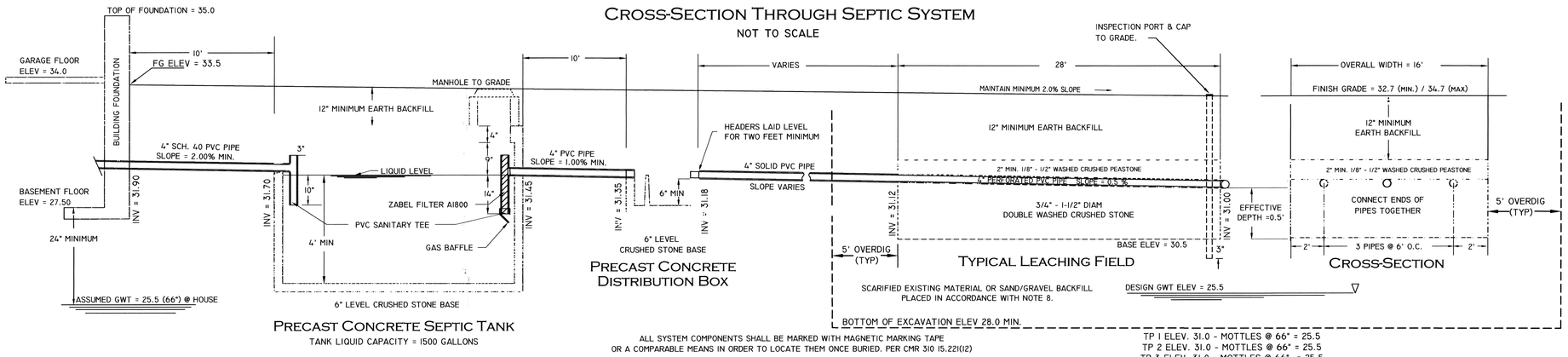
Cross-Section Through Septic System

NOT TO SCALE



Precast Concrete Septic Tank

TANK LIQUID CAPACITY = 1500 GALLONS

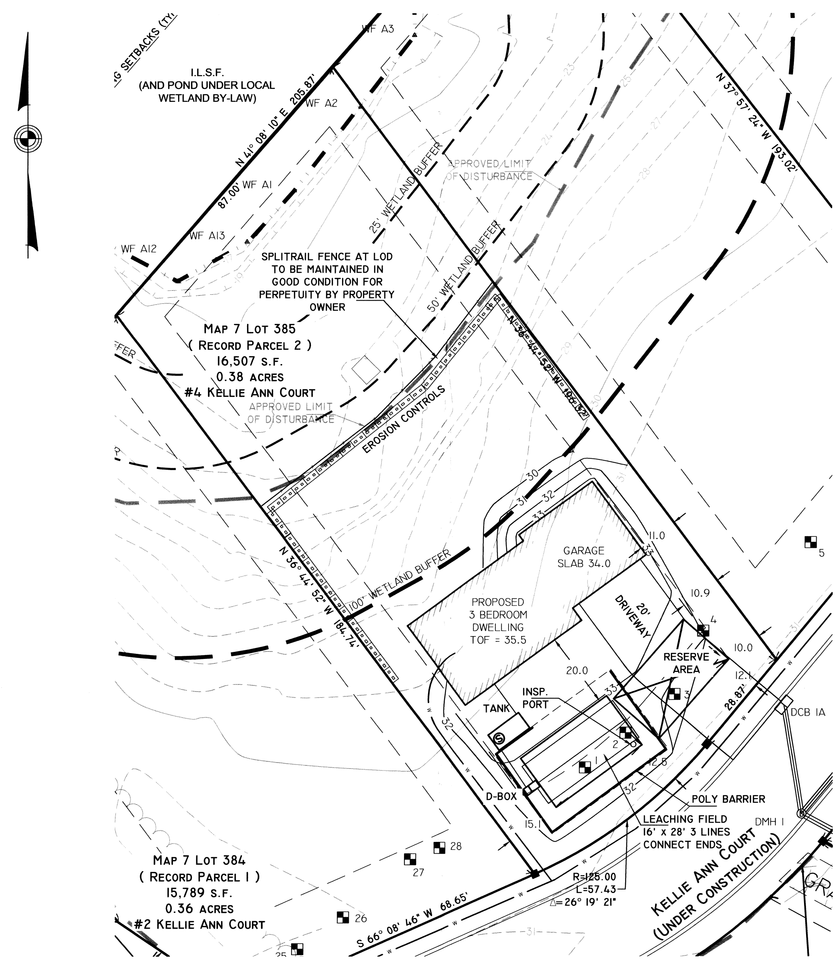
Precast Concrete Distribution Box

Typical Leaching Field

Cross-Section

ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED. PER CMR 310 15.221(12)

TP 1 ELEV. 31.0 - MOTTLES @ 66" = 25.5
TP 2 ELEV. 31.0 - MOTTLES @ 66" = 25.5
TP 3 ELEV. 31.0 - MOTTLES @ 66" = 25.5
TP 4 ELEV. 31.0 - MOTTLES @ 78" = 24.5



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Legend

- SOIL TEST PIT — TP
- EXISTING CONTOUR — 100
- PROPOSED CONTOUR — 100

Modified DEP Forms 11 & 12 - Soil Suitability Assessment & Percolation Test for On-Site Sewage Disposal
Massachusetts City or Town: SEEKONK, MA

InSite Engineering Services, LLC
PROFESSIONAL ENGINEERS and LAND SURVEYORS
Inside Address: 1539 Fall River Ave. Suite 1, Seekonk, Massachusetts 02771
Phone: (508) 336-4500
Fax: (508) 336-4558

CLIENT: NAME:	STEVEN NAJAS	DATE: 4-26-2010	SITE: INSITE JOB# 09-117
ADDRESS:	111 MILES AVENUE, EAST PROVIDENCE, RI 02914	WEATHER: 60°+ F SUNNY	STREET: 167 SCHOOL STREET; TOWN: SEEKONK, MA 02771; MAP/PLOT: A.P. 7 / LOT #0; REPAIR: ; NEW: X
PHONE #:	1-401-641-1241		

PERFORMED BY: MICHAEL S. FARIA RI PE, MA SE708
WITNESSED BY: BETH HALLAL
EXCAVATION CO.: STEVEN BABIT
SURFACE STONES: NONE
VEGETATION: FARM
LAND USE: RESIDENTIAL
DEPTH TO BEDROCK: NONE OBSERVED
SLOPE: 0-2% ±

SITE SKETCH: (PRELIMINARY LOT LAYOUT)
APPROXIMATE SCALE

DEEP OBSERVATION HOLE LOG

Deep Hole #	Depth from surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (munsell)	Soil Mottling (inches) Concentration Color Abundance/size/contrast	Other (Structure, Stones, Consistency, % Gravel)
TP1	0-12	Ap	SANDY LOAM	10YR3/1		FRIABLE
	12-18	B	LOAMY SAND	10YR5/8		FRIABLE
	18-66	C1	MEDIUM SAND	2.5Y7/2		LOOSE
	66-120	C2	MEDIUM LOAMY SAND	2.5Y6/2	66" 7.5YR5/8	FRIABLE
TP2	0-10	Ap	SANDY LOAM	10YR3/1		FRIABLE
	10-18	B	LOAMY SAND	10YR5/8		FRIABLE
	18-66	C1	MEDIUM SAND	2.5Y7/2		LOOSE
	66-120	C2	MEDIUM LOAMY SAND	2.5Y6/2	66" 7.5YR5/8	FRIABLE
TP3	0-12	Ap	SANDY LOAM	10YR3/1		FRIABLE
	12-18	B	LOAMY SAND	10YR5/8		FRIABLE
	18-120	C	MEDIUM SAND	2.5Y7/2	66" 7.5YR5/8	LOOSE
TP4	0-9	Ap	SANDY LOAM	10YR3/1		FRIABLE
	9-18	B	LOAMY SAND	10YR5/8		FRIABLE
	18-120	C	MEDIUM SAND	2.5Y7/2	78" 7.5YR5/8	LOOSE

DISTANCES FROM:(ft.) APPROXIMATE (VERIFY) Hole #	TP1	TP2	TP3	TP4
Open Water Body	>200	>200	>200	>200
Possible Wet Area	>100	>100	>100	>100
Drinking Water Well	>100	>100	>100	>100
Drainageway	>50	>50	>50	>50
Property Line	>10	>10	>10	>10
Other (specify)				
DEPTH TO GROUND WATER: (in.)				
Standing Water in the Hole	88	-	88	-
Weeping from Pit Face	68	84	82	--
Est. High Ground Water	66	66	66	78
ASSESSMENT OF DEEP HOLE:				
SUITABLE	X	X	X	X
UNSUITABLE				

MOTTLING: Abundance: f: few, c: common, m: many; Size: f: fine, 2: medium, 3: coarse; Contrast: f: faint, d: distinct, p: prominent

PERCOLATION TEST

Hole #	TP2	TP4				
Depth of Perc (inches)	50	50				
Start/Pre-Soak	11:15	11:18				
Time at 12"	11:30					
Time at 9"	11:32	24 GAL				
Time at 6"	11:34	<15M				
Time (6"-6") (Min)	2					
Rate (Min/Inch)	2	< 2				

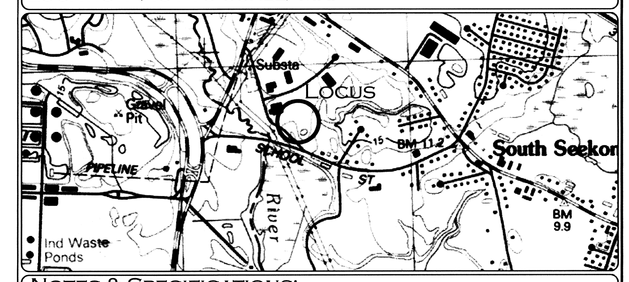
ADDITIONAL TESTING NEEDED: NO
COMMENTS:

DEP CERTIFIED SOIL EVALUATOR PRINTED: MICHAEL S. FARIA RI PE, MA SE708 SIGNED:
I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 310 CMR 15.017 TO CONDUCT SOIL EVALUATIONS AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EXPERTISE AND EXPERIENCE DESCRIBED IN 310 CMR 15.017.
I FURTHER CERTIFY THAT THE RESULTS OF MY SOIL EVALUATION, AS INDICATED ON THIS SOIL EVALUATION FORM, ARE ACCURATE AND IN ACCORDANCE TO 310 CMR 15.017.

Page ___ of ___

Soil Evaluation & Perc Results

Location (Not to Scale) Map



Notes & Specifications:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF 310 CMR 15 (TITLE V) OF THE COMMONWEALTH OF MASSACHUSETTS AND THOSE OF THE TOWN OF SEEKONK BOARD OF HEALTH.

2. THE REQUIRED INSPECTION SCHEDULE DURING THE PROCESS OF CONSTRUCTION SHALL BE ARRANGED BY THE CONTRACTOR WITH THE BOARD OF HEALTH AND DESIGN ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

3. 1500 GALLON SEPTIC TANK AND 5 OUTLET DISTRIBUTION BOX SHALL BE STANDARD DUTY DESIGN AS MANUFACTURED BY A. ROTONDO & SONS, INC., OR APPROVED EQUAL.

4. ALL PIPING SHALL BE 4" DIA. SCHD.40 NSF PVC, WITH ALL JOINTS SEALED WATERTIGHT.

5. ALL STONE SHALL BE DOUBLE WASHED AND FREE OF IRONS, CLAY OR FINES AND SHALL BE SATISFACTORY TO THE TOWN OF SEEKONK BOARD OF HEALTH.

6. THIS SYSTEM IS NOT DESIGNED TO ACCOMODATE A GARBAGE DISPOSAL OR OTHER HIGH WATER USE UNITS.

7. THE PROPOSED SEPTIC SYSTEM IS NOT LOCATED WITHIN THE CONE OF INFLUENCE OF ANY MUNICIPAL WELL NOR ARE THERE ANY PRIVATE WELLS LOCATED WTHIN 100 FEET (RADIALLY) OF THE PROPOSED SYSTEM.

8. EXCAVATE ALL TOP, SUB AND ANY OTHER SOILS ENCOUNTERED DOWN INTO THE "C" SAND LAYER ELEV 28.0 (36" MINIMUM) FOR A HORIZONTAL DISTANCE OF 5' ON ALL SIDES OF THE PROPOSED SYSTEM. BACKFILL TO ELEVATION = 31.7 WITH SELECT ON-SITE OR IMPORTED SOIL MATERIAL CONSISTING OF CLEAN GRANULAR SAND, FREE OF ORGANIC MATTER OR OTHER DELETERIOUS SUBSTANCES AND MEETING THE SIEVE SIZE REQUIREMENTS OF 310 CMR 15.255(3) & (5) [CONSTRUCTION IN FILL].

9. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO THE CONTINUATION OF CONSTRUCTION

10. WATER TABLE FLUCTUATES ANNUALLY, NO WARRANTEE OF A DRY BASEMENT IS EXPRESSED OR IMPLIED.

11. THE LOT DOES NOT LIE IN A FLOOD HAZARD ZONE.

12. ELEVATIONS SHOWN ON THIS PLAN ARE BASED ON NGVD 1929 DATUM.

13. PARCEL SHOWN IS NOT LOCATED IN TOWN OF SEEKONK AQUIFER PROTECTION DISTRICT.

14. UTILITIES SHOWN ARE AS-BUILT UNLESS OTHERWISE NOTED.

15. THE LOT LIES IN A R-3 ZONING DISTRICT AND IS IN A CLUSTER DEVELOPMENT.
    FRONT YARD SETBACK =20'
    SIDE YARD SETBACK: =10'
    REAR YARD SETBACK: =10'

16. I CERTIFY THAT THE PROPOSED WATER SERVICE SHOWN ON THIS PLAN IS IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE SEEKONK WATER DISTRICT.

17. WETLAND DELINEATION BY ECOSYSTEM SOLUTIONS INC.

18. OWNERS: NAJAS REALTY LLC,
    111 MILES AVENUE, EAST PROVIDENCE R.I. 02916

19. TITLE REFERENCE: DEED BOOK 18852 PAGE 79

Design Calculations

Average Daily Sewage Flow (gallons per day)

PROPOSED 3 BEDROOM DWELLING @ 110 GPD PER BEDROOM = 330 GPD

Septic Tank Sizing (gallons)

200% AVERAGE DAILY FLOW = 2 (330) = 660 GALLONS
3 BEDROOM HOME REQUIRES 1500 GALLON TANK (MINIMUM).

Leaching Area Calculation

SOIL CLASS 1 (SANDY LOAM)

PERK RATE IN TP 2 WAS 2 MPI
PERK RATE IN TP 4 WAS LESS THAN 2MPI
DESIGN FOR 5 MPI PER TITLE V.

Required Minimum Leaching Area:

ADF = 330 GPD / 0.74 GPD / SF = 446 SF MINIMUM
TRY: LEACHING FIELD 16' WIDE AND 28' LONG
16' x 28' = 448 SF DESIGN TOTAL
DESIGN - 448 SF > REQUIRED - 446 SF OK

(RESERVE AREA = 16' x 28' = 460 S.F.)

RECEIVED
SEP 10 2013
SEEKONK CONSERVATION

Septic System Design Plan

69-768

PROFESSIONAL SEAL

"Kellie Ann Court"

#4 Kellie Ann Court, Seekonk, Massachusetts 02769
Assessors Map 7 Lot 385 (Record Lot 2)

Prepared for: Najas Realty LLC
111 Miles Avenue, East Providence R.I.

Job #	Scale:	Designed By:	Date:
09-117/1	1" = 20'	SCA	August 26, 2013

Revised: 9/12/2013 CON COM COMMENTS

InSite Engineering Services, LLC
Professional Engineers and Land Surveyors
InSite Professional Complex, Suite 1
1539 Fall River Avenue
Seekonk, MA 02771
Phone: (508) 336-4500
Fax: (508) 336-4558

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