

TOWN OF MILFORD, NH OFFICE OF COMMUNITY DEVELOPMENT

1 UNION SQUARE, MILFORD, NH 03055

TEL: (603)249-0620

WEB: WWW.MILFORD.NH.GOV

STAFF MEMO

Date: March 29, 2019
To: Planning Board

From: Lincoln Daley, Community Development Director

Subject: Burbee Sand & Gravel, Mile Slip Road, Tax Map 58, Lots 1, 2, and 3. Major Site Plan

Application and Gravel and Earth Removal Permit for an earth and sand removal operation to excavate and regrade approximately 8 acres within the Residential R District. (Continued from

2/26/19)

BACKGROUND/PROPOSAL:

The applicant is presenting an application to the Planning Board for a major site plan application for an earth removal operation on Map 58 Lot 1 to excavate and re-grade approximately 8 acres. The application was continued from February 26, 2019 to meet the statutory requirements to re-notice and re-advertise the amended application for the project.

The applicant has made progress with the State in identifying additional areas of the gravel operation not previously accounted for in past approvals (area in proximity to Phase VIII), modifications to the current phase (Phase IX), and reclamation efforts in accordance with the Town's gravel and earth removal regulations. The applicant will detail the discussions with the NHDES involving the AOT permit and the final plan showing the proposed changes to Phase IX.

Attached please find is the gravel removal plan for the proposed site improvements.

EXISTING USE/CONDITIONS:

Map 58 Lot 1 is currently an undeveloped property located in proximity to Mile Slip Road. The southeast portion of the property is currently part of the existing gravel operation shown on Tax Map 58 Lot 1, 2, 3 (Phase VIII). Approximately 2.7 acres of proposed phase, Phase IX has already been disturbed.

The property contains no legal frontage and is accessed from North Mason Road in Brookline south of the site. East of the property lies the Town of Mason (undeveloped, conservation land property) and to the west and south is owned by the applicant. To the north of the subject property lays the delineated wetland resources and the Spaulding Brook. The property generally slopes downward from West to East towards Spaulding Brook.

LOT AREA:

Map 58, Lot $1 = \pm 40$ acres (1,742,400 sq.ft.)

APPLICATION STATUS:

The Board previously deferred acceptance of the application. The applicant has filed several letters of continuance allow additional time to respond to staff's questions regarding the status of existing phases and reclamation efforts. The amended application is complete and ready to be accepted.

NOTICES:

Notices were sent to all property abutters on March 21, 2019.

WAIVERS:

No waivers have been requested.

ZONING DISTRICTS:

The subject properties lie within the Residential R District. The intent of the Residence "R" District is to provide for low- density residential and agricultural land uses, and other compatible land uses, that are sensitive to the rural character and environmental constraints existing in the district. The gravel operation falls within the acceptable use classification of "Harvesting of natural resources" within the district. Further, said operation maintains the required buffer setbacks from delineated wetland resource areas (25 foot buffer) and Spaulding Brook (50 foot buffer).

TRAFFIC AND ACCESS MANAGEMENT:

As stated previously, the operations of the gravel operation will utilize the North Mason Road and Spaulding Brook. The applicant estimates that there will be approximately 7 trucks per day.

DRAINAGE/STORMWATER MANAGEMENT:

The drainage and stormwater management was reviewed by Town Staff. Staff currently has no further comments. The applicant has filed the amended Alteration of Terrain permit with the State, which is currently under review.

INTERDEPARTMENTAL REVIEWS:

Ambulance: No comments **Assessing:** No comments.

Building Department: No comments

Code Enforcement/ Health: No Comments.

Conservation Commission: No further comments. However, staff has received comments from the Mason Conservation Commission regarding concerns involving the proximity of Phase IX to the abutting conservation land and potential impact to the Spaulding Brook. See attached email correspondence.

Fire Department: No comments.

Heritage Commission: No further comments.

Police Department: No comments.

Public Works: No comments.

Water/Sewer Utilities: No comments

Zoning Administrator: No zoning violations or concerns.

Community Development / Planning:

Phase II - The applicant stated that Phase II of the operations has not been worked for several years and exhibits a mixture of vegetated areas with some exposed material. The applicant has since committed to reclaiming the area in compliance with the Town earth and gravel removal regulations.

Phase VIII – The applicant stated that Phase VIII is nearly complete in regards to the material extraction. The western portion of the phase is completed and reclaimed. Of the 7.7 acres of the phase, approximately 4.2 acres will remain active.

Phase IX – Phase IX is the phase that is the subject of the application. The phase consists of distributing approximately 8 acres of land and removing approximately 81,165 cubic yards of material. The applicant acknowledges the disturbance of approximately 2.6 acres of property outside of Phase VIII. The site plan and earth removal permit applications include the 2.6 acre area of unpermitted disturbance and to expand the operations by an additional 2.1 acres.

Staff has spoken with NHDES AOT staff regarding the unpermitted expansion and the anticipated AOT permit application submittal. It is staff's understanding that NHDES is aware of the expansion and has requested that the AOT permit be amended to reflect said expansion and incorporate it into Phase IX. An AOT permit is forthcoming.

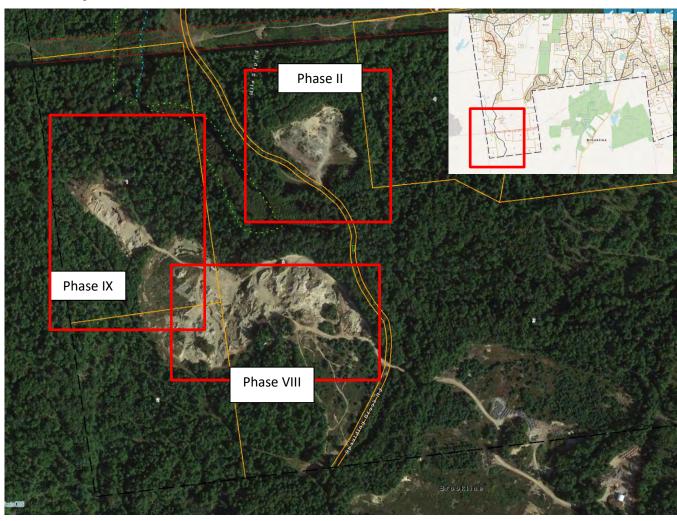
Below please find the list of questions submitted to the applicant for response.

- 1. Gravel Removal Site Plan, Cover Sheet. Please update the Locus Map using a current photograph showing the 2.6 acres of land disturbed/open areas for the proposed phase, Phase IX.
- 2. Gravel Removal Site Plan, Sheets 1 and 3, Notes 3. Please amend by replacing the reference from "Great Brook" to "Spaulding Brook".
- 3. Gravel Removal Site Plan, Sheets 2 and 3. Please amend the plan set by adding the topographic lines within the wetland setbacks and in proximity to the delineated wetland resources areas and Spaulding Brook.
- 4. Gravel Removal Site Plan, Sheets 2 and 3. As stated in the plan set and in accordance with the Wetland Conservation District Overlay, the setback from Spaulding Brook is 50' and from the edge of any stream, pond, or wetland in a horizontal plane. Please verify that all areas associated with the Phase IX are in excess of 50 feet Spaulding Brook and modify the plan set accordingly. In addition, please modify the wetland setback labeling from 25 feet to 50 feet in proximity to the Brook.
- 5. Gravel Removal Site Plan, Sheets 2 and 3. Please verify the difference in elevations between the proposed 5-foot wide x 2 foot high berm and Spaulding Brook. Given the proximity of the project to Spaulding Brook, is the proposed berm sufficient to manage flooding events.
- 6. General Comment. Please explain if Phase IX will be phased and in addition, when will Phase VIII be completed? Is the intent operate both phases concurrently?
- 7. General Comment. The phase includes a loam storage area located on the southeastern portion of Phase IX. Please explain if this area is meant to provide storage of loam for reclamation for the entire phase and previous phases?
- 8. General Comment. A Stormwater Permit will be required which will be based upon the AoT permit application, the SWPP prepared for the NOI (EPA) and the remainder of the town's requirements.
- 9. General Comment. Please provide an update on the amended AoT permit for Phases IX and VIII.
- 10. Gravel and Earth Removal Regulations, Section B. Bonding. Pursuant to said section, the bond amount to cover reclamation of the site shall be \$7,500/per acre x 8 acres (total site disturbance) = \$60,000.

STAFF RECOMMENDATIONS:

The applicant should be prepared to address all of the comments raised by the Planning Board, Conservation Commission, Heritage Commission, Town Consultants, Staff, and public. If the Planning Board finds that all of the questions have been addressed and/or with the conditions, the Board may vote to conditionally approve the application.

Aerial of Project Area:



Lincoln Daley

From: chris costantino <chris.costantino@gmail.com>

Sent: Friday, March 29, 2019 2:33 PM

To: Liz Fletcher

Cc:Lincoln Daley; Darlene BouffardSubject:Re: Burbee Sand and Gravel

Attachments: Burbee IDR M58 L1,2,3 gravel operation 2018.pdf

Hi Liz,

The MCC comments are attached. There is less than I remembered. We spent a lot of time looking at it, but were focused on the potential wetland impacts. We felt that the 5+' berm was sufficient at 25' away from the associated wetlands from Spaulding and Mitchell Brooks. The regs do call for 50'. We didn't feel that the impact would reduce the functionality of the wetland buffer.

We did not catch the drainage that you did. I am embarrassed that we didn't. I have learned something new....

Chris

On Thu, Mar 28, 2019 at 11:43 PM Liz Fletcher < <u>lizfletcher@jacqcad.com</u>> wrote:

Hi Chris,

Please send the Cons Com comments, that would be helpful.

Mason Cons Com is concerned about how close the operation proposes to come to the boundary of the Fifield Tree Farm Conservation Easement, especially along the northwestern edge of the operation where it looks like it's only about 50 feet away. It's really steep there and the grading plan looks like it will be made even steeper. The existing contours indicate a drainage way in that area which isn't even considered in the grading plan. What's to keep the excavated slope there from becoming unstable and collapsing back uphill to the Fifield land?

It seems safer to keep at least 100 feet from the conservation easement in this steep area.

I look forward to seeing Milford Cons Com comments.

Thanks!

Liz

On Mar 27, 2019, at 3:09 PM, chris costantino wrote:

- > Hi Liz,
- > Lincoln Daley, our Community Development Director asked me to contact you regarding the email/contact you got from Suzanne Fournier concerning the Burbee Gravel Operation.
- > Would there be any value to me attending your next CC meeting? Or, I would be glad to meet you in Mason at your convenience. Is there no fire to put out, despite SFournier's alert? I would be glad to send you the comments that the MCC has regarding the gravel operation.
- > It was great to meet your newest CC member, Rosanna. She came with Barbara to the last ROST meeting.
- > Spring is coming!!
- > Chris

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Lincoln Daley

From: Chris Costantino <chris.c.nhmcc@gmail.com>

Sent: Thursday, March 28, 2019 9:11 AM

To: Liz Fletcher

Cc:Lincoln Daley; Darlene BouffardSubject:Re: Burbee Sand & Gravel Plan

Thank you, Liz, for this thoughtful list of concerns. You were working into the wee hours of the morning on this.

Thank you!

Chris

On Thu, Mar 28, 2019 at 1:27 AM Liz Fletcher < <u>lizfletcher@jacqcad.com</u>> wrote:

Thanks, Lincoln for sending the plan. It's quite complex. Focusing on Spaulding Brook in my first look at the plan, it appears that only a 25 foot buffer is shown along the brook, rather than the 50 specified by the town for this brook.

Also, the grading plan doesn't show as much of the northwest corner of the site, where Spaulding Brook is, as does the existing conditions plan. With this corner cut off, it is difficult to ascertain if the grading plan actually can leave a 50 foot buffer at Spaulding Brook. Would it be possible for the engineers to show enough of the northwest corner on the grading plan to indicate that there is a 50 foot buffer possible here?

It would also be helpful if the engineers could show some elevations on Spaulding Brook itself, especially in the northwest corner of the site. Much of the brook immediately north of the site would be at the 370 foot level as they generally show, but the brook drops as it flows out of Mason into Milford before it levels out into the wetland at the Mitchell Brook confluence.

This is a concern due to the possibility of flooding at the site if it is excavated too close to the level of Spaulding Brook. This brook has a very large watershed, draining most of northern Mason. It's a "flashy" watershed, with steep-sided valleys and shallow to bedrock soils. This means its flow can sharply increase in volume and speed with intense storm events, such as are becoming more frequent with climate change.

If Spaulding Brook floods into the exposed soils of an active excavation, volumes of sediment will be washed downstream, smothering fish habitat. Spaulding Brook is an outstanding coldwater trout stream, well worth protecting from sedimentation. To excavate down near the brook's normal level of flow increases its vulnerability to flood damage.

I may have more questions as I study the plan further. Thank you for your consideration and for offering to answer my questions.

Liz Fletcher member, Mason Conservation Commission

On Mar 27, 2019, at 11:40 AM, Lincoln Daley wrote:

> Good Morning Liz,

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> Pleasure speaking with you. Per your request, attached please find a copy of the proposed sand and gravel operation.
> Don't hesitate to contact me should you have any questions.
> Regards,
> Lincoln Daley
> Director of Community Development
> Town of Milford, NH
> 1 Union Square, Milford, NH 03055
> 603-249-0620
> Idaley@milford.nh.gov
> <20190327101353042.pdf>
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Town of Milford CONSERVATION COMMISSION

Town Hall
1 Union Square
Milford, NH 03055-4240
(603) 249-0628
Fax (603) 673-2273
www.milford.nh.gov
conservation@milford.nh.gov



MEMORANDUM

July 20, 2018

To: Milford Planning Board

Re: Interdepartmental Review Map/Lot 58/1,2,3 Burbee Gravel and Sand Operation Site Plan

To the Board,

The Conservation Commission reviewed this plan at their July 12, 2018 meeting. The Commission acknowledges the applicant's intent, as shown on the plan, to stay away from the sensitive areas located near the excavation site.

The Commission appreciates the opportunity to review this application. We look forward to seeing a well-designed project that improves the natural resource functionality of the site.

Very Respectfully,

Chris Costantino
Milford Conservation Commission



Milford Heritage Commission Town Hall 1 Union Square Milford NH 03055

Board of Selectmen Town of Milford 1 Union Square Milford NH 03055

15 December 2018

The Heritage Commission has reviewed several sets of plans by the Burbee Sand and Gravel Company at Spaulding Brook. Recent and decades of material removal around a historical site has been made evident to the Commission which has prompted this letter of concern. It is clear from the documented plans that the current owner, Jane Provins Rev. Trust is aware of this historically important site and is taking steps to preserve the site intact. The Heritage Commission appreciates this sensitivity and would applaud the continued effort to keep this site intact. The Commission recommends that any further excavation in the area is done with the sensitivity of the historically important artifacts known and yet to be known are documented and preserved as intact as possible.

Thank you for the consideration.

Respectfully

David Palance Chairman Milford Heritage Commission

Enclosure: Spaulding Mill Site at Spaulding Brook Heritage Summary

Spaulding Mill Site at Spaulding Brook Heritage Summary-

Abel Spaulding came from Pepperell, MA and built his log cabin home just north of the brook that would later take his name. At the time, the brook was known as Swallow's Stream and the land was part of Brookline.

In 1784, the Spaulding lumber mill was built and operated on the Spaulding brook for more than 80 years and supported 3 generations of Spaulding families. Abel Spaulding Jr. took over operations and he had 9 children all born at the Spaulding home. His son, Alfred Spaulding was the 3rd generation of Spaulding's to operate the mill.

10 years after the mill was established, this area of the Mile Slip became a part of Milford. The opening of the mill in this heavily wooded area of the Mile Slip in the late 1700's attracted settlers, particularly to the north of the mill site. Names such as Shedd, Green, Holden, and Badger were some of the early settlers of the area. Over the 80+ years of operation, the hills and forests of the Mile Slip gradually became fields and meadows with meandering stone walls and cattle and sheep on family farms. It was the gradual loss of the forests that ultimately sealed the fate of the Mill and the settlers in the area. By 1870, the timber had been depleted from the Mile Slip and Alfred had no choice but to close the Mill. He continued to live at the home until he moved away to Pepperell in 1888.

Today, 130 years later, all that remains are the cellar holes and the rough foundations of where the Spaulding home was and the remnants of the mill on the north side of Spaulding Brook. Even the Brookline town history talks about the place being just ruins in 1914. Aside from some areas of earth removal in recent times, the area has returned to nature and 130 years' worth of timber growth has reclaimed the area.



In addition to the Spaulding site, just to the south of the site on the other side of the road, the remains of a farm that at one time was owned by Joseph Dunklee can also be seen. In addition to the house foundations here, a very interesting series of stones can be seen on the hill behind the foundation. The stones appear to be part of what was once a corn crib for the farm.

Reference material: History of Brookline, NH – 1914

The Lodge including a history of the Mile Slip by Andrew Rothovius -1964 Milford Heritage Commission, Compiled by Christopher Thompson -2018

GRAVEL REMOVAL OPERATION - (PHASE 9)

TAX MAP 58 LOTS 1, 2 & 3 OFF MILE SLIP ROAD MILFORD, NEW HAMPSHIRE MAY 11, 2018 LAST REVISED: MARCH 14, 2019

OPERATIONAL NOTES:

- THE PROPOSED EXCAVATION WILL CONSIST OF DISTURBING APPROXIMATELY 8.0 ACRES. THE ESTIMATED AUGUST OF MATERIALS TO BE EXCAVATED IS APPROXIMATELY 81.165± CUBIC YARDS.
- ALL TRAFFIC TRANSPORTING EXCAVATED MATERIALS FROM THE PROPERTY WILL UTILIZE NORTH MASON ROAD AND SPAIR DANG RROAD TO CAM ACCESS TO THE SITE
- NO EXCAVATION WILL BE PERFORMED WITHIN 25' OF MAPPED WETLANDS OR 50' FROM GREAT BROOK, WITHIN 50' OF ABUTTING PROPERTIES OR WITHIN 150' OF EXISTING DWELLINGS.
- no excavation within 3 feet of seasonal high water table is plained. Additional test pits will need to be performed in deep cut areas once wateral is excavated to ensure adequate separation between the season high water table is maintained. All test pit data and information will be submitted to the town of miliford.
- NOIS ON SITE MAY CONSIST OF AN OFFICE TRAILER AND EXCAVATION EQUIPMENT. THE USED ON SITE TO PROCESS THE MATERIAL MAY CONSIST OF A UNMANUM OF ONE BULLDOZER, A MADRE THAT OF THE STATE OF THE WORKER OF THE STATE OF THE STATE OF THE WORKER OF THE STATE OF THE STATE OF THE WORKER OF THE STATE OF

- NO MORE THAN TEN (10) ACRES, INCLUDING THE PROCESSING AREA, SHALL BE LEFT IN AN UNRESTORED (UNSTABILIZED) CONDITION AT ANY TIME. SEE EROSION CONTROL NOTES. THE EXCAVATION OPERATIONS FOR THE SITE WILL BE WORKED FROM THE FRONT TO BACK AND CONSTRUCTION SHALL PROCRESS SO THAT RUNOFF FROM EXCAVATED AREAS DOES NOT FLOW OUTSIDE THE EXCAVATION AREA.
- Trucks that will be utilized to transport the material from the site will consists of tri—axles, 10—wheelers, and tractor trailer dum trucks. The duration of the scomation will be determined by the Market and the Need for the Material
- THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:

 NHDES ALTERATION OF TERRAIN PERMIT AOT (FORMERLY SITE SPECIFIC PERMIT)

 RSA 155-E PERMIT REMOVAL PERMIT

 MILFORD STORMAEL REMOVAL PERMIT

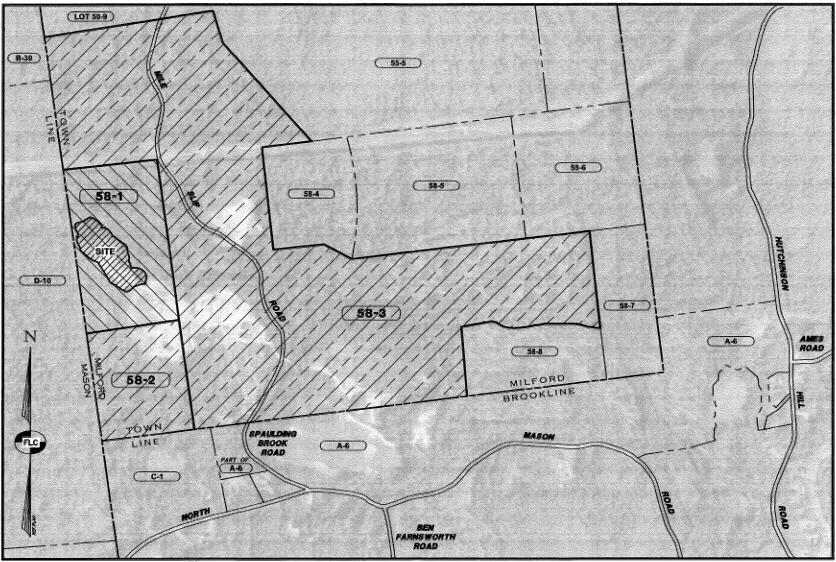
 MILFORD STORMAEL

- THE APPLICANT SHALL SUBMIT TO THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, ALTERATION OF TERRAIN PROCRAM, AND THE TOWN OF MILFORD A WRITTEN UPDATE OF THE PROJECT AND REVISED PLANS DOLUMENTING THE PROJECT STATUS EVERY FIVE (5) YEARS FROM THE DATE OF THE ALTERATION OF TERRAIN PERMIT.

- THERE SHALL BE NO FUELING OF VEHICLES ON SITE UNLESS A SOURCE CONTROL PLAN IS SUBMITTED AND APPROVED BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.

REGULATORY NOTES:

1. ALL OPERATIONS SHALL CONFORM TO THE TOWN OF MILFORD GRAVEL AND EARTH REMOVAL REGULATIONS AND RSA 155-E, WHICH IS THE LAW GOVERNING EARTH EXCAVATIONS.



SCALE: 1"=500"±

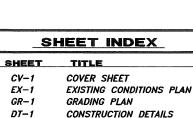
PREPARED FOR: **BURBEE SAND & GRAVEL**

P.O. BOX 456 BROOKLINE, NEW HAMPSHIRE 03033

LAND OF:

JANE E. PROVINS REVOCABLE TRUST OF 1999 JANE E. PROVINS, TRUSTEE

113 NORTH MASON ROAD **BROOKLINE, NEW HAMPSHIRE 03033**



CV-1

EX-1

GR-1

DT-1

DT-2

PAGE

MAP 58 LOTS 5 & 7 CHARLES L. HILDRETH 3 LADY COVE FALMOUTH, ME 04105—1956 VOL.7534 PG.293 8/29/2005 (58-5 MILE SLIP ROAD)

MAP 58 LOT 6
CLARENCE L FARWELL
REVOCABLE TRUST
CLARENCE L FARWELL, TRUSTIEE
25 LAKE ROAD
BROOKLINE, NH 03033—2217
VOL.5987 PG-436 7/10/2003
(ON BROOKLINE T/L)

MAP 50 LOT 9 TOWN OF MILFORD 1 UNION SQUARE MILFORD, NH 03055-4230 VOL.7531 PG.2372 8/24/2005 (0 MILE SUP ROAD)

MAP 55 LOT 5 TOWN OF MELFORD

TOWN OF MILFORD MAR 142019

_ZBA___Office

ABUTTER INFORMATION (IN BROOKLINE)

EROSION CONTROL DETAILS

MAP C LOT 1
JANE E PROVINS REVOCABLE
TRUST OF 1999
JANE E PROVINS, TRUSTEE
113 NORTH MASON ROAD
BROOKLINE, NH 03033
VOL.7741 PC.1558 9/21/2006
(113 NORTH MASON ROAD)

ABUTTER INFORMATION (IN MASON)

MAP B LOT 30 MAP B LOT 30 C. CHRISTOPHER GUIRY 566 MITCHELL HILL ROAD MASON, NH 03048 VOL5172 PG.951 2/16/1990

MAP D LOT 10 CRAIG W. FIFIELD, TRUSTEE 54 KIRKILAND DRIVE STOW, MA 01775 VOL.7629 PC.1669 1/30/2006 (388 BLACK BROOK ROAD)

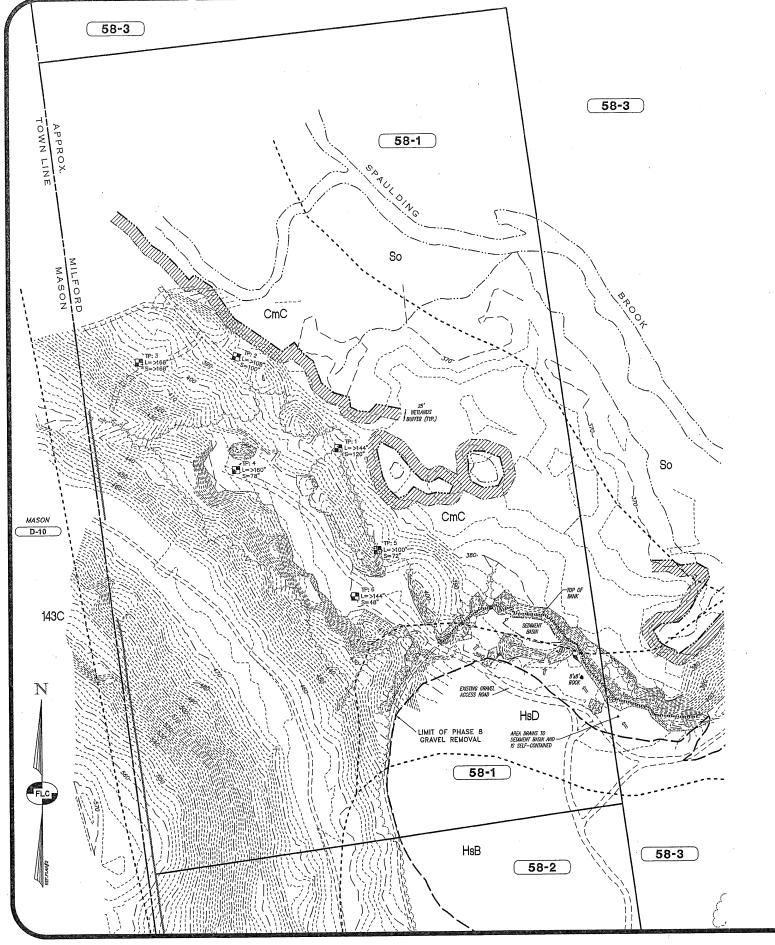
MAP D LOT 11-2 DAVID M. & JOAN C. PUSHEE 61 CARMEL DRIVE PLYMOUTH, NH 03264 VOL2767 PC.727 5/1/1980 (GILMAN HILL ROAD)

FIF: 1780(V000 due DPOL NO 1780 00 SHEFT: (V-1 DACE NO 1 OF 5							
REV.	DATE	DESCRIPTION			C/0	DR	СК
Α	12/04/18	ADD NOTE "R"				NRC	CEB
В	1/29/19	REV. PER STATE COMMENTS				PWH	CEB
С	2/20/19	PER DES COMMENTS				DSL	CEB
D	3/14/19	ADDED CONTOURS PER DES				DEB	CEB



206 Elm Street, Milford NH 03055 Fax: (603)-413-5456 Phone: (603)-672-5456 www.FieldstoneLandConsultants.com





REFERENCE PLANS:

1. "LOT LINE REVISION & — CONSOLIDATION PLAN — TAX MAP PARCELS A-6 & C-9 — BROOKLINE, NEW HAMPSHIRE", 2 SHEETS, SCALE 1"=200", DATED MARCH 27, 2008, BY MERIDIAN LAND SERVICES, INC. RECORDED IN THE H.C.R.D. AS PLAN #35997.

2. "EARTH REMOVAL OPERATION — MAP 58 LOTS 1, 2, 3 — MILFORD, NEW HAMPSHIRE", SCALE 1"=100', 4 SHEETS, DATED APRIL 27, 2007 AND LAST REVISED OCTOBER 25, 2007, BY MERIDIAN LAND SERVICES, INC. AVAILABLE AT THE TOWN OF MILFORD PLANNING DEPT.

LEGEND:

_ _ _ _ EDGE OF GRAVEL ROAL YTYTYTYTYTYTYN EDGE OF TREE LINE ---- WETLANDS BUFFER LINE ---- 2' CONTOUR INTERVAL 58-1 TAX MAP & LOT NUMBER

CMC CANTON FINE SANDY LOAM 8 TO 15% SLOPES, VERY STONY

HINCKLEY LOAMY SAND 15 TO 35% SLOPES, VERY STONY

So SCARBORO MUCKY FINE SANDY LOAM 0 TO 3% SLOPES

CERTIFICATION:

"I HEREBY CERTIFY THAT THE EXISTING IMPROVEMENTS SHOWN ARE THE RESULT OF AN AERIAL PHOTOGRAPHY PERFORMED BY AERIAL DIGITAL IMPPINE (ADM), FLIGHT DATE 2008, TOGETHER WITH GPS ON-SITE FIELD SURVEY BY THIS OFFICE DURING THE MONTH OF MAY 2018 AND MARCH 2019.

DATE: 3/14/19



CERTIFICATION:

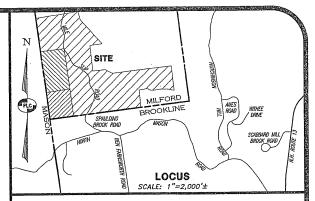
WETLANDS WERE DELINEATED IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS 1987 WETLAND DELINEATION MANUAL Y-57-1 AND INTERIM REGIONAL SUPPLEMENT FOR NORTHEAST AND NORTHCENTRAL REGION AND FIELD INDICATORS FOR HYDRIC SOILS IN NEW ENGLAND BY CHRISTOPHER A. GUIDA, CW.S. IN JANUARY 2018.

DATE: 3/14/19



TOWN OF MILFORD RECEIVED

MAR 142019



- THE OWNER OF RECORD FOR TAX MAP LOTS 58-1, 58-2 AND 58-3 IS THE JANE E. PROWNS REVOCABLE TRUST OF 1999, 113 NORTH MASON ROAD, BROOKLINE, MH 3031 HE DEED REFERENCE FOR LOTS 58-1 AND 58-3 IS BK.8195 PO.295 DATED APRIL 16, 2010 AND THE DEED REFERENCE FOR LOT 58-2 IS BK.7645 PO.773 DATED APRIL 20, 2006, FOUND IN THE HILLBOROUGH COUTY REGISTRY OF DEEDS.
- 2. THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS ON TAX MAP LOTS 58-1, 58-2 AND 58-3 AS SHOWN.
- 3. THE TOTAL AREA OF TAX MAP LOT 58-1 IS $40\pm$ ACRES PER TAX CARD.
- 4. THE PROPERTY IS LOCATED WITHIN THE RESIDENCE DISTRICT (R).

LOT REQUIREMENTS INCLUDE:

MIN LOT SIZE: 2 ACRES (87,120 S0.FT.)
ROAD FRONTAGE: 200 FT. ON A CLASS V OR BETTER ROAD
BUILDING SETBACKS: FRONT— 30°, SIDE AND REAR— 15°
OPEN SPACE: >30°, OF TOTAL LOT AREA.

- THE TOWN LINE AND LOT PERIMETERS SHOWN WERE DEVELOPED FROM THE REFERENCE PLANS AND ARE NOT THE RESULT OF A FIELD BOUNDARY SURVEY BY THIS OFFICE.
- THE SURFACE FEATURES AND SITE TOPOGRAPHY SHOWN WERE DEVELOPED FROM AERIAL PHOTOGRAPHY PERFORMED BY AERIAL DIGITAL MAPPING (ADM), FLIGHT DATE 2008, TOGETHER WITH GPS ON-SITE FIELD SURVEY BY THIS OFFICE DURING THE MONTHS OF MAY 2018 AND MARCH 2019.
- JURISDICTIONAL WETLANDS SHOWN WERE MAPPED AND LOCATED BY THIS OFFICE DURING THE MONTH OF MAY 2018.
- . A PORTION OF THE LOT LIES WITHIN THE LIMITS OF THE 100—YEAR FLOOD HAZARD AREA PER FEMA F.I.R.M. PANEL 33011C0465D DATED SEPTEMBER 25, 2009 FOR MILFORD, COMMUNITY NO. 330096.
- THE SUBJECT PARCEL LIES WITHIN THE MILFORD LEVEL 2 GROUNDWATER PROTECTION DISTRICT.



A	03/14/19	ADDED CONTOURS PER DES		TJB	MDP
REV.	DATE	DESCRIPTION	c/o	DR	CK
	Accessed to the last of the la		A STREET, SQUARE, SQUA	-	The second second

EXISTING CONDITIONS PLAN

TAX MAP 58 LOTS 1, 2 & 3 (OFF MILE SLIP ROAD) MILFORD, NEW HAMPSHIRE

PREPARED FOR

BURBEE SAND & GRAVEL 35 NORTH MASON ROAD, BROOKLINE, NH 03033

LAND OF

JANE E. PROVINS **REVOCABLE TRUST OF 1999**

MAY 17, 2018

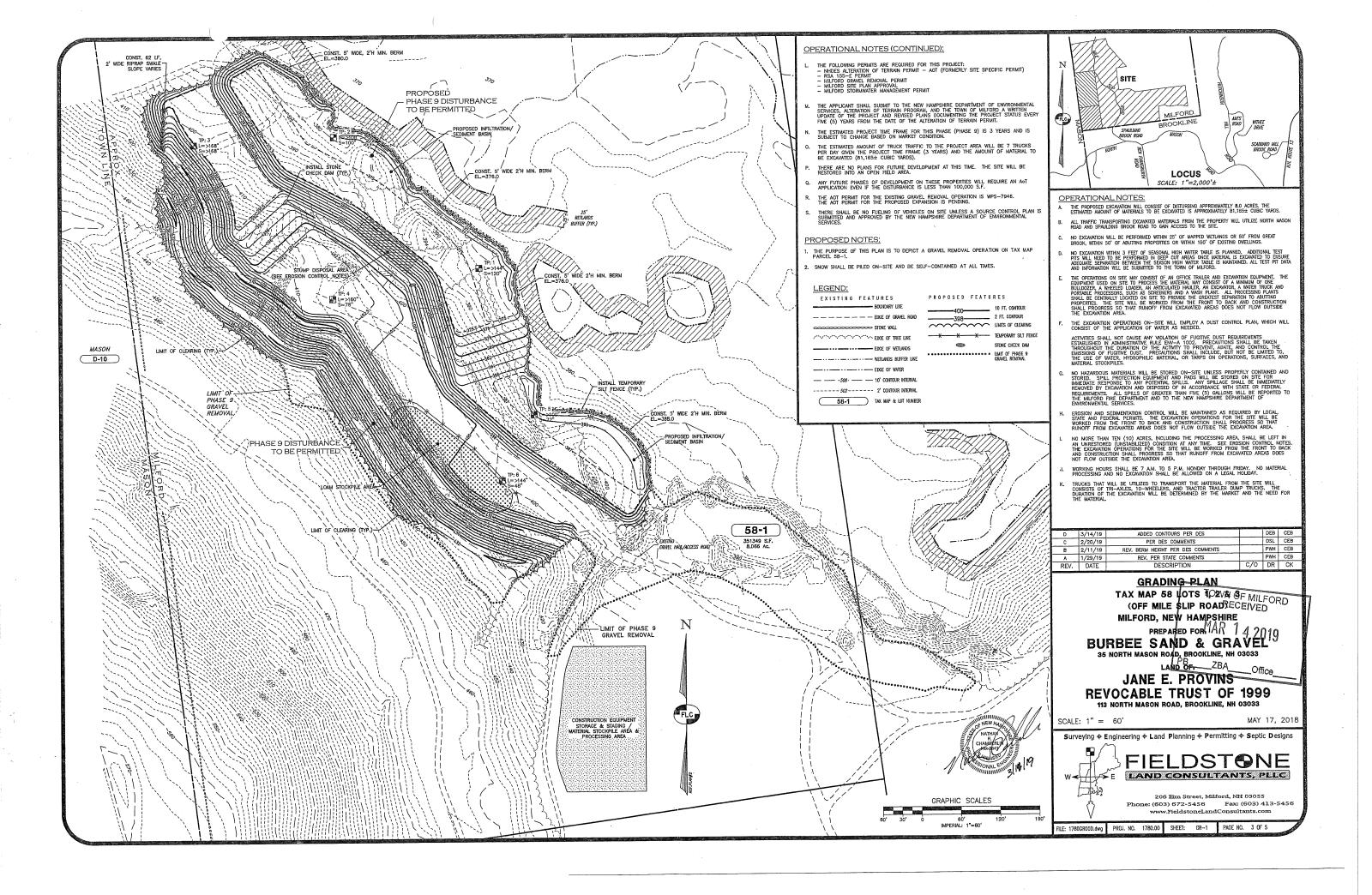
Surveying + Engineering + Land Planning + Permitting + Septic Designs



FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055 Phone: (603) 672-5456 Fax: (603) 413-5456 www.FieldstoneLandConsultants.com

FILE: 1780EX00A.dwg PROJ. NO. 1780.00 SHEET: EX-1 PAGE NO. 2 OF 5



SITE PREPARATIO

- CUT AND FILL SLOPES SHOULD NOT EXCEED 2:1 TO PROVIDE STABILITY. FLATTER SLOPES (3:1) ARE PREFERRED.
- AVOID LONG SLOPES TO HELP PREVENT EROSION AND TO ALLOW ACCESS FOR SEEDING, MULCHING AND MAINTENANCE. (SEE TERRACED SLOPE DETAIL).
- 4. WHEN SLOPES ARE TERRACED, ROCK LINED CHUTES OR EQUIVALENT SHALL BE UTILIZED TO CONVEY CONCENTRATED FLOWS OF WATER TO STABLE OUTLETS.
- 5. REMOVE LARGE STONES, BOULDERS AND OTHER DEBRIS THAT WILL HINDER THE SEEDING PROCESS AND ALLOW THE ESTABLISHMENT OF VEGETATION.
- SPREAD TOPSOIL FROM THE SITE OVER THE AREA TO BE SEEDED. THIS PROJECT WILL BE RECLAIMED WITH THE LOAM AVAILABLE ON-SITE.
- 7. OBTAIN SOIL SAMPLES BY COLLECTING B TO 8 SMALL SAMPLES (1 OR 2 HANDFULS) OF SOIL MATERIAL FROM THE UPPER 4 INCHES OF THE AREA TO BE SEEDED. MIX THE SMALL SAMPLES TO OBTAIN ONE COMPOSITE SAMPLE.
- B. USE PART OF THE SAMPLE FOR A SOIL TEST TO DETERMINE LIME AND FERTILIZER NEEDS RUN THE BALANGE OF THE SAMPLE(S) THROUGH A SIEVE ANALYSIS TO DETERMINE THE PERCENT BY WEIGHT PASSING A NO. 23 EVEV. THOSE FASSING ARE CALLED FINES.

(1) SPECIES AND VARIETY SELECTION

SELECT ONE OF THE GRASS/LEGUME MIXES BASED ON THE PERCENT WEIGHT PASSING A NO. 200 SIEVE AS OUTLINED ABOVE. MIX 2 IS RECOMMENDED IS SUPPRESSION OF WOOD'S GROWIN IS DESIRED AND THERE ARE MORE THAN 15 FERCENT FINES. THE STANDARD CONSERVATION MIXES AVAILABLE FROM LOCAL SEED SUPPLIERS ARE NOT RECOMMENDED ON DROUGHTY SITES. THESE MIXES USUALLY PROVIDE A CREEN COVER VERY QUICKLY, BUT THE PLANT SPECIES BEGINT OF DE IN 24 YEARS ON

WHERE PERCENT BY WEIGHT PASSING A NO. 200 SIEVE IS LESS THAN 15, SELECT FROM MIX 1

М.	X 1 (WARM SEASON GRASS	ies)				
	_ .		MIX OPTIONS	FOR VARIO	DUS SITUAT	10NS
	SPECIES	VARIETIES (SELECT ONE)	LBS PER ACR	E (PLS)		
			(1)	(2)	(3)	
	SWITCHGRASS	TRAILBLAZER, PATHFINDER	6	2	6	
	COASTAL PANICGRASS	ATLANTIC		5		
	BIG BLUESTEM	NIAGRA, KAW	4	2	4	
	LITTLE BLUESTEM	ALDOUS, CAMPER, BLAZE	2			
	SAND LOVEGRASS	BEND, NE-27	4	6	5	
			15	15	15	

OPTIONS IN MIX.1

(1) THIS COMBINATION MOST CLOSELY REPRESENTS THE NATURALLY OCCURRING VEGETATION WHERE WARM SEASON GRASSES ARE NATIVE IN THE NORTHEAST.

(2) THIS COMBINATION HAS THE FASTEST ESTABLISHMENT AND COVER

(3) THIS COMBINATION IS THE SIMPLEST AND MAY BE EASIER TO OBTAIN. OPTIONS 2 OR 1 IS PREFERRED,

WHERE PERCENT BY WEIGHT PASSING A NO. 200 SIEVE IS BETWEEN 15 AND 20, SELECT FROM MIX 2.

MIX 2 (LEGUMES AND COOL SEASON GRASSES)

SPECIES	VARIETIES (SELECT ONE) (a)	LBS PER ACE	
FLATPEA (C)	LATHCO	10.0	
PERENNIAL PEA (C)	LANCER	2.0	
CROWN VETCH (c)	PENGIFT, CHEMUNG	10.0	
TALL FESCUE	KY=31, REBEL, KEN-HI	10.0	

(a) VARIETIES ARE LISTED IN PREFERENTIAL ORDER. (b) WARM SEASON GRASS SEED IS SOLD AND PLANTED ON THE BASIS OF PURE LIVE SEEDS (PLS). AN ADJUST IMENT IS MADE TO THE BULK POUNDS OF SEED TO COMPENSATE FOR INERT MATERIAL AND DEAL

SEED, (e) THESE LEGUMES MUST BE INOCULATED AT THE TIME OF SEEDING, IF SEEDING BY HAND, USE A STICKING AGENT SUCH AS COCA-COLA OR MILK TO STICK INOCULANT TO SEED. IF SEEDING WITH A HYDROSEEDER, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT.

WHERE PERCENT BY WEIGHT PASSING A NO. 200 SIEVE IS ABOVE 20, SELECT FROM MIX 3.

MIX 3 (LEGUMES AND COOL SEASON GRASSES)

SPECIES	VARIETIES (SELECT ONE) (8)	LBS PER ACRE	
TALL FESCUE	KY-31	20.0	
REDTOP	STREEKER, COMMON	2.0	
BIRDSFOOT TREFOIL ^(c)	VIKING, EMPIRE	8.0	

(a) VARIETIES ARE LISTED IN PREFERENTIAL ORDER.
(b) LEGUIME AND COOL SEASON GRASS SEED IS SOLD AND PLANTED ON A BULK BASIS. THE WEIGHT IS
NOT COMPENSATED FOR INERT MATERIAL AND DEAD SEED.
(c) THESE LEGUIMES MUST BE INCOLLATED AT THE TIME OF SEEDING, IF SEEDING BY HAND, USE A
STICKING AGENT SUCH AS COCA-COLA OR MILK TO STICK INCOLLANT TO SEED, IF SEEDING WITH A
HYDROSEEDER, USE 4 TIMES THE RECOMMENDED RATE OF INCOLLANT.

(2) LIME AND FERTILIZER DETERMINATION

(a) MIX 1 - IN LIEU OF A SOIL TEST, LIME AT THE RATE OF 1 TONIACRE (50 LBS/1000 S.F.) FERTILIZE WITH 500 LBS/ACRE (11 LBS/1000 S.F.) OF 10-20-20 OR EQUIVALENT, INCORPORATE LIME, FERTILIZER, AND SEED USING BAKES IF SEEDING IS DONE BY HAND, IT IS STRONGLY RECOMMENDED TO USE A BUILLOZER TO TRACK THE SITE AFTER SEEDING. TRACKING WILL INCORPORATE THE LIME, FERTILIZER AND SEED TO

(b) MIXES 2 & 3 - IN LIEU OF A SOIL TEST, LIME AT THE RATE OF 2 TONS/ACRE (9D LBS/1000 S.F.) FERTILIZE WITH 500 LBS/ACRE (11 LBS/1000 S.F.) OF 10-20-20 OR EQUIVALENT.

THE SEED NEEDS TO BE INCORPORATED TO ENSURE SUCCESS AND TO SHORTEN ESTABLISHMENT TIME THIS IS ESPECIALLY TIME OF MIXES 1 AND 2, AND IS MOST CRITICAL FOR THE LARGE SEED LEGUMES IN MIX 2. ON THE FLATTER SLOPES, USE A BULLOZER TO "TRACK" IN THE SEED.

(a) MULCHING FOR MIX 1 - WEED FREE MULCH. CLEAN STRAW IS RECOMMENDED. MULCH AT THE MAXIMUM RATE OF 500-700 LBS/ACRE. HIGHER MULCHING RATES AND MULCH WITH WEED SEED CONTENT INHIBIT SEEDING SUCCESS SIGNIFICANTLY. IF THE EROSION HAZARD IS AND THE SEED IS RPORATED, MULCHING IS NOT NECESSARY FOR SEEDING SUCCESS. DO NOT APPLY MULCH PRIOR TO

(b) <u>MULCHING FOR MIX 2 AND 3</u> - MULCH WITH WEED FREE HAY OR STRAW AND MULCH AT THE RATE OF 2-3 TONSACRE FOR MIX 3. THE HIGHER MULCHING RATE IS RECOMMENDED WHERE SEED INCORPORATION IS DIFFICULT. THIS IS ESPECIALLY CRITICAL FOR MIX 2.

(4) SEEDING METHODS

ALTERNATIVE 1 - LARGE AREAS AND/OR STEEP SLOPES
APPLY, LIME, SEED AND FERTILIZER WITH A HYDROSEEDER AND DEPENDING ON THE CONSISTENCY OF THE
SOIL MATERIAL, STEEPNESS OF SLOPE, AND SEED MIXTURE USED:

(a) PRESS THE SEED INTO THE SOIL BY "TRACKING" WITH BULLDOZER, OR (b) COVER THE SEED BY WALKING BACK AND FORTH OVER STEEP LOOSE SANDY SLOPES, OR (c) APPLY MULCH AND A TACKIFIER TO HOLD THE MULCH IN PLACE.

ALTERNATIVE 2 - FLAT TO GENTLY SLOPING AREAS (2:1 SLOPES MAXIMUM)
APPLY LIME, SEED AND FERTILIZER USING FARM TYPE SPREADERS, AND "TRACK" THE SITE WITH A
BULLDOZER OR APPLY MULCH.

PERMANENT SEEDING FOR DISTURBED AREAS

1 DT-1 USDA NRCS TECHNICAL NOTE <u>PUBLICATION PM-NH-21</u> "VEGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS,

PRIMARY SEEDING DATES BEGIN AS SOON AS THE SNOW MELTS IN THE SPRING AND ENDS MAY 15. THE IMPORTANCE OF EARLY SEEDING CANNOT BE OVEREINFUNGSIZED. THIS IS ESPECIALLY TRUE OF MIX 1. DEPENDING ON THE WEATHER CONDITIONS, SUBSTANTIAL FAILURE CAN BE EXPECTED IS SEEDING IS

LATE SUMMER AND EARLY FALL SEEDINGS ARE NOT RECOMMENDED FOR MIXES 1 AND 2. IF LATE SEASON SEEDINGS OF MIXES 1 AND 2 ARE NECESSARY, THEY SHOULD BE DONE AFTER OCTOBER 2D TO PREVENT FALL GERMINATION AND SUBSEQUENT WINTER KILL.

MIX 3 CAN ALSO BE SEEDED FROM AUGUST 15 TO SEPTEMBER 1 WITH CONVENTIONAL SEEDING

(6) RESPONSE OF SEEDING

THE PLANT SPECIES IN MIXES 1 AND 2 GERMINATE AND GROW SLOWLY. COMPLETE COVER MAY NOT OCCUR FOR 2-4 YEARS. HOWEVER, A WELL ESTABLISHED STAND WILL ENDURE FOR YEARS.

SUBSTANTIAL STAND VIGOR CAN BE ACHIEVED IF THE SITE IS TOPDRESSED WITH FERTILIZER ONE YEAR AFTER PLANTING. IF TOPDRESSING MIX 1, FERTILIZE BETWEEN JUNE 16 AND JULY 15. THE TIMING OF THIS TOPDRESSING IS IMPORTANT. MIXES 2 AND 3 SHOULD BE TOPDRESSED IN EARLY SPRING. TOPDRESS MIXES 1, AND 3 WITH A BALANCED FERTILIZER, APPLYING 50 LBS OF NITROGENIACRE. FOR EXAMPLE APPLY 250 LBS OF 20-20-20/ACRE. TOPDRESS MIX 2 WITH AFOIL IS OF EARLY SIGNAL OF THE STANDARD OF THE

IF MOWING IS DESIRED TO SUPPRESS WOODY GROWTH, MOW MIX 1 ABOUT MID JULY LEAVING A STUBBLE HEIGHT OF 6-8 INCHES. IT IS NOT NECESSARY TO MOW MIX 2. A GOOD COVER OF FLATPEA WILL PREVENT INVASION OF WOODY SPECIES. MIX 3 CAN BE WOVED AT ANY TIME.

PERMANENT SEEDING FOR DISTURBED AREAS - CONT.

USDA NRCS TECHNICAL NOTE <u>PUBLICATION PM-NH-21</u> "VEGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS, REVISED APRIL 2000

- 3. REMOVE TOPSOIL AND STOCKPILE AWAY FROM ANY WETLAND, STABILIZE STOCKPILE IMMEDIATELY BY SEEDING. PLACE SILT FENCE AROUND THE DOWN SLOPE SIDE OF EARTH
- 4. CONSTRUCTMAINTAIN THE ACCESS ROAD TO THE EXCAVATION AREA. WHEN CUITING THROUGH THE SLOPES TO GET TO THE EXCAVATION SITE THE BERN SHALL BE CONSTRUCTED ENSURING THAT THE SITE IS SELF-CONTAINED. ALL CUIT AND FILL SLOPES SHALL BE STABILIZED UPON COMPLETION OF ROUGH GRADING PER THE THE EROSION CONTROL NOTES.
- 5. INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.25° OR GREATER RAINFALL EVENT.
- 6. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, CULVERTS, DITCHES, SILTATION FENCES, BEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
- 8. SEEDING SHALL BE PERFORMED UPON COMPLETION OF WORK AREAS. SEE EROSION CONTROL NOTES FOR SEEDING DETAILS.
- 9. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED. ACCUMULATED SEDIMENT SHALL BE REMOVED AND STABILIZED APPROPRIATELY.

CONSTRUCTION SEQUENCE NOTES

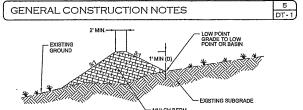
- USE OF TEMPORARY SEEDING SHALL BE IMPLEMENTED WHEN A DISTURBED AREA WILL BE INACTIVE FOR A PERIOD OF 72 HOURS AFTER FINAL GRADING.
- THIS DOES NOT APPLY TO MARKETABLE STOCKPILE AREAS OF MATERIAL, ALL STOCKPILES WILL BE SELF CONTAINED WITHIN THE SITE,
- ALL ESSENTIAL GRADING SUCH AS DIVERSIONS. DAMS, DITCHES, AND DRAINS NEEDED TO PREVENT GULLYING AND REDUCE SILTATION SHALL BE COMPLETED
- PREPARE SEEDBED BY REMOVEING ALL STONES, TRASH AND STUMPING DEBRIS THAT WILL INTERFERE WITH SEEDING AREA. WHERE FEASIBLE, TILL THE SOIL TO A DEPTH OF ABOUT 3 INCHES TO PREPARE SEEDBED AND MIX FERTILIZER INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATIONS SHOULD BE FERFORMED ACROSS
- A MINIMUM OF 300 POUNDS PER ACRE (7 LBS, PER 1,000 SQ.FT.) OF
 10-10-10 FERTILIZER, OR ITS EQUIVALENT, SHALL BE UNIFORMLY SPREAD
 OVER THE AREA PRIOR TO BEING INCORPORATED INTO THE SOIL.
- THE SEED SHALL BE SPREAD UNIFORMLY OVER THE AREA. AFTER SEEDING, THE SOIL SHOULD BE FIRMED BY ROLLING OR PACKING. WHERE ROLLING OR PACKING IS NOT FEASIBLE, THE SEED SHALL BE COVERED LIGHTLY BY RAKING, DISKING, OR DRAGGING.
- STRAW MULCH MAY BE NECCESSARY TO PROMOTE SEED GERMINATION IN DRY AND/OR INFERTILE CONDITIONS.

PLANT SELECTION AND APPLICATION RATES:				
	SPECIES (RATE 1 LBS/AC.) (LBS/1,00	RATE 2 30 S.F.)	REMARKS
	WINTER RYE	112	2.5	FALL, B/15 TO 9/15 PLANT 1.0 INCH DEEP
	OATS	80	2.0	SPRING PRIOR TO 5/15PLANT 1.0 INCH DEEP
	ANNUAL RYEGRASS	40	1.0	QUICK, SHORT DURATION GOOD APPEARANCEEARLY SPRING & FALLPLANT 0.25 INCH DEEP
	PERENNIAL RYEGRASS	30	0.7	LASTS LONGER THAN ANNUAL LATE SPRING & FALL MULCHING WILL ALLOW USE ALL SEASONPLANT 0.5 INCH DEEP

SEEDING FOR TEMPORARY PROTECTION OF DISTURBED AREAS DT-1

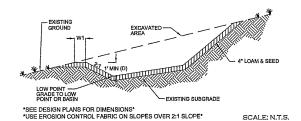


- ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REQUIREMENTS AND SPECIFICATIONS
 OF THE TOWN OF MILFORD AND RSA 155-E.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION
 OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS AND SHALL VERIFY THAT
 ALL THE INFORMATION SHOWN HEREON IS CONSISTENT, COMPLETE, ACCURATE, AND CAN BE
 CONSTRUCTED PRIOR TO AND/OR DURING CONSTRUCTION, FIELDSTONE LAND CONSULTANTS, CONSTRUCTED PRIOR I O ADDITOR DUTING THE MOST THE OFFICE OF A DISTRICT O
- THE CONTRACTOR SHALL CONTACT "DIGSAFE" 72 HOURS PRIOR TO THE START OF CONSTRUCTION (1-800-255-4977 IN NH, 1-888-344-7233 IN MA).
- COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND SPECIAL CONDITIONS OF TOWN,
 AGENCIES, SUCH AS THE PLANNING BOARD, ZONING BOARD, CONSERVATION COMMISSI
 OTHERS, IS MANDATORY AND IS THE RESPONSIBILITY OF THE OWNER.
- 5. ANY ALTERATION OF THIS DESIGN OR CHANGE DURING CONSTRUCTION MAY REQUIRE APPROVAL OF VARIOUS TOWN BOARDS OR AGENCIES AND SHALL BE DISCUSSED WITH THE OWNER AND FIELDSTONE LAND CONSULTANTS, PLLC PRIOR TO CONSTRUCTION.

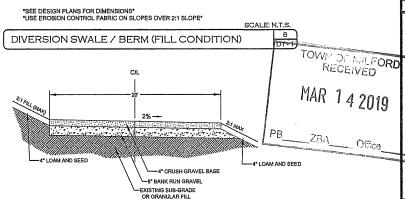


MULCH SHALL CONSIST OF GROUND STUMPS, CHIPPED BRUSH AND/OR OTHER OTHER ORGANIC MATERIAL NECESSARY TO FORM A STABLE BERM

MULCH BERM



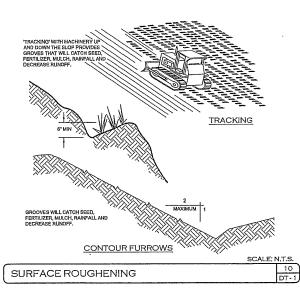
DIVERSION SWALE / BERM (EXCAVATED CONDITION)

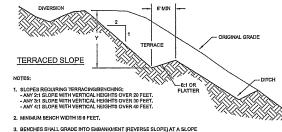


COMPACTED SUBGRADE

"NOTE CROSS SLOPE MAY VARY IN DIRECTION" GRAVEL ACCESS DRIVE TYPICAL SECTION DT-1

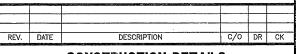
> CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION DIGSAFE.COM OR DIAL 8 1 1
> CALL 811 - KNOW WHAT'S BELOW





- BENCHES SHALL GRADE INTO EMBANKMENT (REVERSE SLOPE) AT A SLOPE OF 6:1 OR FLATTER AND BE A MINIMUM OF 1 FOOT IN DEPTH.
- 5. THE BENCH GRADIENT TO THE OUTLET POINT SHALL BE 1 TO 2 PERCENT

TERRACED SLOPE



CONSTRUCTION DETAILS TAX MAP 58 LOTS 1, 2 AND 3 (OFF MILE SLIP ROAD) MILFORD, NEW HAMPSHIRE

PREPARED FOR **BURBEE SAND & GRAVEL** P.O. BOX 456, BROOKLINE, NH 03033

LAND OF JANE E. PROVINS **REVOCABLE TRUST OF 1999**

MAY 11, 2018 SCALE: AS SHOWN

FIELDSTONE LAND CONSULTANTS, PLLC

Surveying Φ Engineering Φ Land Planning Φ Permitting Φ Septic Designs

206 Elm Street, Milford, NH 03055 Phone: (603) 672-5456 Fax: (603) 413-5456 www.Fields

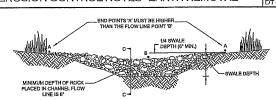
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PROJ. NO. 1780.00 SHEET: DT-1 PAGE NO. 4 OF 5

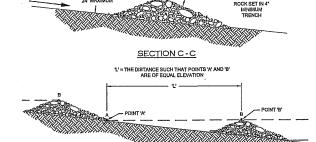
DURING EXCAVATION AND THEREAFTER, EROSION CUNTROL MEASURES ARE TO BE IMPLEMENTED AS

- EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS IN ANY GIVEN AREA, INSTALL ALL STONE CHECK DAMS, SILVATION CONTROL FENCES, CONSTRUCTION DEVISE AND DAY OTHER DEVICES PROP
- CUT AND CLEAR TREES AS REQUIRED. DISPOSE OF DEBRIS. STUMPS ARE TO BE BURIED ON SITE AT THE LOCATIONS SHOWN. STUMPS SHALL BE COMPACTED AND ALL VOIDS FILLED WITH SUITABLE MATERIAL. COVER WITH 4°Q FLOAM FROM SITE AND SEED.
- 3. REMOVE TOPSOIL AND STOCKPILE AWAY FROM ANY WETLAND. ALL STOCKPILES SHALL BE STABILIZED IMMEDIATELY BY SEEDING. PLACE SILT FENCE AROUND THE DOWN SLOPE SIDE OF EARTH STOCKPILES
- 4. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.
- 5. THE AREA OF LAND EXPOSED AND THE TIME OF EXPOSURE SHALL BE MINIMIZED, ALL NON-ACTIVE DISTURBED AREAS (AREAS CLEARED FOR EXCAVATION BUT NOT PRESENTLY UNDERGOING EXCAVATION) SHALL BE STABLIZED WITHIN 4 DAYS OF DISTURBANCE. THE MAXIMUM AREA OF ACTIVE DISTURBANCE SHALL BE LIMITED TO 10 ACRES (THIS DOES NOT INCLUDE THE PROCESSING AREA OR ACCESS ROADS WHICH COULD TOTAL APPROXIMATELY 5 ACRES). ALL DISTURBED AREAS SHALL BE STABLIZED WITHIN 72 HOURS AFTER FINAL GRADING.
- 6. DURING EXCAVATION THE PROJECT SHALL BE GRADED IN SUCH A WAY THAT ALL SIDE SLOPES SLOPE INTO THE PROJECT, THE AREA BEING EXCAVATED SHALL BE SELF CONTAINED. SEE GRADING PLANS.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, CULVERTS, DITCHES, SILTATION FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
- 8. INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.25* OR GREATER RAINFALL EVENT,
- 10. ALL DISTURBED AREAS SHALL BE STABILIZED, AS REQUIRED, WITHIN 72 HOURS AFTER FINAL GRADING
- 11. AN AREA MAY BE CONSIDERED STABILIZED WHEN ONE OF THE FOLLOWING AS OCCURED A. BASE COURSE GRAVELS HAVE SEEN INSTALLED IN AREAS TO BE PAVED; B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
- B. A MINIMUM OF 93% VEGETATED LIFOUTH IT AS BEEN ESTABLISHED;
 C. A MINIMUM OF 3-MONES OF NON-EROSIVE MATERIAL SUCH AS STONE, RIPRAP OR MULCH
 (STUMF GRINOINGS) HAVE BEEN INSTALLED; OR
 D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- 12. CUT SLOPES MAY BE LEFT AS SAND SLOPES TO PROVIDE HABITATS FOR WILDLIFE. THIS SHALL ONLY OCCUR IN AREAS WHERE THE SITE IS SELF-CONTAINED.
- 13. IF VEGETATION IS CHOSEN FOR STABILIZATION (RESTORATION) THEN ALL DISTURBED AREAS SHALL BE COVERED WITH LOAM FROM THE SITE AND SEEDED. SEEDING PREPARATION AND MIXTURES SHALL BE AS DESCRIBED IN PERMANENT SEEDING NOTES ON SHEET DT-1.
- ANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS.
- 15. IF PLANTINGS ARE CHOSEN FOR STABILIZATION (RESTORATION) THEN PLANTINGS SHOULD MIMIC AREAS OF THE SITE THAT HAVE ALREADY BEEN SUCCESSFULLY RESTORED. ALL DISTURBED AREAS SURROLUNDING THE FLANTINGS SHALL BE COVERED WITH A MINIMUM OF 2-INCHES OF MULCH OR LOAM FROM THE SITE AND SEEDED.
- 17. THE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR OBSERVING AND MANAGING THE PROJECT PER RSA 430:53 AND AGR 3800 REGARDING INVASIVE SPECIES (PLANTS AND INSECTS). NO INVASIVE SPECIES PLANT OR INSECT SHALL BE INTRODUCED ONTO THE SITE.
- 18. DITCHES, SWALES AND DRAINAGE BASINS SHALL BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- 19. ACCESS ROAD SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
- 20, ALL CUT AND FILL SLOPES SHALL BE LOAMED AND SEEDED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE,





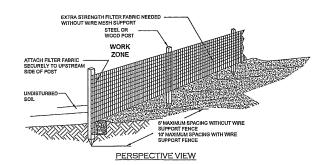
VIEW LOOKING UPSTREAM

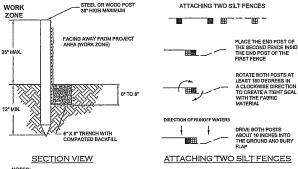


PROFILE - CHECK DAM SPACING

- 1. STONE CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR
- 2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE CHECK DAM SHOULD BE LESS THAN ONE ACRE.
- 3. STONE CHECK DAMS SHOULD NOT BE USED IN A FLOWING STREAM
- 5. WHEN INSTALLING STONE CHECK DAMS THE CONTRACTOR SHALL KEY THE STONE INTO THE CHANNEL BANKS AND EXTEND THE STONE BEYOND THE ABUTMENTS A MINIMUM OF 18-INCHES TO PREVENT FLOW AROUND THE DAM.
- 6. STONE CHECK DAMS SHOULD BE REMOVED ONCE THE SWALE OR DITCH HAS BEEN STABILIZED UNLESS OTHERWISE SPECIFIED.

2 DT-2 STONE CHECK DAM

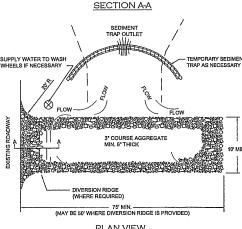




NOTES:

- SILT FENCES SHOULD NOT BE USED ACROSS STREAMS, CHANNELS, SWALES, DITCHES OR OTHER DRAINAGE WAYS.
- SILT FENCE SHOULD BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE AND THE ENDS OF THE SILT FENCE SHOULD BE FLARED UPSLOPE.
- 4. SILT FENCES PLACED AT THE TOE OF SLOPES SHOULD BE INSTALLED AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND ACCESS FOR MAINTENANCE.
- 5. THE MAXIMUM SLOPE ABOVE THE FENCE SHOULD BE 2:1 AND THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHOULD BE 100 FEET.
- 6. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
- SILT FENCES SHOULD BE REMOVED WHEN THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.
- 8. SILT FENCES SHOULD BE INSTALLED FACING AWAY FROM THE WORK ZONE,

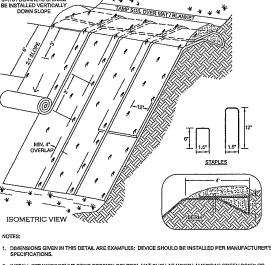
SCALE: N.T.S. 3 DT-2 SILT FENCE



2% OR GREATER

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- 2. THE MINIMUM STONE USED SHOULD BE 3-INCH CRUSHED STONE.
- THE MINIMUM LENGTH OF THE PAD SHOULD BE 75 FEET, EXCEPT THAT THE MINIMUM LENTH MAY BE REDUCED TO SO FEET IF A SHICH TO 8-INCH HIGH BERM IS INSTALLED AND THE ENTRANCE OF THE PROJET SITE.
- THE PAD SHOULD EXTEND THE FULL WIDTH OF THE CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
- 5. THE PAD SHOULD SLOPE AWAY FROM THE EXISTING ROADWAY.
- 6. THE PAD SHOULD BE AT LEAST 6-INCHES THICK
- THE GEOTEXTILE FILTER FABRIC SHOULD BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
- 8. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
- 9. NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHOULD BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET
- 10. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- 11. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASH.
- ROCK BAGS OR SANDBAGS SHALL BE PLACED SUCH THAT NO GAPS ARE EVIDENT. SEE NOTES ERO-03.
- THE PLANS DO NOT CALL FOR THE INSTALLATION OF A CONSTRUCTION EXIT DUE TO THE TRAVEL LENGTH ON-SITE AND THE SINGLE-GRAINED SANDY SOLIS ON-SITE. SHOULD CONDITIONS EXIST THAT CAUSE TRACKING A CONSTRUCTION EXIT SHALL BE INSTALLED.

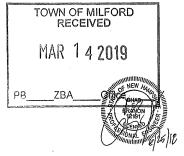
TEMPORARY GRAVEL CONSTRUCTION EXIT



- INSTALL STRAW/COCONLIT FIBER EROSION CONTROL MAT SUCH AS NORTH AMERICAN GREEN SC150 OR EQUAL ON ALL SLOPES TO BE STABILIZED.
- THE EROSION CONTROL MATERIAL(S) SHALL BE ANCHORED WITH "U" SHAPED 11 GAUGE WIRE STAPLES OR WOODEN STAKES WITH A MINIMUM TOP WIDTH OF 1 INCH AND LENGTH OF 7 INCH.
- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS, MATS / BLANKETS SHALL HAVE GOOD SOIL CONTACT.
- 5. APPLY LIME, FERTILIZER AND PERMANENT SEEDING BEFORE PLACING BLANKETS.
- 6. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET AS SHOWN. ROLL THE BLANKETS DOWN THE SLOPE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES OR STAKES IN APPROPRIATE LOCATIONS. <u>REFER TO MANUFACTURERS STAPLE GUIDE FOR CORRECT STAPLE PATTERN.</u>
- 7. LAY BLANKETS LOOSELY AND STAKE DR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
- 8, IN LOOSE SOIL CONDITIONS THE USE OF STAPLES OR STAKE LENGTHS GREATER THAN 6 INCHES MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
- THE CONTRACTOR SHALL MAINTAIN THE BLANKET UNTIL ALL WORK ON THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MAINTENANCE SHALL CONSIST OF THE REPAIR OF AREAS WHERE DAMAGED BY ANY CAUSE. ALL DAMAGED AREAS SHALL BE REPAIRED TO REESTABLISH THE CONDITIONS AND GRADE OF THE SOIL PRIOR TO APPLICATION OF THE COVERING AND SHALL BE REFERTILIZED, RESEEDED AND REMUCHED AS DIRECTED.

EROSION BLANKETS - SLOPE INSTALLATION

RECEIVED ZBA







EROSION CONTROL DETAILS TAX MAP 58 LOTS 1, 2 AND 3 (OFF MILE SLIP ROAD)

PREPARED FOR **BURBEE SAND & GRAVEL** P.O. BOX 456, BROOKLINE, NH 03033

MILFORD, NEW HAMPSHIRE

LAND OF

JANE E. PROVINS **REVOCABLE TRUST OF 1999** 113 NORTH MASON ROAD, BROOKLINE, NH 03033

SCALE: AS SHOWN MAY 11, 2018



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Fieldstone Land Consultants, PLLC (Burbee Sand _Gravel - Site Photos)



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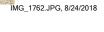




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