



Lancaster Sewer District Commission

Established In 1967 By A Special Act of the Massachusetts Legislature
PO Box 773 South Lancaster MA 01561
978-365-7016 www.LSDC-MA.com

RECEIVED

May 24, 2019

MAY 28 2019

Ms. Jeanne Rich, Chair
Lancaster Zoning Board of Appeals
701 Main Street
Lancaster, MA 01523

COMMUNITY DEVELOPMENT
AND PLANNING

RE: Denial of Sewer Extension Permit
Goodridge Brook Estates,
Sterling Road, Lancaster, MA

Dear Ms. Rich and Board Members;

As you are aware, the Lancaster Sewer District Commission (LSDC) has been reviewing an application for a sewer extension permit from Crescent Builders (the Applicant) intended to provide sewer service for the above referenced proposed project (the Development).

The LSDC has been acting in this manner consistent with our enabling legislation and with past practice as a body corporate independent from the Town of Lancaster. It has been brought to our attention that a legal opinion provided to the ZBA by Attorney Adam Costa asserts that per Chapter 40B the ZBA, and not the LSDC, has the authority to issue sewer permits for the proposed Development. Although we disagree with this opinion and would seek to defend our independent authority, we concur with Atty. Costa's opinion that the ZBA cannot be obligated by the Applicant "to make commitments on the Sewer District's behalf under the (Administrative Consent Order) ACO." ***See attached Costas Memorandum dated 4-25-2019***

Nonetheless, the Commissioners recognizes that the ZBA is considering a permit for the referenced Development and will be closing deliberations shortly. In order to ensure that the LSDC's position on this matter is fully considered by the ZBA the Commission wishes to advise you that at the LSDC meeting held on Wednesday May 22, 2019 the Commission voted to deny the permit application for the following reasons:

1. Non-response to engineering issues. The Applicant was provided engineering review comments from the LSDC's review engineer, Weston & Sampson, in September 2018 and March 2019. The Applicant has not corrected identified issues and as proposed the sewer extension design does not meet engineering standards for sewer utilities.
2. Lack of wastewater flow report. The Applicant has been unwilling or unable to satisfy the requirement to submit an engineered wastewater flow report which is used to establish design and permit criteria. The LSDC has been working in good faith with the Applicant to review the permit application based on flow estimates for the Development provided verbally by the Applicant and via media reports.

3. Lack of a feasible plan for Infiltration and Inflow (I&I) removal. Regulations of the Massachusetts Department of Environmental Protection and the LSDC require that a sewer extension of this size include a plan to remove I&I at a 4 to 1 ratio. That is, for every gallon of wastewater discharged 4 gallons of water from I&I – ie leaks – must be identified and removed from the sewer system. The Applicant has been unable to demonstrate that they have a feasible plan for satisfying this requirement.
4. Inadequate system capacity. The LSDC's sewer system has a discharge limit of 0.37 million gallons per day. The LSDC's consultant, Weston & Sampson, conducted a capacity analysis and determined that the Development would cause the LSDC to exceed our discharge limit. ***See attached Potts Memorandum dated 5-22-2019.***
5. Unfair financial burden on existing LSDC rate payers. The additional capacity and I&I schemes proposed by the Applicant would shift the cost ratio for wastewater treatment provided by the Massachusetts Water Resources Authority. This change in cost ratio would result in an increase in rates borne by the LSDC rate payers in perpetuity. This creates an unfair financial burden on the rate payers of the LSDC.

Please feel welcome to contact our office should you have any questions.

Very truly yours,

Jonathan Gulliver
Commissioner

Robert Lidstone
Commissioner

Cc: Michael Antonellis, Town Planner
Stephen Philbin, LSDC Counsel

Attachments: *Costas Memorandum dated 4-25-2019*
Potts Memorandum dated 5-22-2019

May 22, 2019

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Lancaster Sewer District Commission
18B Prescott Street, P.O. Box 773
South Lancaster, Massachusetts 01561-0773

MAY 28 2019

COMMUNITY DEVELOPMENT
AND PLANNING

Re: Existing Wastewater Flows and Available Wastewater Capacity

Dear Commissioners:

As requested, Weston & Sampson has performed an analysis of the Lancaster Sewer District's (the District) existing wastewater flows relative to its allowable capacity at the Massachusetts Water Resource Authority's (MWRA) Clinton Wastewater Treatment Plant (WWTP). The purpose of this analysis was to:

- Understand the District's existing wastewater flows
- Determine the District's available remaining capacity at the MWRA Clinton WWTP
- Determine the potential impacts of the estimated new wastewater flows from the proposed Goodridge Brook Estates off Sterling Road on the District's available remaining capacity at the MWRA Clinton WWTP

Weston & Sampson obtained the District's daily wastewater flow meter readings from Larry Thomas, Superintendent of the MWRA Clinton WWTP, for the complete years of 2016 through 2018. In accordance with the MWRA's requirements, the maximum allowable average daily flow (ADF) from the District cannot exceed 0.37 million gallons per day (mgd). Table 1, below, presents a summary of the District's total annual wastewater flow (in million gallons) and its ADF over the past three (3) years.

Table 1
District's Wastewater Flows and ADF – 2016 through 2018

DESCRIPTION	2016	2017	2018	TOTAL
Total Wastewater Flow (million gallons)	111.34	109.22	99.52	320.08
Number of Days	366	365	365	1,096
ADF (mgd)	0.304	0.299	0.273	0.292

As presented above in Table 1, the District's ADF is approximately 0.292 mgd over the past three (3) years. Based on the allowable ADF of 0.37 mgd, the District has approximately 78,000 gallons per day (gpd) (0.37 mgd – 0.292 mgd) in remaining capacity at the MWRA Clinton WWTP.

Presently, there are approximately 850 sewer connections in the District. Therefore, the estimated wastewater flow per sewer connection is approximately 340 gpd per sewer connection (292,000 gpd/850 sewer connections).

Based on discussions with the District, a portion of the remaining available capacity of 78,000 gpd must be reserved for properties that have previously received betterments from the District but are not currently connected to the District's sewer system or properties/developments that were previously approved by District but are also not currently connected to the District's sewer system.

In total, there are approximately 155 potential sewer connections that meet the criteria described in the previous paragraph and have the right to connect to the District's sewer system. Assuming the current wastewater flow rate per sewer connection of 340 gpd, approximately 52,700 gpd (155 sewer connections x 340 gpd/sewer connection) must be reserved for these potential connections. Therefore, the District has approximately 25,300 gpd (78,000 gpd – 52,700 gpd) of remaining available capacity at the MWRA Clinton WWTP.

A proposed affordable housing development, Goodridge Brook Estates, wishes to connect to the District's existing 12-inch polyvinyl chloride (PVC) sewer in Sterling Road. The proposed development includes 96 apartments and 56 single family homes with an overall total of 378 bedrooms according to a December 2018 newspaper article in *The Item*. This information was provided by the developer's project engineer, Robert Traux. The developer, Crescent Builders, has not provided an engineered wastewater flow report as required by permit to the District or Weston & Sampson for review. Weston & Sampson originally requested this engineered report as a part of our September 2018 review comments and again in our March 2019 review comments. Therefore, it should be noted that the following calculations and analysis are based on the information provided in the newspaper article.

In accordance with the Title 5 state code (310 CMR 15.00), the estimated wastewater flow rate for residential housing is 110 gpd per bedroom. Based on this flow rate, the Goodridge Brook Estates would generate approximately 41,600 gpd of new wastewater. It should be noted that Title 5 wastewater flow rates (i.e. – 110 gpd/bedroom) are considered a "maximum" flow with a factor of two (2) built in to be conservative for design. The "average" daily flow would be approximately half of the "maximum" wastewater flow. Therefore, the estimated "average" daily flow for the Goodridge Brook Estates would be approximately 20,800 gpd.

As previously mentioned herein, the District has approximately 25,300 gpd of available remaining capacity at the MWRA Clinton WWTP. If the Goodridge Brook Estates were approved, the District's available capacity would be reduced to approximately 4,500 gpd (25,300 gpd – 20,800 gpd). Over 80% of the District's available remaining capacity would be utilized by this one (1) proposed development.

Before new wastewater flows from the Goodridge Brook Estates can be allowed into the District's system, potential wastewater flows from the former Atlantic Union College (AUC) must be taken into consideration. AUC has not operated at its full capacity for a number of years and is currently closed. But as an existing member of the District, wastewater capacity should be reserved for this site at an amount at least equal their previous wastewater flows in case the property re-opens as a college or the property is redeveloped. Any wastewater flow from the AUC property would certainly exceed the remaining 4,500 gpd if the Goodridge Brook Estates were granted access to the District's system. At a minimum and based on the acreage of the site (over 130 acres), average daily wastewater flows could range between 60,000 and 80,000 gpd depending if the site is redeveloped or if it resumes operation as a college.

With only 25,300 gpd of available remaining wastewater capacity at the MWRA Clinton WWTP, the District appears to be unable to allow new wastewater flows of the proposed magnitude from the Goodridge Brook Estates and still be able to accommodate all of its existing sewer connections, namely the former AUC property, at this time. The priorities of current members of the District should be placed ahead of any new connections. Therefore, it is our recommendation that the District not allow the Goodridge Brook Estates to connect to the District's system unless the following concerns/requirements can be addressed to the satisfaction of the District.

- 1) Goodridge Brook Estates reduce the proposed wastewater flows from its development unless the allowable ADF capacity at the MWRA Clinton WWTP is increased at no additional cost, now and in the future, to the District. This will likely require discussions directly with the MWRA to see if additional capacity at the MWRA Clinton WWTP even exists.
- 2) Address infiltration/inflow (I/I) identification and removal in accordance with the wastewater flows, as stipulated above in Item #1, at a removal rate of four (4) gpd of I/I for every one (1) gpd of proposed wastewater in accordance with current Massachusetts Department of Environmental Protection (MassDEP) regulations (314 CMR 12.04).

We trust that this letter adequately addresses the District's concerns. Please let me know if you have any comments or require additional information.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.


John C. Potts, P.E.
Senior Project Manager