

February 11, 2021

Ravi Venkataraman, AICP
Town Planner and Acting Zoning Administrator
Town of Richmond
203 Bridge Street
Richmond, Vermont 05477

RE: Longridge Subdivision
Subdivision Amendment Application

Dear Ravi,

On behalf of the Owner of Lot #4 at the Longridge Subdivision located off Fiddlehead Lane in Richmond, we have prepared a subdivision amendment application. The Owner of the undeveloped lot #4 would like to remove language from the final plat that prevents development of the lot. The existing language reads *"No building construction requiring sewage disposal may take place on Lot #4 until verification, as required by the Town of Richmond, of soil suitability for on-site wastewater disposal or confirmation of receipt of municipal sewer allocation to service this lot has been submitted to the planning commission."*

Krebs & Lansing have dug test holes on the property in the presence of a state wastewater official and determined that suitable soils exist on site for two mound style wastewater disposal systems. These test hole logs, system design, and locations are shown on the included plan titled "Wastewater Disposal Plan – Lot #4". The Owner will be submitting this design for state approval.

Please feel free to contact me if you have questions or comments regarding this matter.

Respectfully submitted,



Seth Goddard, P.E.

Hearing Fee: \$120 plus \$60.00 recording Fee
Total fee \$180.00 payable to the Town of Richmond

Amendment Request # _____
Original Permit # _____

**Town of Richmond
Request Form for
Subdivision Approval Amendment**

This form must be filled out and submitted prior to the scheduling of the amendment hearing.

L5, Inc.
Subdivider's Name at Time of Approval

Longridge Subdivision
Recorded Subdivision Name

Terrace Drive
Name of nearest town highway

4 / Residential
/ Type of Lots
(ex.8 / residential)

L5, Inc.
Current permit holder c/o MURPHY
25 Buell St., Burlington, VT 05401
Current Holder Address

Seth Goddard, PE - Krebs & Lansing Cons. Eng., Inc.
Name of person requesting amendment
Phone # (day): (802) 989-8873

Please list and briefly describe all proposed amendment(s):

(Ex. 1. Move cul-de-sac 50' south, 2. Remove condition #4 from previous approval dated 6/6/03, etc.)

Remove note on Lot 4 that states "No building construction requiring sewage disposal may take place on Lot #4 until verification, as required by the town of Richmond, of soil suitability for on-site wastewater disposal or confirmation of receipt of municipal sewer allocation to serve this lot has been submitted to the Planning Commission." Suitable soils have been found for the proposed 4 bedroom and ADU. Soil test hole information and wastewater disposal system designs are attached.

Attach all proposed revisions and modifications to the recorded plans, documents and materials or any new materials you wish to have considered. At the discretion of the Zoning Administrator, two (2) 24"x36" and three (3) 11"x17" copies of the proposed plans may be required. A hearing fee of \$120.00 plus \$60.00 for recording is required with this application payable to the Town of Richmond.

One public hearing is required. **The applicant is responsible for providing, with this application, the current names, mailing addresses and a stamped, addressed envelope for all abutting properties to the ORIGINAL SUBDIVISION boundary.** The Town will mail a notice to all parties after a date is scheduled by the Development Review Board.

I hereby give my assurance that the above information is complete, accurate and included in this submittal.

Signed by Landowner or agent L5, Inc. by c/o Murphy, JP + Sec
A letter of authorization must accompany submittal if agent signs.)

Date 2.10.21

Do not write below - For Town Use

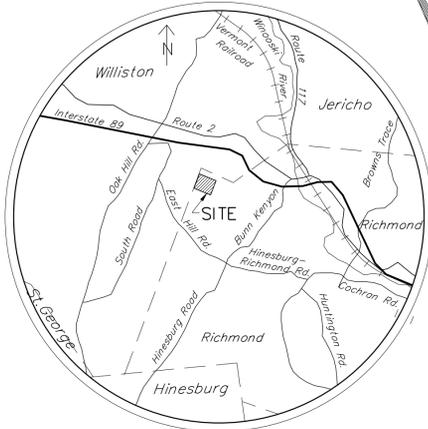
Application Deemed Complete By: _____
Attach copy of written decision to this form
Fee Received: \$ _____

Hearing Date: _____
Decision made on: _____

Longridge Subdivision

List of Abutters

TAX MAP #	OWNER NAME	OWNER ADDRESS	OWNER CITY	OWNER STATE	OWNER ZIP CODE
21055.018000	STEVEN MUNDELL	296 YANTIZ HILL ROAD	WILLISTON	VT	05495
21COM.05000i	MEADOWRIDGE COMMUNITY ASSOCIATION, C/O SUNDANCE PROPERTY SERVICES	PO BOX 71	BURLINGTON	VT	05402
KR0280	DAVID & DEBORAH CONANT	2258 WEST MAIN STREET	RICHMOND	VT	05477
EH1156	WILLIAM & BARBARA RYAN	1156 EAST HILL ROAD	RICHMOND	VT	05477
EH1090	MARGARET ROLAND	1090 EAST HILL ROAD	RICHMOND	VT	05477
DC0137	WILLIAM DALTON, ADENA WEIDMAN, JORDAN WEIDMAN, NICOLE GREEN	137 DEER CREEK LAND	RICHMOND	VT	05477
EH0180	PEGGY FARR REVOCABLE TRUST	112 HUNTINGTON ROAD	RICHMOND	VT	05477
FD0142	JOSHUA PARKER	142 FIDDLEHEAD LANE	WILLISTON	VT	05495
FD0207	HENRIK & JOLENE	207 FIDDLEHEAD LANE	WILLISTON	VT	05495
FD0205	PHILIP JR. & ELISSA DELONG	205 FIDDLEHEAD LANE	WILLISTON	VT	05495



Location Map

Deed References

Grantor	Grantee	Volume & Page	Date
Landmark Development Corporation	to L 5, Inc.	70/94 (Richmond)	June 14, 1990
Charles Walston	to Homer Betty	12/47 (Richmond)	June 8, 1881
Hiram Walston, Guardian of C. H. Lee	to Charles Walston	11/ 80 (Richmond)	July 3, 1869
Hiram Phelps, Guardian of Hiram S. Lee	to Charles Walston	11/ 81 (Richmond)	July 3, 1869
Louisa J. Lee and Charles C. Lee	to Charles Walston	11/ 82 (Richmond)	July 3, 1869
George Chase	to Harley L. Bing	19/461 (Richmond)	October 18, 1926
Goodsell G. Greenough	to Annie B. Brown, Mary A. Crane, Luthera M. Brown & (W.A., L.B., E. & E.A. Brown in common)	16/156 (Richmond)	September 18, 1884
Hiram S. & Cynthia A. Conant	to Ransom M. Conant	14/20 (Richmond)	March 24, 1898
Hattie M. & Spencer Patrick	to Ransom M. Conant	14/22 (Richmond)	April 9, 1898
Samuel Conant	to Ransom M. Conant	13/36 (Richmond)	March 27, 1891

Survey Notes

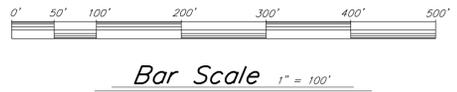
- All bearings are calculated and are based on Astronomic North. The Astronomic bearings used were calculated from an observation of Polaris on August 8, 1994. Magnetic North is approximately 15' west of Astronomic North.
- A closed traverse was completed August 8, 1994 using a theodolite (Wild T-2 S/N 286841), and electronic distance meter (AGA Geodimeter S/N 23164) and a steel tape. A second closed traverse was completed August 8, 1994 using a theodolite (Wild T-1 S/N 277888), and electronic distance meter (DI-4 Distomat S/N 47795) and a steel tape.
- In addition to this plot of survey, keys to the title of lands of the L 5 Inc. were prepared. These documents include chains of title for L 5 Inc. and adjacent owners as well as a Surveyor's Report delineating the logic, analysis and decision making process for boundary determination.

Boundary Notes

- The descriptions of these lands and the evidence located and existing on the ground were compared and analyzed to provide a final boundary most indicative of the original intent of the deeds and in harmony with existing physical monumentation. Where conflicts between physical evidence and written evidence are substantial, deeds and/or documents should be executed to eliminate any color of title or conflict.
- Monuments have been set in and on the ground where shown on the plat of survey where, in the opinion of the surveyor, it was needed to show a point not otherwise monumented.
- Any boundary determination, based on deeds or documents recorded in the public records by which title or rights were conveyed to L 5 Inc. or title or rights in lands of L 5 Inc. were otherwise delineated, is subject to the accuracy and legality of those deeds or documents. Where those deeds or documents are improperly executed as a matter of law or contain errors or omissions in fact, or contain or are based upon erroneous conclusions of law, then the indicated boundaries may not be valid.
- The boundary determination and boundaries shown are also subject to the accuracy and legality or lack of authority of any grantor or grantee who professed the right of ability to convey, receive or condemn property or rights in affected property.
- Any depiction on the plats of survey of boundary lines or other structures exclusive of boundary lines for L 5 Inc. were located by tachemetry.
- The extent of the effect of adverse possession or other unwritten claims, if there is or was any, have been identified where known. To that extent, these plots of surveys may be subject to any unidentified claims or rights. Assumptions for correctness and accuracy are indicated on this plat of survey.
- This plat of survey is for the sole use of L 5, Inc. and the use by other property owners, private or municipal, is specifically unauthorized.
- The area stated for the remaining lands was calculated by subtracting the areas of Lots 1, 2 & 4 (34.39 acres) from the total area (95.7 acres) that was calculated from the bearings and distances given in the Miller Property Survey, see Map Reference #1. The certification on this plan applies to Lots 1, 2, and 3 only.

Map References

- Transit and Stadia Survey of C.C. Miller, Sr. Et. Al. Property Williston and Richmond, Vermont by Carroll A. Peter, dated May 5 1978, revised June 9, 1982
- Plat of Lots 12-60, Vermont National Bank, Formerly Landmark Development Corporation, Meadow Ridge, Williston, Vermont, by Pinkham Engineering Associates, Inc., dated April 4, 1989 sheet 2 of 3, project no. 6308



Meadow Ridge Common Land M

Town of Richmond

Town of Williston

Benoit

Dr. Ryan

Rolands

Note: The bearing and distance from IP8 to IP 2 was measured to be S 66°24'43" E 1253.09' by Krebs & Lansing.

Ward Johnson
Volume 24 Page 475 (Richmond)
March 9, 1961

Lot 1
12.03 acres

Lot 2
11.25 acres

Lot 3
11.14 acres

L 5, Inc.
Remaining Lands

Area = 61 acres
See boundary note #8
Volume 70 Page 94 (Richmond)
May 30, 1990
Volume 88 Page 381 (Williston)

No building construction requiring sewage disposal may take place on Lot #4 until verification, as required by the Town of Richmond, of soil suitability for on-site wastewater disposal or confirmation of receipt of municipal sewer allocation to serve this lot has been submitted to the Planning Commission.

Planning Commission Resolution

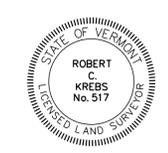
Approved by resolution of the Planning Commission of the Town of Richmond, on the _____ day of _____, 199_, subject to the requirements of said resolution. Signed this _____ day of _____, 1996, by _____

Chairman

Legend

- Survey control point
- Iron pipe found
- Iron pin set, 3' long, 1" dia. with aluminum cap stamped "Robert C. Krebs L.L.S. 517"
- Calculated point
- Property line / right of way
- Barb wire fence
- Edge of woods

Certification
This survey is based on physical evidence found in the field and information abstracted from deeds and other pertinent records and this survey is consistent with that evidence. This plat conforms to 27 V.S.A. section 140.3
Robert C. Krebs L.L.S. #517



Date revised	Description	Checked	Date
February 11, 2021	Remove Lot 4 note	sdg	02/11/21
October 21, 1996	Lot 4 note	iaj	10/21/96

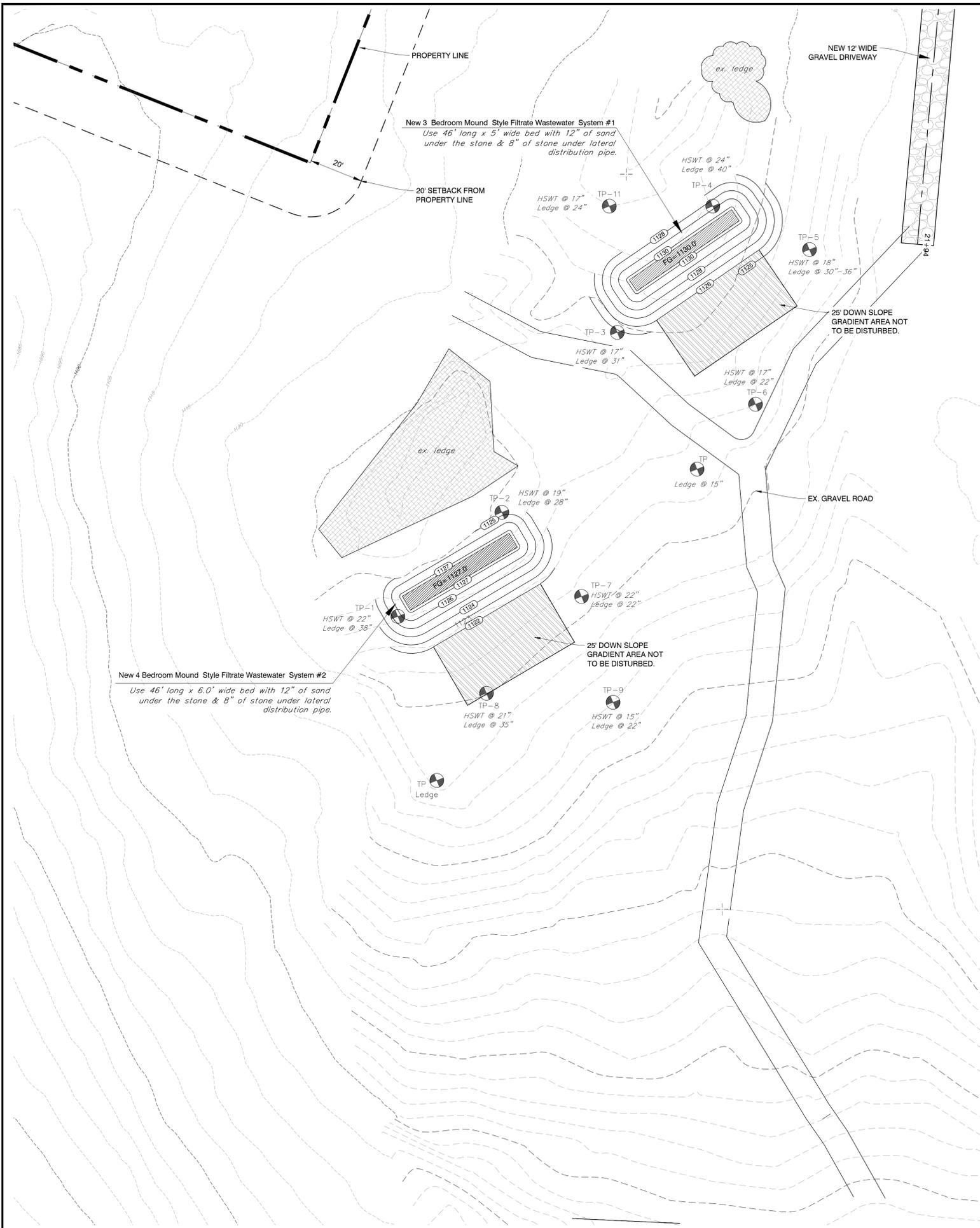
Final Plat
Longridge
Subdivision

Project 93166 Richmond
KREBS & LANSING Consulting Engineers, Inc.
10 Main Street, Colchester, Vermont 05446

Gloria A. Conant Daniels
Volume 61
Page 35
(Richmond)
Dec. 31, 1987

Gloria A. Conant Daniels
Volume 61
Page 35
(Richmond)
Dec. 31, 1987

1788' (map reference 1)
1292' (map reference 1)
1788'-237'80"-688'23" = 1261'65"



Basis of Design for Mound Style Wastewater Disposal Systems # 1

Design Flow:
 - For a 3 Bedroom Single Family
 - Design Flow = 3 bedrooms * 140gpd gal/day/bedroom = 420 gals/day
 Total Design Flow = 420 gpd

Application Rate:
 - For mound system
 - Application rate = $Q = 1.0 \text{ gals/s.f./day}$
 - Pretreated Effluent Maximum Application rate = $Q = 2.0 \text{ gals/s.f./day}$

Required Leach Area:
 - Area required = $\frac{420}{2.0} = 210 \text{ s.f.}$
 - Use 5.0' wide Bed
 - Required system length = $\frac{210 \text{ s.f.}}{5.0 \text{ ft.}} = 42 \text{ ft.}$
 - Use 1, 46' long x 5.0' wide bed style mound

Performance Based Desktop Mounding Analysis

Design Flow = 420 gpd
 Natural Ground Slope = 8.1-10% (average)
 Receiving Soil Texture = loam

From Table 1:
 Linear Loading Rate Factor (l) = 10.1

From Soil Test Logs:
 Seasonal High Water Table at 17 inches
 $h = 11 \text{ inches or } .91 \text{ feet}$
 (For filtrate mound with 12" of sand, or effluent mound with 30" of sand, $h = \text{HSWT}$ minus 6" of unsaturated soil needed)

Linear Loading Rate: (LLR)
 $LLR = (h) * (l) = 10.1 * .91$
 $LLR = 9.2 \text{ gpd/ft}$

System Length: (L)
 $L = 420 \text{ gpd} / 9.2 \text{ gpd/ft}$
 $L = 45.6 \text{ ft (required)}$
 46 linear feet provided

Table 1. Linear Loading Rate Factors Based on Soil Texture and Natural Ground Slope

Soil Texture	LINEAR LOADING RATE FACTORS (l)						
	Natural Ground Slope						
	0-2%	2.1-4%	4.1-6%	6.1-8%	8.1-10%	10.1-15%	15.1-20%
Coarse sand, Sand, Loomy Coarse Sand, Loomy Sand	7.5	22.4	37.4	52.4	52.4	52.4	52.4
Coarse Sandy Loom, Sandy Loom, Fine Sand, Very Fine Sand, Loomy Fine Sand, Loomy Very Fine Sand	3.7	11.2	18.7	26.2	33.7	33.7	33.7
Fine Sandy Loom, Very Fine Sandy Loom	1.5	4.4	7.5	10.5	13.5	18.7	26.2
Loom	1.1	3.4	5.6	7.9	10.1	14.0	19.6
Silt Loom	0.7	2.2	3.7	5.2	6.7	9.4	13.1
Sandy Clay Loom, Silty Clay Loom, Clay Loom	0.4	1.1	1.9	2.6	3.4	4.7	6.5
Sandy Clay, Silty Clay, Clay	0.2	0.7	1.1	1.6	2.0	2.8	3.9

Table from "Simplified Procedure for Prescriptive Desktop Mounding Analysis" dated February 6, 2003, published by State of Vermont Agency of Natural Resources Department of Environmental Conservation, Wastewater Management Division.

Primary Mound Style Bed Elevations Information

TRENCH NO.	EXISTING GROUND	DESIGN H.S.W.T.	BOTTOM STONE	PIPE INVERT	TOP STONE	FINISH GRADE
P1	1122.0'	1126.09'	1128.0'	1128.67'	1129.0'	1130.0'

Basis of Design for Mound Style Wastewater Disposal Systems # 2

Design Flow:
 - For a 4 Bedroom Single Family
 - Design Flow = 3 bedrooms * 140gpd/bedroom = 420 gpd
 + Additional bedroom = 70 gpd
 Total Design Flow = 490 gpd

Application Rate:
 - For mound system
 - Application rate = $Q = 1.0 \text{ gals/s.f./day}$
 - Pretreated Effluent Maximum Application rate = $Q = 2.0 \text{ gals/s.f./day}$

Required Leach Area:
 - Area required = $\frac{490}{2.0} = 245 \text{ s.f.}$
 - Use 6.0' wide Bed
 - Required system length = $\frac{245 \text{ s.f.}}{6.0 \text{ ft.}} = 40.8 \text{ ft.}$
 - Use 1, 46' long x 6.0' wide bed style mound

Performance Based Desktop Mounding Analysis

Design Flow = 490 gpd
 Natural Ground Slope = 8.1-10.0% (average)
 Receiving Soil Texture = loam

From Table 1:
 Linear Loading Rate Factor (l) = 10.1

From Soil Test Logs:
 Seasonal High Water Table at 19 inches
 $h = 13 \text{ inches or } 1.1 \text{ feet}$
 (For filtrate mound with 12" of sand, or effluent mound with 30" of sand, $h = \text{HSWT}$ minus 6" of unsaturated soil needed)

Linear Loading Rate: (LLR)
 $LLR = (h) * (l) = 10.1 * 1.1$
 $LLR = 11.1 \text{ gpd/ft}$

System Length: (L)
 $L = 490 \text{ gpd} / 11.1 \text{ gpd/ft}$
 $L = 44.1 \text{ ft (required)}$
 46 linear feet provided

Table 1. Linear Loading Rate Factors Based on Soil Texture and Natural Ground Slope

Soil Texture	LINEAR LOADING RATE FACTORS (l)						
	Natural Ground Slope						
	0-2%	2.1-4%	4.1-6%	6.1-8%	8.1-10%	10.1-15%	15.1-20%
Coarse sand, Sand, Loomy Coarse Sand, Loomy Sand	7.5	22.4	37.4	52.4	52.4	52.4	52.4
Coarse Sandy Loom, Sandy Loom, Fine Sand, Very Fine Sand, Loomy Fine Sand, Loomy Very Fine Sand	3.7	11.2	18.7	26.2	33.7	33.7	33.7
Fine Sandy Loom, Very Fine Sandy Loom	1.5	4.4	7.5	10.5	13.5	18.7	26.2
Loom	1.1	3.4	5.6	7.9	10.1	14.0	19.6
Silt Loom	0.7	2.2	3.7	5.2	6.7	9.4	13.1
Sandy Clay Loom, Silty Clay Loom, Clay Loom	0.4	1.1	1.9	2.6	3.4	4.7	6.5
Sandy Clay, Silty Clay, Clay	0.2	0.7	1.1	1.6	2.0	2.8	3.9

Table from "Simplified Procedure for Prescriptive Desktop Mounding Analysis" dated February 6, 2003, published by State of Vermont Agency of Natural Resources Department of Environmental Conservation, Wastewater Management Division.

Primary Mound Style Bed Elevations Information

TRENCH NO.	EXISTING GROUND	DESIGN H.S.W.T.	BOTTOM STONE	PIPE INVERT	TOP STONE	FINISH GRADE
P1	1124.0'	1122.9'	1125.0'	1125.67'	1126.0'	1127.0'

Longridge Soil Test Pit Log

Fiddle Head Lane
 Richmond Vermont

Date: 11/06/2015
 Weather: Sunny and mild
 Present: Bill Zabiloski, State of Vermont and Jay Renshaw, Krebs & Lansing Josh Parker and Liam Murphy

NLTD = no ledge to depth
NLWTD = no ledge, water to depth
HSWT = high seasonal water table

NWTD = no water to depth
Redox = Redoximorphic features
BGS= Below Ground Surface

TP-1 1" ± of organics, duff and leaf litter
 0-3" 10YR 3/3 Dark brown SL, soft granular, loose, dry, many roots
 3-22" 10YR 5/6 Yellow brown FSL, weak, fine granular, friable, dry, roots, faint redox @ 22"
 22-34" 2.5Y 4/3 Olive FSL, semi firm, crumb, fine granular, irregular boundary, dry, roots, distinct redox
 34-38" 10YR 5/2 Grey FSL, weak massive, fine, semi firm, friable, few roots, redox features common
 HSWT @ 22", NWTD, Ledge possible @ 38"

TP-2 1" ± of organics, duff and leaf litter
 0-4" 10YR 3/3 Dark brown SL, soft granular, loose, dry, roots
 4-19" 10YR 5/6 Yellow brown SL, granular, very loose, dry, many roots, redox @ 19"
 19-28" 10YR 5/3 Brown SL/FSL, friable, dry, prominent redox
 HSWT @ 19", NWTD, Ledge @ 28"

TP-3 1" ± of organics, duff and leaf litter
 0-3" 10YR 3/3 Dark brown SL, granular, loose, dry, many roots
 3-13" 10YR 5/6 Yellow brown FSL, fine granular, loose, dry, many roots
 13-17" 2.5Y 4/4 Olive FSL, granular, loose, dry, many roots, redox features faint @ 17"
 21-31" 2.5Y 4/3 Olive FSL, fine granular, friable in hand, few roots, common redox features
 HSWT @ 17", NWTD, Ledge possible @ 31"

TP-4 1" ± of organics, duff and leaf litter
 0-3" 10YR 2/1 Black L, fine granular, loose, dry, roots
 3-13" 10YR 5/6 Yellow brown FSL, fine granular, loose, dry, many roots
 13-24" 2.5Y 4/3 Olive FSL, fine granular, friable, dry, small coarse fragments, roots, faint redox features @ 24"
 24-40" 10YR 5/2 Grey FSL, friable, weak, massive, layered small rocks, few cobbles, fragments increase with depth, ledge assumed @ 40"
 HSWT @ 24", NWTD, Ledge possible @ 40"

TP-5 1" ± of organics, duff and leaf litter
 0-6" 10YR 2/1 Black L, fine granular, loose, dry, roots
 6-18" 10YR 5/6 Yellow brown FSL, fine granular, loose, dry, many roots, faint redox @ 18"
 18-24" 2.5YR 4/3 Olive FSL, fine granular, friable, dry, few coarse fragments, roots, faint redox features
 24-36" 10YR 5/2 Grey/olive FSL, weak, fine granular, friable, damp, redox, irregular ledge boundary
 HSWT @ 18", NWTD, Ledge possible @ 30-36"

TP-6 1" ± of organics, duff and leaf litter
 0-4" 10YR 3/3 Dark brown L, fine granular, loose, dry, many roots
 4-17" 10YR 5/6 Yellow brown FSL, granular, loose, dry, roots, faint redox @ 17"
 20-22" 2.5Y 4/3 Olive FSL, fine granular, friable, loose, dry, few roots, coarse fragments, ledge @ 22"
 HSWT @ 17", NWTD, Ledge @ 22"

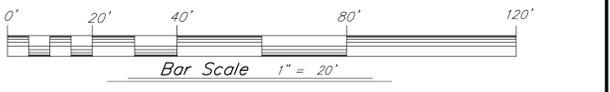
TP-7 1" of organics, duff and leaf litter
 0-4" 10YR 3/3 Dark brown SL, granular, loose, dry, many roots
 4-22" 10YR 5/6 Yellow brown FSL, granular, very loose, damp, prominent root boundary
 HSWT assumed @ 22", NWTD, Ledge @ 22"

TP-8 1" ± of organics, duff and leaf litter
 0-7" 10YR 3/3 Dark brown SL, granular, loose, dry, many roots
 7-21" 10YR 5/6 Yellow brown FSL, fine granular, loose, dry, roots, faint redox @ 21"
 21-26" 2.5Y 4/3 Olive SL, friable, loose, dry, few roots, distinct redox
 26-35" 10YR 5/2 Grey FSL, weak, massive, semi-firm, dry, few roots, common redox
 HSWT @ 21", NWTD, Ledge @ 35"

TP-9 1" ± of organics, duff and leaf litter
 0-7" 10YR 3/3 Dark brown SL, granular, loose, dry, many roots
 7-15" 10YR 3/4 Yellow brown FSL, fine granular, loose, dry, many roots, faint redox @ 15"
 15-22" 10YR 5/3 Brown FSL, fine granular, loose, damp, many roots, redox, ledge @ 22"
 HSWT @ 15", NWTD, Ledge @ 22"

TP-10 1" ± of organics, duff and leaf litter
 0-4" 10YR 3/3 Dark brown SL, granular, loose, dry, many roots
 4-15" 10YR 5/6 Yellow brown FSL, granular, very loose, dry, few coarse fragments, roots
 HSWT assumed @ 15", NWTD, Ledge @ 15"

TP-11 1" ± of organics, duff and leaf litter
 0-3" 10YR 3/3 Dark brown L, fine granular, loose, dry, roots
 3-17" 10YR 5/6 Yellow brown SL/FSL, granular, loose, dry, many roots, faint redox features @ 17"
 17-22" 2.5Y 4/3 Dark olive FSL, fine granular, loose, few roots, distinct redox
 22-24" 2.5Y 4/4 Olive SL, prominent redox features
 HSWT @ 17", NWTD, Ledge @ 24"



Date revised	Description	Checked	Date
Design	SDG		
Drawn	SDG		
Checked	SWH		
Scale	1" = 20'		
Date	Feb. 11, 2021		
Project	20303 Yantz Hill Road		Richmond, Vermont
Wastewater Disposal Plan - LOT #4			
LONGRIDGE SUBDIVISION			
KREBS & LANSING Consulting Engineers, Inc. 164 Main Street, Colchester, Vermont 05446			
			WW-1