

LAYOUT 9/4/02 10:30-11 INSP 4 9/9/02 12:00
 INSP 2 9/5/02 a.m. INSP 5 11/18/02 9:30
 INSP 3 9/6/02 12:00 INSP 6 11/19/02 9:30am

ISSUE DATE: 8/29/2002
 APPROVAL DATE: 11/19/02

**PERMIT
INDEXED**

P 517443
 AS 10626-A

**ON-SITE SEWAGE DISPOSAL SYSTEM
 HOWARD COUNTY HEALTH DEPARTMENT
 BUREAU OF ENVIRONMENTAL HEALTH**

03-282767

J Joseph Gartland IS PERMITTED TO INSTALL ALTER

ADDRESS: 1835 West Old Liberty Rd 21157 PHONE NUMBER: 410-875-2400

SUBDIVISION: Indian Hill LOT NUMBER: 29

ADDRESS: 12520 Indian Hill Drive PROPERTY OWNER: Carrigan Homes

SEPTIC TANK CAPACITY (GALLONS): 1500 OUTLET BAFFLE FILTER REQUIRED

PUMP CHAMBER CAPACITY (GALLONS): 1500 COMPARTMENTED TANK REQUIRED

NUMBER OF BEDROOMS: 4

SQUARE FEET PER BEDROOM: _____

LINEAR FEET OF TRENCH REQUIRED: NA

TRENCHES:	Trench to be _____ feet wide. Inlet _____ feet below original grade. Bottom maximum depth _____ feet below original grade. Effective area begins at _____ feet below original grade. _____ feet of stone below distribution pipe.
LOCATION:	To be determined at pre-construction meeting at the site. Entire septic disposal easement to be fenced during house construction phase.
NOTES:	FOR AT GRADE MOUND SYSTEM ONLY. See specific design plans by S/E Engineering, inc, and approved 6/6/2002

PLANS APPROVED: Mark Rifkin DATE: 6/6/2002

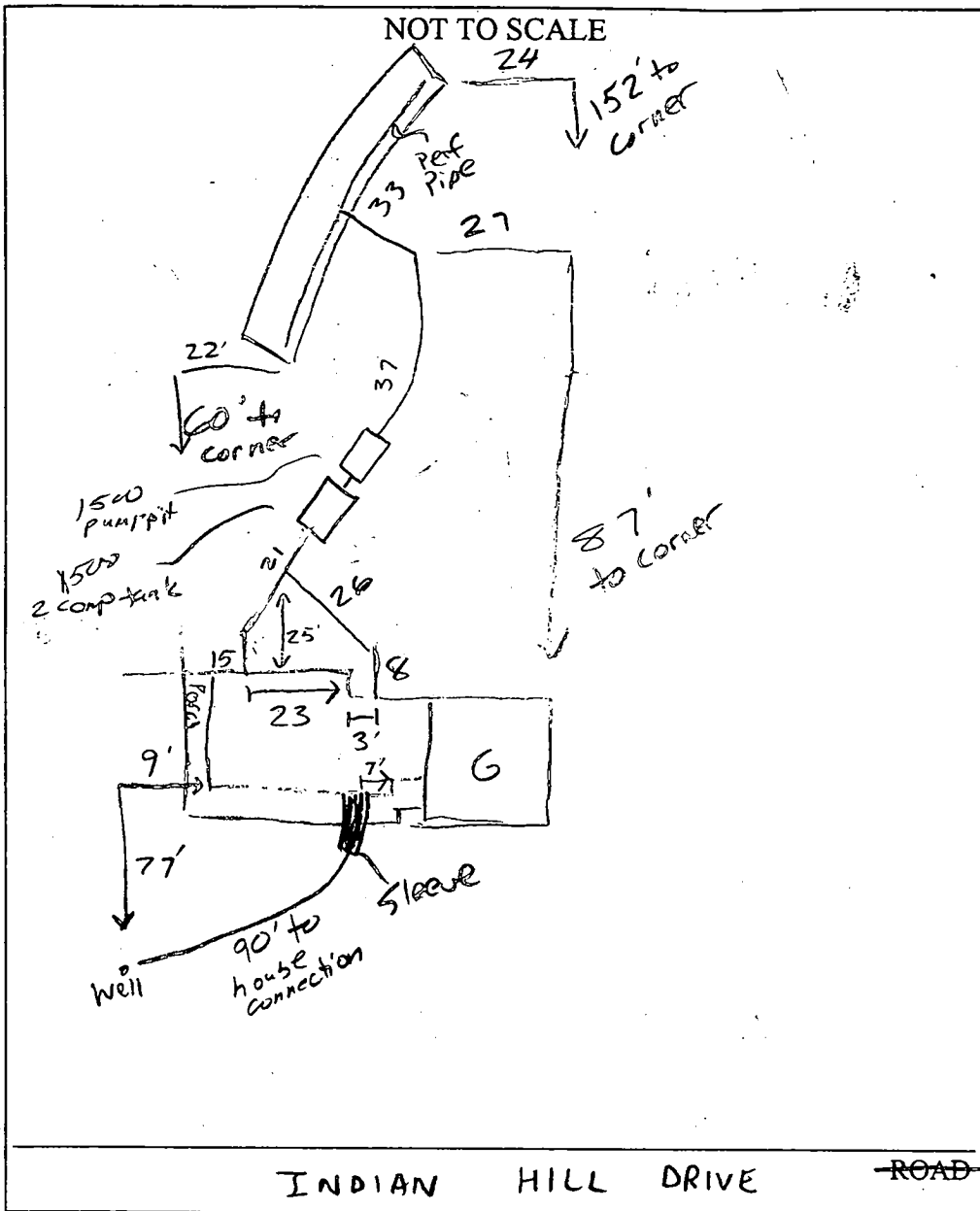
- NOTE: PERMIT VOID AFTER 2 YEARS
- NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS UNLESS SPECIFICALLY AUTHORIZED

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT CALL 410-313-2640 FOR INSPECTION OF SEPTIC SYSTEM

**BUILDING PERMIT SIGNED
AND RETURNED**

9/17/2002 800136369 DECK
11/20/02 800135445- JG POOL

A510626-A



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
_____	_____	_____
NUMBER OF TRENCHES _____		
TOTAL LENGTH _____		
ABSORPTION AREA _____		
DISTRIBUTION BOX LEVEL _____		
DISTRIBUTION BOX BAFFLE _____		
DISTRIBUTION BOX PORT _____		

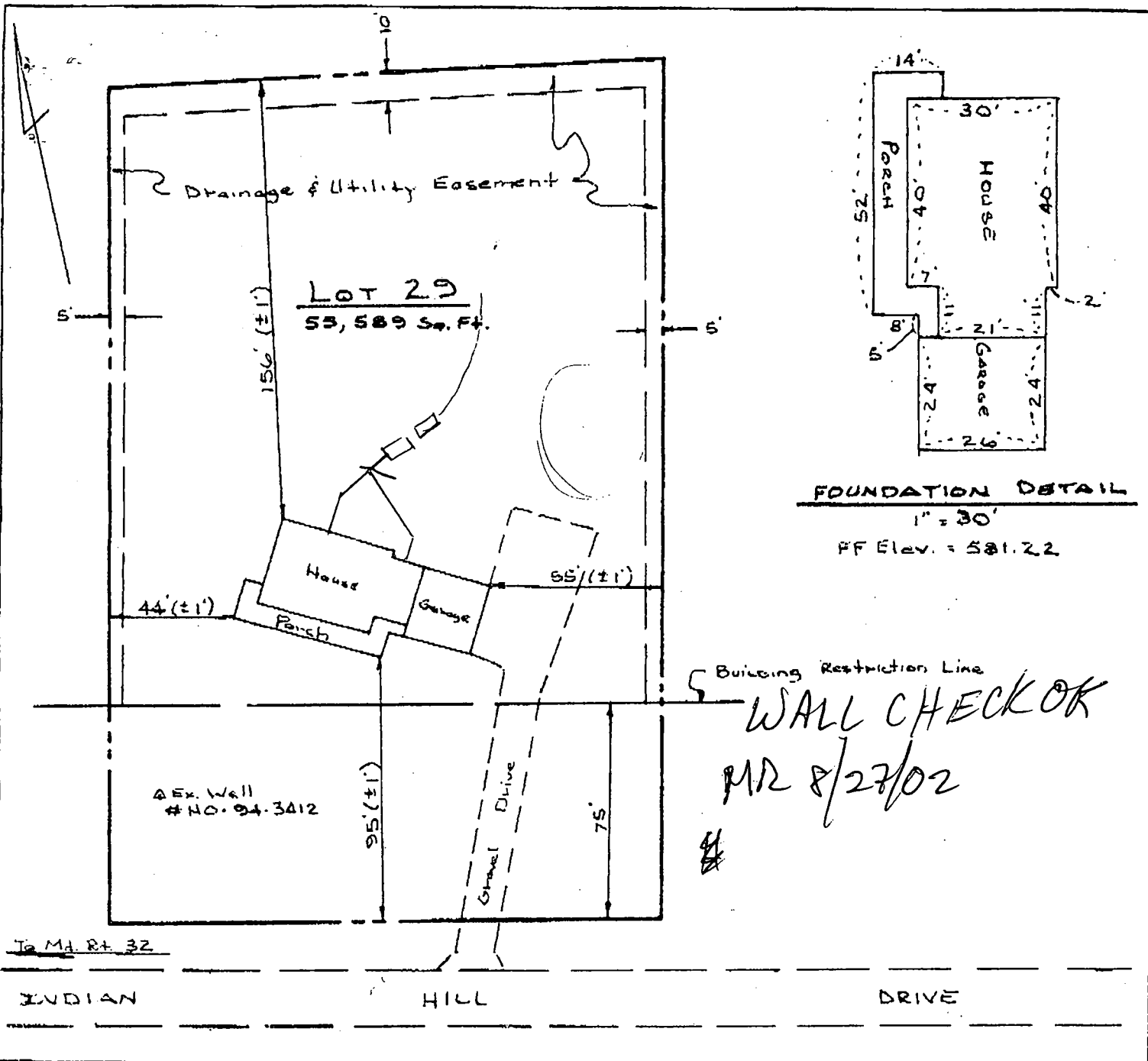
SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	<input checked="" type="checkbox"/>
CAPACITY	1500 GAL
SEAM LOC	top
TANK LID DEPTH	2
BAFFLES	<input checked="" type="checkbox"/>
BAFFLE FILTER	—
MANHOLE LOC	_____
6" PORT LOC	_____
WATERTIGHT TEST	NR
SEPTIC TANK 2 LEVEL	_____
Capacity	1500 GAL
SEAM LOC	top
TANK LID DEPTH	3
BAFFLES	N/A
BAFFLE FILTER	N/A
MANHOLE LOC	_____
6" PORT LOC	_____
WATERTIGHT TEST	_____

PRE-CONSTRUCTION 9/4/02 SDA not staked but mound site was O.K. to continue due to field verification that mound site was correct.

INSTALLATION 9/5/02 witnessed mound site being placed. JB 9/6/02 site visit to measure distribution network & ground. JB/GM 9/5/02 saw mound cap & performed preliminary pump test of generator. JB 11/19/02 performed second pump test & high water alarm O.K. to final JB

FINAL INSPECTOR *[Signature]*

DATE OF APPROVAL *[Signature]* 11/19/02



Note: This lot does not lie within a flood hazard area, as delineated on the National Flood Insurance Program Map

R.S.K. Surveys
 60 Fairground Avenue
 Taneytown, MD 21787
 (410) 751-0062

**LOCATION DRAWING
 OF
 FOUNDATION LOCATION - LOT 29
 INDIAN HILL SUBDIVISION, HOWARD CO.
 FOR DAN ROSENBERGER**

NOTE: The Advice is an integral part of this plat and is to be found on the affixed page.

Drawn By: RSK
 Date: 7-28-02
 Check By: PJM
 Surveyed: 7-26-02
 Book No.: K-9
 Page No.: 30
 Plat No.: LD-02-1
 Scale 1" = 50'

I hereby certify that I have surveyed the property shown hereon for the purpose of locating the improvements only, and the improvements are located as shown. Exact property corners have not been established or set. We assume no responsibility or liability for any rights-of-way or easements recorded or unrecorded, not appearing on the record plat and/or mentioned in the title deed referred to hereon.

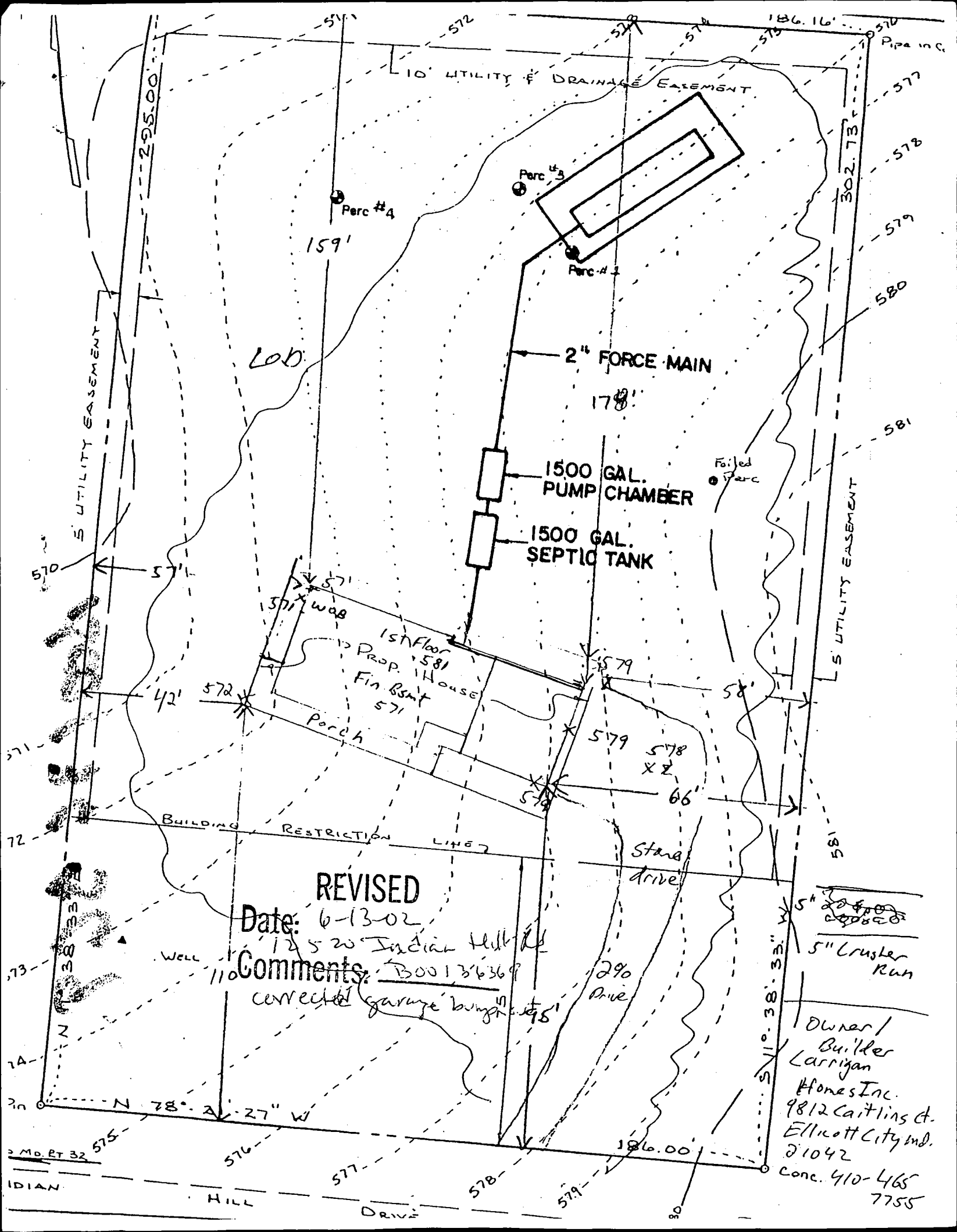
Signed this 28 day of July, 2002

Richard S. Krebs
 Richard S. Krebs, L.S. #10873

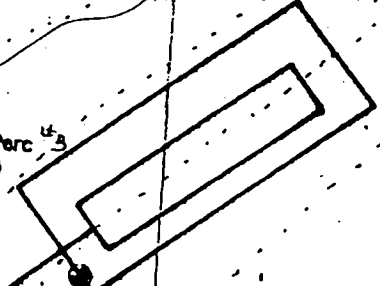


12520 Indian Hill Rd.
 Permit-Boo136369

JUGARTLAND



10' UTILITY & DRAINAGE EASEMENT



2" FORCE MAIN

1500 GAL. PUMP CHAMBER

1500 GAL. SEPTIC TANK

REVISED

Date: 6-13-02
 12520 Indian Hill Rd
 Comments: 300136369
 corrected garage bump-out

Owner/
 Builder
 Carrigan
 Homes Inc.
 9812 Caitlins Ct.
 Elliott City Md.
 21042
 Conc. 410-465
 7755

MO. RT 32

INDIAN HILL DRIVE

5" Crusher Run

Stand drive

Well

159'

LOB

295.00'

302.73'

BUILDING RESTRICTION LINE

Perc #4

Perc #3

Perc #1

Failed Perc

1st Floor Prop. 581
 Fin. Bsmt 571
 Porch

579 X 2

66'

290 Drive

N 78° 27' W

5' 10" 38' 33"

186.00'

30

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WATER AND SEWERAGE PROGRAM
TEL: (410)313-2640 FAX: (410)313-2648

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: J Joseph Gartland Inc Telephone #: 410-875-2400
Address: 1835 W Old Liberty Rd
Westminster Md. 21157

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): Eric Gartland License# 1713
A licensed individual must perform the actual installation. Apprentices must be under the direct supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification.

Name of Property Owner: Carrigan Homes Telephone #: 410-465-7753
Subdivision: Indiana Hill Lot #: 29 Well Tag #: HO-99-3412
Site Address: 12020 Indiana Hill DR

Submersible Pump Data
Make: Grundfos
Model #: 75B02422
Pump Capacity: 7 GPM
Well Yield: 7 GPM

Pitless Adapter
Make: Howard
Model #: 47800
Depth: 42 (36" min)
NSF approved:

Well Cap and Electric Conduit
Two piece watertight cap:
Screened, vented well cap:
Cap secured to casing:
Conduit min 18" B.G.:
Conduit secured to well cap:

Depth of well encountered at time of pump installation: _____ (feet)
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Torque arrestors & Cable guards are required - Must circle one
Safety rope, if used, attached to inside of well casing with eye bolt _____

Line to house
Type: Plastic
PSI: 160 (160 psi min)
Depth of supply line: 42 (36" min)

House Connection
PVC sleeved to undisturbed soil at wall penetration:
Approximate length of sleeve: 6
Sleeve caulked and sealed properly:

The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation: _____ date: 11-19-02

For Health Department Use Only - Not to be completed by Installer

Date Insp. Requested: 9/6/02 Date Insp. Approved: 9/6/02 JB
Inspection Data: Pitless adapter and water supply line at least 36" below grade _____
Two piece cap installed and attached to casing securely
Elec. conduit extends at least 18" below grade/attached to cap properly
Safety rope installed inside of well casing
Correct well tag attached properly and casing 8" above finished grade
Water supply line sleeved adequately at house connection
Adequate grout observed below pitless adapter

ST/CO USE ONLY DATE Received MM DD YY DATE WELL COMPLETED MM DD YY Depth of Well **OKSRK** PERMIT NO. FROM "PERMIT TO DRILL WELL"
 8 13 15 23 02 22 **340'** 26 **6/17/02** **70-94-3412**
 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS) (TO NEAREST FOOT)

OWNER Rosenberger last name first name Don
 STREET OR RFD Indian Hill Dr. TOWN Lylesville 21784
 SUBDIVISION Rosenberger Property SECTION _____ LOT 29

WELL LOG
 Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET		check if water bearing
	FROM	TO	
Sand	0	78	
Gray Mica Rock	78	340'	

GROUTING RECORD YES NO
 WELL HAS BEEN GROUTED (Circle Appropriate Box)
 TYPE OF GROUTING MATERIAL (Circle one)
 CEMENT **CM** BENTONITE CLAY **BC**
 NO. OF BAGS 22 NO. OF POUNDS 2068
 GALLONS OF WATER 132
 DEPTH OF GROUT SEAL (to nearest foot)
 from 0 ft. to 75 ft.
 (enter 0 if from surface)

CASING RECORD
 casing types insert appropriate code below
 ST STEEL **CO** CONCRETE
 PL PLASTIC **OT** OTHER
 MAIN CASING TYPE ST Nominal diameter top (main) casing (nearest inch)! 6 Total depth of main casing (nearest foot) 81
 60 61 63 64 66 70

OTHER CASING (if used)
 diameter inch depth (feet) from to
 E A C H I N G C A S I N G

SCREEN RECORD
 screen type or open hole insert appropriate code below
 ST STEEL **BR** BRASS **HO** OPEN HOLE
 PL PLASTIC **OT** OTHER

NUMBER OF UNSUCCESSFUL WELLS: 0
 WELL HYDROFRACTURED YES NO

CIRCLE APPROPRIATE LETTER
A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
E ELECTRIC LOG OBTAINED
P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO. M SD 024
 DRILLERS SIGNATURE [Signature]
 (MUST MATCH SIGNATURE ON APPLICATION)
 LIC. NO. M D

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

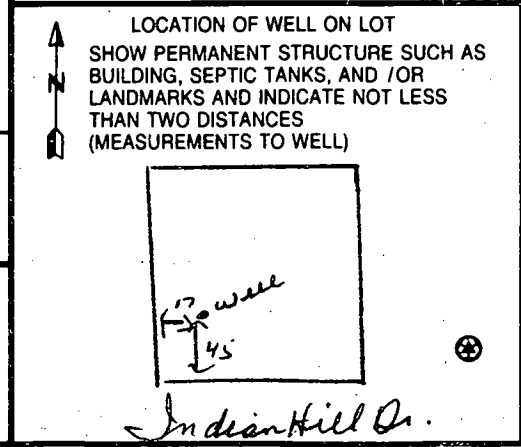
C 2 DEPTH (nearest ft.)
 1 80 2 340
 E A C H I N G C A S I N G
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
 T _____ (E.R.O.S.) W Q _____
 70 _____ 72 _____ 74 75 76 _____
 TELESCOPE CASING LOG INDICATOR OTHER DATA

C 3 **PUMPING TEST**
 HOURS PUMPED (nearest hour) 3
 PUMPING RATE (gal. per min.) 4
 METHOD USED TO MEASURE PUMPING RATE Bucket
 WATER LEVEL (distance from land surface)
 BEFORE PUMPING 41 ft.
 WHEN PUMPING 240 ft.
 TYPE OF PUMP USED (for test)
 A air **P** piston **T** turbine
 C centrifugal **R** rotary **O** other (describe below)
 J jet **S** submersible

PUMP INSTALLED
 DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO
 IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
 TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29 29
 CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 _____ 35 _____
 PUMP HORSE POWER 37 _____ 41 _____
 PUMP COLUMN LENGTH (nearest ft.) 43 _____ 47 _____
 CASING HEIGHT (circle appropriate box and enter casing height)
 above } LAND SURFACE (nearest foot)
 below }



B 1	1705	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND PERMIT TO DRILL WELL W516967 please print or type	STATE PERMIT NUMBER HO-94-3412 fill in this form completely
-----	------	--------------------------------	---	---

Date Received (APA) 050702
 OWNER INFORMATION
 15 Last Name: Rosenberg Owner: Dan
 36 Street or RFD: 12498 Indian Hill
 57 Town: Lakesville MD 21784

LOCATION OF WELL
 B 3 Howard
 8 COUNTY: Howard
 23 SUBDIVISION: Indian Hill
 SECTION C LOT 29
 52 NEAREST TOWN: West Friendship
 MILES FROM TOWN (enter 0 if in town) 3 1/2

DRILLER INFORMATION
 Driller's Name: Joseph L. Wayne MS D 24
 Firm Name: Joseph L. Wayne Well Drilling
 Address: 5512 Ridge Rd. Mt. Airy MD 21771
 Signature: Joseph L. Wayne Date: 5/6/02

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)
 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
 NEAR WHAT ROAD: Indian Hill Dr.
 DISTANCE FROM ROAD: 40 FT
 TAX MAP: 9 BLK: 12 PARCEL: 343

WELL INFORMATION
 APPROX. PUMPING RATE (GAL. PER MIN.): 5
 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): 500

USE FOR WATER (CIRCLE APPROPRIATE BOX)
 DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 INDUSTRIAL, COMMERCIAL, DEWATERING
 PUBLIC WATER SUPPLY WELL
 TEST, OBSERVATION, MONITORING
 GEO-THERMAL

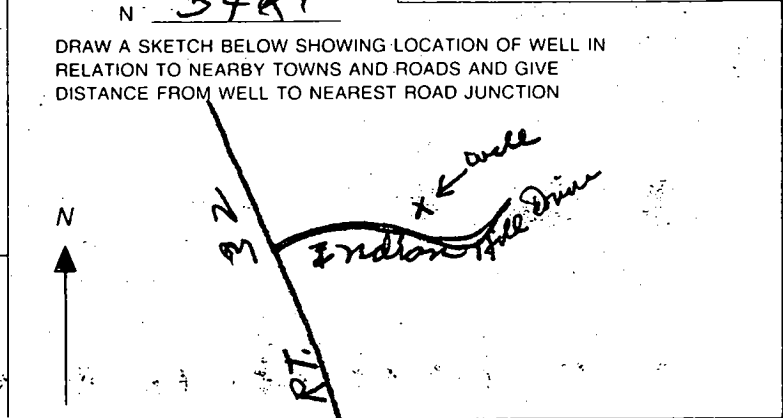
NOT TO BE FILLED IN BY DRILLER
 HEALTH DEPARTMENT APPROVAL
 COUNTY NAME: Howard COUNTY NO.: A10626
 STATE SIGNATURE: Mark E. R. [Signature] DATE ISSUED: 05/17/02
 CO SIGNATURE: [Signature] EXP. DATE: 5/17/03
 NORTH GRID: 547 EAST GRID: 0815

APPROXIMATE DEPTH OF WELL: 300 FEET
 APPROXIMATE DIAMETER OF WELL: 6 INCH NEAREST

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X
 SOURCES OF DRILLING WATER:
 1. well
 WRITE THE BOX NUMBER FROM THE MAP HERE
 E 8185
 N 5487

METHOD OF DRILLING (circle one)
 BORED (or Augered) JETTED Jetted & DRIVEN
 AIR-ROtary AIR-PERcussion ROTARY (Hydraulic Rotary)
 CABLE REVerse-ROtary DRive-POINT
 other: _____

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)
 THIS WELL WILL NOT REPLACE AN EXISTING WELL
 THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
 THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
 THIS WELL WILL DEEPEM AN EXISTING WELL
 PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE): _____



Not to be filled in by driller (MDE OR COUNTY USE ONLY)
 APPROP. PERMIT NUMBER: _____
 PERMIT No.: HO-94-3412

SPECIAL CONDITIONS
 NOTE: APPROVING AUTHORITY'S SHOULD USE SEPARATE SHEET IF NEEDED

*** WET SEASON RE-TEST NECESSARY PRIOR TO
ANY PERMIT APPROVALS * 12/18/97
SEPTIC SPECIFICATIONS WORK-SHEET**

All

SUBDIVISION: Indian Hill A 10626

STREET NAME: Indian Hill Rd Dr LOT NUMBER: 29-C

AVERAGE PERCOLATION RATE: _____ SQUARE FEET PER BEDROOM: _____

NUMBER OF BEDROOMS: _____ LINEAR FEET OF TRENCH PER BEDROOM: _____

TOTAL LINEAR FEET OF TRENCH: _____ SEPTIC TANK CAPACITY: _____

TOP SEAMED TANK REQUIRED? YES NO

COMPARTMENTED TANK REQUIRED? YES NO

TRENCH DIMENSIONS: Trench to be _____ feet wide. Inlet _____ feet below original grade. Bottom maximum depth _____ feet below original grade. Effective area begins at _____ feet below original grade. _____ feet of stone below distribution pipe.

=====

PUMPED SYSTEM PROPOSED: YES NO

PUMPED SEPTIC SYSTEM DETAIL: _____ gallon pump chamber.
YES NO Top seamed pump chamber required?

Note 1: Septic pump detail to be provided by installer prior to issuance of septic permit.
Note 2: Pump performance test is necessary prior to Health Department approval of pumped septic system.

=====

LOCATION: _____

ADDITIONAL NOTES: _____

Reviewer: _____ Date: _____

APPLICATION

A 10626

P _____

SEWAGE DISPOSAL TESTING

STATE OF MARYLAND - DEPARTMENT OF HEALTH AND MENTAL HYGIENE

HOWARD COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES
P. O. BOX 476, ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 465-5000, EXT. 356

DISTRICT 3

DATE 3/7/73

*3/4/73
2 PM*
*6/14/73
2 PM*

*10-1973
test necessary around March of
(wet period) f.*

*County Home 701
5602 Balto National Pike
Baltimore Md*

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER COUNTRY HOMES, LTD.

ADDRESS 5602 Balto National Pike PHONE 788 5044

PROPERTY LOCATION: Balto 28 Md
Mr. Robert Kanode

SUBDIVISION INDIAN HILL LOT NO. 29, Blk. C

ROAD AND DESCRIPTION Indian Way HILL DRIVE

SIZE OF LOT 1 1/2 acre TYPE BLDG. 3 or 4
NUMBER OF BEDROOMS _____

IF NOT SINGLE RESIDENCE DESCRIBE _____

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE.

SIGNATURE OF APPLICANT _____

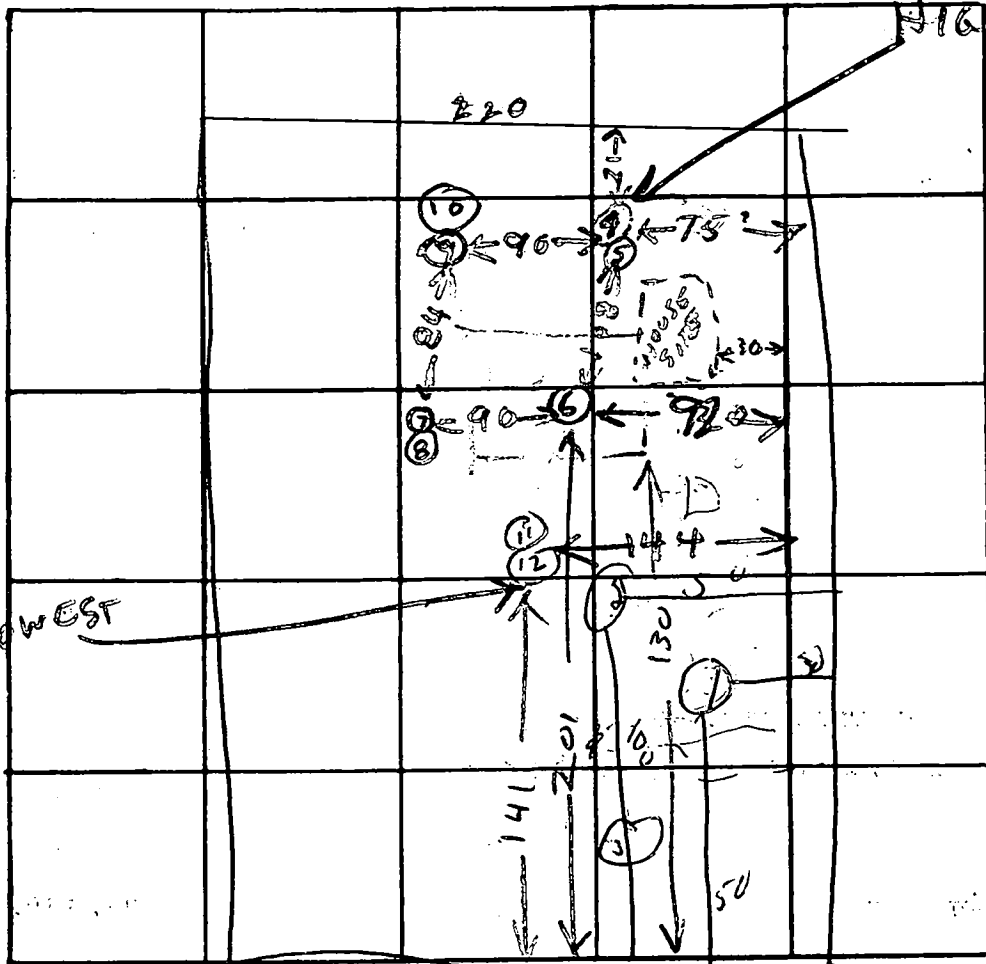
APPROVED BY B. Hodger FOR _____ DATE 6/14/73

REJECTED BY DW. Managham FOR Septic DATE 3-7-73
(KIND OF SYSTEM)

HOLD PENDING FURTHER TESTS 3/7/73 DATE _____

REASONS FOR REJECTION OR HOLDING 3-7-73 too much surface water to ensure
proper working septic system

THIS IS NOT A PERMIT



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME	
			START	STOP	START	STOP		
3/7/77	1	12 ft	soil good after 4 ft - too much surface water to get true side of soil hole smaller. Cross of ground water at 10 ft					
	2	9 ft	water breaking in at 8 ft					
	3	7 ft	too much surface water					
4/14/77	4	9	UNDERGROUND WATER 9 FT TOP 3 FT CLAYISH					
	5	5	339	336	336	344	8	
	6	7 1/2	UNDERGROUND WATER 7 1/2 FT ROCK BOTTOM TOP 6 FT CLAY					
	7	10	UNDERGROUND WATER 9 FT					
	8	3	349	405	standch 37 min			
	9	9	UNDERGROUND WATER 9 FT					
	10	3	407	425	4425	450	25	

March
REMARKS

TYPE OF SOIL

TESTED BY

6/14/73

ALSO PRESENT

11 3 418 446 little perc not even one inch
12 8 red clay with some



Preliminary
APPLICATION

A 10626

P _____

SEWAGE DISPOSAL TESTING

MARYLAND STATE DEPARTMENT OF HEALTH

HOWARD COUNTY

ELLICOTT CITY

DISTRICT 3

DATE 7/14/65

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TESTS IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER COUNTRY HOMES LTD.

ADDRESS 925 Rambling Drive, Baltimore 21228 PHONE _____

PROPERTY LOCATION:

SUBDIVISION INDIAN HILL LOT NO. Twenty-nine, Block C

ROAD AND DESCRIPTION Indian Way

OCCUPANT Vacant PHONE _____

PERSON TO CONSTRUCT SYSTEM _____

ADDRESS _____ PHONE _____

SIZE OF LOT 1-1/2 A. TYPE BLDG. 3-4 B.R.
NUMBER OF BEDROOMS

IF NOT SINGLE RESIDENCE DESCRIBE _____

SIGNATURE OF APPLICANT COUNTRY HOMES, LTD.
[Signature]

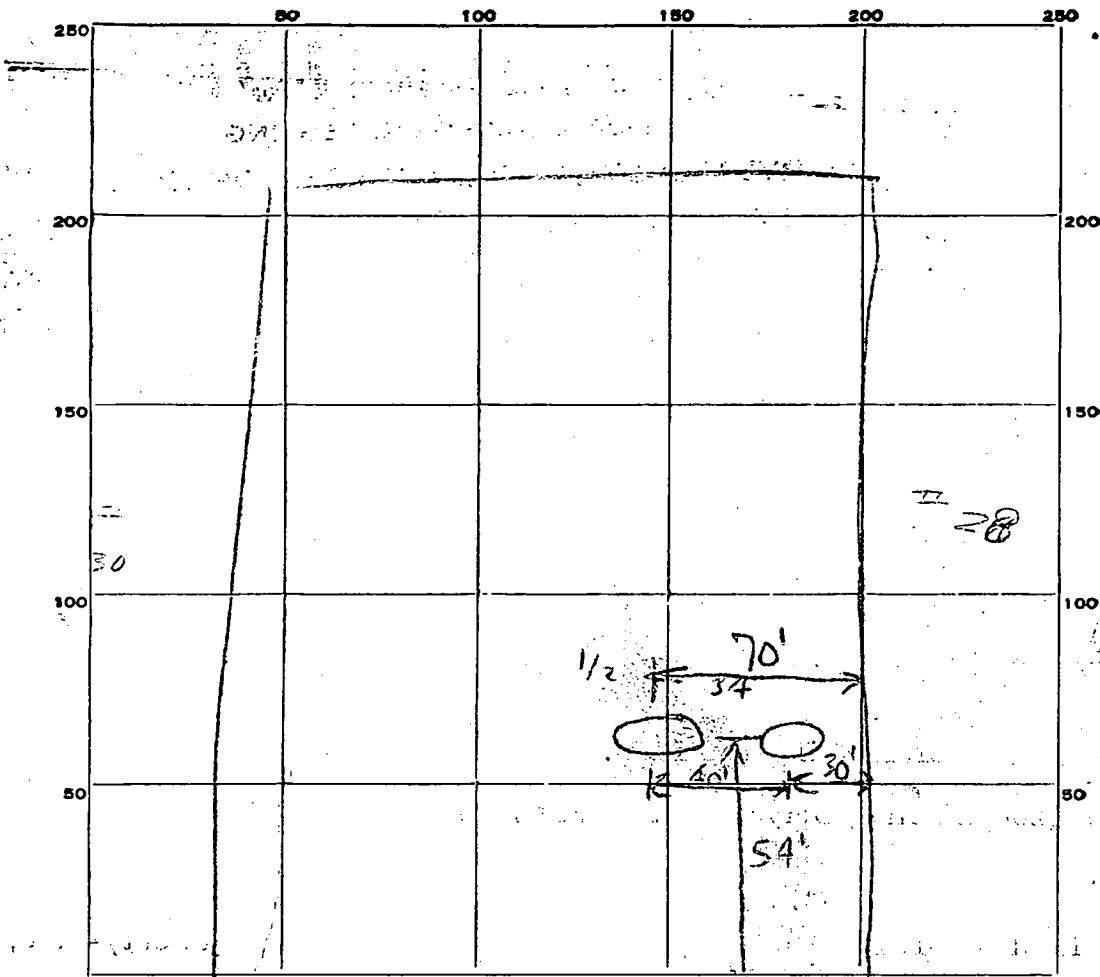
APPROVED BY *[Signature]* DATE 5-21-68
925 RAMBLING DRIVE, BALTIMORE, MARYLAND

REJECTED BY _____ FOR _____ DATE _____
(KIND OF SYSTEM)

HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING _____

THIS IS NOT A PERMIT



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

Indian Way

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
8/1/65	1	4 ft.	11:12:20	11:20	11:30	11:35	1st
	2	9 ft.	11:25	11:25	11:30	11:35	1st
	3	4 ft.	11:16	11:17	11:17	11:17	2nd
	4	9 ft.					

SOIL AUGER FINDING:

R.D.F. 8/3/65

TESTED BY:

REMARKS:

LOT 29, B.P.K.C.

APPLICATION

A 10626

SEWAGE DISPOSAL TESTING

P _____

MARYLAND STATE DEPARTMENT OF HEALTH

HOWARD COUNTY

ELLICOTT CITY

Septic Tank - 3 bedroom - 750 gal
- 4 " " 1000 gal

DISTRICT 3

DATE 7/14/65

Dry Well - 112 sq ft absorbent adswall and below inlet pipe
for bedroom. Max depth permitted for Dry Well is 10ft below avg
grade.

Place Dry Well 5ft from front lot line and 70ft from
right sideline as seen when facing from front lot line

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TESTS IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE
DISPOSAL SYSTEM.

PROPERTY OWNER COUNTRY HOMES LTD.

ADDRESS 925 Rambling Drive, Baltimore 21228 PHONE _____

PROPERTY LOCATION:

SUBDIVISION INDIAN HILL LOT NO. Twenty-nine, Block C

ROAD AND DESCRIPTION Indian Way

OCCUPANT Vacant PHONE _____

PERSON TO CONSTRUCT SYSTEM _____

ADDRESS _____ PHONE _____

SIZE OF LOT 1-1/2 A. TYPE BLDG. 3-4 B.R.
NUMBER OF BEDROOMS

IF NOT SINGLE RESIDENCE DESCRIBE _____

SIGNATURE OF APPLICANT COUNTRY HOMES LTD.
925 RAMBLING DRIVE

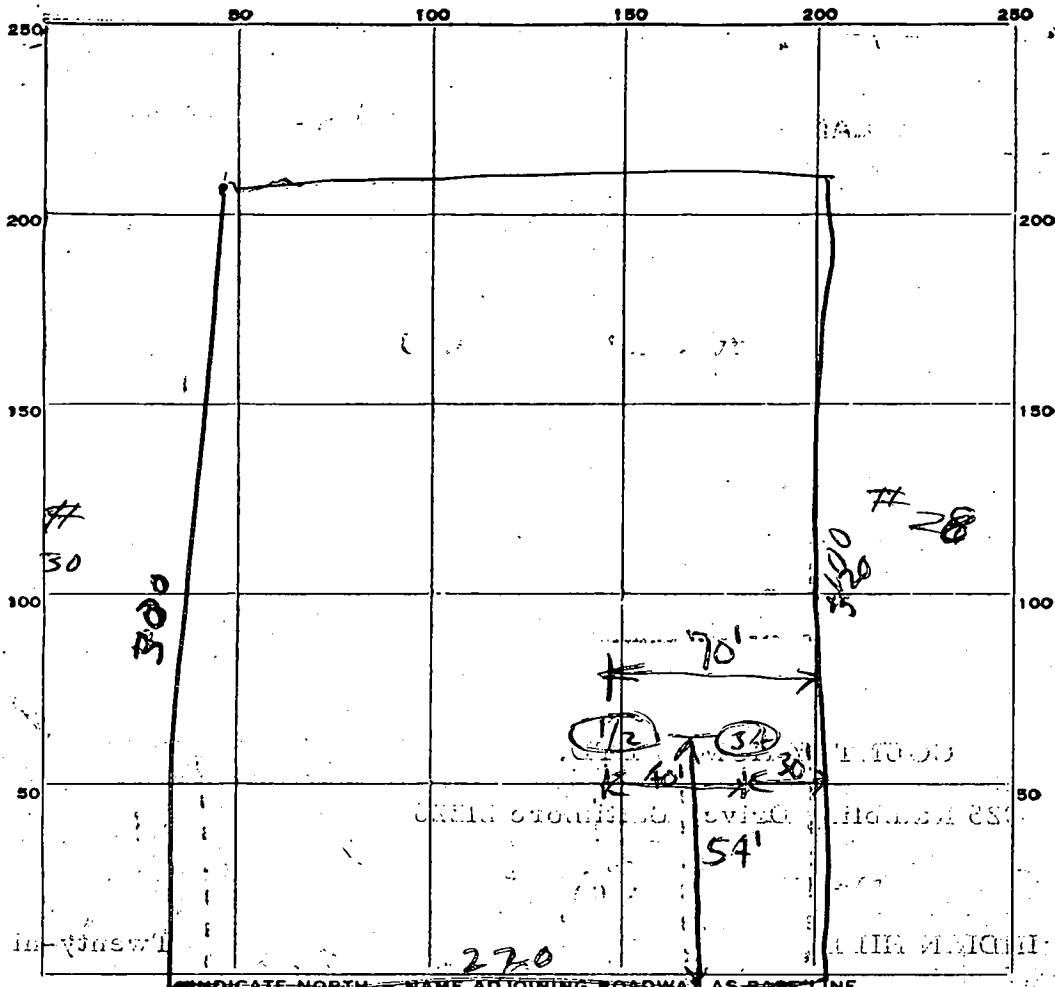
APPROVED BY [Signature] DATE 5-21-68
BALTIMORE, MARYLAND (KIND OF SYSTEM)

REJECTED BY _____ FOR _____ DATE _____
(KIND OF SYSTEM)

HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING _____

THIS IS NOT A PERMIT



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASELINE.
Indian Hollow Hill DRIVE

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
8/4/95	1	4 ft.	11:11	11:12	11:12	11:13	10 min
	2	9 ft.	11:12	11:20	11:20	11:30	10 min
	3	4 ft.	Not	tested	Same	type Soil	
	4	9 ft.	11:16	11:17	11:17	11:19	2 min

SOIL AUGER FINDING _____

TESTED BY *R.W.F. 8/3/95*

REMARKS _____

LOT 29, B.K.C.

February 26, 1970

Country Homes, Ltd.
925 Rambling Drive
Baltimore, Maryland 21228

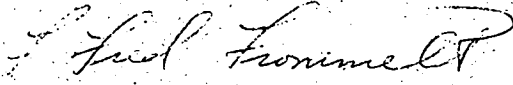
Attention: Mr. R. E. Kanode

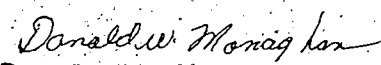
Dear Sir:

The following will explain why your request for a building permit for Lot No. 29, Indian Hills, has not been granted. Normally the original subdivision tests serve for the issuance of a building permit. Under unusual conditions such as regrading, lot lines or lot size being changed, further tests are sometimes required. In one instance after a subdivision was approved regrading removed a considerable amount of the top soil to near the point of solid rock. On this basis building permits were denied and the Health Department was upheld in court.

In this subdivision, Indian Hills, a building permit and a permit to install the septic system was granted for Lot No. 4A. Excavation of the septic area revealed soil that in no way resembled the type of soil that would give test results comparable to the original tests indicating an unusual condition. On this basis this Department does not feel it is unreasonable to ask to have the Lot No. 29, in question, retested to reveal the type of soil present to determine if it is similar to the soil originally tested or if it was different as on Lot No. 4A, this being due to engineering error on the original percolation test, or regrading, changing directional flow of storm drainage, etc.

Very truly yours,


F. Fred Frommelt,
Sanitarian


Donald W. Monaghan,
Sanitarian

FFF: jr

APPLICATION

PERCOLATION TESTING

A _____

P _____

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
3525-H ELLICOTT MILLS DRIVE/ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 313-2640

DISTRICT _____

DATE _____

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I HEREBY APPLY FOR THE NECESSARY TEST PRIOR TO APPLICATION FOR PERMIT TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER _____

ADDRESS _____ PHONE _____

AGENT OR PROSPECTIVE BUYER _____

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION _____ LOT NO. _____

ROAD AND DESCRIPTION _____

TAX MAP _____ PARCEL # _____

SIZE OF LOT _____ TYPE BLDG. _____
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT.

(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

DISAPPROVED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____

REASONS FOR REJECTION OR HOLDING _____

PERCOLATION TEST PLAT/PRELIMINARY PLAT - TITLE OR I.D. # _____ DATE _____

SITE DEVELOPMENT PLAN/FINAL PLAT - TITLE OR I.D. # _____ DATE _____

THIS IS NOT A PERMIT

COUNTY #

SOIL PROFILE

0' D
 heavy brn
 si lm

12"
 heavy
 tan yel
 brn
 loam

48"
 ↓

2

No profile
 80 min
 rates

3

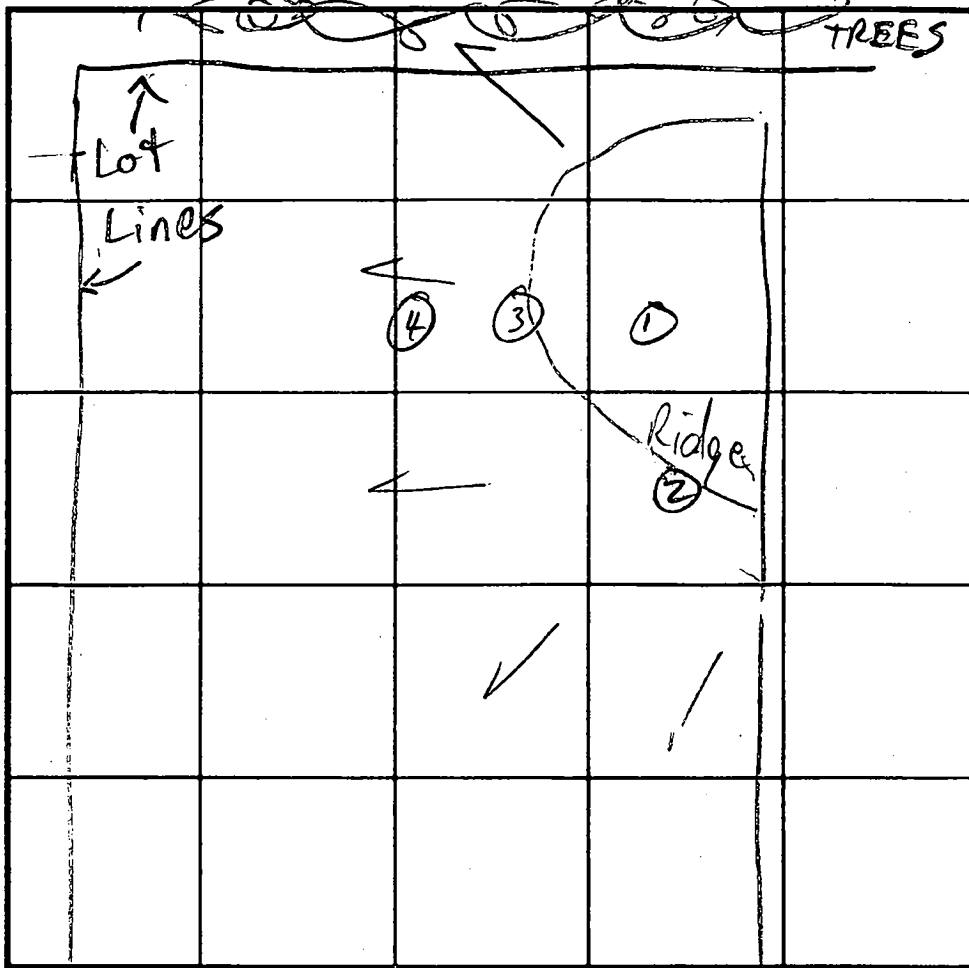
brn
 si lm

10'
 reddish
 brn
 si lm

16'
 yel brn
 loam

29'
 yel brn
 sa lm

41'



SOIL PROFILE

0' 4
 dk brn
 si lm

10' red brn
 heavy
 si lm

22' yel brn
 loam

33'

31/32"
 15

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE. INDIAN HILL
 ELEV LEADING EL RDG

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
4/18/02	1	7"	10:37	20/32	3 - 14"	32"	11:26
		6 3/8"	10:56	7/16		31 1/2"	11:41
		5 15/16"	11:11	7/16	44"	31 3/4"	11:56
		5 1/16"	11:26	7/16		30 29/32"	12:11
		40 min inch. 7 3/16"	11:41	6/16		30 17/32"	12:34
		11:56	11/32	30 3/16"	12:51		
	2	7"	10:59	5/16	4 16"	7"	11:55
		6 1/16"	11:14	3/16		6 9/16"	12:10
		6 1/2"	11:29	2/16	36	5 3/16"	12:30
		6 1/16"	11:44	2/16		5 2/16"	12:50
		90 min inch. 6 1/4"	11:59	2/16		4 10/16"	1:08

REMARKS _____

TYPE OF SOIL _____

TESTED BY _____ ALSO PRESENT _____

TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME _____ TRENCH WIDTH _____

INLET DEPTH _____ MAXIMUM BOTTOM DEPTH _____ SQ. FT./BEDROOM _____

Indian Hills Lot 29

AH 1

0 - 3 sil 7.5 yr 413

3 - 12 1 - sil 5 yr 414

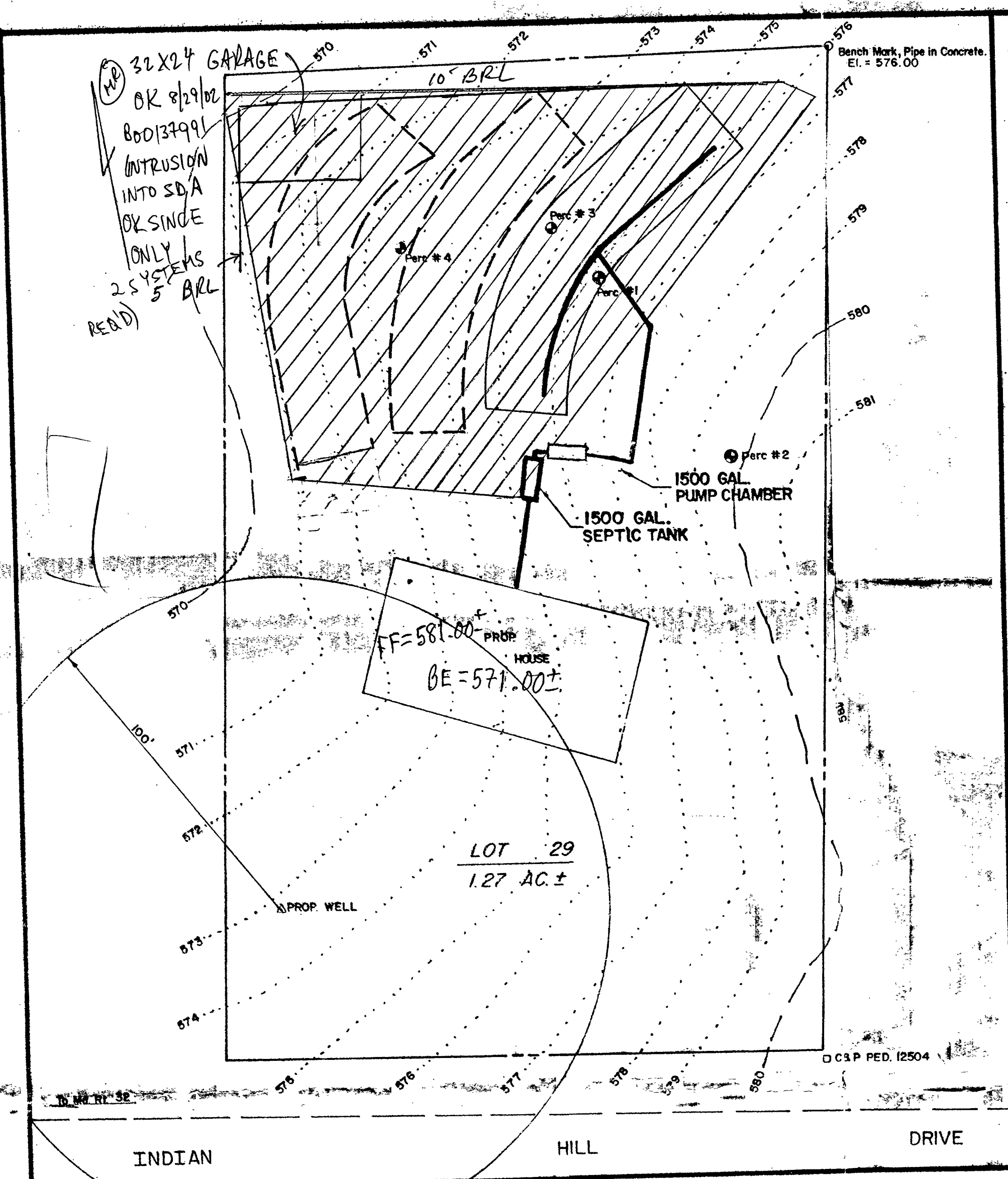
12 - 20 1 - sil 10 yr 5/6 15⁹⁰ cl

20 - 34 1 10 yr 5/6

34 - 41 sil - 1 10 yr 5/6

41 - 55 sil variegated color
7.5 yr 418
5 yr 5/8
10 yr 4/7

55 - sil



DESIGN CRITERIA

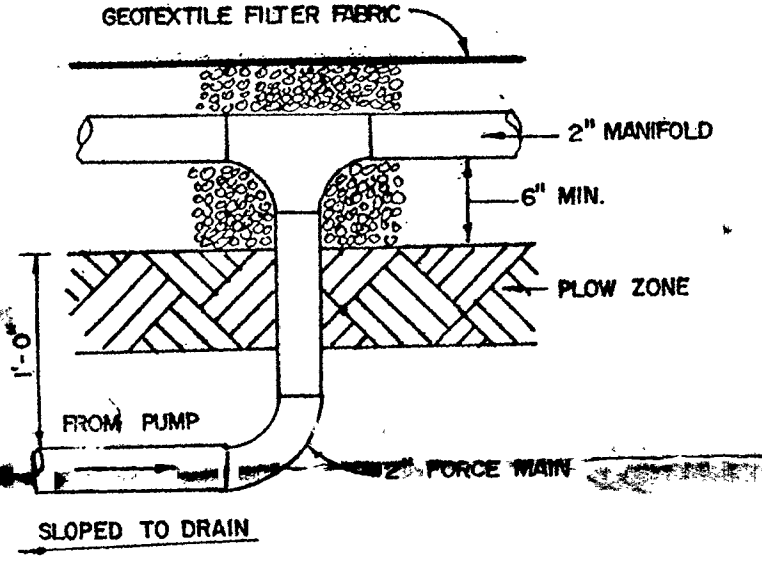
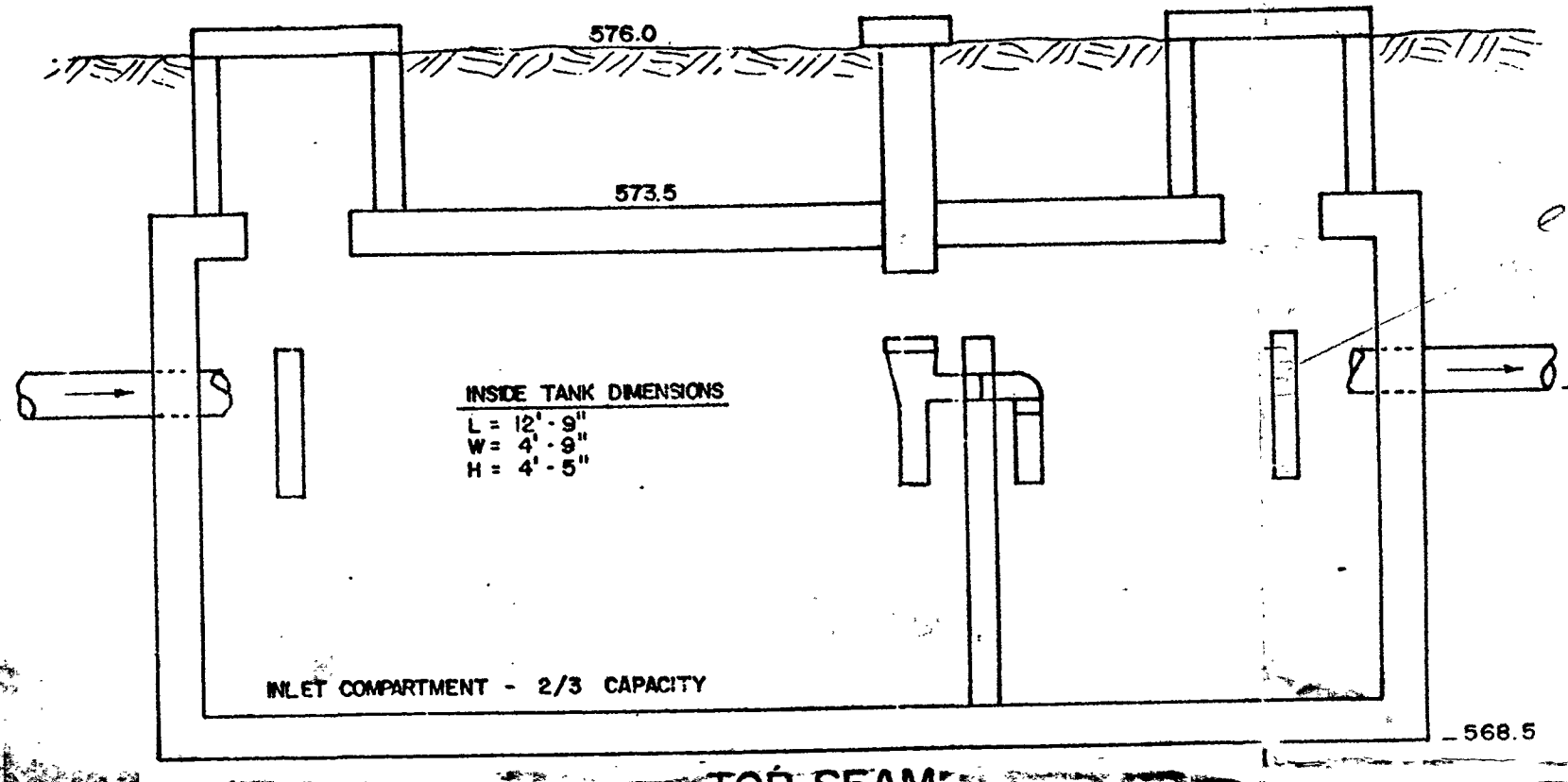
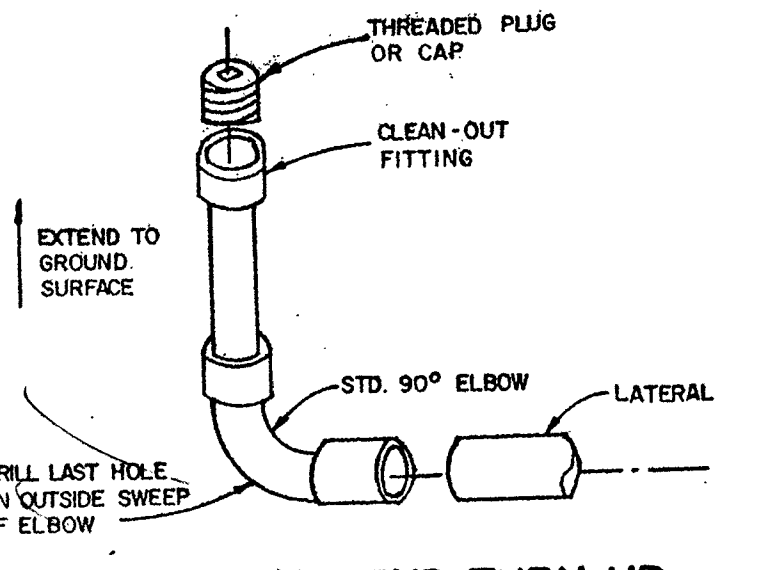
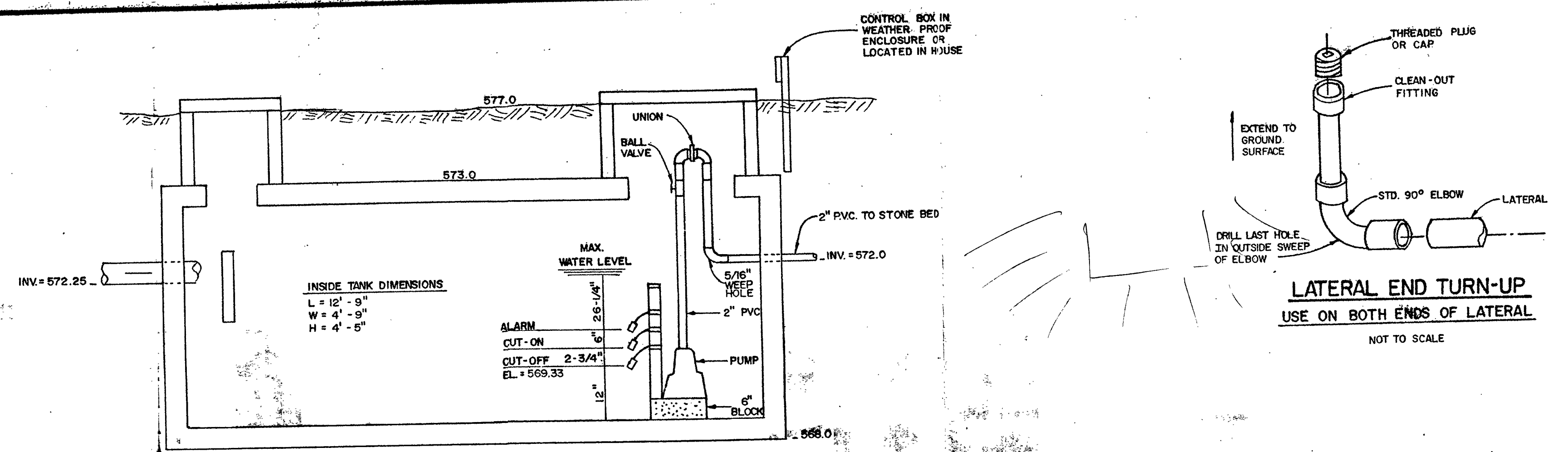
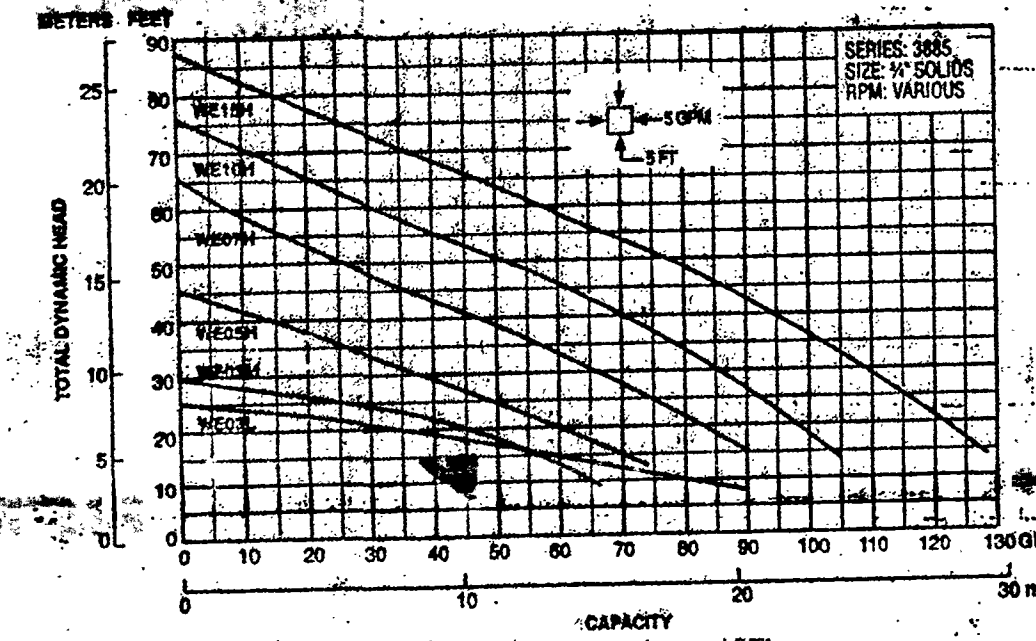
4 Bed Rooms x 150 = 600 GPD
At Grade Loading Rate = 0.4 GPD/Sq. Ft.
Bed Area Required: 600 / 0.4 = 1500 Sq. Ft.
Bed Provided: 16' x 100' = 1600 Sq. Ft.
1 = 1500 GAL. Top Seam Septic Tank
1 = 1500 GAL. Top Seam Pump Chamber
Pump Rate = 28 Perforations @ 1.63 GPM = 46 GPM
TDH: 14'
Dose: 600 / 6 = 100 Gal.

SOIL TEST

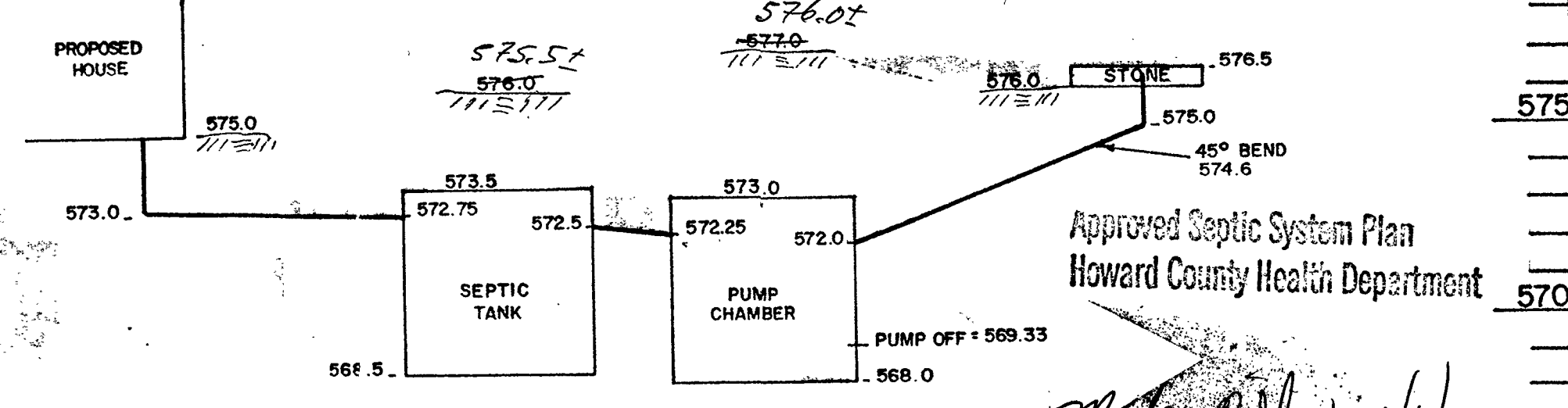
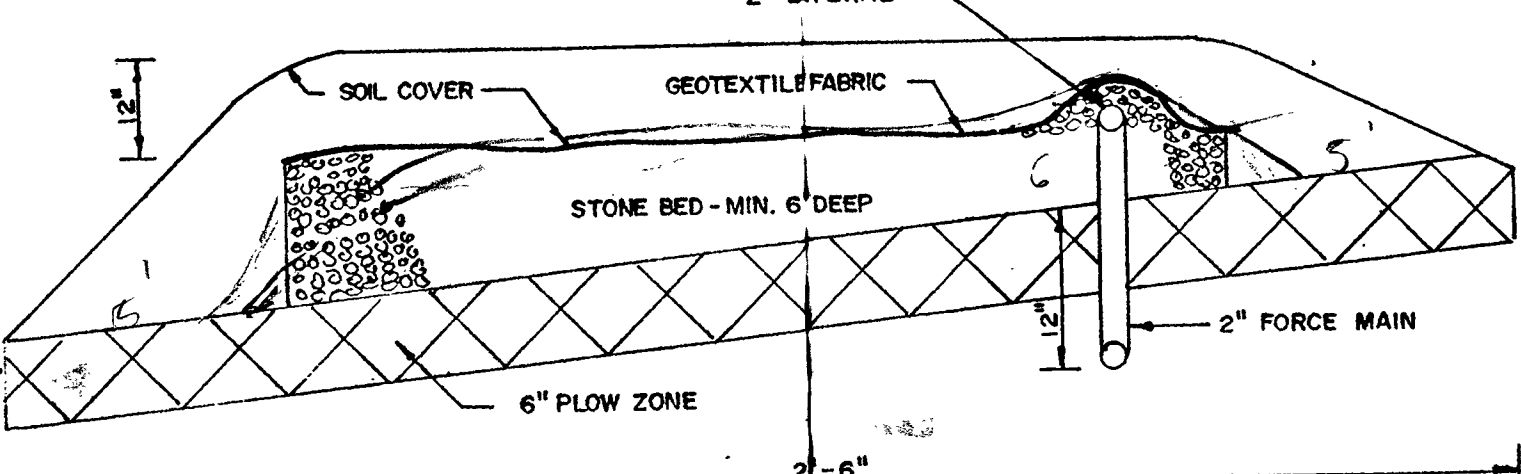
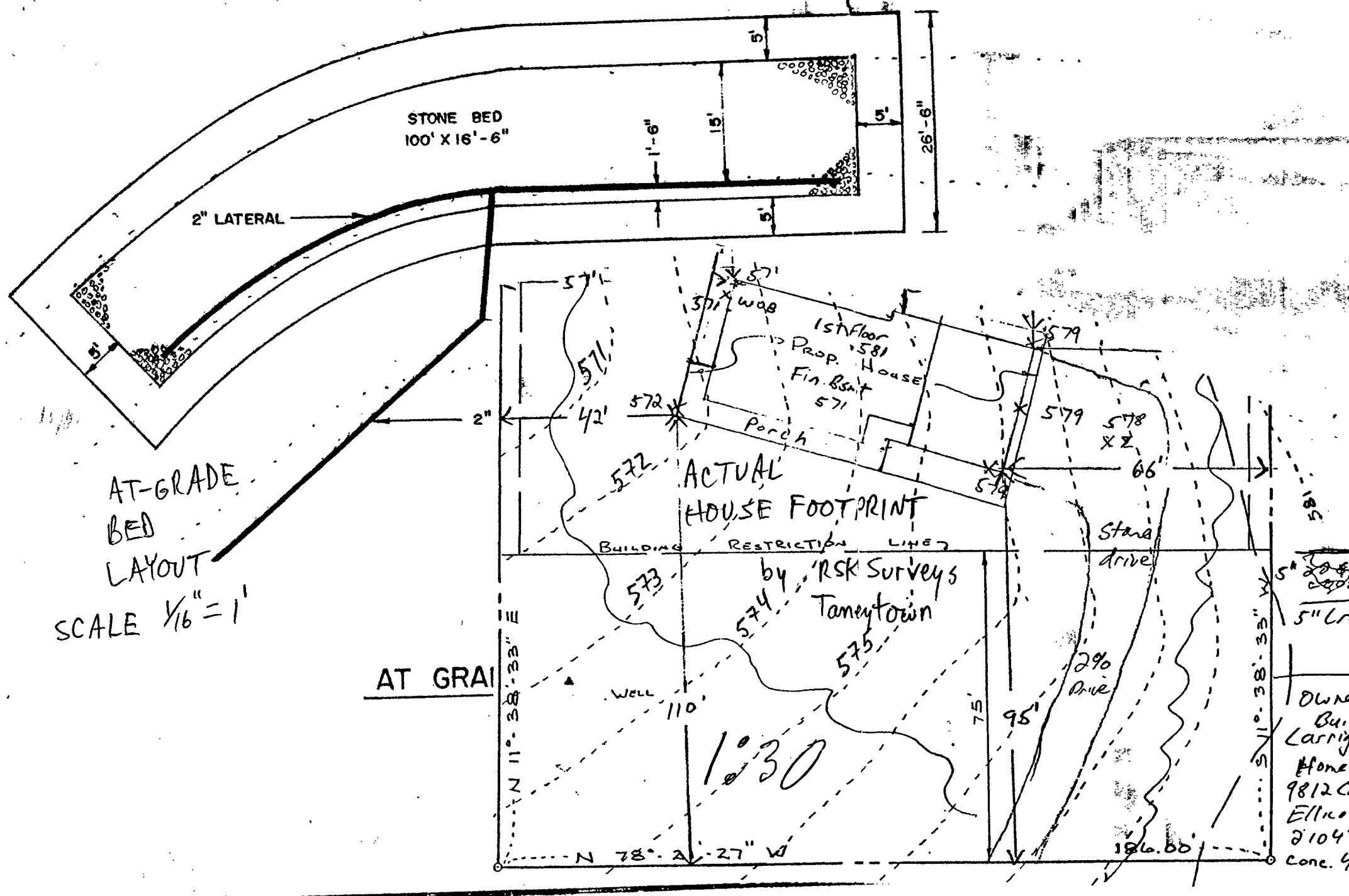
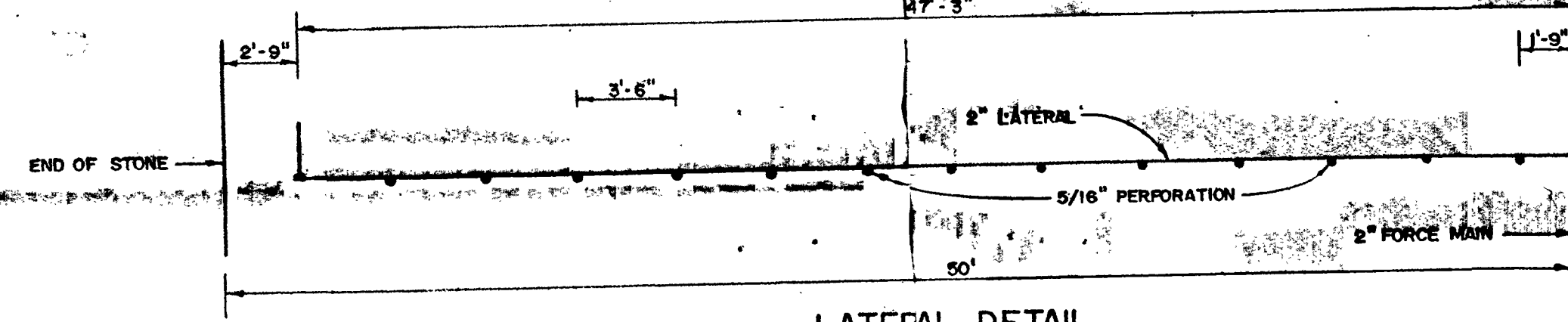
- #1: 1" @ 41 min.
- #2: 1" @ 30 min.
- #3: 1" @ 53 min.
- #4: 1" @ 36 min.

SPECIFICATIONS

- Tank measurements and elevations are based on septic tanks and pump chambers as manufactured by Mayer Bros., Elkridge, Md. (410) 796-1434.
- All piping to be schedule 40 PVC of sizes shown.
- The force main from the pump chamber to the stone bed is to be installed with a continuous slope back to the chamber to assure complete drainage following each pump cycle.
- A submersible pump to remove 46 GPM against 14' TDH to be provided. Pump to be a Goulds Model 3885 WE 0311 M or equal.
- A test of the pump system and distribution piping is required prior to covering the system.
- The High Water Alarm is to be on a separate circuit. Alarm to be located in the house.



This area designates a private sewage DISPOSAL AREA as required by the Maryland Department of Environment for individual sewage disposal. Improvements of any nature in this area are restricted. This SEWAGE DISPOSAL AREA shall become null and void upon connection to a public sewerage system. The County Health Officer shall have authority to grant adjustments to the private sewage DISPOSAL AREA.



APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF HOWARD COUNTY

James D. Clise
Howard County Health Officer



S/E ENGINEERING, INC. WESTMINSTER, MARYLAND			
SCALE: AS SHOWN	APPROVED: JDC	DRAWN: RSK	DES: JDC
DATE: MAY, 2002	LOT 29 EXTENSION OF INDIAN HILL DAN ROSENBERGER		DRAWING NO. 1 OF 1
AT GRADE SEWAGE SYSTEM			

...ENT ...RIDGE

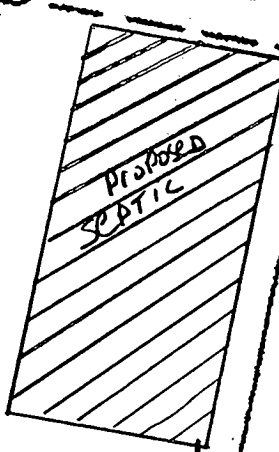
1240

15

S 80° 44' 17" E
186.16

16

Utility Easement



10'
5 50
22
40' BUILD
RESTRICTION

N 11° 38' 33" E
295.00'

29
Proposed Home
55,588.9 \$

N 11° 38' 33" E
302.73'

28
50,430

75' BUILDING
RESTRICTION LINE
BLOCK

* Proposed Well

48.00'
N 11° 38' 33"

(C)

18° 21' 27" E
186.00'

542.00'

156.00' 20'

HILL DRIVE

27" E
946.09'

200.00'
Dan Rosenberger

LEGEND

- = PERCOLATION TEST WOLE
- ⊙ = SEWAGE DISPOSAL AREA 80" IN DIAMETER
- ⊗ = WATER WELL

NOTE:
AREAS BY PLANIMETER

RECEIVED

AUG 23 1965

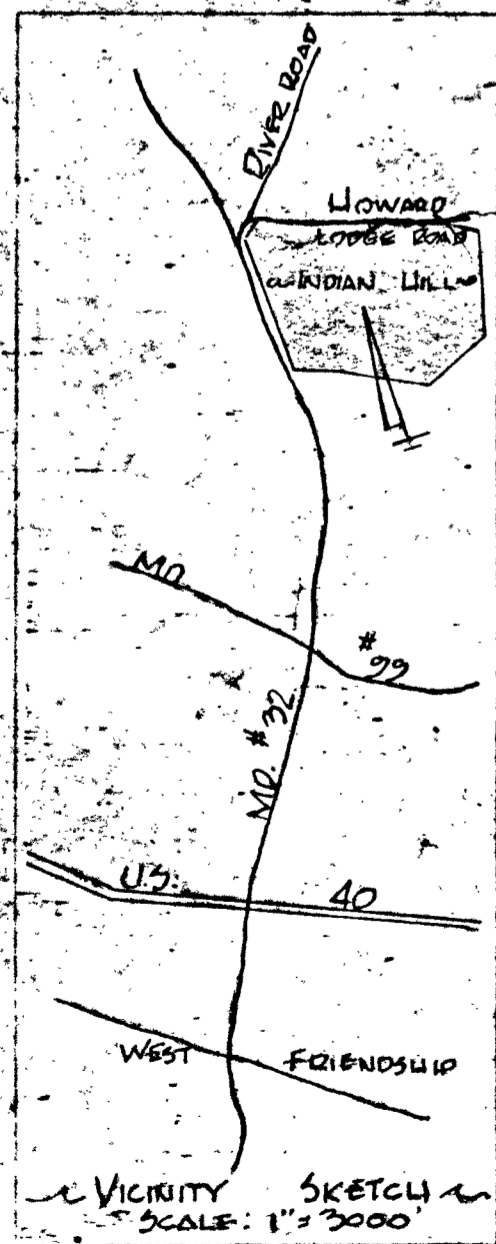
HOWARD COUNTY
PLANNING COMMISSION

PERCOLATION DATA

MAXIMUM DEPTH PERMITTED FOR EFFLUENT PIPE TO ENTER SEWAGE DISPOSAL AREA AT ITS HIGHEST ELEVATION WITH REFERENCE TO EXISTING GRADE AT TIME OF PERCOLATION TEST

LOT NO. & BLOCK AVERAGE PERCOLATION TIME IN MIN. / 2 INCHES

LOT NO. & BLOCK	AVERAGE PERCOLATION TIME IN MIN. / 2 INCHES
400	2.15
401	2.00
402	2.10
403	2.05
404	2.12
405	2.08
406	2.14
407	2.09
408	2.11
409	2.07
410	2.13
411	2.06
412	2.16
413	2.04
414	2.18
415	2.02
416	2.20
417	2.01
418	2.22
419	2.00
420	2.24
421	1.99
422	2.26
423	1.98
424	2.28
425	1.97
426	2.30
427	1.96
428	2.32
429	1.95
430	2.34
431	1.94
432	2.36
433	1.93
434	2.38
435	1.92
436	2.40
437	1.91
438	2.42
439	1.90
440	2.44
441	1.89
442	2.46
443	1.88
444	2.48
445	1.87
446	2.50
447	1.86
448	2.52
449	1.85
450	2.54
451	1.84
452	2.56
453	1.83
454	2.58
455	1.82
456	2.60
457	1.81
458	2.62
459	1.80
460	2.64
461	1.79
462	2.66
463	1.78
464	2.68
465	1.77
466	2.70
467	1.76
468	2.72
469	1.75
470	2.74
471	1.74
472	2.76
473	1.73
474	2.78
475	1.72
476	2.80
477	1.71
478	2.82
479	1.70
480	2.84
481	1.69
482	2.86
483	1.68
484	2.88
485	1.67
486	2.90
487	1.66
488	2.92
489	1.65
490	2.94
491	1.64
492	2.96
493	1.63
494	2.98
495	1.62
496	3.00
497	1.61
498	3.02
499	1.60
500	3.04
501	1.59
502	3.06
503	1.58
504	3.08
505	1.57
506	3.10
507	1.56
508	3.12
509	1.55
510	3.14
511	1.54
512	3.16
513	1.53
514	3.18
515	1.52
516	3.20
517	1.51
518	3.22
519	1.50
520	3.24
521	1.49
522	3.26
523	1.48
524	3.28
525	1.47
526	3.30
527	1.46
528	3.32
529	1.45
530	3.34
531	1.44
532	3.36
533	1.43
534	3.38
535	1.42
536	3.40
537	1.41
538	3.42
539	1.40
540	3.44
541	1.39
542	3.46
543	1.38
544	3.48
545	1.37
546	3.50
547	1.36
548	3.52
549	1.35
550	3.54
551	1.34
552	3.56
553	1.33
554	3.58
555	1.32
556	3.60
557	1.31
558	3.62
559	1.30
560	3.64
561	1.29
562	3.66
563	1.28
564	3.68
565	1.27
566	3.70
567	1.26
568	3.72
569	1.25
570	3.74
571	1.24
572	3.76
573	1.23
574	3.78
575	1.22
576	3.80
577	1.21
578	3.82
579	1.20
580	3.84
581	1.19
582	3.86
583	1.18
584	3.88
585	1.17
586	3.90
587	1.16
588	3.92
589	1.15
590	3.94
591	1.14
592	3.96
593	1.13
594	3.98
595	1.12
596	4.00
597	1.11
598	4.02
599	1.10
600	4.04
601	1.09
602	4.06
603	1.08
604	4.08
605	1.07
606	4.10
607	1.06
608	4.12
609	1.05
610	4.14
611	1.04
612	4.16
613	1.03
614	4.18
615	1.02
616	4.20
617	1.01
618	4.22
619	1.00
620	4.24
621	0.99
622	4.26
623	0.98
624	4.28
625	0.97
626	4.30
627	0.96
628	4.32
629	0.95
630	4.34
631	0.94
632	4.36
633	0.93
634	4.38
635	0.92
636	4.40
637	0.91
638	4.42
639	0.90
640	4.44
641	0.89
642	4.46
643	0.88
644	4.48
645	0.87
646	4.50
647	0.86
648	4.52
649	0.85
650	4.54
651	0.84
652	4.56
653	0.83
654	4.58
655	0.82
656	4.60
657	0.81
658	4.62
659	0.80
660	4.64
661	0.79
662	4.66
663	0.78
664	4.68
665	0.77
666	4.70
667	0.76
668	4.72
669	0.75
670	4.74
671	0.74
672	4.76
673	0.73
674	4.78
675	0.72
676	4.80
677	0.71
678	4.82
679	0.70
680	4.84
681	0.69
682	4.86
683	0.68
684	4.88
685	0.67
686	4.90
687	0.66
688	4.92
689	0.65
690	4.94
691	0.64
692	4.96
693	0.63
694	4.98
695	0.62
696	5.00
697	0.61
698	5.02
699	0.60
700	5.04
701	0.59
702	5.06
703	0.58
704	5.08
705	0.57
706	5.10
707	0.56
708	5.12
709	0.55
710	5.14
711	0.54
712	5.16
713	0.53
714	5.18
715	0.52
716	5.20
717	0.51
718	5.22
719	0.50
720	5.24
721	0.49
722	5.26
723	0.48
724	5.28
725	0.47
726	5.30
727	0.46
728	5.32
729	0.45
730	5.34
731	0.44
732	5.36
733	0.43
734	5.38
735	0.42
736	5.40
737	0.41
738	5.42
739	0.40
740	5.44
741	0.39
742	5.46
743	0.38
744	5.48
745	0.37
746	5.50
747	0.36
748	5.52
749	0.35
750	5.54
751	0.34
752	5.56
753	0.33
754	5.58
755	0.32
756	5.60
757	0.31
758	5.62
759	0.30
760	5.64
761	0.29
762	5.66
763	0.28
764	5.68
765	0.27
766	5.70
767	0.26
768	5.72
769	0.25
770	5.74
771	0.24
772	5.76
773	0.23
774	5.78
775	0.22
776	5.80
777	0.21
778	5.82
779	0.20
780	5.84
781	0.19
782	5.86
783	0.18
784	5.88
785	0.17
786	5.90
787	0.16
788	5.92
789	0.15
790	5.94
791	0.14
792	5.96
793	0.13
794	5.98
795	0.12
796	6.00
797	0.11
798	6.02
799	0.10
800	6.04



APPROVED FOR INDIVIDUAL WATER SUPPLY & SEWERAGE SYSTEM:
Theodore C. Sured
 THEODORE C. SURED
 HOWARD CO. HEALTH OFFICER
 DATE: AUG 20, 1965

PRELIMINARY PLAN OF SUBDIVISION
 IN INDIAN HILL
 AS PREPARED FOR COUNTRY HOMES, LTD.
 MD. RT. #32 & RIVER ROAD - 3rd ELEC. DIST., HOWARD CO. MD.
 SCALE: 1" = 200' AUGUST 10th, 1965

5653

57

44

AVENUE

51

20

20

20

5

DIVE

4

ORIG PERCS APPROVED HERE

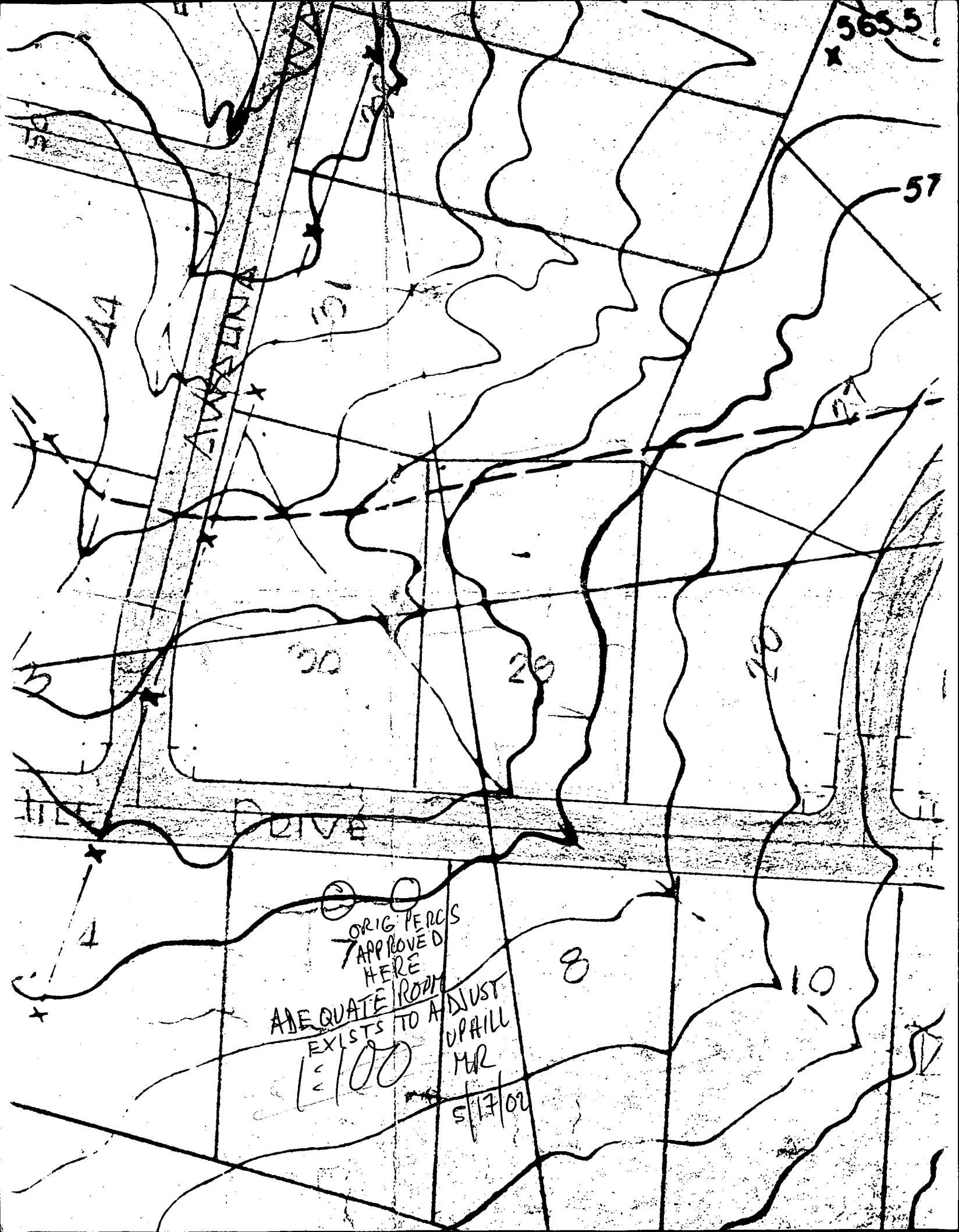
ADEQUATE ROOM EXISTS TO ADJUST UP HILL

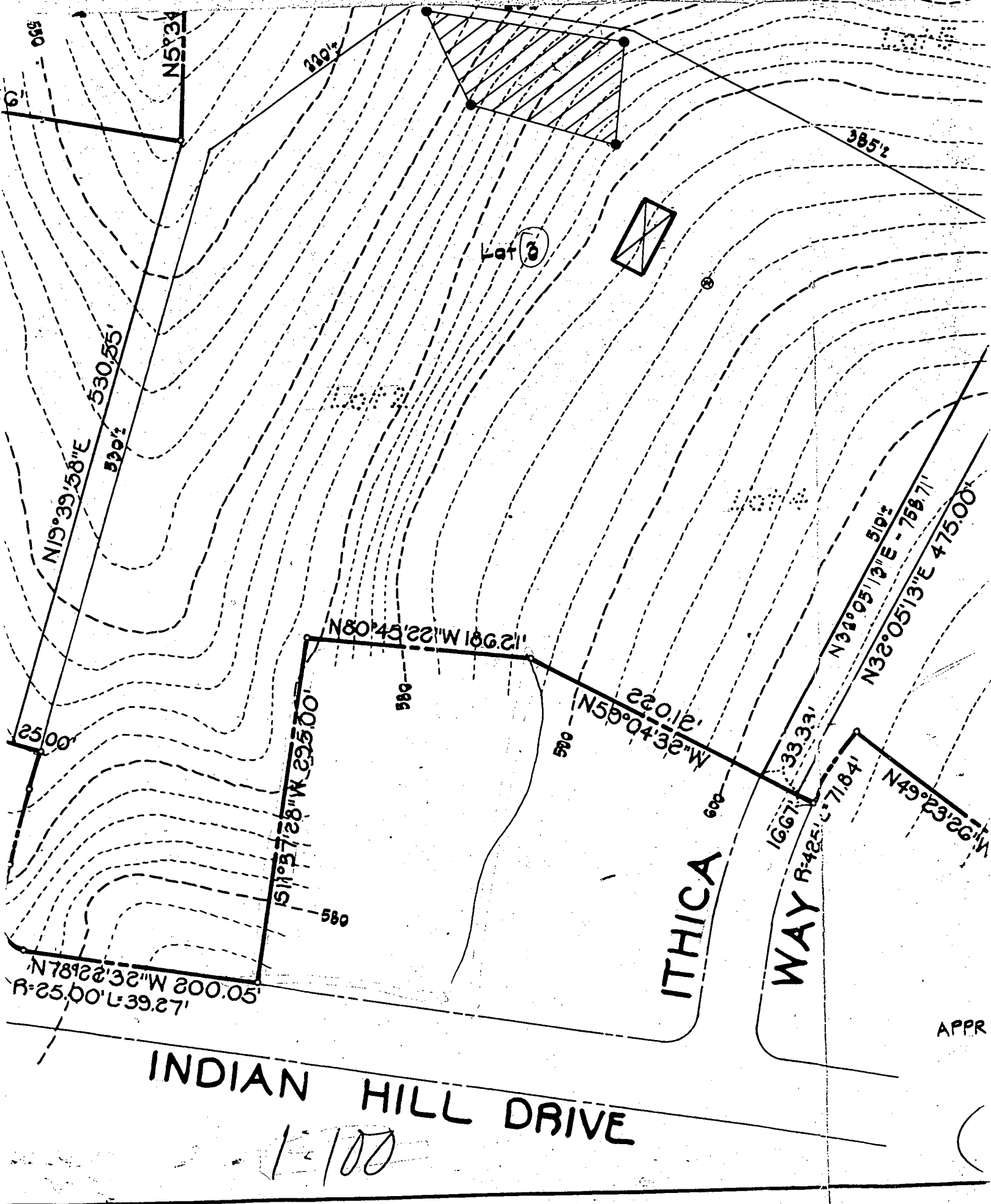
1/00

5/17/02

8

10





62
 530.55'
 N19°39'58"E
 520'
 25.00'
 50.008 M 23.2987 N
 R=25.00' L=39.27'

N52°34'

320'

Lot 3

385'

N80°45'22"W 186.21'

S11°37'28"W 255.00'

580

M=240.65 N
 N59°04'32"W
 220.16'

580

ITHICA

WAY R=425.00' L=71.84'

N32°05'13"E 475.00'
 N32°05'13"E 758.71'
 510'
 1667' 33.33'
 600

N49°23'20"E

APPR

INDIAN HILL DRIVE

1/2 100

ALTERNATIVE ONSITE SEWAGE DISPOSAL SYSTEMS

In accordance with the attached memorandum the following technologies may be used as alternative systems for new construction on existing lots of record. Onsite sewage disposal technologies were selected that we believe will hydraulically function while reducing the load of nutrients from septic systems to ground and surface waters. These systems require maintenance that may need to be performed on a regular basis. Property owners should be required to maintain a maintenance contract for the life of the system.

At-Grade Mound

Based on THE WISCONSIN AT-GRADE SOIL ABSORPTION SYSTEM FOR SEPTIC TANK EFFLUENT by Converse, Tyler, and Peterson. This is basically a pressure dosed elevated bed system. The system is designed and constructed similar to a sand mound, but no sand is used. The bed is placed directly on the surface of the ground which has been plowed. The use of a roto-tiller is not permitted. Leaching chambers such as the Infiltrator® may be used. Particular care must be taken not to disturb the plowed area. Unlike a sand mound there is no sand placed on the plowed surface to protect it from compaction. Also, the initial and recovery sewage disposal areas must be protected from compaction before, during, and after construction.

Permeability - 2 to 60 minutes per inch in the most restrictive horizon in the top 30 inches of soil as measured in an infiltrometer.

Vertical Permeability (min/in)	Design Loading Rate (gpd/ft ²)
2 to 15	0.8
16 to 30	0.6
31 to 60	0.4

Linear Loading Rate (gpd/ft of bed length) - ≤ 9

The effective absorption area is that area in the gravel or leaching chamber directly down gradient from the distribution pipe. The system should be designed to maximize the length of the bed perpendicular to the slope. Accurate as-builts are necessary so that the ends of the distribution laterals can be recovered for future maintenance. Lateral turn-ups should be cut off at grade and/or shielded to protect from breakage. We have consistently had turn-ups broken by lawn mowers. See the State of Maryland DESIGN AND CONSTRUCTION MANUAL FOR SAND MOUND SYSTEMS for the design of a pressure distribution system.

THE WISCONSIN AT-GRADE SOIL ABSORPTION SYSTEM FOR SEPTIC TANK EFFLUENT

J.C. Converse
Member ASAE

E.J. Tyler
Affiliate ASAE

J.O. Peterson*

The Wisconsin at-grade soil absorption system was developed to overcome some site conditions that restrict the use of in-ground soil absorption systems and to reduce the need for a Wisconsin mound system. This paper describes the siting, design and construction of the Wisconsin at-grade system and reports performance.

DESCRIPTION OF THE SYSTEM

Figure 1 shows a schematic of a typical Wisconsin at-grade system. It is designed following procedures similar to in-ground or mound systems but the bottom of the aggregate is located "at-grade" or on the tilled soil surface. Typically the site is tilled, aggregate placed on the tilled area, distribution pipe positioned within the aggregate, synthetic fabric spread over the aggregate, and final soil cover placed over the system. The at-grade unit is preceded by a pretreatment unit such as a septic tank or a septic tank and dose chamber.

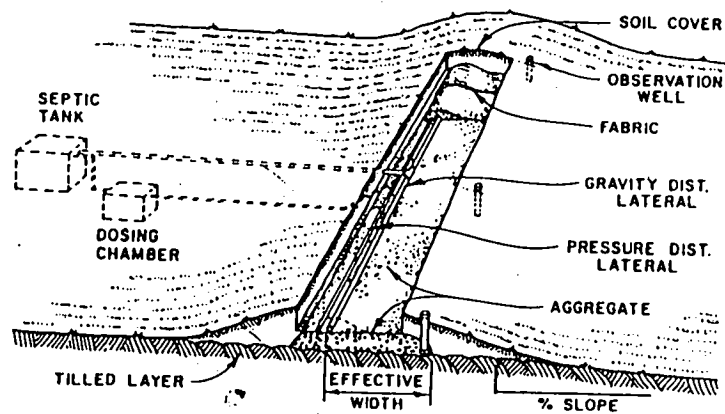


Fig. 1 Schematic of the Wisconsin At-Grade System Showing Both Pressure and Gravity Distribution. A Dose Chamber is Required When Pressure Distribution (Recommended) is Used.

*J.C. Converse, Professor, Agricultural Engineering Department; E.J. Tyler, Associate Professor, Soil Science Department and Wisconsin Geological and Natural History Survey; J.O. Peterson, Associate Professor, Agricultural Engineering Department and Environmental Resources Center, University of Wisconsin-Madison. Research supported by the Small Scale Waste Management Project, the College of Agricultural and Life Sciences, and State of Wis.

Soil and Site Criteria

The Wisconsin at-grade system is used on sites of intermediate soil and site conditions between those for in-ground units and the Wisconsin mound. Codes often require a separation distance between the bottom of the aggregate and the limiting soil condition (bedrock or seasonal high water table). In Wisconsin the separation distance is 90 cm (3 ft), while codes of other jurisdictions may have different depth requirements. For example, if the site has limiting conditions deeper than 90 cm (3 ft), an at-grade system may be placed on the site. If the depth is less than 90 cm (3 ft), a Wisconsin mound system may be appropriate. If the depth is substantially greater than 90 cm (3 ft), a shallow or deep in-ground system could be used. Figure 2 shows the relationships for the 4 system types and Table 1 lists the soil site limitations for the at-grade system in Wisconsin. Most codes also have limitations on soil permeability that must be followed.

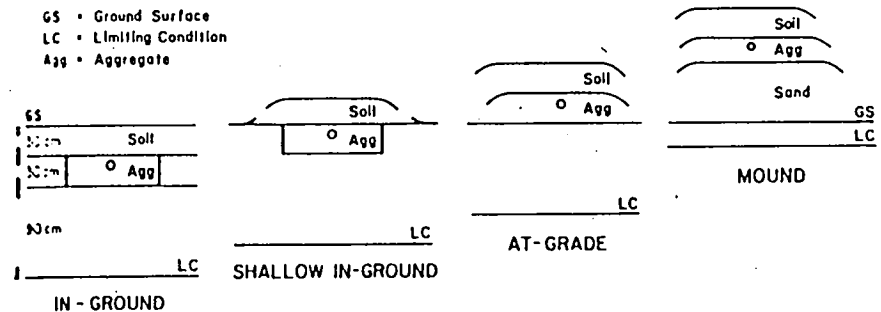


Fig. 2 Cross Sections of 4 Soil Absorption Systems in Relation to Ground Surface (GS) and Depths Using 90 cm (3 ft) as the Acceptable Separation Distance Between Aggregate (Agg) and Limiting Condition (LC)

Table 1. Soil and Site Criteria for the Wisconsin At-Grade System Used in Wisconsin

Parameter	Limit
Depth from surface to high water ^a	90 cm (3 ft) ^b
Depth from surface to bedrock	90 cm (3 ft) ^b
Surface slope	25% ^c
Permeability of soil (0-90 cm)	- ^d
flood plain	no

^a May be seasonal which would be estimated by mottles.

^b Wisconsin code sets 90 cm separation distance to limiting condition.

^c Limited experience on 25% slope. Recent systems, not reported here, have been placed on 25-30% slopes.

^d The standard percolation test was not performed on the sites. The estimated percolation rates for the surface horizon are between 0 and 60 mpi with the majority of the sites having rates of 30 mpi or faster.

Table 2 gives the soil loading rates for the at-grade system which are similar to those often used for in-ground systems (Wisc. Adm. Code, 1983). These loading rates include a factor of safety. For example, many codes require a design loading rate of 568 Lpd/bedroom (150 gpd/bedroom) but the actual loading rate may range from 25 to 75% of that amount (Converse and Tyler, 1987). If actual loading rates are used in the design, then the design loading rates in table 2 should be reduced or increased proportionately.

Table J. Summary of Soil and Site Conditions for the 14 At-Grade Systems.^a

Site	Slope	Limitation ^b	Description by horizon: Depth, mottling, texture ^c		
1	2	42" Est. Sat	0-24" sil	24-42" cl	42"+ mot cl.
2	8	42" Est. Sat.	0-30" sil	30-42" sil	42"+ mot sil.
3	1	38" Est. Sat	0-20" sil	20-38" sil	38"+ mot sil.
4	10	36" Est. Sat.	0-18" sil	18-36" sil	36"+ mot sil
5	10	28" Est. Sat.	0-28" sil	28-50" mot sil	50"+ mot sil
6	12	42" Est. Sat.	0-11" sil	11-42" sil	42"+ mot. sil
7	6	37" Est. Sat.	0-37" sil		37"+ mot. sil
8	10	39" Est. Sat.	0-39" sil & s		39"+ mot s
9	0	42" banded s	0-42" sil		42-60"+ banded s
10	14	37" Est. Sat.	0-37" sil		37"+ mot. sil
11	12	36" Est. Sat.	0-22" sil	22-36 sil	36"+ mot. c
12	13	36" Est. Sat.	0-36" sil		36"+ mot. sil
13	19	40" Est. Sat.	0-10" sil	10-40" cl	40-54" mot. cl
14	15	38" Est. Sat.	0-4" sil	4-38" cl	38"+ mot. cl

^a Most limiting or average soil condition of three observed soil profiles is reported. System design is based on most limiting site condition.
^b Est. Sat. is Estimated Seasonal Saturation assuming that mottles are indicative of seasonal saturation; Banded s is banded sandy soil, some cementation of sand may be present.
^c Mot. is soil mottling or variegations of soil colors; sil is silt loam; sil is silty clay loam; cl is clay loam; sil is sandy clay loam; sil is sandy loam; sil is loamy sand; l is loam; s is sand; c is clay (Soil Survey Staff, 1981).

System Size and Configuration

Table 4 gives the system size and configuration. There are 5 configurations that have been used. A plan view and cross section of each are shown in Fig. 3. The preferred configuration is the long and narrow unit. Site restrictions may require using several short narrow sections to make up the total length required such as shown in configuration 3 and 4. Seven use pressure distribution and 7 have gravity distribution (two units use gravity distribution boxes as shown in Fig. 3).

Loading Rates and Age

The design loading rate on each system ranged from 1.9 cm/d (0.46 gpd/ft²) to 3.8 cm/d (0.92 gpd/ft²) (Table 4). On sites 1, 3, 4, 5, and 11, the system was designed so that individual portions of the system could be loaded. On site 6, the flow from the distribution box could be diverted to 3 locations in the unit. The loading rates on all of the systems ranged from 0.2 to 2.9 times the design rate. On site 11, the flow was confined to only 12% of the absorption area. The age of the systems ranges from 11 to 58 mo.

Performance

Hydraulic: All systems, except site 11 have been performing satisfactorily (Table 5). There has been no seeping of effluent at the toe in 13 of the 14 sites. On site 11, seepage occurred after about a year, but as part of the experiment this unit was loaded at 2.9 times the design load (Table 4) as the flow was confined to about 12% of the absorption area. Had the flow not been confined to such a small area, seepage probably would not have occurred. Shortly after the flow was diverted to another part of the system, ponding in this section disappeared. Systems 1 and 3, both pressure distribution, do show some ponding in the half of the system that is being loaded after 58 and 44 mo. of operation, respectively. These systems have been loaded at 1.05 and

Table 4. System Characteristics for the 14 At-Grade Units

Site Config No. (a)	No. Bed Rooms	No. People	Age (b)	Effective Absorption Area (ft ²)	No. Units	Length (ft)	Width (ft)	Type Distr. (c)	Water Usage (gpd)		Loading Rate --(gpd/ft ²)--		Linear Load Actual/Design (e)		Actual/Design (f)		
									Usage	Design	Actual	Design	Actual	Design	Actual	Design	
1	2	3	6	58	850	2	85	5	P	280	0.53	0.66	1.09	3.00	5.76	1.92	25
2	1	2	2	50	330	1	66	5	P	197	0.91	0.60	0.55	6.00	1.61	0.27	100
3	3	3	5	44	500	2	100	2.5	P	158	0.60	0.63	0.60	0.23	4.80	0.38	100
4	4	3	9	42	1250	1	120	5.2	P	355	0.60	0.57	0.91	0.26	4.60	0.29	100
5	1	3	4	38	795	4	60	5.2	G	216	0.57	0.60	0.60	0.13	4.50	0.35	100
6	5	3	4	35	825	1	37.5	5.3	G	121	0.55	0.15	0.57	1.41	3.00	0.64	22
7	1	3	3	34	744	1	75	11	G-BOX	170	0.60	0.23	0.60	0.11	10.40	2.45	12
8	1	2	2	24	330	1	66	5	P	86	0.91	0.26	0.91	0.26	4.60	0.63	100
9	1	3	5	23	500	1	100	5	P	156	0.90	0.31	0.90	0.13	4.50	0.64	22
10	1	2	2	20	500	1	100	5	G	64	0.60	0.13	0.60	0.11	10.40	2.45	12
11	5	4	4	16	1044	4	14.5	18	G-BOX	178	0.57	1.41	0.57	1.41	10.40	2.45	12
12	1	3	3	13	750	1	125	6	G	79	0.60	0.11	0.60	0.11	3.60	0.63	100
13	1	3	3	13	750	1	60	12.5	G	168	0.60	0.22	0.60	0.22	7.50	2.80	100
14	1	2	2	11	657	1	90	7.3	G	135	0.46	0.21	0.46	0.21	3.33	1.50	100

^a See Fig. 3 for configuration of system.

^b Age of system as of Oct. 1987.

^c Effluent distribution in system, P is pressure distribution, G is gravity, G-Box is gravity with distribution box.

^d Design loading rate on all sites was at 0.6 gpd/ft² except for sites 2, 8, 9 which was 0.90 gpd/ft².

Site 2, a silt loam, was sized smaller due to site restrictions. Site 8 and 9, loamy sand and sandy loam, respectively, were sized one class higher (Wisc. Adm. Code, 1985). Site 14 was oversized for sandy loam.

^e Values in column reflect design length and width and design flow rates of 150 gpd/bedroom.

^f Used - Portion of system that is being used.

^g Used an area of 7 ft long by 18 ft wide (1/2 of one unit).

1.24 their design loading rate. System 1 is on a sloping site and only one of the observation tubes has ponding, indicating a very small portion of the absorption area is ponded. In system 3, the absorption area is level with one tube showing ponding. In this system more of the area is probably ponded.

System 5 and 7, both gravity systems, have some ponding in one of the observation tubes. In system 5, the effluent is being loaded at 1.9 times design as the flow is confined to 1/4 of the absorption area. Based on probing of the area adjacent to the tube, the ponding is confined to a small fraction of the currently used portion of the system. A similar conclusion can be stated for system 7. This localized ponding is due to poor distribution that is characteristic of gravity distribution. Localized ponding may be occurring in between the observation tubes in the other gravity systems and thus is not obvious. However, to date no wetness or spongy areas are evident along the toe of the units. None of the other systems have observed ponding.

Both gravity flow and pressure distribution are being evaluated in at-grade systems. Using gravity flow, the installation costs are less since a dose chamber is not needed. However, distribution by gravity is not very uniform along the length of the system (Converse, 1974) and localized ponding at the toe of the aggregate can occur (system 5 and 7). Typically in the gravity unit, the effluent will flow out of the distribution pipe at one or two locations and move down through the aggregate, and flow downslope at the aggregate/soil interface until it infiltrates into the soil surface. Over time the area becomes clogged as this portion of the soil is being overloaded. Eventually, ponding will occur at the toe of the aggregate at which time it starts to move horizontally along the toe of the aggregate. Thus there are large areas of the system that do not receive wastewater. In contrast, the pressure distribution network applies the effluent more uniformly along the length of the system, where the effluent moves downward through the aggregate and is absorbed by the soil as the effluent moves downslope at the aggregate soil interface.

Because of localized ponding and the lack of years of experience, the current recommendation for gravity networks is to 1) provide a means, such as a distribution box or an accessible tee at the inlet, to divert the flow to another portion of the absorption area and 2) install the pressure distribution laterals next to the gravity laterals with the force main stubbed just outside the system. If the gravity network fails, a dose chamber and force main can be installed very easily without disturbing the at-grade unit. On going research will confirm if gravity flow is a viable means of distributing effluent in at-grade systems.

Treatment Effectiveness: Five at-grade units (Sites 1, 3, 4, 5, and 7) were sampled for treatment effectiveness. Soil samples were taken beneath each of the systems, along with controls some distance from the absorption area, at 30 cm (1 ft) increments to a depth of 90 cm (3 ft). In the structured soil at 90 cm (3 ft), 11 of the 16 samples from the 4 sites showed fecal coliform counts ranging from 3 to 60 MPN/gram of soil with an average of 10 MPN per gram of soil for all 16 samples. In the one non-structured soil site, there were < 2 MPN per gram of soil of fecal coliforms found 30 cm (1 ft) below the aggregate/soil interface in four samplings. A more detailed report will be presented in another paper.

DESIGN AND CONSTRUCTION EXAMPLE

Design

When working with on-site wastewater treatment systems, the evaluator/designer must evaluate the soil site conditions and then select the

best system for the site that meets the owner's needs and causes the least impact on the environment. When evaluating the site the following should be done:

1. Evaluate the landscape for surface water movement. Measure elevations and distances on the site so that slope, contours and available areas can be determined.
2. Describe several soil profiles where the system will be located. Determine the limiting conditions such as bedrock, high water table, and soil permeability.

The designer uses the information to design a system that will fit the site. Not all sites meet the criteria for on-site soil absorption systems and an alternative to soil absorption may be necessary.

Assume for the example the following site factors:

1. Soil profile is similar to Site 1 in Table 3.
2. Slope is 20%.
3. Distance available along the contour is 175 ft and along the slope it is 30 ft.
4. Design for a 3 bedroom house.

Based on the above information, it appears that an at-grade system is suited for this site because estimated high water is at 42 in, the surface soil horizon is permeable, and code setback requirements are assumed to be satisfied.

Steps:

1. Determine the design daily flow rate (DDFR).
Since this is a 3 bedroom house, use 150 gallons per bedroom or a design daily flow rate of 450 gpd.
2. Determine the effective absorption area (EAA) required for the site.

Use table 2 for selecting the appropriate design loading rate (DLR) that matches the soil conditions. Since this is a silt loam soil with good structure, use a DLR = 0.6 gpd/ft².

$$\begin{aligned} \text{EAA} &= \text{DDFR} \div \text{DLR} \\ &= 450 \text{ gpd} \div 0.6 \text{ gpd/ft}^2 \\ &= 750 \text{ ft}^2 \end{aligned}$$

3. Determine the design linear loading rate (DLLR) for the site.

Evaluate the soil profile to estimate a design linear loading rate for the site. Since wastewater will move at the aggregate soil interface on this 20% slope, the system should be narrow to avoid toe seepage. Also, since the horizon is clay loam below 42", it will present a barrier to the vertical flow. Thus a narrower system is appropriate. An appropriate design linear loading rate for this site would be about 4 gpd/ft which is based on experience.

4. Determine the effective absorption width (EAW) of the unit.

Since the estimated design linear loading rate is 4 gpd/ft and the loading rate is 0.6 gpd/ft² then:

$$EAW = DLLR \div DLR$$

$$= 4 \text{ gpd/ft} \div 0.6 \text{ gpd/ft}^2$$

$$= 6.7 \text{ ft}$$

This is the effective width of the aggregate. If this was on a non-sloping site, then the total aggregate width would be 6.7 ft. Since this is on a sloping site, the total aggregate width will be about 8.0 ft as approximately 1.5 to 2 ft of aggregate must be placed upslope of the distribution pipe to support the distribution network and satisfy the angle of repose of the aggregate (Fig. 1).

5. Determine the absorption length (AL) of the unit.

Since the required effective absorption area is 750 ft² then:

$$AL = EAA \div EW$$

$$= 750 \text{ ft}^2 \div 6.7 \text{ ft}$$

$$= 112 \text{ ft}$$

6. Determine the overall length (L) and width (W) of the unit.

It is necessary to tie the aggregate into the surrounding soil surface by placing a layer of soil about 5 ft wide around the perimeter of the aggregate (Fig. 1). Greater widths for landscaping purposes are satisfactory.

$$L = \text{aggregate length} + \text{soil cover end lengths}$$

$$= 112 \text{ ft} + 5 \text{ ft} + 5 \text{ ft}$$

$$= 122 \text{ ft}$$

$$W = \text{aggregate width} + \text{soil cover side widths}$$

$$= 8.0 \text{ ft} + 5 \text{ ft} + 5 \text{ ft}$$

$$= 18.0 \text{ ft}$$

7. Determine the height of the unit.

Design for a minimum of 6 in. of aggregate beneath the distribution pipe and about 2 in. above the pipe. As shown in Fig. 1, the aggregate will taper off at the edges. Place synthetic fabric over the aggregate and approximately 1 ft of soil cover over the fabric. Thus the height (H) of the unit above the original grade will be approximately 2 ft at the distribution lateral and tapering to the edges.

8. Design a distribution network for the unit.

Since the absorption area is relatively narrow and on a slope, a single distribution line along the length is satisfactory. It would be located 6.7 ft upslope of the aggregate toe. If the site was level, the distribution pipe would be located in the center of the aggregate. The distribution can either be gravity or pressure but pressure distribution is recommended.

NO Gravity

Gravity: If gravity is used, provisions should be made so the flow can be diverted to at least 2 locations within the unit. Two vertical risers near the center inlet tee allow access to the network to close off one half the unit. Another approach is to use a distribution box as shown in Fig. 3. The gravity laterals consist of 4" perforated PVC drain pipe preferably with a center inlet. One distribution lateral along the length of the absorption area for gravity is sufficient regardless of the width of the absorption area. A pressure distribution line should be installed next to the gravity distribution line because gravity distribution in these systems have not been proven with time. If several absorption areas are installed (Fig 3, configuration 2, 3 or 4) gravity distribution is not recommended.

Pressure: Design the pressure network as per in-ground pressure networks and mound systems (Otis, 1981). Normally the network consists of a single lateral along the length of the absorption area. On wider absorption areas, some have installed several parallel laterals but only on relatively small slopes. Care must be taken to get equal distribution in the laterals if they are not at the same elevation. *FOR A TYPICAL HOME SIZE UNIT, USE A HOLE DIAMETER OF 1/4" SPACED 30" APART WHICH WILL REQUIRE A 1" DIA. LATERAL UP TO 30 FT LONG, 2" DIA. LATERAL UP TO ABOUT 50 FT AND A 3" DIA. UP TO ABOUT 75 FT.*

Construction

use our sand mound criteria

As with all soil absorption systems, proper construction is very important. The following steps should be followed when constructing the at-grade unit. There are variations to this approach, but the principles should be followed closely.

Steps:

1. Check for proper soil moisture prior to construction. If it is too wet (soil rolls into a wire) wait until it dries sufficiently well to minimize smearing and compaction.
2. Stake out the system with the length following the contour.
3. Till the area following the contour using a chisel plow. The tilled area should be at least the total length and width of the system. A mold board plow, chisel plow, or chisel teeth mounted on a backhoe bucket are satisfactory for tillage (the normal teeth on a backhoe are not satisfactory).
4. Install the inlet pipe from the pretreatment unit or dose chamber from the upslope side of the unit either prior to plowing or after plowing. If it enters from the downslope edge or the site is level, place the pipe prior to tilling. Avoid traffic on the tilled area especially beneath the aggregate area and downslope. If compaction or ruts occur in the upslope or downslope area during construction, retil the compacted or rutted area.
5. Place the three observation tubes at 1/6, 1/2, and 5/6 of the absorption length and exactly at the toe of the aggregate. The tubes must be constructed and placed so that ponded effluent at the downslope edge of the aggregate may be observed in the tubes.
6. Place the aggregate in the designated area of the tilled area, to a depth of 15 cm (6"). Work from the upslope edge of the system.
7. Place the distribution laterals level along the length of the unit and connect them to the inlet pipe from the pretreatment unit or dose chamber. Place 5 cm (2") of aggregate on top of the laterals.

8. Place non-biodegradable synthetic fabric (not building paper, burlap, hay, or straw) over the aggregate. Extend it only to the edge of the aggregate.
9. Place approximately 30 cm (12") of soil over the fabric and taper it to a distance of at least 1.5 m (5 ft) in all directions of the aggregate. Surface grade around the system to divert away surface water. Seed and mulch the exposed areas immediately after construction to control erosion.

SUMMARY AND CONCLUSIONS

An at-grade soil absorption unit has been developed for the treatment and disposal of pretreated domestic wastes. It is used on sites that are not suitable for an in-ground soil absorption unit and which exceed the requirements for a Wisconsin mound unit. It is constructed by tilling the soil, placing the aggregate and distribution system, and covering with synthetic fabric and soil.

Fourteen such units have been evaluated over a 1 to 5 year period. All systems are functioning satisfactorily using gravity or pressure distribution. Long term performance especially using gravity distribution is still under study.

Soil treatment beneath these systems has been very satisfactory with less than 2 MPN of fecal coliforms per gram of soil at 90 cm (3 ft) in non-structured soils. In structured soils slightly higher numbers were found.

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4-11-02

603000

To whom it may concern,

#825

check 3049

ck 10969

9-11-02

I would like to add a 16x40 deck (with steps) to the rear of a house that I am building. The permit # is B00 136369. Address is 12520 Indian Hill Road.

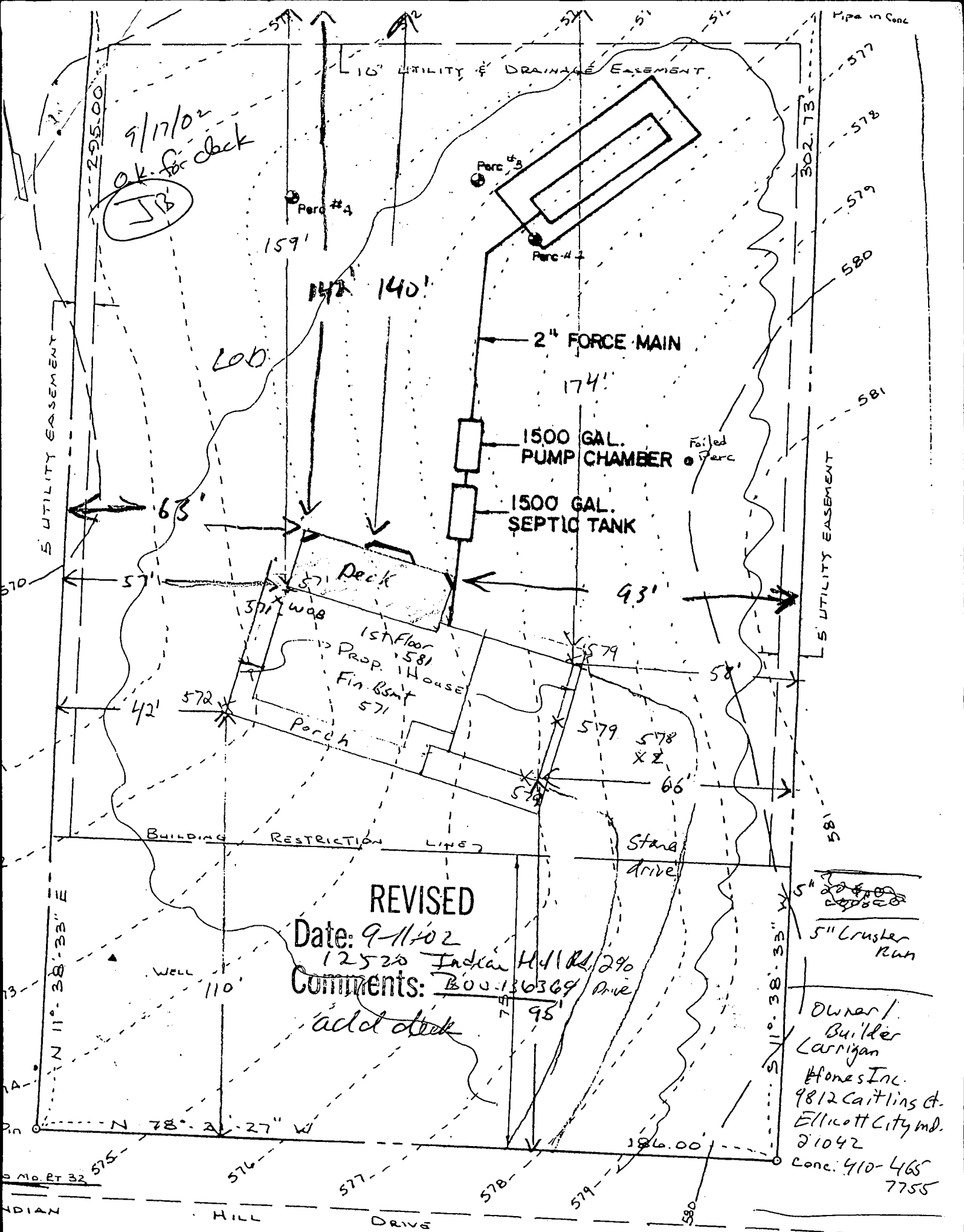
Thank-you

Owen Kelly

410-465-7755

RASAP - 9/11/02

cc: Health Dept



REVISIED
 Date: 9-11-02
 12520 Indian Hill Rd, 290
 Comments: BOJ-136369 Ave
 'add deck'


5" Cluster Run
 Owner/Builder
 Carrigan
 Homes Inc.
 9812 Caitlins Ct.
 Ellicott City Md.
 21042
 Conc: 410-465
 7755

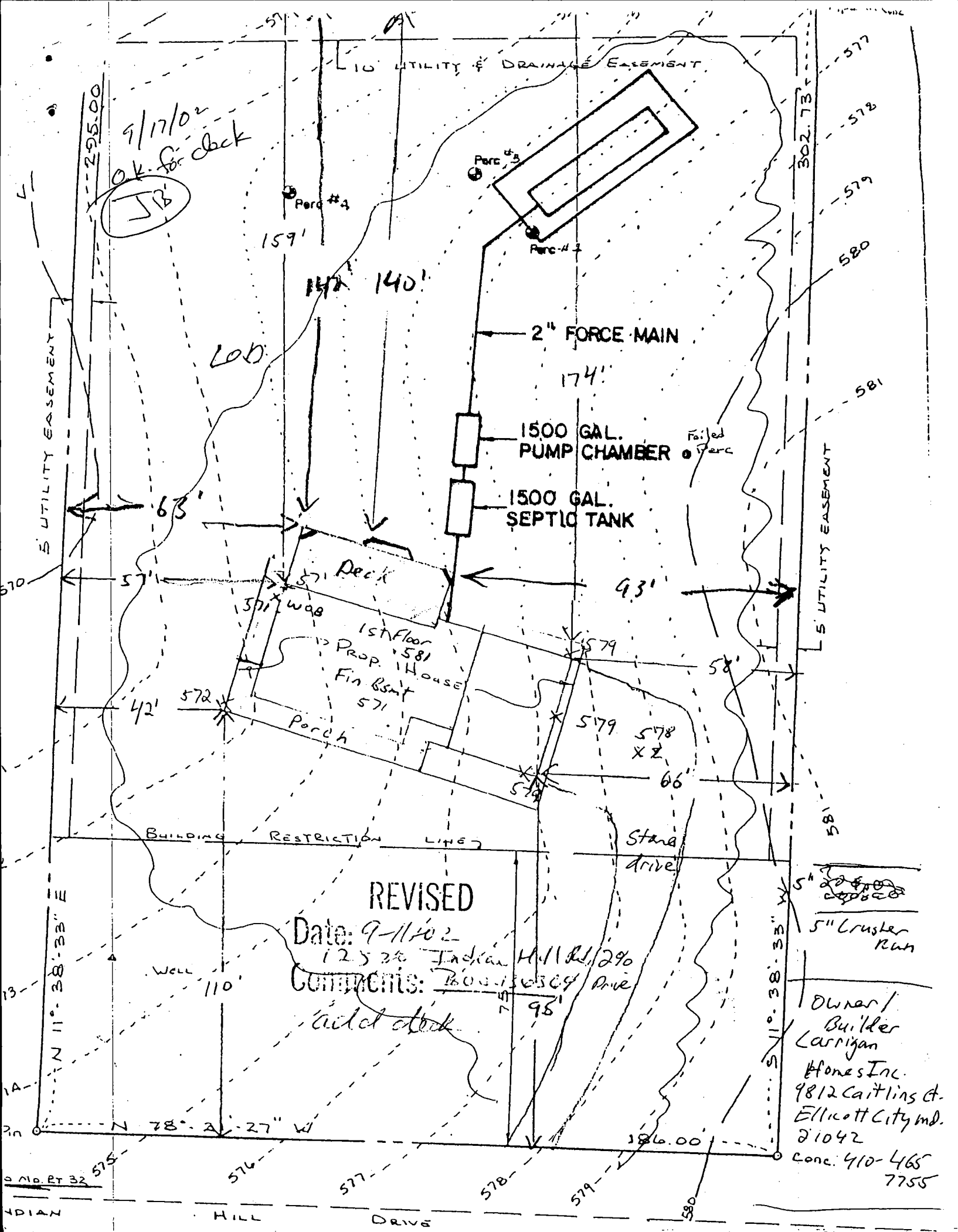
R.S.K. SURVEYS | 60 FAIRGROUND AVENUE | (410) 751-0062
 TANEYTOWN, MD. 21787

Date M. 2002
 Drawn S.K.
P.J.M.
K-9
18
SP-1-02
3-02

1 SITE PLAN
 LOT 29 - ROSENBERGER

This plat is compiled from deeds and surveys. The courses and distances shown on properties adjoining the proposed right of way are those contained in the deed referred to by Liber and Folio Number and do not necessarily refer to the meridian shown hereon nor do they imply a current survey of said properties unless so noted.

SCALE: 1" = 30'

 Richard S. Krebs 5/4/02



REVISED
 Date: 9-11-02
 12526 Indian Hill Rd, 290
 Comments: Bonus 3034 Ave
acid check

Owner/
 Builder
 Carrigan
 Homes Inc.
 9812 Caitling Ct.
 Elkott City Md.
 21042
 Conc. 410-465
 7755

R.S.K. SURVEYS | 60 FAIRGROUND AVENUE | (410) 751-0062
 TANEYTOWN, MD. 21787

Date	M.	2002
Drawn		S.K.
		P.J.M.
		K-9
		18
		SP-1-02
		3-02

1 SITE PLAN
 LOT 29 - ROSENBERGER

This plat is compiled from deeds and surveys. The courses and distances shown on properties adjoining the proposed right of way are those contained in the deed referred to by Liber and Folio Number and do not necessarily refer to the meridian shown hereon nor do they imply a current survey of said properties unless so noted.

SCALE: 1" = 30'

Richard S. Krebs 5/4/

Building Address <u>12520 Indian Hill Dr</u> <u>Sykesville MD 21784</u>	Property Owner's Name <u>Dan Rosenberger</u> Address <u>12520 INDIAN HILL DR.</u>
Suite/Apt. #: _____ SDP/WP/Petition #: _____ Census Tract <u>6030.00</u> Subdivision <u>Indian Hill Sub,</u>	City <u>Sykesville</u> State <u>MD</u> Zip Code <u>21784</u> Home Phone <u>410-442-2366</u> Work Phone <u>413-463-4187</u>
Section <u>2</u> Area _____ Lot <u>29</u> Tax Map <u>9</u> Parcel <u>136</u> Grid <u>12</u>	Applicant's Name & Mailing Address, (if other than stated hereon): _____ Phone _____ Fax _____
Zoning <u>RR-DEU</u> Map Coordinates <u>SD10</u> Lot size <u>1.27</u>	Phone _____ Fax _____

Existing Use <u>SF Home</u> Proposed Use <u>Pool Inground for same</u> Estimated Construction Cost \$ <u>41,490</u>	Contractor Company <u>Johnson Pools + Spas Inc.</u> Contact Person <u>Bill Phillips</u>
Description of Work <u>Inground pool 24'x40'</u> <u>27x45' w/ deck - Fence to code</u> <u>1215 sq ft of disturbance 3-8' deep</u>	Address <u>3204 Solomons Is. Rd</u> City <u>Edgewater</u> State <u>MD</u> Zip Code <u>21037</u> License No <u>77833</u> Phone <u>4109563630</u> Fax _____

Occupant or Tenant <u>Same as above</u> Contact Name <u>Thuck fill</u> Address _____ City _____ State _____ Zip Code _____ Phone _____ Fax _____	Engineer or Architect Company _____ Contact Person _____ Address _____ City _____ State _____ Zip Code _____ Phone _____ Fax _____
--	--

BUILDING DESCRIPTION - <u>COMMERCIAL</u>		BUILDING DESCRIPTION - <u>RESIDENTIAL</u>	
Building Characteristics	Utilities	Building Characteristics	Utilities
Height: _____ No. of stories: _____ Gross area, sq. ft. per floor: _____ Use group: _____ Construction type: <input type="checkbox"/> Reinforced Concrete <input type="checkbox"/> Structural Steel <input type="checkbox"/> Masonry <input type="checkbox"/> Wood Frame <input type="checkbox"/> State Certified Modular	Water Supply: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private Sewage Disposal: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private Electric Yes <input type="checkbox"/> No <input type="checkbox"/> Gas Yes <input type="checkbox"/> No <input type="checkbox"/> Heating System: Electric <input type="checkbox"/> Oil <input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas <input type="checkbox"/> Sprinkler system: N/A <input type="checkbox"/> <input type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> Other Suppression <input type="checkbox"/> # of Heads	SF Dwelling <input type="checkbox"/> SF Townhouse <input type="checkbox"/> Depth _____ Width _____ 1st floor: _____ 2nd floor: _____ Basement: _____ Finished Basement <input type="checkbox"/> Unfinished Basement <input type="checkbox"/> Crawl space <input type="checkbox"/> Slab on Grade <input type="checkbox"/> No. of Bedrooms _____ Multi-family dwellings: No. of efficiency units: _____ No. of 1 BR units: _____ No. of 2 BR units: _____ No. of 3 BR units: _____ Other Structure: _____ Dimensions: _____ Footings: _____ Roof: _____ <input type="checkbox"/> State Certified Modular <input type="checkbox"/> Manufactured Home	Water Supply: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private Sewage Disposal: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private Electric Yes <input type="checkbox"/> No <input type="checkbox"/> Gas Yes <input type="checkbox"/> No <input type="checkbox"/> Heating System: Electric <input type="checkbox"/> Oil <input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas <input type="checkbox"/> Sprinkler system: N/A <input type="checkbox"/> <input type="checkbox"/> NFPA #13D <input type="checkbox"/> NFPA #13R <input type="checkbox"/> Other:

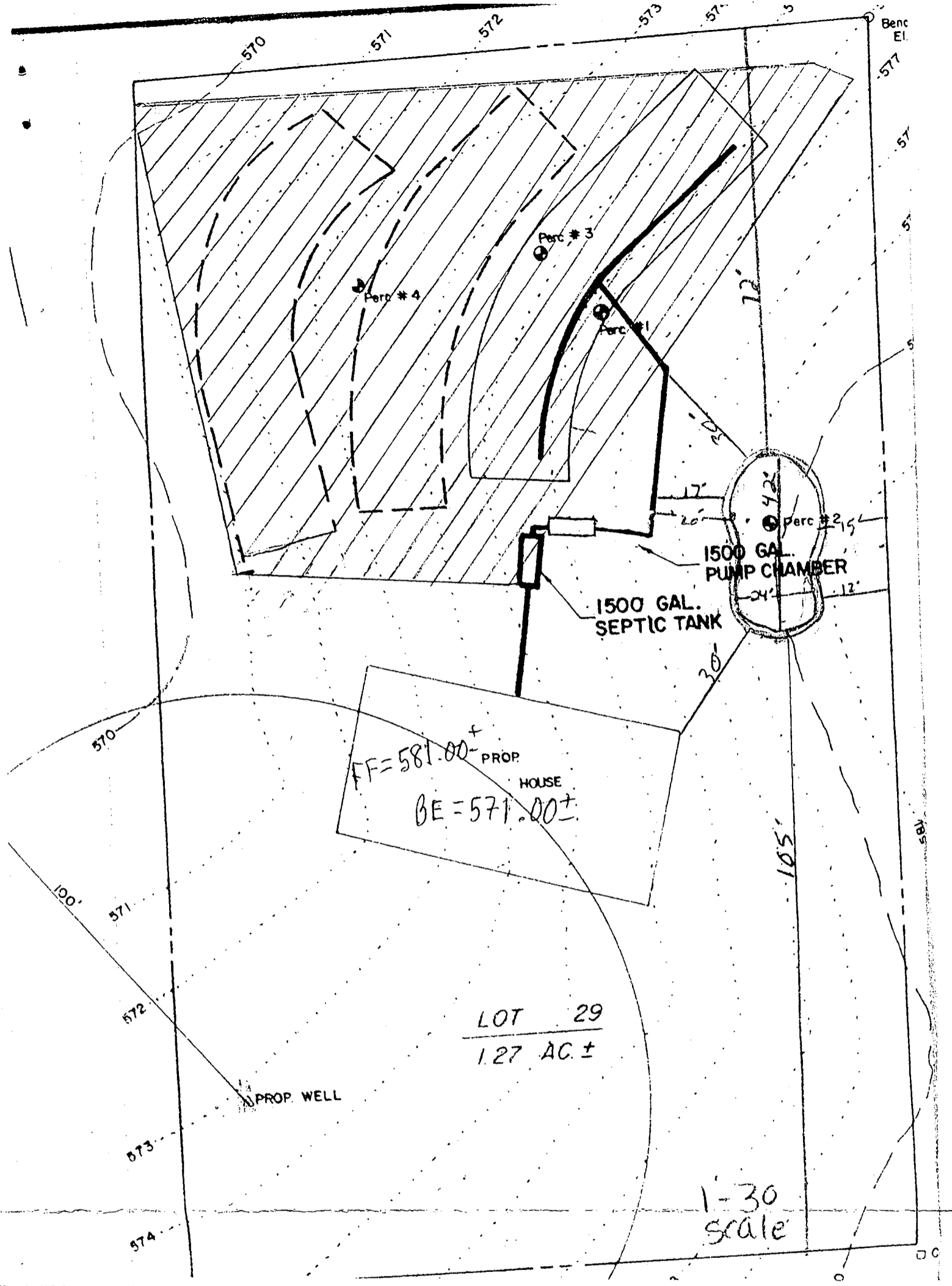
THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION, (2) THAT THE INFORMATION IS CORRECT, (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERE TO, (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION, (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO HIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

<u>Karen Klayman</u> Applicant's Signature	<u>Karen Klayman</u> Print Name <u>11/19/02</u> Date
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Title/Company _____ Date _____

Checks payable to: **DIRECTOR OF FINANCE OF HOWARD COUNTY**
**** PLEASE WRITE NEATLY AND LEGIBLY. ****

AGENCY	DATE	SIGNATURE APPROVAL	DPZ SETBACK INFORMATION	PROPERTY ID#
Land Development, DPZ			Front: _____	<u>54833</u>
State Highways			Rear: _____	Filing fee \$ _____
Building Official			Side: _____	Permit fee \$ _____
Dev. Engineering, DPZ			Side St: _____	Excise tax \$ _____
Health	<u>11/20/02</u>	<u>Jacob</u>	All minimum setbacks met? YES <input type="checkbox"/> NO <input type="checkbox"/>	Add'l per. fee \$ _____
Fire Protection			Is Entrance Permit required? YES <input type="checkbox"/> NO <input type="checkbox"/>	TOTAL FEES \$ _____
Is Sediment Control approval required prior to issuance? YES <input type="checkbox"/> NO <input type="checkbox"/>			Historic District? YES <input type="checkbox"/> NO <input type="checkbox"/>	Sub-total paid \$ _____
CONTINGENCY CONSTRUCTION START: <input type="checkbox"/>			Lot Coverage for New Town Zone _____	Balance due \$ _____
ONE STOP SHOP: <input type="checkbox"/>			SDP/Red-line approval date _____	Check # _____
Distribution of Copies: White: Building Official Green: LDD, DPZ Yellow: DED, DPZ Pink: Health Gold: SHA			Accepted by _____	Validation # _____



11/20/02 JB
 O.K. for Pool