TOWN OF ESSEX

APPLICATION FOR CERTIFICATE OF OCCUPANCY

NO. 123-93 Nov 19, 1993

The undersigned herewith requests an inspection of the premises and the issuance of "Certificate of Occupancy" of premises, or portion thereof, for use or habitation.

[ ] This request is for use only of existing land or buildings.

[X] This request is for new construction or rehabilitated or altered structure which was done under authority of building/zoning permit # 123-93

issued 8-18-93, 1993 to David Harmon/Westbuilt Co. Diane J. Wessel V. Pres.

Premises are at 12 Old Pump Road, Essex

Water service installation inspected and approved by Well

Driveway location inspected and approved by See attached

Sanitary sewer connection or septic system inspected and approved by:

Name: _____ Date: _____

Construction was begun _____, 19____ and completed _____, 19___

Approval granted by: ___ P.C. ___Z.B.A._____, 19____.

Use of premises intended Residential - single family
(type of use)

Applicant's Signature: Diane J Wessel, V.Pres., Westbuilt Co.

By issuance of this Occupancy Permit, the Town of Essex Zoning Administrator hereby acknowledges that the use and/or building construction is in complete conformity with the Zoning Regulations, unless otherwise noted. Field measurements and similar dimensions for setbacks are based in part on evidence supplied by owner. The Town of Essex is not liable for errors or mistakes when it is found that information submitted by the applicant is erroneous or inaccurate.

Certificate of Occupancy approved ✓ with ____ (without) ____conditions
If with conditions, see attachment outlining same.

Certificate of Occupancy denied ____. Please see attachment with reasons for denial.

11/19/93
Date

Zoning Administrator, Town of Essex, VT

form-40

WESBUILT Co.

WILLIAM B. WESSEL

70 HIGHLAND TERRACE • SOUTH BURLINGTON • VERMONT • 05403
802/862-4092

COPY

OF ESSEX, VERMONT
FOR CURB CUT/UTILITY PERMIT

A. Section 43. Application for Curb Cut and Utility
Way.

b cuts and utility installations shall be submitted
ks/Town Engineer for review and approval. Applicants
to the [illegible]
shall submit the information requested on this form and any additional information requested by the Director of Public Works/Town Engineer for a clear understanding of this application.

Application No. _____ 5/26/93
Date

Property Address NORTH EAST CORNER OF OLD PUMP & SLEEPY HOLLOW RDS
Owner Name DAVID & MARY HARMON

Owner Address 72 LOGWOOD CIRCLE ESSEX JCT. VT.
Phone Number - Work _____ Home 879-4074

Town Tax Map # 12 Parcel # 16-1

Application is for: (Check one)

A) New Curb Cut X B) Utility Installation: Overhead _____ Underground _____

Please use attached diagram to describe location and type of installation.

Comments by Director of Public Works/Town Engineer:

Culvert: Yes X No _____

Culvert Size: 18" Diameter (18 inch minimum)

Water Bar(s): Yes _____ No X

Total Length of Culvert: 30 FT (30 foot minimum)

Signature of Owner

William B. Wessel
AGENT FOR OWNER
862. 4092

For Office Use Only

Fee Paid N/A

Approved X Rejected _____ Date 6/2/93

(X) w/ COMMENTS ON BACK.

Carl K. Carpenter (for)
Director of Public Works/Town Engineer or Authorized Representative

1. Culvert must be ~~ASPHALT COATED~~ CORRIGATED GALVANIZED METAL PIPE

2. Culvert will be purchased by Applicant.
3. Culvert will be purchased and installed by the applicant. The Town of Essex Department of Public Works will inspect.

NOTE: A MINIMUM OF 24 HOURS NOTICE IS REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION. WITHIN 24 HOURS OF COMPLETION, THE APPLICANT IS REQUIRED TO NOTIFY THE DIRECTOR OF PUBLIC WORKS/TOWN ENGINEER FOR INSPECTION PURPOSES.

FITZPATRICK-LLEWELLYN INCORPORATED
Engineering and Planning Services

One Wentworth Drive • Williston • Vermont • 05495 • (802) 878-3000

17 November 1993

Mr. Jerry Firkey
Zoning Administrator
Town of Essex
81 Main Street
Essex Junction, VT 05452

RE: David & Mary Harmon, Old Pump Road, Essex
Septic System Inspection Summary
FILE: 93037

Dear Mr. Firkey:

On behalf of David & Mary Harmon, we were asked to generally review the construction of the mound system on the above project. The contractor in charge of constructing the system was Spence Excavating and Construction of Richmond, VT. A summary of our inspection is as follows.

27 October 1993 - A representative from FitzPatrick-Llewellyn verified the location of the system to be constructed. The system identified as the primary disposal area as indicated on the approved plans was being constructed. A 40' x 70' approximate area was plowed using an apparatus connected to the arm of the backhoe. Plow depth was 8" +/- parallel to the contours with the furrows turned uphill. The soil moisture content within the plowed zone was fairly dry, (would not ribbon). So called "mound sand" was stockpiled on-site, reportedly, sieve analysis had been taken and would be available for our use.

10 November 1993 - We asked by Ernie Spence to return to the site to conduct a hydraulic flow test on the mound system. Prior to conducting the test, we verified the dimensions of the mound as constructed. The absorption area of the mound consisted of two gravel trenches within the sand bed. The dimensions of each trench met the requirements of the plan. The depth of stone below the pipe was 6". Side slopes of the mound measured approximately 3:1. The stone used in the system was reported to be washed stone from Hinesburg Sand and Gravel, it was clean in place, and was reportedly installed using the backhoe bucket.

At our request the orifices were drilled, and the distribution piping was assembled, but not glued together. The 9.5 foot spacing of the orifices was verified and size of each orifice was 5/16" diameter. The orifices were facing upward for the flow test. As discussed previously with the contractor, the distal perforations were on the bottom of the pipe. A temporary electrical connection was hooked up to the pump and the flow test commenced when the float control ball was actuated. One, pump mounted float, was observed in the station. The test was conducted with clean water.

As the test commenced and the flow equalized, the water from each orifice shot upwards approximately 6 to 9 feet in the air. The orifice head was approximately 2.5 to 3.5 psi, slightly higher than the required 1 psi, but not high enough to compromise the system integrity. We accepted the flow test and allowed the piping to be glued together. To reduce the potential of vapor lock, the end caps of each lateral were drilled with a 1/8 inch diameter hole on the top of each cap.

We reviewed the remaining construction procedure with Mr. Spence, regarding the placement of the insulation, geotextile fabric over the top of the system, the final grading, topsoil depth, and surface diversion ditches. Our primary concern was the placement of a surface diversion swale on the uphill side of the system. Mr. Spence had agreed this would not be a significant obstacle and would be easily completed during finished grading.

10 November 1993 - other observation on this date included our verification of the septic tank. A 1,000 gallon pre-cast concrete structure with inlet and outlet baffles was installed on site as specified. The tank was located about 30+/- feet from the south east corner of the house. The gray water dry well was also installed during our inspection and was located about 30 feet from the south side of the house.

Discrepancies with the approved plan The following items were not in conformance with the approved drawings:

Pump Station - Schedule 80 PVC piping (1 1/2" diameter) was used instead of 1 1/2" diameter galvanized iron. The structure was a square pre-cast station a manufactured by S.T. Griswold. The access cover was a round cast iron manhole cover an option available on the plan. The pump provided with the station was a 1/3 hp Goulds model, different and larger than specified.

Venting for the station was through the top of the structure, via 3" mushroom vent cap, not through the inlet piping. The valve configuration was slightly different than the approved plan. The wiring and conduit was not installed during our inspection but on site ready for installation. A junction box was in the station NEMA rating was unavailable.

Mound System - A sieve analysis was completed on a sample of sand from the mound. In addition, two sieve analyses were supplied by the contractor reportedly from source pits where the sand was obtained from. The three parameters specified in the sand specification were not met. The #40 sieve passes 16% more sand than the maximum allowable.

Conclusion - Based on our observations during the construction of the mound system, it is our opinion that although there are some significant discrepancies with the approved plan. However, the system constructed, if properly maintained, should provide adequate renovation of wastewater, prevent the surfacing of sewage on top of the ground and eliminate a direct discharge of sewage into waters of the state.

Should you have any questions regarding the information provided, or in general about the report, please contact us at your convenience.

Sincerely,

FITZPATRICK-LLEWELLYN INCORPORATED

Charles Van Winkle

Charles Van Winkle
Project Manager

cc: David & Mary Harmon
Bill Wessel, Builder
Ernie Spence, Contractor

KNIGHT CONSULTING ENGINEERS, INC.

P.O. BOX 29 WILLISTON, VT 05495 (802)879-6343

Sheet No. 1 of 1

Date 11-15-93

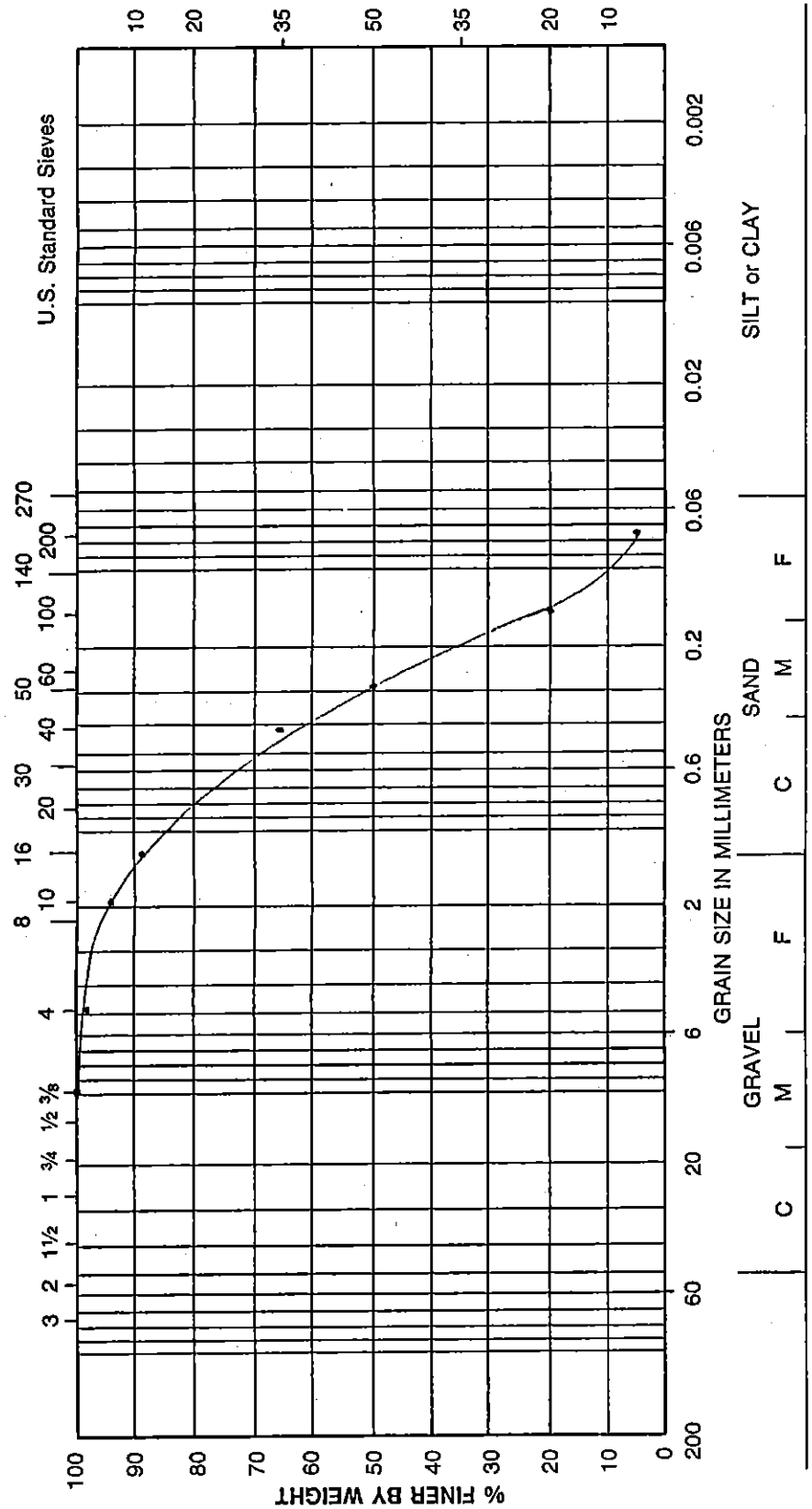
FOR FITZPATRICK - CLEWELLYN

By J. FAY

PROJECT HARMON (FL # 93037)

PROJECT NO. _____

GRAIN SIZE DISTRIBUTION CURVE



SIEVE	% FINER	REQ'D % FINER	SIEVE	% FINER	REQ'D % FINER
3/8	100				
4	98				
10	94	85-100			
16	89				
40	66	30-50			
50	50				
100	20				
200	5	5-10			

SAMPLE INFORMATION

SOURCE: —

DATE REC'D: 11-12-93

DEL'D BY: CLIENT

REF. SPEC: VT ANR - DEC "MIXED SAND"

CLASSIFICATION/DESCRIPTION

2M QCP 669