

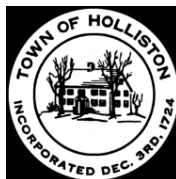
# HOLLISTON DOWNTOWN BUSINESS DISTRICT SEWER FEASIBILITY ANALYSIS

## STATUS REPORT

August 14, 2023

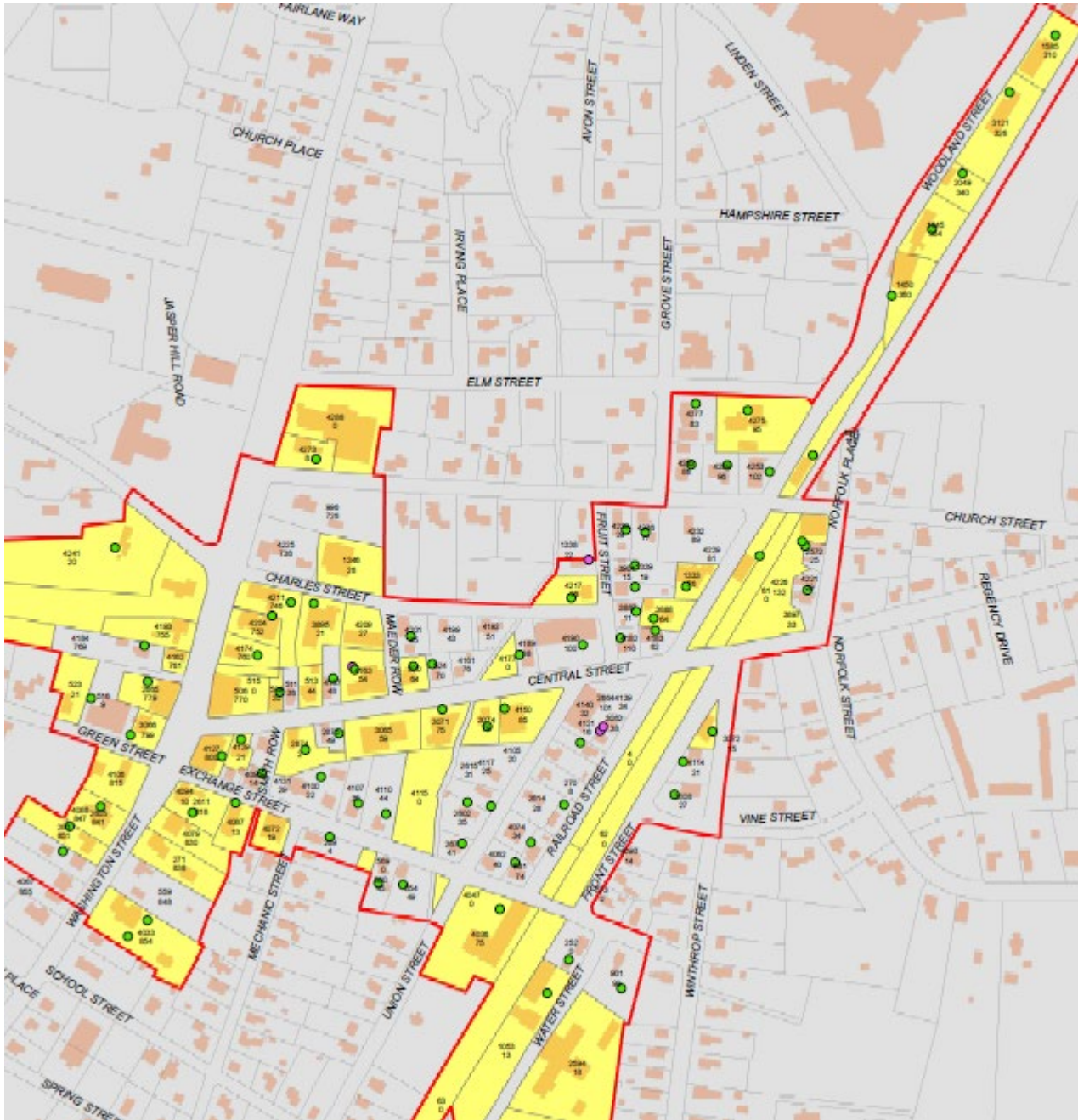
### Select Board

John Cronin, Chair  
Tina Hein, Vice Chair  
Benjamin Sparrell, Clerk



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# Phase I

47 Commercial Properties

2+/- Residential Properties

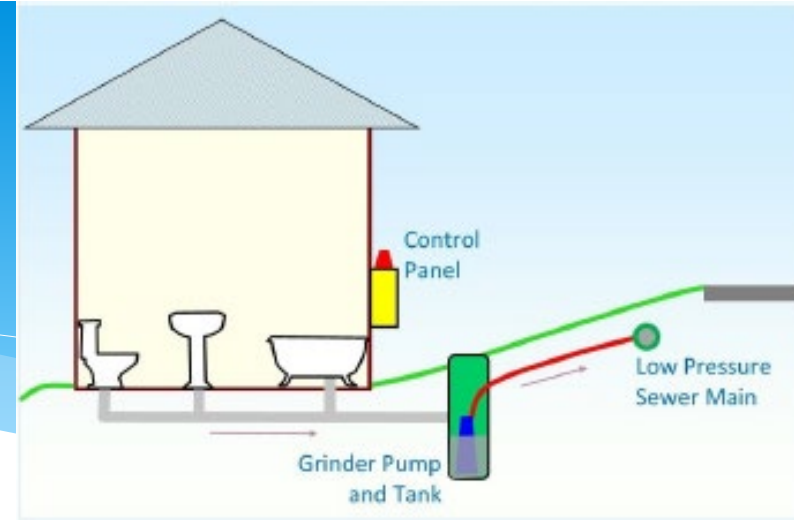
Primarily:  
Central Street;  
Washington Street;  
Railroad Street

## Discussion Outline

1. **Sewer Capacity – dictated by Disposal Capacity at Woodland School complex site.**
  - a. Preliminary estimates – 50,000+ gpd
  - b. MassDEP permitting Aug – Sept
  - c. Capacity expected to be finalized in September
  - d. School wastewater design flow – 12,000 - 15, 000 gpd
  - e. Phase I Existing Downtown Commercial Properties Only - current wastewater design flow based on water use – 12,000 gpd. Title 5 Design code 18,325 gpd
2. **District Boundary**
  - a. Initial - ~ 47 Commercial + 2 Residential properties
  - b. Future - Revised in consideration of property owner preferences, public comments and MassDEP permitted disposal capacity
3. **Sewer Technology**
  - Low pressure collection system recommended
  - Cross – country vs street sewer option as it significantly affect cost
  - Technology options - Septic tank effluent (recommended) vs grinder pump

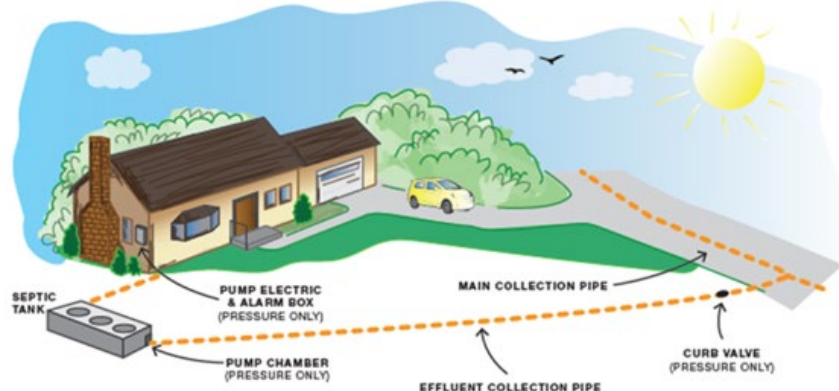
# Septic Tank-Effluent vs. Grinder Pump

1. Lower cost, smaller pump
2. Larger footprint 50 vs 20 +/- sf
3. Part of treatment process – can be more grant eligible
4. Simplifies treatment - reduces sludge / odor issues



## Septic Tank Effluent Sewer System

Each property will include an on-site septic tank for solids removal. Effluent flows by gravity or is pumped to a collection system and conveyed to the treatment plant.



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#### **4. Existing Conditions**

- a. 47 commercial + 2 residential properties**
- b. Septic tanks located – majority of properties**
- c. STEP individual pump stations – few already exist**

#### **5. Existing Wastewater Generation Estimates – Water Use by Property**

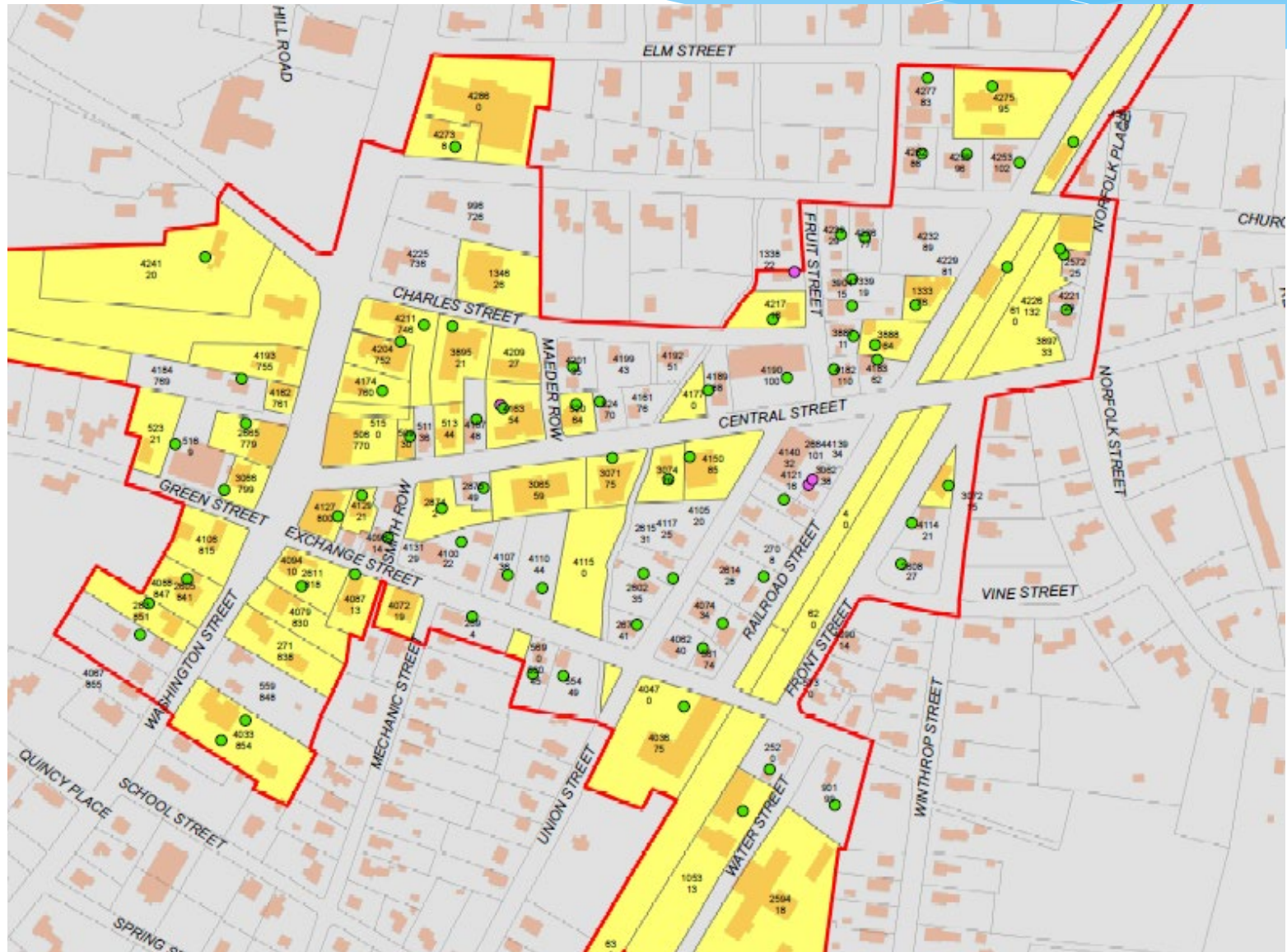
- a. See Table**
- b. Future – controlled by zoning**

#### **6. Costs – TBD, initial estimates below**

#	#	Street Name	Levels	Property Description	Bldg Footprint (sf)	T5 Design Flow (gpd)	Water Use Based WW Design Flow (gpd)
1	21	Central Street	2	office	1,423	213	66
2	32	Central Street	2	Retail w / apart- 2nd floor	1,248	275	223
3	44	Central Street	2	candy store	1,625	163	116
4	54	Central Street	1	half vacant + True Value Hardware at # 58	5,068	253	58
5	59	Central Street	2	fire station 6 bays	6,935	205	118
6	64	Central Street	1	dry cleaners Plus Retail	1,331	67	29
7	75	Central Street	1	Auto Dealer - New	4,961	750	38
8	76	Central Street	1	Wine Store	680	34	
9	79	Central Street	1	insurance office	1,035	78	36
10	85	Central Street	1	auto shop	4,436	600	104
11	100	Central Street	2	pizza + ice cream + office 2nd fl	9,288	1,161	788
12	101	Central Street	1	CVS	6,693	1,632	219
13	132	Central Street		Contractor office	3,604	270	751
14	21	Charles Street	2	Massage + dental +shops	5,846	638	430
16	27	Charles Street		Physician + counselors	3,488	262	214
17	110	Church Street	2	Liquor store	1,995	199	29
18	95	Elm Street	2	law office	4,232	635	1,104
19	13	Exchange Street	2	vet - 20 cages	2,432	560	226
20	19	Exchange Street	1	office	3,352	251	88
21	76	Railroad Street		coffee shop 27 seats with retail + locksmith	3,721	1,131	713
22	81	Railroad Street		Rest + bar	2,249	2,275	558
23	2	Smith Row		dentist - 2 Dentists	1,419	400	49
24	746	Washington Street	2	dentist	3,313	400	85
25	752	Washington Street	3	library - 250 patrons per day	5,214	0	194

#	#	Street Name	Levels	Property Description	Bldg Footprint (sf)	T5 Design Flow (gpd)	Water Use Based WW Design Flow (gpd)
26	755	Washington Street	2	spa + Retail	2,539	317	121
27	760	Washington Street	1.5	insurance business	1,580	118	62
28	761	Washington Street	3	Retail (763) + 2nd & 3rd floor apt	1,417	401	367
29	770	Washington Street	3	Retail+Rest (12 seats )-office 2nd	6,820	1,272	122
30	779	Washington Street	2	Supermarket + retail	5,016	251	452
31	799	Washington Street	1	vacant - gas station	1,821	0	0
32	800	Washington Street	2	Nail solan+stores+ Apart 2nd Fl	6,102	220	740
33	815	Washington Street	1	gas station 8 b\pumps + Mart	1,602	300	195
34	818	Washington Street	2	bank	2,306	115	83
35	830	Washington Street	2	bank	2,409	120	154
36	838	Washington Street	3	office, 1 doctor, 1 massage therapist	2,201	180	414
37	841	Washington Street	3	office	2,323	614	572
38	847	Washington Street	2	office ?	1,477	111	63
39	854	Washington Street	2	funeral home	4,197	110	276
40	13	Water Street	3	office	7,423	557	491
41	18	Water Street	1	Dance Academy	13,248	0	454
42	15	Winthrop Street		office	1,725	129	92
43	310	Woodland Street	1	martial arts	4,341	0	274
44	326	Woodland Street	1	Travel Office	4,305	323	119
45	340	Woodland Street	1	office	991	74	7
46	354	Woodland Street	1.5	office	8,693	652	154
47	360	Woodland Street	2	office	0	0	325
Totals					18,318	11,770	

# Existing Septic Tank Locations



# Low Pressure Sewer Cross Country Route Preliminary Layout



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# Low Pressure Sewer - Cross Country Preliminary Layout



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# Preliminary Budget

Holliston Collection System - LPP - XCountry - Quantities and Preliminary Cost Estimate							
On-Prop. Work	Pressure House Sys., Existing Tank			20	EA	\$7,500	\$150,000
	Pressure House Sys., New Tank			29	EA	\$10,000	\$290,000
	Property Connections to Sewer			1,500	LF	\$60	\$90,000
	Septic Tank Effluent Pump			45	EA	\$7,000	\$315,000
	Abandon Existing Septic Systems			29	EA	\$1,500	\$43,500
Collection System	Town Road Crossing	SDR 35	3" pressure	500	LF	\$200	\$100,000
	State Road Crossing	SDR 35	3" pressure	150	LF	\$350	\$52,500
	Stream Crossing	SDR 35	3" pressure	80	LF	\$350	\$28,000
	Force Main - Cross Country	SDR 26	3" pressure	3,500	LF	\$80	\$280,000
	Force Main - Road Shoulder	SDR 26	3" pressure	2,500	LF	\$150	\$375,000
	Asphalt cut, remove and replace	8	ft wide	1,475	SY	\$75	\$111,000
	Subtotal - Collection System Construction Costs						\$1,835,000
	Miscellaneous			10%			\$183,500
	Contingency			25%			\$458,800
	Engineering & Admin			30%			\$743,200
	Total Collection System Capital Costs						\$3,220,500
Treatment Plant & Drainfield Expansion	Treatment Plant Upgrades	Placeholder		1	LS	\$1,000,000	\$1,000,000
	Drainfield Upgrades	Placeholder		1	LS	\$800,000	\$800,000
	Subtotal - Treatment & Disposal System Construction Costs						\$1,800,000
	Misc., Contingency & Engineering /Legal / Admin			50%			\$900,000
	Total Treatment & Disposal Capital Costs						\$2,700,000
Collection, Treatment & Disposal - Opinion of Costs						\$5,920,500	

## Central St – South



21



59



75



79



85



101

## Central St – North



32



44



54



64



100

## Washington St East



0



746



752



760



770



800



818



830



838



854

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## Washington St West



747



755



761



779



799



815



841



847

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## Water St



13 (West)



18 (East)

## Winthrop St



15

# Questions / Discussion

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Environmental Engineers/ Consultants

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