Rochester, Jacqueline

Subject:FW: WPCa 3-14-24 meetingAttachments:2024_02-16 WPCA APP 64 DBR.pdf; Civil Plans.pdf

From: Erik Lindquist <<u>ELindquist@tighebond.com</u>>
Sent: Friday, February 16, 2024 10:08 AM
To: Smeriglio, Frank <<u>Frank.Smeriglio@WILTONCT.ORG</u>>
Cc: Lisa Feinberg <<u>LFeinberg@carmodylaw.com</u>>; Henry Conroy <<u>Henry@spinrep.com</u>>; Samuel Fuller
<<u>sbfuller@fullerdevelopmentllc.com</u>>
Subject: 64 Danbury Road

CAREFUL - From outside - CHECK before you CLICK.

Hi Frank,

I am attaching a letter requesting approval from the WPCA for a sewer connection for the proposed residential development at 64 Danbury Road currently under review by P&Z. Included with this letter are the associated plan sheets and details for the sewer design. I will be sending 3 hard copies of this information in the overnight this evening for Monday delivery as well. Please advise should you have any questions or need anything further from me for this application.

Thank you as always for your help with this.

Regards,

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15-0173-001 February 16, 2024

Frank Smeriglio Director of Public Works Town of Wilton 238 Danbury Road Wilton, CT 06897

Re: 64 Danbury Road Application to the WPCA

Dear Mr. Smeriglio:

I am pleased to provide you with 3 copies of plans and details for the design of the sanitary sewer service connection for 64 Danbury Road. The sanitary sewer service being proposed would connect to an existing manhole in Danbury Road immediately in front of the site. Currently the 64 Danbury Road property maintains a 43,605 square-foot office building that discharges to the municipal sewer main. As part of the proposed development plan the owner is applying to demolish the office building and replace it with 93 residential units consisting of 31 (1-bedroom) and 62 (2-bedroom) units (155 total bedrooms). Based on an estimated effluent load of 150 gallons per day (gpd) per bedroom, and a peaking factor of 4, we anticipate an average daily flow of 23,250 GPD and a peak flow of 65 GPM (0.144 CFS).

The estimated effluent load from the existing office building is assumed to be 200 GPD per 1,000 square-feet of office area, or 8,720 GPD. When this load is deducted from the anticipated residential effluent load, we can estimate a net increase of 14,530 GPD (23,250 GPD – 8,720 GPD) from the site to the town sewer main.

64 Danbury Road is located directly across the street from ASML who recently conducted flow metering of the sewer main in Danbury Road just upstream of our site as part of their application to the WPCA. **Table 1** below shows a summary of the estimated peak baseline flows in the existing Danbury Road sewer main from that study. The total flow calculated is the aggregate of the recently monitored flows combined with the estimated flows from ASML for their existing facility and anticipated future development (Phases 1 and 2).

Table-1 – Danbury Road Sewer Main (Baseline flow)

Max Peak Metered Flow Danbury Road	Existing ASML Flow (Calculated)	Future ASML Flows (Calculated)	Total Peak Flow Danbury Road Sewer Main
1.956 CFS	0.048 CFS	0.029 CFS	2.033 CFS

Table 2 below summarizes the impacts of the proposed 64 Danbury Road development on the sewer main in Danbury Road using the total peak estimated flow from Table 1 as our baseline, combined with our calculated generation rate for the proposed residential development (2.033 CFS + 0.144 CFS). We evaluated the capacity of the sewer main at the two flattest sections of the main south of the project to confirm each pipe has adequate capacity. See attached sewer as-builts for the location of the 2 pipes evaluated.

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	Capacity Calculations					
Line ID	Slope (ft/ft)	Maximum Capacity (CFS)	Existing Peak Flow ¹ (CFS)	Existing Flow to Full (%)	Proposed Flow ² (CFS)	Proposed Flow to Full (%)
1	0.0007	6.00	2.033	33.9	2.177	36.3
2	0.0017	9.35	2.033	21.7	2.177	23.3

Table-2 – Danbury Road Sewer Main Capacity Analysis

1 - Total flow in Danbury Road from Table 1

2 - Proposed flow estimated for 64 Danbury Road residential development plus flow in Danbury Road

Based on our review of the existing sewer main and the relatively small net increase in estimated sewer effluent from the site, it is our professional opinion that the proposed development will have a negligible impact on the existing sewer main. If you have any questions with the plans or calculations, please feel free to contact me at (860) 852-5219 at your convenience.

Very truly yours,

TIGHE & BOND, INC.

Erik W. Lindquist, PE, LEED AP Senior Project Manager

ohn a Black

John W. Block, P.E., L.S. Senior Vice President

J:\F\F0173 Fuller\001 64 Danbury Rd\Correspondence\2024_02-14 WPCA 64 Danbury Road.Docx



ALBERTSON, SHARP & BACKUS, INC. CONSULTING ENGINEERS NORWALK, CONN.











		INVERT OUT			
E	INVERT	SIZE/TYPE	ELEVATION		
N/A	12" HDPE	142.95			
	12" HDPE	135.50			
	12" HDPE	143.67			
		12" HDPE	136.45		
		15" HDPE	135.00		
	134.17	12" HDPE	132.50		