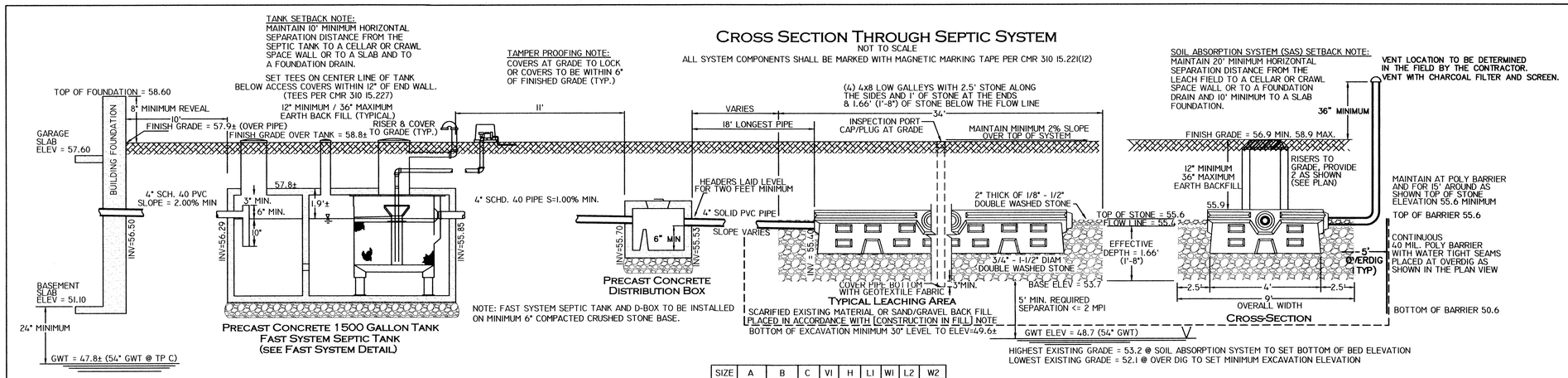
Cross Section Through Septic System

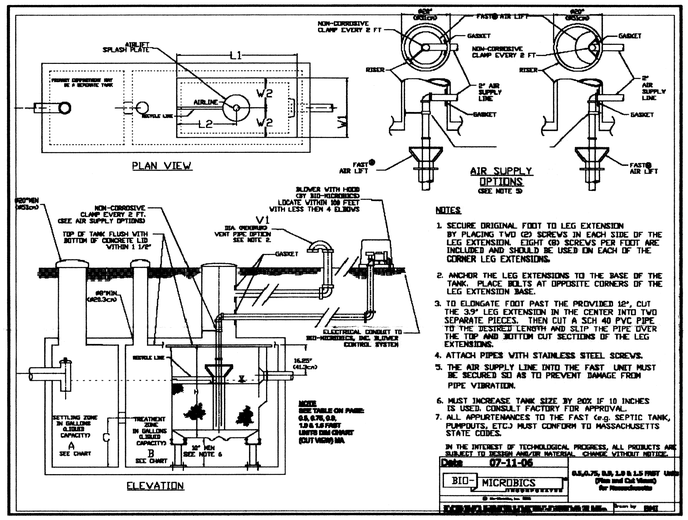
NOT TO SCALE

ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE PER CMR 310 15.221(12)

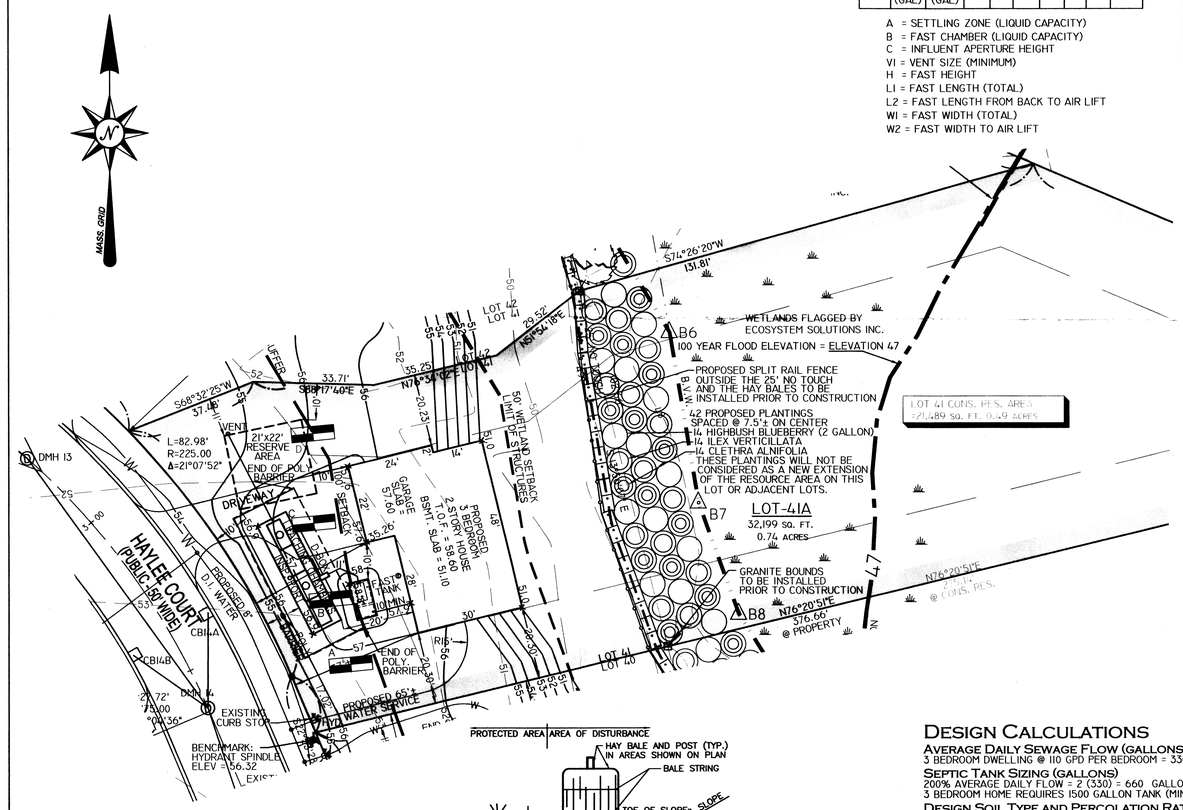


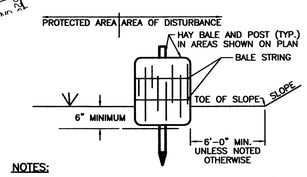
SIZE	A	B	C	VI	H	LI	WI	L2	W2
0.5	500 (GAL)	1000 (GAL)	24"	3"	50"	60"	30"	26"	15.5"

A = SETTLING ZONE (LIQUID CAPACITY)
B = FAST CHAMBER (LIQUID CAPACITY)
C = INFLUENT APERTURE HEIGHT
VI = VENT SIZE (MINIMUM)
H = FAST HEIGHT
LI = FAST LENGTH (TOTAL)
L2 = FAST LENGTH FROM BACK TO AIR LIFT
WI = FAST WIDTH (TOTAL)
W2 = FAST WIDTH TO AIR LIFT



FAST SYSTEM DETAIL (FOLLOW MANUFACTURERS SPECIFICATIONS)





Legend

SOIL TEST PIT — A
ORIGINAL CONTOUR — 100
PROPOSED CONTOUR — 100
PROPOSED SPOT ELEVATION — x100

Color Legend

WETLANDS LINE
25' WETLAND BUFFER ZONE
50' WETLAND BUFFER ZONE
100' WETLAND BUFFER ZONE

NOTES:

1. HAY BALES ARE TO BE PLACED WITHIN A 6" MINIMUM TRENCH PRIOR TO CONSTRUCTION.
2. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO THE TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICES.
3. BALE STRING SHALL BE LAID PARALLEL TO THE GROUND SURFACE.
4. EACH BALE TO BE SECURELY STAKED INTO THE GROUND WITH (2) 1"x1"x3' OAK BEAN POLE.
5. CONTRACTOR IS RESPONSIBLE TO MAINTAIN INTEGRITY OF HAY BALE LINE FOR DURATION OF CONSTRUCTION.
6. EROSION CONTROLS TO REMAIN UNTIL SOIL CONDITIONS STABILIZE.
7. LOOSE HAY TO BE SPREAD ON AREAS OF EXPOSED LOAM & SEED UNTIL GERMINATION AND STABILATION OCCURS.

HAY BALE DETAIL

(NOT TO SCALE)

Design Calculations

Average Daily Sewage Flow (Gallons per Day)
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).

Design Soil Type and Percolation Rate
SOIL CLASS I (SAND)
PERC RATE IN TP 40-B & 40-D WAS < 2 MPI
DESIGN FOR 5 MPI PER TITLE V

Required Minimum Leaching Area:
REQUIRED AREA = 330 GPD / 0.74 GPD / SF = 446 SF MINIMUM

LEACHING AREA:
(4) 4x8 LOW GALLEYS WITH 2.5' STONE ALONG THE SIDES AND 1' OF STONE AT THE ENDS & 1.66' (1'-8") OF STONE BELOW THE FLOW LINE
BOTTOM AREA: 9' x 34' = 306 SF
SIDE AREA: 1.66 x 2' x (9' + 34') = 142 SF
TOTAL LEACHING AREA: 306 SF + 142 SF = 448 SF
TOTAL RESERVE AREA: 21' X 22' = 462 SF

Graphic Scale

20 0 10 20 40 80

1 INCH = 20 FEET

Soil Evaluation & Perc Results

DEEP OBSERVATION HOLE 41A

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	OTHER
0-8"	Ao	SL	10 YR 3/2	-	ORGANIC
8-24"	B	LS	10 YR 5/6	-	-
24-120"	C	F-MS	2.5 Y 6/3&2	54" 7.5 YR 5/8	STRATIFIED

OBSERVED GROUND WATER: NO STANDING, NO WEEPING — DATE: 7-19-07
ESTIMATED HIGH GROUND WATER: 54" — BY: M. FARIA
PERC. RATE @ 36" = < 2 MPI — WITNESS: J.R.

DEEP OBSERVATION HOLE 41B

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	OTHER
0-8"	Ao	SL	10 YR 3/2	-	ORGANIC
8-24"	B	LS	10 YR 5/6	-	-
24-120"	C	F-MS	2.5 Y 6/3&2	54" 7.5 YR 5/8	STRATIFIED

OBSERVED GROUND WATER: NO STANDING, NO WEEPING — DATE: 7-19-07
ESTIMATED HIGH GROUND WATER: 54" — BY: M. FARIA
NO PERC. TEST PERFORMED — WITNESS: J.R.

DEEP OBSERVATION HOLE 41C

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	OTHER
0-6"	Ao	SL	10 YR 3/2	-	ORGANIC
6-24"	B	LS	10 YR 5/6	-	-
24-120"	C	F-MS	2.5 Y 6/3&2	54" 7.5 YR 5/8	STRATIFIED

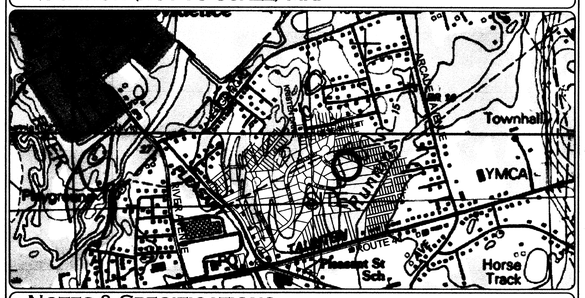
OBSERVED GROUND WATER: NO STANDING, NO WEEPING — DATE: 7-19-07
ESTIMATED HIGH GROUND WATER: 54" — BY: M. FARIA
PERC. RATE @ 40" = < 2 MPI — WITNESS: J.R.

DEEP OBSERVATION HOLE 41D

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	OTHER
0-6"	Ao	SL	10 YR 3/2	-	ORGANIC
6-24"	B	LS	10 YR 5/6	-	-
24-120"	C	F-MS	2.5 Y 6/3&2	54" 7.5 YR 5/8	STRATIFIED

OBSERVED GROUND WATER: NO STANDING, NO WEEPING — DATE: 7-19-07
ESTIMATED HIGH GROUND WATER: 54" — BY: M. FARIA
NO PERC. TEST PERFORMED — WITNESS: J.R.

Location (Not to Scale) Map



Notes & Specifications

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 BOARD OF HEALTH.

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

1500 GALLON FAST SYSTEM SEPTIC TANK AND DISTRIBUTION BOX SHALL BE STANDARD DUTY DESIGN AS MANUFACTURED BY CONCRETE PRODUCTS, INC. OR APPROVED EQUAL.

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

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

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

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

EXCAVATE ALL TOP, SUB AND ANY OTHER SOILS ENCOUNTERED DOWN TO THE BOTTOM OF EXCAVATION (SEE CROSS SECTION) FOR A HORIZONTAL DISTANCE OF 5' ON ALL SIDES OF THE PROPOSED SYSTEM. BACK FILL TO TOP OF STONE ELEVATION 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].

ELEVATIONS SHOWN ON THIS PLAN ARE BASED ON NGVD 29.

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

WATER TABLE FLUCTUATES ANNUALLY, NO WARRANTEE OF A DRY BASEMENT IS EXPRESSED OR IMPLIED. A PERIMETER FOUNDATION DRAIN DISCHARGING TO DAYLIGHT AND/OR A SUMP PUMP IS ALWAYS RECOMMENDED.

THE PROPOSED WORK DOES NOT LIE IN A CRITICAL FLOOD HAZARD ZONE.

THE LOT DOES NOT LIE IN AN OVERLAY DISTRICT FOR GROUNDWATER AQUIFER PROTECTION.

~~THE SITE IS UNDER CONSTRUCTION, DUE TO THE POSSIBILITY OF THE BENCHMARK~~ CHANGING DURING CONSTRUCTION, THE CONTRACTOR IS TO VERIFY THE BENCHMARK WITH THE SURVEYOR PRIOR TO CONSTRUCTION.

MAINTAIN 15' MINIMUM SEPARATION FROM WATER SERVICE TO PROPOSED SEPTIC COMPONENTS.

HOUSE DIMENSIONS, ELEVATION AND LOCATION ARE APPROXIMATE AND SUBJECT TO CHANGE, CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.

THE LOT LIES IN A R-1 ZONING DISTRICT.
FRONT YARD SETBACK: 35'
SIDE YARD SETBACK: 15' + 5'/STORY
REAR YARD SETBACK: 25'

REFERENCE: DEFINITIVE SUBDIVISION PLAN FOR FALL RIVER AVENUE DEVELOPMENT PARTNERS, LLC, "BANNA ESTATES" TAUNTON AVENUE/PLEASANT STREET, SEEKONK, MA. DATED; AUGUST 2, 2007, REVISED; MAY 27, 2008. BY INSITE ENGINEERING SERVICES, LLC. AND "NOTICE OF INTENT PLAN OF BANNA ESTATES" REVISED: MAY 12, 2008.

TIE INTO PROPOSED CONTOURS AND ELEVATIONS AS SHOWN IN THE ABOVE REFERENCE.

I CERTIFY THAT THE PROPOSED WATER SERVICE SHOWN ON THIS PLAN IS IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE SEEKONK WATER DISTRICT. THE CONTRACTOR IS TO COORDINATE THE WATER SERVICE TIE IN WITH THE WATER AUTHORITY AND INSTALL THE WATER SERVICE WITH MAGNETIC MARKING TAPE ABOVE THE ENTIRE LENGTH OF THE WATER SERVICE.

PROPOSED SEPTIC TANK TO BE INSTALLED IS A MICROFAST 0.5 DENITRIFICATION SYSTEM BY BIO-MICROBICS INC.

REFERENCE: APPROVAL NOT REQUIRED PLAN FOR FALL RIVER AVENUE DEVELOPMENT PARTNERS, LLC., "BANNA ESTATES" 4 & 6 HAYLEE COURT, SEEKONK, MASSACHUSETTS 02771, ASSESSORS MAP 20 LOT 650 & 651, DATED; MAY 16, 2007, BY INSITE ENGINEERING SERVICES, LLC.

WETLAND LINES ESTABLISHED AND APPROVED UNDER THE ORDER OF RESOURCE AREA DELINEATION SE 69-613.

THE SPLIT RAIL FENCE WILL SERVE AS THE LIMIT OF LAWN AND FUTURE YARD ACTIVITIES AND SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION.

THE HAY BALES AT THE 25' NO TOUCH DELINEATE THE LIMITS OF DISTURBANCE AND ALL FUTURE ACTIVITIES.

THE 50-FOOT WETLAND BUFFER DELINEATES THE LIMITS OF ALL STRUCTURES AS STATED WITHIN THE TOWN OF SEEKONK CONSERVATION COMMISSION REGULATIONS AMENDED MARCH, 2003

RECEIVED
JUN 30 2010
SEEKONK CONSERVATION

SE69-692

Septic System Design & NOI Plan

PROFESSIONAL SEAL

"BANNA ESTATES"

#6 HAYLEE COURT, SEEKONK, MA. 02771
AP 20 LOT 650 (SUBDIVISION LOT 41A)

APPLICANT: PETRA BUILDING CORP.
STEVEN NAJAS
111 MILES AVENUE, EAST PROVIDENCE, RI 02914

Job #	Scale:	Design By:	Date:
06-050-41A	1"=20'	MSF	JULY 1, 2010

Revised:

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

SHEET 1 OF 1

SE69-692

J:\06-050 TAUNTON AVE - PLEASANT STREET\CAD\06-050 SEPTIC 9-17-08.DWG, SEP & NOI LOT 41, 7/29/2010 4:25:35 PM