



December 18, 2020

Cilvan Realty, LLC
44 Three Mile Harbor Road
East Hampton, NY 11937

**Re: Engineering Report for Sanitary System Evaluation
44 Three Mile Harbor Road
East Hampton, NY 11937**

Dear Mr. Cilione:

P.W. Grosser Consulting (PWGC) conducted an evaluation of the mentioned site with regard to the previous submitted food permits. The evaluation sought to verify the grandfathered flow. Based upon the prior Suffolk County Department of Health Services (SCDHS) approvals, in order to determine the extent of the proposed re-development of the property utilizing the following documents:

- Records from Suffolk County Health Service Freedom of Information Law (FOIL)

Existing Conditions

The site is located at 44 Three Mile Harbor Road in East Hampton, Suffolk County, New York. The property is approximately 0.80 acres in size and is currently developed with a single building with one tenant spaces. The tenant is a restaurant with club and patio called The 324.

The subject property is located in Ground Water Management Zone V (5), which has an allowable density sewage flow rate of 300 gallons per day per acre (gpd/acre). Utilizing the gross land area of 0.80 acres, the permitted sanitary flow would be 240 gallons per day (gpd) ($0.80 \text{ acres} \times 300 \text{ gpd/acre} = 240 \text{ gpd}$).

Previous Approved Sewage Flow (Grandfathered Flow)

According to the record information by SCDHS Office of Wastewater Management, the site was previously approved under reference number C03-88-0012. This approval indicated a restaurant capacity of 50 seats and a disco capacity of 100 occupants. This equates to a sanitary flow of 1,500 gpd ($150 \text{ occupants/seats} \times 10 \text{ gpd/seat} = 1,500 \text{ gpd}$). To determine if the property had a more intense use, PWGC has filled a FOIL with the SCDHS Food Unit. That FOIL revealed that a permit had been issued by the Food unit on June 7th, 1994 for a food establishment with a maximum occupancy of 360. Thus the sanitary flow for this property would equate to 3,600 gallons per day (Table 1).



Table 1 – SCDHS 1994 Approved Design Flow Calculations - Based Upon Information Provided

Tenant	Area (sq.ft.)/ Seats /Units	Sanitary Flow Rate (Gals./Day/sq.ft.)/ (Seats) / Unit	Sanitary Flow (Gals./Day)
Restaurant	360	10	3,600
		TOTAL	3,600

* Maximum Occupancy Permitted on the site.

Proposed Sewage Design Flow

PWGC understands that the proposed redevelopment consists of a wet retail (market) space on the first floor with medical or non-medical office and affordable housing on the second floor. Based upon these proposed uses the sanitary flow was calculated in accordance with the SCDHS Office of Wastewater Management latest standards, as shown below in Table 2.

Table 2 – Design Flow Calculations as per Latest SCDHS Standards- Based Upon Information Provided

BUILDING USE	AREA (sf)	REQUIR. SANITARY LOAD (gpd per seat/sf/unit)	SANITARY FLOW (gpd)	REQUIR. KITCHEN LOAD (gpd per seat/sf)	KITCHEN FLOW (gpd)	HYDRAULIC FLOW
Wet Retail	6,046	0.03	181.38	0.07	423.22	604.60
Medical office	2,651	0.10	265.10	-	-	265.10
Apartments	1,466 (2 units)	300.00	600.00	-	-	600.00
TOTAL SANITARY FLOW:			1,046.48	TOTAL KITCHEN FLOW:	700.00	1,469.70

Based upon the above calculations the proposed sanitary flow is 1,046.48 gpd, which is less than the proposed grandfathered flow of 3,600 gpd. If possible the number of affordable housing units or the use on the first floor could be changed as long as the sanitary flow from the proposed development stays under the 3,600 gpd established by the proposed grandfathered flow.



Proposed Sanitary System

As part of the redevelopment of the property within the grandfathered flows, the existing sewage disposal systems will need to be evaluated to determine if they meet current SCDHS standards. Given the age of the development and the proposed increase in use, it may be necessary to upgrade and/or replace portions of the existing sewage disposal systems. Currently the exiting sanitary system consists of the following:

Table 3 – Existing Sanitary Flow- Based Upon Information Provided

Sanitary System	Required as per the current flows	Existing System	Required Additional Upgrade
Grease Trap (Restaurant)	432.22 gpd x 1-day flow = 432.22 gal.	*Estimated One (1) 10' dia. X 5' Liquid Depth = 2,500 gal.	N/A
Fuji	1,469.70 gpd	Two (2) 10' dia. X 6' Liquid Depth = 6,000 gal.	Removal of Septic. Installation of Two (1) Fuji CEN 21 = 1,900 gal.
Leaching Pools (Restaurant)	1,469.70 gpd / 1.5 gpd/sq.ft. = 979.80 sq.ft.	*Estimated Nine (9) 10' dia. X 7.5' Effective Depth = 2,119.5 sq.ft.	N/A

Based upon the calculations in table 2, the proposed sanitary system would consist of the following items. The proposed sanitary system would consist of one (1) 10' Ø x 5' liquid depth grease trap, two (2) manholes, one (1) fuji CEN 21 and nine (9) leaching pools. Given the location of the existing sanitary system and location of the proposed building it may be possible to reuse items such as the grease trap and some of the existing leaching pools. However, the reuse of the structures will be better determined during the design phase of the project.

A preliminary cost estimate for the replace of the entire sanitary system is shown in Table 4 below:



Table 4 – Approximate Design Flow Cost

Wastewater Treatment System						
Item	Units	# of feet / units	Cost per foot/unit	Unit Cost	Labor Cost	Total Cost
Grease Trap	GAL.	2500	\$1.00	\$2,500.00	\$2,500.00	\$5,000.00
Manhole	EA.	2	\$2,000.00	\$4,000.00	\$4,000.00	\$8,000.00
Fuji Clean CEN21 Treatment Unit	EA.	1	\$27,500.00	\$27,50.00	\$27,500.00	\$55,000.00
Leaching Pools	EA.	9	\$1,250.00	\$11,250.00	\$11,250.00	\$22,500.00
Sewer Piping	L.F.	200	\$2.50	500	1000	1,500
Electric	L.F.	50	\$25.00	1250	3750	5,000
Site Restoration	SQ.FT	1500	\$0.20	300	300	600
Asphalt Restoration	SQ.FT	0	\$6.00	0	0	0
Abandon Existing System*	EA.	12	\$3,500.00	0	42,000	42,000
Totals				\$50,300.00	\$92,300.00	\$139,600.00
Total w/ 15% Contingency				\$57,845.00	\$106,145.00	\$160,540.00

Summary

In summary, the site will be eligible for a substantial grandfathered flow, based upon the current permits and historic records. If the grandfathered flow is exceeded the proposed redevelopment would be require variance. If the proposed redevelopment plans keep the sanitary flow below the grandfathered flow it appears that the use of an I/A OWTS would be required rather than the use of conventional subsurface sewage disposal systems, such as the ones that are currently in place.

Please feel free to contact me if you have any questions or wish to discuss this further.

Sincerely Yours,
P.W. Grosser Consulting

Bryan Grogan, PE
Vice President