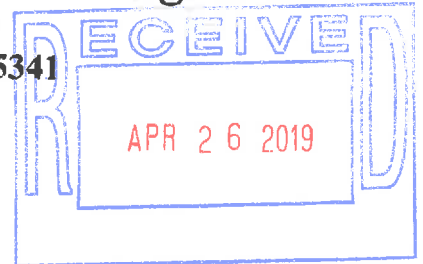


Joseph Olson D.B.A.
Rusty Olson's--Soil and Percolation Testing

Joseph J. Olson--MPCA License #810
11481 Riverview Rd. NE, Hanover, MN 55341
(763) 498-8779 fax (763) 498-8290



Revised April 24, 2019
June 18, 2018
Dundee Farms LLC
PID # 1311823310009
Medina, Hennepin County

This on-site Sewage Treatment System is partially designed for a Type III three -bedroom home in accordance with the Minnesota Pollution Control Agency Chapter 7080 and local ordinances. In order for a designer to design a type III system the designer must have reasonable assurance the system will function. The sites shown for the septic sites are on the highest ground on the Property. There is no guarantee that any septic system will function but the area shown is the best and only area this designer will design septic systems on this lot.

The system is a type III because There is less than 12 inches to the periodically saturated soils.

The city requires an operating permit to be in place for all type III systems. The city will set the requirements for the operating permit.

Once the house size, location and septic primary and future sites are chosen this design can be completed.

The periodically saturated soils were located at 0 inches (mottled soil). Due to the periodically saturated soils, a pressurized mound system will need to be installed to treat the septic effluent. The bottom of the treatment area must be located at least 3' above the saturated soils.

The soils at a depth of 12" have a percolation rate averaging 11 MPI.

All new tanks need to be insulated if there is less than two feet of cover over the top of the tanks. Clean outs must be installed on the end of the laterals for maintenance.

A pumping chamber will need to be installed to lift the effluent to the treatment area. The power supply and switches must be located outside the manhole and pumping chamber in a weatherproof enclosure. A warning device must be installed with a light and sound device: this is in case of a pump failure.

Use 7/32-inch perforations on the laterals.

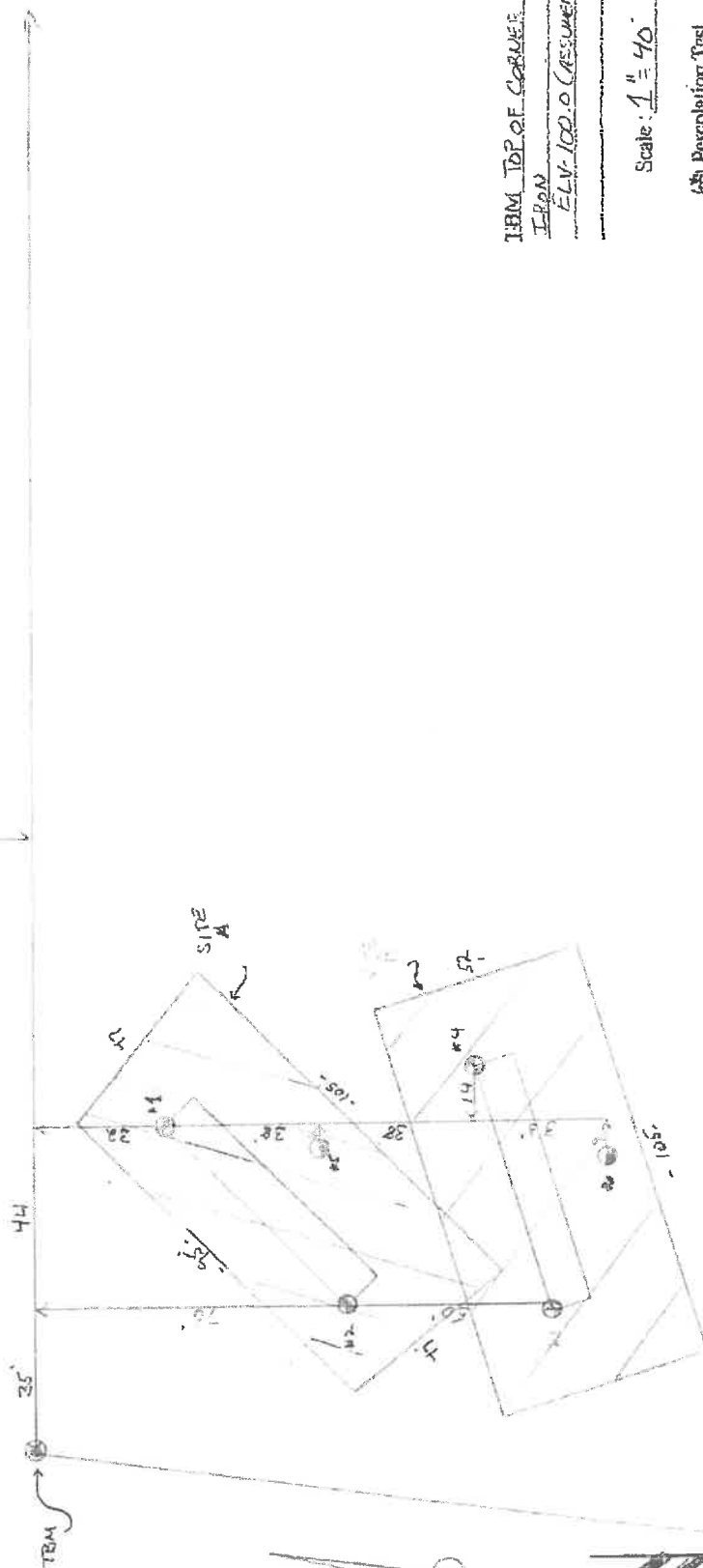
Keep all heavy equipment off of the proposed treatment areas before and after construction. The treatment area must be fenced off before construction begins. This Design is not valid & the System will need to be relocated if failure to protect the areas proposed for the On-Site Sewage Treatment systems occurs.

With proper installation and maintenance, this system should have no problem in treating septic effluent effectively. Nothing other than gray water, (laundry, showers, etc.) Human water and toilet tissue should be disposed of into the septic tanks. **Iron filters cannot go into the septic system.** Garbage disposals are not recommended. Additives must not be used they may cause harmful damage to your septic system. It is recommended that you pump the septic tanks every two years.

Sincerely,

Joseph J. Olson

2- MEDINA



TBM TOP OF CORNER
IRON
ELV. 100.0 (ASSUMED)

Scale: 1" = 40'

- Percolation Test
 - Soil Boring
 - Bench Mark
- Check all underground utilities

Property of: DUNDEE FARMS LLC
RD # 131182331000.9
MEDINA, HENRY COUNTY

Date 6/18/18 PPI (763) 498-8779
Rusty Olson's soil and percolation testing
Designed by: [Signature]

Mound Design

Property Owner: Dundee Farms Inc

Date: 6/18/2018

Site Address: N/A

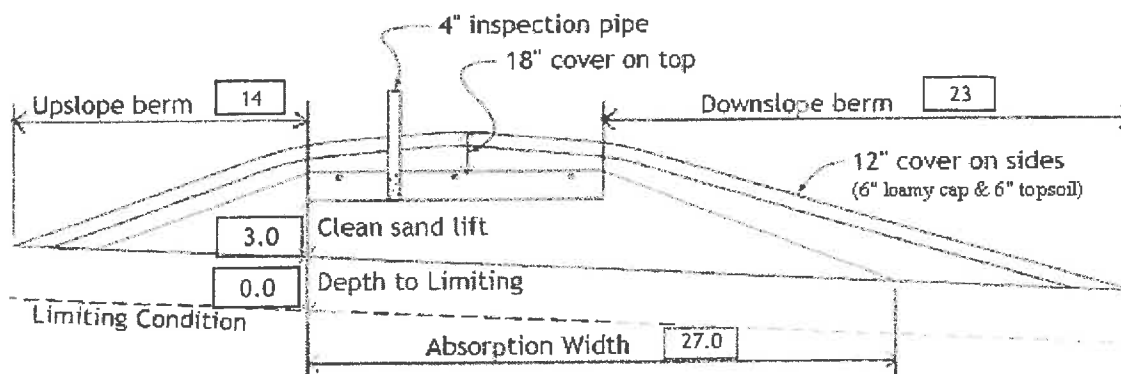
PID: 1311823310009

Comments: Periodically saturated soils at the surface Site A upslope

Instructions: = enter data = adjust if desired = computer calculated - DO NOT CHANGE!

- 1) bedroom Type Residential System
- 2) GPD design flow
- 3) Garbage disposal or pumped to septic
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: none
- 5) GPD/ft² mound sand loading rate contour loading rate of req's a min ft. long rockbed
- 6) ft rockbed width ft rockbed length
- 7) ft lateral spacing ft perforation spacing (maximum of 3 for both)
 manifold connection
- 8) laterals feet long perfs / lateral perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9) inch perfs at feet residual head gives gpm flow rate per perforation
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> OK
- 10) doses per day (4 minimum)
- 11) gallons per dose (treatment volume)
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 5x
- 13) feet of inch supply line leads to gallons of drainback volume 2.00 3x
(Tip: "top feed" manifold to control the drainback)
- 14) gallons TOTAL pump out volume (treatment + drainback)
- 15) feet vertical lift from pump to mound laterals, leads to a:
- 16) GPM @ feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17) gal Dose tank (code minimum) gal Dose tank (design size / LUG req'd) at gpi
leads to a
- 18) inch swing on Demand float, or timed dosing of min ON (confirm pump rate with drawdown
(this delivers Average flow, =70% of Peak design flow) hrs OFF test and adjust as necessary)
- 19) inches from bottom of tank to "Pump OFF" float
- 20) inches from bottom of tank to "Pump ON" float, or inches to "Timer ON" float if time dosed
- 21) inches from bottom of tank to "Hi Level" float, or inches to "Hi Level" float if time dosed
- 22) gallons reserve capacity (after High Level Alarm is activated)

- 23) 0.45 gpd/ft² Absorption area Soil Loading Rate, which gives a mound ratio of 2.7 (minimum)
(this must match the soil boring log) desired mound ratio 2.7
- 24) 2 percent site slope (0-20% range) 2 (% downslope site slope, if different than upslope)
- 25) 0 inches, or 0.0 ft. to Redox or other limiting condition (need at least 12" to be a Type I)
Treatment zone contains 0 inches of 0% soil credit, and 0 inches of 50% soil credit. Giving a:
- 26) 36 inch, or 3.0 ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**
- 27) 27.0 ft. Total ABSORPTION width (with sand beyond rockbed as follows:)
- 28) 0.0 ft. upslope and sideslope
17.0 ft. Downslope
- Individual slope ratios give BERM widths (topsoil beyond rockbed) of:
- 29) 3:1 upslope ratio 14 ft. upslope berm
- 30) 3:1 sideslope 16 ft. sideslope berms
- 31) 4:1 downslope 23 ft. downslope berm
- 32) Overall Dimensions: 10.0 ft. wide by 63.0 ft. long Rock bed
47 ft. wide by 95 ft. long Mound footprint

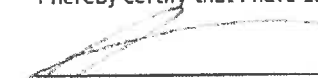


Note:

For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.
For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

- 33) Rock Bed:
10.0 ft. by 63.0 ft. by 6 inches under pipe, plus 20% gives 21 yd³ or *1.4= 29 ton
- 34) Mound Sand: (note: volume is based on 3:1/4:1 slope from top of rockbed, Exchange sand for loamy cap if desired)
74.6 up + 123.6 downslope + 19.6 ends + 72.3 under rock = 348 yd³ or *1.4= 488 ton
plus 20%
- 35) Loamy Cap:
43 ft. by 91 ft. 6" deep, plus 20% gives 87 yd³ or *1.4= 122 ton
- 36) Topsoil:
47 ft. by 95 ft. 6" deep, plus 20% gives 100 yd³ or *1.4= 140 ton

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.


Designer Signature

Rusty Olson's Soil & Perc
Company

810
License#

6/18/2018
Date

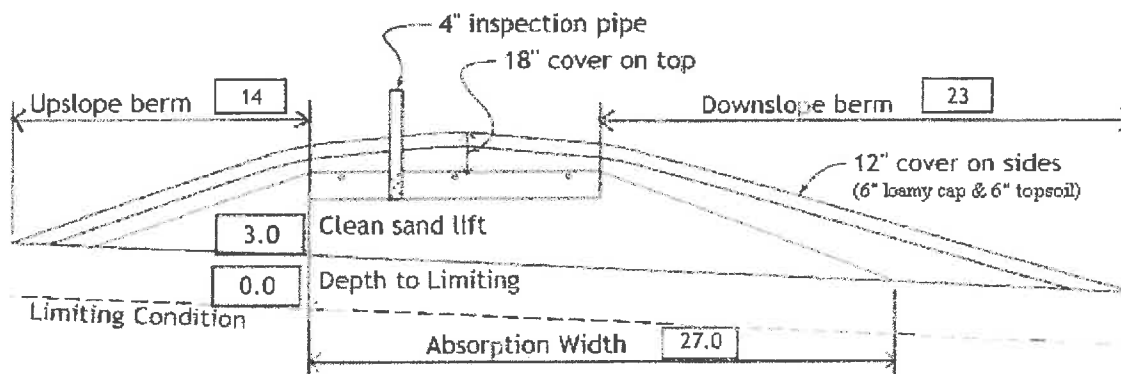
Mound Design

Property Owner: Dundee Farms Inc Date: 6/18/2018
 Site Address: N/A PID: 1311823310009
 Comments: Periodically saturated soils at the surface Site A downslope

Instructions: = enter data = adjust if desired = computer calculated - DO NOT CHANGE!

- 1) bedroom Type Residential System
- 2) GPD design flow
- 3) Garbage disposal or pumped to septic
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: none
- 5) GPD/ft² mound sand loading rate contour loading rate of req's a min ft. long rockbed
- 6) ft rockbed width ft rockbed length
- 7) ft lateral spacing ft perforation spacing (maximum of 3 for both)
 manifold connection
- 8) laterals feet long perfs / lateral perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9) inch perfs at feet residual head gives gpm flow rate per perforation
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> OK
- 10) doses per day (4 minimum)
- 11) gallons per dose (treatment volume) 2.00 5x
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 3x
- 13) feet of inch supply line leads to gallons of drainback volume
(Tip: "top feed" manifold to control the drainback)
- 14) gallons TOTAL pump out volume (treatment + drainback)
- 15) feet vertical lift from pump to mound laterals, leads to a:
- 16) GPM @ feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17) gal Dose tank (code minimum) gal Dose tank (design size / LUG req'd) at gpi
leads to a
- 18) inch swing on Demand float, or timed dosing of min ON (confirm pump rate with drawdown)
(this delivers Average flow, =70% of Peak design flow) hrs OFF test and adjust as necessary)
- 19) inches from bottom of tank to "Pump OFF" float
- 20) inches from bottom of tank to "Pump ON" float, or inches to "Timer ON" float if time dosed
- 21) inches from bottom of tank to "Hi Level" float, or inches to "Hi Level" float if time dosed
- 22) gallons reserve capacity (after High Level Alarm is activated)

- 23) gpd/ft² Absorption area Soil Loading Rate, which gives a mound ratio of (minimum)
(this must match the soil boring log) desired mound ratio
- 24) percent site slope (0-20% range) (% downslope site slope, if different than upslope)
- 25) inches, or ft. to Redox or other limiting condition (need at least 12" to be a Type I)
Treatment zone contains inches of 0% soil credit, and inches of 50% soil credit. Giving a:
- 26) inch, or ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**
- 27) ft. Total ABSORPTION width (with sand beyond rockbed as follows:)
- 28) ft. upslope and sideslope
 ft. Downslope
- Individual slope ratios give BERM widths (topsoil beyond rockbed) of:
- 29) upslope ratio ft. upslope berm
- 30) sideslope ft. sideslope berms
- 31) downslope ft. downslope berm
- 32) Overall Dimensions: ft. wide by ft. long Rock bed
 ft. wide by ft. long Mound footprint



Note:

For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.
For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

- 33) Rock Bed:
 ft. by ft. by inches under pipe, plus 20% gives yd³ or *1.4= ton
- 34) Mound Sand: (note: volume is based on 3:1/4:1 slope from top of rockbed, Exchange sand for loamy cap if desired)
 up + downslope + ends + under rock = yd³ or *1.4= ton
plus 20%
- 35) Loamy Cap:
 ft. by ft. 6" deep, plus 20% gives yd³ or *1.4= ton
- 36) Topsoil:
 ft. by ft. 6" deep, plus 20% gives yd³ or *1.4= ton

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

Designer Signature

Rusty Olson's Soil & Perc
Company

810
License#

6/18/2018
Date

Mound Design

Property Owner: Dundee Farms Inc

Date: 6/18/2018

Site Address: N/A

PID: 1311823310009

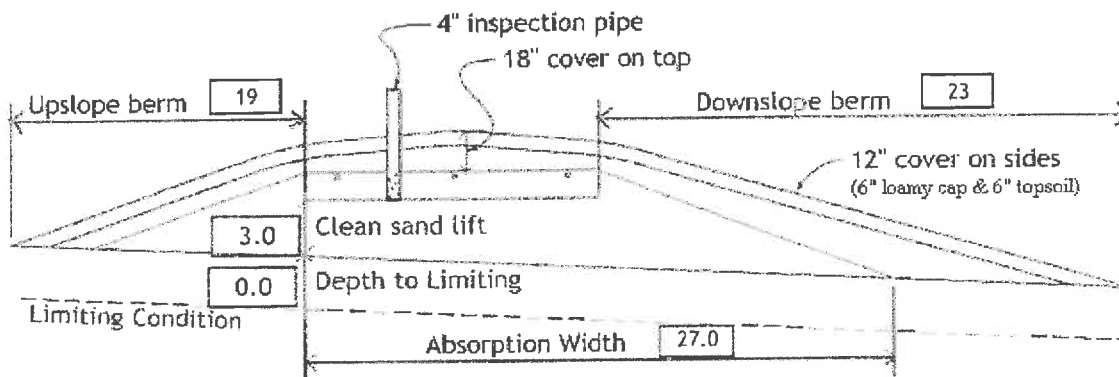
Comments: Periodically saturated soils at the surface

Site B

Instructions: = enter data = adjust if desired = computer calculated - DO NOT CHANGE!

- 1) bedroom Type Residential System
- 2) GPD design flow
- 3) Garbage disposal or pumped to septic
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: none
- 5) GPD/ft² mound sand loading rate contour loading rate of req's a min ft. long rockbed
- 6) ft rockbed width ft rockbed length
- 7) ft lateral spacing ft perforation spacing (maximum of 3 for both)
 end feed manifold connection
- 8) laterals feet long perfs / lateral perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9) inch perfs at feet residual head gives gpm flow rate per perforation
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> OK
- 10) doses per day (4 minimum)
- 11) gallons per dose (treatment volume)
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 5x
- 13) feet of inch supply line leads to gallons of drainback volume 2.00 3x
(Tip: "top feed" manifold to control the drainback)
- 14) gallons TOTAL pump out volume (treatment + drainback)
- 15) feet vertical lift from pump to mound laterals, leads to a:
- 16) GPM @ feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17) gal Dose tank (code minimum) gal Dose tank (design size / LUG req'd) at gpi
leads to a
- 18) inch swing on Demand float, or timed dosing of min ON (confirm pump rate with drawdown
(this delivers Average flow, =70% of Peak design flow) hrs OFF test and adjust as necessary)
- 19) inches from bottom of tank to "Pump OFF" float
- 20) inches from bottom of tank to "Pump ON" float, or inches to "Timer ON" float if time dosed
- 21) inches from bottom of tank to "Hi Level" float, or inches to "Hi Level" float if time dosed
- 22) gallons reserve capacity (after High Level Alarm is activated)

- 23) gpd/ft^2 Absorption area Soil Loading Rate, which gives a mound ratio of (minimum)
(this must match the soil boring log) desired mound ratio
- 24) percent site slope (0-20% range) (% downslope site slope, if different than upslope)
- 25) inches, or ft. to Redox or other limiting condition (need at least 12" to be a Type I)
Treatment zone contains inches of 0% soil credit, and inches of 50% soil credit. Giving a:
- 26) inch, or ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**
- 27) ft. Total ABSORPTION width (with sand beyond rockbed as follows:)
- 28) ft. upslope and sideslope
 ft. Downslope
- Individual slope ratios give BERM widths (topsoil beyond rockbed) of:
- 29) upslope ratio ft. upslope berm
- 30) sideslope ft. sideslope berms
- 31) downslope ft. downslope berm
- 32) Overall Dimensions: ft. wide by ft. long Rock bed
 ft. wide by ft. long Mound footprint



Note:

For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.
For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

- 33) Rock Bed:
 ft. by ft. by inches under pipe, plus 20% gives yd^3 or $\times 1.4 =$ ton
- 34) Mound Sand: (note: volume is based on 3:1/4:1 slope from top of rockbed, Exchange sand for loamy cap if desired)
 up + downslope + ends + under rock = yd^3 or $\times 1.4 =$ ton
plus 20%
- 35) Loamy Cap:
 ft. by ft. 6" deep, plus 20% gives yd^3 or $\times 1.4 =$ ton
- 36) Topsoil:
 ft. by ft. 6" deep, plus 20% gives yd^3 or $\times 1.4 =$ ton

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

Designer Signature

Rusty Olson's Soil & Perc
Company

810
License#

6/18/2018
Date

Soil Observation Log

www.SepticResource.com vers 12.4

Owner Information	
Property Owner / project: <u>Dundee Farms Inc</u>	Date: <u>5/23/2018</u>
Property Address / PID: <u>1311823310009</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent mat'l's:	<input checked="" type="checkbox"/> Till <input type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Alluvium <input type="checkbox"/> Organic <input type="checkbox"/> Bedrock
landscape position:	<input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input checked="" type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	<u>L45A</u> slope <u>2</u> % direction- <u>Linear</u>

Soil Log #1							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>98.5</u>		Depth to SHWT <u>0</u> inches			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-6	Topsoil	<35	2.5y2.5/1		Friable	Moderate	Blocky
6-12	Sandy Clay Loam	<35	2.5y4/2	10y4/8	Firm	Strong	Blocky
12-24	Clay Loam	<35	2.5y5/2	10y4/8, 1-6/10y	Firm	Strong	Blocky
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
Comments:							

1.31E+12 Soil Log #2							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>98.5</u>		Depth to SHWT <u>0</u> inches			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-6	Topsoil	<35	2.5y2.5/1		Friable	Moderate	Blocky
6-12	Sandy Clay Loam	<35	2.5y4/2	10y4/8	Firm	Strong	Blocky
12-24	Clay Loam	<35	2.5y5/2	10y4/8, 1-6/10y	Firm	Strong	Blocky
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive

1.31E+12 Soil Log #3							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>97.5</u>		Depth to SHWT <u>0</u> inches			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-6	Topsoil	<35	2.5y2.5/1		Friable	Moderate	Blocky
6-16	Sandy Clay Loam	<35	2.5y3/1	10y4/8	Firm	Strong	Blocky
16-24	Clay Loam	<35	2.5y4/3	10y4/8, 1-6/10y	Firm	Strong	Blocky
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive

I hereby certify this work was completed in accordance with MN 7080 and any local req's.

Designer Signature

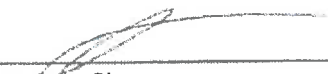
Rusty Olson's Soil & Perc
Company

810
License #

1.31E+12 Soil Log #4							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>97.5</u>		Depth to SHWT <u>0</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-6	Topsoil	<35	2.5y2.5/1		Friable	Moderate	Blocky
6-24	Sandy Clay Loam	<35	2.5y4/3	10y4/8	Firm	Strong	Blocky
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive

1.31E+12 Soil Log #5							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>98.2</u>		Depth to SHWT <u>0</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-6	Topsoil	<35	2.5y2.5/1		Friable	Moderate	Blocky
6-12	Sandy Clay Loam	<35	2.5y4/2	10y4/8	Firm	Strong	Blocky
12-24	Clay Loam	<35	2.5y5/2	10y4/8, 1-6/10y	Firm	Strong	Blocky
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive

I hereby certify this work was completed in accordance with MN 7080 and any local req's.


 Designer Signature

 Company

 License #

Soil Observation Log

www.SepticResource.com vers 12.4

Owner Information	
Property Owner / project: <u>Dundee Farms Inc</u>	Date <u>5/23/2018</u>
Property Address / PID: <u>1311823310009</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent mat'l's:	<input checked="" type="checkbox"/> Till <input type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Alluvium <input type="checkbox"/> Organic <input type="checkbox"/> Bedrock
landscape position:	<input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input checked="" type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	<u>L45A</u> slope <u>2</u> % direction- <u>Linear</u>

Soil Log #6							
<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>97.0</u>		Depth to SHWT <u>0</u> inches			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-6	Topsoil	<35	2.5y2.5/1		Friable	Moderate	Blocky
6-16	Clay Loam	<35	2.5y4/3	10y4/8	Firm	Strong	Blocky
16-24	Sandy Clay Loam	<35	2.5y5/2	10y4/8, 1-6/10y	Firm	Strong	Blocky
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
Comments:							

Percolation Test Data Sheet

Lic.#810

Percolating test readings made by: Rusty Olson's Perc. starting at 9:57 A.M. On 5/24/18

Location: PID #1311823310009

Hole number: 1

Date hole was prepared: 5/23/18

Depth of hole bottom __12__ inches, Diameter of hole __6__ inches.

Soil data from test hole:

Depth, inches

Soil texture

0-6

Topsoil 2.5y2.5/1

6-12

Sandy Clay loam 2.5y4/2

Method of scratching side wall: Knife

Depth of gravel in bottom of hole 2 inches:

Date of initial water filling 5/23/18 depth of initial water filling 12 inches above the hole bottom

Method used to maintain at least 12 inches of water depth in hole for at least 4 hours Automatic Siphon

Maximum water depth above hole bottom during tests 6 inches

Time	Time	Depth	Drop in H2O	Perc Rate
10:07	10:37	6"	2.4	12.5
10:44	11:14	6"	2.4	12.5
11:15	11:45	6"	2.4	12.5

AVERAGE PERC. RATE			12.5	MPI
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Percolation Test Data Sheet

Lic.#810

Percolating test readings made by: Rusty Olson's Perc. starting at 9:57 A.M. On 5/24/18

Location: PID #1311823310009

Hole number: 2

Date hole was prepared: 5/23/18

Depth of hole bottom __12"__ inches, Diameter of hole __6"__ inches.

Soil data from test hole:

Depth, inches

Soil texture

0-6

Topsoil 2.5y2.5/1

6-12

Sandy Clay loam 2.5y4/2

Method of scratching side wall: Knife

Depth of gravel in bottom of hole 2 inches:

Date of initial water filling 5/23/18 depth of initial water filling 12 inches above the hole bottom

Method used to maintain at least 12 inches of water depth in hole for at least 4 hours Automatic Siphon

Maximum water depth above hole bottom during tests 6 inches

Time	Time	Depth	Drop in H2O	Perc Rate
10:08	10:38	6"	2.6	11.5
10:43	11:13	6"	2.6	11.5
11:16	11:46	6"	2.6	11.5

AVERAGE PERC. RATE			11.5	MPI
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Percolation Test Data Sheet

Lic.#810

Percolating test readings made by: Rusty Olson's Perc. starting at 9:57 A.M. On 5/24/18

Location: PID #1311823310009

Hole number: 3

Date hole was prepared: 5/23/18

Depth of hole bottom ___12"___ inches, Diameter of hole ___6"___ inches.

Soil data from test hole:

Depth, inches

Soil texture

0-6

Topsoil 2.5y2.5/1

6-12

Sandy Clay loam 2.5y3/1

Method of scratching side wall: Knife

Depth of gravel in bottom of hole 2 inches:

Date of initial water filling 5/23/18 depth of initial water filling 12 inches above the hole bottom

Method used to maintain at least 12 inches of water depth in hole for at least 4 hours Automatic Siphon

Maximum water depth above hole bottom during tests 6 inches

Time	Time	Depth	Drop in H2O	Perc Rate
10:09	10:39	6"	4.2	7.1
10:42	11:12	6"	4.1	7.3
11:17	11:47	6"	4.1	7.3

AVERAGE PERC. RATE			7.2	MPI
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Percolation Test Data Sheet

Lic.#810

Percolating test readings made by: Rusty Olson's Perc. starting at 9:57 A.M. On 5/24/18

Location: PID #1311823310009

Hole number: 4

Date hole was prepared: 5/23/18

Depth of hole bottom ___12"___ inches, Diameter of hole ___6"___ inches.

Soil data from test hole:

Depth, inches

0-6

6-12

Soil texture

Topsoil 2.5y2.5/1

Sandy Clay loam 2.5y4/3

Method of scratching side wall: Knife

Depth of gravel in bottom of hole 2 inches:

Date of initial water filling 5/23/18 depth of initial water filling 12 inches above the hole bottom

Method used to maintain at least 12 inches of water depth in hole for at least 4 hours Automatic Siphon

Maximum water depth above hole bottom during tests 6 inches

Time	Time	Depth	Drop in H2O	Perc Rate
10:10	10:40	6"	2.2	13.6
10:41	11:11	6"	2.2	13.6
11:18	11:48	6"	2.2	13.6

AVERAGE PERC. RATE			13.6	MPI
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