



ALLEN ENGINEERING
& ASSOCIATES, INC.

Civil Engineers, Surveyors &
Land Development Consultants

ADDRESS

One Charlesview Road,
Suite 2
Hopedale, MA 01747

PHONE

(508) 381-3212

WEB SITE

www.allen-ea.com

March 10, 2021

Town of Bellingham Zoning Board of Appeals
c/o Town Clerk
Bellingham Municipal Center
10 Mechanic Street
Bellingham, MA 02019

Re: **Application for Earth Removal Special Permit – Red Mill on the Charles**
Mechanic Street and Mill Street
Snowflake, LLC – Applicant

Dear Board Members:

On behalf of Snowflake, LLC, (the Applicant), Allen Engineering & Associates, Inc. is hereby submitting an Application for an Earth Removal Special Permit under Article XVII, Earth Removal Regulations, of the Town of Bellingham Zoning Bylaw.

We are providing the Board with the following materials in support of the Application:

1. Two (2) copies of the following:
 - a) Application for Special Permit
 - b) Project Narrative
 - c) Certified List of Abutters within 300-feet of the subject property
 - d) Soil Boring and Test Pit Logs
2. Mailing labels for abutters as supplied by the Assessors Office
3. Check in the amount of \$150.00 payable to the Town of Bellingham, and
4. Nine (9) 11x17 copies of the plan set titled "Earthwork Special Permit Plans", dated March 10, 2021.

Please feel free to contact me at 508 381-3212 with any questions regarding the Applications.

Sincerely,
Allen Engineering
& Associates, Inc.

Mark E. Allen, PE
President

Cc: Kevin Lobisser, Applicant (Snowflake, LLC)
Bellingham Planning Board c/o Jim Kupfer, Planner

SPECIFY TYPE OF APPLICATION

Appeal

**✓
Special Permit**

Variance

1. ◇ APPEAL of a decision

- Please attach a copy of the Building Inspector's letter/decision.**

2. **◇ SPECIAL PERMIT – check all that apply**

- | | | |
|---|---|--|
| <input type="checkbox"/> Principal Use | <input type="checkbox"/> Non-Conforming Situation | <input type="checkbox"/> Flood Plain |
| <input type="checkbox"/> Accessory Use | <input type="checkbox"/> Home Occupation | <input type="checkbox"/> Comprehensive Permit |
| <input type="checkbox"/> Multi-Family Housing | <input checked="" type="checkbox"/> Earth Removal | <input type="checkbox"/> Family Apartment <input type="checkbox"/> Other |

3. ◇ VARIANCE – check all that apply

- | | | |
|---------------------|---------------|------------------------|
| ■Rear Yard Setback | ■Area | ■Lot Width |
| ■Side Yard Setback | ■Lot Frontage | ■Percent Area Building |
| ■Front Yard Setback | | |

1. Petitioner
 (type/print) Snowflake, LLC c/o Kevin Lobisser, President
 Signature _____
 Email kevin@lobisserbuildingcorp.com
2. Address One Charlesview Road, Suite 1, Hopedale, MA 01747 Phone 508 488-6433
3. Property
 Owner Varney Brothers Sand and Gravel c/o Leslie Varney
 Signature _____
 Email _____
4. Address P.O. Box 94, Bellingham, MA 02019 Phone _____
5. Address of Subject
 Premises Undeveloped land located off Mill Street and Mechanic Street

Underlying Zoning Districts:
Suburban and Business 1.

7. What zoning district(s) is the subject premises located? Downtown Residential Development
8. Assessor's Map 51 Lot 13-1 Overlay District (DRDOD)
9. Describe proposed activity:
Earth removal to accomodate a residential development consiting of 105 sinlge family dwelling
lots and 66 town homes in 22 triplex buildings.

10. Cite (sub) section(s) of the Zoning Ordinance under which application is made:
Section 240-114 - [earth removal] Permit from the Board of Appeals

11. Are there any buildings on the premises (if so, please describe them including their dimension)?
No

12. Describe the subject premises (terrain, septic system, description of area, etc.) The site was formerly a gravel borrow site (Varney Brothers Sand & Gravel). Much of the
site contains open gravel areas. The topography varies greatly with spoil piles of rock and
subsoil located throught the site. Some of the former gravel borrow ares are in various stages
of re-growth. There are no structures, utilities or paved roadways on the site.

13. How long have you owned the subject premises?
The Petitioner has the property under agreement with the Owner
14. What is the present use of the subject premises? Vacant - former gravel borrow operation
15. State grounds for the special permit/variance or appeal – please be specific (use separate sheet if necessary).
A Special Permit is requested to allow for soil export from the site in excess of the thresholds
specified in Section 240-113.

I attest that I, to the best of my knowledge have paid any and all real estate taxes, excise taxes, license and/or permit fees.

Owner: _____
Signature _____ Date _____

Applicant: _____
Signature _____ Date _____

Effective 8/2017

Please note: This application cannot be processed unless initialed by the Town Collector:
Town Collector: _____ **Date:** _____

PROJECT NARRATIVE – EARTH REMOVAL SPECIAL PERMIT

For:

Red Mill on the Charles Bellingham, Massachusetts

March 10, 2021

Snowflake, LLC – Applicant

Project Site

The subject property, hereinafter referred to as “the Site”, contains approximately 85.6 acres of land located off Mechanic Street (Route 140) and Mill Street. According to the latest Assessor’s data, the Site is identified as Map 51, Parcel 13-1, owned by Varney Brothers Sand and Gravel, Inc. The Site is located entirely within the Downtown Residential Development Overlay District (DRDOD), and partially within the Water Resource Overlay District. Underlying zoning districts include Suburban and Business 1. It is the Proponent’s intent to permit the proposed project under the provisions of the DRDOD.

Abutting land includes a railway and the Charles River to the north, Commercial Property (Lincoln Properties) to the east, residential dwellings and Union Cemetery to the south, and Town owned property to the west. Access and frontage exists along Mill Street, a dead-end roadway that intersects with North Main Street (Route 126), and along the north side of Mechanic Street (Route 140) approximately 0.4 miles west of the Maple Street/Mechanic Street intersection.

On-site wetlands resource area include Bordering Vegetated Wetlands (BVW), an intermittent stream, a perennial stream with its associated 200-foot Riverfront Area, Isolated Land Subject to Flooding (ILSF), Land Under Water and Vernal Pools. The extents of these resources were confirmed via an Order of Resource Area Delineation (ORAD) issued by the Bellingham Conservation Commission in July of 2019. According to the latest data by the National Flood Insurance Program (NFIP), a portion of the Site along the northern boundary lies within Bordering Land Subject to Flooding (BLSF). The Zone AE, 100-year flood plain elev. is approximately elev. 209.

According to the latest available information by the Natural Heritage and Endangered Species Program (NHESP), there are no mapped areas of rare and endangered species or wildlife habits. There are no Outstanding Resource Waters (ORW) or Areas of Critical Environmental Concern (ACEC) identified at the Site.

Topography is irregular and undulating across the majority of the Site. Elevations range from elev. 330 at the highpoint along the eastern Site boundary, elev. 206 at the low points along the northeast corner of the Site, elev. 240 at Mill Street and elev. 290 at Mechanic Street. The majority of the site is wooded with cleared areas associated with past gravel borrow operations by the current owner.

Based on the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), the on-Site soils consist of Scarboro, Sacco, Birdsall, Freetown Muck, Hinckley, Windsor and Udorthents.

Project Description

The proposed Red Mill on the Charles project, hereinafter referred to “the Project”, consists of 105 single family lots/dwellings, and 66 town homes (22 triplexes) on five (5) lots, for a total count of 171 residential units. The project will also preserve approximately 40 acres of open space in perpetuity. Off-site improvements (not subject to this Special Permit Application) include upgrades to Mill Street, pump station construction off Mill Street, Common Street extension, and drainage improvements. The Definitive Subdivision plans are currently under review by the Bellingham Planning Board and Conservation Commission.

The plans provided as part of this Earth Removal Special Permit are derived from the Definitive Subdivision Plans and include existing site conditions, roadway alignments, lot lines, proposed grading, work limits, construction phasing and erosion control measures. Other engineering details such as utilities, lighting and landscaping are omitted from the plans for clarity.

The plans depict the overall extents of the proposed earth removal and grading, including the earthwork required to establish future building pads. Future building permit plans for individual lots will include additional minor grading associated with the final building footprints and driveways, but no new earth removal or grading will occur beyond the limits of work as depicted on the plans.

Site access is proposed via a through road extending from the end of Mill Street and from the Site frontage on Mechanic Street (just east of 156 Mechanic Street). The Mechanic Street access will be a shared access for the Project and the adjacent Lincoln Property Company. The through road (“Road A”) is a collector street approximately 4,500 linear feet in length. The remaining roads (Road B, C & D) total approximately 4,550 linear feet. In aggregate the Project entails approximately 9,050 linear feet (1.7+/- miles) of new roadways.

Earth Removal and Mitigation Measures

Soils

Allen Engineering & Associates, Inc. has reviewed the Soil Survey for Worcester County, prepared by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). In general, the upland areas of the site have a reported hydrologic soil group (HSG) of “A”. These soils are typically sandy loam or loamy sand and have moderately low runoff potential. Very slow infiltrating HSG “D” soils on the site appear to be associated with the mapped wetlands. On-site test data as well as published soil data is appended to this report in section 4.

An extensive subsurface testing program consisting of open test pits and borings was conducted at the site to confirm the general USDA/NRCS soil characteristics, estimated seasonal high groundwater, and the presence of ledge. AEA’s findings in the field are generally consistent with USDA/NRCS published data. However, ledge is anticipated in the south eastern portion of the Site as observed at the Mechanic Street entrance resulting from recent site work conducted for the Lincoln Properties development.

Final design grades throughout the site are established well above average groundwater elevations. The closest excavation to groundwater will occur within the proposed storm water basins, which is two (2) feet minimum outside of the Water Resource Protection District and four (4) feet within the Water Resource Protection District.

Test pit and boring logs are provided for the Board's reference and the testing locations are depicted on the plans provided.

Project Phasing

Due to the scale of the Project, it is currently anticipated that it will be completed in three (3) phases. Refer to Sheets ES-1 and ES-2 for the extent and details for individual phases. Please note that the phasing plan provided is intended as a general guide; the exact phasing limits may be adjusted, or sub-phases may be implemented once a construction manager is engaged for the Project. In addition, areas of future phases may be utilized for stockpiling and management of earth materials in order to avoid excessive handling.

The following is a general description of the proposed project phases:

Phase 1

- Off-site work including Mill Street improvements, Common Street extension, Pump Station #1 and two (2) drainage basins. These elements are considered mitigation for the Red Mill on the Charles and are not subject to the Earth removal Special Permit.
- Earth excavation and removal associated with Road A and all lots/units fronting on Road A. The volume of soil export is estimated to be approximately 240,000 cubic yards.
- Construction of Road A (4,300+/-l.f.) and associated utility & drainage infrastructure, including pump station #2, force main sewer, 6 detention basins, and two (2) resource area crossings at Road A.
- Construction of 20 single family homes and 66 multi-family units.

Phase 2

- Earth excavation and removal associated with Roads B and C and all lots fronting on Roads B and C. The volume of soil export is estimated to be approximately 290,000 cubic yards.
- Construction of Roads B and C (2,650+/-l.f.) and associated utility & drainage infrastructure, including one detention basin.
- Construction of 52 single family homes.

Phase 3

- Earth excavation and removal associated with Road D and all lots fronting on Roads D. The volume of soil export is estimated to be approximately 22,000 cubic yards.
- Construction of Roads D (1,750+/-l.f.) and associated utility & drainage infrastructure, including one detention basin.
- Construction of remaining 33 single family homes.

The total soil export (Phases 1-3) is estimated to be approximately 550,000 cubic yards, not including top soil, much of which will be re-used on the site.

Construction Controls

General construction controls will be implemented to minimize impacts to on-site resource areas, public ways, and adjacent properties. These measures include:

- A pre-construction meeting will be held with representatives from the Town.
- A third-party construction monitoring program and protocol will be established.
- Construction hours will be limited to Monday through Friday 7:00 am to 6:00 pm, Saturday 8:00 am to 5:00 pm, or as otherwise allowed by the Town of Bellinham. No construction shall occur on Sundays or holidays.
- Access to the site will be via construction entrances at Mill Street and Mechanic Street.
- Access gates shall be provided and locked at the end of each work day.
- Parking areas for construction employees will be established on Site. No construction vehicle shall park on public roadways.
- Construction staging and stockpiling areas will be established in appropriate locations away from slopes and wetland resource areas.

Soil and Erosion Controls:

- Adherence to a Stormwater Pollution Prevention Plan (SWPPP) prepared in accordance with the NPDES permit requirements and the latest NPDES Massachusetts Construction General Permit.
- Design, installation, and maintenance of soil erosion and sediment control Best Management Practices (BMPs) implemented during construction shall meet the performance standards outlined in the Massachusetts Stormwater Management Guidelines.
- In addition to installing and maintaining the erosion control BMPs, the contractor will be required to implement and maintain the following erosion control measures:
 - Prior to the commencement of construction, erosion control barriers shall be installed around the perimeter of the proposed work area.
 - Rip-Rap Construction Entrances shall be installed.
 - Provide inlet protection around all stormwater inlets and filter bags beneath the grates of all existing and new catch basins, where applicable.
 - Install silt fence barrier around the perimeter of soil stockpiles.
 - Incorporate diversion swales, check dams, and sedimentation basins.
 - Minimize the amount of open earth disturbance at any given time and stabilized open soil immediately upon establishment of final grades.
 - Blasting of ledge shall be undertaken in accordance with all applicable local and state regulations.

Noise and Vibration & Visual Screening

- All exhaust mufflers on construction equipment will be in good working order.
- Contracts will include language requiring contractors to properly maintain their equipment.
- Back-up alarms on vehicles and equipment will be adjusted as low as possible to reduce noise, without compromising safety.
- When feasible, equipment that is not being used will be turned off.

- Noise creating equipment on-site will be located as far as possible from sensitive receptors.
- Engine housing panels on all equipment will be kept closed.
- Electricity will be obtained from the electric grid as soon as feasible to reduce the use of portable generators.
- No construction vehicles and/or equipment shall commence warming-up prior to the permitted hours of construction.
- Earth material processing equipment will be located in areas of the site that are screened from adjacent properties by existing vegetated buffer and earth slopes.

Air Quality

- Water suppression will be used to minimize the generation of dust from construction activities.
- Covering loads on construction vehicles hauling materials to and from the site.
- Ensuring disturbed areas are minimized and disturbed areas are stabilized as soon as earthwork activities are completed.
- Installing crushed stone ant-tracking pads at the site construction entrances.
- Sweeping streets to remove any sediment tracked onto public ways.
- Encouraging contractors to comply with MassDEP's "Diesel Engine Retrofits in the Construction Industry: A How to Guide" and the use of ultra-low sulfur diesel in off-road engines.

Construction Vehicle Routes and Access

The Proponent anticipates working closely with the Zoning Board of Appeals, the Planning Board and other Town Officials to determine the best travel routes and access points to the Site, as well as any desired restrictions the Town may wish to impose on local public roadways. In early stages of construction, the only viable and immediate access to the Site is via Mill Street, which will be utilized for construction of the following Project components:

- Off-site improvements on Town land including the Mill Street Pump Station, Common Street Extension, and Drainage basins.
- Earth excavation and removal for the western half of Phase 1, from the Mill Street frontage to the proposed perennial stream crossing at the approximate midpoint of Road A.
- The primary hauling route during the above activities will be Route 126 to points north of the Site, since left turn movements from Mill Street to North Main Street are not desired. However, upon completion of the Common Street extension to binder course pavement, trucks will also be able to utilize the signalized intersection at Common Street for left turns to points south of the Site I.E. Route 140 to Interstate 495.

Simultaneously with the above construction activities, earthwork will be undertaken at the Mechanic Street access point including excavation and removal of soil and ledge. Upon gaining access from Mechanic Street, construction of the following Project components will commence:

- Remaining earth excavation and removal for Phase 1 from Mechanic Street to the intermittent stream crossing.
- Construction of the intermittent stream crossing, and excavation and removal of earth materials to the Perennial Stream crossing.

- Construction of the perennial stream crossing, which can be staged from both sides.
- The primary hauling route during the above construction activities will be via Route 140 to Interstate 495.

With two construction access points fully operational, the following work can commence and both of the access points can be utilized depending on the destination of earth materials:

- Earth excavation and removal for Phase 1
- Earth excavation and removal for Phase 2

Stormwater Management Groundwater Quality, Water Supply Protection

The project will implement best stormwater management practices in order to comply with the following ten (10) Standards of the MassDEP Stormwater Management Regulations where applicable to the Project.

- Standard #1 No Untreated Discharges – The stormwater management system is being designed so that all stormwater runoff from the roadway, parking areas, and roof tops is treated through a treatment train consisting of deep sump hooded catch basins (roadside swales for the low impact design roadway), treatment structures, basin forebays, and detention/infiltration basins.
- Standard #2 Peak Rate Attenuation – The United States Soil Conservation Service, “Urban Hydrology for Small Watersheds, Technical Release Number 55” (TR-55) methods were used to develop runoff hydrographs for watershed areas affected by the proposed Project. Existing and Proposed hydrographs are being developed for the 2, 10, 25, and 100-year storm events for the purpose of developing a stormwater management system that will limit post-development peak runoff rates to pre-development levels.
- Standard #3 Stormwater Recharge – The requisite Groundwater recharge is provided within the roadside swales (for Low Impact Roadways), and detention/infiltration basins.
- Standard #4 Water Quality – Water quality measures are designed to provide a minimum of 80% Total Suspended Solid (TSS) removal, with 44% pretreatment and treatment of 1-inch of runoff over paved impervious areas. The water quality volume is achieved by providing storage volume below the outlets of the detention/infiltration basins and through flow based treatment within stormwater treatment units.
- Standard #5 Land uses with Higher Potential Pollutant Loads (LUHPPL) – The Project is considered a LUHPPL because it will exceed 1,000 vehicle trips per day. Additional pretreatment and water quality measures are proposed accordingly.
- Standard #6 Critical Areas – This Standard is not applicable because the Site is not located with a Critical Area.
- Standard #7 Redevelopment Project – This Standard is not applicable because the Project is considered new development.

- Standard #8 Construction Pollution Prevention & Erosion and Sedimentation Control – The Project area exceeds one acre; therefore, a Notice of Intent (NOI) must be filed with the U.S. EPA including a Stormwater Pollution Prevention Plan (SWPPP), which must be kept on Site at all times during construction. A SWPPP will be developed in accordance with the Massachusetts Construction General Permit (CGP). The SWPPP will outline erosion and sedimentation control measures for the Project, including installation, inspection and maintenance of these measures through all phases of construction until all surfaces are permanently stabilized.
- Standard #9 Operation and Maintenance Plan – An Operation and Maintenance Plan is being developed to describe the requisite long-term operation and maintenance of all on-Site stormwater Best Management Practices (BMPs) and hydraulic drainage systems, Low impact development systems, and source control for the prevention of pollution.
- Standard #10 Prohibition of illicit Discharges – An Illicit Discharge Statement will be provided by the Applicant/Owner prior to the discharge of stormwater to post-construction BMPs.

The stormwater management system design is currently under review by the Town's Peer review consultant as part of the Special Permit and Notice of Intent application with the Planning Board and Conservation Commission respectively.



TOWN OF BELLINGHAM

Assessment Administration Office
Municipal Center - 10 Mechanic Street
Bellingham, Massachusetts 02019
508-657-2862 * FAX 508-657-2894
Email: Assessors@bellinghamma.org
www.bellinghamma.org

February 25, 2021

**THE PROPERTY OWNERS LISTED HEREIN ARE THE KNOWN ABUTTERS TO
THE PROPERTY OWNERS:**

ABUTTER TO ABUTTER WITHIN 300 FEET OF MAP 51 PARCEL 13 LOT 1

Property Address(es): Mechanic St.
 Bellingham, MA. 02019

Owner of Record: Varney Bros. Sand & Gravel
 PO Box 94
 Bellingham, MA. 02019

Requested by: Michael Dryden
 One Charleview Rd.
 Hopedale, MA. 01747

ABUTTERS ATTACHED

Certified:


Cheryl A. Hanly, Assessment Technician, MAA



300 foot Abutters List Report

Bellingham, MA

February 25, 2021

Subject Property:

Parcel Number: 0051-0013-0001
CAMA Number: 0051-0013-0001
Property Address: MECHANIC ST

Mailing Address: VARNEY BROS SAND + GRAVEL
PO BOX 94
BELLINGHAM, MA 02019

Abutters:

Parcel Number: 0040-0019-0000
CAMA Number: 0040-0019-0000
Property Address: 33 HIGH ST

Mailing Address: TOWN OF BELLINGHAM
CONSERVATION LAND
10 MECHANIC STREET
BELLINGHAM, MA 02019

Parcel Number: 0045-0042-0000
CAMA Number: 0045-0042-0000
Property Address: 59 FIFTH AV EXT

Mailing Address: FLANAGAN, WAYNE & LERCH, KELLY
59 FIFTH AVE EXTENSION
BELLINGHAM, MA 02019

Parcel Number: 0045-0044-0000
CAMA Number: 0045-0044-0000
Property Address: 39 NORTH MAIN ST

Mailing Address: LEYVA, TIMOTHY A & SHARON L
39 NORTH MAIN ST
BELLINGHAM, MA 02019

Parcel Number: 0045-0050-0000
CAMA Number: 0045-0050-0000
Property Address: 6 NORTH MAIN ST

Mailing Address: TOWN OF BELLINGHAM GRAVEL
10 MECHANIC STREET
BELLINGHAM, MA 02019

Parcel Number: 0045-0056-0000
CAMA Number: 0045-0056-0000
Property Address: HIGH ST

Mailing Address: TOWN OF BELLINGHAM WATER
DEPATRMENT PUMP STATION
10 MECHANIC STREET
BELLINGHAM, MA 02019

Parcel Number: 0045-0057-0000
CAMA Number: 0045-0057-0000
Property Address: MILL ST

Mailing Address: UNKNOWN OWNERS C/O TREASURER
10 MECHANIC ST
BELLINGHAM, MA 02019

Parcel Number: 0045-048F-0000
CAMA Number: 0045-048F-0000
Property Address: 10 MILL ST

Mailing Address: CROS AND KOB LLC
10 MILL ST
BELLINGHAM, MA 02019

Parcel Number: 0045-048G-0000
CAMA Number: 0045-048G-0000
Property Address: 12 MILL ST

Mailing Address: 12 MILL STREET R E TRUST BRIAN
STONKUS-TR
166 LAKESHORE DR
BLACKSTONE, MA 01504

Parcel Number: 0046-0006-0000
CAMA Number: 0046-0006-0000
Property Address: HIGH ST

Mailing Address: UNITED STATES OF AMERICA ARMY
CORPS OF ENGINEERS
696 VIRGINIA RD
CONCORD, MA 01742-2751

Parcel Number: 0046-0007-0000
CAMA Number: 0046-0007-0000
Property Address: MILL ST

Mailing Address: UNITED STATES OF AMERICA ARMY
CORPS OF ENGINEERS
696 VIRGINIA RD
CONCORD, MA 01742-2751



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2/25/2021

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300 foot Abutters List Report

Bellingham, MA

February 25, 2021

Parcel Number:	0046-001A-0000	Mailing Address:	UNITED STATES OF AMERICA ARMY
CAMA Number:	0046-001A-0000		CORPS OF ENGINEERS
Property Address:	MILL ST		696 VIRGINIA RD
			CONCORD, MA 01742-2751
Parcel Number:	0050-0041-0005	Mailing Address:	SULLIVAN RICHARD F & LORI A
CAMA Number:	0050-0041-0005		18 CENTERVILLE LN
Property Address:	18 CENTERVILLE LN		BELLINGHAM, MA 02019
Parcel Number:	0050-0041-0006	Mailing Address:	MACHADO, FLORIANE C CAMPOS
CAMA Number:	0050-0041-0006		22 CENTERVILLE LN
Property Address:	22 CENTERVILLE LN		BELLINGHAM, MA 02019
Parcel Number:	0050-0046-0000	Mailing Address:	UNION CEMETERY CO OF BLGHM INC
CAMA Number:	0050-0046-0000		ATTN: ROGER OAKLEY
Property Address:	84 MECHANIC ST		178 NORTH MAIN ST
			BELLINGHAM, MA 02019
Parcel Number:	0050-0057-0000	Mailing Address:	MICHALOWSKI, JOSEPH T FERNANDEZ,
CAMA Number:	0050-0057-0000		TARA M
Property Address:	32 DAVID RD		32 DAVID RD
			BELLINGHAM, MA 02019
Parcel Number:	0050-0058-0000	Mailing Address:	TRAUDT, ALICE A
CAMA Number:	0050-0058-0000		36 DAVID RD
Property Address:	36 DAVID RD		BELLINGHAM, MA 02019
Parcel Number:	0050-0059-0000	Mailing Address:	MOULTON, BRUCE EDWIN MOULTON,
CAMA Number:	0050-0059-0000		KATHLEEN M
Property Address:	40 DAVID RD		6706 HEMLOCK CT
			SIMS, NC 27880
Parcel Number:	0050-0060-0000	Mailing Address:	MARCINKEVICIUS, CHRISTOPHER
CAMA Number:	0050-0060-0000		O'TOOLE, NANCY MENDOLIA
Property Address:	44 DAVID RD		44 DAVID RD
			BELLINGHAM, MA 02019
Parcel Number:	0050-0061-0000	Mailing Address:	MCGILVRAY, LESTER P JR
CAMA Number:	0050-0061-0000		78 CRAIGIE AV
Property Address:	52 DAVID RD		WOONSOCKET, RI 02895
Parcel Number:	0050-0062-0000	Mailing Address:	PIERCE DAVID K
CAMA Number:	0050-0062-0000		53 DAVID RD
Property Address:	53 DAVID RD		BELLINGHAM, MA 02019
Parcel Number:	0050-0063-0000	Mailing Address:	COURNOYER, ADELARD + SANDRA M
CAMA Number:	0050-0063-0000		47 DAVID RD
Property Address:	47 DAVID RD		BELLINGHAM, MA 02019
Parcel Number:	0050-0064-0000	Mailing Address:	GRASSO, ROBERT M + BRIDGET M
CAMA Number:	0050-0064-0000		GRASSO, LAURIE A
Property Address:	41 DAVID RD		41 DAVID RD
			BELLINGHAM, MA 02019



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2/25/2021

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300 foot Abutters List Report

Bellingham, MA
February 25, 2021

Parcel Number:	0050-0065-0000	Mailing Address:	TAVARES, ROBERT M + LINDA L
CAMA Number:	0050-0065-0000		34 DAVID RD
Property Address:	34 DAVID RD		BELLINGHAM, MA 02019
Parcel Number:	0050-0066-0000	Mailing Address:	PEARSON THOMAS R M & JEAN L
CAMA Number:	0050-0066-0000		4 CHARLOTTE RD
Property Address:	4 CHARLOTTE RD		BELLINGHAM, MA 02019
Parcel Number:	0050-0067-0000	Mailing Address:	SLATKAVITZ, WILLIAM
CAMA Number:	0050-0067-0000		10 CHARLOTTE RD
Property Address:	10 CHARLOTTE RD		BELLINGHAM, MA 02019
Parcel Number:	0050-044B-0000	Mailing Address:	CHAMPAGNE, AARON P LYDON,
CAMA Number:	0050-044B-0000		CHRISTINE A
Property Address:	15 CENTERVILLE LN		15 CENTERVILLE LN
			BELLINGHAM, MA 02019
Parcel Number:	0050-078D-0000	Mailing Address:	ZWICKER, KEN P
CAMA Number:	0050-078D-0000		59 DAVID RD
Property Address:	59 DAVID RD		BELLINGHAM, MA 02019
Parcel Number:	0050-078E-0000	Mailing Address:	CUERONI ANDREW P MASUCCI
CAMA Number:	0050-078E-0000		MADELINE E
Property Address:	58 DAVID RD		58 DAVID RD
			BELLINGHAM, MA 02019
Parcel Number:	0050-078F-0000	Mailing Address:	HERNANDEZ, ENRIQUE E & ROZYIEVA,
CAMA Number:	0050-078F-0000		INDIRA
Property Address:	64 DAVID RD		64 DAVID RD
			BELLINGHAM, MA 02019
Parcel Number:	0050-078M-0000	Mailing Address:	ABEL, ROBERT F & CHANG, HSIAO &
CAMA Number:	0050-078M-0000		5 ROLLING HILLS DR
Property Address:	5 ROLLING HILLS DR		BELLINGHAM, MA 02019
Parcel Number:	0051-0009-0000	Mailing Address:	128 MECHANICS REALTY LLC
CAMA Number:	0051-0009-0000		199 WASHINGTON ST
Property Address:	128 MECHANIC ST		FRANKLIN, MA 02038
Parcel Number:	0051-0009-0001	Mailing Address:	MCDONALD JAMES C & CHARLENE
CAMA Number:	0051-0009-0001		9 ROLLING HILLS DR
Property Address:	9 ROLLING HILLS DR		BELLINGHAM, MA 02019
Parcel Number:	0051-0009-0002	Mailing Address:	TOBIN, MICHAEL B & KAREN T
CAMA Number:	0051-0009-0002		13 ROLLING HILLS DR
Property Address:	13 ROLLING HILLS DR		BELLINGHAM, MA 02019
Parcel Number:	0051-0010-0000	Mailing Address:	ROY, MARIE D - L/E ROY, GARY
CAMA Number:	0051-0010-0000		144 MECHANIC ST
Property Address:	144 MECHANIC ST		BELLINGHAM, MA 02019



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2/25/2021

Page 3 of 4



300 foot Abutters List Report

Bellingham, MA
February 25, 2021

Parcel Number: 0051-0011-0000
CAMA Number: 0051-0011-0000
Property Address: 156 MECHANIC ST

Mailing Address: FERRAGAMO, PAUL J + LAURA J
156 MECHANIC ST
BELLINGHAM, MA 02019

Parcel Number: 0051-0013-0000
CAMA Number: 0051-0013-0000
Property Address: 160 MECHANIC ST

Mailing Address: TR BELLINGHAM LLC ATTN: BARINGS
1 FINANCIAL PLAZA - #1700
HARTFORD, CT 06103

Parcel Number: 0051-0014-0000
CAMA Number: 0051-0014-0000
Property Address: 164 MECHANIC ST

Mailing Address: TMC HOLDINGS & DEVELOPMENT LLC
24 WILLIAM WY
BELLINGHAM, MA 02019

Parcel Number: 0051-004A-0000
CAMA Number: 0051-004A-0000
Property Address: 161 MECHANIC ST

Mailing Address: TMC HOLDINGS & DEVELOPMENT LLC
24 WILLIAM WY
BELLINGHAM, MA 02019

Parcel Number: 0051-004B-0000
CAMA Number: 0051-004B-0000
Property Address: MECHANIC ST

Mailing Address: TMC HOLDINGS & DEVELOPMENT LLC
24 WILLIAM WY
BELLINGHAM, MA 02019

Parcel Number: 0051-011A-0000
CAMA Number: 0051-011A-0000
Property Address: 146 MECHANIC ST

Mailing Address: ROY, MARIE D - L/E ROY, GARY
144 MECHANIC ST
BELLINGHAM, MA 02019

Parcel Number: 0056-0004-0000
CAMA Number: 0056-0004-0000
Property Address: 6 BLACKSTONE ST

Mailing Address: E & J REALTY TRUST EDWARD T &
JUDITH A MOORE-TRS
6 BLACKSTONE ST
BELLINGHAM, MA 02019



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2/25/2021

Page 4 of 4

SAGE Environmental, Inc. Boring Logs

PROJECT: D0161

LOCATION: Mill Street, Bellingham, MA

DRILLING CO: SAGE EnviroTech Drilling

EQUIPMENT: 7822 DT Track Rig

DRILLED BY: Steve Perry

BORING NO. SB-101

PAGE 1 OF 1

DATE STARTED: 3/23/2020

DATE FINISHED: 3/23/2020

GROUNDWATER OBSERVATIONS

At 0 after 0 hours

At 0 after 2 hours

SAMPLE DATA

DEPTH (ft)	SAMPLE TYPE	HAMMER BLOWS ON SAMPLER (Inches)				Strata Change	Sample ID			LITHOLOGY (Description of material)
		0-6	6-12	12-18	18-24		No.	Pen (in)	Rec (in)	
						6"				Surface: Forest Floor
						1'				Subsoil
						2' 6"				Brown, fine to coarse SAND and gravel.
						6'				Light brown, fine SAND with trace silt.
						9'				Brown to grey, fine SAND with little silt.
						22'				Brown to grey, fine SAND with trace silt.
						25'				Light brown, fine SAND with little fine to medium gravel.
						28'				Light brown, fine SAND with some fine to coarse gravel.
						31'				Light brown, fine SAND.
						40'				Light brown, fine SAND with trace silt. End of boring at 40'.

GENERAL REMARKS:

NA - Not Analyzed
 ND - Not Detected (sample < 1ppm)
 BSG - Below Surface Grade

SAGE Environmental, Inc. Boring Logs

PROJECT: D0161

LOCATION: Mill Street, Bellingham, MA

DRILLING CO: SAGE EnviroTech Drilling

EQUIPMENT: 7822 DT Track Rig

DRILLED BY: Steve Perry

BORING NO. SB-102

PAGE 1 OF 1

DATE STARTED: 3/23/2020

DATE FINISHED: 3/23/2020

GROUNDWATER OBSERVATIONS

At 0 after 0 hours

At 0 after 2 hours

SAMPLE DATA

DEPTH (ft)	SAMPLE TYPE	HAMMER BLOWS ON SAMPLER (Inches)				Strata Change	Sample ID			LITHOLOGY (Description of material)
		0-6	6-12	12-18	18-24		No.	Pen (in)	Rec (in)	
						6"				Surface: Forest Floor
						1'				Subsoil
						8'				Grey to brown, fine to coarse SAND with some gravel.
						12'				Grey to brown, fine SAND with trace silt.
						15'				Grey to brown, fine to coarse SAND, some gravel with 6" lense fine of sand and trace silt in and out from 12' to 15'.
						21'				Brown, fine SAND with trace silt.
						26'				Light brown to brown, fine to coarse SAND and gravel.
						30'				Brown to grey, fine SAND with trace silt.
						35'				Brown to grey, fine to coarse SAND with some gravel. End of boring at 35'.

GENERAL REMARKS:

NA - Not Analyzed
 ND - Not Detected (sample < 1ppm)
 BSG - Below Surface Grade

SAGE Environmental, Inc. Boring Logs

PROJECT: D0161

LOCATION: Mill Street, Bellingham, MA

DRILLING CO: SAGE EnviroTech Drilling

EQUIPMENT: 7822 DT Track Rig

DRILLED BY: Steve Perry

BORING NO. SB-103

PAGE 1 OF 1

DATE STARTED: 3/23/2020

DATE FINISHED: 3/23/2020

GROUNDWATER OBSERVATIONS

At 0 after 0 hours

At 0 after 2 hours

SAMPLE DATA

DEPTH (ft)	SAMPLE TYPE	HAMMER BLOWS ON SAMPLER (Inches)				Strata Change	Sample ID			LITHOLOGY (Description of material)
		0-6	6-12	12-18	18-24		No.	Pen (in)	Rec (in)	
						6"				Surface: Forest Floor
						1'				Subsoil
						11'				Grey to brown, fine to coarse SAND and gravel.
						28'				Grey to brown, fine SAND with trace silt.
						35'				Brown, fine SAND with little silt. End of boring at 35'.

GENERAL REMARKS:

NA - Not Analyzed
 ND - Not Detected (sample < 1ppm)
 BSG - Below Surface Grade

SAGE Environmental, Inc. Boring Logs

PROJECT: D0161

LOCATION: Mill Street, Bellingham, MA

DRILLING CO: SAGE EnviroTech Drilling

EQUIPMENT: 7822 DT Track Rig

DRILLED BY: Steve Perry

BORING NO. SB-104

PAGE 1 OF 1

DATE STARTED: 3/24/2020

DATE FINISHED: 3/24/2020

GROUNDWATER OBSERVATIONS

At 8' 6" after 0 hours

At 9' 6" after 2 hours

SAMPLE DATA

DEPTH (ft)	SAMPLE TYPE	HAMMER BLOWS ON SAMPLER (Inches)				Strata Change	Sample ID			LITHOLOGY (Description of material)
		0-6	6-12	12-18	18-24		No.	Pen (in)	Rec (in)	
						5'				Brown, fine SAND, some medium to coarse sand, and little fine to coarse gravel.
						10'				Brown, fine SAND.
										Brown, fine SAND with little silt. End of boring at 10'.

GENERAL REMARKS:

Well is installed to 30' BSG with 10' of screen and 20' of riser.

NA - Not Analyzed
 ND - Not Detected (sample < 1ppm)
 BSG - Below Surface Grade

SAGE Environmental, Inc. Boring Logs

PROJECT: D0161

LOCATION: Mill Street, Bellingham, MA

DRILLING CO: SAGE EnviroTech Drilling

EQUIPMENT: 7822 DT Track Rig

DRILLED BY: Steve Perry

BORING NO. SB-105

PAGE 1 OF 1

DATE STARTED: 3/24/2020

DATE FINISHED: 3/24/2020

GROUNDWATER OBSERVATIONS

At 0 after 0 hours

At 0 after 2 hours

SAMPLE DATA

DEPTH (ft)	SAMPLE TYPE	HAMMER BLOWS ON SAMPLER (Inches)				Strata Change	Sample ID			LITHOLOGY (Description of material)
		0-6	6-12	12-18	18-24		No.	Pen (in)	Rec (in)	
						9'				Light brown, fine SAND with trace medium to coarse sand.
						12'				Grey to brown, fine SAND with trace silt.
						14'				Light brown, fine SAND.
						16'				Light brown, fine SAND with trace silt.
						18'				Light brown, fine SAND with little medium to coarse SAND.
						20'				Grey to brown, fine SAND with little silt.
						23'				Light brown to grey, fine SAND.
						28'				Grey to brown, fine SAND with trace silt.
						35'				Brown to Grey, fine SAND. End of boring at 35'.

GENERAL REMARKS:

NA - Not Analyzed
 ND - Not Detected (sample < 1ppm)
 BSG - Below Surface Grade

SAGE Environmental, Inc. Boring Logs

PROJECT: D0161

LOCATION: Mill Street, Bellingham, MA

DRILLING CO: SAGE EnviroTech Drilling

EQUIPMENT: 7822 DT Track Rig

DRILLED BY: Steve Perry

BORING NO. SB-106

PAGE 1 OF 1

DATE STARTED: 3/24/2020

DATE FINISHED: 3/24/2020

GROUNDWATER OBSERVATIONS

At 0 after 0 hours

At 0 after 2 hours

SAMPLE DATA

DEPTH (ft)	SAMPLE TYPE	HAMMER BLOWS ON SAMPLER (Inches)				Strata Change	Sample ID			LITHOLOGY (Description of material)
		0-6	6-12	12-18	18-24		No.	Pen (in)	Rec (in)	
						7'				Brown, fine to medium SAND with little fine to coarse gravel.
						20'				Light brown to brown, fine to coarse SAND with some gravel.
						32'				Light brown to brown, fine to coarse SAND with some gravel and lenses of fine sand.
						40'				Light brown, fine to medium SAND with trace silt. End of boring at 40'.

GENERAL REMARKS:

NA - Not Analyzed
 ND - Not Detected (sample < 1ppm)
 BSG - Below Surface Grade



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

Varney Brothers Sand & Gravel

Owner Name

Off Mill Street

Street Address

Bellingham

City

MA

State

51/13

Map/Lot #

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☐ Yes ☐ No If yes:

Source

Soil Map Unit

Soil Name

Soil Limitations

Soil Parent material

Landform

3. Surficial Geological Report Available? ☐ Yes ☐ No

If yes:

Year Published/Source

Map Unit

Description of Geologic Map Unit:

4. Flood Rate Insurance Map Within a regulatory floodway? ☐ Yes ☐ No

5. Within a velocity zone? ☐ Yes ☐ No

6. Within a Mapped Wetland Area? ☐ Yes ☐ No

If yes, MassGIS Wetland Data Layer:

Wetland Type

7. Current Water Resource Conditions (USGS):

Month/Day/ Year

Range: ☐ Above Normal

☐ Normal

☐ Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 1 8-28-19 fair
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____
Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: 90 Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-11	A	LS									
11-33	Bw	LS									
33-120	C	SAND		70							

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 2 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: 112 Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-11	Ap										
11-31	Bw										
31-127	C			75							

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 3 8-28-19 fair _____
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
Description of Location: _____

2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: 90 Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-8	A	LS									
8-24	B	LS									
24-132	C	SAND		73							

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 4 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-11	A	LS									
11-27	B	LS									
27-120	C	Gravel									

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 5 8-28-19 fair _____
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
Description of Location: _____

2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-11	A	LS									
11-30	B	LS									
30-120	C	SAND									

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 6 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-8	A	LS									
8-27	B	LS									
27-120	C	Gravel									

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 7 8-28-19 fair
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____
Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-7	Ap	LS									
7-26	Bw	LS									
26-96	C1	Sand/gravel		96							
96-151	C2	Silty Sand									

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 8 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-8	Ap	LS									
8-24	Bw	LS									
24-120	C	Sand									

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

- Deep Observation Hole Number: 9 8-28-19 fair _____
Hole # Date Time Weather Latitude Longitude:
1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
Description of Location: _____
2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____
3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet
4. Unsuitable Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock
5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-5	Ap	LS									
5-22	Bw	LS									
22-120	C	gravel									

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 10 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: _____ Depth Weeping from Pit 72 Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-98	C	sand/gravel		50							

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 11 8-28-19 fair _____
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
Description of Location: _____

2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: _____ Depth Weeping from Pit 60 Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-100	C	sand/gravel	45								

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 12 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: _____ Depth Weeping from Pit 64 Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-99	C	coarse sand		55							

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 13 8-28-19 fair _____
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
Description of Location: _____

2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-6	A	LS									
6-30	B	LS									
30-120	C	Gravel									

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 14 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☒ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-7	A	LS									
7-23	B	LS									
23-42	C	gravel									Refusal

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 15 8-28-19 fair
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____
Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☒ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-36	C	LS									Refusal

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 16 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-130	C	sand/gravel									

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

- Deep Observation Hole Number: 17 8-28-19 fair _____
Hole # Date Time Weather Latitude Longitude:
1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
Description of Location: _____
2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____
3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet
4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☒ Bedrock
5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-72	C	LS									Refusal

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 18 8-28-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable

Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-108	C	LS/gravel		90							

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 19 9-5-19 fair _____
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
Description of Location: _____

2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☒ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-96	FILL										
96-105	A/Bw	LS									
105-140	C	sand/gravel									

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 20 9-5-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☒ Yes ☐ No If Yes: ☒ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-120	disturbed										
120-140	C	sand/gravel									

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 21 9-5-19 fair
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____
Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☒ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-123	disturbed										
123-144	C	sand/gravel									

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 22 9-5-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-5	A	LS									
5-15	Bw	LS									
15-123	C	gravel									

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 23 9-5-19 fair _____
Hole # Date Time Weather Latitude Longitude:

1. Land Use Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____

Description of Location: _____

2. Soil Parent Material: _____
Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: ☐ Yes ☒ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-9	A	LS									
9-24	B	LS									
24-120	C1	sand/gravel									
120-130	C2	LS/Shale									

Additional Notes:



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C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 24 9-5-19
Hole # Date Time Weather Latitude Longitude:

1. Land Use: Gravel Pit
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: _____

2. Soil Parent Material: _____ Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable

Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☒ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-9	Ap	LS									
9-24	Bw	LS									
24-72	C1	sand/gravel									
72-120	C2	LS									Refusal

Additional Notes: _____



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F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

LANCE ANDERSON SE 27

Typed or Printed Name of Soil Evaluator / License #

Lance Anderson/SE#27

Name of Approving Authority Witness

Date

6/30/20

JUNE 2022

Expiration Date of License

6/2022

Approving Authority

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

Field Diagrams: Use this area for field diagrams: