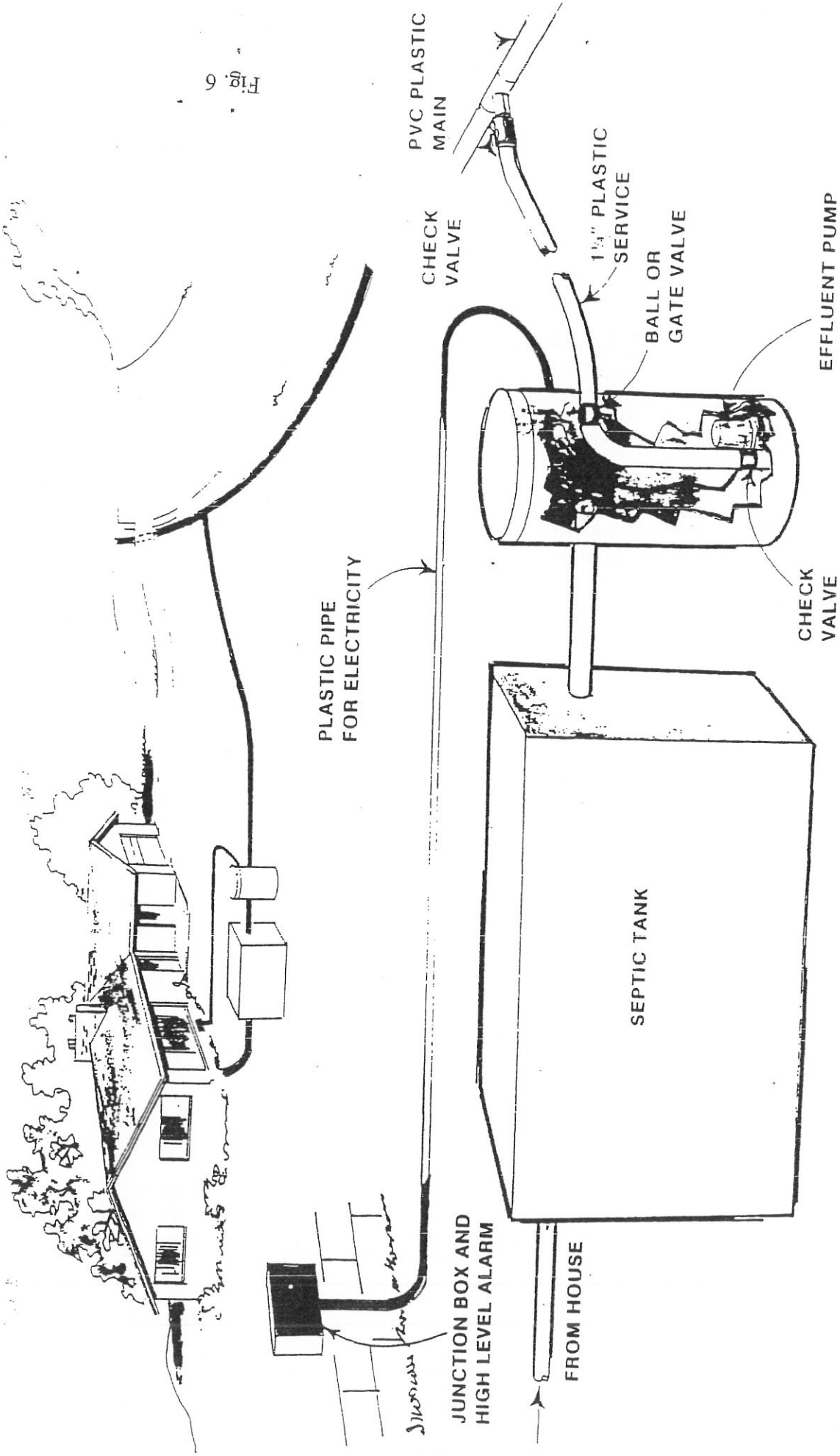


Fig. 6

TYPICAL "STEP" PRESSURE SEWER SYSTEM SCHEMATIC

collection station by in rushing air. The valves stay open for a pre-set time typically 6 seconds. Vacuum sewers are capable of limited uphill transport. See Fig. 7 & 8

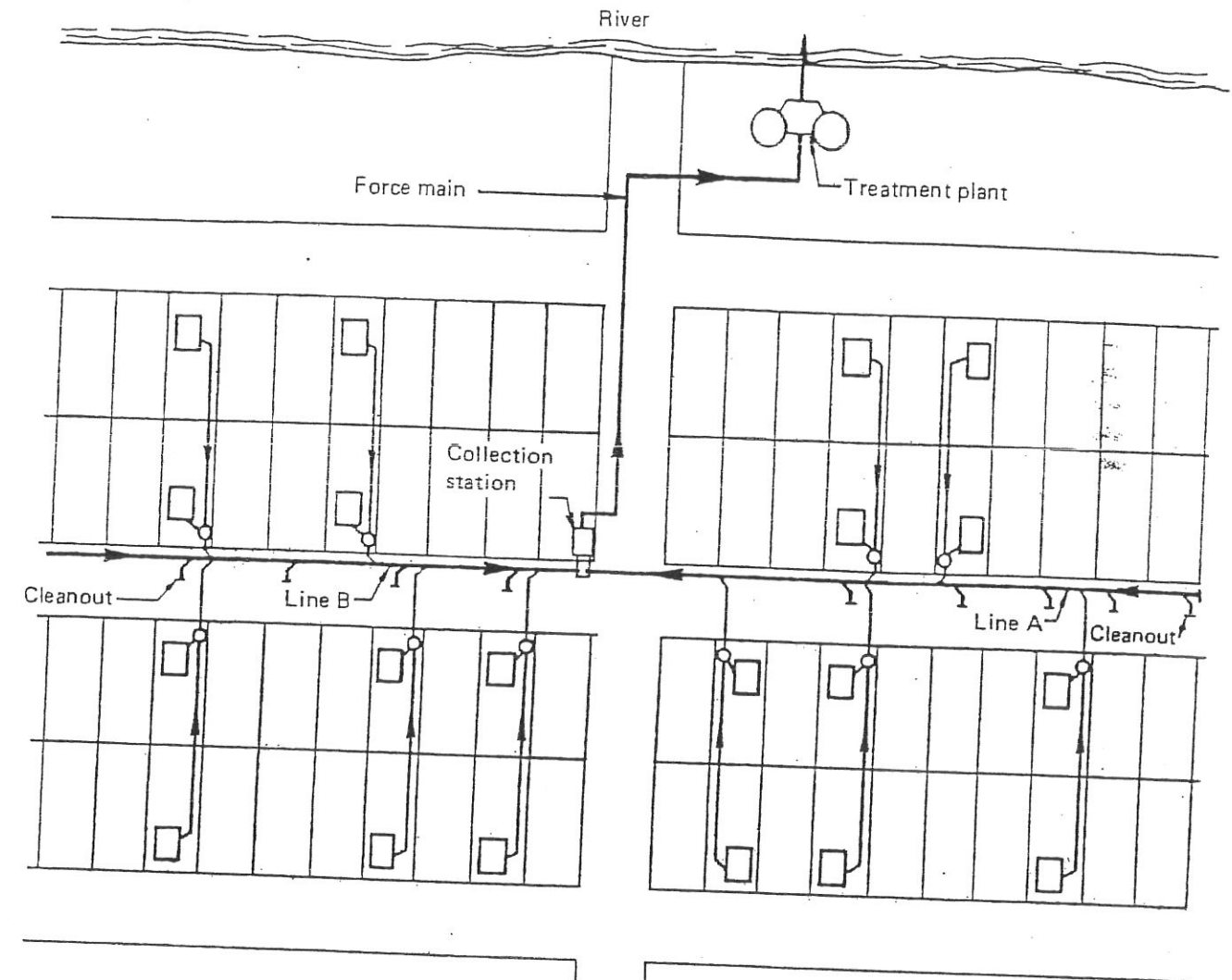
Of the above CS, GP and STEP are applicable to WHB and will be further evaluated.

### **GENERAL ADVANTAGES**

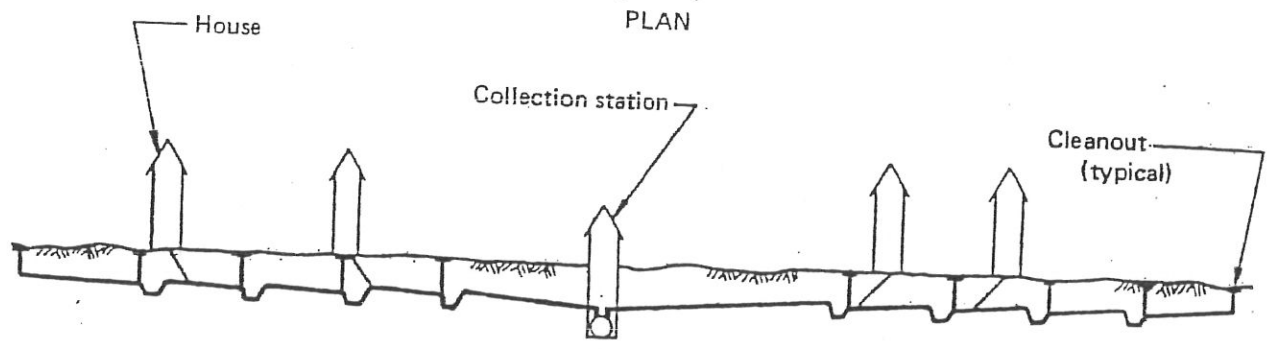
The major advantages of Pressure sewer systems in comparison to gravity are the capability to pump uphill through small plastic pipes and virtually eliminate infiltration.

Other advantages of pressure sewer systems are as follows:

1. Eliminates lift stations
2. Minimizes community disturbances. (There would be no need to disturb Main Street. The pressure lines could be located in the back of existing buildings).
3. Reduces the size of treatment plant when using the septic tank to initially collect solids and grease.
4. A lower front- end investment.
5. Treatment is more cost effective when using the existing septic tank leaching pool system in close proximity of the collection area which will eliminate shoring and bracing.
6. Flexibility in site layout.
7. Narrow and shallow trenches.
8. Minimum labor and equipment.
9. Right-of-way flexibility.



PLAN

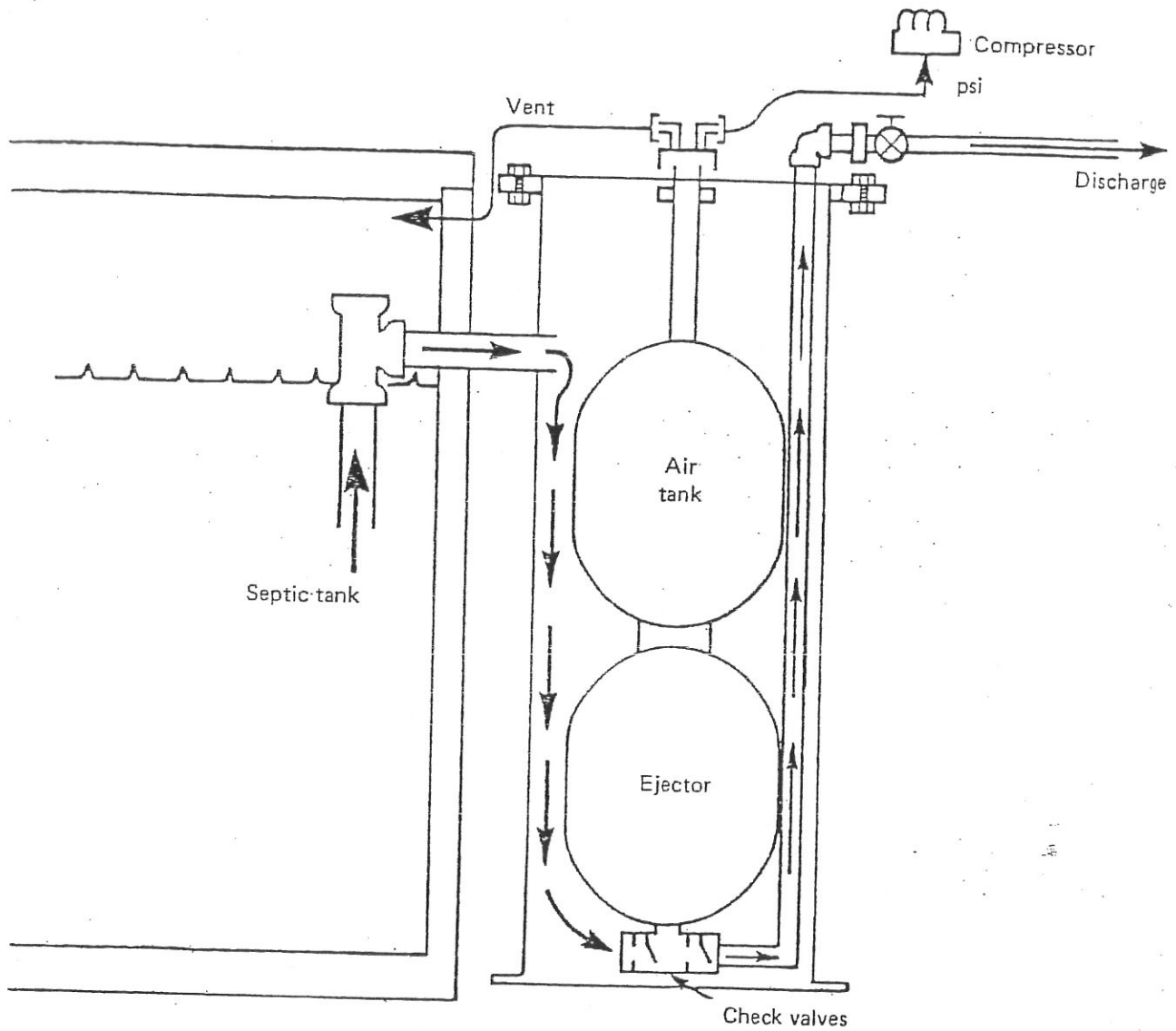


CROSS SECTION

Typical layout—vacuum sewer system.

Fig.7





Pneumatic ejector (courtesy of Clow Corporation).

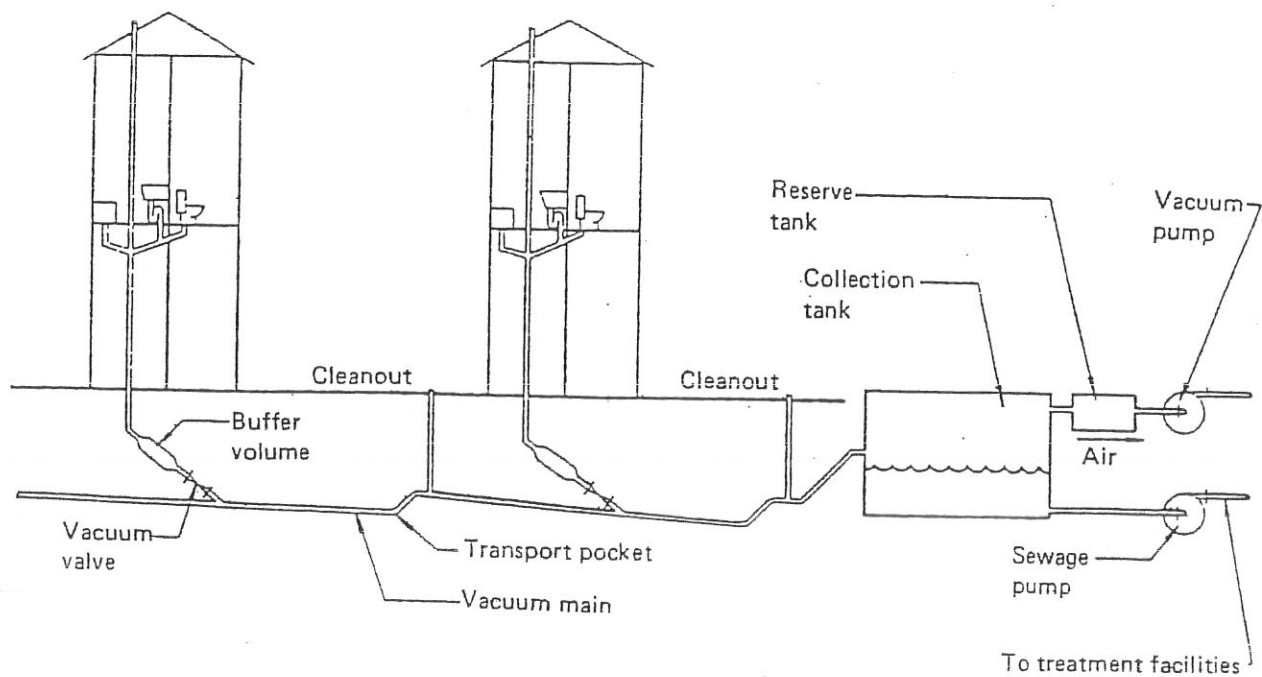


Fig. 8 AIRVAC vacuum sewage collection system.

In reviewing pressure sewer systems, a choice has to be made between grinder or effluent pumps. As with most different types of equipment there are advantages and disadvantages to both. Some of the advantages of effluent pumping in comparison to grinder are as follows:

1. Grease-Since approximately 90% of the grease remains in the septic tank, there is little concern that the grease will create problems with the pumping system or build up within the service lines or force mains. This, of course, depends on proper sizing and routine maintenance of the septic tank.
2. Storage- Usually a grinder pump basin has no more than 6 hours of storage capacity in case of a pump or power failure. Since the effluent pump has storage in the pump basin as well as storage in the free board area of the septic tank, an effluent pumping system normally would have a greater storage capacity.
3. Scouring Velocity- Grinder pump pressure systems are usually designed on 2 –5 fps scouring velocity. This is based on the major concern of the settling of heavy solids and grease build-up in the service line and force main. As previously stated, since upward of 90% of the grease remains in the septic tank, one could reduce the minimum scouring velocity required for an effluent pressure system. With the reduction in the required velocity, friction losses through the service line and forced main are less, which would allow more pumps to be paralleled into one common force main. This can have an effect on overall cost as well as reducing maintenance requirements.
4. Capital Cost- the cost of effluent pump versus a grinder pump will depend on force power. The standard centrifugal grinder pump generally recommended for

pressure sewer system has a 2 horse power motor and a shut-off head of around 100ft. Smaller horse-power centrifugal pumps with lower heads and capacities are not recommended due to torque requirements needed to operate grinder mechanisms. In a case of effluent pressure sewer systems, you can have choices of from .3 hp to 2hp.

5. Operation and Maintenance- The most significant advantage of effluent pumps over grinder pumps is the long-term maintenance cost. It is projected that submersible centrifugal pumps used in effluent pressure sewer systems should last from 10 to 15 years before a major overhaul is required. On the other hand, grinder pumps are designed to grind and pump as one unit. This puts a heavier load on the motor, seals, bearings, and pumping shaft, which can shorten the life of the pump in comparison to the work load required on the effluent pump pumping fairly clear liquid.

#### Disadvantages of Effluent Pumps over Grinder Pumps:

1. Septage- The major disadvantage of using effluent pumps is that the septage (grease and sludge) must be eventually pumped out of the septic tank. Since an anaerobic septic tank generates methane, the venting system must be adequate to dispose of gasses that are generated. Generally, the standard house plumbing venting system used with the current onsite disposal system will perform this function.

2. Odor- Septic tank effluents can create odors due to hydrogen sulfide generated from the anaerobic action of the septic tank. Therefore care should be taken to ensure the lid to the effluent pump chamber is airtight.
3. Corrosion- Since septic tank can be more corrosive than fresh sewage; it is recommended that materials making up the pump system be non-corrosive when possible.

## **APPLICATION**

### **CONVENTIONAL SEWER SYSTEM**

The Conventional Sewer System (CS) in order to maintain a minimum velocity of 2fps can be constructed along Main Street sloping from Potunk Lane and Library Avenue towards Sunset, as shown in Drawing A.

Most of the buildings along Main Street currently discharge sanitary wastes to the rear of their building to septic tank and leaching pool systems. By providing a gravity sewer line along Main Street, the discharge of the soil line from these buildings will have to be re-directed towards the front, and the main sewer line will have to be deep enough to accommodate the invert elevation of these lines. Since ground water is close to the surface, a good portion of Main Street gravity sewer will be in ground water, which would add to the construction cost.

A pump station located north of Main Street in the vicinity of Sunset, would then direct sewage via a force main to an existing sewage treatment plant at Gabreski Airport. This plant is currently operated by the Suffolk County Department of Public works. It has been estimated that approximately 1980 feet of 8" gravity sewer line would be required

with at least 8 manholes. In addition a pumping station with approximately 12,600' of force main is needed in order to reach the existing sewage treatment plant. Force main would be crossing major roads, including the LIRR.

In discussions with the Suffolk County Department of Public Works, the sewage treatment plant at Gabreski Airport is currently not operating at full capacity and could very well accommodate additional flow from the Village. The normal charge for initial connection to a Sewage Treatment Plant by the Suffolk County Department of Public Works is \$15.00 per gallon. It should be noted however, that the excess capacity of this plant has already been committed to future development at the airport. The estimated cost for operation and maintenance of the Sewage Treatment Plant is approximately \$400.00 a year per service.

#### **TRANSFER OF DEVELOPMENT RIGHTS**

In order to provide for greater flexibility of building use in the downtown area and to address sewage disposal problems, such as overflowing systems, excess pumping, environmental concerns, etc. public sewers or transfer of development rights with community septic tank and leaching pools should be considered.

Article VI of the Suffolk County Department of Health Service (SCDHS) standards includes provisions to permit the use of Transfer of Development Rights (TDR) that comply with special criteria. These criteria can be found in SCDHS standards "TRANSFER OF DEVELOPMENT RIGHTS."

In brief, some of these criteria have a direct bearing on the Village. First the Village is located in Ground Water Management Zone IV where 600gpd per acre can be transferred. The second criteria, which has a major impact, is that the maximum

allowable sanitary discharge at a site to be developed (receiving area) must be limited to no more than two times Article VI limits (i.e. a one acre parcel with existing 600gpd sanitary flow would be allowed to receive and additional transfer of 600gpd flow for a total of 1,200 gpd per acre).

The current use by businesses on the north and south sides of Main Street as reflected in the Certificate of Occupancy (CO) in almost every case exceeds the sanitary density flow as prescribed in the SCDHS standards. Any addition or increase to the sanitary flow of these buildings would be prohibited by County standards unless public sewers were available or using the TDR's as prescribed in the standards.

The total acreage of occupied businesses on the north side of Main Street is approximately 10.2 acres along with an estimated flow of 15,000gpd whereas the south side of Main Street has 15.7 acres with 13,000 gpd flow based on current village CO information and SCDHS standards. (Appendix 2)

In addition, 10.2 adjacent acres are owned by the Village (such as the 6.2 acres formerly St. Mark's, Village Green, parking etc. Drawing B). This gives a total of 36.1 acres with an estimated 28,000gpd in the downtown area.

In compiling an inventory of the Village owned open space, which will not be developed, over 60 acres have been identified. (Appendices 1,3) By transferring the development rights of 36 of these acres to the Main Street area and using the 600gpd per acre criteria, less the estimated downtown sewage flow of 28,000gpd, this would leave 15,000gpd which could be applied to those businesses which require expansion.

## PRESSURE SEWER SYSTEM

The use of Pressure Sewer Systems, Drawing C, provides for two collection systems.

System A which would handle the south side of Main Street and part of the northwest side with its effluent being handled by a septic tank leaching pool system located on the 6 acre site on the southwest side of Main Street.

System B would handle the northeast side of Main Street with disposal to a septic tank leaching pool system located on the northwest parking lot. System A has approximately 2,100' of force main located in back of the buildings to be served. Taking advantage of the current soil line direction from existing septic tanks. System B has approximately 830' of force main also located in the back of buildings to be served. It is anticipated that the majority of the buildings to be served can be accommodated by effluent system pumps (STEP) with a minimum use of grinder pumps (GP).

There are 3 general solutions that might be applied for the treatment of sewage

1. Gabreski airport sewage treatment plant.
2. A local treatment system such as a chromoglass system located on the southwest end of Main Street.
3. A septic tank and leaching pool system located to various Village owned lands within proximity to Main Street as part of a transfer of development rights.

The sewage collection systems for 1,2 or 3 can be broken down into 3 major types:

1. Gravity Collection Systems
2. Vacuum Collection Systems
3. Pressurized Collection Systems

## COST

The costs where possible are a reflection of comparative figures from other projects of similar size. The goal is to select and compare the least cost mix of technologies available.

### 1. Gravity Sewer Collection System

Gravity Sewer Collection for the business district with a Pump Station to the existing Gabreski airport Sewage Treatment Plant.

1,980 ft of 8" sewer lines @ \$200,000.

Pump station 15-40 thousand gpd ± \$230,000

12,600 ft of force main \$630,000

SCDPW tapping fee for 30,000 gal. \$450,000

Estimated annual O&M ± \$400 per service.

Note 1: The STP currently has excess capacity and could accommodate near future connection from the Village. This excess capacity however, has already been committed to future expansion at the airport. When and if this occurs, the village may incur additional costs to accommodate expansion to the STP.

2: The abandonment of the existing septic tank and leaching pools, meeting SCDHS standards will be required. In many cases, the soil line from the buildings will need to be re-routed in order to tap into the gravity line.

The estimated cost per connection has been placed at \$1,000 to \$5,000.



## 2. Pressure Collection System

Small diameter sewer lines located on the north and the south side of the existing buildings along Main Street with one system moving west with approximately 2,100 ft of pressure line and a second system moving to the east with 830 ft of line. Estimated cost \$88,000

O&M cost per service \$600

Septic tank and leaching pool system for the westerly system \$75,000 and for the easterly system \$50,000 for a total of  $\pm$ \$125,000

O&M for maintaining the septic tank and leaching pool system is \$100.00 per service

Note: The existing septic tank and/or leaching pool will require modification to accommodate effluent pumps/grinder pumps with an estimated cost of \$2,000 to \$5,000.

## 3. Vacuum Collection System

The estimated cost of the vacuum collection system has been placed at 25% less than conventional collection, equaling \$150,000.

O&M cost per service is \$500

Note 1: The modification of the septic tank and leaching pool system to accommodate a vacuum system has been placed at \$1,000 to \$4,000 per service.

2: The treatment system will be similar to the above note under pressure sewers.

As a substitute to conventional septic tank and leaching pool systems, the use of sewage treatment plants of 15,000 gallons or less were considered. At least 3 plants

would be required, each with an approximate cost of \$500,000 and an O&M cost of \$500 per service.(There should be at least 14' to ground water at STP location)

When comparing the above costs, the use of a Pressure Sewer in combination with a new septic tank leaching pool system is the most cost effective.

TABLE OF COST OF SEWAGE COLLECTION AND TREATMENT SYSTEMS

	GRAVITY	PRESSURE	VACUUM	O & M COST/PRESSURE PER YEAR
MAIN STREET VILLAGE SHOPPING (PIPES)	± \$200,000	\$88,000	\$150,000 plus pumping station to septic tank	
PUMPING STATION TO STP + FORCE MAIN	\$860,000 with a generator			\$100
STP (GABRESKI)		± \$450,000 for hook-up		\$400
SEPTIC TANK AND LEACHING POOLS	\$125,000	\$125,000	\$125,000	\$40
MODIFICATION OF EXISTING SEPTIC TANK AND LEACHING SYSTEM	\$1,000 to \$5,000 per service	\$2,000 to \$5,000 per service	\$1,000 to \$4,000 per service	
ANNUAL O & M COST PER SERVICE	\$100	\$600	\$500	

NOTES:

1. Small STP of 15,000 gallons or less estimated cost ± \$450,000. (ground water should be a minimum of 14 ft. below grade.)
2. The future flow of the STP at Gabreski has been committed to the Air National Guard.
3. A 30,000 gallon STP estimated cost at \$1,400,000.

THE VILLAGE OF WESTHAMPTON BEACH  
PROJECTED SEWAGE REQUIREMENTS

DRAFT

VILLAGE OF WESTHAMPTON BEACH  
VILLAGE BOARD

July 2005

Prepared by Aldo Andreoli, PE

## Introduction

The Inc. Village of Westhampton Beach has initiated a project to revitalize the downtown area of the village by studying the benefits and impacts that central sewage collection, conveyance, and treatment will provide in terms of bringing new business to the village and keeping young families on Long Island.

The downtown area of the village is served by individual on-site septic systems. The systems, due to the presence of a high groundwater table, can not handle additional flow therefore limiting the use of the building to a dry type establishment. Redevelopment has become stagnant due to the types of uses that can be undertaken within the downtown area.

Work force housing is an initiative that the village shares with Suffolk County. For affordable housing to be constructed land developers must maximize building yield. The cost of wastewater treatment and the land that would be dedicated to plant construction for a new facility hinders the project's viability making it increasingly difficult to construct work force housing. The Board has a concern shared by many Long Islanders; that future generations will not be able to live on Long Island due to the high cost of housing and utilities and steps must now be taken to help make housing affordable for them.

Suffolk County is in the process of creating a sewer district for the area tributary to the Gabreski Airport wastewater treatment facility. The process is expected to be completed around January 2006. In order for the project to move forward Pine Barrens Commission approval and SEQRA requirements must be achieved. Consequently, the first phase of the project is to prepare the Conceptual Plan for Sewer Services that can be presented to both the Pine Barrens Commission and the Suffolk County Sewer Agency for presentation, consideration, and support.

The village has established the following phased approach to studying the feasibility of undertaking this project:

- Phase IA – Conceptual Plan for Sewer Services
- Phase IB – Pine Barrens Approval / Suffolk County Sewer Agency Application
- Phase IC – SEQRA Environmental Assessment Form and Cost Analysis Report
- Phase IIA – Facility Plan for the Expansion of the Gabreski Airport Wastewater Treatment Plant
- Phase IIB – Engineering Design Report for the Formation of the Westhampton Beach Sewer District (Sanitary Sewers and Conveyance Network)

Phases IA and IB have already been started and is being funded by the village. The remaining phases are contingent on achieving approval from the Pine Barrens Commission to expand the Gabreski Airport wastewater treatment plant.

Also, the standards that govern the design and construction of sewage treatment plants in New York State are commonly referred to as "The Ten State Standards". Chapter 10 therein requires the submission of the Facility Plan (a.k.a. Engineering Report) to the New York State Department of Environmental Conservation (NYSDEC) and the Suffolk County Department of Health Services (SCDHS) for approval.

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## I. Proposal

The proposed Comprehensive Plan update of 2005 for the Village of Westhampton Beach has a number of recommendations for affordable or "work force housing" and residential districts. The report also includes the desires for a creation of a strong downtown business district with greater flexibility and the ability to mix business activities along with possible apartments and office space.

This report intends to review the land use changes and modifications to zoning and to estimate the amount of sewage which might be generated as a result of these modifications. This report will identify those areas and project which will require collection and treatment of sewage.

Although none of the Village is within the Suffolk County Sewer District boundary, adjacent to the Village there is an existing sewage treatment plant at Gabreski Airport. This sewage treatment plant does have capacity at present, but overall plans are not certain and available capacity will have to be negotiated. Therefore this report will also attempt to project the possible sewage requirements to meet what the Village envisions as a result of the proposed changes in its Comprehensive Plan.

## II. Overview

The Village, primarily is developed with residential homes served with septic tank leaching pool systems. Under Suffolk County Department of Health Service standards, individual homes on acre lots and having public water could continually be served with on site disposal systems. However, if density is increased, provisions have to be made to treat the waste that will be



generated

There are areas north of Montauk Highway which potentially could develop as multi family, senior citizen, condominiums, accessory apartments and work force housing. These types of uses would, by their nature, require treatment of the waste generated under County standards. The following is a table reflecting the possible zoning changes and the accompanying sewage flow.

<u>Zoning</u>	<u>Acres</u>	<u>Units/acre</u>	<u>Flow GPD</u>
L-1 (Industrial) to Multi-Family Housing	19	6 @300GPD/U	34,200
HD (Hotel District) to Senior Housing	24	8 @150GPD/U	28,800
R-2 (Residential) to Two Family Housing	7	4 @300GPD/U	8,400
R-2 (Residential) to Work Force Housing	20	6 @300GPD/U	42,000
Total Projected Flow North of Montauk Highway			113,400

The use of the existing on site sub-surface septic tanks and leaching pools have been successful for the most part, with the exception of the lower downtown area due to high ground water.

These conditions are further exacerbated because of the limited space for the installation and expansion of the sanitary systems.

The downtown area currently has some ten wet use facilities with an average sanitary discharge of approximately 2,500 gallons each, creating an immediate flow potential of 25,000 gallons.

Assuming there will be additional demands as sewage collection and treatment become available,

we can expect expansion to take place. This may be in the form of excess apartments, increase restaurant seating, and other wet uses. With time, one can expect an additional 20,000 gallon demand, giving a total of 45,000 gallons. When this is added to the anticipated flow from the northern part of the Village the total flow will be approximately 160,000 GPD.

### III. Discussion

The projected flow of 160,000 GPD from various projects within the Village will undoubtedly be developed over the next few years. It is anticipated that the first areas to generate flow will be from parcels north of Montauk Highway in particular L-1 (Industrial) and HD(Hotel District) which may be re-zoned to multi-family housing in order to accommodate senior and work force housing. Since the Village has expressed strong support for senior and work force housing, changes in zoning to accommodate six to eight units per acre development is possible in the near future under the following minimum conditions:

1. That a given project receives permission from the Village for multiple family units providing that affordable (Work Force Housing) is part of the mix.
2. Application for a Sewer Agency contract agreement/ the creation of a sewer district will first be approved by the Village in order to judge it to be consistent with the Village's overall goals.
3. That the proposed project meets with the approval of the Village, Department of Public Works/Sewer Agency and the Suffolk County Department of Health Services for connection to the Gabreski Airport sewage treatment plant.

It is anticipated that these first projects will contribute 40,000 to 70,000 GPD. The sewage collection system will be by gravity to a central lift or pumping station eventually discharging to Gabreski Airport sewage treatment plant.

The next phase would be the creation of a Village District for the downtown business area. The high ground water and current conditions lend to a grinder pump pressure sewer collection system. ( See Village of Westhampton Beach Main Street Sewer Study Report) The pressurized sewer collection system can systematically be expanded to serve this District with a minimum of disturbance to the community. It is estimated that eventually as much as 30,000 GPD will be generated from this District. The sewage collected would be pumped to Gabreski Airport sewage treatment plant or one of the previously developed projects on the north section of the Village.

## REFERENCES

- I Andreoli, Aldo, PE , Village of Westhampton Beach Main Street Sewer Study
- II. Emilita, David J.S.AICP , Draft: Village of Westhampton Beach Comprehensive Plan Update of 2005
- III. Suffolk County Health Department, Standards For Approval Of Plans And Construction For Sewage Disposal Systems For Other Than Single Family Residences

## APPENDIX

- A Westhampton Beach Land Use
- B. Westhampton Beach Zoning