



APPLICATION FOR PERMIT
DEPARTMENT OF BUILDING INSPECTIONS SERVICES
ELECTRICAL INSTALLATIONS

Date 20 January 1994, 19__
 Receipt and Permit number 4706

To the CHIEF ELECTRICAL INSPECTOR, Portland, Maine.

The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the Portland Electrical Ordinance, the National Electrical Code and the following specifications:

LOCATION OF WORK: 38 Maple St Peaks Island 085-1-023

OWNER'S NAME: Meredith & Dick Springer ADDRESS: _____

	FEES
OUTLETS:	
Receptacles _____ Switches _____ Plugmold _____ ft. TOTAL _____	
FIXTURES: (number of)	
Incandescent _____ Fluorescent _____ (not strip) TOTAL _____	
Strip Fluorescent _____ ft. _____	
SERVICES:	
Overhead <input checked="" type="checkbox"/> Underground _____ Temporary <input checked="" type="checkbox"/> TOTAL amperes <u>60</u> .. <u>15.00</u>	
METERS: (number of) _____	
MOTORS: (number of)	
Fractional _____	
1 HP or over _____	
RESIDENTIAL HEATING:	
Oil or Gas (number of units) _____	
Electric (number of rooms) _____	
COMMERCIAL OR INDUSTRIAL HEATING:	
Oil or Gas (by a main boiler) _____	
Oil or Gas (by separate units) _____	
Electric Under 20 kws _____ Over 20 kws _____	
APPLIANCES: (number of)	
Ranges _____ Water Heaters _____	
Cook Tops _____ Disposals _____	
Wall Ovens _____ Dishwashers _____	
Dryers _____ Compactors _____	
Fans _____ Others (denote) _____	
TOTAL _____	
MISCELLANEOUS. (number of)	
Branch Panels _____	
Transformers _____	
Air Conditioners Central Unit _____	
Separate Units (windows) _____	
Signs 20 sq. ft. and under _____	
Over 20 sq. ft _____	
Swimming Pools Above Ground _____	
In Ground _____	
Fire/Burglar Alarms Residential _____	
Commercial _____	
Heavy Duty Outlets, 220 Volt (such as welders) 30 amps and under _____	
over 30 amps _____	
Circuits, Fairs, etc. _____	
Alterations to wires _____	
Repairs after fire _____	
Emergency Lights, battery _____	
Emergency Generators _____	
INSTALLATION FEE DUE: _____	
FOR ADDITIONAL WORK NOT ON ORIGINAL PERMIT DOUBLE FEE DUE: _____	
FOR REMOVAL OF A "STOP ORDER" (304-16.b) TOTAL AMOUNT DUE: <u>15.00</u>	

INSPECTION:

Will be ready on 1-25, 19__; or Will Call _____
 CONTRACTOR'S NAME: Steve's Electric Steve Houle
 ADDRESS: 373A South St Biddeford
 TEL.: 282-6525
 MASTER LICENSE NO.: 4706 SIGNATURE OF CONTRACTOR: _____
 LIMITED LICENSE NO.: _____

INSPECTOR'S COPY — WHITE
 OFFICE COPY — CANARY
 CONTRACTOR'S COPY — GREEN

931114

Permit # _____ City of Portland BUILDING PERMIT APPLICATION Fee \$35. Zone _____ Map # _____ Lot# _____
 Please fill out any part which applies to job. Proper plans must accompany form.

Owner: Meredith Springer Phone # _____
 Address: 38 Maple St- Peaks Island, ME 04108
 LOCATION OF CONSTRUCTION 38 Maple St- Peaks *del*
 Contractor: Island Bay Services, Inc 766-3375
 Address: Box 4d - Peaks Island, ME Phone # 04108
 Est. Construction Cost: 2800 Proposed Use: rebt dwlg
 Past Use: 1-fam,
 # of Existing Res. Units _____ # of New Res. Units _____
 Building Dimensions L _____ W _____ Total Sq. Ft. _____
 # Stories: _____ # Bedrooms _____ Lot Size: _____
 Is Proposed Use: Seasonal _____ Condominium _____ Conversion _____
 Explain Conversion: demolish 1-fam dwlg - reb uild

11-29-93 For Official Use Only
 Date: 11-19-93 Subdivision: _____
 Inside Fire Limits _____
 Bldg Code _____
 True Limit _____
 Estimated Cost: 2800
 NOV 30 1993
 LAND

85 J 23
 Foundation:
 1. Type of Soil: _____
 2. Set Backs - Front _____ Rear _____ Side(s) _____
 3. Footings Size: _____
 4. Foundation Size: _____
 5. Other _____
 Floors:
 1. Sills Size: _____ Sills must be anchored.
 2. Girder Size: _____
 3. Lally Column Spacing: _____ Size: _____
 4. Joists Size: _____ Spacing 16" O C.
 5. Bridging Type: _____ Size: _____
 6. Floor Sheathing Type: _____ Size: _____
 7. Other Material: _____
 Exterior Walls:
 1. Studding Size _____ Spacing _____
 2. No. windows _____
 3. No. Doors _____
 4. Header Sizes _____ Span(s) _____
 5. Bracing: Yes _____ No _____
 6. Corner Posts Size _____
 7. Insulation Type _____ Size: _____
 8. Sheathing Type _____ Size: _____
 9. Siding Type _____ Weather Exposure _____
 10. Masonry Materials _____
 11. Metal Materials _____
 Interior Walls:
 1. Studding Size _____ Spacing _____
 2. Header Sizes _____ Span(s) _____
 3. Wall Covering Type _____
 4. Fire Wall if required _____
 5. Other Materials _____

Zoning: Street Frontage Provided _____
 Provided Setbacks: Front _____ Back _____ Side _____ Side _____
 Review Required:
 Zoning Board Approval: Yes _____ No _____ Date: _____
 Planning Board Approval: Yes _____ No _____ Date: _____
 Conditional Use: _____ Variance _____ Site Plan _____ Subdivision _____
 Shoreland Zoning Yes _____ No _____ Floodplain Yes _____ No _____
 Special Exception _____
 Other (Explain) _____

Ceiling:
 1. Ceiling Joists Size: _____
 2. Ceiling Strapping Size _____ Spacing _____
 3. Type Ceiling: _____
 4. Insulation Type _____ Size _____
 5. Ceiling Height: _____
 Roof:
 1. Truss or Rafter Size _____ Span _____
 2. Sheathing Type _____ Size _____
 3. Roof Covering Type _____
 Action: _____ Approved _____
 Approved with Conditions _____
 Date: 11-19-93
 Signature: _____

Chimneys:
 Type: _____ Number of Fire Places _____
 Heating:
 Type of Heat: _____
 Electrical:
 Service Entrance Size: _____ Smoke Detector Required Yes _____ No _____
 Plumbing:
 1. Approval of soil test if required Yes _____ No _____
 2. No. of Tubs or Showers _____
 3. No. of Flushes _____
 4. No. of Lavatories _____
 5. No. of Other Fixtures _____
 Swimming Pools:
 1. Type: _____
 2. Pool Size: _____ x _____ Square Footage _____
 3. Must conform to National Electrical Code and State Law.

Permit Received By: Louisa E. Chase
 Signature of Applicant: Terry Clive Date: 11-19-93
 Signature of CEO: _____ Date: _____
 Inspection Dates: [6]
 Copyright GPCOG 1988

081059

Call Ben Weigel when her 781-5069 for p/w

Permit # 081059 City of Portland BUILDING PERMIT APPLICATION Fee \$1020.00 Zone _____ Map # _____ Lot # _____

Owner: Meredith N. Springer Phone # 766-5018
Address: 607 Old Country Rd. Elmsford, NY 10523
LOCATION OF CONSTRUCTION 38 Maple St/ Peaks Island
Contractor: Weigel Construction s.t.
Address: 2 Glen Rd. Falmouth, ME 04105 Phone # 791-5569
Est. Construction Cost: _____ Proposed Use: single family
Past Use: single family-recycled
of Existing Res. Units _____ # of New Res. Units _____
Building Dimensions L _____ W _____ Total Sq Ft. _____
Storied: _____ # Bedrooms _____ Lot Size: _____
Is Proposed Use: Seasonal _____ Condominium _____ Conversion _____
Explain Conversion: to construct single family dwelling as per plans
Minor Minor site plan not necessary per Bill Giroux

For Official Use Only
Date Nov. 1993 Subdivision: NOV 15 1993
Int. Fire Limits _____
Bldg Code _____
Time Limit _____
Estimated Cost: 200,000
CITY OF PORTLAND

Zoning: _____
Street Frontage Provided: _____
Provided Setbacks: Front _____ Back _____ Side _____ Side _____
Review Required:
Zoning Board Approval: Yes _____ No _____ Date: _____
Planning Board Approval: Yes _____ No _____ Date: _____
Conditional Use, Variance, Site Plan, Subdivision _____
Shoreland Zoning Yes _____ No _____ Floodplain Yes _____ No _____
Special Exception _____
Other (Explain) _____

Foundation: 85 ft - 23 24 & 26
1. Type of Soil: _____
2. Set Backs - Front _____ Rear _____ Side(s) _____
3. Footings Size: _____
4. Foundation Size: _____
5. Other _____

PERMIT ISSUED WITH LETTER
SHS must be attached

Floors:
1. Sills Size: _____
2. Girder Size: _____
3. Lally Column Spacing: _____ Size: _____
4. Joists Size: _____ Spacing 16" O.C.
5. Bridging Type: _____ Size: _____
6. Floor Sheathing Type: _____ Size: _____
7. Other Material: _____

Ceiling:
1. Ceiling Joists Size: _____ Spacing _____
2. Ceiling Strapping Size: _____ Spacing _____
3. Type Ceilings: _____
4. Insulation Type: _____ Size _____
5. Ceiling Height: _____

Roof:
1. Truss or Rafters Size _____ Span Action: Approved
2. Sheathing Type _____ Size _____
3. Roof Covering Type _____
Date: 11-10-93

Chimneys:
Type: _____ Number of Fire Places _____
Heating:
Type of Heat: _____

Electrical:
Service Entrances Size: _____ Smoke Detector Required Yes _____ No _____
Plumbing:
1. Approval of soil test if required Yes _____ No _____
2. No. of Tubs or Showers _____
3. No. of Flushes _____
4. No. of Lavatories _____
5. No. of Other Fixtures _____

Swimming Pools:
1. Type: _____
2. Pool Size: _____ x _____ Square Footage _____
3. Must conform to National Electrical Code and State Law.

Exterior Walls:
1. Studding Size _____ Spacing _____
2. No. windows _____
3. No. Doors _____
4. Header Sizes _____ Span(s) _____
5. Bracing: Yes _____ No _____
6. Corner Posts Size _____
7. Insulation Type _____ Size _____
8. Sheathing Type _____ Size _____
9. Siding Type _____ Weather Exposure _____
10. Masonry Materials _____
11. Metal Materials _____

Permit Received By Latip
Signature of Appl. Terry Cline Date 11/9/93
Signature of CEO _____ Date _____

Interior Walls:
1. Studding Size _____ Spacing _____
2. Header Sizes _____ Spacing _____
3. Wall Covering Type _____
4. Fire Wall if required _____
5. Other Materials _____

Inspection Dates _____
White-Tax Assessor _____ Yellow-GPCOG _____ White Tag -CEO _____

Arthur Rowe

031114

Permit # _____ City of Portland BUILDING PERMIT APPLICATION Fee \$35. Zone _____ Map # _____ Lot # _____

Please fill out any part which applies to job. Proper plans must accompany form.

Owner: Meredith Springer Phone # _____

Address: 38 Maple St- Peaks Island, ME 04108

LOCATION OF CONSTRUCTION: 38 Maple St- Peaks Island

Contractor: Island Bay Services, Inc 766-3375

Address: 36x 48 - Peaks Island, ME Phone # 04108

Est. Construction Cost: 2800 Proposed Use: rebit dwlg

Part Use: 1-fam.

of Existing Res. Units _____ # of New Res. Units _____

Building Dimensions L _____ W _____ Total Sq. Ft. _____

Stories: _____ Bedrooms _____

Is Proposed Use: Seasonal _____ Condominium _____ Conversion _____

Explain Conversion: demolish 1-fam dwlg - rebuild

For Official Use Only

Date: 11/19/93 Subdivision: 46

Inside Fire Limit: _____ Name: _____

Time Limit: _____ Estimated Cost: 2800 City of Portland

Zoning: Street Frontage Provided: _____ Side _____

Provided Setbacks: Front _____ Back _____

Review Required: Zoning Board Approval: Yes _____ No _____ Date: _____

Planning Board Approval: Yes _____ No _____ Site Plan _____ Subdivision _____

Conditional Use: _____ Variance _____ Floodplain: Yes _____ No _____

Shoreland Zoning: Yes _____ No _____

Special Exception _____

Other (Explain): W01-11-11-93 HISTORIC PRESERVATION

85-J-23

Foundations

1. Type of Soil: _____ Rear _____ Side(s) _____

2. Set Backs - Front _____

3. Footing Size: _____

4. Foundation Size: _____

5. Other: _____

Floors

1. Sills Size: _____ Sills must be anchored.

2. Girder Size: _____ Size: _____

3. Lally Column Spacing: _____ Spacing 16" O.C.

4. Joists Size: _____ Size: _____

5. Bridging Type: _____ Size: _____

6. Floor Sheathing Type: _____

7. Other Material: _____

Exterior Walls

1. Studding Size _____ Spacing _____

2. No. windows _____

3. No. Doors _____ Span(s) _____

4. Header Sizes _____ No. _____

5. Bracing: Yes _____ No _____

6. Corner Posts Size _____ Size _____

7. Insulation Type _____ Size _____

8. Sheathing Type _____ Weather Exposure _____

9. Siding Type _____

10. Masonry Materials _____

11. Metal Materials _____

Interior Walls

1. Studding Size _____ Spacing _____

2. Header Sizes _____ Span(s) _____

3. Wall Covering Type _____

4. Fire Wall if required _____

5. Other Materials _____

Ceiling:

1. Ceiling Joists Size: _____ Spacing _____ Does not require review.

2. Ceiling Strapping Size _____ Requires Review.

3. Type Ceilings: _____

4. Insulation Type _____

5. Ceiling Height: _____

Roof:

1. Truss or Rafter Size _____ Span _____

2. Sheathing Type _____ Size _____

3. Roof Covering Type _____

Chimneys:

Type: _____ Number of Fire Places _____

Heating:

Type of Heat: _____

Electrical:

Service Entrance Size: _____ Smoke Detector Required: Yes _____ No _____

Plumbing:

1. Approval of soil test if required _____ Yes _____ No _____

2. No. of Tubs or Showers _____

3. No. of Flushes _____

4. No. of Lavatories _____

5. No. of Other Fixtures _____

Swimming Pools:

1. Type: _____ Square Footage _____

2. Pool Size: _____

3. Must conform to National Electrical Code and State Law.

Permit Received By: Louise E. Chase

Signature of Applicant: Terry Pine Date: 11/19/93

Signature of CEO: Terry Pine Date: _____

Inspection Date: 11/19/93

White Tag - CEO _____

Copyright GPCOG 1988

White-Tax Assessor Yellow-GPCOG

PLOT PLAN



FEES (Breakdown From Front)
Base Fee \$ 55
Subdivision Fee \$ _____
Site Plan Review Fee \$ _____
Other Fees \$ _____
(Explain) _____
Late Fee \$ _____

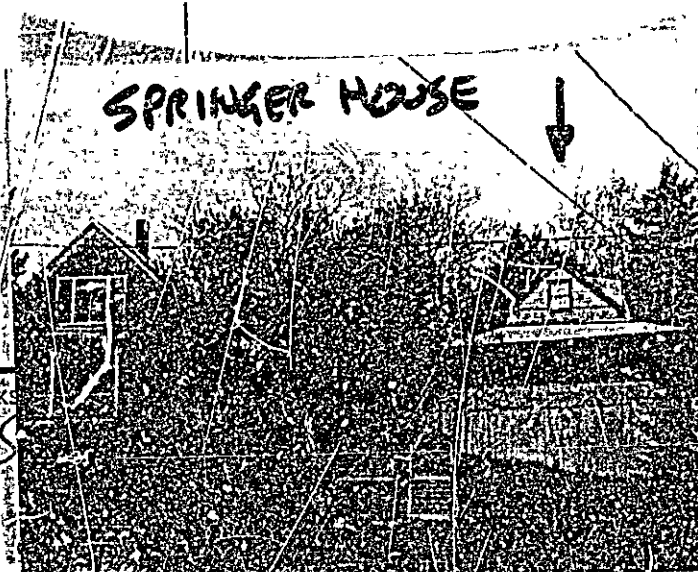
Type	Inspection Record	Date
<i>Done</i>		6/16/94
<i>Done</i>		

COMMENTS

Signature of Applicant

Terry Gray

Date

TRANSMITTAL NOTICE		DATE 11-23-93
TO: SAM HOFFSES	PROJECT SPRINKER	<input type="checkbox"/> FOR CHECKING <input type="checkbox"/> FOR YOUR APPROVAL <input type="checkbox"/> FOR YOUR COMMENTS <input type="checkbox"/> FOR YOUR USE <input type="checkbox"/> APPROVED AS NOTED
	JOB NUMBER	
NO. OF COPIES 1	DRAWING NUMBERS	DESCRIPTION PHOTO OF SPRINKER HOUSE 38 MAPLE ST. PEAKS ISLAND, ME.
REMARKS		
TO: ON 11-15-93 BY ME FOR ISLAND ISLAND SERVICES, INC. REQUESTED FOR HOPEFULLY THIS WILL SATISFY THE NEED AND ALLOW FOR ISSUE OF DEMO PERMIT BY THE END OF THIS WEEK OR EARLY NEXT WEEK.		
Sincerely		DEPT. OF BUILDING INSPECTION CITY OF PORTLAND, ME

Terry Cline

Terry Cline, Architect

Sustainable Environments

44 Maple St. Peaks Island, ME 04108



NOV 25 1993
RECEIVED

Office (207) 766-5168 Home (207) 766-2372

DEMOLITION CALL LIST
CITY OF PORTLAND
DIVISION OF INSPECTION SERVICES

MARGARETH SPRINGER hereby requests permission to demolish
(Name of Owner)

EXISTING HOUSE beginning Nov. 29th for the following work
(structure) (Date)
as described: DEMOLISH HOUSE (RECYCLING 65%) AND HAULING
REMAINDER TO MAINLAND DUMP.

UTILITY APPROVALS	NUMBERS	CONTACT NAME AND DATE
Central Maine Power	828-1411 x5000	N.A.
New England Telephone	1-800-225-4977	N.A.
Northern Utilities	797-8002 x6243	N.A.
Portland Water District	774-5961	N.A.
Public Cable Co.	775-2381 x257	N.A.

CITY APPROVALS	NUMBERS	CONTACT NAME AND DATE
DPW/Sewer Division	874-8300 x8871	N.A.
DPW/Traffic Division	874-8033 x8891	NA
DPW/Forestry Division	874-8300 x8820	N.A.
DPW/Sealed Drain Permit	874-8300 x8822	NA
Building Inspector	874-8300 x8703	NA
Historic Preservation	874-8300 x8699	N.A.
Fire Dispatcher	874-8300 x8576	N.A.

ASBESTOS	NUMBERS	CONTACT NAME AND DATE
U.S. EPA Region 1	617-567-3219	N.A.
DEP - Environmental	879-6300	N.A.

I have contacted all of the necessary utility companies and City departments.

Date: 11-19-97 Signed: Teresa Ching

As Agent for Owner of
Island Bay Services Inc.



CITY OF PORTLAND, MAINE
Department of Building Inspection

Certificate of Occupancy

LOCATION 38 Maple St., Peaks Island 685-J-027

Date of Issue 19 Oct 94

Issued to Meredith Springer

This is to certify that the building, premises, or part thereof at the above location, built -- altered -- changed as to use under Building Permit No. 93/1059, has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES

APPROVED OCCUPANCY

Entire

Single Family Dwelling

Limiting Conditions:

This certificate supersedes certificate issued:

Approved:

10/5/94

(Date)

Inspector

Notice: This certificate is subject to the laws of the City of Portland, Maine, and shall be returned to the Department of Building Inspection upon the expiration of the term of the certificate. Copy will be furnished to the owner of the premises for one dollar.

310592 *Don W. White* *781-5562 for Mr*
 Permit # _____ City of Portland BUILDING PERMIT APPLICATION Fee \$420.00 Zone _____ Map # _____ Lots _____
 Please fill out any part which applies to job. Proper plans must accompany form.

Owner: Meredith N. Springer Phone # 760-3018
 Address: 607 Old Country Rd. Falmouth, ME 04523
 Location of Construction: 38 Maple St/ Peaks Island
 Contractor: Weigand Construction Sub: _____
 Address: 2 Glen Rd. Falmouth, ME 04515 Phone # 781-5549
 Est. Construction Cost: _____ Proposed Use: single family
 _____ Post Use: single family-reycled
 # of Existing Res. Units: _____ (New Res. Unit: _____)
 Building Dimensions L _____ W _____ Total Sq. Ft. _____
 # Stories: _____ # Bedrooms _____ Lot Size: _____

For Official Use Only
 Date: NOV 15 1993 Subdivision: _____
 Name: NOV 15 1993
 Estimated Cost: 200,000
 Zoning: _____
 Street Frontage Provided: _____
 Review Required: _____
 Zoning Board Approval: Yes _____ No _____ Date: _____
 Planning Board Approval: Yes _____ No _____ Date: _____
 Conditional Use: _____ Variance _____ Site Plan _____ Subdivision _____
 Shoreland Zoning: Yes _____ No _____ Floodplain: Yes _____ No _____
 Special Easements: _____
 Other (Explain): _____

Proposed Use: Seasonal _____ Condominium _____ Conversion _____
 To construct single family dwelling as per plans
 Higher minor site plan necessary per Bill Giroux
 5-23-24-25-26
 There will be some demo, and demo contractor to pick up.
 Ceiling _____
 Deck - Front _____ Rear _____ Side(s) _____
 Stairs Size: _____
 Foundation Size: _____
 Other _____

PERMIT ISSUED
WATCH LETTER
 See back of permit for conditions

1. Sills Size: _____
 2. Gorder Size: _____
 3. Lath Cob _____ Spacing: _____ Size: _____
 4. Joists Size: _____ Spacing: Spring 16" O.C.
 5. Bridging Type: _____ Size: _____
 6. Floor Sheathing Type: _____ Size: _____
 7. Other Material: _____

Exterior Walls:
 1. Studding Size _____ Spacing _____
 2. No. windows _____
 3. No. Doors _____
 4. Door _____ Span(s) _____
 5. Bracing: Yes _____ No _____
 6. Corner _____
 7. Insulation _____ Size _____
 8. Sheathing Type _____ Size _____
 9. Siding Type _____ Weather Exposure _____
 10. Masonry Materials _____
 11. Metal Materials _____

Interior Walls:
 1. Studding Size _____ Spacing _____
 2. Header Size _____
 3. Wall (Lathing Type) _____
 4. Fire _____
 5. Other Materials _____

HISTORIC PRESERVATION
 1. Ceiling Joists Size: _____
 2. Ceiling Strapping Size _____ Spacing _____
 3. Type Ceilings: _____
 4. Insulation Type _____ Size _____
 5. Ceiling Height _____
 Roof:
 1. Truss or Rafter Size _____ Span _____
 2. Sheathing Type _____ Size _____
 3. Roof Covering Type _____
 Chimneys:
 Type _____ Number of Fire Places _____
 Heating:
 Type of Heat: _____
 Electrical:
 Service Entrance Size: _____ Smoke Detector Required: Yes _____ No _____
 Plumbing:
 1. Approval of _____
 2. No. of Tubs or Showers _____
 3. No. of Flushes _____
 4. No. of Lavatories _____
 5. No. of Other Fixtures _____
 Swimming Pools:
 1. Type _____
 2. Pool Size _____ Square Footage _____
 3. Must conform to National Electrical Code and State Law _____
 Permit Received By: L.A.C.
 Signature of Applicant: _____ Date: 11/93
 Signature of GEO: _____
 Inspection Dates: _____

Te. 1-800-235-2359 White Tax Assessor Yellow GPCOG White Tax GEO

PLOT PLAN

Terr Caerigan 74

766-2191

1-555-1611

N
↑

Terry Clive
766-5106

781-5569 -

FEES (Breakdown From Front)

Base Fee \$ 1020.00

Subdivision Fee \$ _____

Site Plan Review Fee \$ _____

Other Fees \$ _____

(Explain) _____

Late Fee \$ _____

Inspection Record			Date
Type	OK	GR	
redistrict	OK	GR	5/11/94
res zoning	OK	GR	5/12/94

COMMENTS submitted all necessary plans HHE 200 form

10/10/74 C of O for single family home P. Clive

Signature of Applicant

Date

PLUMBING APPLICATION

085-J-023 (3)

Department of Human Services
Division of Health Engineering
(207) 289-3826

PROPERTY ADDRESS

Town or Plantation: Peaks Island

Street: 38 Maple St

PROPERTY OWNERS NAME

Last: Springer First: MERLEITH

Applicant Name: Carlo Doran Patti

Mailing Address of Owner/Applicant (if different): 10 Stonecrest Dr. Portland ME

PORTLAND 5110 TOWN COPY

Date Permit Issued: 10.17.94 \$ 445 FEE Double Fee Charged

L.P.I. # 0129

Local Plumbing Inspector Signature: _____

Owner/Applicant Statement

I certify that the information submitted is correct to the best of my knowledge and understanding and that any falsification is reason for the Local Plumbing Inspector to deny a Permit.

Signature of Owner/Applicant: Carlo Doran Patti Date: 11-28-94

Caution: Inspection Required

I have inspected the installation authorized above and found it to be in compliance with the Maine Plumbing Rules.

Local Plumbing Inspector Signature: Arthur Rowe Date Approved: 11-28-94

PERMIT INFORMATION

This Application is for:

1. NEW PLUMBING

2. RELOCATED PLUMBING

Type Of Structure To Be Served:

1. SINGLE FAMILY DWELLING

2. MODULAR OR MOBILE HOME

3. MULTIPLE FAMILY DWELLING

4. OTHER — SPECIFY _____

Plumbing To Be Installed By:

1. MASTER PLUMBER

2. OIL BURNERMAN

3. MFG'D. HOUSING DEALER / MECHANIC

4. PUBLIC UTILITY EMPLOYEE

5. PROPERTY OWNER

LICENSE # 107167

Hook-Up & Piping Relocation (Maximum of 1 Hook-Up)	Column 2 Number Type of Fixture	Column 1 Number Type of Fixture
HOOK-UP: to public sewer, in those cases where the connection is not regulated and inspected by the local Sanitary District.	2	1
		1
OR		1
		1
HOOK-UP: to an existing subsurface wastewater disposal system.		2
		2
PIPING RELOCATION: of sanitary lines, drains, and piping without new fixtures.		1
		1
Number of Hook-Ups & Relocations		1
		1
Hook-Up & Relocation Fee		1
		1
OR		1
		1
TRANSFER FEE (\$8.00)	2	2
		2
FIXTURES (Subtotal) Column 2		9
FIXTURES (Subtotal) Column 1		8
Total Fixtures		17
Fixture Fee		\$ 445
Transfer Fee		\$
Hook-Up & Relocation Fee		\$
Permit Fee (Total)		\$ 67

SEE PERMIT FEE SCHEDULE FOR CALCULATING FEE

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

PROPERTY ADDRESS		5111 TOWN COPY PORTLAND Date Permit Issued: 10/19/94 FEE: \$16.00 LPI: 01/24 Local Plumbing Inspector Signature: _____
Town Or Plantation	PORTLAND (PEAKS ISLAND)	
Street	38 MAPLE STREET	
PROPERTY OWNERS NAME		
MEREDITH (MM) Last: SPRINGER F.L. RICHARD		
Applicant Name:	TEF CLINE	
Mailing Address of Owner/Applicant (If Different)	2 TOM HOUSE WHARF RD. PORTLAND, ME 04101	

Owner/Applicant Statement
I certify that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Local Plumbing Inspector to deny a Permit.
Meredith Springer 6-19-94
Signature of Owner/Applicant Date

Caution: Inspection Required
I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules.
Arthur Rowe 11-28-94
Local Plumbing Inspector Signature Date Approved

PERMIT INFORMATION

THIS APPLICATION IS FOR: 1. <input type="checkbox"/> NEW SYSTEM 2. <input checked="" type="checkbox"/> REPLACEMENT SYSTEM 3. <input type="checkbox"/> EXPANDED SYSTEM 4. <input type="checkbox"/> EXPERIMENTAL SYSTEM	THIS APPLICATION REQUIRES: 1. <input type="checkbox"/> NO RULE VARIANCE 2. <input type="checkbox"/> NEW SYSTEM VARIANCE Attach New System Variance Form 3. <input checked="" type="checkbox"/> REPLACEMENT SYSTEM VARIANCE Attach Replacement System Variance Form a. <input checked="" type="checkbox"/> Requiring Local Plumbing Inspector Approval b. <input type="checkbox"/> Requires State and Local Plumbing Inspector Approval 4. <input type="checkbox"/> MINIMUM LOT SIZE VARIANCE	INSTALLATION IS: COMPLETE SYSTEM 1. <input checked="" type="checkbox"/> NON-ENGINEERED SYSTEM 2. <input type="checkbox"/> PRIMITIVE SYSTEM (Includes Alternative Toilet) 3. <input type="checkbox"/> ENGINEERED (+2000 gpd) INDIVIDUALLY INSTALLED COMPONENTS: 4. <input type="checkbox"/> TREATMENT TANK (ONLY) 5. <input type="checkbox"/> HOLDING TANK _____ GAL 6. <input type="checkbox"/> ALTERNATIVE TOILET (ONLY) 7. <input type="checkbox"/> NON-ENGINEERED DISPOSAL AREA (ONLY) 8. <input type="checkbox"/> ENGINEERED DISPOSAL AREA (ONLY) 9. <input type="checkbox"/> SEPARATED LAUNDRY SYSTEM
SEASONAL CONVERSION to be completed by the LPI 5. <input type="checkbox"/> SYSTEM COMPLIES WITH RULES 6. <input type="checkbox"/> CONNECTED TO SANITARY SEWER 7. <input type="checkbox"/> SYSTEM INSTALLED - P# _____ 8. <input type="checkbox"/> SYSTEM DESIGN RECORDED AND ATTACHED	IF REPLACEMENT SYSTEM: YEAR FAILING SYSTEM INSTALLED 1974 THE FAILING SYSTEM IS: 1. <input type="checkbox"/> BED 3. <input type="checkbox"/> TRENCH 2. <input type="checkbox"/> CHAMBER 4. <input checked="" type="checkbox"/> OTHER CESSPOOL	DISPOSAL SYSTEM TO SERVE: 1. <input checked="" type="checkbox"/> SINGLE FAMILY DWELLING 2. <input type="checkbox"/> MODULAR OR MOBILE HOME 3. <input type="checkbox"/> MULTIPLE FAMILY DWELLING 4. <input type="checkbox"/> OTHER _____ SPECIFY
SIZE OF PROPERTY: 7,000 S.F.± ZONING: _____	TYPE OF WATER SUPPLY PUBLIC WATER	

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK 1. <input checked="" type="checkbox"/> SEPTIC: <input type="checkbox"/> Regular <input checked="" type="checkbox"/> Low Profile 2. <input type="checkbox"/> AEROBIC (IF NECESSARY) SIZE: 1000 GALS.	WATER CONSERVATION 1. NONE 2. <input checked="" type="checkbox"/> LOW VOLUME TOILET 3. <input type="checkbox"/> SEPARATED LAUNDRY SYSTEM 4. <input type="checkbox"/> ALTERNATIVE TOILET SPECIFY: _____	PUMPING 1. <input checked="" type="checkbox"/> NOT REQUIRED 2. <input type="checkbox"/> MAY BE REQUIRED (DEPENDENT ON TREATMENT TANK LOCATION AND ELEVATION) 3. <input type="checkbox"/> REQUIRED DOSE: _____ GALS.	CRITERIA USED FOR DESIGN FLOW (BEDROOMS, SEATING, EMPLOYEES, WATER RECORDS, ETC) SINGLE FAMILY DWELLING (3 BEDROOM) DESIGN FLOW: 270 (GALLONS/DAY)
SOIL CONDITIONS USED FOR DESIGN PURPOSES PROFILE: 2 CONDITION: A DEPTH TO LIMITING FACTOR: 17-34	SIZE RATINGS USED FOR DESIGN PURPOSES 1. <input type="checkbox"/> SMALL 2. <input type="checkbox"/> MEDIUM 3. <input checked="" type="checkbox"/> MEDIUM-LARGE 4. <input type="checkbox"/> LARGE 5. <input type="checkbox"/> EXTRA LARGE	DISPOSAL AREA TYPE/F 1. <input type="checkbox"/> BED _____ Sq. Ft. 2. <input type="checkbox"/> CHAMBER _____ Sq. Ft. REGULAR <input type="checkbox"/> H-20 3. <input type="checkbox"/> TRENCH _____ Linear Ft. 4. <input checked="" type="checkbox"/> OTHER: 228 S.F. 19 TYPE 'S' ELTEN IN DRAIN UNITS	

SITE EVALUATOR STATEMENT

On SEPTEMBER 15, 1993 (date) I conducted a site evaluation for this project and I certify that the data reported is accurate. The system I propose is in accordance with the Subsurface Wastewater Disposal Rules.
Albert Feild 163 10/15/93
 Site Evaluator Signature Date
 SE# REVISED 4/23/94 Date
 (Local Plumbing Inspector's Signature if permit is for Seasonal Conversion.)
 Page 1 of 3
 HHE-200 Rev. 11/86

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

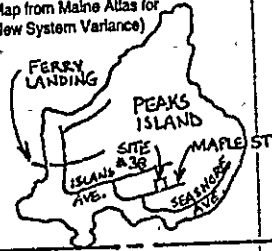
Department of Human Services
Division of Health Engineering

Town, City, Plantation: **PORTLAND (PEAKS ISLAND)**
Street, Road, Subdivision: **38 MAPLE STREET**

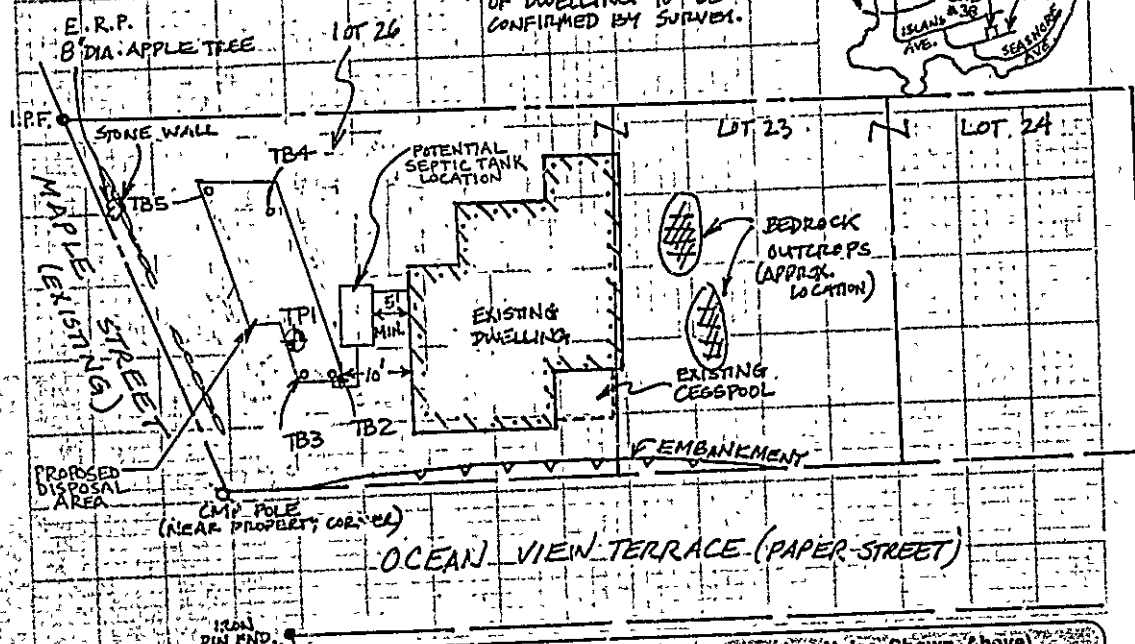
Owners Name: **M. BOOTH**
SPRINGER, RICHARD (Mrs)

SITE PLAN
Scale 1" = 20' Ft.

SITE LOCATION PLAN (Attach Map from Maine Atlas for New System Variance)



NOTE: PROPERTY LINES & LOCATION OF DWELLING TO BE CONFIRMED BY SURVEY.



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole: TPI Test Pit Boring

Depth of Organic Horizon Above Mineral Soil: _____

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0-6			DARK BROWN	
6-10	FINE	FRAGILE	DARK	NONE
10-15	SANDY		YELLOWISH	EVIDENT
15-20	LOAM		BROWN	
20-30				
30-40				
40-50				
50-60				
60-65				
65-70				
70-75				
75-80				
80-85				
85-90				
90-95				
95-100				

Soil Profile: 2 Classification: A Slope: _____ Limiting Factor: 34

Ground Water Rootzone Layer Bedrock

Observation Hole: TB2 Test Pit Boring

* Depth of Organic Horizon Above Mineral Soil: _____

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0-6				
6-10				
10-15				
15-20				
20-30				
30-40				
40-50				
50-60				
60-65				
65-70				
70-75				
75-80				
80-85				
85-90				
90-95				
95-100				

Soil Profile: _____ Classification: _____ Slope: _____ Limiting Factor: 25

Ground Water Rootzone Layer Bedrock

Albert Frick
Site Evaluator Signature

163
BE# REVISED 4/23/94
10/15/93
Date



Albert Frick Associates, Inc.
 Soil Scientists & Site Evaluators
 95A County Road Gorham, Maine 04038
 (207) 819-5561

Town, City, Plantation: **PORTLAND (PEAKS ISLAND)** Street, Road, Subdivision: **38 MAPLE STREET SPRINGER** Owners Name: **MEREDITH RICHARD (WJS)**

SOIL DESCRIPTION AND CLASSIFICATION

Observation Hole: **TB3** Test Pit Boring

Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0				
2				
4				
6				
8				
10				
12				
14				
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				
40				
42				
44				
46				
48				
50				

Soil Classification: **2B** Ground Water Rooting Layer Bedrock

Observation Hole: **TB4** Test Pit Boring

Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0				
2				
4				
6				
8				
10				
12				
14				
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				
40				
42				
44				
46				
48				
50				

Soil Classification: **1Z** Ground Water Rooting Layer Bedrock

SOIL DESCRIPTION AND CLASSIFICATION

Observation Hole: **TB5** Test Pit Boring

Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0				
2				
4				
6				
8				
10				
12				
14				
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				
40				
42				
44				
46				
48				
50				

Soil Classification: **23** Ground Water Rooting Layer Bedrock

Observation Hole: Test Pit Boring

Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0				
2				
4				
6				
8				
10				
12				
14				
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				
40				
42				
44				
46				
48				
50				

Soil Classification: Ground Water Rooting Layer Bedrock

Albert Frick

163

10/15/93

Chief Estimator

CF#

Date

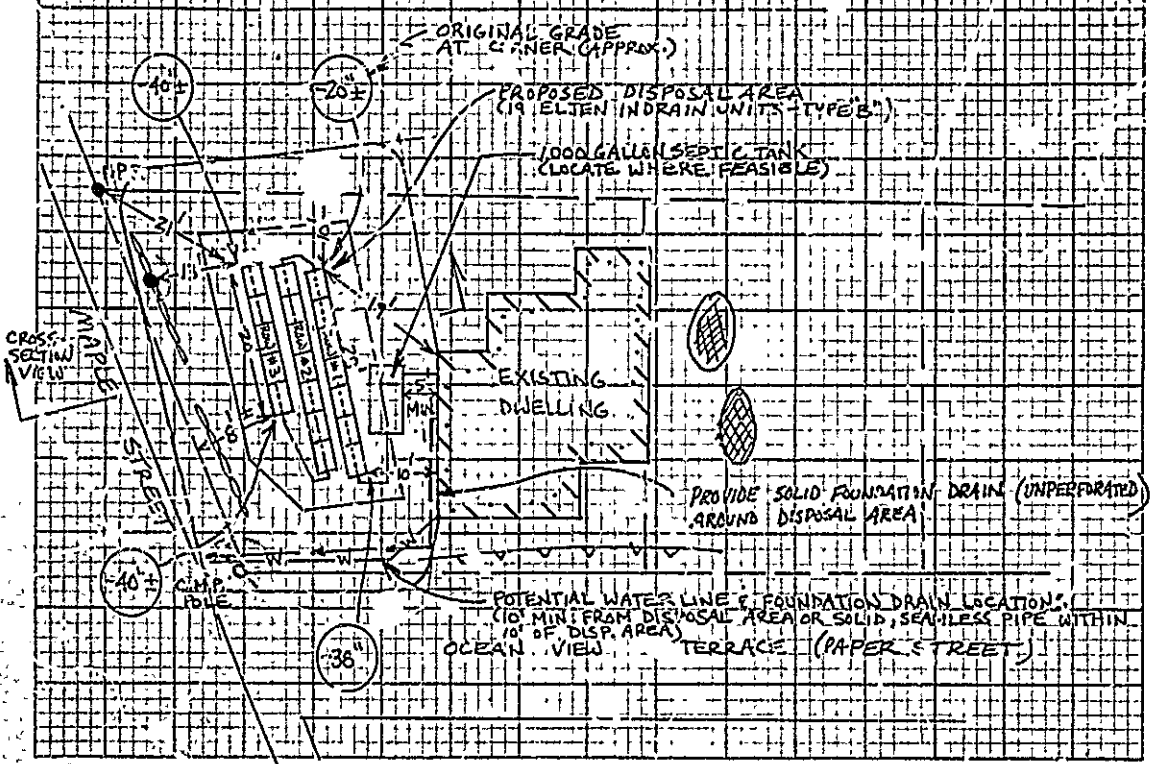
SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

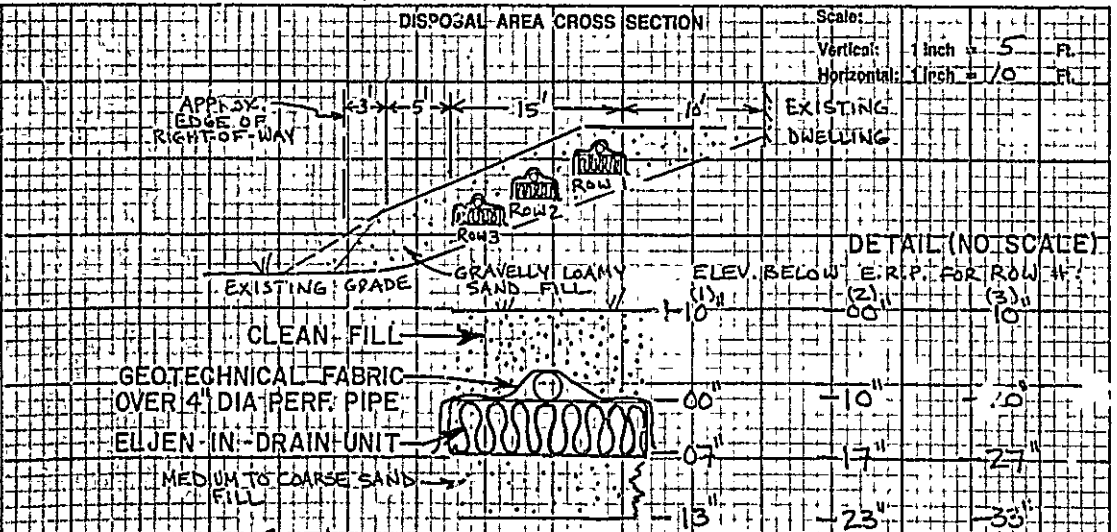
Town, City, Parish: PORTLAND (PEAKS ISLAND) Street, Road, Subdivision: 38 MAPLE STREET SPRINGER, RIVIERA Owners Name: M. J. ...

SUBSURFACE WASTEWATER DISPOSAL PLAN

Scale: 1" = 20' FT.



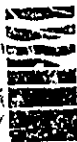
FILL REQUIREMENTS		CONSTRUCTION ELEVATIONS		ELEVATION REFERENCE POINT LOCATION & DESCRIPTION	
Depth of Fill (Upslope)	30" <u>48"</u>	Reference Elevation Is	<u>00</u>	SEE	NAIL IN 8" DIA. APPLE TREE,
Depth of Fill (Downslope)	36"	Bottom of Disposal Area	<u>DETAIL</u>	82"	ABOVE BASE OF TREE.
		Top of Distribution Lines or Chambers			



Albert Finch
Site Evaluator Signature

163
SE#

4/29/94
Date



Albert Frick Associates, Inc.

Scientists & Site Evaluators
95A County Road
(207) 839-5563
Cornam, Maine 04035
FAX (207) 839-5564

Albert Frick SS, SE
James Logan SS, SE
Matthew Logan SE

PORTLAND (PEAKS ISL.)
TOWN

38 MAPLE ST.
LOCATION

MERYETH (Mrs)
RICHARD SPRINGER
APPLICANT'S NAME

1) The Plumbing and Subsurface Wastewater Disposal Rules adopted by the State of Maine, Department of Human Services pursuant to 22 M.R.S.A. § 42 (the "Rules") are incorporated herein by reference and made a part of this application and shall be consulted by the owner/applicant, the system installer and/or building contractor for further construction detail and material specifications. The system installer should contact Albert Frick Associates, Inc. 839-5563, if there are any questions concerning materials, procedures, or designs. The system installer and/or building contractor installing the system shall be solely responsible for compliance with the Rules and with all state and municipal laws and ordinances pertaining to the permitting, inspection and construction of subsurface wastewater disposal systems.

2) This application is intended to represent facts pertinent to the Rules only. It shall be the responsibility of the owner/applicant, system installer and/or building contractor to determine compliance with and to obtain permits under all applicable local, state and/or federal laws and regulations (including, without limitation, Natural Resources Protection Act, wetland regulations, zoning ordinances, subdivision regulations, Site Location of Development Act and minimum lot size laws) before installing this system or considering the property on which the system is to be installed a "buildable" lot. It is recommended that a wetland scientist be consulted regarding wetland regulations.

Prior to the commencement of construction/installation, the local plumbing inspector shall inform the owner/applicant and Albert Frick Associates, Inc. of any local ordinances which are more restrictive than the Rules in order that the design may be amended. All designs are subject to review by local, state and/or federal authorities. Albert Frick Associates, Inc.'s liability shall be limited to revisions required by regulatory agencies pursuant to laws or regulations in effect at the time of preparation of this application.

3) All information shown on this application relating to property lines, well locations, subsurface structures and underground facilities (such as, utility lines, drains, septic systems, water lines, etc.) are based solely upon information provided by the owner/applicant and has been relied upon by Albert Frick Associates, Inc. in preparing this application. The owner/applicant shall review this application prior to the start of construction and confirm this information.

4) Installation of a garbage (grinder) disposal is not recommended. If one is installed, an additional 1000 gallon septic tank should be connected in series to the proposed septic tank.

5) The system user shall avoid introducing kitchen grease or fats into this system. Chemicals such as septic tank cleaners and/or chlorine (such as from water treatment) and controlled or hazardous substances shall not be disposed of in this system.

ATTACHMENT TO SUBSURFACE WASTEWATER DISPOSAL APPLICATION

PORTLAND (PEAKS ISL.) 38 MAPLE ST.
OWN LOCATION

MEREDITH
RICHARD SPRINGER
APPLICANT'S NAME

6) The septic tank should be pumped within two years of installation and subsequently as recommended by the pump service, but in no event should the septic tank be pumped less often than once every three years.

7) The actual water flow or number of bedrooms shall not exceed the design criteria indicated on this application without a re-evaluation of the system as proposed. If the system is supplied by public water or a private service with a water meter, the water consumption per period should be divided by the number of days to calculate the average daily water consumption (water usage (cu.ft.) \times 7.48 cu.ft. (gallons per cu.ft.) \div # of days in period).

8) The general minimum setbacks between a well and septic system serving a single family residence is 100-300 feet, unless the local municipality has a more stringent requirement. A well installed by an abutter within the minimum setback distances prior to the issuance of a permit for the proposed disposal system may void this design.

9) When a gravity system is proposed, BEFORE CONSTRUCTION/INSTALLATION BEGINS, the system installer or building contractor shall review the elevations of all points given in this application and the elevation of the existing and/or proposed building drain and septic tank inverts for compatibility to minimum slope requirements. In gravity systems, the invert of the septic tank(s) outlet(s) shall be at least 4 inches above the invert of the distribution box outlet at the disposal area. When an effluent pump is required, provisions shall be made to make certain that surface ground water does not enter the septic tank or pump station. An alarm device warning of a pump failure shall be installed. Also, when pumping is required to a chamber system, install a "T" connection in the distribution box and place 3 inches of stone or a splash plate in the first chamber. Insulate gravity pipes, pump lines and the distribution box as necessary to prevent freezing.

10) On all systems, remove the vegetation, organic duff and old fill material from under the disposal area and any fill extension. On sites where the proposed system is to be installed in natural soil, scarify the bottom and sides of the excavated disposal area with a rake. Do not use wheeled equipment on the scarified soil surface. For systems installed in fill, scarify the native soil by retro-tilling to a depth of at least 8 inches over the entire disposal and fill extension area to prevent glazing and to promote fill bonding. Place fill in loose layers no deeper than 8 inches and compact thoroughly before placing more fill (this ensures that voids and loose pockets are eliminated to minimize the chance of leakage). Do not use wheeled equipment on the scarified soil area until after 12 inches of fill is in place. Keep equipment off the chambers. Divert the surface water away from the disposal area by ditching or shallow swales.

11) Unless noted otherwise, fill shall be gravelly loamy sand which contains no more than 15% fines (silt and clay). Clay content shall be less than 5%.

12) Do not install systems on loamy, silty, or clayey soils during wet periods since soil smearing/glazing may seal off the soil interface.

13) Seed all filled and disturbed surfaces with perennial grass seed, then mulch with hay or equivalent material to prevent erosion.



ELJEN™

IN-DRAIN™ LEACHING SYSTEM



Trench and In-Ground Cluster Installation

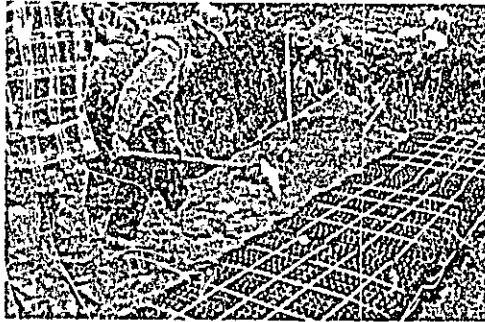
1. Prepare site according to local and state regulations. Do not install system on frozen or saturated ground.

2. Remove all organic soil and roots at disposal and fill extension areas.

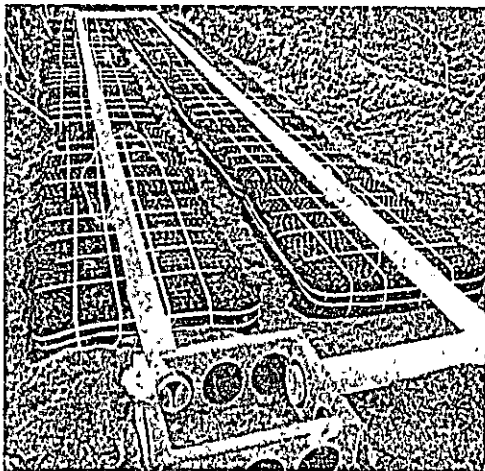
3. Scarify receiving layer to eliminate smearing.

4. Provide 6" level raked sand bed: Medium to coarse sand, with an effective size of .25 to 2.0 mm and no more than 5% passing a #200 sieve. Concrete sand is the most reliable choice for long system life.

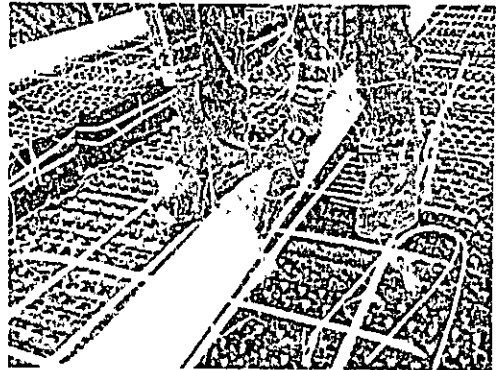
5. Avoiding footprints, place In-Drains stripe side up end to end on sand bed. Caution: Use gloves while handling In-Drains. Spacer cores can have sharp edges.



6. Place 4" perforated distribution pipe over stripe on In-Drains. Use solid pipe over compacted sand from D-Box to In-Drains and to connect distribution lines at far end. Connect mid-points on rows 40' or longer.

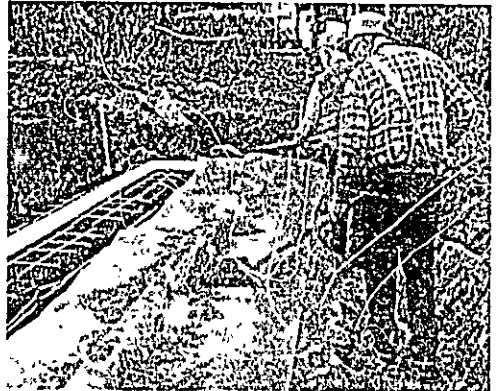


7. Install SSI Inc. or equal flow equalizers in D-Box in level gravity fed systems.



8. Secure pipe with one Eljen clamp per In-Drain. Force clamp through fabric into sand after sliding down core.

9. Install Eljen cover fabric over rows of In-Drains. Drape fabric straight down over pipe. Secure with hand shoveled sand. Do not block holes in perforated pipe.



10. Place medium to coarse sand (per step #4) between rows and 6" min. around the sides of the In-Drains.

11. Complete backfill and loam to 12" min. over In-Drains. Fill should be clean, porous and devoid of large rocks. Use well graded sandy fill with a maximum 10% passing #200 sieve. Do not use wheeled equipment over system. A light track machine may be used with caution, avoiding crushing or shifting of pipe assembly.

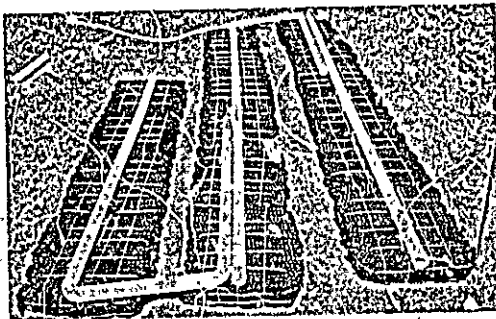
12. Divert surface runoff. Finish grade to prevent surface ponding. Seed loam and protect from erosion.

Raised or Fill Systems

- 1 Follow step 3 for trench installation.
- 2 Compact fill, in max. 6" lifts, with a light tracked machine. Use clean soil free of organic material, clay, construction debris, stones larger than 6" and no more than 10% passing a #200 sieve.
- 3 Provide 6" sand bed, per trench step #4, directly under the In-Drains.
- 4 Complete system per trench steps #5-12.
- 4 Install a line of 3" perforated pipe on first row of In-Drains. Cap pipe at far end.
- 5 Place at least 10' of capped perforated overflow pipe at the far end and downhill side of trench above pipe.
- 6 Connect overflow pipe to a line of perforated pipe on the next row of In-Drains with 2 elbows and a short length of solid pipe. Cap perforated pipe on opposite end.
- 7 Continue this procedure until the last row of In-Drains has an end capped line of perforated pipe.
- 8 Complete assembly by following steps #9-12 at trench installation.

Serial Distribution on Slopes

- 1 Site preparation is the same as for trench and fill systems. Groove receiving layer by raking or contour plowing at right angle to slope before placing fill or sand.
- 2 Install rows of In-Drains at design elevations.
- 3 Provide a well anchored D-Box with velocity reduction tee or baffle. D-Box serves as an inspection port.



Pumoad Systems

- 1 Prepare disposal site as described above.
- 2 Provide a well anchored D-Box with a velocity reduction tee or baffle to assure good flow distribution in the system. Flow equalizers are not required.
- 3 System assembly is the same as for gravity designs.
- 4 Pressure distribution does not result in reduced system size and is therefore not generally used for In-Drain disposal systems.

Design Manual Available

Effluent pretreatment offered by In-Drain technology generally allows substantial reductions in leach field size compared to conventional stone or chamber systems. Sizing formula varies from state to state. Consult your area distributor for a state specific Design and Installation Manual.

Eljen Corporation
 15 Westwood Rd., Storrs, CT, 06268
 203-420-9486 • 800-444-1359
 Fax 203-487-1124
 Patent nos. 4,485,594 and 4,880,333
 Additional Patents Pending

Distributed By:

HUBER DESIGN INC.
 P.O. BOX 401
 HANCOCK, NH 03449
 603-525-4320 • 800-266-4320
 FAX 603-525-3777

LIMITED WARRANTY

1. Each In-Drain™ unit is warranted to the original purchaser against defects in materials and workmanship for one year from the date of manufacture when installed in accordance with manufacturer's instructions. Eljen Corp. must be notified within fifteen (15) days of the appearance of any defect during this period. Eljen Corp. will supply a replacement unit. Eljen Corp.'s liability specifically excludes the cost of removal and/or installation of the units.
2. The warranty does not extend to incidental, consequential, special or indirect damage. Specifically excluded from warranty coverage are: damage due to ordinary wear and tear, alteration, abuse or misuse, objection to stresses, effluent loading greater than those prescribed in the design and installation instructions, the placement of improper materials by buyer into buyer's system, any event not caused by or under the control of Eljen Corp. In no event will Eljen Corp. be responsible for loss or damage to the buyer, the units, or any 3rd party resulting from its installation or shipment.
3. Buyer shall be solely responsible for insuring that installation of the system is completed in accordance with all applicable laws, codes, rules and regulations.
4. No warranties or representations at any time made by any representative of Eljen Corp. shall vary or expand the provisions hereof. No warranty applies to any party other than the original purchaser.

EXTENDED WARRANTY

Eljen offers a 15 year warranty for In-Drains. Conditions of system design, installation and maintenance apply. Please refer to detailed warranty available from Eljen or an authorized representative.

Eljen™ Products for a clean, healthy environment

Eljen™ and In-Drain™ are trademarks of Eljen Corporation

© 1993, Eljen Corp. #B94

Compare new Bio-Matt™ fabric vs. soil interface



Nonwoven fabric-50x magnification



Concrete sand-50x magnification

Recent studies have shown that the hydraulic conductivity ratio (HCR) of nonwoven fabric has a stable long term permeability in contact with sand.

Bio-Matt™ fabric in standard In-Drains offers a comparable environment to soil for biomat growth and presents no masking effect on infiltration

capacity. Many years of field experience confirm the long term acceptance rates (LTAR) used in sizing In-Drain leach field systems.

* 1989 study by Geoservices Inc., Norcross, GA.

Fabric photo courtesy Amco Fabrics & Fibers Co.

Concrete sand photo courtesy GRU/Drexel

Flexibility of Installation

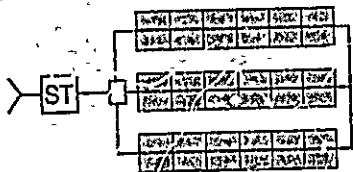
- Mound or in-ground installations
- Level or sloped sites
- Lightweight preassembled units
- Trench or cluster (bed) layouts
- D-Box or serial distribution
- No stone/gravel cleanup



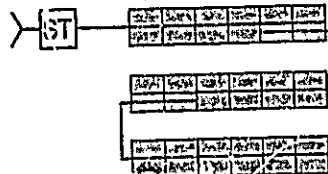
Trench system-straight line or curved to follow contours



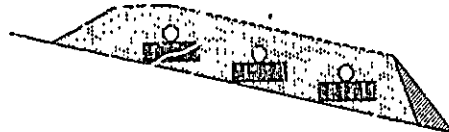
Section



Mound or in-ground cluster



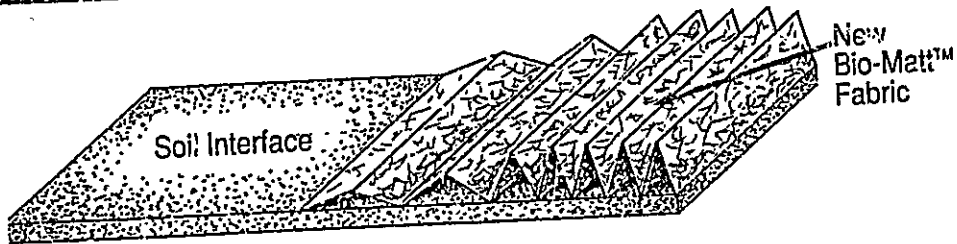
Serial distribution on slope



Detailed installation guidelines available for all types of systems

Only the Eljen In-Drain™ System "Pretreats" effluent with a two-stage biomat.

Here's how it works...



Conventional Systems have a single biomat forming at the soil interface.

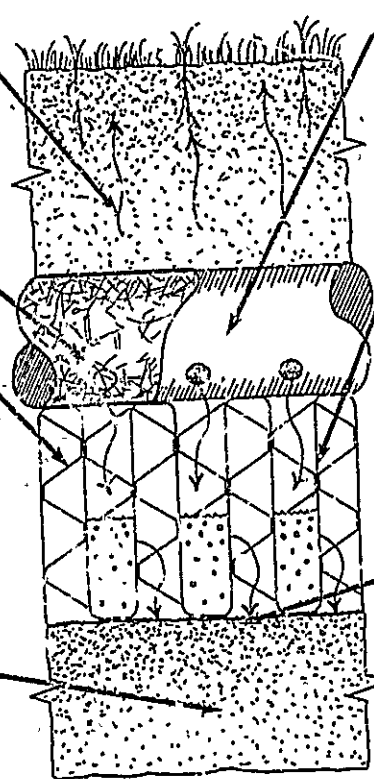
In-Drains™ offer 2 biomat layers...
1. Primary surface on fabric
2. Secondary at soil interface

Porous top of In-Drains allows evapotranspiration and oxygen exchange for better effluent treatment.

Antisiltation fabric keeps fines out of In-Drains.

Cusped plastic core provides separation between layers of Bio-Matt™ fabric. Maintains unit structural integrity and aids in oxygen transfer.

Pretreated effluent reduces potential for ground water pollution.



Perforated pipe distributes effluent to In-Drains™. Pipe is secured to In-Drains with preformed metal clamps.

Primary biomat layer forms on Bio-Matt™ fabric. Up to 10 ft² of fabric provided for every ft² of soil interface.

Secondary biomat layer forms at soil interface. Long term acceptance rate of this biomat layer is 3 to 10 times that of conventional systems.