#388

No. 96-18

FEE 160.00 PD

THE COMMONWEALTH OF MASSACHUSETTS

AMHERST, MASSACHUSETTS

Application for Disposal System Construction Permit

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

Location Address or Lot No.	Owner's Name, Address and Tel. No.
SAME	RUSSELL KOTFILA 253-7378 388 MIDDLE ST. AMHERST MA 01002
Installer's Name, Address, and Tel.No.	Designer's Name, Address and Tel. No. 413-665-7670 DAVID E. KEATES 102 RUSSELL ST. SUNDERLAND, MA 01375

Type of Building:
Dwelling No. of Bedrooms 4 Garbage Grinder (NO
Other Type of Building _____ No. per Persons _____ Showers ( ) Cafeteria ( )
Other Fixtures _____

Design Flow 1.25 x 440 = 550 gallons per day. **Calculated** daily flow _____ gallons.

Plan Date 10/9/96 Number of sheets 17 Revision Date _____
Title SEWAGE DISPOSAL SYSTEM FOR RUSSELL KOTFILA

Description of Soil See logs sheets 4 & 5 of 17

Nature of Repairs or Alterations (Answer when applicable)
Request waiver for a 4' separation to E.S.H.W.T. & bottom of field for perc. ≤ 2.0 min/in.
Site has Town water

Paul E. Keates 10/9/96

Date last inspected: _____

Agreement:
The undersigned agrees to ensure the construction and maintenance of the aforedescribed on-site sewage disposal system in accordance with the provisions of Title 5 of the Environmental Code and not to place the system in operation until a Certificate of Compliance has been issued by this Board of Health.

Signed [signature] Date 10/21/96

Application Approved by _____ Date _____

Application Disapproved for the following reasons _____

Permit No. 96-15 Date Issued _____

THE COMMONWEALTH OF MASSACHUSETTS

Amherst, MASSACHUSETTS

Certificate of Compliance

THIS IS TO CERTIFY, that the On-site Sewage Disposal System installed ( ) or repaired/replaced (✓) on _____ by _____ for _____ at 388 Middle Street has been constructed in accordance with the provisions of Title 5 and the for Disposal System Construction Permit No. 96-15 dated _____. Use of this system is conditioned on compliance with the provisions set forth below:

The issuance of this certificate shall not be construed as a guarantee that the system will function as designed. This Certificate expires on _____

DATE 6/24/97 Inspector David E. Keates

THE COMMONWEALTH OF MASSACHUSETTS

No. 96-15 Amherst, MASSACHUSETTS FEE 160.00

Disposal System Construction Permit

Permission is hereby granted to Russell Hotfila to construct ( ) or repair (✓) an On-site Sewage System located at 388 Middle St Amherst Mass

and as described in the above Application for Disposal System Construction Permit. The applicant recognizes his/her duty to comply with Title 5 and the following local provisions or special conditions.

All construction must be completed within three years of the date below.

DATE 11-4-96 Approved by [signature] for Inspection Service Agt. 11-5-96 VAL-04

FORM 1255 Rev. 3/95 A.M. SULKIN CO. - BOSTON, MA

VARIANCE APPROVED BY TELEPHONE: YES
(1) SAM 10-31-96 (2) FRANK - 11-4-96 (3) MARISELA - 11-4-96

Town of

AMHERST Massachusetts

TOWN HALL
4 BOLTWOOD AVENUE
AMHERST, MA. 01002-2351

INSPECTION SERVICES DEPARTMENT
Phone (413) 256-4030

October 29, 1996

To: Board of Health Members

From: David Zarozinski, Sanitarian

Re: Variance request for a failed septic system at 388 Middle Street Amherst, Massachusetts.

Mr. and Mrs. Russell Kotfila of 388 Middle Street Amherst Mass. are requesting a variance to Title V Regulation 15.212 (b) DEPTH To Ground Water. (copy enclosed)

On October 2, 1996 Mr. David Keates, Civil Engineer conducted a percolation test at this site. The perc test witnessed by me had a rate of less than two (2) minutes per inch with a ground water at (38) thirty - eight inches. The new regulation of a five (5) foot separation would not allow the engineer to meet the side slope requirements. The waiver would allow a four (4) foot separation to the water table and the system will meet the Town requirement of twenty - five percent larger than required by the State. Also, town water is available.

Therefore, I would support this request.

10/24/96

To: Amherst B.C.H.
att. David Zarozynski
Town Hall
4 Boltwood Ave
Amherst, MA 01002-2351

RE: Russell Kotfila
Septic System
358 Middle St
Amherst, MA

Request waiver of 5' separation to water table for perc < 2 min/in. 4.0' provided. 5' separation would result in too much fill and side slope distances could not be met due to site constraints. Site has Town water. Majority of treatment is provided in the first 2 feet in a sand fill system.

David E. Keates

PROJECT | Sheet: of | David E. Keates, P.E. Consulting Civil Engineer 102 Russell Street

10/24/96

To: Amherst BCH

att: David Zuzozenski

Town Hall

4 Boltwood Ave

Amherst, MA 01002-2351

RE: Russell Kotfila

septic System

567 Middle St.

Amherst, MA

Request waiver of 5' separation to water table for perc < 2 min/in. 4' 0" provided. 5' separation would result in [illegible] fill and side slope distances could not be met due to site constraints. Site has Town water. Majority of treatment is provided in the first 2 feet in a sand fill system.

David E. Keates

PROJECT

Sheet of

David E. Keates, P.E.
Consulting Civil Engineer
102 Russell Street
Sunderland, MA 01375
Tel: 413-665-7670

TITLE 5
OFFICIAL INSPECTION FOR - NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM FORM
PART A
CERTIFICATION

Property Address: ~~288~~ 388 **Middle St. Amherst, MA**

Owner's Name: Marina Jaffe
Owner's Address: 288 Middle Street
Amherst, MA 01002

388

COPY

Date of Inspection: July 07, 2003 (Revised)

Name of Inspector: *Alan E. Weiss, R.S # 933*
Company Name: *Cold Spring Environmental Inc.*
Mailing Address: *350 Old Enfield Road*
Belchertown, Massachusetts 01007
Telephone Number: (413) 323-5957 fax: 413-323-4916

CERTIFICATION STATEMENT

I certify that I have personally inspected the sewage disposal system at this address and that the information reported below is true, accurate and complete as of the time of the inspection. The inspection was performed based on my training and experience in the proper function and maintenance of on site sewage disposal systems. **I am a DEP approved system inspector pursuant to Section 15.340 of Title 5 (310 CMR 15.000).** The system:

XX Passes
___Conditionally Passes
___ Needs Further Evaluation by the Local Approving Authority
___Fails

Inspector's Signature: _____ **Date: July 02 & 07, 2003**

The system inspector shall submit a copy of this inspection report to the Approving Authority (Board of Health or DEP) within 30 days of completing this inspection. If the system is a shared system or has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the DEP. The original should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

Notes and Comments:

Septic Tank & leaching area was in good condition upon inspection. D Box was found level and functional. Pump/Pump Chamber operation was repaired by plumber. Inspections found, all levels/stains & baffles were ok. We found septic system be operational per 1996 plans. System is 7+/- years old. Note: An alarm is recommended on the pump chamber . Sewer is located in Street.

******This report only describes conditions at the time of inspection and under the conditions of use at that time. This inspection does not address how the system will perform in the future under the same different conditions of use.**

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 288 middle ST.

Owner: Jaffe
Date of Inspection: 7/2/03

Inspection Summary: Check A,B,C,D or E / ALWAYS complete all of Section D

A. System Passes:

YES I have not found any information which indicates that any of the failure criteria described in 310 CMR 15.303 or in 310 CMR 15.304 exist. Any failure criteria not evaluated are indicated below.

Comments:

B. System Conditionally Passes:

No One or more system components as described in the "Conditional Pass" section need to be replaced or repaired. The system, upon completion of the replacement or repair, as approved by the Board of Health, will pass.

Answer yes, no or not determined (Y,N,ND) in the ____ for the following statements. If "not determined" please explain.

_____ The septic tank is metal and over 20 years old* or the septic tank (whether metal or not) is structurally unsound, exhibits substantial infiltration or exfiltration or tank failure is imminent. System will pass inspection if the existing tank is replaced with a complying septic tank as approved by the Board of Health.
*A metal septic tank will pass inspection if it is structurally sound, not leaking and if a Certificate of Compliance indicating that the tank is less than 20 years old is available.

ND explain:

_____ Observation of sewage backup or break out or high static water level in the distribution box due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. System will pass inspection if (with approval of Board of Health):

____ broken pipe(s) are replaced
____ obstruction is removed
____ distribution box is leveled or replaced

ND explain:

_____ The system required pumping more than 4 times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

____ broken pipe(s) are replaced
____ obstruction is removed

ND explain:

OFFICIAL INSPECTION FORM - NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 288 Middle ST

Owner: Joffe

Date of Inspection: 7/2/03

C. Further Evaluation is Required by the Board of Health:

No Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect public health, safety or the environment.

1. **System will pass unless Board of Health determines in accordance with 310 CMR 15.303(1)(b) that the system is not functioning in a manner which will protect public health, safety and the environment:**

___ Cesspool or privy is within 50 feet of a surface water
___ Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh

2. **System will fail unless the Board of Health (and Public Water Supplier, if any) determines that the system is functioning in a manner that protects the public health, safety and environment:**

___ The system has a septic tank and soil absorption system (SAS) and the SAS is within 100 feet of a surface water supply or tributary to a surface water supply.

___ The system has a septic tank and SAS and the SAS is within a Zone 1 of a public water supply.

___ The system has a septic tank and SAS and the SAS is within 50 feet of a private water supply well.

___ The system has a septic tank and SAS and the SAS is less than 100 feet but 50 feet or more from a private water supply well**. Method used to determine distance _____

**This system passes if the well water analysis, performed at a DEP certified laboratory, for coliform bacteria and volatile organic compounds indicates that the well is free from pollution from that facility and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis must be attached to this form.

3. **Other:**

_____
_____
_____

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 288 Middle St

Owner: Taffe

Date of Inspection: 7/2/07

D. System Failure Criteria applicable to all systems:
You must indicate "yes" or "no" to each of the following for all inspections:

Yes	No	
___	No	Backup of sewage into facility or system component due to overloaded or clogged SAS or cesspool
___	No	Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool
___	No	Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool
___	No	Liquid depth in cesspool is less than 6" below invert or available volume is less than ½ day flow
___	No	Required pumping more than 4 times in the last year NOT due to clogged or obstructed pipe(s). Number of times pumped ____.
___	No	Any portion of the SAS, cesspool or privy is below high ground water elevation.
___	No	Any portion of cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply.
___	No	Any portion of a cesspool or privy is within a Zone 1 of a public well.
___	No	Any portion of a cesspool or privy is within 50 feet of a private water supply well.
___	No	Any portion of a cesspool or privy is less than 100 feet but greater than 50 feet from a private water supply well with no acceptable water quality analysis. **[This system passes if the well water analysis, performed at a DEP certified laboratory, for coliform bacteria and volatile organic compounds indicates that the well is free from pollution from that facility and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis must be attached to this form.]**

No (Yes/(No)) **The system fails.** I have determined that one or more of the above failure criteria exist as described in 310 CMR 15.303, therefore the system fails. The system owner should contact the Board of Health to determine what will be necessary to correct the failure.

E. Large Systems:
To be considered a large system the system must serve a facility with a design flow of 10,000 gpd to 15,000 gpd.
You must indicate either "yes" or "no" to each of the following:
(The following criteria apply to large systems in addition to the criteria above)

yes	no	
___	___	the system is within 400 feet of a surface drinking water supply
___	___	the system is within 200 feet of a tributary to a surface drinking water supply
___	___	the system is located in a nitrogen sensitive area (Interim Wellhead Protection Area – IWPA) or a mapped Zone II of a public water supply well

If you have answered "yes" to any question in Section E the system is considered a significant threat, or answered "yes" in Section D above the large system has failed. The owner or operator of any large system considered a significant threat under Section E or failed under Section D shall upgrade the system in accordance with 310 CMR 15.304. The system owner should contact the appropriate regional office of the Department.

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART B
CHECKLIST

Property Address: 288 Middle ST

Owner: Jaffee

Date of Inspection: 12/2/03

Check if the following have been done. You **must** indicate "yes" or "no" as to each of the following:

Yes No

yes ___ Pumping information was provided by the owner, occupant, or Board of Health

___ No Were any of the system components pumped out in the previous two weeks ?

yes ___ Has the system received normal flows in the previous two week period ?

___ No Have large volumes of water been introduced to the system recently or as part of this inspection ?

yes ___ Were as built plans of the system obtained and examined? (If they were not available note as N/A)

yes ___ Was the facility or dwelling inspected for signs of sewage back up ?

yes ___ Was the site inspected for signs of break out ?

yes ___ Were all system components, excluding the SAS, located on site ?

yes ___ Were the septic tank manholes uncovered, opened, and the interior of the tank inspected for the condition of the baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge and depth of scum ?

yes ___ Was the facility owner (and occupants if different from owner) provided with information on the proper maintenance of subsurface sewage disposal systems ?

The **size and location of the Soil Absorption System (SAS)** on the site has been determined based on:

Yes no

yes ___ Existing information. For example, a plan at the Board of Health.

yes ___ Determined in the field (if any of the failure criteria related to Part C is at issue approximation of distance is unacceptable) [310 CMR 15.302(3)(b)]

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION

Property Address: 288 Middle ST

Owner: Jaffee

Date of Inspection: 7/2/03

FLOW CONDITIONS

RESIDENTIAL

Number of bedrooms (design): 4 Number of bedrooms (actual): 4

DESIGN flow based on 310 CMR 15.203 (for example: 110 gpd x # of bedrooms): 440

Number of current residents: 5

Does residence have a garbage grinder (yes or no): No

Is laundry on a separate sewage system (yes or no): No [if yes separate inspection required]

Laundry system inspected (yes or no): —

Seasonal use: (yes or no): No

Water meter readings, if available (last 2 years usage (gpd)): N/A

Sump pump (yes or no): Yes (to gutter at Street)

Last date of occupancy: Current

COMMERCIAL/INDUSTRIAL

Type of establishment: N/A

Design flow (based on 310 CMR 15.203): _____ gpd

Basis of design flow (seats/persons/sqft,etc.): _____

Grease trap present (yes or no): ___

Industrial waste holding tank present (yes or no): ___

Non-sanitary waste discharged to the Title 5 system (yes or no): ___

Water meter readings, if available: _____

Last date of occupancy/use: _____

OTHER (describe): _____

GENERAL INFORMATION

Pumping Records

Source of information: August, 2002

Was system pumped as part of the inspection (yes or no): ___

If yes, volume pumped: 1500 gallons -- How was quantity pumped determined? Meas.

Reason for pumping: _____

TYPE OF SYSTEM

✓ Septic tank, distribution box, soil absorption system

___ Single cesspool

___ Overflow cesspool

___ Privy

___ Shared system (yes or no) (if yes, attach previous inspection records, if any)

___ Innovative/Alternative technology. Attach a copy of the current operation and maintenance contract (to be obtained from system owner)

___ Tight tank ___ Attach a copy of the DEP approval

___ Other (describe): _____

Approximate age of all components, date installed (if known) and source of information:

1997

Were sewage odors detected when arriving at the site (yes or no): No

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 288 Middle St.

Owner: Jaffe
Date of Inspection: 7/2/07

BUILDING SEWER (locate on site plan)

Depth below grade: 12"
Materials of construction: ___cast iron ✓40 PVC ___other (explain): _____
Distance from private water supply well or suction line: 10'+
Comments (on condition of joints, venting, evidence of leakage, etc.):
OK.

SEPTIC TANK: Yes (locate on site plan)

Depth below grade: 12"
Material of construction: ✓concrete ___metal ___fiberglass ___polyethylene
___other(explain)_____
If tank is metal list age: ___ Is age confirmed by a Certificate of Compliance (yes or no): ___ (attach a copy of certificate)
Dimensions: 10' x 5' x 4.5'
Sludge depth: 3"
Distance from top of sludge to bottom of outlet tee or baffle: 46"
Scum thickness: 3"
Distance from top of scum to top of outlet tee or baffle: 5"
Distance from bottom of scum to bottom of outlet tee or baffle: 12"
How were dimensions determined: MEAS.
Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):
Good condition; Small gap at outlet tee cemented by Karl's - Inlet has baffle.

GREASE TRAP: N/a (locate on site plan)

Depth below grade: ___
Material of construction: ___concrete ___metal ___fiberglass ___polyethylene ___other (explain):_____
Dimensions: _____
Scum thickness: _____
Distance from top of scum to top of outlet tee or baffle: _____
Distance from bottom of scum to bottom of outlet tee or baffle: _____
Date of last pumping: _____
Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 288 Middle St

Owner: Jaffee

Date of Inspection: 7/2/03

TIGHT or HOLDING TANK: N/A (tank must be pumped at time of inspection)(locate on site plan)

Depth below grade: _____
Material of construction: ____concrete ____metal ____fiberglass ____polyethylene ____other(explain):
_____
Dimensions: _____
Capacity: _____gallons
Design Flow: _____gallons/day
Alarm present (yes or no): _____
Alarm level: _____ Alarm in working order (yes or no): ____
Date of last pumping: _____
Comments (condition of alarm and float switches, etc.):
_____
_____

DISTRIBUTION BOX: Yes (if present must be opened)(locate on site plan)

Depth of liquid level above outlet invert: 0 inches
Comments (note if box is level and distribution to outlets equal, any evidence of solids carryover, any evidence of leakage into or out of box, etc.):
Good condition
_____
_____

PUMP CHAMBER: Yes (locate on site plan)

Pumps in working order (yes or no): As of 7/07/03 ok
Alarms in working order (yes or no): No - unable to locate Alarms -
Comments (note condition of pump chamber, condition of pumps and appurtenances, etc.):
Plumber came to fix pump operation, Pump replaced + works.
_____

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 288 Middle ST

Owner: Jaffee
Date of Inspection: 7/2/03

SOIL ABSORPTION SYSTEM (SAS): Yes **(locate on site plan, excavation not required)**

If SAS not located explain why:

Type
____ leaching pits, number: ___
____ leaching chambers, number: ____
____ leaching galleries, number: ____
____ leaching trenches, number, length: _____
(1) leaching fields, number, dimensions: 70' L x 10' W
____ overflow cesspool, number: ____
____ innovative/alternative system Type/name of technology: _____
Comments (note condition of soil, signs of hydraulic failure, level of ponding, damp soil, condition of vegetation, etc.):
Good condition

CESSPOOLS: N/A **(cesspool must be pumped as part of inspection)(locate on site plan)**

Number and configuration: _____
Depth – top of liquid to inlet invert: _____
Depth of solids layer: _____
Depth of scum layer: _____
Dimensions of cesspool: _____
Materials of construction: _____
Indication of groundwater inflow (yes or no): ____
Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):

PRIVY: N/A **(locate on site plan)**

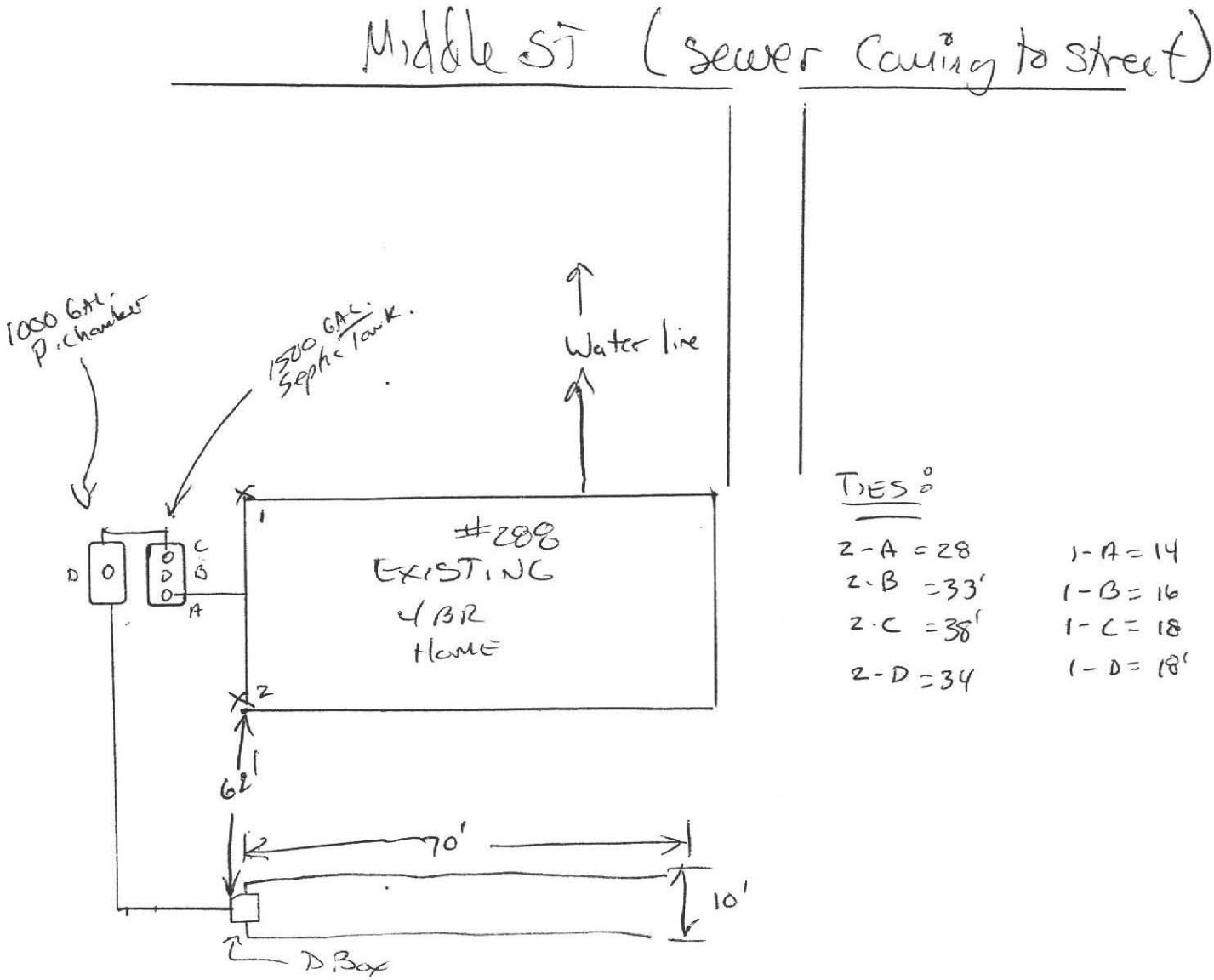
Materials of construction: _____
Dimensions: _____
Depth of solids: _____
Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 288 Middle St

Owner: Jaffe
Date of Inspection: 7/2/03

SKETCH OF SEWAGE DISPOSAL SYSTEM
Provide a sketch of the sewage disposal system including ties to at least two permanent reference landmarks or benchmarks. Locate all wells within 100 feet. Locate where public water supply enters the building.



OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 288 Middle St

Owner: Jaffe
Date of Inspection: 7/2/03

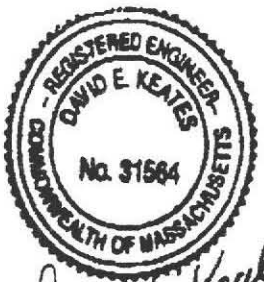
SITE EXAM
✓ Slope
✓ Surface water
Check cellar
Shallow wells

Estimated depth to ground water 5' feet

Please indicate (check) all methods used to determine the high ground water elevation:

✓ Obtained from system design plans on record - If checked, date of design plan reviewed: 1997
___ Observed site (abutting property/observation hole within 150 feet of SAS)
___ Checked with local Board of Health-explain: _____
___ Checked with local excavators, installers- (attach documentation)
___ Accessed USGS database-explain: _____

You **must** describe how you established the **high ground water elevation**:
See plans / Deep holes (Keats)



David E. Keates 10/9/96

N

TOWN WATER

TP 1

10'

PERC

VENT

A

TBM - EL. 100.00
TOP ELEC. BOX
DUPLEX OUTLET

57'

4 BEDROOM HOUSE
NO GARBAGE DISPOSAL

FAILED SYSTEM

TP 2

10/15

75'

RR TIE WALL

EXISTING 1500 GAL S.T

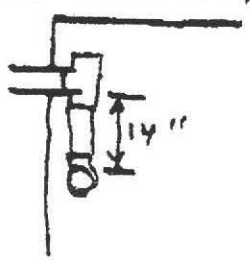
62'

1000 GAL PUMP CHAMBER

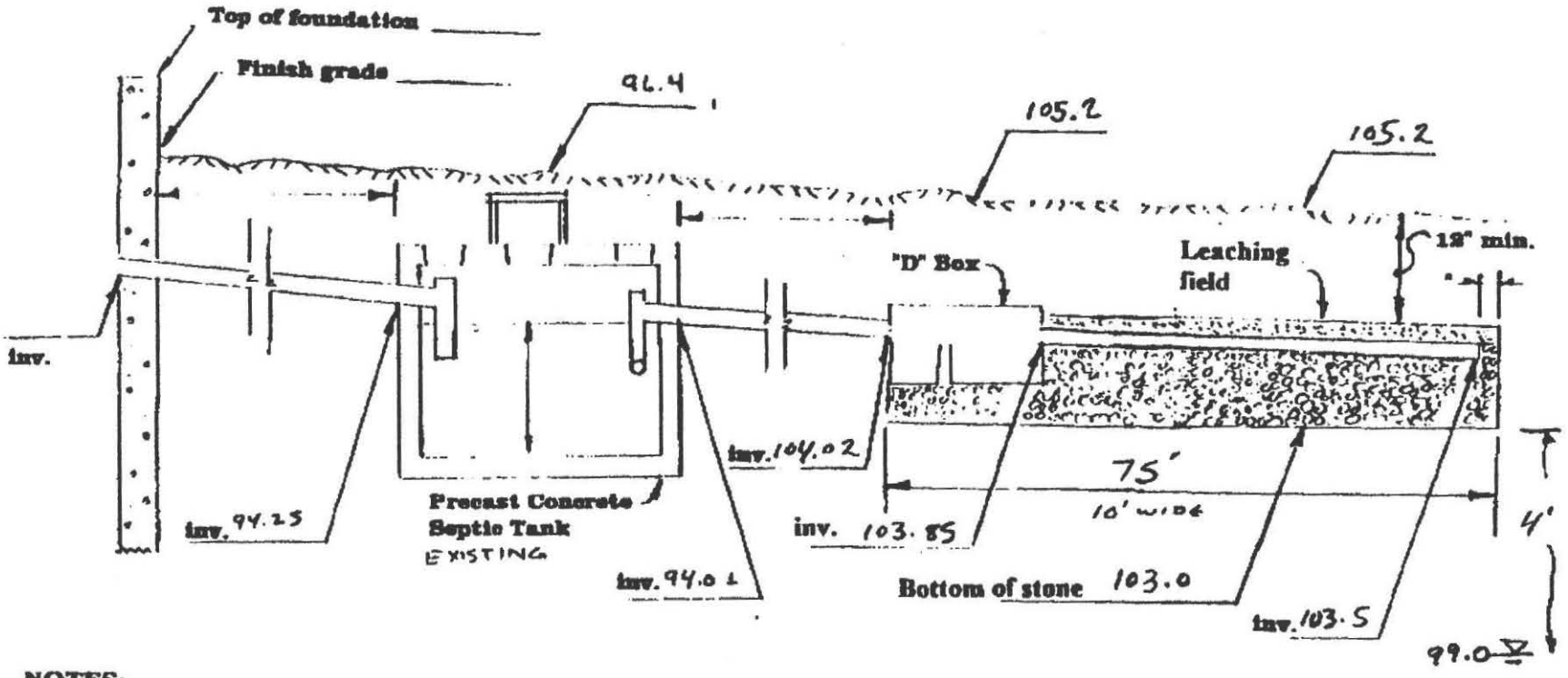
2" FORCEMAIN

96 Revised below.

3/4 PVC outlet baffle
4" tee as gas deflection
file in existing septic tank.



Septic System Profile



NOTES:

1. The grade above and adjacent to the leach field shall slope at least 2.0% to prevent accumulation of surface water.
2. Leach field distribution pipe shall have a minimum slope of 0.005 ft./ft.
3. The bottom of the leach field shall be level at the specified elevation.
4. Pipe from foundation wall to the septic tank shall be schedule 40 PVC or equivalent and have a minimum grade of 1/4" per foot.
5. Pipe from the septic tank to the "D" box shall be schedule 40 PVC or equivalent and have a minimum grade of 1/8"per foot.
6. All piping shall be 4" diameter.

REGISTERED ENGINEER — DAVID E. KEATES — No. 31984 — COMMONWEALTH OF MASSACHUSETTS

David E. Keates 10/9/96

PROJECT
RUSSELL KOTFILA
38 MIDDLE ST.
AMHERST, MA

Sheet 12 of 17

David E. Keates, P.E.
Consulting Civil Engineer
102 Russell Street
Sunderland, MA 01375
Tel: 413-665-7870