



SEWAGE FLOW CALCULATIONS

Project: **272 Tremont Street
Melrose, MA**

Project No.: **19-29908**

Date: **15-Jan-20**

Computed By: **C. Reach**

Checked By: **R. Salvo, P.E.**

Client: **Eric Kenworthy**

SUMMARY OF SEWER FLOW CALCULATIONS

Existing Condition: 3 Family Dwelling consisting of 9 Bedrooms

Proposed Condition: 1 2 Unit Building (24 Bedrooms) with 600-ft of Retail

Existing Sewer Flow = 990 GPD

Proposed Sewer Flow = 2,670 GPD

Net Increase In Flow = 1,680 GPD



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EXISTING CONDITION

Sewer flow calculations based on 314 CMR 7.15 (Attached)

Component	Gallons per Day per Unit	Unit	Existing (Unit)	Existing Flow
Exsting 3 Family Dwelling	110	110 Gallons/day/Bedroom	9	990

TOTAL DAILY FLOW	990
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SEWAGE & WATER FLOW CALCULATIONS

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PROPOSED CONDITION

Sewer flow calculations based on 314 CMR 7.15 (Attached)

Component	Gallons per Day per Unit	Unit	Proposed (Unit)	Proposed Sewer Flow (GPD)	Estimated Water Usage (GPD)
Proposed Multi Family Dwelling	110	110 GPD/Bedroom	24	2640	2933
Proposed Retail	5	5 GPD/100 S.F.	600	30	33

TOTAL DAILY FLOW	2,670	2,967
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314 CMR: DIVISION OF WATER POLLUTION CONTROL

7.14: continued

(2) For all other applicants and permittees, by a duly authorized representative. An authorized representative may be:

- (a) A principal executive officer of at least the level of vice president for a corporation.
- (b) A general partner or proprietor if for a partnership or sole proprietorship respectively.
- (c) A duly authorized representative of the individual designated in 314 CMR 7.14(2)(a) or (b) if such representative is responsible for the sewer extension or connection and the overall operation of the facility discharging thereto.

7.15: Calculation of Flows

Unless a variance is authorized by the Department in writing, applicants applying for a sewer extension or connection permit shall use the following figures in calculating daily sewage flow in completing the application:

SEWAGE FLOW ESTIMATES:

<u>Type of Establishment</u>	<u>Gallons per Person per Day</u>
Boarding Schools, Colleges	65
Nursing Home and Rest Home	100
School, without cafeteria, gymnasium or showers	10
School, with cafeteria, but not gymnasium or showers	15
School, with cafeteria, gymnasium and showers	20
Swimming Pool	10
Camp, resident - washroom and toilets	25
Camp, resident - mess hall	10
Camp, day - washroom and toilets	10
Camp, day - mess hall	3
Camp Ground - showers and toilets - per site	75
Gymnasium - per spectator	3
Gymnasium - per participant	25
Theater, Auditorium	3
Public Park - toilet wastes only	5
Public Park - bathhouse, showers, and flush toilets	10
Factory or Industrial Plant, without cafeteria	15
Factory of Industrial Plant, with cafeteria	20
Work or Construction Camp	50
Single and multiple dwelling units - Per Bedroom motels, hotels, boarding houses	110
Tennis Club - per court	250
Bowling Alley - per alley	100
Country Club - dining room - per seat	10
Country Club - snack bar or lunch room - per seat	10
Country Club - locker and showers - per locker	20
Church - per seat	3
Church - vestry/kitchen - per person at capacity	5
Trailer, dump station - per site or per trailer	50
Mobile Home Park - per site	200
Office Building - per 1,000 sq. ft.	75
Dry Goods Stores - per 100 sq. ft.	5
Drive-In - per stall	5
Non-single family, Automatic clothes washer per washing machine	400
Hospital - per bed	200
Service Station, excluding thruway - per island	300
Skating Rink - 3,000 gallons per day plus 5 gallons per seat	300
Dog Pounds - Veterinary Clinics - per pen	50