



Approval: _____ Denial: _____

Date: _____

Zoning Administrator

Planning and Zoning Department

Chamber Septic System Application

Page 1

Applicant(s)/Owner(s):

Name(s) _____

Address _____

City _____ State _____ Zip _____

Cell # _____ Email _____

Installer/Designer:

Name(s): _____

License Number: _____

Address: _____

City: _____ State: _____ Zip: _____

Cell#: _____ Email: _____

Parcel Information:

Property ID#(s): _____ Parcel Size: _____

Complete Legal Description: _____

Septic System Design Information:

1. Septic Tank Capacity: _____ gallons. (See Table 1.)

Table 1. CAPACITY OF SEPTIC TANKS *

Single-Family Dwellings - Number of Bedrooms	Multiple Dwelling Units or Apartments - One Bedroom Each	Other Uses - Maximum Fixture Units Served	Minimum Septic Tank Working Capacity in Gallons
1-3		20	1000
4	2	25	1200
5 or 6	3	33	1500
7 or 8	4	45	2000

2. Soils.

Depth to restrictive layer or mottled soils: _____ inches.

Maximum depth of system: _____ inches. (Depth to restrictive layer / mottled soils = 24")

Soil Classification or Texture: _____.

Percolation rate: _____ MPI.

Soil Loading Rate: _____ gal/ft²/day. (See Table 3 on next page)

Percent Land Slope: _____ %.

Septic System Design Information (Continued):

Table 3. Effluent loading rate of an absorption trench based on soil texture. A registered soil classifier should determine the soil texture at the depth where the bottom of the trench will be located.

Soil Texture	Percolation Rate (minutes/inch)	Depth of rock below the distribution pipe			
		6"	12"	18"	24"
Square feet of trench bottom per bedroom					
Sand and loamy sand	1 to 5	125	100	85	70
Sandy loam	6 to 15	190	150	125	110
Fine sand, very fine sand, loam	16 to 30	250	200	165	145
Silt and silt loam	30 to 45	300	240	200	170
Clay loam, sandy clay, silty clay loam	45 to 60	330	265	220	190
Clay	60 to 120	650	515	440	375
Trench bottom area loading rate, gal/ft²/day					
Sand and loamy sand	1 to 5	1.2	1.5	1.8	2.1
Sandy loam	6 to 15	0.8	1.0	1.2	1.4
Fine sand, very fine sand, loam	16 to 30	0.6	0.75	0.90	1.05
Silt and silt loam	30 to 45	0.5	0.63	0.75	0.90
Clay loam, sandy clay, silty clay loam	45 to 60	0.45	0.57	0.68	0.80
Clay	60 to 120	0.23	0.29	0.34	0.4

3. Chamber or Absorption Bed Area.

Estimated Design Flow: _____ gallons per day. (See Table 4.)

Number of Bedrooms	Gallons Per Day
2	300
3	450
4	600
5	750
6	900

4. Chamber Bottom Area Calculation:

_____ gpd(Design Flow) / _____(Loading Rate) = _____ ft²(Chamber Bottom Area).

Width of Chambers: ___ ft.

Length of Chamber(s) Run(s) Calculation:

_____ft² (Chamber Bottom Area) / _____ ft (Chamber Width) = _____ ft (Lineal Feet).

Septic System Design Information (Continued):

5. Distribution. (Check all that apply)

- Seepage Bed Distribution Box Chamber Pressure
- Drop Boxes Gravity Rock

6. Dosing Chamber. (Only for Systems Requiring a Pump)

Minimum Pump Tank Size = _____ gallons. (Design Flow)

Maximum Pump Discharge: _____ gpm. (must be greater than 7.5 gpm per 100 ft² of chamber area)

Pump Lift Capacity: _____ feet. (must be 5 feet greater that elevation change plus pipe friction loss)

Change in elevation from pump to the top of chamber bed: _____ feet.

7. Sketch of Proposed System:

Show pertinent property boundaries, rights-of-way, easements.

Show location of house, garage, driveway, and all other improvements, existing or proposed.

Show location and layout of sewage treatment system, wells, setbacks and separation distances.

Use attached standard system diagram for detailed dimensions of trenches or seepage bed area.

Application Fee: \$250 (\$150 w/o Soil Testing)

I hereby authorize Grand Forks County Planning Staff to enter upon property subject to this application to gather information pertinent to this request.

Signature(s) of Applicant(s): _____ Date: _____

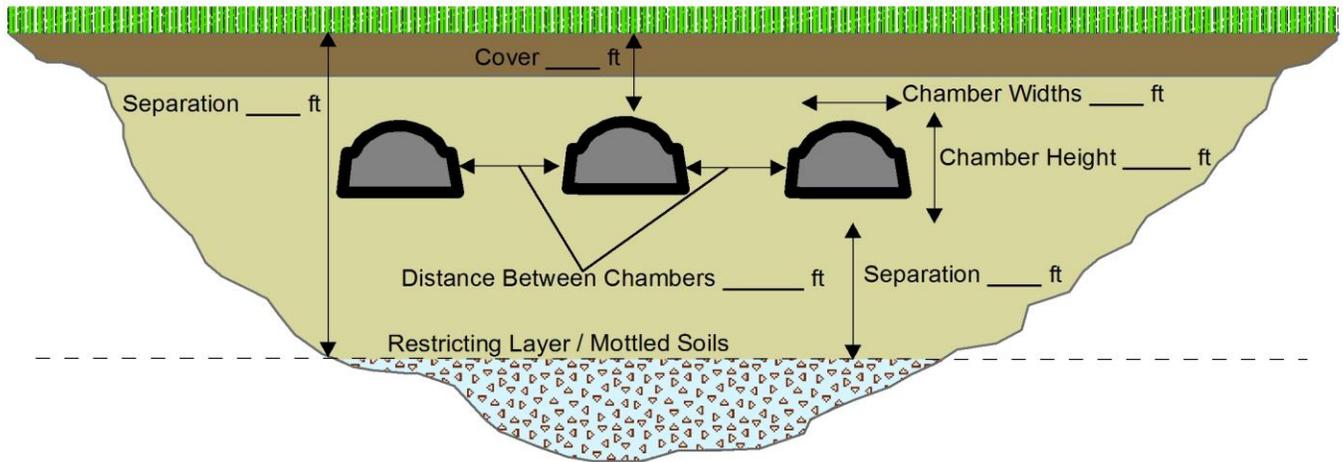
_____ Date: _____

Signature(s) of Owner(s): _____ Date: _____

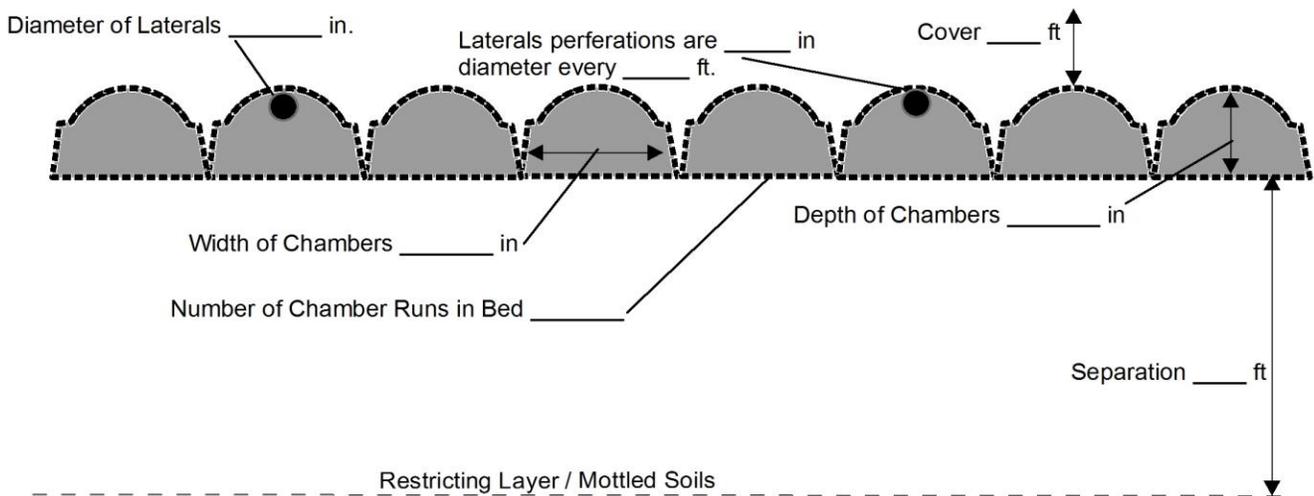
_____ Date: _____

Chamber Cross-Section

(for seepage beds also complete cross-section below)



Seepage Bed Cross-Section



Soil Boring Log

Client: _____

Address: _____

Date: _____

Location: _____

Soil Type: _____

Disturbed/ Compacted yes no

of Bedrooms: _____

Type of observation: Probe Pit Boring

Garbage Disposal: yes no

Type: I II III IV

Flow: _____

Parent Material: Till Outwash Loess Bedrock Alluvium

Vegetation: Wet Dry Unknown

Slope Form: _____

Slope: _____ %

Drainage: Good Problems Solutions _____

Floodplain: yes no

Elevation of Boring: _____

Depth of Water: _____

Depth to Bedrock: _____

Depth of Sat. Soil: _____

Max Depth of System: _____

Soil Sizing Factor: _____

Linear Loading Rate: _____

Well Information:

Location: _____

Depth: _____

Casing Depth: _____

10' of Imp. material: yes no

Depth (inches)	Texture	Color	Structure
			Blocky Platy Prismatic None

Additional Notes: _____

Preliminary design:

Trench _____ Bed _____ Atgrade _____ Mound _____ Holding Tank _____

Gravity Dist. _____ Pressure Dist. _____

Sand: Serial _____ Pressure _____ Liner _____ Clay: Liner _____