

No.

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST

pd 8/17/95 #1578 Brooks Fee 160.00 due Plan received 8/4/95

Application for Disposal Works Construction Permit

Application is hereby made for a Permit to Construct () or Repair (X) an Individual Sewage Disposal System at:

27 TRILLIUM WAY

GARY & KAREN BROOKS

27 TRILLIUM WAY, AMHERST.

Type of Building

Dwelling - No. of Bedrooms 3 Expansion Attic (NO) Garbage Grinder (NO) Other - Type of Building No. of persons Showers () - Cafeteria () Other fixtures

Design Flow 110 gallons per person per day. Total daily flow 412.5 330 gallons

Septic Tank - Liquid capacity 1500 gallons Length Width Diameter Depth

Disposal Trench - No. 4 Width 3'0" Total Length 472.160 Total leaching area sq. ft.

Seepage Pit No. Diameter Depth below inlet Total leaching area sq. ft.

Other Distribution box (Y) Dosing tank (-)

Percolation Test Results Performed by Harold L. Stiles & Bob Stover Date

Test Pit No. 1 6 minutes per inch Depth of Test Pit 130" Depth to ground water 70"

Test Pit No. 2 minutes per inch Depth of Test Pit 128" Depth to ground water 78"

Description of Soil See attached plan

Nature of Repairs or Alterations - Answer when applicable

Agreement:

The undersigned agrees to install the aforementioned Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Environmental Code - The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by the board of health.

Signed Harold L. Stiles

8/4/95

Application Approved By Roger Bonsall

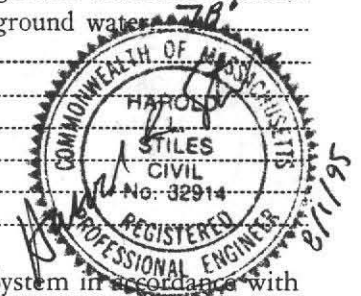
8/7/95

Application Disapproved for the following reasons:

Permit No.

Issued

Date



THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST

Certificate of Compliance

THIS IS TO CERTIFY, That the Individual Sewage Disposal System constructed () or Repaired (X) by John C. V. Excavating

at ... has been installed in accordance with the provisions of TITLE 5 of The State Environmental Code as described in the application for Disposal Works Construction Permit No. ... dated ...

THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORY.

DATE 8/14/95

Inspector Roger Bonsall

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST

No.

FEE

Disposal Works Construction Permit

Permission is hereby granted to Construct () or Repair () an Individual Sewage Disposal System at No.

as shown on the application for Disposal Works Construction Permit No. Dated

DATE

Board of Health

CHECK OR FILL IN WHERE APPLICABLE

Harold L. Stiles 8/14/95

Town Water

see attached revision

THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF HEALTH

Application for Approval of Sewerage System

Application is hereby made for approval of a sewerage system as shown on the plans attached hereto and for approval of the system as shown on the plans attached hereto.

System at: 27 TAILOR STREET
City of CAROL SPRING

Type of Building: _____
Dwelling - No. of Bedrooms: _____
Other - Type of Building: _____
Other Rooms: _____

Design Flow: _____
Sewer Tank - Capacity: _____
Disposal Method: _____
Sewerage for No. _____
Other Disposal for _____
Permittee's Test Results: _____
Test No. 1: _____
Test No. 2: _____

Description of Soil: _____
Nature of Region of Abandonment: _____

Agreement: _____
The undersigned agrees to comply with the provisions of TITLE 24C of the Regulations of the Board of Health in operation under the Sanitary Code of the Commonwealth of Massachusetts, Chapter 24C, Section 10, and to pay the cost of the sewerage system in operation under the Sanitary Code of the Commonwealth of Massachusetts, Chapter 24C, Section 10.

Application Approved by: _____
Application Disposed of by: _____

Person No. _____

THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF HEALTH
Department of Environmental Health

THIS IS TO CERTIFY that the sewerage system shown on the plans attached hereto has been installed in accordance with the provisions of the Sanitary Code of the Commonwealth of Massachusetts, Chapter 24C, Section 10, and that the application for approval of the system has been approved by the Board of Health.

THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSIDERED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORILY.

DATE: _____

THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF HEALTH

Law of _____

Department of Environmental Health

Permission is hereby granted to the Contractor () or his agent () to construct the sewerage system as shown on the plans attached hereto.

DATE: _____

CHECK ONE ONLY IN THESE CIRCLES

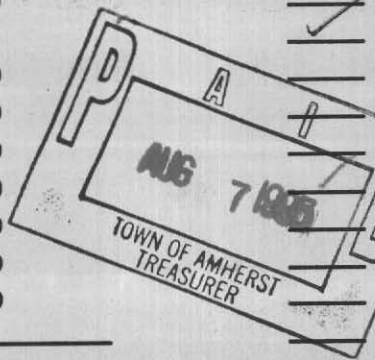


Handwritten signature and date:
Kane
6/14/58

**TOWN OF AMHERST
Health Department**

Brooks # 1575
29 Trillium Way (11)

<input type="checkbox"/> Bakery	01-0-501-4433-00	<input checked="" type="checkbox"/> Offal/Garbage	01-0-501-4472-00
<input type="checkbox"/> Bed & Breakfast	01-0-501-4474-01	<input checked="" type="checkbox"/> Perc Test \$100.00	01-0-501-4344-00
<input type="checkbox"/> Burial Permit	01-0-501-4475-00	<input type="checkbox"/> Retail Permit	01-0-501-4473-00
<input type="checkbox"/> Car Seat Rental	89-0-000-2557-00	<input type="checkbox"/> Sanitary Code Booklet	01-0-501-4380-00
<input type="checkbox"/> Catering	01-0-501-4429-00	<input type="checkbox"/> Septic Installers Permit	01-0-501-4470-01
<input type="checkbox"/> Food Handler	01-0-501-4474-00	<input type="checkbox"/> Septic Private Applications \$60.00	01-0-501-4470-00
<input type="checkbox"/> Housing Inspection	01-0-501-4348-00	<input type="checkbox"/> Septic - Reinspection	01-0-501-4345-00
<input type="checkbox"/> Massage	01-0-501-4425-00	<input type="checkbox"/> Sub-Division Rev.	01-0-501-4460-00
<input type="checkbox"/> Motel License	01-0-501-4428-00	<input type="checkbox"/> T.B. Clinic	01-0-501-4379-00
<input type="checkbox"/> Miscellaneous	01-0-501-_____	<input type="checkbox"/> Twenty-one D Tickets	01-0-501-4879-00



TOTAL FEE \$160

[Signature]
Treasurer/Collector
8-7-95
Date

[Signature]
Health Department
2/7/95
Date

Must have Collector's "PAID STAMP" on receipt to be valid.

White: Applicant Yellow: Collector Pink: Accountant Gold: Health Dept.



11/11/11

Revision - reduced Flow
Fee \$160
Pd 8/2/95
1578
Brooks

No.

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

Application for Disposal Works Construction Permit

Application is hereby made for a Permit to Construct () or Repair (+) an Individual Sewage Disposal System at:

27 Trillium Way
Location - Address
G.E. & Karen Brooks
Owner
or Lot No.
Address

Type of Building
Dwelling - No. of Bedrooms 3 Expansion Attic (No) Garbage Grinder (No)
Other - Type of Building No. of persons Showers () - Cafeteria ()
Other fixtures

Design Flow 55 gallons per person per day. Total daily flow 330 gallons.
Septic Tank - Liquid capacity 1500 gallons Length Width Diameter Depth
Disposal Trench - No. 4 Width 3.0' Total Length 120.0' Total leaching area 640.0 sq. ft.
Seepage Pit No. Diameter Depth below inlet 0.5 Total leaching area sq. ft.

Other Distribution box (x) Dosing tank ()
Percolation Test Results Performed by Harold L. Stiles & Robt. Stover Date July 21, 1995
Test Pit No. 1 6 minutes per inch Depth of Test Pit 130" Depth to ground water 70"
Test Pit No. 2 minutes per inch Depth of Test Pit 128" Depth to ground water 78"

Description of Soil see attached plan

Nature of Repairs or Alterations - Answer when applicable



Agreement:

The undersigned agrees to install the aforescribed Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Environmental Code - The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by the board of health.

Signed _____ Date _____

Application Approved By _____ Date _____

Application Disapproved for the following reasons: _____ Date _____

Permit No. _____ Issued _____ Date _____

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

Certificate of Compliance

THIS IS TO CERTIFY, That the Individual Sewage Disposal System constructed () or Repaired (x) by _____

at 27 Trillium Way
has been installed in accordance with the provisions of TITLE 5 of The State Environmental Code as described in the application for Disposal Works Construction Permit No. _____ dated _____

THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORY.

DATE _____ Inspector _____

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

No.

FEE.

Disposal Works Construction Permit

Permission is hereby granted G.E. + Karen Brooks
to Construct () or Repair (x) an Individual Sewage Disposal System
at No. 27 Trillium Way
as shown on the application for Disposal Works Construction Permit No. _____ Dated _____

DATE _____

Board of Health

CHECK OR FILL IN WHERE APPLICABLE

BOARD OF HEALTH

Town of ...

Application for Disposal of Sewage

Application is hereby made for a permit to install a sewage disposal system at:

System No. 87 Tullman Way
G.E. & Karna, Inc.

Type of Building
Dwelling - No. of Bedrooms 2
Other - Type of Building Other

Design flow 35
Septic Tank - Liquid capacity 1200
Disposal Trench - No. 4
Sewage for No. 1
Other Treatment in box ✓
Location for No. 1
Test Pit No. 1
Test Pit No. 2

Description of Soil Clay
Nature of Repairs or Alterations None

Agreement
The undersigned agrees to comply with the provisions of Chapter 140A of the General Laws of the Commonwealth of Massachusetts and to maintain the system in operation until a better system is provided.

Application Approved By [Signature]
Application Disapproved By [Signature]
Permit No. 87 Tullman Way



THIS IS TO CERTIFY THAT THE SEWAGE DISPOSAL SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 140A OF THE GENERAL LAWS OF THE COMMONWEALTH OF MASSACHUSETTS AND THAT THE SYSTEM WILL FUNCTION AS DESCRIBED.

DATE 87 Tullman Way
By [Signature]
The undersigned is hereby granted a permit to construct a sewage disposal system at No. 87 Tullman Way in the Town of ... as shown on the application for Disposal of Sewage.

Permit No. 87 Tullman Way
The undersigned is hereby granted a permit to construct a sewage disposal system at No. 87 Tullman Way in the Town of ... as shown on the application for Disposal of Sewage.

CHECK ONE LEFT IN THESE PLACES

AMHERST CIVIL ENGINEERING
6 UNIVERSITY DRIVE BOX 144
AMHERST, MASSACHUSETTS 01002
(413) 256-3400

August 7, 1995

To: Roger Bonsall
Health Department
Amherst Town Hall
4 Boltwood Walk
Amherst, MA 01002

Re: G. E. Brooks Disposal Works Repair Application for 27 Trillium Way
Proposed system design flow calculated by the 1978 Title 5 compared
with the design flow as calculated by Title 5 as revised in 1995.

Design Flow by 1995 Title 5

Daily flow provided by four leach trenches: 40 ft. long by 3 ft. wide by 0.5 ft.
below leach line for class 2 soils with a percolation rate of 6 minutes per inch
allowing under the revised code 0.60 gal. per day per square foot:

Sidewall: 8 sides(40' X 0.5')0.60 gpd/sf = 96.00 gal./day
Bottom Area: 4 tr.s(40' X 3')0.60 gpd/sf = 288.00 gal./day

Available daily flow: 384.00 gal./day

Design Flow by 1978 Title 5

Daily flow provided by proposed system with a percolation rate of 6 minutes per
inch allowing under the 1978 code 1.66 gal. per sq. ft. of sidewall and 0.71 gal.
per sf. ft. of bottom area:

Sidewall: 8 sides(40' X 0.5')1.66 gpd/sf = 265.60 gal./day
Bottom Area: 4 tr.s(40' X 3')0.71 gpd/sf = 340.80 gal./day

Available daily flow: 606.40 gal./day > 412.



Determination for Seasonal High Water Table

Method Used:

- Depth observed standing in observation hole _____ inches
- Depth weeping from side of observation hole _____ inches
- Depth to soil mottles 70" inches
- Ground water adjustment _____ feet

106-3
751-7

Index Well Number _____ Reading Date _____ Index well level _____
 Adjustment factor _____ Adjusted ground water level _____

Percolation Test		
Date: <u>7/21/95</u>		Time: <u>1:00</u>
Observation Hole #	<u>1</u>	
Depth of Perc	<u>39"</u>	
Start Pre-soak	<u>1:14</u>	
End Pre-soak	<u>1:29</u>	
Time at 12"	<u>1:30</u>	
Time at 9"	<u>1:41</u>	
Time at 6"	<u>1:57</u>	
Time (9"-6")	<u>16₃</u>	
Rate Min./Inch	<u>6</u>	

Waived
old Perc rate = 10
Some Loading factor
2-10

Site Suitability Assessment: Site Passed Site Failed

Additional Testing Needed: _____

Performed By: Amherst Civil Eng. Certification Number: _____

Witnessed By: Roger Bonsall

Comments: _____

No. _____

Commonwealth of Massachusetts
Massachusetts

Date: 7/21/95

\$160 fee. Pd
w/ Plan 2/7

Site Suitability Assessment for On-site Sewage Disposal

not pumped
in 8 yrs

Performed By: Amherst Civil Eng Certification Number: _____
Witnessed By: Roger Bonsall

Location Address or Lot No. <u>27 Trillium Way</u>	Owner's Name, Address and Tel. # <u>27 Trillium Way Gary + Karen Brooks 253-3758</u>
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3 Blkm w/ GG
1500 Gal Tank

New Construction Repair
Inst. Failure

Office Review

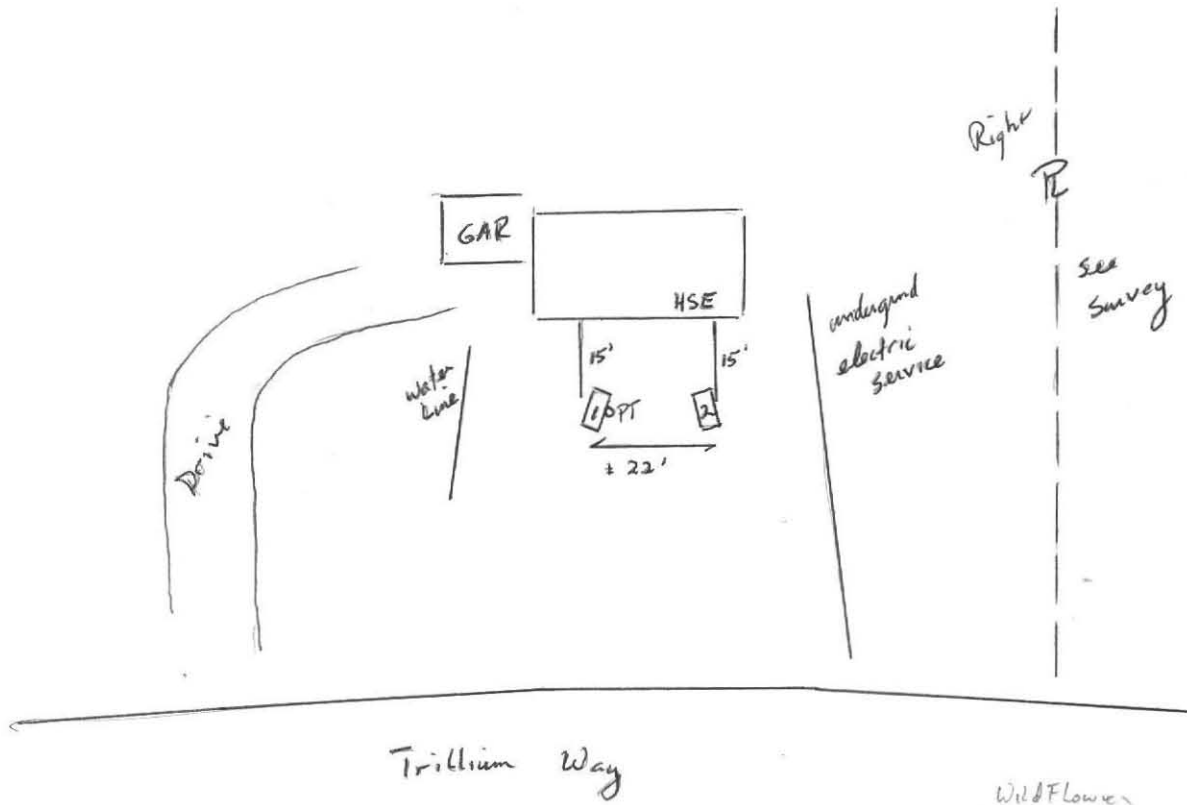
Published Soil Survey Available: No Yes
Year Published _____ Publication Scale _____ Soil Map Unit _____
Drainage Class _____ Soil Limitations _____
Surficial Geologic Report Available: No Yes
Year Published _____ Publication Scale _____
Geologic Material (Map Unit) _____
Landform _____

Flood Insurance Rate Map:
Above 500 year flood boundary No Yes
Within 500 year flood boundary No Yes
Within 100 year flood boundary No Yes

Wetland Area:
National Wetland Inventory Map (map unit) _____
Wetlands Conservancy Program Map (map unit) _____

Current Water Resource Conditions (USGS): Month _____
Range: Above Normal Normal Below Normal

Other References Reviewed: Soil Class II design



On-site Review

Deep Hole Number 2 Date: 7/21/95 Time: _____ Weather Sunny 80°

Location (identify on site plan) _____

Land Use _____ Slope (%) 2% Surface Stones _____

Vegetation _____

Landform SAME

Position on landscape (sketch on the back) _____

Distances from:

Open Water Body _____ feet Drainageway _____ feet
 Possible Wet Area >100 feet Property Line _____ feet see Survey
 Drinking Water Well Down Water feet Other _____

DEEP OBSERVATION HOLE LOG					
Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
11"	Ap	FSL	10YR 3/4		
25"	Bw	MLS	10YR 5/8		
78"	C ₁	Med-Co LS	10YR 6/4		
128"	C ₂	FSL	10YR 6/2	78" 10YR 6/6 10YR 6/2	no modifier

Parent Material (geologic) Glacial Till + Outwash Depth to Bedrock: >128"
 Depth to Groundwater: _____ Standing Water in the Hole: NA Weeping from Pit Face: NA
 Estimated Seasonal High Ground Water: 78"

On-site Review

Deep Hole Number 1 Date: 7/21/95 Time: 12:40 Weather Sunny 80°

Location (identify on site plan) _____

Land Use Residential Slope (%) 3 Surface Stones no

Vegetation Lawn Pine + Oak

Landform _____

Position on landscape (sketch on the back) _____

Distances from:

Open Water Body _____ feet Drainageway _____ feet

Possible Wet Area 7100 feet Property Line _____ feet

Drinking Water Well town feet Other _____
Water

DEEP OBSERVATION HOLE LOG					
Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
7"	A	FSL	10YR 3/4		
20"	Bw	MLS	10YR 5/8	no 2 observed	
70"	C ₁	med-Co L S	10YR 6/4		fine gravel + few cobbles
130"	C ₂	Sandy Loam	10YR 6/2	70" 10YR 6/2 7.5YR 6/6	no mottling firm w/ depth

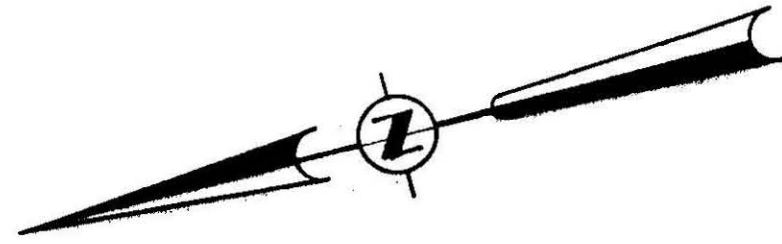
100.7

Parent Material (geologic) Outwash + Till Depth to Bedrock: >130"

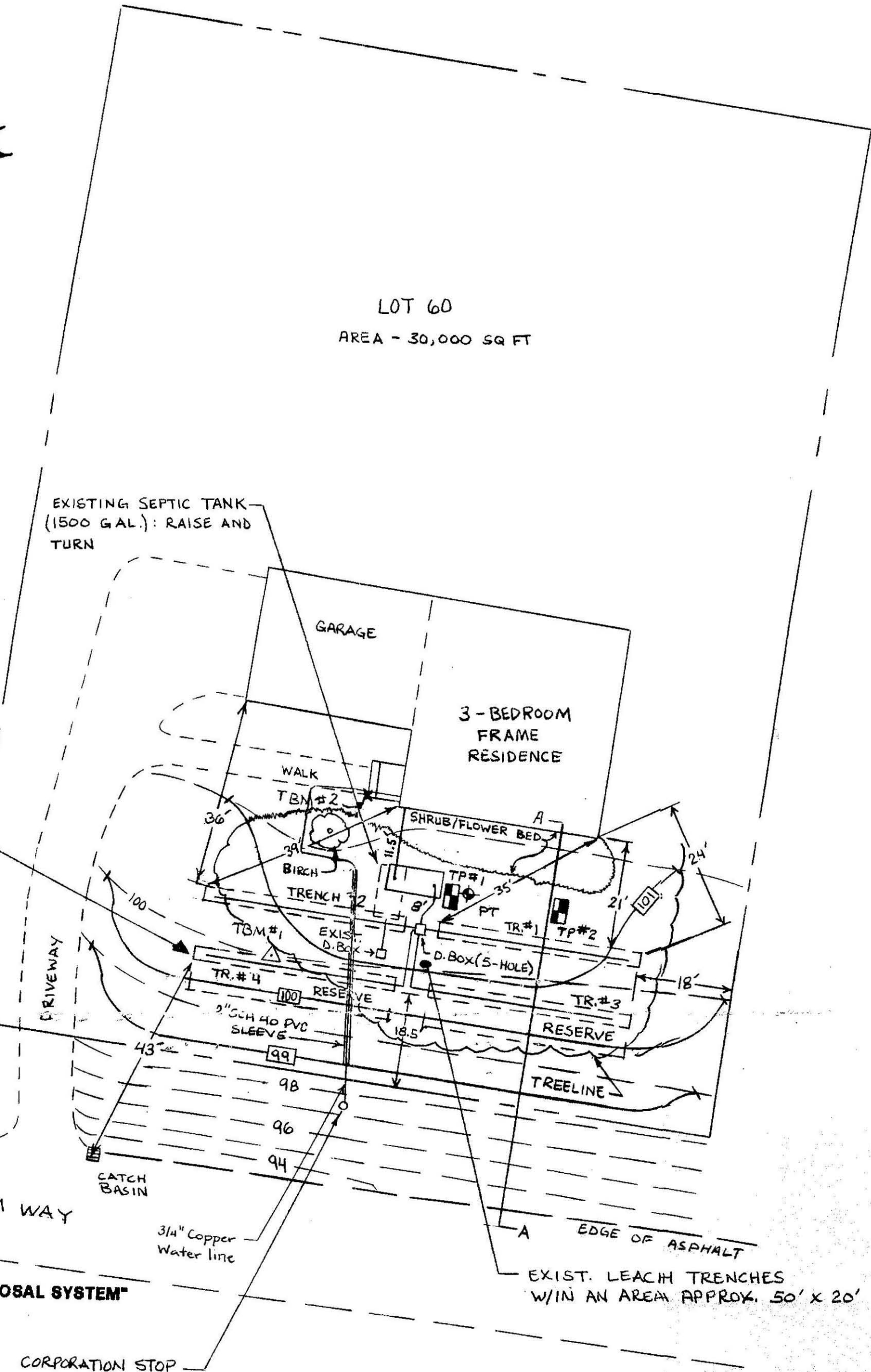
Depth to Groundwater: _____ Standing Water in the Hole: NA Weeping from Pit Face: NA

Estimated Seasonal High Ground Water: 70" 94.82

PLAN VIEW SCALE 1" = 20 FEET



- LEGEND**
- TP#X DEEP OBSERVATION PIT
 - PT PERCOLATION TEST LOCATION
 - XX EXISTING CONTOUR LINE (1' INTERVAL)
 - XX PROPOSED CONTOUR LINE (1' INTERVAL)
 - ~~~~ TREELINE
 - ~~~~ SHRUB/FLOWER LINE

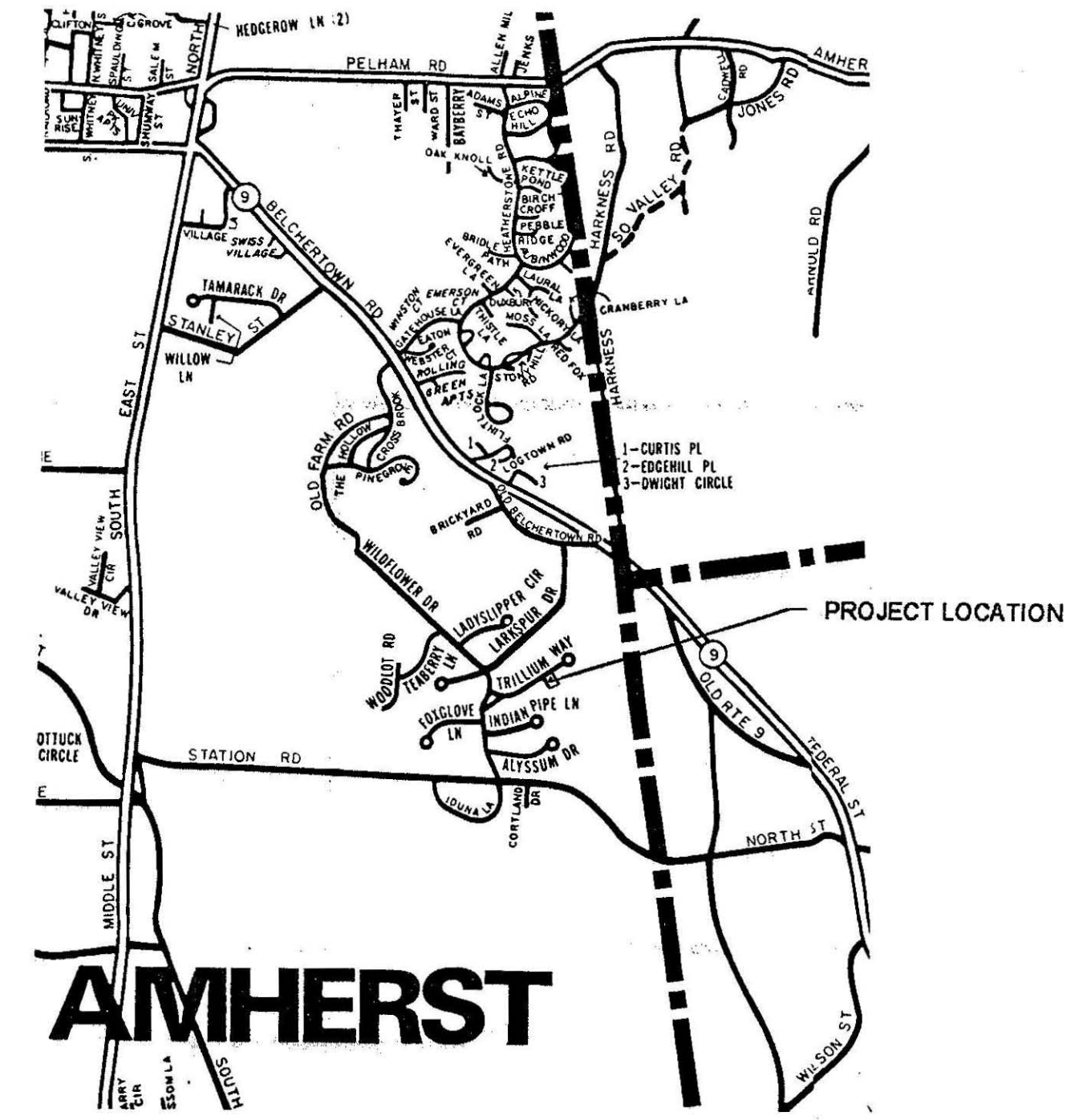


4 LEACH TRENCHES
40' LONG BY 3' WIDE
BY 0.5' BELOW INLET
9' SEPARATION

TBM #1: 100 FT ELEV. ASSUMED AT SPIKE
SET IN GROUND; ALT. TBM (TBM#2)
ELEV. 101.80' AT NORTHWEST CORNER
OF LOWER FRONT STEP.

BOUNDARY INFORMATION FROM: "PLAN SEWAGE DISPOSAL SYSTEM"
BY: F. A. FILIOS, R.S. DATED APRIL 23, 1986.

VICINITY MAP
NTS



CONSTRUCTION NOTES:

1. This area served by town water. No wells within 200 ft. of proposed leach facility at time of survey.
2. Septic tank shall be pumped and inspected as necessary and at least once every three years.
3. Pipes exiting Distribution Box shall have the same invert elevation and shall be level for at least the first two feet of length.
4. Topsoil and subsoil shall be removed for five feet around proposed leach area and where fill is to be placed. Fill shall be a clean granular sand and conform to the specifications of Title 5 310 CMR 15.255(3).
5. Excavation and disposal of existing leach facilities shall conform to the requirements of the Amherst Health Department.

TRENCH INVERT ELEVATIONS:

TR. #	BEGIN	END
TR. #1	99.57'	99.37'
TR. #2	99.57'	99.37'
TR. #3	99.07'	98.87'
TR. #4	99.07'	98.87'

SOIL INVESTIGATION

TEST PIT NO. 1 Elev. 100.70' PERCOLATION TEST AT 97.80'
Saturation Period: 15 Minutes
Percolation Rate: 6 Minutes/Inch

0" - 7"	A	Fine Sand Loam 10YR3/4
7" - 20"	Bw	Medium Sand Loam 10YR5/8
20" - 70"	C1	Medium to Coarse Loamy Sand with Fine Gravel and Few Cobbles Matrix: 10YR6/4
70" - 130"	C2	Sandy Loam - Firmer with Depth Matrix: 10YR6/2 Mottling: 7.5YR6/6

Groundwater Elevation: 94.87'
Bedrock Elevation: 89.87' or lower
These are Class 2 Soils

TEST PIT NO. 2 Elev 100.70'

0" - 11"	Ap	Fine Sand Loam 10YR3/4
11" - 25"	Bw	Medium Loam Sand 10YR5/8
25" - 78"	C1	Medium - Coarse Loamy Sand 10YR6/4
78" - 128"	C2	Fine Sandy Loam Matrix: 10YR6/2 Mottling: 10YR6/6

Groundwater Elevation: 94.20'
Bedrock Elevation: 90.03' or lower
These are Class 2 Soils

No wetlands within 200 ft of the Soil Absorption System. Soil investigation and percolation testing performed by Harold L. Stiles, P.E. and Robert Stover on July 21, 1995. Witnessed by Roger Bonsall, Assistant Health Officer, Amherst Board of Health.

DESIGN CRITERIA

Three bedroom single family house.
Garbage disposal shall be removed
Utilize leaching trench system.
Existing septic tank: 1500 gal. tank

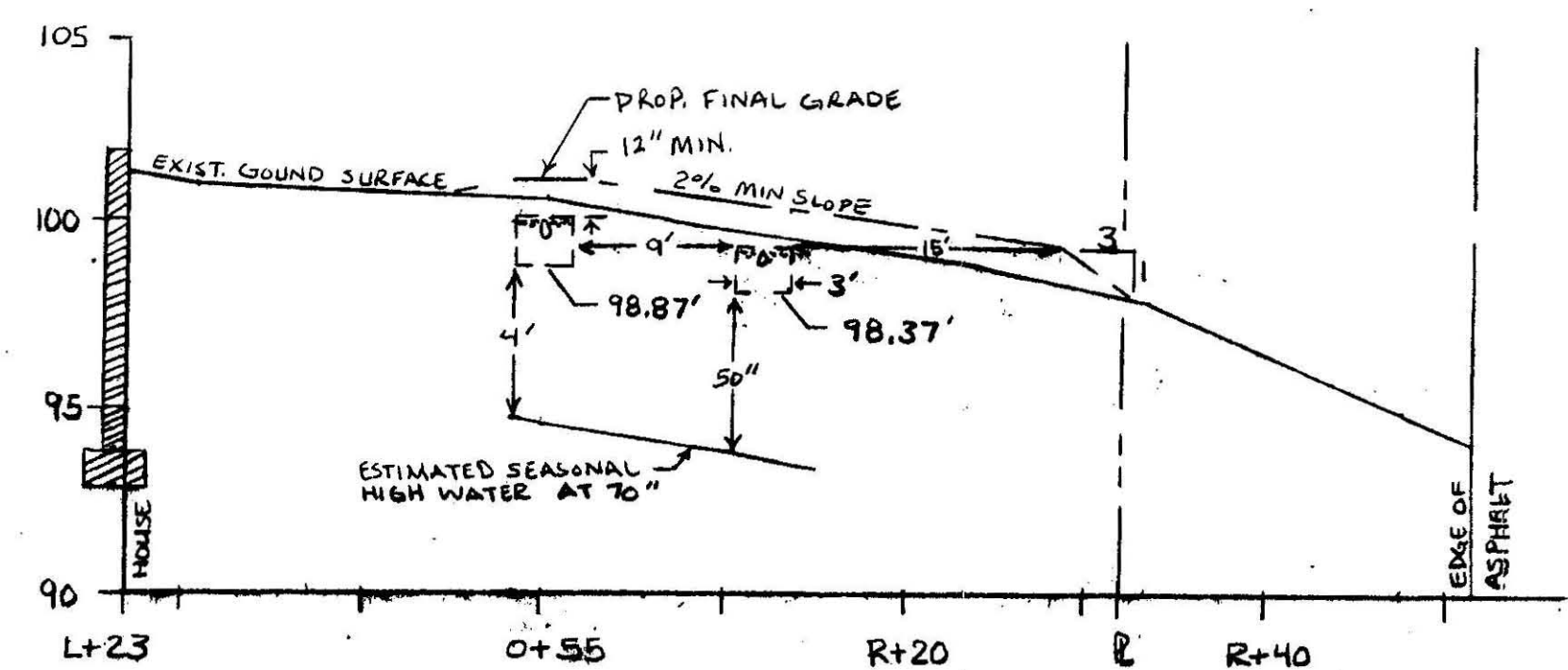
DESIGN CALCULATION

Design flow: 3 bdrm @ 110gpd/bdrm = 330 gpd ✓
Leaching Trenches: Percolation rate = 6min/in ✓
Bottom area: 0.60 GPD/SF ✓
Sidewall area: 0.60 GPD/SF ✓

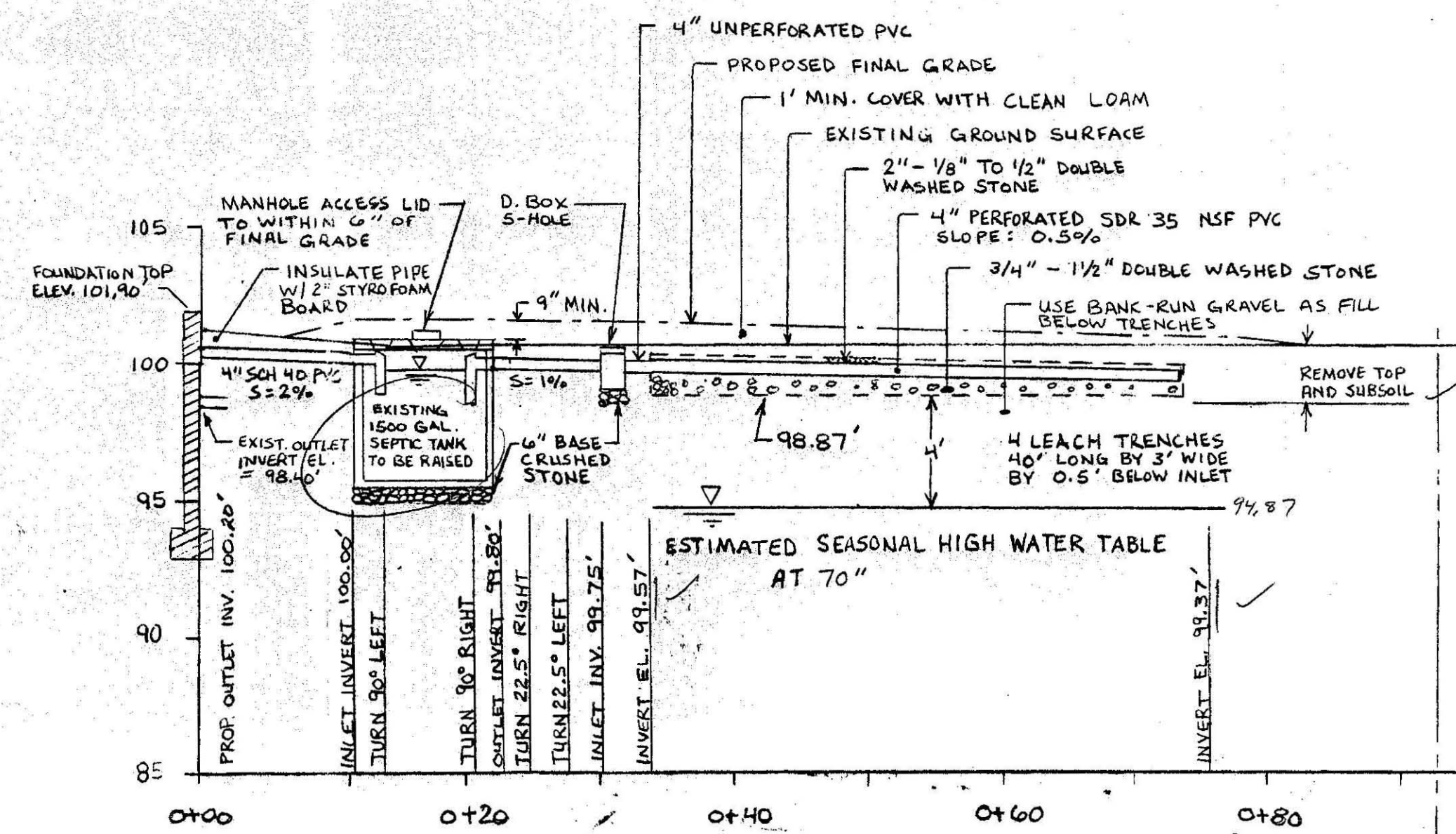
Use 4 trenches 40 ft. long x 3.0 ft. wide x 0.50 ft. deep (below flow line)
Bottom area: (40 x 3) x 4 x 0.60 = 288.00 GPD
Sidewall area: (40 x 0.5) x 2 x 4 x 0.60 = 96.00 GPD
TOTAL LEACHING CAPACITY = 384.00 GPD ✓
TOTAL REQUIRED = 330.0 GPD ✓

GENERAL CONDITIONS

1. This system repair is designed in accordance with 310 CMR 15.00 (Title 5). Construction shall conform to same.
2. Contractor shall notify engineer of any unusual conditions and shall not modify the plan without the written consent of the engineer. Any debris in the site area shall be removed and disposed of in accordance with the law.
3. There is no guarantee express or implied to any user of a system installed pursuant to this plan.
4. The contractor shall notify the Engineer and the Representative of the Amherst Board of Health when the excavation is complete and prior to covering the system. Notification shall be 48 hours prior to the time of inspection.



LEACHING TRENCHES SECTION "A" - "A"
(TRENCHES #1 AND #3 SHOWN) SCALE: H: 1" = 10' V: 1" = 5'



SYSTEM PROFILE (TRENCH #1 SHOWN) H: 1" = 10' V: 1" = 5'

G. E. AND KAREN BROOKS
27 TRILLIUM WAY
AMHERST, MASSACHUSETTS

ON-SITE SEWAGE DISPOSAL SYSTEM		
27 TRILLIUM WAY		
AMHERST, MASSACHUSETTS		
SCALE: AS SHOWN	APPROVED BY	DRAWN BY: RWS
DATE: JULY 31, 1995	HAROLD L. STILES, P.E.	
AMHERST CIVIL ENGINEERING,		(413) 256-3400
REVISED 8/17/95 TO SHORTEN TRENCHES RWS/MS		DRAWING NUMBER

