Lincoln-Lancaster County Health Department

ENVIRONMENTAL PUBLIC HEALTH DIVISION

3140 N STREET · LINCOLN, NE 68510-1514

002916

(402) 441-8000

Permit: SEWAGE INSTALLATION
SEPTIC SYSTEM

Permit # 03380268301

Issued 07/31/03
Expires 01/31/04
Revenue Code 3157

Establishment:
LARRY & GRETCHEN HELMICK
T12N R6E SEC 32 QTR NE
IRREGULAR TRACT LOT 1&2
16303 NW 27 ST-RAYMOND

FEES: $200.00

Permittee:
LARRY & GRETCHEN HELMICK
16303 NW 27 ST
RAYMOND NE 68428

TOTAL: $200.00

Bruce D. Dart

Bruce D. Dart, Health Director

EPH COPY

Lincoln-Lancaster County Health Department
Environmental Health Division
3140 "N" Street • Lincoln, NE 68510-1514
Phone: 402-441-8022

RECEIVED JUL 29 2003

A

Permit Number: 03380268 3

Sewage Disposal System

Request for Site Clearance and Permit

Change to Lagoon / perc test failed

Include Form B, Form C and Applicable Fees with this Application.

☒ Septic System ☒ Lagoon ☐ Other (Refer to Form C)

The undersigned hereby requests site clearance and permit to construct a Sewage Disposal System in conformance with appropriate resolution or ordinance, as described herein:

PLEASE PRINT OR TYPE

A. System Location (Indicate correct number and street)

Address 16303 NW 27th (no rural route) City Raymond NE, Zip 68428

Legal Description Lot 1 and 2 NE 32 12N 6 EAST 1 & 2 I.T.
1/4 1/4 OF Section Township Range Subdivision Addition Block Lot

Geographical Location (if known): Longitude _____ Latitude _____

☐ Check if system mail address is not the same as the owner's address

B. Owner

Name Larry + Gretchen Helmick Signature Larry Helmick

Address 16303 NW 27th City/State/Zip Raymond Nebr. 68428

☒ Check if owner designed system Home Phone 783-2005 Work Phone 783-2005 Cell No

C. Contractor

Name Larry Helmick Company Name _____

Address 16303 NW 27th City/State/Zip Raymond Nebr. 68428

☐ Check if contractor designed system Work Phone _____

D. Engineer/Installer ☐ Check and complete if engineer designed system

Designer Name _____ Firm _____ Work Phone _____

E. This System Will Serve a

☒ Residential Dwelling Number of Bedrooms 2 Is there a Whirlpool Bathtub YES (NO)

☐ Commercial Establishment/Other Facility Specify _____

Design flow in gallons per day 400 Type of Wastewater: ☒ Domestic ☐ Non-Domestic.

DO NOT WRITE BELOW THIS LINE

Approval Process ☐ Municipal Code 24.38 ☒ County Resolution No. 2832

1. **Health Department** Date rec'd 7/31/03 Date frwd 7/31/03 **ACTION** ☒ Approved ☐ Disapproved Signature Jerrold C. Hoff
   9-19-03, min lagoon only 9-22-03 ok, 11-25-03, fence up.
2. **Supt. Bldg. Insp. or Village Clerk** Date rec'd 7-31-03 Date frwd 7-31-03 **ACTION** ☒ Approved ☐ Disapproved Signature _____
3. **City or County Engineer** Date rec'd 07/31/2003 Date frwd _____ **ACTION** ☒ Approved ☐ Disapproved Signature _____

Installation Final Written Approval

By Ron Mayfield

Date Nov-25-03

Business Office Use Only

Date Rec'd 7/31/03

Amt Paid $200

Rec'd By _____ Cash/Check No. $200

FORM 23-100 10-96 White - Health Dept. Yellow - Engineer Pink - Bldg. Inspector

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B

Permit Number: 033802683

Sewage Disposal System

Soil Absorption Test Data Report

Annex to Application

PLEASE PRINT OR TYPE

System Location (Indicate correct number and street)

Address 16303 NW 27th St. City Lagoon NE, Zip _____
(no rural route)

Owner Larry Helmick Addresss 16303 NW 27th

Soil Type (SCS): Pawnee clay loam Percolation Rate: slower than 60 min./inch

Date of Tests 8-4-03 to 8-5-03 Weather: Precipitation _____ Temperature _____

Percolation Test Data Table

A.	B.	C. D. E. F. Pre-Saturation Period				G. H. I. J. K. Percolation Readings					L. M. N. Results		
		Start		End		Start			End				
Hole No.	Hole Depth (in)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Water Lev (in.)	Date (Mo/Da)	Time (Hr/Min)	Elapsed Time (Min)	Water Level Drop (in)	Percolation Rates (Min/in)
1	24"	8-4-03	11:00AM	8-4-03	3:00	8-5-03	10:45	6"	8-5-03	11:15	30"	0	0
2	"							6"			"	0	0
3	"							6"			"	0	0
4	"							7"			"	1/16"	480 mpi
5	"							6"			"	3/8"	80 mpi
6	"							6 1/2"			"	1/8"	240 mpi

Standard deviation perc test 5.2 dia. 4 3.1 dia.

Sum of Percolation Rates: Failed perc test

Average of Rates: _____

Rate Used for Calculation: _____

Person Conducting Percolation Tests

Name: Ron Marquart + Larry + Gretchen Helmick

Phone: _____

Address _____

DO NOT WRITE BELOW THIS LINE

Reviewing Action

Remarks NRCS soils Map shows this area is in Pawnee soil grading into Shelby. Recommend a lagoon for onsite wastewater treatment.

Signature of Reviewing Official Ron Marquart Date 8-5-03

FORM 23-101 10-96

PERC TEST

8-4-03 presoak @ 11:00 AM started and at
Holes augered to 24" deep in very dry soil,
Pealed walls in 3 holes to 7" diameter

Aug-4-03 weather: Dry, no rain for weeks

owner: Larry & Gretchen Hakwick
16303 NW 27th 32-12-6



8-5-03

Time →

Hole #1 6" — 10:45 to 11:15

5 7/8" — Had > 12" of water in it after 24 hrs. + the presoak
5 7/8" — water was bailed out to 6" for perc test.
0

Hole #2 6" — 7 1/2"

7 1/2" — Had > 12" " " " "
7 1/2" — water baled out to 6"
0

Hole #3 6" — 7 1/4"

7 1/4" — NO water in hole after presoak
7 1/4" — Added water to hole to 6"
0

Hole #4 7" Standard

26"
25 15/16" — Had > 12" water in hole after presoak 24 hrs later. And 5 gal
1/16" — bucket with siphon was still over 3/4 full

Hole #5 6" Standard

28 2/8"
28 4/8"
3/8"

Hole #6 6 1/2" Standard

24 3/8" — Had 6" of water in hole after presoak & 24 hrs later. the
24 2/8" — 5 gal siphon bucket was empty.
1/8"

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B

Permit Number: 033802683

Sewage Disposal System

Soil Absorption Test Data Report

Annex to Application

PLEASE PRINT OR TYPE

System Location (Indicate correct number and street)

Address 16303 NW 27th (no rural route) City Raymond NE, Zip 68428

Owner Larry Helmick Addresss 16303 NW 27th Raymond Nebr. 68428

Soil Type (SCS): Clay Percolation Rate: 3/4" min./inch

Date of Tests 7/25 to 7/26 Weather: Precipitation None Temperature 101

Percolation Test Data Table

A.	B.	C. D. E. F. Pre-Saturation Period				G. H. I. J. K. Percolation Readings					L. M. N. Results		
		Start		End		Start			End				
Hole No.	Hole Depth (in)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Water Lev (in.)	Date (Mo/Da)	Time (Hr/Min)	Elapsed Time (Min)	Water Level Drop (in)	Percolation Rates (Min/in)
1	3'	7/25	6:00 PM	7/26	7:00 AM	7/26	7:00 PM	6"	7/26	11:30	4½ hrs	7/8"	30 7/8
2	3'	7/25	6:00 PM	7/26	7:00 AM	7/26	7:00 PM	6	7/26	11:30	4½ hrs	½	30 ½
3	3'	7/25	6:00 PM	7/26	7:00 AM	7/26	7:00 PM	6"	7/26	11:30	4½ hrs	½	30 mins
4	3'	7/25	6:00 PM	7/26	7:00 AM	7/26	7:00 PM	6"	7/26	11:30	4½ hrs	5/8	30 5/8
5	3'	7/25	6:00 PM	7/26	7:00 AM	7/26	7:00 PM	6"	7/26	11:30	4½ hrs	½	30 ½
6	3'	7/25	6:00 PM	7/26	7:00 AM	7/26	7:00 PM	6"	7/26	11:30	4½ hrs	¾	30 ¾

Sum of Percolation Rates: 4 4/8

Average of Rates: 3/4"

Rate Used for Calculation: 4 1/2 ÷ 6 ~~MIN/IN~~

Person Conducting Percolation Tests

Name: Larry Helmick

Phone: 783-2005

Address 16303 NW 27th Raymond Nebr. 68428

DO NOT WRITE BELOW THIS LINE

Reviewing Action

Remarks This test appears not to have had an adequate presoak for thorough swelling of soil before the test.

Signature of Reviewing Official Ron Mayer Date

FORM 23-101 10-95

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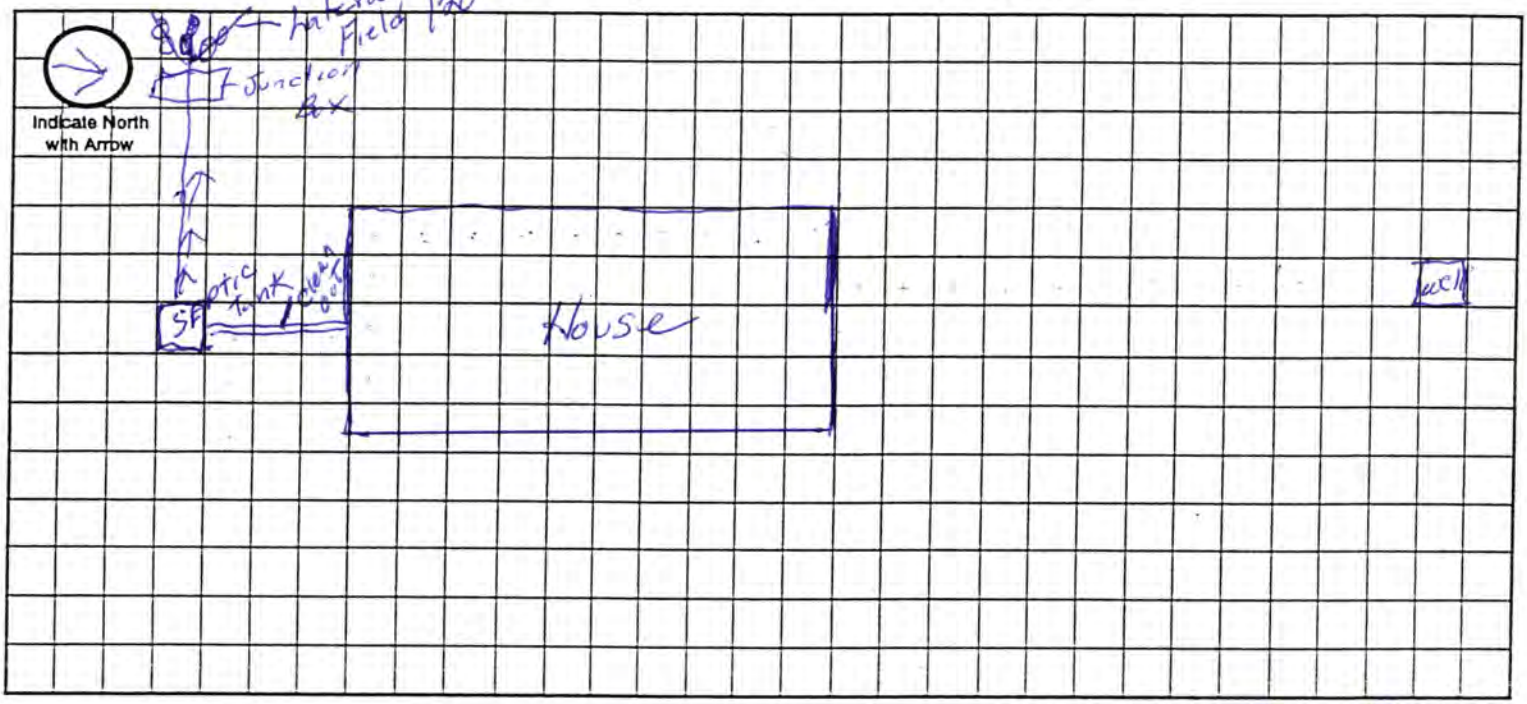
C

Permit Number:

Sewage Disposal System

Preliminary Plan Specifications

Draw a plot plan showing system location, lines, distribution box, tank and laterals, percolation test hole locations, well, residence, compass direction and property lines. Indicate on drawing if residence and well are existing or proposed.



Approximate Scale: 5 ft. = 10 grid line/s

A. System Location (Indicate correct number and street)

Address (no rural route) 16303 NW 27th City Raymond NE, Zip 68428

B. Proposed Septic Tank/s

Tank Material: ☒ Concrete ☐ Plastic ☒ Other Lagoon must not seep more than 1/8" per day

C. Proposed Absorption System (See Form B for Percolation Information)

Percolation Rate 3/4 (min. per inch) Soil Type: Clay Land Slope: 5 %

Type of Absorption System: ☐ Trench ☒ Bed ☐ Other

Total Square Feet of Field Required: 700 sq. ft.

Type of Lateral: ☐ Half-Moon ☒ Perforated Pipe ☐ Other Lateral Material:

Capacity of Septic Tank 1500 gals Number of Absorption Beds: 3 Number of Distribution Laterals per Bed 1

Total Length of Laterals 120 ft. Number of Trenches 3 Trench Width 2 Ft

D. Setbacks Check the Boxes Below if the Required Setback has been Satisfied

Distance From	Private Well	Public Well	Surface Water	Gound Water	Pressure Water Lines	Property Lines	Foundations Yours	Foundations Neighbors	All Other Setbacks
Tank (ft)	50 ☒	500 ☒	50 ☒	NA ☐	25 ☒	20 ☒	15 ☐	25 ☒	☐
Field (ft)	100 ☒	500 ☒	50 ☒	4 ☒	30 ☒	20 ☒	30 ☒	40 ☒	☐
Lagoon (ft)	100 ☐	500 ☐	50 ☐	N/A ☐	30 ☐	50 ☐	100 ☐	200 ☐	☐

E. Required Signatures

Home Building Contractor _____ Date _____

Installer Tony Helmuth Date 7/24/03

FORM 23-102 10-96

Lincoln-Lancaster County Health Department
Environmental Health Division
3140 "N" Street • Lincoln, NE 68510-1514
Phone: 402-441-8022

D

Permit Number:

Sewage Disposal System

As Built Plans & Specifications

Date 4-22-03

System Location (Indicate correct number and street)

Address 16303 NW 22 St (no rural route) City _____ NE, Zip _____

A. Building Sewer

1. Material: sch #40
   Diameter: 4" in.
2. Distance above basement floor: _____ in.
   or distance below basement floor: _____ in.
3. Distance between dwelling and septic tank: _____ ft.
4. Number of clean-outs: _____
5. Distances to: well or suction line _____ ft.
   stream _____ ft.
   pressure line _____ ft.
   property line _____ ft.

B. Septic Tank

1. Material: _____
   Number of compartments: _____
2. Capacity: _____ gal.
3. Factory built: ☐ Yes ☐ No
4. Manholes: Over inlet, diameter _____ in.
   Over outlet, diameter _____ in.
   Riser: ☐ above ☐ below grade _____ in.
5. Inlet: ☐ baffle ☐ tee
6. Outlet: ☐ baffle ☐ tee
7. Depth to top of tank, below unfinished grade: _____ in.
8. Distances to: Well or suction line _____ ft.
   Stream _____ ft.
   Pressure line _____ ft.
   Property line _____ ft.

C. Distribution Box

1. Material: _____
   Number available outlets: _____
2. Factory built: ☐ Yes ☐ No
3. Distance from septic tank: _____ ft.

D. Absorption Field

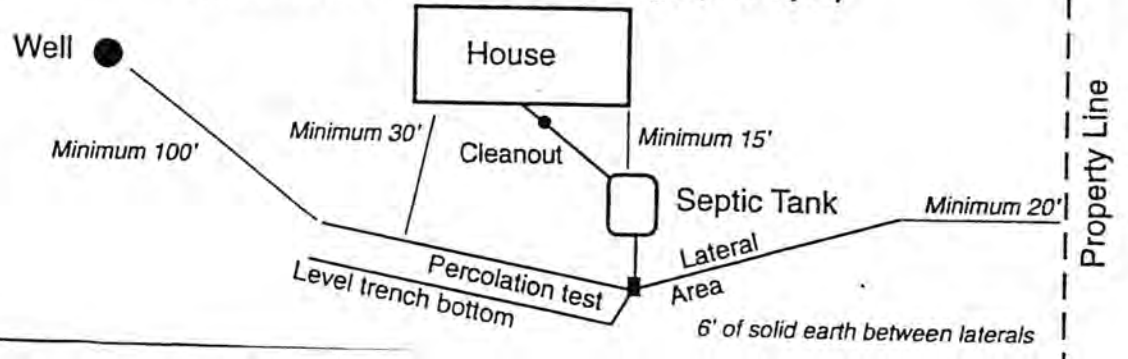
(Provide as-built drawings on back of this form)

1. Type: ☐ Half rounds ☐ Perforated pipe
   Diameter of half round: _____
   or perforated pipe: _____
   Material: ☐ fiberglass ☐ plastic ☐ concrete
   ☐ other _____
2. Lateral lines: Number _____
   Length of each line: _____ ft. _____ ft.
   _____ ft. _____ ft., _____ ft.
3. Trench dimensions: Width _____ ft.
   Slope _____ in/100 ft.
   Average depth _____ in
4. Filter material: _____
   Depth of material _____ in.
5. Distances to: Well or suction line _____ ft.
   Stream _____ ft.
   Pressure line _____ ft.
   Property line _____ ft.

Indicate North with Arrow

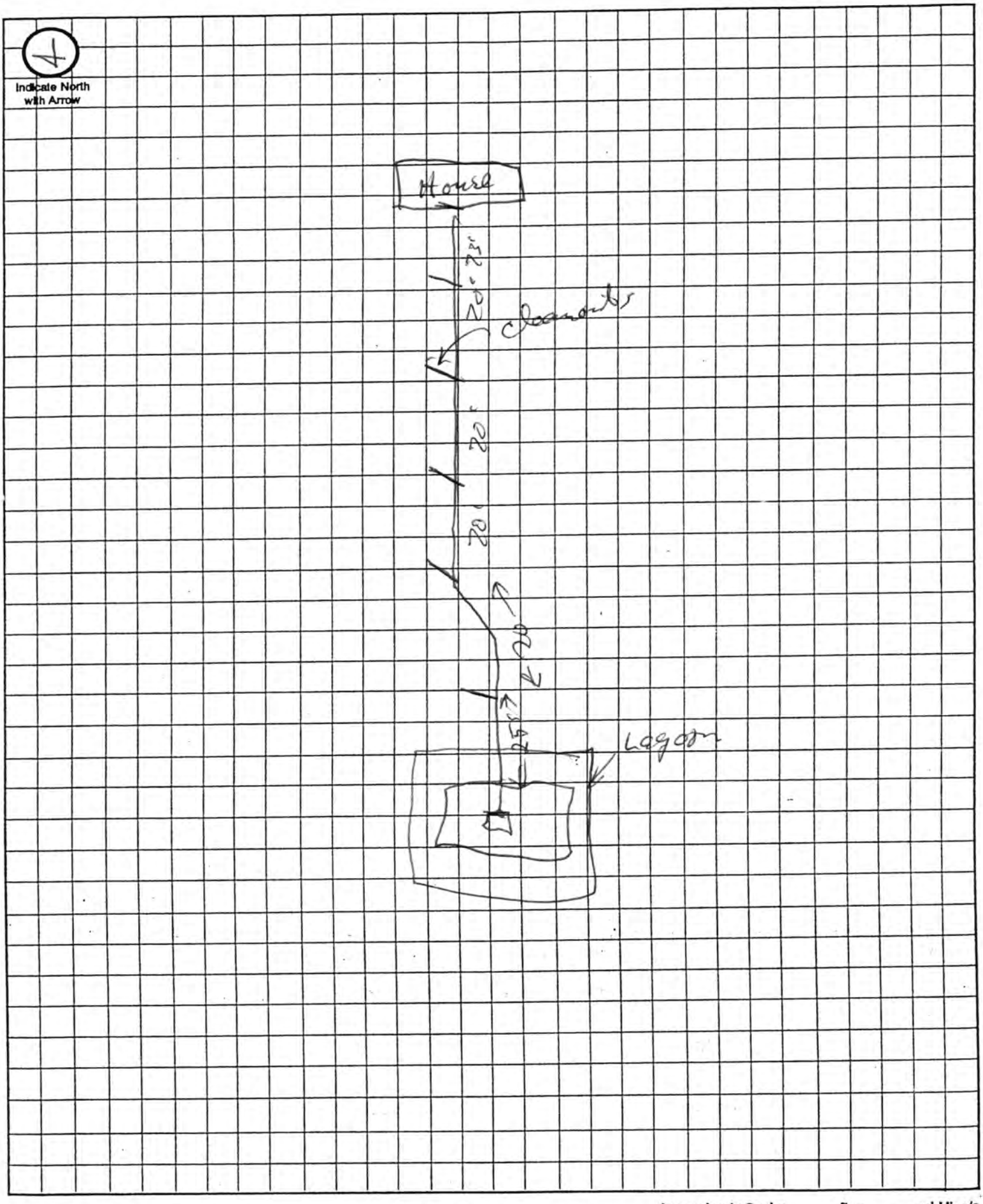
Complete "As Built" drawing on back of this form.

Individual Sewage System Design (Example)



FORM 23-103 10-96

As Built Drawing



Approximate Scale: _____ ft. = _____ grid line/s

NEBRASKA — SHEET NUMBER 8

