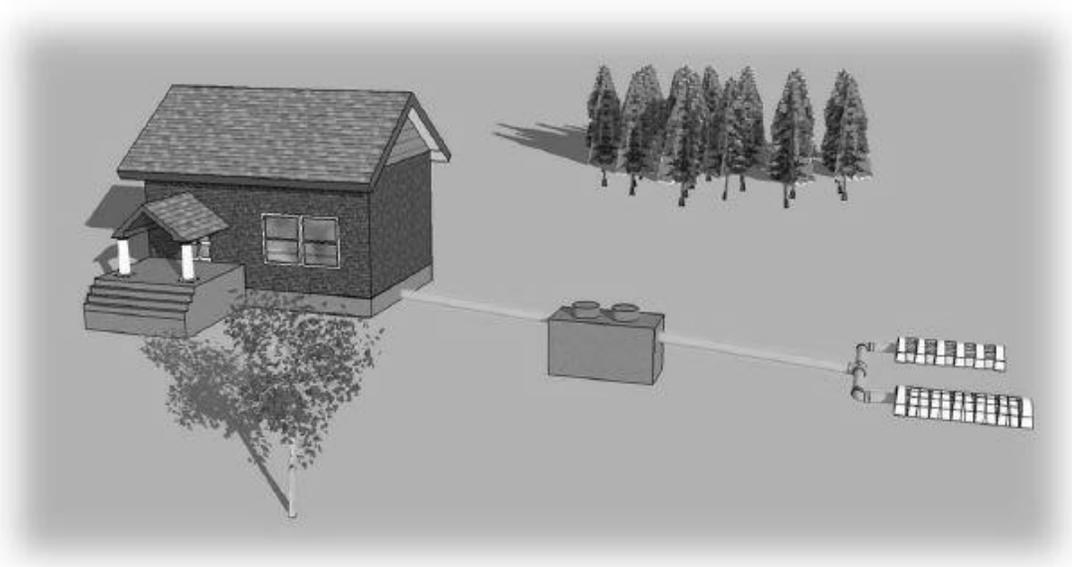


CROOK COUNTY WYOMING CONVENTIONAL SMALL WASTEWATER APPLICATION PACKET



CROOK COUNTY SMALL WASTEWATER REGULATION
Adopted by Resolution: May 1, 2018

**DELEGATION AGREEMENT WYOMING DEPARTMENT OF
ENVIRONMENTAL QUALITY AND CROOK COUNTY,
WYOMING**

Effective May 1, 2019

Crook County Small Wastewater Application
December 2023

Introduction

This application package will assist you with submitting a completed application for a permit to construct a small wastewater treatment and disposal system.

Complete and submit one (1) copy of only those pages that are applicable to your system. If you complete the required pages using the information in this design package as accurately as possible, your small wastewater permit application should comply with the minimum requirements of the Crook County Small Wastewater Regulation, Adopted by Resolution: May 1, 2018.

This application package is designed for conventional systems (septic tank and leachfield) only. In order to use this package, your system must meet all the following criteria:

Wastewater flow of less than two thousand (2,000) gallons per day (GPD) of waste containing domestic sewage.

Standard trench or bed type disposal systems use either perforated pipe or chambers.

Seasonal high groundwater, bedrock, or impervious clay layers must be four feet or more below the bottom of the proposed leachfield trench or bed.

Soil percolation rates must be greater than or equal to (\geq) five (5) minutes per inch (MPI) and less than or equal to (\leq) sixty (60) minutes per inch (MPI).

If your system does not meet all these requirements, a non-conventional system may be required. Examples of non-conventional systems are mounded or partially mounded systems, non-discharging ponds, or evapotranspiration systems. Since these types of facilities are more difficult to design and construct, this package does NOT provide guidance in the design of non-conventional disposal systems. Please contact the Crook County Planning Wastewater Specialist if you propose to use a non-conventional system.

For systems exceeding two thousand (2,000) gallons per day (GPD) or for wastewater that is not entirely domestic waste, contact the Underground Injection Control (UIC) Program at 307-777-5623 or refer to: <http://deq.wyoming.gov/wqd/underground-injection-control/>.

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Crook County Small Wastewater Application for a Permit to Construct

The fee to obtain a Small Wastewater Permit to Construct or As-Built Permit including an inspection which is conducted prior to any backfill is two hundred dollars (\$200.00). This fee is established by the Crook County Board of County Commissioners.

The two-hundred-dollar (\$200.00) fee shall be submitted with the completed application package.

Submit Completed Application Packet		Date Application & Fee was Submitted	
Crook County Planning Crook County Courthouse 309 E Cleveland Street Sundance, WY 82729 (307)-283-4548 timl@crookcounty.wy.gov calebp@crookcounty.wy.gov		(Office Use Only)	
		Application/Permit Number	
		(Office Use Only)	
Mail Completed Application Packet		Crook County Authorization	
Crook County Planning P.O. Box 825 Sundance, WY 82729-0825 (307)-283-4548 timl@crookcounty.wy.gov calebp@crookcounty.wy.gov		Date	(Office Use Only)
		By	(Office Use Only)
Name of Project			
Project Location			
Township		Range	
Section		¼ ¼ Section	
Decimal Latitude	44. ° N	Decimal Longitude	-104. ° W
Subdivision		Lot – Block - Tract	
Real Estate Owner		Engineer/Geologist (If Applicable)	
Printed Name		Printed Name	
Title		Title	
Mailing Address		Mailing Address	
City, State	Zip Code	City, State	Zip Code
Phone Number		Phone Number	
Email		Email	
Installers Information			
Name			
Mailing Address			
City, State	Zip Code		
Phone			
Email			

Property Information			
Physical Address		City	
State		Zip Code	
Lot Size	_____ Feet by _____ Feet Or _____ Acres		
Type of Building	<input type="checkbox"/> Home <input type="checkbox"/> Shop <input type="checkbox"/> Office <input type="checkbox"/> Double Wide <input type="checkbox"/> Guest Home <input type="checkbox"/> Apartment <input type="checkbox"/> Single Wide <input type="checkbox"/> Apartment in Shop <input type="checkbox"/> Camper <input type="checkbox"/> Barn <input type="checkbox"/> Other = _____		
Water Source (Check One)	<input type="checkbox"/> Cistern		
	<input type="checkbox"/> Private Well	SEO Well Permit Number _____	
	<input type="checkbox"/> Community Well	Name	_____
	<input type="checkbox"/> Municipal Well	Name	_____
Is this a replacement for an already existing small wastewater treatment facility? If yes, what are you replacing?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Type Replaced <input type="checkbox"/> Replacement (Tank) <input type="checkbox"/> Replacement (Leachfield) <input type="checkbox"/> New System
Will this small wastewater treatment facility be located within a delineated source water protection area?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Does the county approved plat require enhanced septic systems? If yes, do <u>NOT</u> proceed with this application. Contact the Crook County Wastewater Specialist to discuss other options.			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Provide the legal description of the property and evidence of titled ownership by attaching a copy of the recorded sales contract or deed.			
Access Route			
As part of this application, the applicant shall certify under penalty of perjury that the applicant has secured and shall maintain permission for Crook County personnel and their invitees to access the permitted site, including (i) permission to access the land where the site is located, (ii) permission to collect resource data as defined by Wyoming Statute § 6-3-414, and (iii) permission to enter and cross all properties necessary to access the site if the site cannot be directly accessed from a public road. A map of the access route(s) to the site shall accompany this application. Attach map as a separate sheet.			
Signatures			
All undersigned certify under penalty of perjury that the owner or applicant has secured and shall maintain permission for Crook County personnel and their invitees to access the permitted site, including (i) permission to access the land where the site is located, (ii) permission to collect resource data as defined by Wyoming Statute § 6-3-414, and (iii) permission to enter and cross all properties necessary to access the site if the site cannot be directly accessed from a public road. All undersigned agree to comply with all applicable Wyoming Statutes and Regulations and to allow the activities described in this application.			
Real Estate Owner (Signature Required)		Engineer/Geologist (If Applicable)	
Signature		Signature	
Printed Name		Printed Name	
Title		Title	
Date		Date	

Site Suitability

The owner must be aware of the depth of any impermeable soil layers, high groundwater levels, and slope when considering the septic system location. The septic system must meet the criteria listed in the Application Package Introduction for a conventional system to work properly. **If your site does not meet these criteria, stop filling out this form and contact the Crook County Planning Wastewater Specialist to discuss other options.** The questions below will ensure you have gathered the information necessary to determine if a conventional septic system is appropriate.

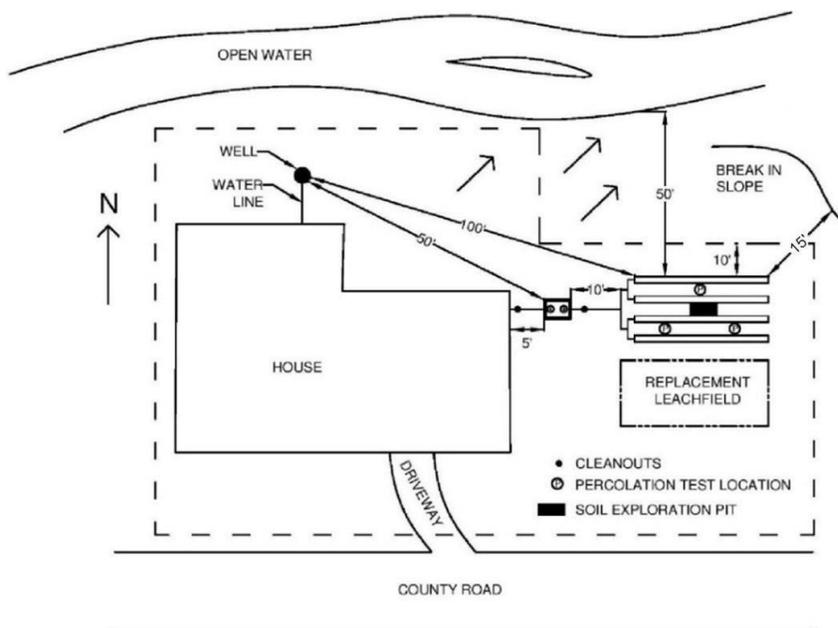
Excavation	Does the soil exploration pit lie within the area of the proposed leachfield?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	Was the bottom of the required soil exploration pit at least four (4) feet below the bottom of the proposed leachfield, usually a minimum eight (8) - nine (9) feet total depth? (Required)		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	Submit a color photo of the Exploration Pit. This photo must show a tape measure against the sidewall of the trench and the entire sidewall.		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	Is a colored photo of Exploration Pit included in this application? (Required) SMS = (307) 290-0450 / Email = calebp@crookcounty.wy.gov		<input type="checkbox"/> Photo Attached	
Depth of the excavation? (Page 3 – Box A)		Page # 3 - (Box A) _____ Inches & _____ Feet		
Who conducted this excavation?		Date		
Impermeable Layers	Did the excavator observe a rock layer below the surface?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	If yes, at what depth below the ground surface was a rock layer discovered?		_____ Inches & _____ Feet	
	Did the excavator observe a clay layer below the surface?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	If yes, at what depth below the ground surface was a clay layer discovered?		_____ Inches & _____ Feet	
High Groundwater	Was groundwater present in the excavation?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	If yes, at what depth below the ground surface was groundwater present?		_____ Inches & _____ Feet	
	Does the soil have an alkali crust at the surface, a rotten egg smell, or a blue-gray or greenish-gray (gley) color that may indicate frequent/continuous saturation?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
	If yes, at what depth below the ground surface?		_____ Inches & _____ Feet	
	Does the soil have a mottled appearance with areas around roots or cracks that look like rust, or is the soil stained a dark red-black or red-brown color, which may indicate periods of saturation?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
If yes, at what depth below the ground surface?		_____ Inches & _____ Feet		
Slope	What is the estimated slope of the proposed leachfield area?		_____ %	
	Is a colored photo of the proposed leachfield area included in this application? Please take this photo at a distance to help visualize the slope. (Required) SMS = (307) 290-0450 / Email = calebp@crookcounty.wy.gov		<input type="checkbox"/> Photo Attached	
	How far away is the nearest break in slope (the side of a hill or where the slope becomes abruptly steeper) from the proposed leachfield area?		_____ Feet	
Other	How far away is the nearest surface water body, such as a lake, river, pond, creek, ditch, or wetland from the proposed leachfield area?		_____ Feet	
	How far away are areas where the soil may be compacted by vehicles, such as roads or parking spaces, from the proposed leachfield area?		_____ Feet	
	How far away are water supply wells (drinking or irrigation wells), cisterns, or water supply lines from the proposed leachfield area?		_____ Feet	
	Do surface drainage features (ditches, depressions, or swales) direct runoff from paved areas such as roofs, patios, or driveways, away from the leachfield?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

Site Plan Drawing

Attach a sketch of your site as a separate sheet, showing each of the items in the table below if applicable.

Element	Required Setback Distance to Septic Tank (Feet)	Required Setback Distance to Leachfield (Feet)	Is the Setback Distance Satisfied?
<input type="checkbox"/> Property Lines	Ten (10)	Ten (10)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> All Buildings, Roads, And Driveways	—	—	<input type="checkbox"/> N/A
<input type="checkbox"/> Setback To Buildings W/Out A Foundation Drain	Five (5)	Ten (10)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Setback To Buildings With A Foundation Drain	Five (5)	Twenty-Five (25)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Private Wells	Fifty (50)	One Hundred (100)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Neighbors Well	Fifty (50)	One Hundred (100)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Public Water Supply Wells	One Hundred (100)	Two Hundred (200)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Potable Water Supply Lines	Twenty-Five (25)	Twenty-Five (25)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Surface Water (Pond, Intermittent Waterways, Etc.)	Fifty (50)	Fifty (50)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Septic Tank	—	Ten (10)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Break In Slope (Where Slope Gets Abruptly Steeper)	Fifteen (15)	Fifteen (15)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Cisterns	Twenty-Five (25)	Twenty-Five (25)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Leachfield	Ten (10)	—	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Replacement Leachfield	Ten (10)	—	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> North Arrow	—	—	<input type="checkbox"/> N/A
<input type="checkbox"/> Slope (Arrow Pointing Downslope)	—	—	<input type="checkbox"/> N/A
<input type="checkbox"/> Location Of Numbered Percolation Test Holes (Numbered)	—	—	<input type="checkbox"/> N/A
<input type="checkbox"/> Location Of Soil Exploration Pit	—	—	<input type="checkbox"/> N/A
<input type="checkbox"/> Location Of Cleanout Port(S)	—	—	<input type="checkbox"/> N/A

Example site plan:



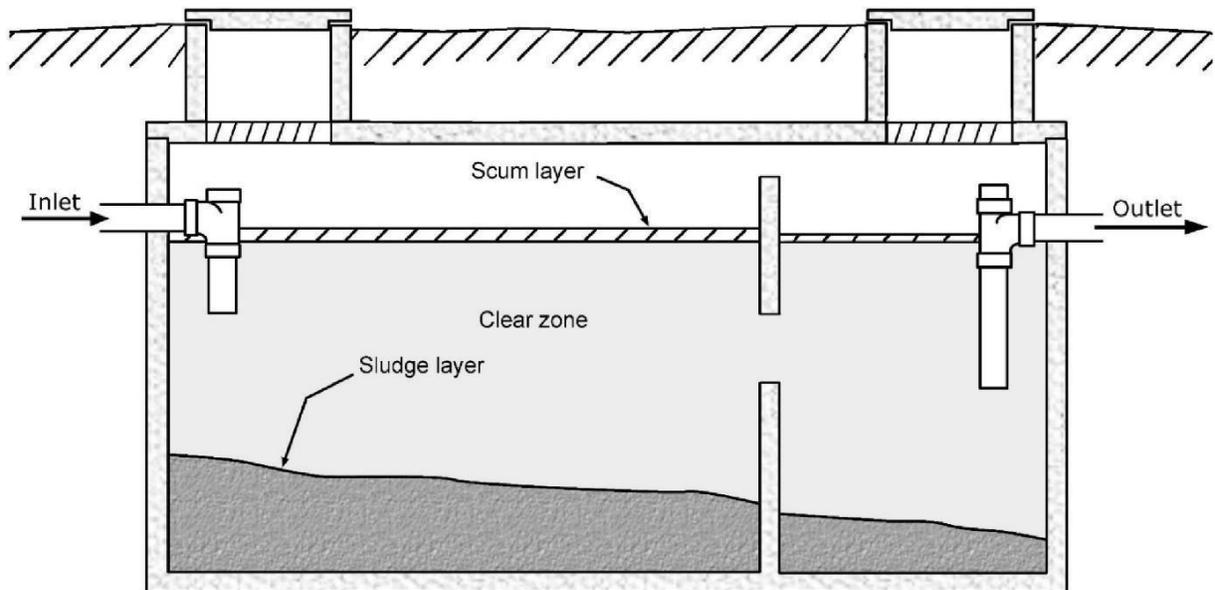
Septic Tank & Piping Worksheet

Manufacturer	<input type="checkbox"/> Boom Concrete <input type="checkbox"/> Norwesco <input type="checkbox"/> J & D Pre-Cast <input type="checkbox"/> Other = _____				
Model Number		Number of Compartments	<input type="checkbox"/> One (1) Compartment <input type="checkbox"/> Two (2) Compartment		
Size (Gallons)	<input type="checkbox"/> 1,000 Gallons <input type="checkbox"/> 1,250 Gallons <input type="checkbox"/> 1,500 Gallons <input type="checkbox"/> 2,000 Gallons <input type="checkbox"/> Other = _____				
Tank Material	<input type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass <input type="checkbox"/> Thermoplastic <input type="checkbox"/> Other = _____				
Is this septic tank on the approved list? (Page # 28 – Page # 31)			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know		
If no, provide a tank diagram from the manufacturer. If you cannot locate a diagram from the manufacturer, complete the following three (3) rows. (These rows are indicated with a thick black line on the border) See Page # 6 for septic tank design requirements and a diagram of a septic tank.					
Please complete for tanks NOT on approved list. <input type="checkbox"/> N/A	Internal Dimensions = Length = _____ Inches Width = _____ Inches Height = _____ Inches				
	Liquid Depth (Inches)	_____ Inches	Amount of Air Space Between Top of Liquid and Tank Ceiling (Inches)	_____ Inches	
	Operating Capacity	$\left(\frac{\text{Length (Inches)}}{\text{Length (Inches)}} * \frac{\text{Width (Inches)}}{\text{Width (Inches)}} * \frac{\text{Liquid Depth (Inches)}}{\text{Liquid Depth (Inches)}} \right) \div 231 = \text{_____ Gallons}$ <div style="text-align: right; font-size: small;">Operating Capacity</div>			
Depth of backfill over septic tank. (Usually six (6) to thirty-six (36) Inches)		_____ Inches	Number of bedrooms	<input type="checkbox"/> One (1) Bedroom <input type="checkbox"/> Four (4) Bedrooms <input type="checkbox"/> Two (2) Bedrooms <input type="checkbox"/> Five (5) Bedrooms <input type="checkbox"/> Three (3) Bedrooms <input type="checkbox"/> _____ Bedrooms	
If there is four (4) or more bedrooms: Does, the septic tank have additional capacity of one hundred- fifty (150) Gallons Per additional bedroom above four (4) Bedrooms?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Is septic tank installed on a level grade, with firm bedding to prevent settling, and without rock or other obstructions touching the tank as per Crook County Small Wastewater Regulation, Chapter III, Section 6,a,(2)?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Does the tank have a twenty (20)-inch access opening in <u>EACH</u> compartment of the tank and a riser from the access opening that terminates at a max of six (6) inches below the ground surface?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Does all the septic tank access risers terminating above ground have locking devices or are screwed in?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
If installing two (2) tanks in a series, install the downstream tank a minimum of two (2) inches lower than the first to insure proper flow. Will the installer use a series of tanks as described?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
What will the piping material between the house and the septic tank be?		<input type="checkbox"/> SCH-40 <input type="checkbox"/> SDR-35	What is the proposed pipe size (diameter)? (Page 5 – Box P)		Page # 5 - Box P _____ Inches
Will the installer lay the pipe from the house to the septic tank in a straight line?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
If no , will the installer include the cleanout ports at any alignment change greater than twenty-two and a half (22.5°) degrees? (Required)			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Will the pipe from the house to the septic tank be more than (<) one hundred (100) feet long?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
If yes , will the cleanout ports be spaced along the line every hundred (100) feet or less? (Required)			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Crook County recommends a cleanout port facing each direction between the building and the tank. If only one is used, which direction does the cleanout port face? (Required)			<input type="checkbox"/> Toward Building <input type="checkbox"/> Toward Septic Tank <input type="checkbox"/> Toward Both		
Will the piping have a minimum slope of quarter (¼) inch per one (1) foot, two (2) % ?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
If the installer uses more than one trench, they must use a distribution box or flow divider tee to equalize flow. Please select which distribution system you are going to be using on this septic system.			<input type="checkbox"/> Distribution Box <input type="checkbox"/> Flow Divider Tee <input type="checkbox"/> _____		
Will the leachfield trenches be less than (>) one hundred (100) feet long? (Required)			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

Basic Design Requirements for Septic Tanks

- * Tanks must have a minimum of a one thousand (1,000) Gallon capacity for residences with up to four bedrooms; add one hundred-fifty (150) Gallons of capacity for each additional bedroom.
- * The tank must be watertight, including all joints and connections, and constructed of a durable, non- corrodible material such as concrete, fiberglass, thermoplastic or other approved material. Crook County regulation do not allow steel tanks.
- * The liquid depth shall be between three (3) and six (6) feet deep.
- * A single compartment tank shall have at least a two to one (2:1) length to width ratio or be partitioned to prevent short-circuiting.
- * The first compartment in any two-compartment tank must accommodate at least fifty (50) percent of the capacity.
- * Each compartment must have an access opening with a minimum dimension of twenty (20) inches, from which both inlet and outlet sanitary tees shall be accessible.
- * Each compartment must have a cleanout riser that extends to a maximum of six (6) inches below the ground surface.
- * The inlet and outlet sanitary tees should be four (4) inch diameter, schedule forty (40) PVC or equivalent, and should extend into undisturbed soil.
- * Install tanks used in a series such that the inlet to each successive tank shall be at least two (2) inches below the outlet of the preceding tank.

Diagram of a Typical Two (2) Compartment Septic Tank



Drawing modified from CIDWT. 2009. *Installation of Wastewater Treatment Systems*. Consortium of Institutes for Decentralized Wastewater Treatment (CIDWT). Iowa State University, Midwest Plan Service. Ames, IA.

Percolation Test Instructions

In order for a septic system to perform properly, the wastewater must move through the soil at an ideal rate, neither too fast nor too slow. A percolation test estimates the rate at which the water will percolate, or move, through the soil. The information provided by percolation tests is necessary to design leachfields correctly. Follow the steps below to complete a percolation test.

1. Location of Percolation Test Holes. The percolation (perc) test holes must be spaced uniformly over the proposed leachfield site. A minimum of three (3) test holes are required, although you can use more if desired.

2. Test Hole Preparation. Dig or bore each hole twelve (12) inches wide and as deep as the proposed depth of the leachfield (usually between thirty (30) and forty (40) inches). Make sure the sides are vertical and scrape the sides and bottom of the hole with a sharp pointed instrument to restore a natural soil surface. Remove loose soil from the hole and place two (2) inches of coarse sand, washed gravel, or crushed stone in the bottom in order to prevent scouring or sealing.

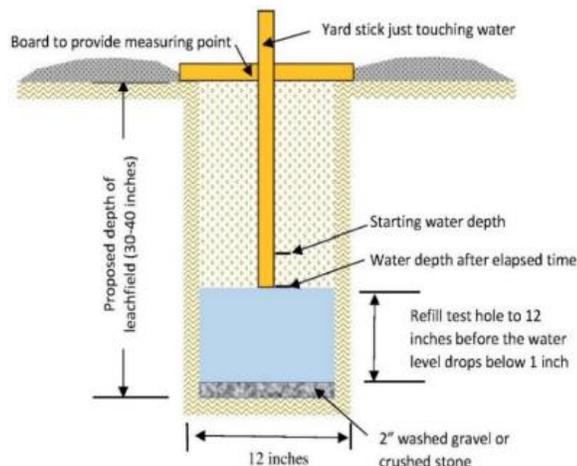
3. Presoaking. Presoaking is *absolutely* required to get valid percolation test results. Presoaking allows the water conditions in the test hole to reach a stable condition that is similar to a leachfield. Presoaking time varies with soil conditions, but presoak holes for at least four (4) hours. Maintain at least eighteen (18) inches of water in the test holes for at least four (4) hours, then allow the soil to swell for twelve (12) hours (overnight is good) before starting the perc test.

For sandy or loose soils, add eighteen (18) inches of water above the gravel or coarse sand. If the eighteen (18) inches of water seeps away in eighteen (18) minutes or less, add eighteen (18) inches of water a second time. If the second filling of eighteen (18) inches of water seeps away in eighteen (18) minutes or less, the soil is excessively permeable, and the site is unsuitable for a conventional disposal system. If this is the case, contact your county small wastewater permitting authority.

4. Perc Rate Measurements. Fill each hole with twelve (12) inches of water and let the soil re-hydrate for fifteen (15) minutes prior to taking any measurements. Establish a fixed reference point such as a flat board placed across the top of the hole to measure the incremental water level drop at the constant time intervals. Measure the water level drop to the nearest one eighth (1/8) of an inch with a minimum time interval of ten (10) minutes. Normal time intervals are usually ten (10) or fifteen (15) minutes.

Refill the test hole to twelve (12) inches above the gravel before starting the measurements. Measure down to the water from the fixed reference point. Record this value on the first line in the perc test data sheet (Page # 8). Take another measurement after the time interval has elapsed and record on the second line of the table. Calculate the water level drop and record in the table.

Continue the test until the water level drop rate has stabilized, i.e. three (3) consecutive measurements within one eighth (1/8) inch of each other. Before the water level drops below one (1) inch above the gravel, refill the test hole to twelve (12) inches. Some test holes may take longer to stabilize than others. If the drop rate continues to fluctuate, use the smallest drop rate out of the last six (6) intervals for your calculations.



Hole Example Usually 30" - 40"	
Measure to nearest 1/8 inch	
Water Level	Drop
18	—
19 5/8	1 5/8
21 1/8	1 1/2
22 1/2	1 3/8
23 5/8	1 1/8
24 5/8	1
25 1/2	7/8
26 3/8	7/8
27 1/4	7/8
Time Interval 10 Minutes	
Final Interval Drop 7/8"	
Perc Rate 10 Mins ÷ (7/8")	
11.43 Mins Per Inch	

Leachfield Sizing Worksheet

Design Flow Gallons Per Day (GPD)	<input type="checkbox"/> Residential Building (Including Mobile Homes)	<p>How many bedrooms does the residence have?</p> <p>_____ bedrooms</p> <p>Does the residence have an unfinished basement?</p> <p style="text-align: center;"><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, add 2 more bedrooms to the number above.</p> <p>_____ Total bedrooms</p>	<p>Enter the number of gallons per day (GPD) of wastewater generated that corresponds with the number of bedrooms in Page # 9 Box # 1 below.</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>1 bedroom</td><td style="text-align: right;">150 GPD</td></tr> <tr><td>2 bedrooms</td><td style="text-align: right;">280 GPD</td></tr> <tr><td>3 bedrooms</td><td style="text-align: right;">390 GPD</td></tr> <tr><td>4 bedrooms</td><td style="text-align: right;">470 GPD</td></tr> <tr><td>5 bedrooms</td><td style="text-align: right;">550 GPD</td></tr> <tr><td>6 bedrooms*</td><td style="text-align: right;">630 GPD</td></tr> </table> <p>*Add an additional eighty (80) gallons per day (GPD) for each bedroom over six (6).</p>	1 bedroom	150 GPD	2 bedrooms	280 GPD	3 bedrooms	390 GPD	4 bedrooms	470 GPD	5 bedrooms	550 GPD	6 bedrooms*	630 GPD
	1 bedroom	150 GPD													
	2 bedrooms	280 GPD													
3 bedrooms	390 GPD														
4 bedrooms	470 GPD														
5 bedrooms	550 GPD														
6 bedrooms*	630 GPD														
<input type="checkbox"/> Non-residential Building	Crook County Small Wastewater Regulation, Table 2 on Page # 27.														
Design Flow Gallons Per Day (GPD): Enter value from cells above or Crook County Small Wastewater Regulation, Table 2 (Page # 26):		Page # 9 - Box # 1													

Loading Rate Gallons Per Day Per Square Feet (GPD/FT²)	Percolation Rate Minutes Per Inch	Loading Rate Gallons Per Day Per Square Feet	Percolation Rate Minutes Per Inch	Loading Rate Gallons Per Day Per Square Feet	Percolation Rate Minutes Per Inch	Loading Rate Gallons Per Day Per Square Feet
	<input type="checkbox"/> 5 MPI	0.80 GPD/FT ²	<input type="checkbox"/> 16 MPI	0.50 GPD/FT ²	<input type="checkbox"/> 30-31 MPI	0.39 GPD/FT ²
	<input type="checkbox"/> 6 MPI	0.75 GPD/FT ²	<input type="checkbox"/> 17 MPI	0.49 GPD/FT ²	<input type="checkbox"/> 32-33 MPI	0.38 GPD/FT ²
	<input type="checkbox"/> 7 MPI	0.71 GPD/FT ²	<input type="checkbox"/> 18 MPI	0.48 GPD/FT ²	<input type="checkbox"/> 34-35 MPI	0.37 GPD/FT ²
	<input type="checkbox"/> 8 MPI	0.68 GPD/FT ²	<input type="checkbox"/> 19 MPI	0.47 GPD/FT ²	<input type="checkbox"/> 36-37 MPI	0.36 GPD/FT ²
	<input type="checkbox"/> 9 MPI	0.65 GPD/FT ²	<input type="checkbox"/> 20 MPI	0.46 GPD/FT ²	<input type="checkbox"/> 38-40 MPI	0.35 GPD/FT ²
	<input type="checkbox"/> 10 MPI	0.62 GPD/FT ²	<input type="checkbox"/> 21 MPI	0.45 GPD/FT ²	<input type="checkbox"/> 41-43 MPI	0.34 GPD/FT ²
	<input type="checkbox"/> 11 MPI	0.60 GPD/FT ²	<input type="checkbox"/> 22 MPI	0.44 GPD/FT ²	<input type="checkbox"/> 44-46 MPI	0.33 GPD/FT ²
	<input type="checkbox"/> 12 MPI	0.58 GPD/FT ²	<input type="checkbox"/> 23-24 MPI	0.43 GPD/FT ²	<input type="checkbox"/> 47-50 MPI	0.32 GPD/FT ²
	<input type="checkbox"/> 13 MPI	0.56 GPD/FT ²	<input type="checkbox"/> 25 MPI	0.42 GPD/FT ²	<input type="checkbox"/> 51-55 MPI	0.31 GPD/FT ²
	<input type="checkbox"/> 14 MPI	0.54 GPD/FT ²	<input type="checkbox"/> 26 - 27 MPI	0.41 GPD/FT ²	<input type="checkbox"/> 56-60 MPI	0.30 GPD/FT ²
	<input type="checkbox"/> 15 MPI	0.52 GPD/FT ²	<input type="checkbox"/> 28 - 29 MPI	0.40 GPD/FT ²		
	Loading Rate Gallons Per Day Per Square Feet (GPD/FT²): Enter loading rate for your percolation rate from above table. (Page 9 - Box # 2)				Page # 9 - Box # 2	
				_____ Gallons Per Day Per Square Feet (GPD/FT²)		

Required Leachfield Area Square Feet (FT²) (Page 9 - Box # 3)	$\frac{\quad}{\quad} = \quad$		Page # 9 - Box # 3
	Design Flow Page # 9 (Box # 1)	Loading Rate Page # 9 (Box # 2)	Required Leachfield Area Page # 9 (Box # 3)
Example	390 Gallons Per Day (GPD)	0.62 Gallons Per Day Per Square Feet (GPD/FT ²)	629.03 (630 Square Feet (FT ²))

Leachfield Design Instructions

Arrange conventional small wastewater (septic system) leachfields using either a trench or a bed layout. Construct of either trench or bed layouts using either perforated pipe or open-bottom chamber systems. Crook County prefers trench layouts because they provide more surface area for absorption of wastewater into the soil. Trenches also treat wastewater more efficiently because the undisturbed soil between the trenches allows more oxygen to reach the microbes that break down and treat the wastewater. For this reason, trenches are also more effective when soils have lower or “slower” percolation rates. Use bed layouts where space for a leachfield is limited and only where soils have higher or “faster” percolation rates.

To design your leachfield, follow these steps:

1. Choose either a trench or a bed layout.
2. Choose either perforated pipe or open-bottomed chambers for your leachfield.
3. Fill out the layout worksheets that correspond to your selection.
4. These worksheets will determine how many trenches you need or how large to make your bed.
5. Submit **only** the worksheets that you complete.

Trench Leachfield System:	Bed Leachfield System:
Perforated Pipe Trench Layout Worksheets Pages # 12 – 16	Perforated Pipe Bed Layout Worksheets Pages # 22 - 24
Chambered Trench Layout Worksheets Pages #17 - 21	Chambered Bed Layout Worksheets Pages # 25 - 26

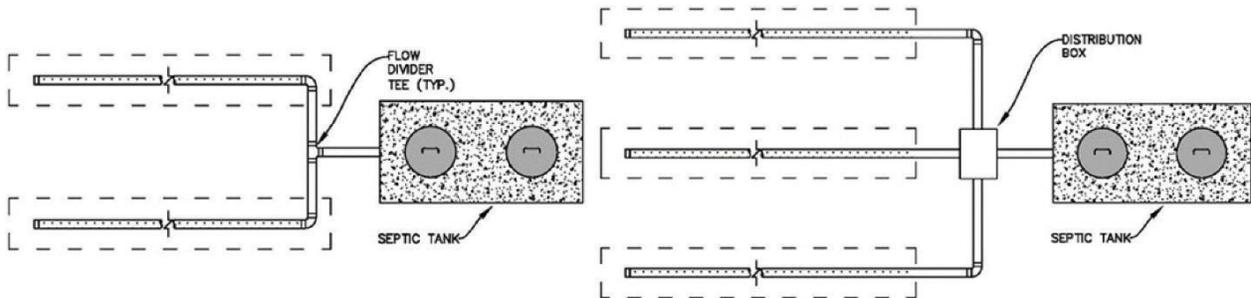
Install leachfields to ensure equal distribution of wastewater effluent among all the trenches. Equal distribution allows the use of the entire infiltrative surface of the leachfield and prevents overloading part of the leachfield.

Use either a flow divider tees and piping headers or a distribution box (D-box) to distribute wastewater effluent equally among the trenches of a leachfield. A flow divider tee and piping header system conveys wastewater effluent to each disposal trench using a network of solid piping. Split the discharge line from the septic tank using a flow divider tee (see example below). If there is an odd number of trenches in the leachfield, use a distribution box to divide wastewater effluent evenly among the trenches (see example below). Distribution boxes are typically made of concrete or wastewater-grade plastics and are watertight with a single inlet set at a higher elevation than the outlets. Construct outlets so that their elevations are equal relative to one another.

The maximum length of perforated pipe per trench or per lateral for bed layouts is one hundred (100) feet.

The maximum length of chambers per trench or per lateral for bed layouts is fifty (50) feet.

Examples of Septic Systems Where the Effluent is Distributed Equally.



Crook County does not require installation of leachfield trenches in a straight line. In fact, it is always preferable to follow the contour of the land and the bottom of each individual trench shall be level throughout its length. Additionally, never install the leachfield in floodways, at the base of slopes, or in depressions where runoff water could flood the leachfield. Construct leachfields in areas with good surface drainage, where the water cannot pond over the leachfield.

Table 1. Chamber System Equivalent Areas

Use dimensions provided in the table below to design leachfields utilizing chamber technology on Pages # 17 - 21 (chambered trenches) or Pages #25 - 26 (chambered beds) of this application package.

Chamber Class	Manufacturer	Model	Nominal Dimensions			Effective Dimensions			Equivalent Area	
			Length (Feet)	Width (Inches)	Height (Inches)	Length (Feet)	Width (Inches)	Height (Inches)	Trench Layout (FT ² Per Unit)	Bed Layout (FT ² Per Unit)
Page # 11	Page # 11	Page # 11	Page # 11	Page # 11	Page # 11	Page # 11	Page # 11	Page # 11	Page # 11	Page # 11
Box A	Box B	Box C	Box # 1	Box # 2	Box # 3	Box # 4	Box # 5	Box # 6	Box # 7	Box # 8
High Capacity	Infiltrator	Quick4 (High Capacity)	4.4'	34"	16"	4.0'	34"	11.5"	23.9 FT ² Per Unit	16.2 FT ² Per Unit
	Infiltrator	Quick4 Plus (High Capacity)	4.4'	34"	14"	4.0'	34"	8.0"	21.5 FT ² Per Unit	16.2 FT ² Per Unit
	Infiltrator	Arc 36 (High Capacity)	5.3'	34"	16"	5.0'	34"	10.5"	29.0 FT ² Per Unit	20.3 FT ² Per Unit
	ADS	BioDiffuser - 16" (High Capacity)	6.3'	34"	16"	6.2'	34"	11.2"	36.7 FT ² Per Unit	25.1 FT ² Per Unit
Standard	Infiltrator	Quick4 (Standard Capacity)	4.4'	34"	12"	4.0'	34"	8.0"	21.5 FT ² Per Unit	16.2 FT ² Per Unit
	Infiltrator	Quick4 Plus (Standard Capacity)	4.4'	34"	12"	4.0'	34"	8.0"	21.5 FT ² Per Unit	16.2 FT ² Per Unit
	Infiltrator	Arc 36 (Standard Capacity)	5.3'	34"	13"	5.0'	34"	7.0"	26.1 FT ² Per Unit	20.3 FT ² Per Unit
	ADS	BioDiffuser - 11 (Standard Capacity)	6.3'	34"	11"	6.2'	34"	5.8"	31.1 FT ² Per Unit	25.1 FT ² Per Unit
	Prinsco	Pro 4/36 (Standard Capacity)	4.7'	34"	12"	4.0'	34"	8.5"	21.8 FT ² Per Unit	16.2 FT ² Per Unit
Standard Low Profile	Infiltrator	Quick4 Plus (Low Profile)	4.4'	34"	8"	4.0'	34"	3.3"	18.4 FT ² Per Unit	16.2 FT ² Per Unit
	Infiltrator	Arc 36 (Low Profile)	5.3'	34"	8"	5.0'	34"	3.8"	23.4 FT ² Per Unit	20.3 FT ² Per Unit
Narrow	Infiltrator	Quick4 Equalizer 36	4.4'	22"	12"	4.0'	22"	6.0"	14.5 FT ² Per Unit	10.5 FT ² Per Unit
	Infiltrator	Arc 24	5.6'	22"	12"	5.0'	22"	6.3"	18.3 FT ² Per Unit	13.1 FT ² Per Unit
	ADS	BioDiffuser Bio 3	7.3'	22"	12"	7.2'	22"	6.4"	26.5 FT ² Per Unit	18.9 FT ² Per Unit
Narrow LP	Infiltrator	Quick4 Plus 36 (Low Profile)	4.4'	22"	8"	4.0'	22"	3.3"	12.7 FT ² Per Unit	10.5 FT ² Per Unit
Ultra-Narrow	Infiltrator	Quick4 Equalizer 24	4.4'	16"	12"	4.0'	16"	6.0"	11.6 FT ² Per Unit	7.6 FT ² Per Unit
	Infiltrator	Arc 18	5.6'	16"	12"	5.0'	16"	6.3"	14.7 FT ² Per Unit	9.5 FT ² Per Unit
	ADS	BioDiffuser Bio 2	7.3'	16"	12"	7.2'	16"	6.4"	21.3 FT ² Per Unit	13.7 FT ² Per Unit

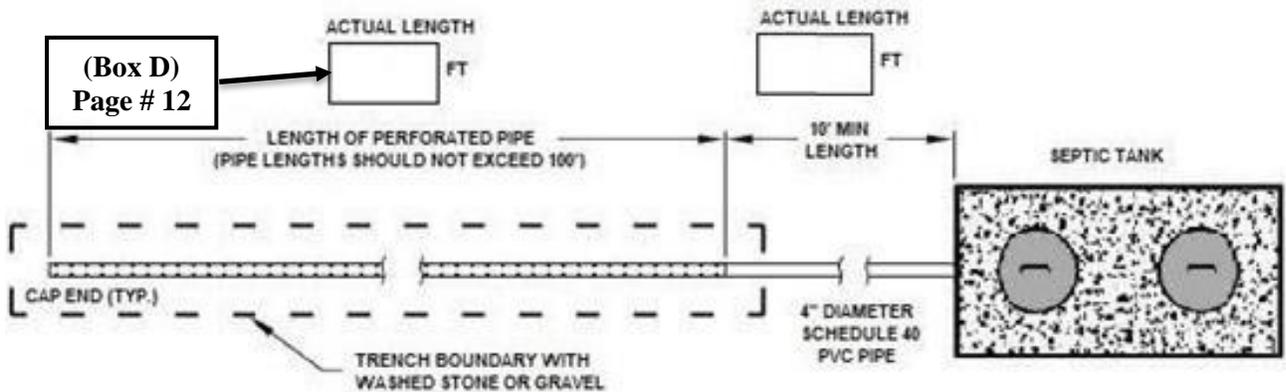
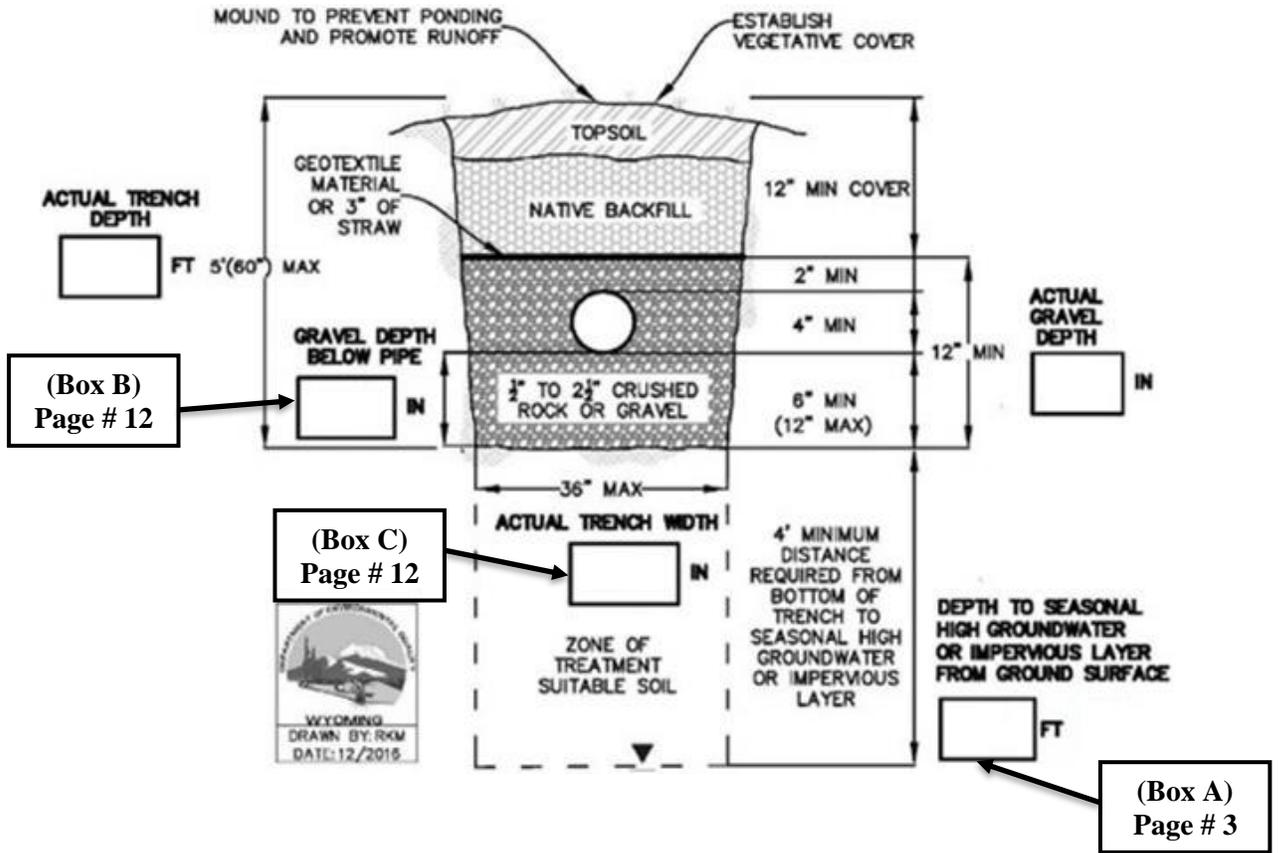
Perforated Pipe Trench Layout Worksheet

Design					
Required Leachfield Area (Page 9 - Box # 3)				Page # 9 - Box # 3	
Depth of Trench Below Pipe (Feet) (Page 12 - Box B)				Page # 12 - Box B	
Width of Trench (Feet) (Page 12 - Box C)				Page # 12 - Box C	
Absorptive Area Per Linear Foot of Trench (Page 12 - Box # 4)	$\frac{\text{_____}}{\text{_____}} + \frac{\text{_____}}{\text{_____}} + \frac{\text{_____}}{\text{_____}} = \frac{\text{_____}}{\text{_____}}$			Page # 12 - Box # 4	
	Trench Depth Page # 12 (Box B)	Trench Depth Page # 12 (Box B)	Trench Width Page # 12 (Box C)	Absorptive Area Page # 12 (Box # 4)	
Example	1'	1'	3'	5	
Total Trench Length (Feet) (Page 12 - Box # 5)	$\frac{\text{_____}}{\text{_____}} = \frac{\text{_____}}{\text{_____}}$			Page # 12 - Box # 5	
	Required Leachfield Area Page # 9 (Box # 3)	Absorptive Area Page # 12 (Box # 4)	Total Trench Length Page # 12 (Box # 5)		
Example	629.03 (630 Square Feet (FT ²))	5	125.81 (126')		
Trench Layout					
Number of Trenches to Use	Total Trench Length Page # 12 (Box # 5)	Minimum Number of Trenches to Use Page # 12 (Box # 6)	Number of Trenches to Use Page # 12 (Box # 6) = _____ <u>Use the table to the right to find the minimum number of trenches.</u>		
	000-101	1	$\frac{\text{_____}}{\text{_____}} = \frac{\text{_____}}{\text{_____}}$		
	101-200	2	Total Trench Length Page # 12 (Box # 5)	Minimum # of Trenches Page # 12 (Box # 6)	Length of Each Trench Page # 12 (Box D)
	201-300	3 ☼	125.81 (126')	2	62.9 (63')
	301-400	4	Length of Each Trenches Page # 12 (Box D) = _____		
	401-500	5 ☼	☼ = Distribution Box Required		
501-600	6				
Notes	* The maximum depth of each trench shall be five (5) feet sixty (60) inches.		* A maximum of fifty (50) feet of chambered trench. * A maximum of one hundred (100) feet of perforated pipe per trench		
Perforated Pipe Trench Layout Design Sheets					
Select your Trench Layout and complete the following layout design sheet by filling in the boxes with the actual dimensions for your selected trench layout.	<input type="checkbox"/> One Trench Perforated Pipe Layout			Page # 13	
	<input type="checkbox"/> Two Trench Perforated Pipe Layout			Page # 14	
	<input type="checkbox"/> Three, Five or Multi Trench Perforated Pipe Layout			Page # 15	
	<input type="checkbox"/> Four Trench Perforated Pipe Layout			Page # 16	

One Trench Perforated Pipe Layout Design Sheet

Notes

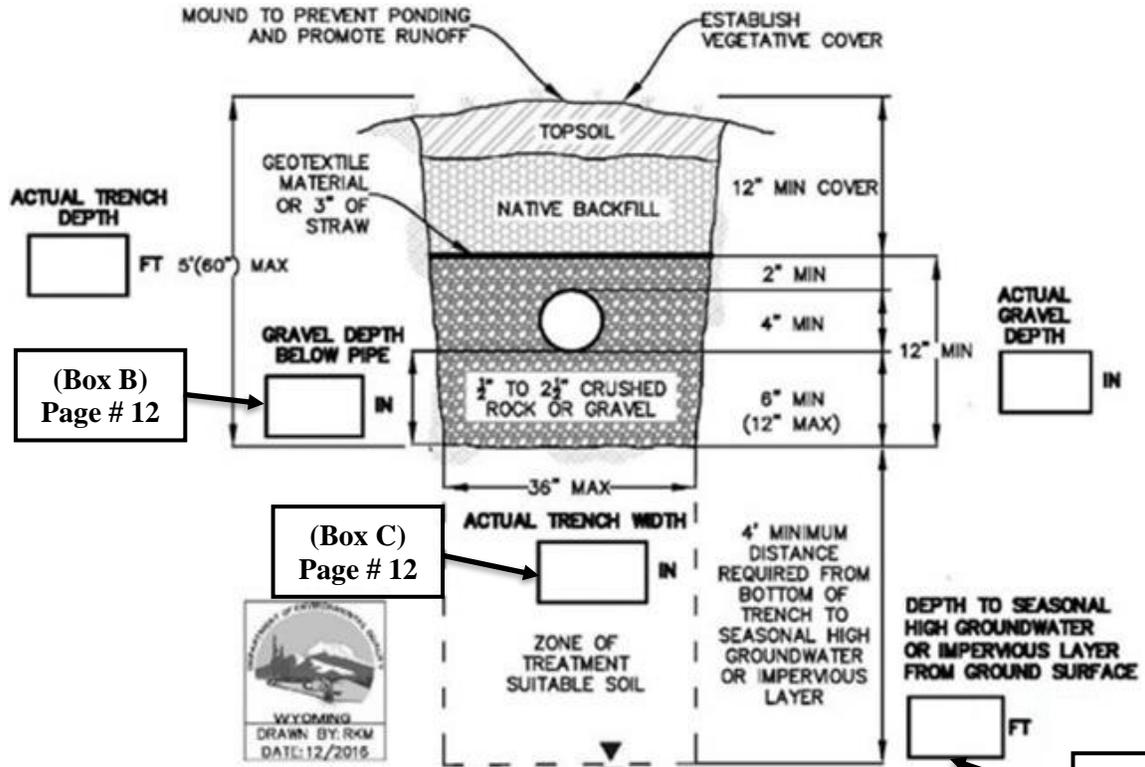
- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet sixty (60) inches.



Two Trench Perforated Pipe Layout Design Sheet

Notes

- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet sixty (60) inches.
- * Leachfield header piping shall not be perforated.

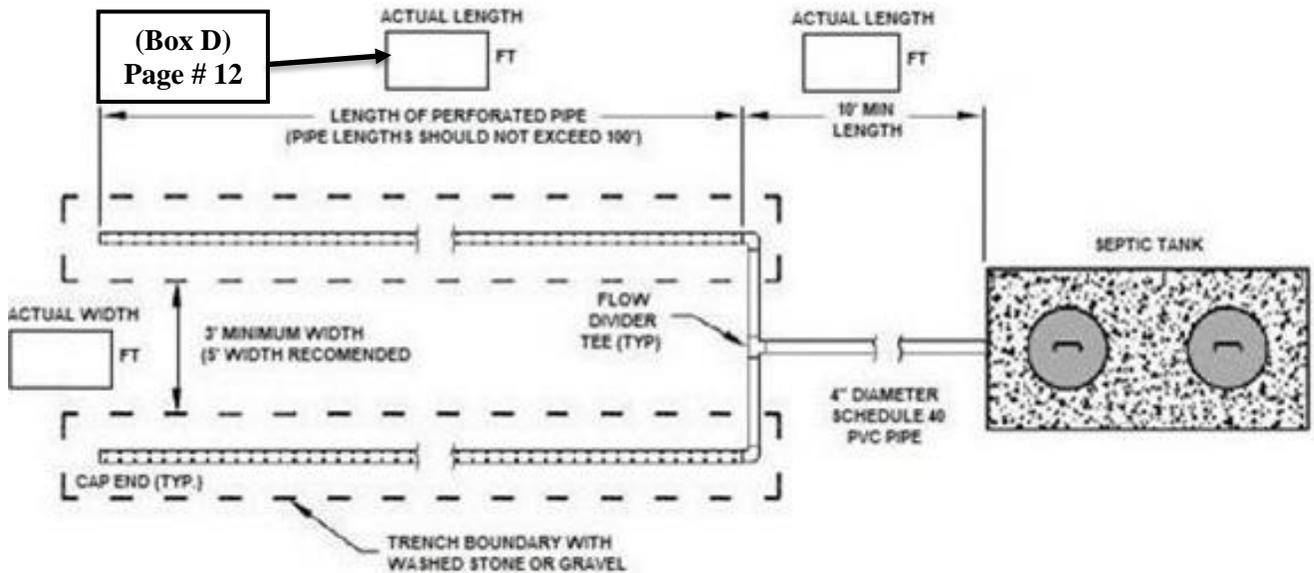


(Box B)
Page # 12

(Box C)
Page # 12



(Box A)
Page # 3

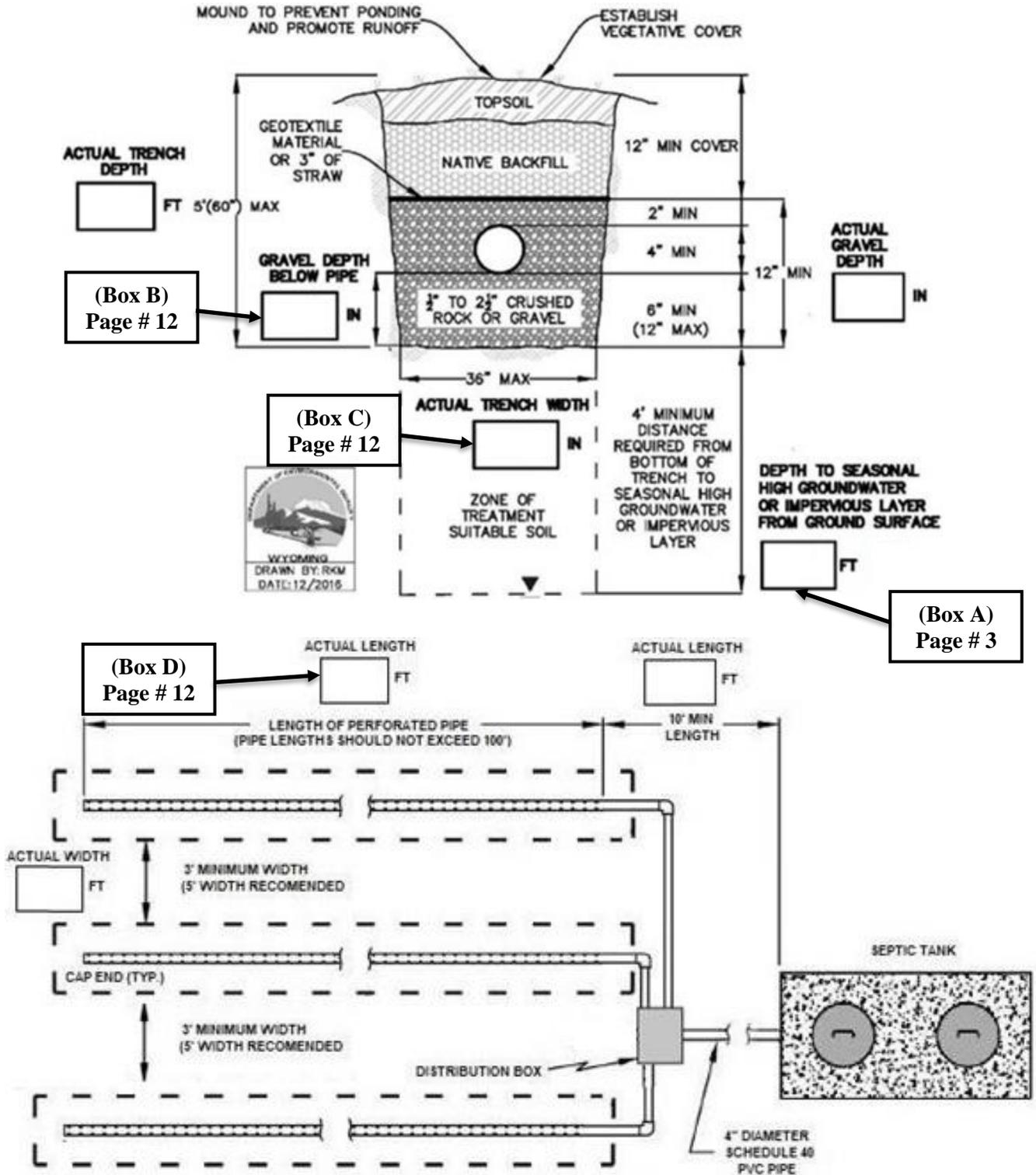


(Box D)
Page # 12

Three, Five or Multi Trench Perforated Pipe Layout Design Sheet

Notes

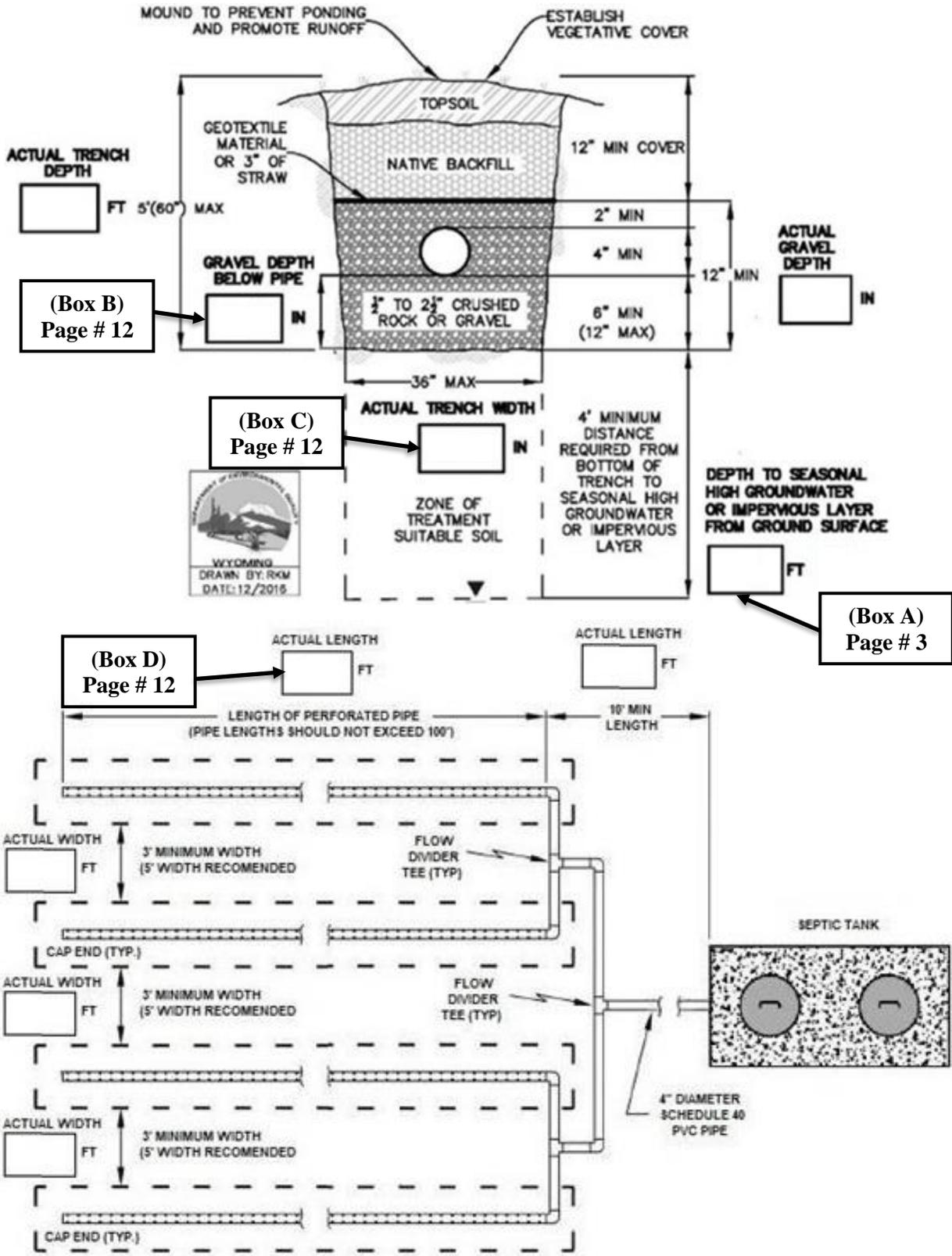
- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet sixty (60) inches.



Four Trench Perforated Pipe Layout Design Sheet

Notes

- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet sixty (60) inches.
- * Leachfield header piping shall not be perforated.



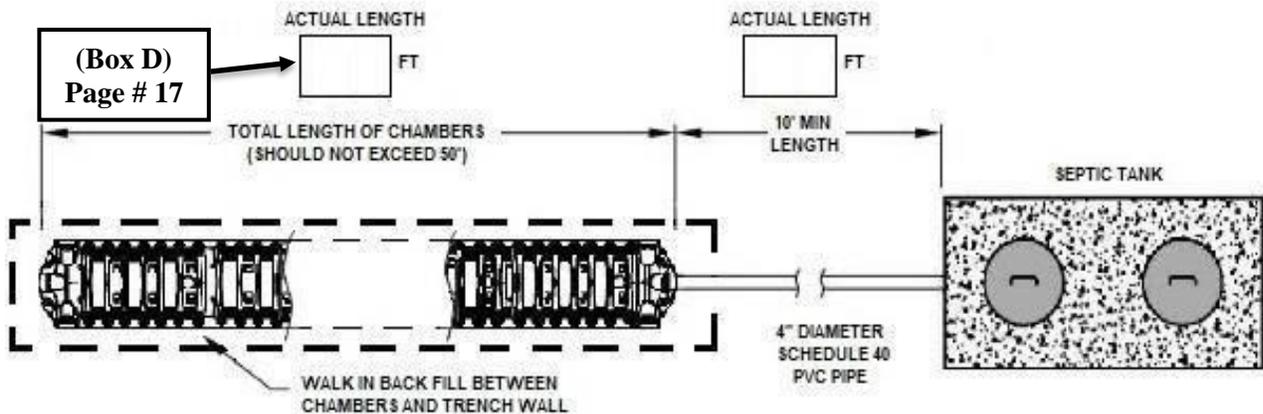
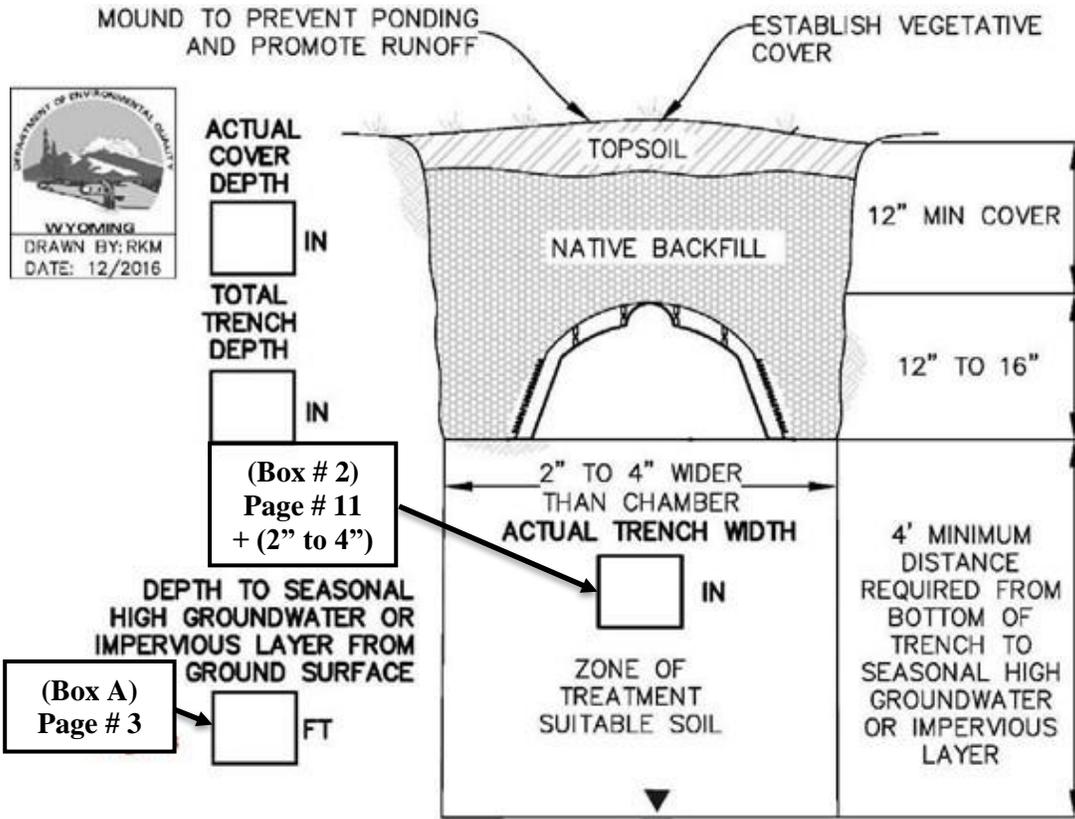
Chambered Trench Layout Worksheet

Chambers (Page # 11)			
Manufacturer	<input type="checkbox"/> Infiltrator	<input type="checkbox"/> ADS	<input type="checkbox"/> Prinsco <input type="checkbox"/> Other = _____
Model	Page # 11 - Box C		
Nominal Length (Feet)	Page # 11 - Box # 1		
Nominal Width (Inches)	Page # 11 - Box # 2		
Nominal Height (Inches)	Page # 11 - Box # 3		
Effective Length (Feet)	Page # 11 - Box # 4		
Design			
Required Leachfield Area (Page 9 - Box # 3)	Page # 9 - Box # 3		
Equivalent Area Per Unit (Page 11 - Box # 7)	Page # 11 - Box # 7		
Number of Chambers (Page 17 - Box # 5)	$\frac{\text{Required Leachfield Area}}{\text{Equivalent Area Per Unit}} = \text{Number of Chambers (Round Up)}$		Page # 17 - Box # 5
Example	629.03 (630 Square Feet (FT ²))	26.1 ft ² Per Unit	24.1 (25 Chambers)
Trench Layout			
Total Trench Length (Feet)	$\text{Number of Chambers (Round Up)} \times \text{Effective Length} = \text{Total Trench Length}$		Page # 17 - Box # 6
Example	24.1 (25 Chambers)	5'	120.7 (121')
Number of Trenches to Use	Total Trench Length Page # 17 (Box # 6)	Minimum Number of Trenches to Use Page # 17 (Box # 7)	Number of Trenches to Use Page # 17 (Box # 7) = _____ Use table to the right to find the minimum number of trenches.
	0-50	1	$\frac{\text{Total Trench Length}}{\text{Length of Each Trench}} = \text{Minimum Number of Trenches}$
	51-100	2	
	100-150	3☼	
	151-200	4	
	201-250	5☼	
	251-300	6	
Notes	<ul style="list-style-type: none"> * The bottom of each trench shall be level throughout its length. * The maximum depth of each trench shall be five (5) feet sixty (60) inches. * A maximum of fifty (50) feet of chambers per trench. 		
Chambered Trench Layout Design Sheets			
Select your Trench Layout and complete the following layout design sheet by filling in the boxes with the actual dimensions for your selected trench layout.	<input type="checkbox"/> One Trench Chambered Layout		Page # 18
	<input type="checkbox"/> Two Trench Chambered Layout		Page # 19
	<input type="checkbox"/> Three, Five or Multi Trench Chambered Layout		Page # 20
	<input type="checkbox"/> Four Trench Chambered Layout		Page # 21

One Trench Chambered Layout Design Sheet

Notes

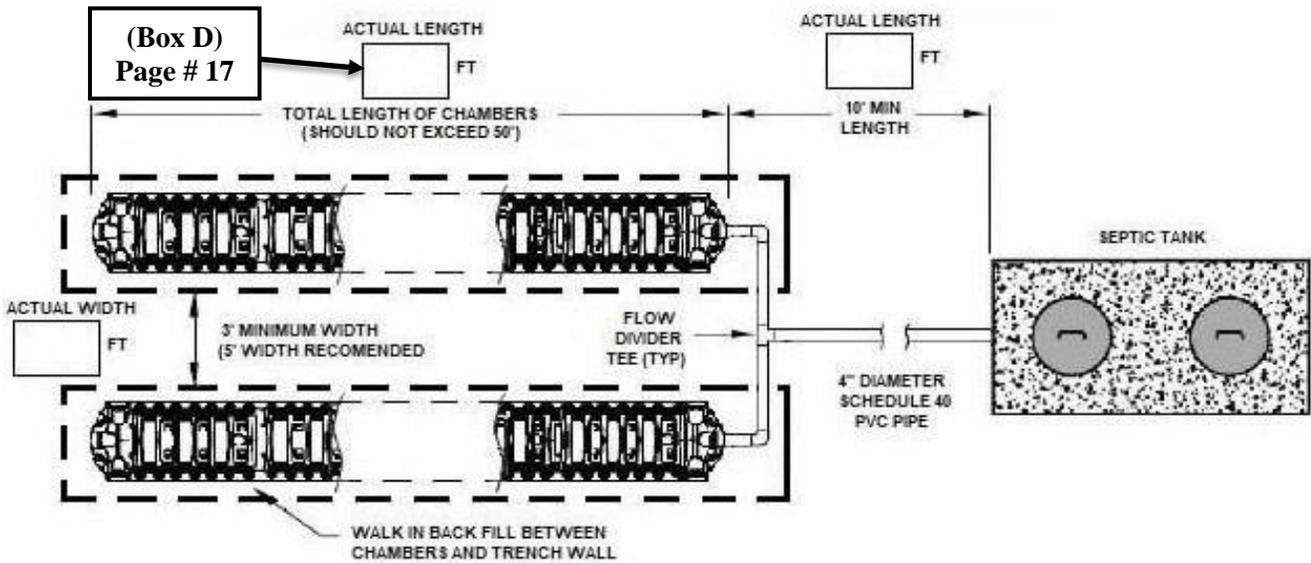
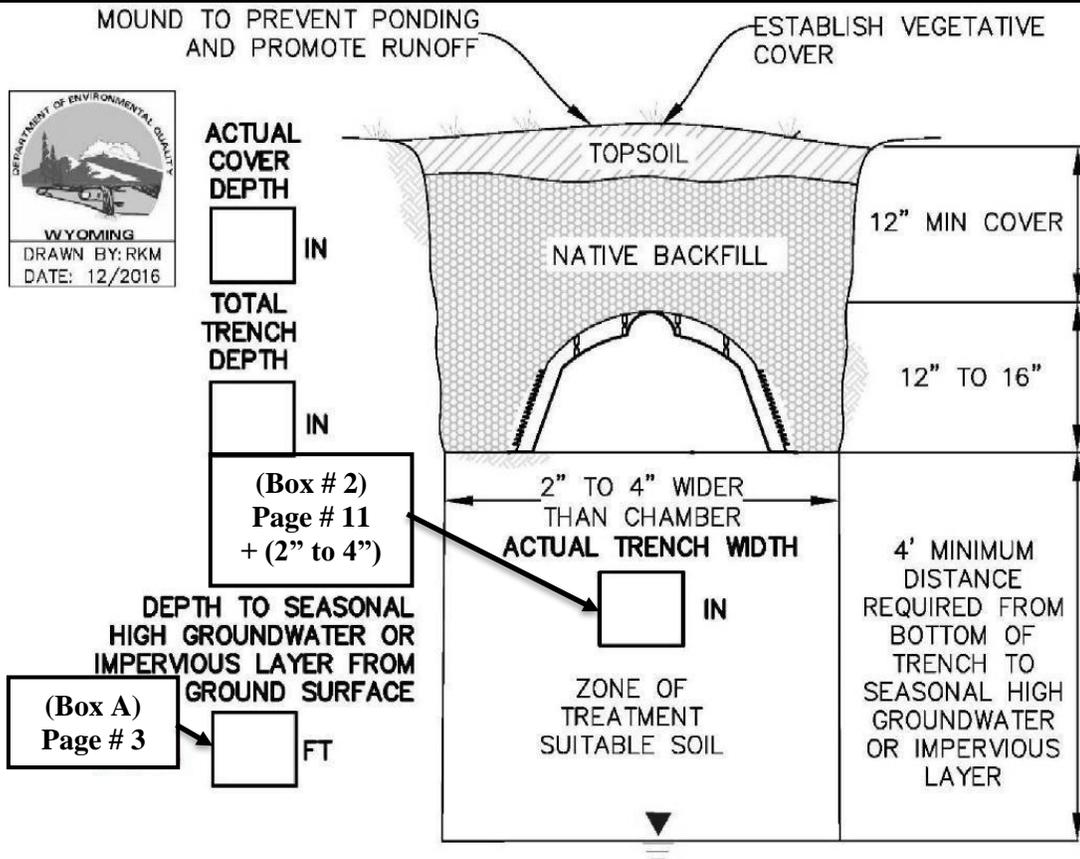
- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet, sixty (60) inches.



Two Trench Chambered Layout Design Sheet

Notes

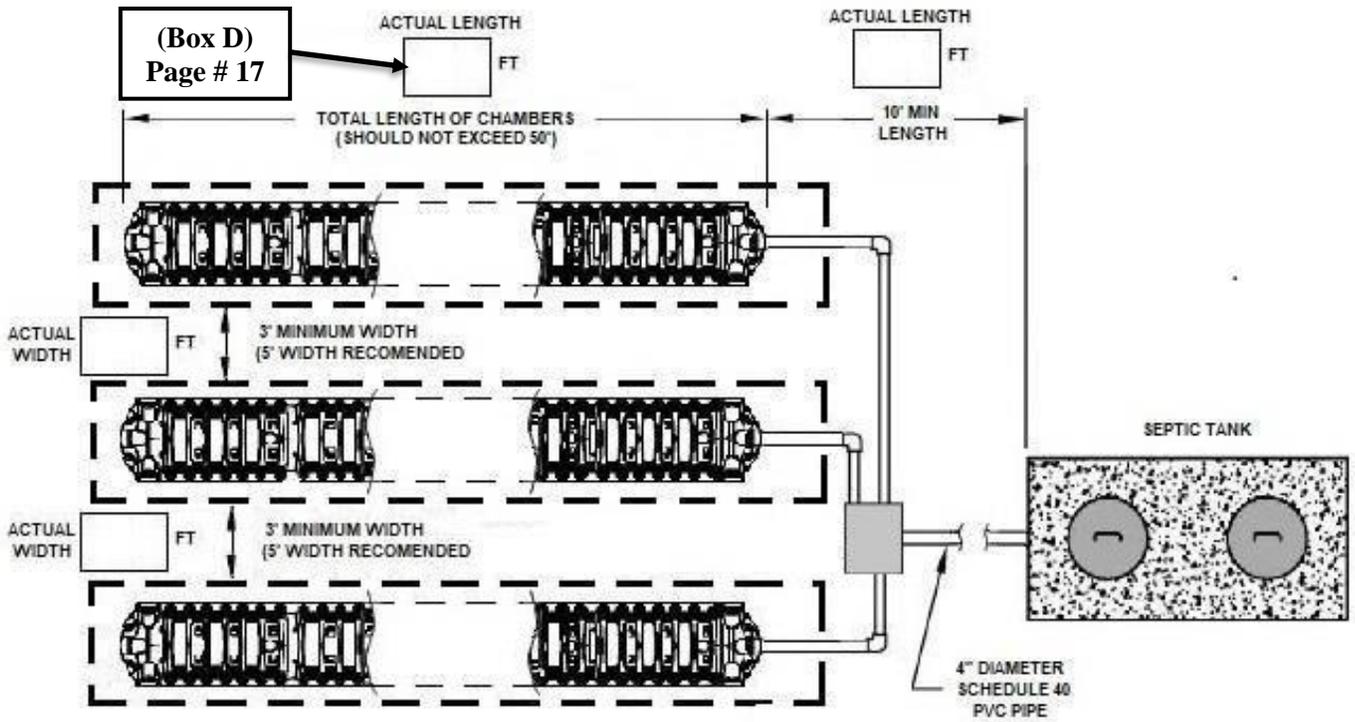
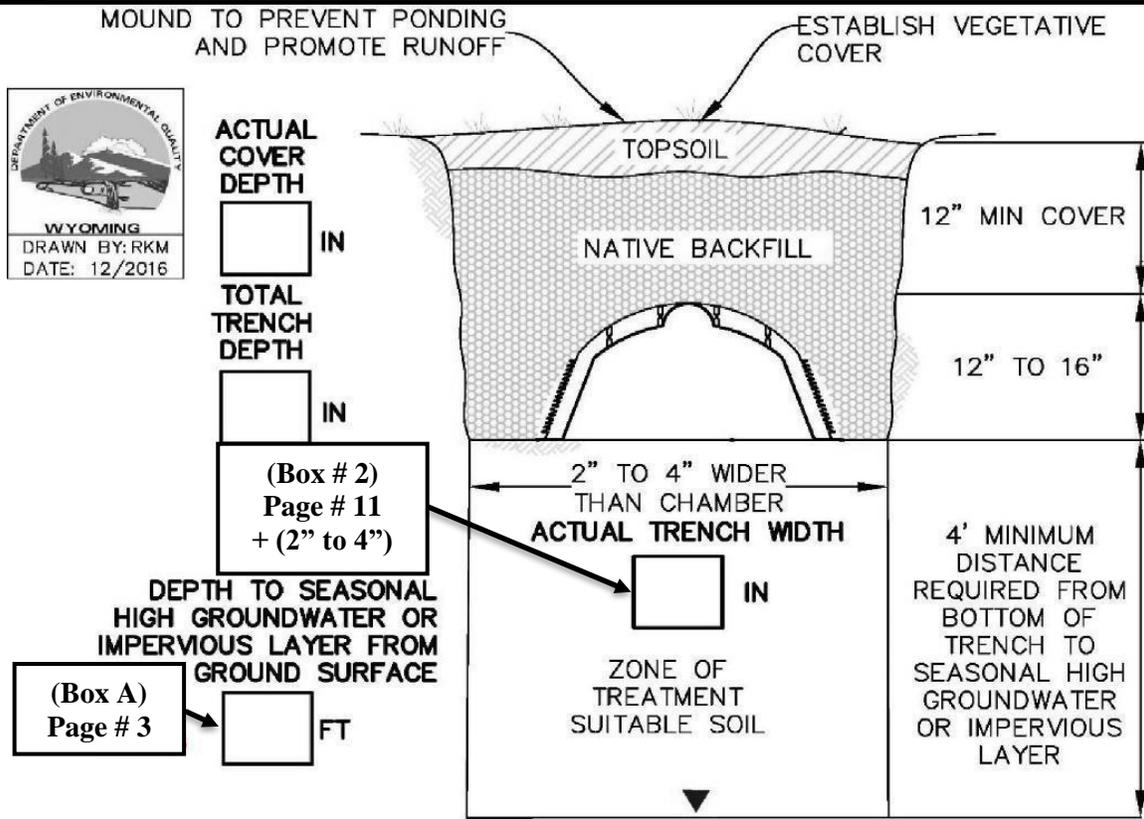
- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet, sixty (60) inches.



Three, Five or Multi Trench Chambered Layout Design Sheet

Notes

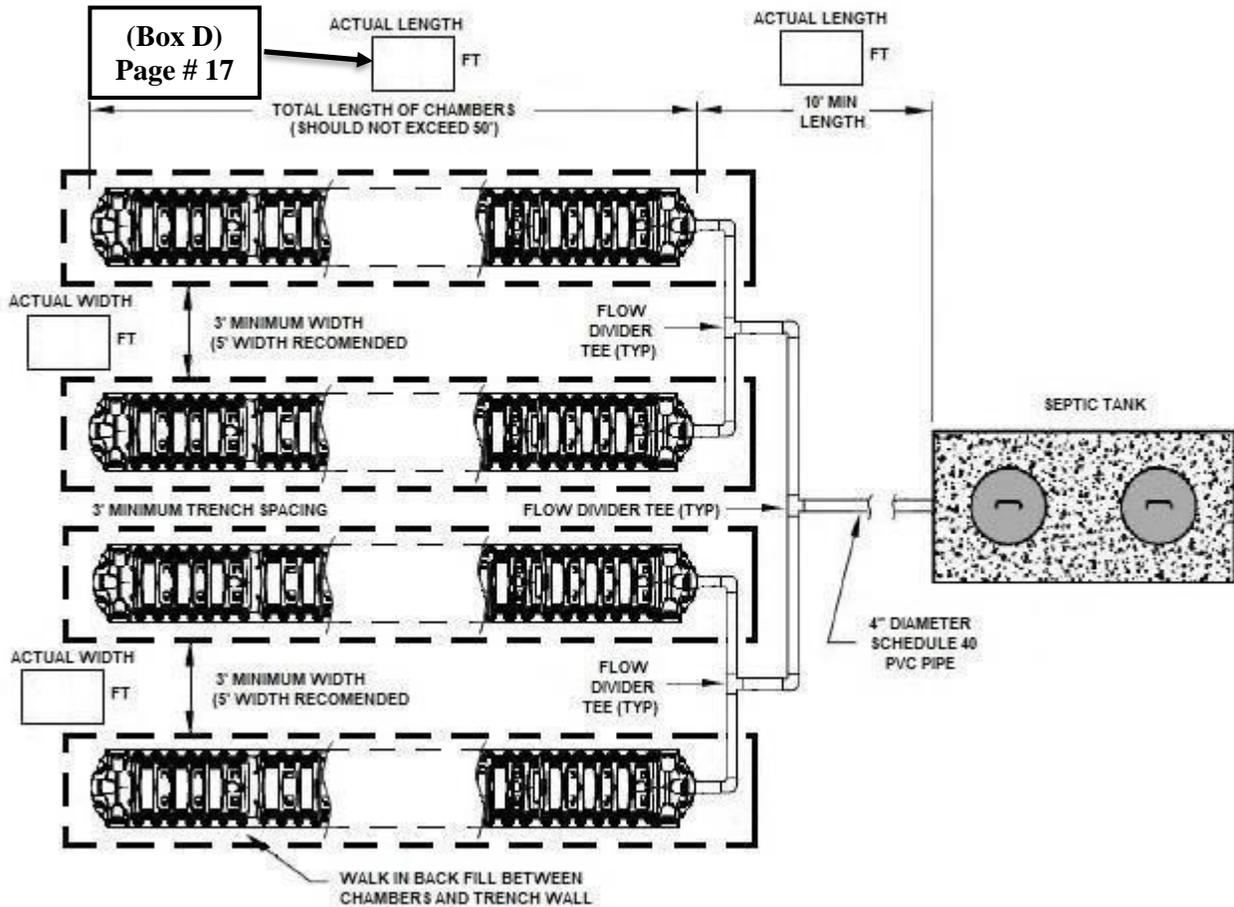
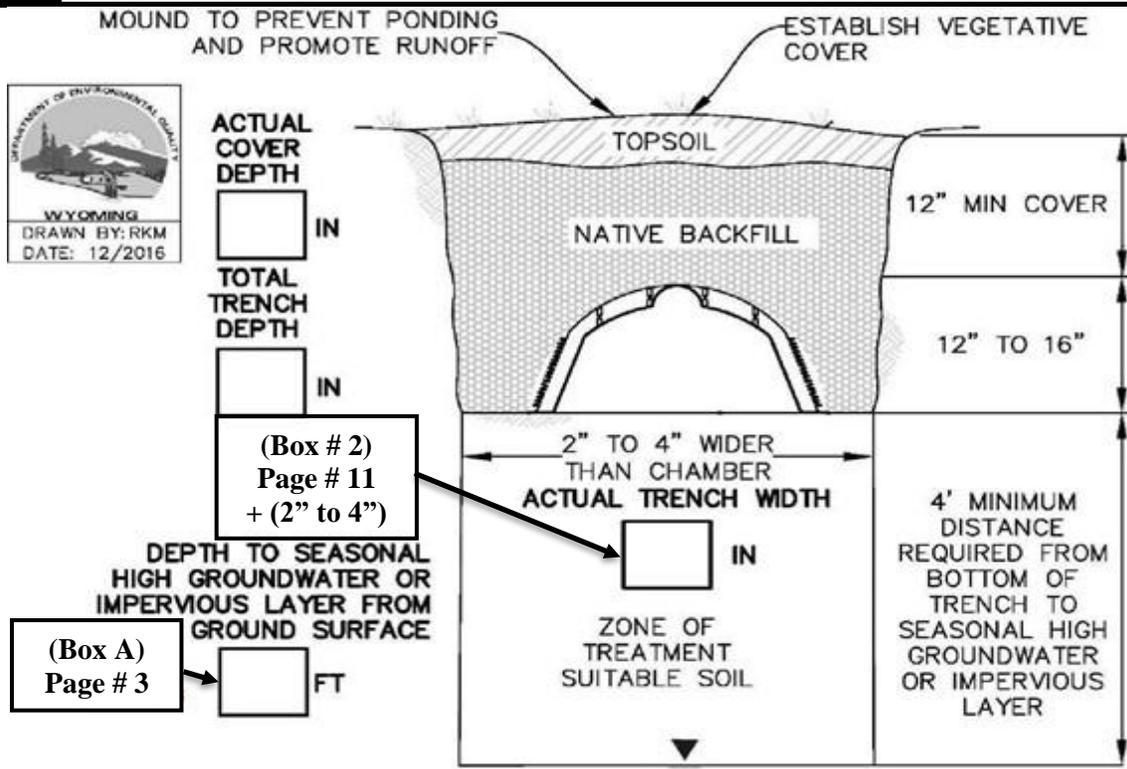
- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet, sixty (60) inches.



Four Trench Chambered Design Sheet

Notes

- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of each trench shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet, sixty (60) inches.



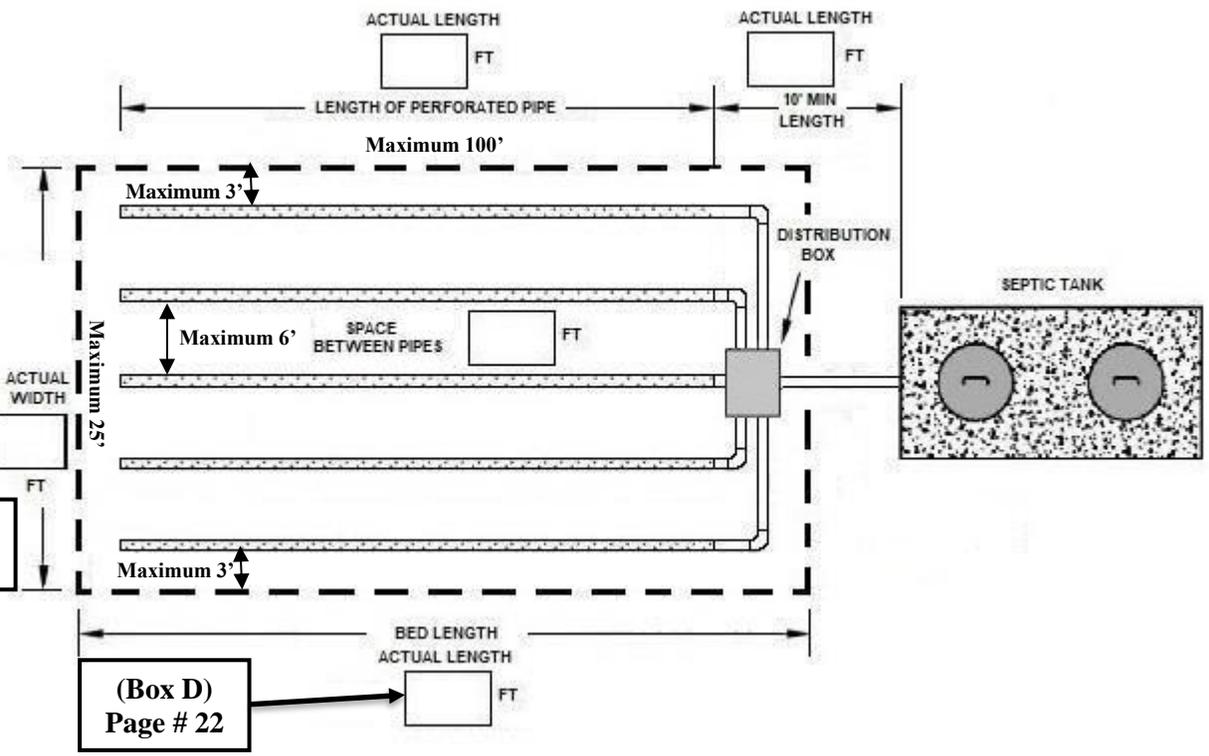
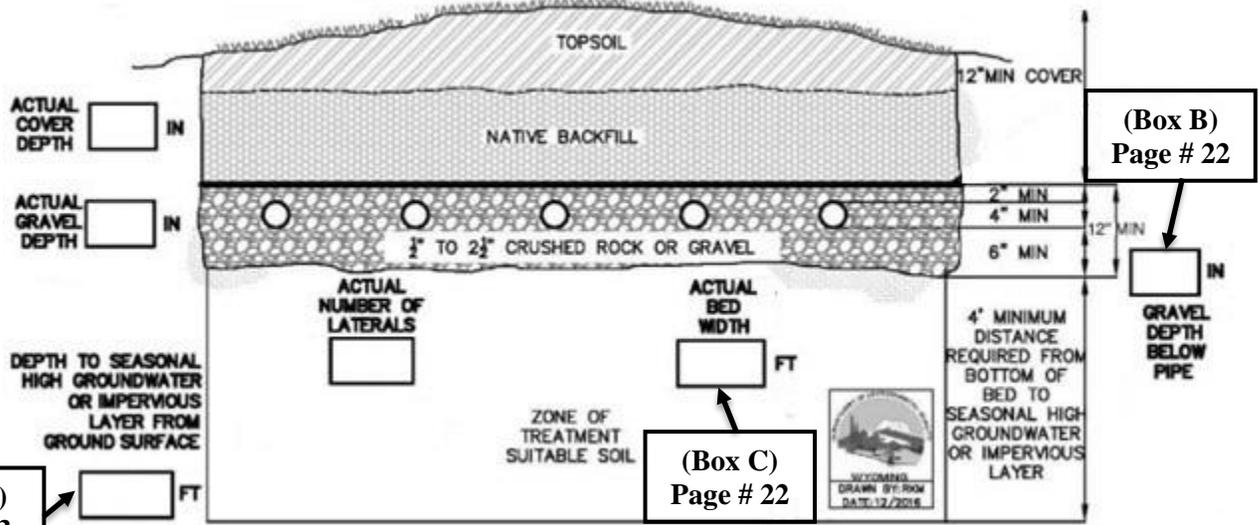
Perforated Pipe Bed Layout Worksheet

Design					
Required Leachfield Area (Page 9 - Box # 3)				Page # 9 - Box # 3	
Total Excavated Depth (Feet) (Page 22 - Box A)				Page # 22 - Box A	
Depth Below Pipe (Feet) (Page 22 - Box B)				Page # 22 - Box B	
Bed Layout					
Bed Width (Feet) (Page 22 - Box C)				Page # 22 - Box C	
Bed Length (Feet) (Page 22 - Box D)				Page # 22 - Box D	
Bed Total (FT²) (Page 22 - Box E)	* =			Page # 22 - Box E	
	Bed Width Page # 22 (Box C)	Bed Length Page # 22 (Box D)	Total Bed Area Page # 22 (Box E)		
Example	25'	26'	650 FT ²		
$\frac{650 \text{ FT}^2}{\text{Total Bed Area Page \# 22 (Box E)}} \geq \frac{629.03 \text{ (630 Square Feet (FT}^2\text{))}}{\text{Required Leachfield Area Page \# 9 (Box \# 3)}}$					
<input type="checkbox"/>	If No, adjust Bed Width Page # 22 (Box C) and Bed Length Page # 22 (Box D) until Page # 22 (Box E) is greater than Page # 9 (Box # 3)				
Perforated Pipe Bed Layout Design Sheet					
<input type="checkbox"/>	If Yes, Complete the following layout design sheet. * Fill in the boxes with the actual dimensions. * Number of laterals for your perforated bed.			Pages # 23 - 24	
Notes	* The bed location shall be relatively flat; no more than one (1) foot slope from the highest to lowest point. * The maximum depth of the bed shall be five (5) feet sixty (60) inches. * Leachfield header piping shall not be perforated.		* A maximum of six (6) feet on center pipe lateral spacing. * A maximum of twenty-five (25) feet bed width. * A maximum of fifty (50) feet bed length. * A maximum of one hundred (100) feet of perforated pipe per lateral.		

Perforated Pipe Bed Layout Design Sheet

Notes

- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of the bed shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet, sixty (60) inches.
- * Leachfield header piping shall not be perforated.

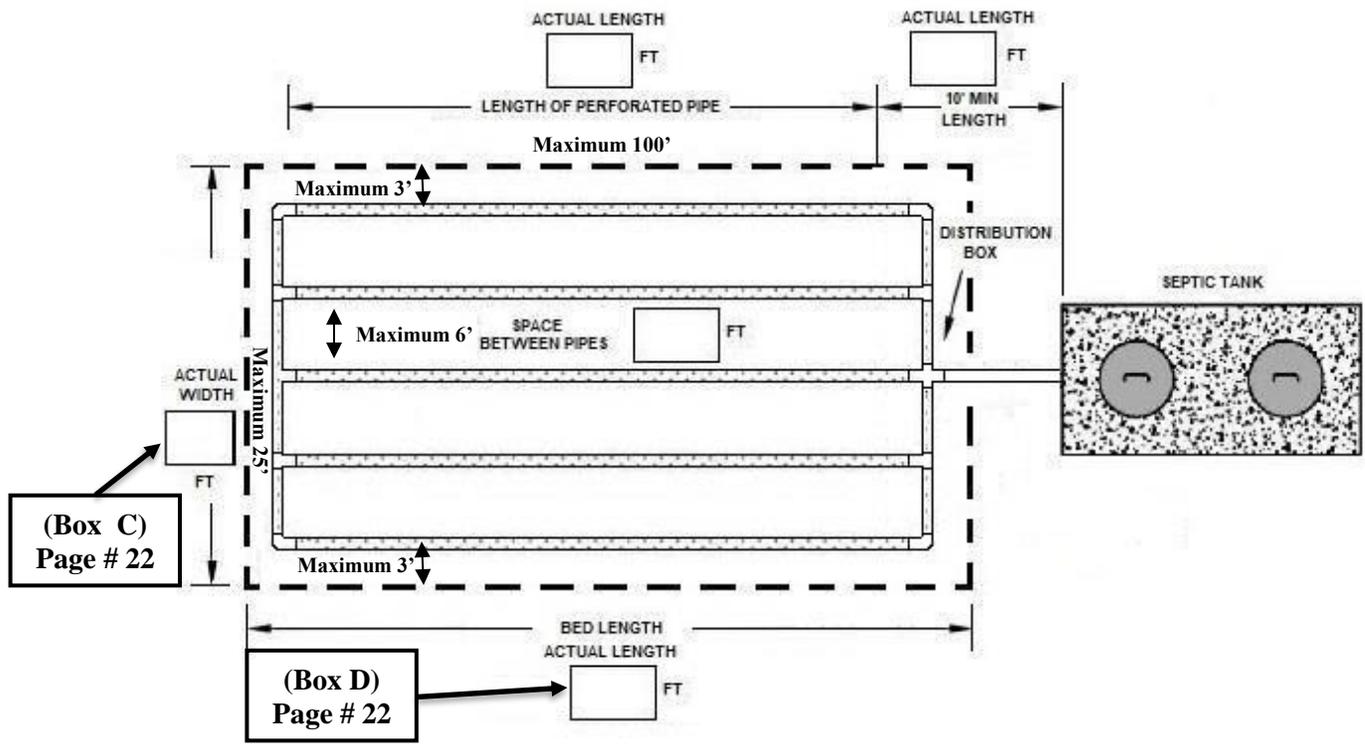
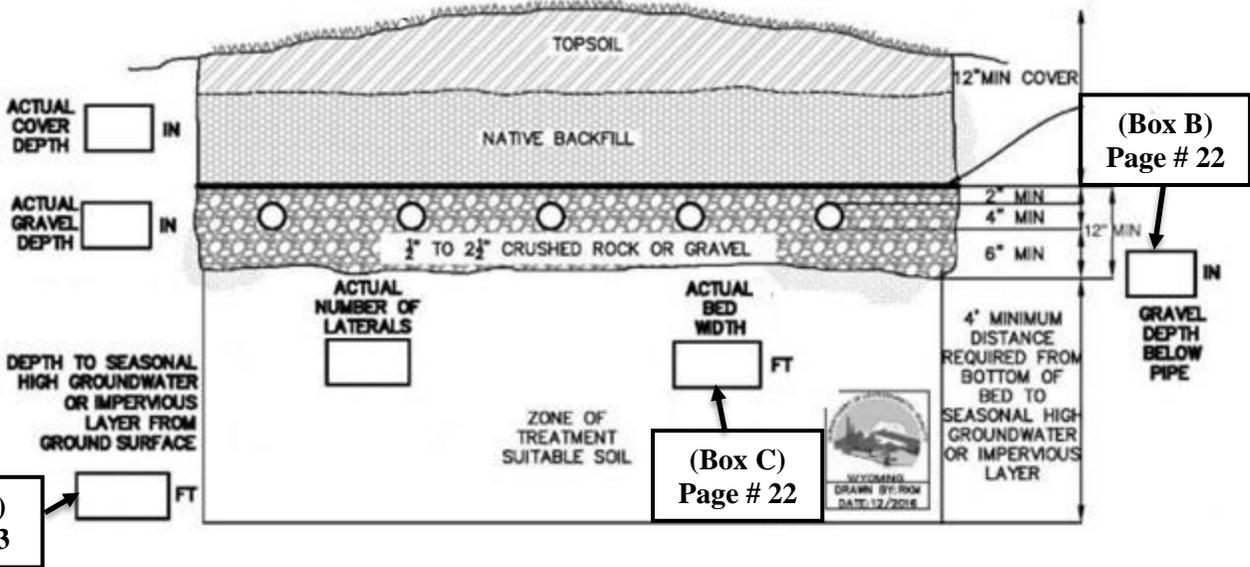


Perforated Pipe Bed Layout Design Sheet

Notes

Please provide the actual dimensions in the boxes on the diagrams below.

- * The bottom of the bed shall be level throughout its length.
- * The maximum depth of each trench shall be five (5) feet, sixty (60) inches.



Chambered Bed Layout Worksheet

Manufacturer	<input type="checkbox"/> Infiltrator <input type="checkbox"/> ADS <input type="checkbox"/> Prinsco <input type="checkbox"/> Other = _____
Model	Page # 11 - Box C
Nominal Length (Feet)	Page # 11 - Box # 1
Nominal Width (Inches)	Page # 11 - Box # 2
Nominal Height (Inches)	Page # 11 - Box # 3
Effective Length (Feet)	Page # 11 - Box # 4

Design

Required Leachfield Area (Page 9 - Box # 3)	Page # 9 - Box # 3	
Equivalent Area Per Unit (Page 11 - Box # 8)	Page # 11 - Box # 8	
Number of Chambers Page 25 (Box # 5)	$\frac{\text{Required Leachfield Area}}{\text{Equivalent Area Per Unit}} = \text{Number of Chambers (Round Up)}$	Page # 25 - Box # 5
Example	629.03 (630 Square Feet (FT ²)) 20.3 FT ² Per Unit 30.98 (31 Chambers)	

Bed Layout

Total Chamber Length (Page 25 - Box # 6)	$\text{Number of Chambers} * \text{Effective Length (Feet)} = \text{Total Chamber Length}$		Page # 25 - Box # 6
Example	30.98 (31 Chambers)	5'	154.9 (155')

Number of Rows to Use	Total Chamber Length Page # 25 (Box # 6)	Minimum Number of Rows to Use Page # 25 (Box # 7)	Number of Chamber Rows Page # 25 (Box # 7) = _____ Use table to the right to find the minimum number of trenches.		
	0-50	1			
	51-100	2			
	100-150	3☼	$\frac{\text{Total Chamber Length}}{\text{Length of Rows}} = \text{Minimum Number of Chamber Rows}$	Total Chamber Length Page # 25 (Box # 6)	Length of Rows Page # 25 (Box D)
	151-200	4	154.9 (155')	4	38.725 (40')
	201-250	5☼	Length of Each Row Page # 25 (Box D) = _____		
251-300	6	☼ = Distribution Box Required			

Chamber Bed Layout Design Sheet

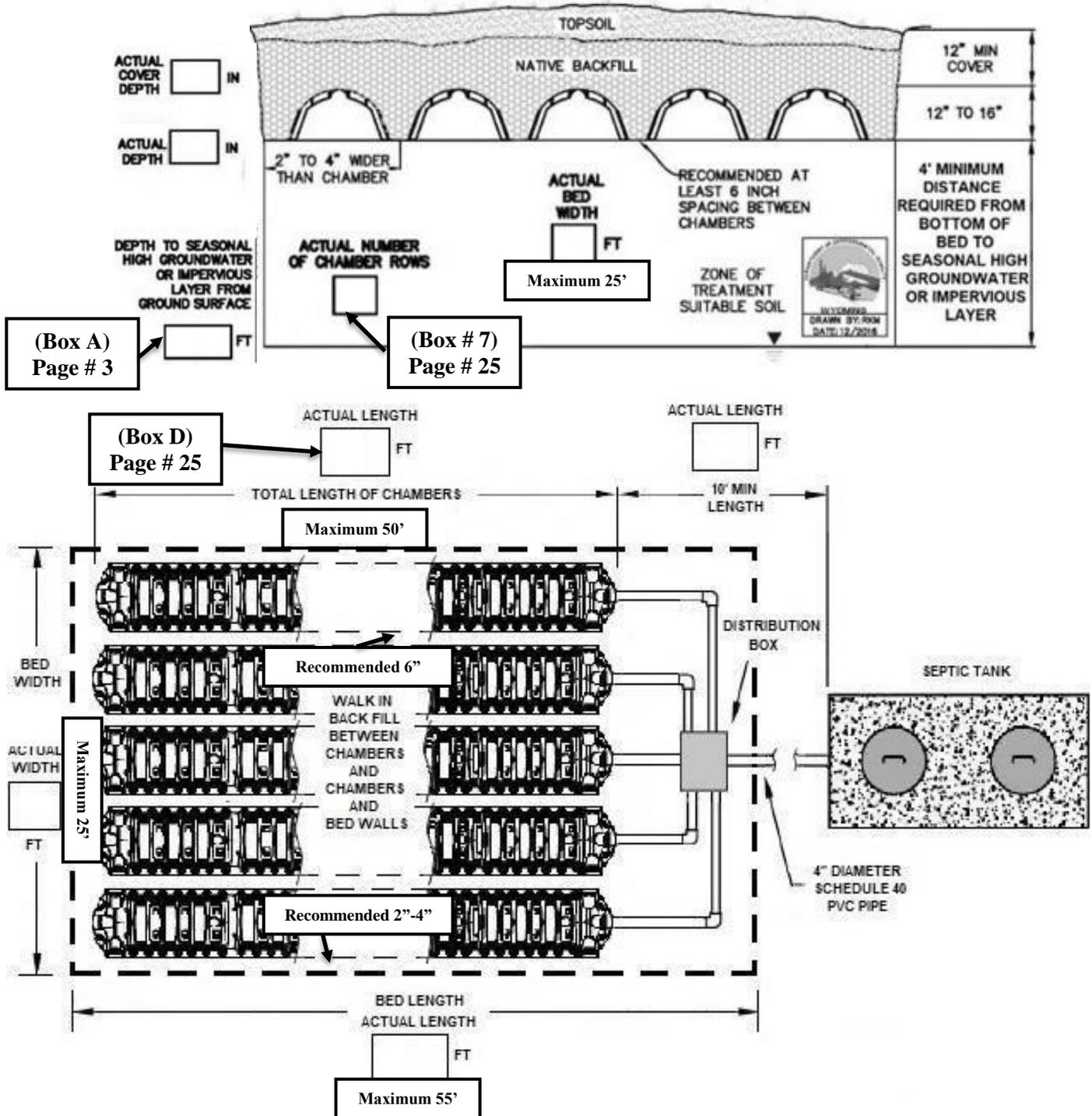
<input type="checkbox"/>	Complete the following layout design sheet on the next page by filling in the boxes with the actual dimensions and number of laterals for your chambered bed layout.	Page # 26
--------------------------	--	------------------

Notes	* The bed location shall be relatively flat; no more than (one) 1-foot slope from the highest to lowest point. * The maximum depth of the bed shall be five (5) feet, sixty (60) inches.	* A minimum of six (6) inch space between each chambers row. * A maximum of fifty (50) feet in length is allowed per row. * A maximum of twenty-five (25) feet bed width.
--------------	---	---

Chambered Bed Layout Design Sheet

Notes

- Please provide the actual dimensions in the boxes on the diagrams below.
- * The bottom of the bed shall be level throughout its length.
- * The maximum depth of the bed shall be five (5) feet sixty (60) inches.



Attachment 1. Table 2 Excerpted from the Crook County Small Wastewater Regulation.

Non-Residential Wastewater Design Flow Rates (Table 2 Excerpted from Crook County Small Wastewater Regulations)¹

Facility	Unit	Flow (Gallons/Unit/Day)
Airports	person	4
Apartment	bedroom	120
Automobile Service Station	vehicle served	10
Bars	seat	20
Bathhouses and swimming pools	person	10
Campgrounds (w/ toilets only)	person	25
Campgrounds (w/shower facility)	person	45
Church	person	4
Country Club	member	25
Day School, Office Building, Retail Store, Warehouse (no showers)	person	15
Hospital	bed	250
Industrial Building (sanitary waste only)	employee	20
Laundry (self-service)	machine	450
Mobile Home	bedroom	see Table 1
Motel, Hotel, Resort	bedroom	140
Recreational Vehicle	each	100
Rest Home, Care Facility, Boarding School	bed	100
Restaurant	meal	10
Restaurant (kitchen waste only)	meal	6
Theater	seat	3

¹Values shown in the above table are the typical flow rates from *Wastewater Engineering Treatment and Reuse*, Metcalf and Eddy, 2003.

Wyoming A-List of Previously Approved Septic Tanks

City	Supplier	Size (gal)	Compartment
Casper	A.J. Vollmar, WYO Septic Tanks	1000	Single
	AllTerra Construction, LLC	1000	Single
		1500	Single
	Forterra Pipe and Precast	1000	Single
1500		Single	
Cheyenne	Vaughn Concrete Products	1500	Single
		2000	Single
		1000	Two
		1250	Two
		1500	Two
		2000	Two
Cody	Cody Precast & Septic Service	1500	Single
		1000	Two
		1500	Two
Evanston	Ellingford Brothers, Inc.	1000	Two
Etna-Thayne	Precast Concrete Products	1000	Single
		1000	Two
		1500	Two
Gillette	Intermountain Construction & Materials	1250	Single
Mills	American Plumbing and Heating	1000	Single
Pinedale	Summit Precast	1000	Two
Powell	Big Horn Precast	1000	Two
		1250	Two
		2000	Two
Riverton	Wind River Ready Mix	1000	Single
		1000	Two
Rock Springs	Rock Springs Block Co.	1250	Single
		1550	Single
		1750	Single
Sheridan	Manor Precast and Materials (Skyline)	1000	Single
		1250	Single
		1500	Single
		1500	Two
Torrington	G & L Concrete, Inc.	1000	Single
Wheatland	Croell Redi-Mix (Model A)	1000	Single
Worland	PBR, Inc.	1000	Two
		1500	Two

Other States A-List of Previously Approved Septic Tanks

State	City	Supplier	Size (gal)	Compartment
Colorado	Rifle	Copeland Concrete	1250	Two
			2000	Two
			2500	Two
			3000	Two
	Loveland	Oldcastle Precast Concrete	1000	Two (Round)
			1250	Two
			1500	Two
			2000	Two
			2500	Two
			3000	Two
1250			Single	
2500			Single	
3000	Single			
Indiana	Plymouth	AK Industries, Inc.	1500	Two
Iowa	Hospers	Ace Roto-Mold, Den Hartog Industries	1250	Single
			1500	Single
			1000	Two
			1250	Two
			1500	Two
Minnesota	St. Bonifacius	Norwesco	1000	Single
			1250	Single
			1500	Single
			1000	Two
			1250	Two
			1500	Two
Montana	Billings	Billings Precast Enterprises	1000	Two
			1500	Two
	Three Forks	Kanta Products, Inc.	1500	Single
			1000	Two
			1500	Two
	Billings	Montana Terrazzo Company	1000	Two
			1100	Two
			1500	Two
			2000	Two

Other States A-List of Previously Approved Septic Tanks

State	City	Supplier	Size (gal)	Compartment
Nebraska	Scottsbluff	Panhandle Concrete Products, Inc.	1000	Two
			1250	Two
			1500	Two
			2000	Two
	Lincoln	Snyder Industries, Inc.	1000	Two
			1250	Two
			1500	Two
			1500	Single
South Dakota	Newell	Boom Concrete	1000	Single
			1500	Single
			1500	Two
	Rapid City	J & D Precast, Inc.	1000	Single
			1000	Two
			1500	Two
			2000	Two
			3350	Two
Utah	Salt Lake City	DURA-CRETE, Inc.	1000	Single
			1250	Single
			1500	Single
			1750	Single
			2500	Single
			1000	Two
	Hyde Park	Robertson Manufacturing	1500	Single
			2000	Single

B-List of Previously Approved Septic Tanks

Use of the following tanks in Wyoming MAY be approved on an individual basis when justified by conditions.

State	City	Supplier	Size (gal)	Compartment
Wyoming	Cody	Cody Precast	1000	Two
	Powell	Big Horn Precast	1000	Two
			1500	Two
Riverton	Wind River Ready Mix	1000	Two	
Colorado	Denver	Rotonics Manufacturing, Inc.	1250	Two
	Rifle	Copeland Concrete, Inc.	1000	Two
			1250	Two
			1500	Two
Connecticut	Old Saybrook	Infiltrator Systems, Inc.	TW-1050	Two
			TW-1250	Two
			TW-1500	Two
			IM-1060	Two
			IM-1530	Two
Indiana	Plymouth	AK Industries, Inc.	1050	Two
			1500	Two
Minnesota	St. Bonifacius	Norwesco	1000	LP-Single
			1250	LP-Single
			1500	LP-Single
			1000	LP-Two
			1250	LP-Two
			1500	LP-Two
Nebraska	Lincoln	Snyder Industries, Inc.	1000	LP-Single
			1250	LP-Single
			1500	LP-Single
			1000	LP-Two
			1250	LP-Two
			1500	LP-Two
New York	Syracuse	Roth Global Plastics, Inc.	1060	Two
			1250	Two
			1500	Two
Montana	Three Forks	J & R Precast Concrete	“B” Model and “Cascade” Model vault toilets only	