

Residential Sewer and Septic System Replacement Comparison – Updated 10/2019

(All costs are approximate and shown for scale. Costs vary widely depending on your property and your typical water usage)

Septic System			Sewer Connection		
<i>Septic design/construction costs from 2014-16</i>			<i>Sewer connection cost in 2014-16; Betterment cost in 2023</i>		
<i>Septic Costs</i>	Approximate Range	Average	<i>Sewer Costs</i>	Approximate Range	Average
Construction ¹	\$27,000 - \$46,000	\$35,000	Betterment	\$34,000 - \$39,000	\$36,500
Design ¹	\$2,500 - \$3,000	\$2,750	Connection ¹	\$4,000 - \$6,000	\$5,000
Permits ²	\$900 - \$1400	\$1,150	Permits ⁴	\$250 - \$350	\$300
Annual Maintenance ³	\$300 - \$2000/year	\$300	Annual Sewer Fee ⁵	\$800 - \$1,000	\$900
<i>W.Acton: 50% properties likely require a non-standard system⁸</i>			<i>Betterments begin 2023; remainder delayed until connection</i>		
Approximate Monthly Cost construction + maintenance	Assume 5-6% interest (typical home equity) <i>Please seek your own estimates & rates</i>	\$286/month⁶ <i>15-year term</i> + \$25/month <i>maintenance</i>	Approximate Monthly Cost ⁶ betterment + sewer usage fee	Assume 3% interest (town rate)	\$154/month^{6,7} <i>30-year term</i> + \$75/month <i>sewer usage fee</i>

Notes & Assumptions:

1. Cost ranges obtained from Health Department Septic Loan Program:
 - Septic quotes from 2014 to 2016 in CWRMP high-needs areas such as West Acton. Actual costs may include additional permitting and vary depending on factors such as soil suitability, lot size, high groundwater, etc.
 - Sewer connection quotes from 2014 to 2016. Actual costs may vary depending on distance of the home from the street, plumbing inside the home, abandoning the septic system and any landscaping after construction.
2. 2018 Health Department Fees for Septic Replacements. Septic Flows under 1,999 GPD.
3. Average pumping and maintenance costs from Health Department Septic Loan Program and <https://baystatesewage.com/septic-pumping/>. High end (\$2000) seen for advanced treatment systems only.
4. 2018 Health Department Fee & Engineering Department Fees for public sewer connections under 1,999 GPD.
5. Average yearly cost for single-family use in existing sewer district (Acton Finance Department). Actual cost varies on average winter water use.
6. 3% interest/30-year term financing the betterment or 5.5% interest/15-year term home-equity loan financing septic construction only. Permitting and design of a septic system is likely to be included within a loan, therefore assuming \$38,900 total (construction + design/permits) = **\$318/month**
7. State Revolving Fund rates as of Oct 2019 = 2.4% for 30-years. Acton Sewer Policy has been that users could pay the full assessment up-front with no interest or pay the same interest that the Town would borrow at.
8. Comprehensive Water Resource Management Plan (2006): “over 50% of the developed parcels are classified as needs parcels” ...”mainly due to the proximity of Middle Fort Pond Brook, which limits onsite wastewater systems due to wetlands and high groundwater limitations.

Project Benefits

Septic Construction vs Betterment Cost

	Quote #1	Quote #2	Quote #3	Quote #4	Quote #5
Date	2016	2016	2016	2014	2014
Property	Spencer Rd	Spencer Rd	Spencer Rd	Mohegan Rd	Mohegan
Historic Cost	\$37,400	\$37,900	\$46,150	\$27,900	\$27,900
2023 (2%)	\$42,960	\$43,535	\$53,011	\$32,048	\$32,048
Landscape Included?	Yes (existing)	No (\$4500)	No	Yes (existing)	No (\$1300)
Design?	No	No	No	No	No

- ❖ Sewer Betterment (2023) = \$35,000 to \$39,000
- ❖ Spencer & Mohegan Roads in High Need Areas (CWRMP) like W.Acton
- ❖ Betterment payments can be passed to next owner
- ❖ Link to cost estimates and quotes [here](#)

Acton, MA 01720

Estimate

Estimate No: 35
Date: 10/26/2016

Bill To:

Spencer Rd.
Acton, MA 01720

Code	Description	Quantity	Rate	Amount
	Install septic system plan # 16-078 designed by Civil Solutions. Price does not include any permit fees to the town of Acton. Price includes using existing loam on site. Price does not include removal of existing septic system.	1.00	\$37,400.00	\$37,400.00

Total \$37,400.00

[REDACTED]
Spencer Rd
Acton ,Ma 01720
Email :
[REDACTED]

Jobsite : Same
Date : 10/23/2016

ESTIMATE

Proposal : Excavate and install septic system, per plan dated September 30, 2016 drawn by Civil Solutions

Scope of work:

- Mobilize onto site
- Locate and verify existing outlet line for location and elevation
- Pump collapse, remove and dispose of existing tank
- Excavate and prep tank holes
- Provide and install septic tank with treatment unit and pump chamber with appropriate risers and castings
- Connect tank to existing line at foundation and patch driveway (if pipe currently under driveway can be re used a \$400.00 credit shall be applied)
- Provide and install pump system meeting plan requirements
- Excavate limit ,prep and install septic sand
- Provide labor and equipment to construct 52' x 26' Presby Enviro Septic Leaching Field
- Provide install D box, venting and associated piping (vents to be installed at edges of work area as discussed)
- Arrange appropriate inspections
- Backfill and subgrade area of disturbance
- Remove existing filed piping from adjacent property
- Backfill loam and seed work on adjacent property

Materials/Allowances included in scope

- Jet Model J-500 septic tank in H2O loading
- [REDACTED]

- 1000 gallon monolithic pump chamber H2O loading
- Pump system meeting plan requirements ,a 1500.00 electrical allowance has been included for wiring of pumps ,and treatment tank .
- Pumping and disposal of up to 1500 gallons septage (from existing tank)
- All pipe and fittings
- 10 tn ¾ stone (for tank base)
- 400 cubic yards septic sand
- 160 tn C-33 Presby Sand
- 250lf Enviro-Septic piping
- 100 cy of material export
- 20 cy screened loam
- Premium seed and starter fertilizer

Site Specific Assumptions or Exclusions:

- Permits cost have not been included
- It is assumed that excavation to grades indicated on plan will be in native soil and that over excavation, dewatering or soil stabilization is not required
- All excess material to be graded onsite
- Cost associated with removing ,hammering , splitting , blasting or disposing of Ledge and Boulders ,have not been included
- Not responsible for damage to existing driveway caused by adjacent work ,trucking or machine access
- All excavated material is assumed to be acceptable for backfill
- Costs associated with handling or disposal of hazardous or unsuitable materials, have not been included
- Contractor and /or its employees or subcontractors are not responsible for damage and/or loss as a result of damage to any unmarked utility, water or sewer line as well as any other sub surface structure
- Home owner is responsible for grass growth
- Not responsible for repair or replacement of damaged irrigation system
- It is assumed existing electric service is of adequate size and capacity to power septic components

COST ESTIMATE \$37,900.00

Landscape Package (optional)

- Provide and install 4" of screened loam over area of disturbance
- Power rake loamed area to prep for seeding
- Hand seed and fertilize loamed area

Materials/Allowances

- 120cy Screened loam
- Premium seed and starter fertilizer

COST ESTIMATE 4500.00



PROPOSAL

10/25/2016


Spencer Rd
Acton, Ma. 01720

RE: Septic installation. Revised: 10/25/16 Add Pretreatment Tank J-500 and deduct 1,500 gallon septic tank.

We are pleased to provide the following estimate for the installation of the proposed septic system designed by Civil Solutions Plan# 16-078PD dated September 30, 2016.

This estimate includes, subject to the extras on page 2, all work necessary to install an on-site waste water system ("septic system") in compliance with Title 5 of the state environmental code (310 CMR 15-301) including without limitation.

Our estimate includes the following:

- The existing septic tank will be pumped of its contents crushed and removed.
- A new Model J 500 pretreatment septic tank will be installed as per revised plan.
- Two access covers will be raised to finish grade as per plan.
- A new 1,000 gallon monolithic pump chamber with pump, floats and control panel will be installed as per plan.
- There is an allowance of \$2,000.00 electrical work is included for the wiring of the septic pump, floats, control panel as well as the control panel for the J-500 pretreatment tank.
- One access cover on the pump chamber will be raised to finish grade.
- Installation of one Presby-Enviro Tube system that measures 26' in width x 52' in length. The system consists of 5-lines 5'9" on center. The distribution box and all necessary plumbing will be installed as per plan.
- The system will be constructed in an estimated 500 yards of approved septic sand.

- The Presby Tubes will be bedded in an estimated 100 yards of ASTM-33 washed sand as per plan.
- All excess fill from the excavation will be used on site as well as an additional 250 yards of common fill for the necessary final grading around the system area.
- The components of the old septic system located on the neighboring property will be removed and clean fill will be put in place. All disturbed areas in the neighbors yard will be loamed and seeded upon completion.
- All disturbed areas will be final graded with topsoil upon completion of the installation. Finish raking and seeding is not included due to the timing of the season. The landscaping can be done in the early spring for an additional charge of \$3,000.00

JOB PRICE:	\$46,150.00
Deposit required at start of construction.	\$20,000.00
Progress payment: System installed, not backfilled.	\$20,000.00
Balance due upon completion of finish grade.	\$ 6,150.00

THIS ESTIMATE IS VALID FOR 30 DAYS

EXTRAS/ EXCLUSIONS

- Ledge: rocks 1 yard and larger will cost extra to remove.
- Unforeseen utility relocation/replacement will be an additional charge.
- Engineered As-Built is to be paid by owner.
- Septic sand in excess of 500 yards will be \$19.50 per yard delivered.
- Screened loam is not included and will be an additional charge of \$22.00 Per cubic yard delivered.
- Hand raking, seeding and fertilizer will be an additional charge of \$3,000.00 and can be done in early spring of 2017

Estimated time to complete this job is 5-6 working days, weather permitting.

If this proposal is acceptable please sign and return one copy to our office and we will schedule your installation.

Proposal

September 22, 2014

Job Location:  Mohegan Road, Acton

Plan from: Stamski & McNary, Inc.

Date: September 9, 2014

Proposal For Installation of Septic System, as per plan, to include:

- Pump and crush existing tank and leach pit
- 1500 Gallon dual-compartment septic tank
- 1000 Gallon pump chamber
- Pump package (with electrician)
- Perc-Rite System (supplied and installed)
- Excavate and backfill
- Pipe, septic gravel, risers, cast iron covers
- Relocate water service
- Loam and hydroseed disturbed areas
- Permits, inspection fee
- Equipment rental and labor

Total: \$ 27,900.00

Please see Addendum A for additional comments.

Note: Removal of ledge and boulders >1 cubic yard will be an extra charge. Not responsible for hazardous or contaminated materials. No additional landscaping.

We Propose hereby to furnish material and labor -- complete in accordance with above specification for the total sum of: Twenty Seven Thousand Nine Hundred Dollars (\$ 27,900.00).
Payment to be made upon completion of job.

Addendum A

1. Scope of work included/description of process/any exclusions: *See Proposal*
2. Earliest possible date to schedule the work, as of September 15, 2014: *Work can begin once proposal is accepted.*
3. Time estimated it will take to complete the work: *One week*
4. Hourly labor cost: *\$55/hour*
5. Will you do the work yourself/be on site? Contact info? *Jason Fenton will be on-site supervising. Cell phone number will also be provided.*
6. During the project, when might the septic system be unavailable? *Will be available.*
7. Forms of payment: *Payment due upon completion of job.*
8. What happens if you go past the completion date? *Will not happen.*
9. Damage to site or to plants or structures? *Disturbed areas will be loamed and hydro-seeded. Not responsible for plants or structures. Landscape estimate can be provided, if requested.*
10. If project goes beyond planting season, how do you handle lawn/replacing plants: *Disturbed areas of lawn will be loamed and hydro-seeded. Hay will be applied, if necessary.*
11. Client references: *References will be provided if requested.*

What is or is not included: *See proposal for list of inclusions/exclusions*

Plant moving/protection of existing plantings, if needed is not included.
Site reclamation consists of loaming and hydro-seeding disturbed areas.

Mohegan Road
Acton, MA 01720

Description & Specifications

**Install Title 5 certified septic system according to plan designed by:
Stamski and McNary, Inc. on September 09, 2014**

Pump, crush and fill existing

Electric

1500 gallon Dual Compartment Septic Tank

1000 gallon Pump Chamber

Oakson Hydraulic Unit

Riser and covers

30 yds Sand

Fill out 45 yds

Re-route water

Stone - 1 load

90' of 4" Sch 40 pipe

Fittings: T's, 90°'s, 45°'s, and 22°'s.

Labor

Lawn installation Loam, Seed and Hay (labor & material)

Total: \$27,900.00

Transplanting & Walk Install \$1800

Grand Total: \$29,700.00

Does not include: inside plumbing, engineering, irrigation repair.

Acceptance of Proposal

All material is guaranteed to be as specified. All work to be completed in a workman like manner according to standard practices. All agreement contingent upon; strikes, accidents or delays beyond our control. Owner is to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Workman's Compensation insurance. This contract is non-cancelable. In the event of cancellation, deposits will be retained as all liquidated damages. We may withdraw this proposal if not accepted in 30 days. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge and above the estimate. The above price accounts for what is outlined on the engineering plans; items that could result in additional charges, are as follows: 1) stump removal on or off site; 2) any unforeseen problems such as ledge (blasting, excavation, and removal), extra large boulders (in excess of .5 cubic yards) ground water, plan deviation, etc. resulting in additional work and/or materials: 3) additional sand, and gravel, or fill (this may result if ledge or boulders are encountered); 4) additional loam, raking or seeding; 5) excavation and handling of contaminated materials off site; 6) snow removal. Contractor is not responsible for the following: 1) Heavy equipment damage on driveway or property; 2) Engineering or engineering responsibilities, 3) Unmarked or improperly marked ground utilities or structures 4) Inside plumbing and 5) Lot lines.

Payment Terms: 50% deposit. 30% upon setting tanks. 20% upon completion.