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Maine Department of Human Services  
Division of Health Engineering, Station 10  
(207) 287-5672 FAX (207) 287-4172

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

## PROPERTY LOCATION

>> Caution: Permit Required -- Attach in Space Below <<

City, Town, or Plantation	Augusta
Street or Road	West River Road
Subdivision, Lot #	

AUGUSTA PERMIT # 6109 TOWN COPY

Date Permit Issued: 1/10/08 \$ 120.00 Double Fee Charged

L.P.I. # 8501

Local Plumbing Inspector Signature: [Signature]

## OWNER/APPLICANT INFORMATION

Name (last, first, MI)	Hastings	<input type="checkbox"/> Owner
	Quirion Construction	<input checked="" type="checkbox"/> Applicant
Mailing Address of Owner/Applicant	712 West River Road Augusta, ME 04330	
Daytime Tel. #	(207) 621-2785	

**Owner/Applicant Statement**

I state and acknowledge that the information submitted is correct to the best of my knowledge, that I have read and agree with the conditions on the back of this form, and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

Signature of Owner/Applicant: [Signature] Date: 1-10-08

**Caution: Inspections Required**

I have inspected the installation authorized above and on back of this form and found it to be in compliance with the Subsurface Wastewater Disposal Rules and local ordinances.

Local Plumbing Inspector Signature: [Signature]

(1<sup>st</sup>) Date Approved: 1-16-08

(2<sup>nd</sup>) Date Approved: 1-17-08

## PERMIT INFORMATION

**TYPE OF APPLICATION**

1.  First Time System

2.  Replacement System

Type Replaced: Cess pool

Year Installed: unknown

3.  Expanded System

a.  Minor Expansion

b.  Major Expansion

4.  Experimental System

5.  Seasonal Conversion

**SIZE OF PROPERTY**

62,000  sq. ft.  acres

**SHORELAND ZONING**

Yes  No

**THIS APPLICATION REQUIRES**

1.  No Rule Variance

2.  First Time System Variance

a.  Local Plumbing Inspector Approval

b.  State & Local Plumbing Inspector Approval

3. Replacement System Variance

a.  Local Plumbing Inspector approval

b.  State & Local Plumbing Inspector approval

5.  Minimum Lot Size Variance

6.  Seasonal Conversion Variance

**DISPOSAL SYSTEM TO SERVE:**

1.  Single Family Dwelling Unit, No. of Bedrooms: 3

2.  Multiple Family Dwelling, No. of Units: \_\_\_\_\_

3.  Other: \_\_\_\_\_

Specify Current Use  Seasonal  Year Round  Undeveloped

**DISPOSAL SYSTEM COMPONENT(S)**

1.  Complete non-Engineered System

2.  Primitive System (graywater & alt toilet)

3.  Alternative Toilet, specify: \_\_\_\_\_

4.  Non-Engineered Disposal Area

5.  Holding Tank, \_\_\_\_\_ gallons

6.  Non-Engineered Disposal Field (only)

7.  Separated Laundry System

8.  Complete Engineered System (+2000 gpd)

9.  Engineered Treatment Tank (only)

10.  Engineered Disposal Field (only)

11.  Pre-treatment, specify: outlet filter on tank

12.  Miscellaneous components

**TYPE OF WATER SUPPLY**

1.  Drilled Well 2.  Dug Well 3.  Private

4.  Public 5.  Other: \_\_\_\_\_

## DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

**TREATMENT TANK**

1.  Concrete

Regular

Low Profile

2.  Plastic

3.  Other: \_\_\_\_\_

CAPACITY: 1000 Gallons

**SOIL DATA & DESIGN CLASS**

PROFILE CONDITION DESIGN

3 / D / 3D

at Observation Hole # TP 1

Depth: 11"

OF MOST LIMITING SOIL FACTOR

**DISPOSAL AREA TYPE/SIZE**

1.  Stone Bed 2.  Stone Trench

3.  Proprietary Device

Cluster array  Linear

Regular load  H-20 load

4.  Other: \_\_\_\_\_

SIZE: 891  sq. ft.  lin. ft.

**DISPOSAL FIELD SIZING**

1.  Small 2.0 sq. ft./gpd.

2.  Medium 2.6 sq. ft./gpd.

3.  Medium Large 3.3 sq. ft./gpd

4.  Large 4.1 sq. ft./gpd.

5.  Extra-Large 5.0 sq. ft./gpd.

**GARBAGE DISPOSAL UNIT**

1.  No 2.  Yes 3.  Maybe

If Yes or Maybe, specify one below:

Multi-compartment tank

\_\_\_\_\_ Tanks in series

Increase in tank capacity

Filter on tank outlet

**EFFLUENT/EJECTOR PUMP**

1.  Not required

2.  May be required

3.  Required >> Specify only for engineered systems

Dose \_\_\_\_\_ Gallons

**DESIGN FLOW**

270 gallons per day BASED ON:

1.  Table 501.1 (dwelling unit(s))

2.  Table 501.2 (other facilities)

SHOW CALCULATIONS for other facilities

3.  Section 503.0 (meter read.)

**LATITUDE AND LONGITUDE**

at center of disposal area

Lat. \_\_\_\_\_ d \_\_\_\_\_ m \_\_\_\_\_ s

Lon. \_\_\_\_\_ d \_\_\_\_\_ m \_\_\_\_\_ s

If g.p.s., state margin of error: \_\_\_\_\_

## SITE EVALUATOR COMMENTS

System-20' by 45' stone bed replacement system for 3 bedroom dwelling

## SITE EVALUATOR STATEMENT

I Certify that on December 2, 2007 (date) I completed a site evaluation on this project and state that the data reported is accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241) as interpreted by me.

[Signature]

SE #331

December 18, 2007

E.S. Coffin, an agent of E.S. Coffin Engineering & Surveying, Inc.

Licensed Site Evaluator

Date

E.S. Coffin Engineering & Surveying, Inc.  
432 Cony Road P.O. Box 4687  
Augusta, Maine 04330-1687

(207) 623-9475 or 1-800-244-9475

Fax (207)623-0016

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator  
See back of this form for conditions of permit

## ATTACHMENT FOR HHE-200 FORM

1. The OWNER/APPLICANT, by signing the front of this form, agrees to provide payment for services rendered as quoted and billed by COFFIN ENGINEERING & SURVEYING (CE&S). Payment on all billings are due within 30 days of billing date, otherwise a late charge of 1.5% per month (18% per year), simple interest, will be added to the total amount. In the event that any portion, or all of the final billing, remains unpaid for a period of 60 days, the OWNER/APPLICANT shall pay all costs of collection, including attorney's fees, court costs, CE&S's cost to collect bill. PLEASE NOTE THAT THE PERSON SIGNING THIS FORM UNDER OWNER/APPLICANT IS RESPONSIBLE FOR PAYMENT OF SERVICES AND SHOULD CONTACT CE&S IF HE/SHE HAS NOT RECEIVED A BILL.
2. All construction shall conform with Title 22 MRSA, §42, 10-144A CMR 241 "Maine-Subsurface Waste Water Disposal Rules," and all other pertinent sections. The OWNER/APPLICANT is responsible for the contractor installing the proposed septic system correctly and for obtaining all necessary permits. The OWNER/APPLICANT shall carefully examine all documents submitted by CE&S and promptly notify CE&S upon becoming aware of any defects. The OWNER/APPLICANT agrees to limit the liability of the site evaluator and/or CE&S to the amount of the total fee paid to CE&S and to a limit of five years from the date of this form. Visits to the site will be for information purposes only. CE&S will not be responsible for any site inspection duties.
3. This disposal system form shall not be transferable and becomes invalid if the authorized work has not commenced within two years after the issue date of the disposal system.
4. The OWNER/APPLICANT shall accurately describe the intended uses (present and future) for the system to the site evaluator. By signing the front of this form, the OWNER/APPLICANT agrees that the uses shown on said form is what was described to the site evaluator. Any change from the intended use described on this form requires a new design. Applicability of design must be reevaluated when location of structures are substantially different from those shown on the site plan or when other structures, additions, or appurtenances (i.e. swimming pools, garbage disposals) are considered.
5. The LPI shall inform the owner and designer of any local ordinance exceeding the Rules (Chapter 241) prior to issuing a permit, so that the application may be properly amended to conform to such ordinances.
6. The most recent revision of the Maine State Plumbing Code is hereby made a part of this HHE-200 Form and shall be consulted by the disposal system installer for further construction details, material specifications, cautions, and other related details pertinent to the installation of this disposal system.
7. This HHE-200 form is intended to represent facts pertinent to the Plumbing Code only. The owner/applicant must check local, state, and federal regulations before considering this an approvable site. All information shown on this form relating to property lines, structures, and subsurface structures (such as, but not limited to water lines, septic tanks, cess pools, cellar drains, utility lines, wells, leach fields, etc.) are noted, shown, or left off as not affecting the system based on information provided by the owner/applicant or his agent. The OWNER/APPLICANT acknowledges and understands that CE&S's submissions may represent imperfect data and may contain errors, omissions, conflicts, inconsistencies, code violations, and improper use of materials. Such deficiencies will be corrected when identified. The OWNER/APPLICANT agrees to carefully study and compare the submissions and report at once in writing to CE&S any deficiencies discovered. The OWNER/APPLICANT further agrees to require each contractor and subcontractor to likewise study the submissions and report at once any deficiencies discovered. It is the responsibility of the owner/applicant or his agent to confirm, BEFORE CONSTRUCTION BEGINS, the above and/or any other features which may affect (or be adversely affected by) the installation of this system.
8. When a gravity system is proposed, BEFORE CONSTRUCTION BEGINS, the disposal system installer and building contractor shall review the relative elevation of all points given in the this HHE-200 Form and the elevation of the existing or proposed building drain and septic tank openings for compatibility to the minimum code pitch requirements. Any questions that arise should be directed to the local plumbing inspector or designer. When a pump system is installed, provisions shall be made to keep the tank and lift station outlets above the high water table.
9. The Septic System Owner's Manual written by the designer is made a part of this HHE-200 Form and shall be consulted by the owner/applicant and disposal system installer for other facts pertinent to the installation and operation of this disposal system.
10. The OWNER/APPLICANT bears the responsibility to show the location of property lines, subsurface structures (such as, but not limited to water lines, septic tanks, cess pools, cellar drains, utility lines), and wells to the Site Evaluator. Actual property lines must be confirmed by a boundary survey. By signing the front of this form, the OWNER/APPLICANT agrees that the property lines and wells on the accompanying plan(s) are shown correctly and any discrepancy found in the future is the responsibility of the OWNER/APPLICANT.
11. The actual water flow or number of bedrooms shall not exceed the design criteria indicated on this HHE-200 Form without a re-evaluation of the system.
12. CE&S is not responsible for the actions of others, who affect the ultimate cost of the PROJECT; by vandalism, marker removal, changes in scope of work, approval agencies, redesign of septic system, etc. (OWNER/APPLICANT to be notified of any cost increase).
13. The laws of Maine will apply concerning the interpretation and performance of this AGREEMENT. If an item in this AGREEMENT is found to be in violation of any prevailing laws, it will not void the entire AGREEMENT. This AGREEMENT is superior and over-rides any Standard Subcontract Agreement signed by the parties involved in this AGREEMENT for this PROJECT when referenced in said Standard Subcontract Agreement.
14. CE&S is responsible for the actions of its' employees only. Insurance is provided for: vehicles, general liability, errors and omissions, and workman's comp. All other entities on the site are responsible for their own safety, work product, actions, conduct, etc.
15. CE&S is not responsible for any actual, alleged, or threatened, pollutant damage in regard to the services performed. Pollutants are defined as any environmentally threatening contaminants commonly regulated in this state.
16. In the event that the OWNER/APPLICANT hires subcontractors, workers, orders material, etc., and governs, directly or indirectly, the overall operation on the work site; then the OWNER/APPLICANT is deemed to be acting as his own general contractor, having greater responsibility for the work site.
17. Other than the procedure of collections described above in (1), should the parties of this AGREEMENT have differences involving either the work site, or the PROJECT, that cannot be resolved between them; then the procedures of Alternate Dispute Resolution will be the only method of resolving those differences.



# Replacement System Variance Request

VARIANCE CATEGORY		LIMIT OF LPI'S APPROVAL AUTHORITY			VARIANCE REQUESTED TO:				
<b>SOILS</b>									
Soil Profile	Ground Water Table				to 7"		11 inches		
Soil Condition	Restrictive Layer				to 7"		inches		
from HHE-200	Bedrock				to 12"		inches		
<b>SETBACK DISTANCES (in feet)</b>		<b>Disposal Fields</b>			<b>Septic Tanks</b>			<b>Disposal Fields</b>	<b>Septic Tanks</b>
<b>From</b>	<b>Less than 1000 gpd</b>	<b>1000 to 2000 gpd</b>	<b>Over 2000 gpd</b>	<b>Less than 1000 gpd</b>	<b>1000 to 2000 gpd</b>	<b>Over 2000 gpd</b>	<b>To</b>	<b>To</b>	
Wells with water usage of 2000 or more gpd or public water supply wells	300 ft [a]	300 ft [a]	300 ft [a]	100 ft [a]	100 ft [a]	100 ft [a]			
Owner's wells	100 down to 60 ft	200 down to 100 ft	300 down to 150 ft	100 down to 50 ft [b]	100 down to 50 ft	100 down to 50 ft		80'	
Neighbor's wells	100 down to 60 ft [b]	200 down to 120 ft [b]	300 down to 180 ft [b]	100 down to 50 ft [b]	100 down to 75 ft [b]	100 down to 75 ft [b]			
Water supply line	10 ft [a]	20 ft [a]	25 ft [a]	10 ft [a]	10 ft [a]	10 ft [a]			
Water course, major - for replacements only, see Table 400.4 for major expansions	100 down to 60 ft	200 down to 120 ft	300 down to 180 ft	100 down to 50 ft	100 down to 50 ft	100 down to 50 ft			
Water course, minor	50 down to 25 ft	100 down to 50 ft	150 down to 75 ft	50 down to 25 ft	50 down to 25 ft	50 down to 25 ft			
Drainage ditches	25 down to 12 ft	50 down to 25 ft	75 down to 35 ft	25 down to 12 ft	25 down to 12 ft	25 down to 12 ft			
Edge of fill extension – Coastal wetlands, special freshwater wetlands, great ponds, rivers, streams	25 ft [d]	25 ft [d]	25 ft [d]	25 ft [d]	25 ft [d]	25 ft [d]			
Slopes greater than 3:1	10 ft	18 ft	25 ft	N/A	N/A	N/A			
No full basement [e.g. slab, frost wall, columns]	15 down to 7 ft	30 down to 15 ft	40 down to 20 ft	8 down to 5 ft	14 down to 7 ft	20 down to 10 ft			
Full basement [below grade foundation]	20 down to 10 ft	30 down to 15 ft	40 down to 20 ft	8 down to 5 ft	14 down to 7 ft	20 down to 10 ft			
Property lines	10 down to 5 ft [c]	18 down to 9 ft [c]	20 down to 10 ft [c]	10 down to 4 ft [c]	15 down to 7 ft [c]	20 down to 10 ft [c]			
Burial sites or graveyards, measured from the down toe of the fill extension	25 ft	25 ft	25 ft	25 ft	25 ft	25 ft			

**OTHER**

1. Fill extension Grade - to 3:1

2. \_\_\_\_\_

3. \_\_\_\_\_

- Footnotes:
- a. This setback distance cannot be reduced by the LPI, but may be considered for reduction by State variance.
  - b. May not be any closer to neighbor's well than the existing disposal field or septic tank unless written permission is granted by the neighbor.
  - c. Sufficient distance shall be maintained to assure that the toe of the fill does not extend to the 3:1 slope or property line.
  - d. Natural Resources Protection Act requires a 25 foot setback on slopes with less than 20% from the edge of disturbance and 100 feet on slopes greater than 20% except for the repair or installation of a replacement system when no practical alternative exists.

Kare P. Collin  
SITE EVALUATOR'S SIGNATURE

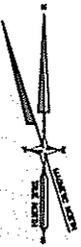
December 18, 2007  
DATE

**FOR USE BY THE DEPARTMENT ONLY**

The Department has reviewed the variance(s) and  does,  does not, give its approval. Any additional requirements, recommendations, or reasons for the Variance denial, are given in the attached letter.

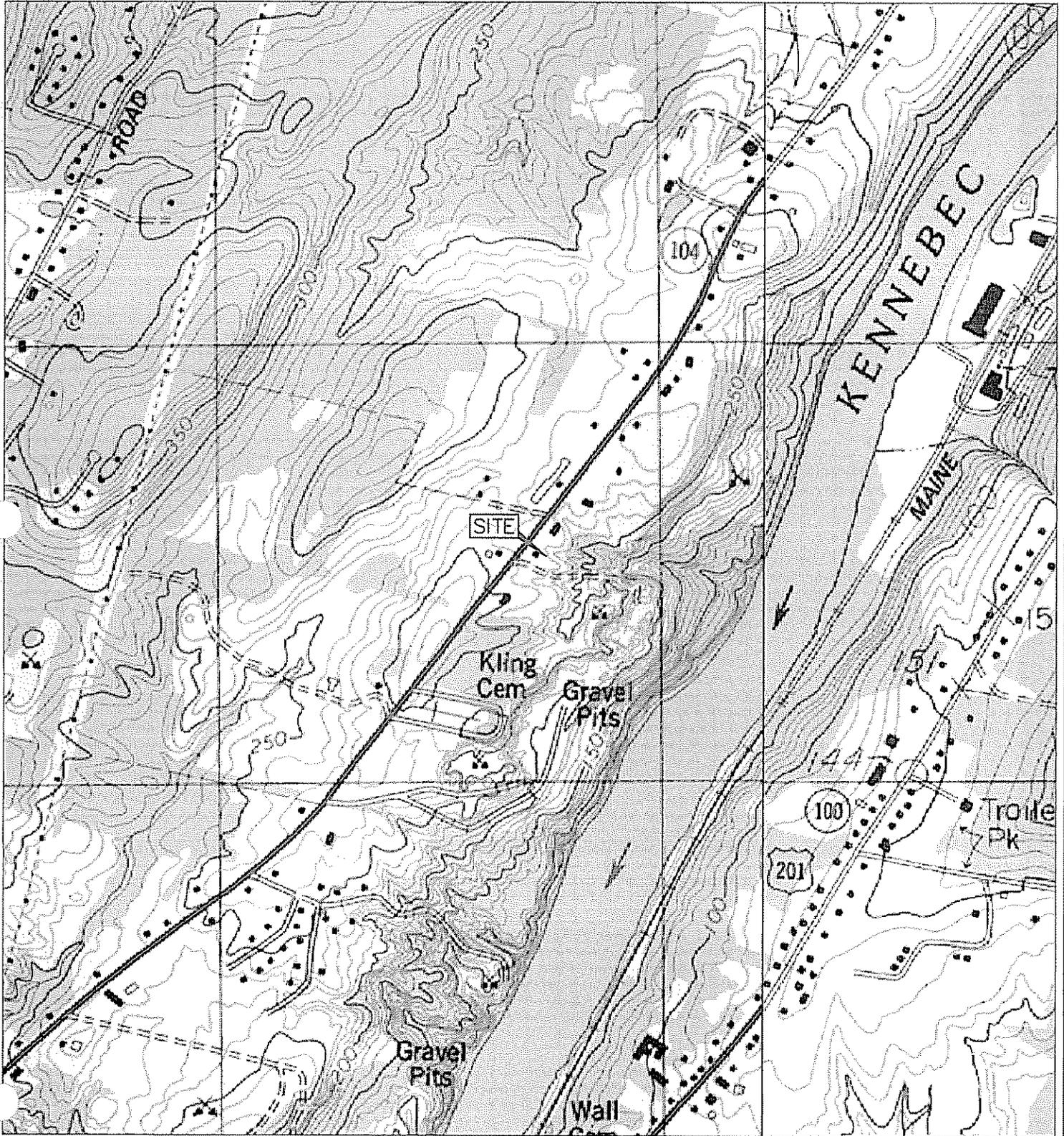
\_\_\_\_\_  
SIGNATURE OF THE DEPARTMENT

\_\_\_\_\_  
DATE



# SITE LOCATION MAP

SCALE 1" = 1000'



**HHE-200**

ENGINEERING  
**E.S. COFFIN**  
SURVEYING  
O 1963

E.S. COFFIN ENGINEERING & SURVEYING, INC.  
432 Cross Road P.O. Box 2087 Augusta, Maine 04330  
Ph. (207) 623-9475 Fax (207) 623-9016 Toll Free 1-800-243-9475

CLIENT PROJECT  
**Quirion Construction  
SEPTIC SYSTEM DESIGN**

SHEET TITLE  
**SITE LOCATION MAP**

LOCATION: WEST RIVER ROAD

SCALE: AS SHOWN

TOWN: AUGUSTA COUNTY: KENNEBEC STATE: MAINE

DATE: DECEMBER 18, 2007

Town, City, Plantation  
 Augusta

Street, Road, Subdivision  
 West River Road

Owner's Name  
 Quinon Construction

SITE PLAN

Scale: 1" = \_\_\_ feet

TEXTURE TERMS

Sand  
 Loamy sand  
 Sandy loam  
 Loam  
 Silty loam  
 Silty clay loam  
 Silty clay  
 Bedrock

TEXTURE

ABUNDANCE  
 Very-36-60%  
 Extremely-61-90%

MODIFIER TERMS

Vf-very fine  
 F-fine  
 M-medium  
 C-course  
 ROCK  
 Gravely-0.1-3"  
 Cobbley-3-10"  
 Stony->10"

MOTTLING

CONTRAST  
 Faint  
 Distinct  
 Prominent

ABUNDANCE  
 None  
 Few-<2%  
 Common-2-20%  
 Many->20%

CONSISTENCE

TERMS  
 Loose  
 Friable  
 Firm  
 Very Firm  
 Cemented

SOIL DESCRIPTION AND CLASSIFICATION

Observation Hole TP 1  Test Pit  Boring  
 1-1/2" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL (INCHES)	Texture	Consistency	Color	Mottling
0	fine sandy loam	Frable	Lt. Olive Brown	None
10	Very fine sandy loam	Firm	Olive Brown	Common Distinct
20				
30				
40				
50				

Soil Classification <u>3</u> <u>D</u> Profile Condition	Slope <u>5</u> %	Limiting Factor <u>11</u> "	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
---------------------------------------------------------------	---------------------	--------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Observation Hole TP 2  Test Pit  Boring  
 1-1/2" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL (INCHES)	Texture	Consistency	Color	Mottling
0	fine sandy loam	Frable	Ol. Brown	None
10			Lt. Olive Brown	
20		Firm	Olive Gray	Common Distinct
30	Very fine sandy loam			
40				
50				

Soil Classification <u>3</u> <u>D</u> Profile Condition	Slope <u>5</u> %	Limiting Factor <u>12</u> "	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
---------------------------------------------------------------	---------------------	--------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Site Evaluator's Signature *Kane P. Coffin*

SE # 331

Date: 12/18/07

HHE-200

**SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION**

Department of Human Services  
Division of Health Engineering

Town, City, Plantation

Street, Road, Subdivision

Owner's Name

**Augusta**

**West River Road**

**Quirion Construction**

**FILL REQUIREMENTS**

Depth of Fill (Upslope) 29-35"  
Depth of Fill (Downslope) 45-48"

**CONSTRUCTION ELEVATIONS**

Reference Elevation is 00"  
Bottom of Disposal Area -41"  
Top of distribution lines -30"

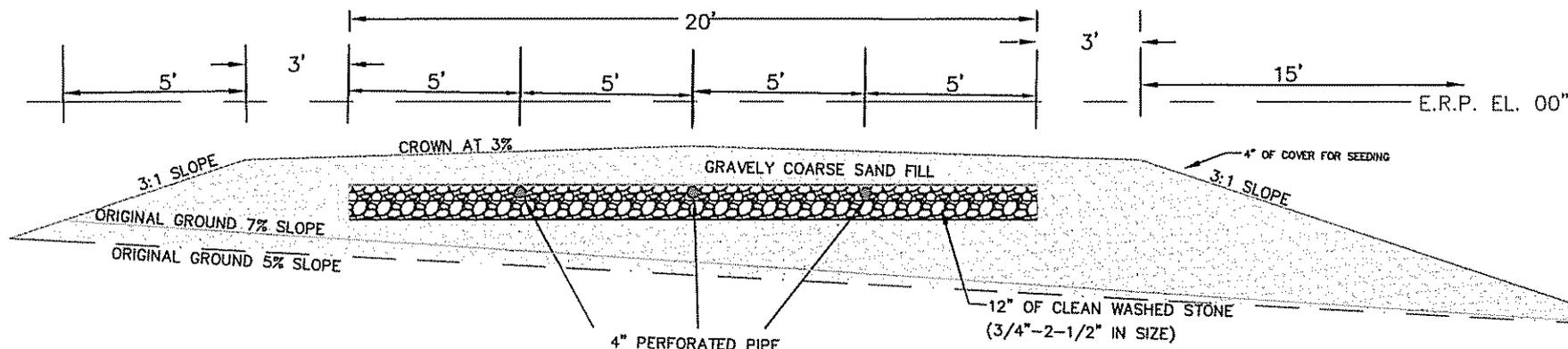
**ELEV. REF. PT:**

50d spike in 13" Willow Tree  
18" above ground

**DISPOSAL AREA CROSS SECTION**

**SCALE:**

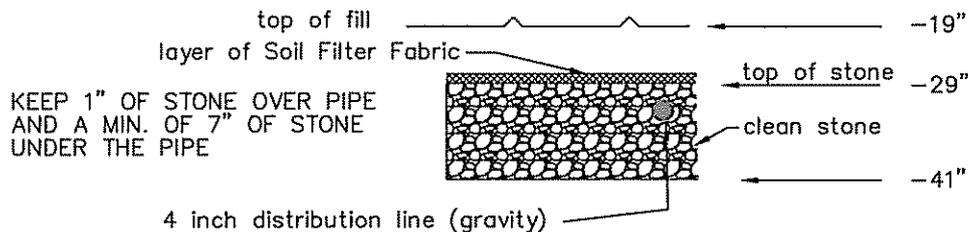
Vertical: 1 inch = 5 feet  
Horizontal: 1 inch = 5 feet



DISPOSAL FIELD SHOULD ONLY BE INSTALLED ACCORDING TO THE MAINE SUBSURFACE WASTE WATER DISPOSAL RULES.

REMOVE VEGETATION AND ROTO-TILL GRAVELY COARSE SAND FILL INTO ORIGINAL GROUND TO A DEPTH OF 6-8 INCHES

E.R.P.  
elev.



INSTALL 20' BY 45' STONE BED

**STONE BED DETAIL (no scale)**

Site Evaluator's Signature

SE # 331

Date: 12/18/07

**HHE-200**

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services (207) 287-5672  
 Division of Health Engineering (207) 287-4172 (fax)

Town, City, Plantation  
**Augusta**

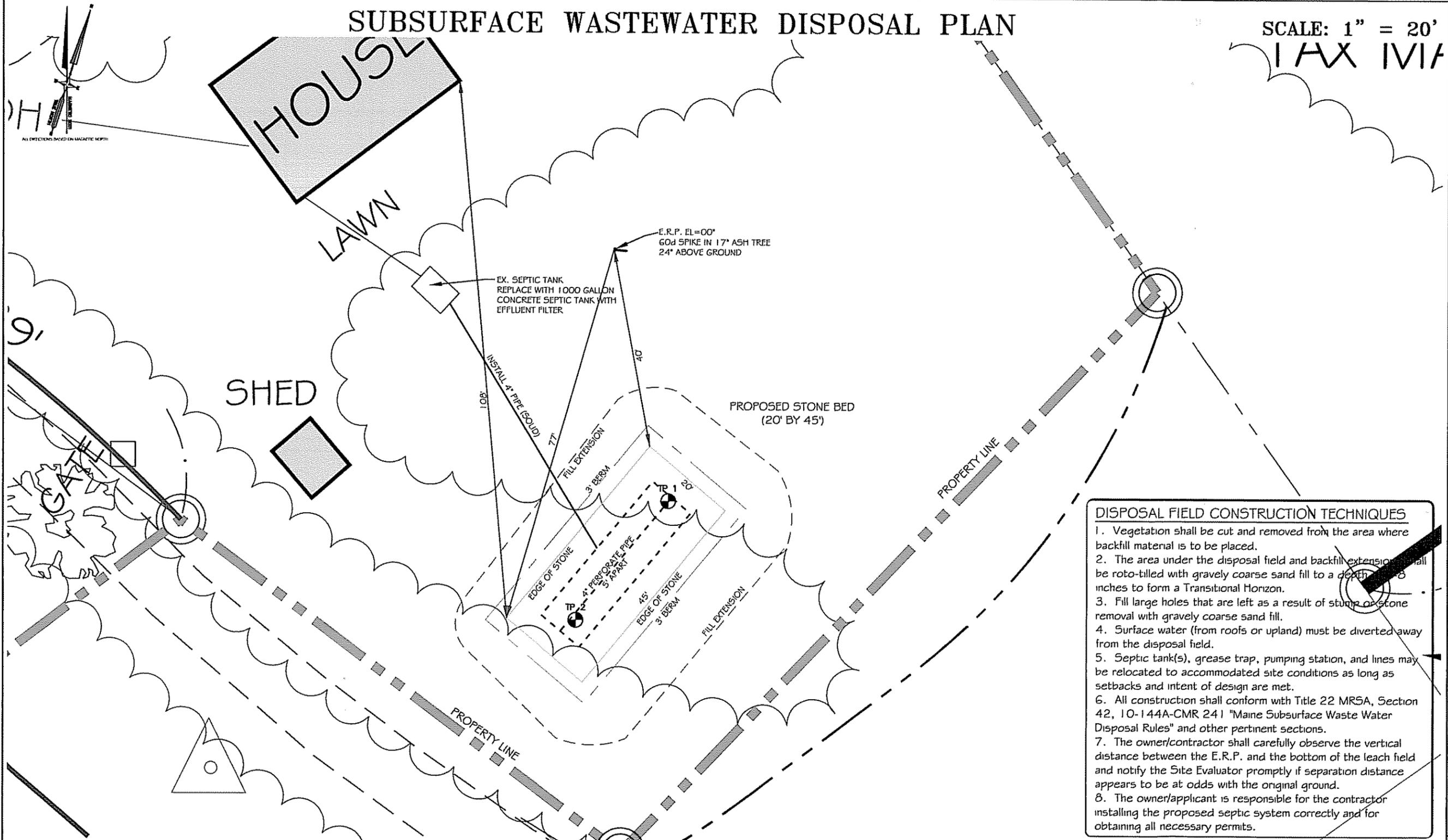
Street, Road, Subdivision  
**West River Rd.**

Owner's Name  
**Quirion Construction**

## SUBSURFACE WASTEWATER DISPOSAL PLAN

SCALE: 1" = 20'

1 X 1 VI 1



**DISPOSAL FIELD CONSTRUCTION TECHNIQUES**

1. Vegetation shall be cut and removed from the area where backfill material is to be placed.
2. The area under the disposal field and backfill extension shall be roto-tilled with gravelly coarse sand fill to a depth of 8 inches to form a Transitional Horizon.
3. Fill large holes that are left as a result of stump or stone removal with gravelly coarse sand fill.
4. Surface water (from roofs or upland) must be diverted away from the disposal field.
5. Septic tank(s), grease trap, pumping station, and lines may be relocated to accommodate site conditions as long as setbacks and intent of design are met.
6. All construction shall conform with Title 22 MRSA, Section 42, 10-144A-CMR 241 "Maine Subsurface Waste Water Disposal Rules" and other pertinent sections.
7. The owner/contractor shall carefully observe the vertical distance between the E.R.P. and the bottom of the leach field and notify the Site Evaluator promptly if separation distance appears to be at odds with the original ground.
8. The owner/applicant is responsible for the contractor installing the proposed septic system correctly and for obtaining all necessary permits.

ELEVATION REFERENCE POINT	ELEVATION: 00"
	DESCRIPTION: 50d spike in 1 7" Ash Tree (24" above ground)
SHEET TITLE:	PLAN VIEW
	SCALE: 1" = 20'
DATE: DECEMBER 18, 2007	
PROJECT:	QUIRION CONSTR.
LOCATION:	WEST RIVER ROAD
TOWN:	AUGUSTA
COUNTY:	KENNEBEC
STATE:	MAINE
<p>ES COFFIN ENGINEERING &amp; SURVEYING, INC.                  412 Cory Road P.O. Box 687 Augusta, Maine 04310                  Ph. (207) 633-9423 Fax (207) 633-9016 Toll Free 1-800-244-6173</p>	
PROJ. NO. 2007-213	

Site Evaluator's Signature

SE # 331

Date: 12/18/07

HHE-200