City of Essex Junction Sewer Allocation Request

Instructions:

1) Submit completed form to planning and zoning department electronically at thass@essexjunction.org during conceptual plan review and amended at final plan review, if necessary.
*2) Payment of **sewer allocation fee** is due upon zoning permit request (final municipal permit before start of construction). Refer to the current fee schedule for more information. Please note **sewer connection fees** may also be applicable.*

****

Applicant Name and Mailing Address:

Milot Real Estate c/o Brett Grabowski
32 Seymour Street #101, Williston, Vermont 05495

Phone Number: (802) 310-4620 **Email Address:** brett@milotrealestate.com

Property Owner(s) Name and Mailing Address (if different):

Handy Hotels and Rentals LLC

241 Pearl Street, Essex Junction, VT 05452

Project Address: 15-23 Park Street, Essex Junction, VT 05452 (17 Park)

Project Information (check or circle any that are applicable)

☐**Single-family home** # of bedrooms _____ ☐ Multiplex (see Attachment A)

Business: # of employees_____ **Public restroom available:** Yes or No?

Type of business: ☐Animal groomer/kennel ☐Conference space
☐Hair salon ☐ Tasting Room ☐ Brewery ☐ Car Wash

☐Care Facility ☐ Catering ☐ Child Care Facility ☐Dentist office

☐Doctors Office ☐ Grocery Store ☐ Hotel ☐ Laundromat

☐Nail Salon ☐ Office ☐Restaurant ☐ Store ☐ Therapist office

☐Other **See attached letter and Calculations**

Detailed information about business (i.e. # of chairs with sinks, type of office or store)

See Letter

Existing land use of parcel or building (be detailed): See Letter

If residential, include # of bedrooms. If commercial, include type of business, # of employees.

See letter and calculation breakdown.

Sewer allocation request calculations (reference Attachment A for housing). If unsure leave blank. Staff will make the assessment and circulate it back to you for review:

See letter and calculation breakdown.

*Applicants should request the difference between Proposed and Existing Sewer Allocation. If the proposed change results in a net decrease in flow rates, no sewer allocation fee will apply.

Signature of Property Owner: _____

Date: 02/09/24

****

STAFF USE ONLY

Existing Sewer Allocation: 908 **gpd** **Proposed Sewer Allocation:** 8,870 **gpd**

Provisional Sewer Allocation Requested*: 7962 **gpd X $12.80 allocation fee =**
$ 101,913.60

Final Allocation Approved 7,962 **gpd**

Amount of fee collected $ _____

DEPARTMENTAL APPROVAL
Wastewater signature: Melissa Mendrige
Planning signature: Christopher Yuen

City of Essex Junction

KREBS & LANSING
CONSULTING ENGINEERS

164 Main Street, Suite 201
Colchester, VT 05446

P: (802) 878-0375 | greg.dixson@krebsandlansing.com

February 9, 2024

Chelsea Mandigo
Water Quality Superintendent
City of Essex Junction
2 Lincoln Street
Essex Junction, VT 05452
chelsea@essexjunction.org
(802) 878-6943, ext. 1705

RE: Water/Wastewater Allocation Request
17 Park Street, Essex Junction, VT 05452

Dear Chelsea,

This Project is proposing to demolish the existing building located at 17 Park Street in the City of Essex Junction, Vermont. The buildings have been used for years as commercial space for retail and restaurants. The proposed five-story building will have two commercial spaces on the first floor and 53 residential dwelling units on the above stories. The units will be a combination of efficiency studios, studios, one-bedroom, and two-bedroom units.

On behalf of this Project, we are requesting a letter approving our additional water and wastewater allocation. This parcel has requested allocation for another proposed project, this allocation request was sent back in 2017 but that project did not move forward. The existing water and wastewater use, based on gallons per day (GPD), from that last request is as follows:

Existing:
Sewer: Restaurants - 27 seats * 30 gpd* 0.8 (reduction) = 648 GPD
FTE Employees – 10 * 15 gpd * 0.8 (reduction) = 120 GPD
Dwellings - 1-bedroom apt x 140 gpd = 140 GPD
908 GPD Total

Water: Restaurants - 27 seats * 30 gpd* 0.9 (reduction) = 729 GPD
FTE Employees – 10 * 15 gpd * 0.9 (reduction) = 135 GPD
Dwellings - 1-bedroom apt x 150 gpd * 0.9 (reduction) = 135 GPD
999 GPD Total

We have generated the proposed design flows using the “Wastewater System and Portable Water Supply Rules” dated April 12, 2019. A copy of the Site Plan and GPD calculation sheet are included with this letter for your use. This allocation letter will be included with an application to the State of Vermont for a Wastewater System and Potable Water Supply Permit.

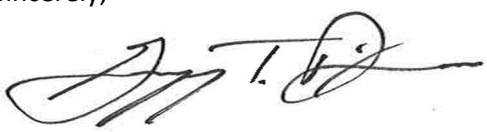
Proposed:
Sewer: 8,870 GPD Total
Water: 9,570 GPD Total

Based on the calculations provided above we are requesting allocation for the following increases in water and sewer flows.

Allocation Requested:
Sewer: 7,962 GPD Total
Water: 8,571 GPD Total

Please contact us if there is anything more you need or if there are any comments/questions. Thank you for your time in reviewing this project.

Sincerely,



Greg Dixson, P.E.

Proposed Use Table for WW Flows based on Wastewater System and Potable Water Supply Rules

Grenerated by Krebs and Lansing - Date 02/09/24 rev

SEWER:

Type	Use per WW Standards	Number of Employees	Number of Dwelling Units (DU)	Rate (Gal. Per Day Per employee)	Rate (Gal. Per Day Per DU)	Gallons Per Day
Studio Apartments	Studio Dwelling Units		35		140	4900
Single Bedroom Apartments	Single-bedroom Dwelling Units		8		140	1120
Double Bedroom Apartments	Multi-bedroom Dwelling Units		10		210	2100
General Office Space and/or Retail	Commercial Space 1	25		15		375
General Office Space and/or Retail	Commercial Space 2	25		15		375
			53		**TOTALS:**	**8870** **GPD**

WATER:

Type	Use per WW Standards	Number of Employees	Number of Dwelling Units (DU)	Rate (Gal. Per Day Per employee)	Rate (Gal. Per Day Per DU)	Gallons Per Day
Studio Apartments	Studio Dwelling Units		35		140	4900
Single Bedroom Apartments	Single-bedroom Dwelling Units		8		140	1120
Double Bedroom Apartments	Multi-bedroom Dwelling Units		10		280	2800
General Office Space and/or Retail	Commercial Space 1	25		15		375
General Office Space and/or Retail	Commercial Space 2	25		15		375
			53		**TOTALS:**	**9570** **GPD**

KREBS & LANSING
CONSULTING ENGINEERS

164 Main Street, Suite 201
Colchester, VT 05446

P: (802) 878-0375 | greg.dixson@krebsandlansing.com

March 11, 2024

Chelsea Mandigo
Water Quality Superintendent
City of Essex Junction
2 Lincoln Street
Essex Junction, VT 05452
chelsea@essexjunction.org
(802) 878-6943, ext. 1705

RE: Sewer Calculations
17 Park Street, Essex Junction, VT 05452

Dear Chelsea,

This Project is proposing to demolish the existing buildings located at 17-19 Park Street in the City of Essex Junction, Vermont. The buildings have been used for years as rentable commercial space, most recently for Domino's Pizza. The proposed five-story building will have 53 residential dwelling units. You have requested some additional information about septic from this property.

You have asked me to analyze the gravity line from J26A to J26

- There are only two other connections to J26A, both 4" lines. One is the existing connection to the building being demolished and the other is likely the Park Street School. There should be very little flow besides this project.
- Length of 8" line from J26A to J26 = 200 feet
- Slope of pipe from onsite review = 0.004
- Maximum capacity of an 8" line at 0.004 per Hazen Williams Equations below:
-

  $V = k\ (C)\ (R^{0.63})(S^{0.54})$
  Vmax = Velocity (f/s) – max when pipe is full
  k = Conversion factor for the unit system (1.318)
  C = roughness coefficient (130 for assumed slightly older VC pipe)
  R = hydraulic radius (cross sectional area of pipe /wetted perimeter full pipe) = 0.17'
  S = slope (0.004)

  Qmax = Vmax * a
  Vmax = Velocity (f/s) – max when pipe is full
  a = cross sectional area of pipe
  Qmax = **±440 gpm**

- Proposed flow from project = 8,870 GPD = ±12.4 GPM (assuming all flow happens within

12 hours)

- There is little to no flow into sewer manhole J26A at this time. So this project will be the majority of the flow, if not the only source. 12.4 gpm would have no effect on the flow through the existing pipe.
- Further, the pipe to the manhole from the proposed project will be 6" SDR 35 PVC @ 1% slope, the maximum flow from that pipe would be less than the maximum flow the existing 8" can handle.

The project should have no adverse impact on the existing pipe length between sewer manholes J26A and J26. Please let me know if there is anything more you need.

Sincerely,

Greg Dixson, P.E.