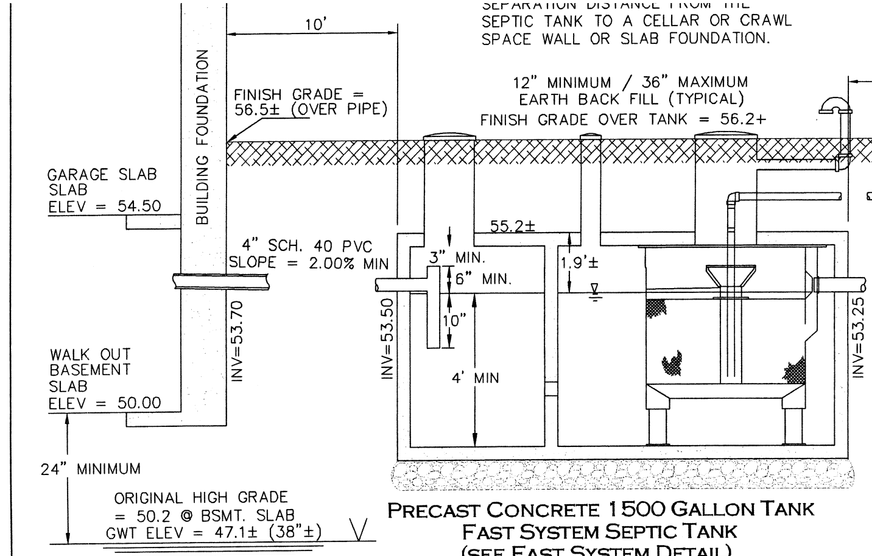
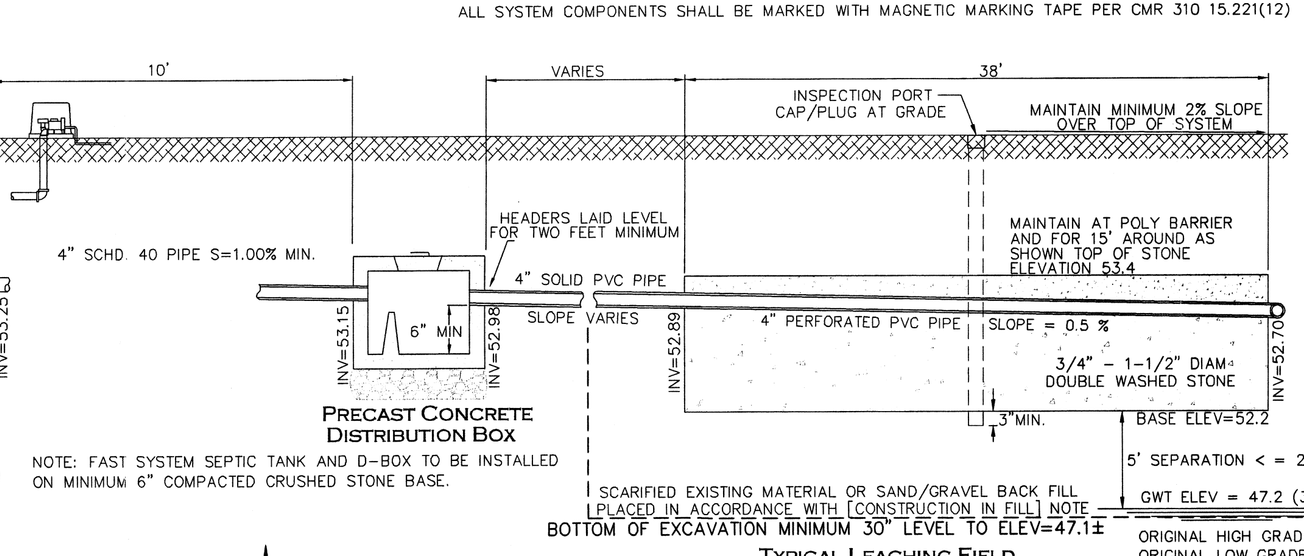


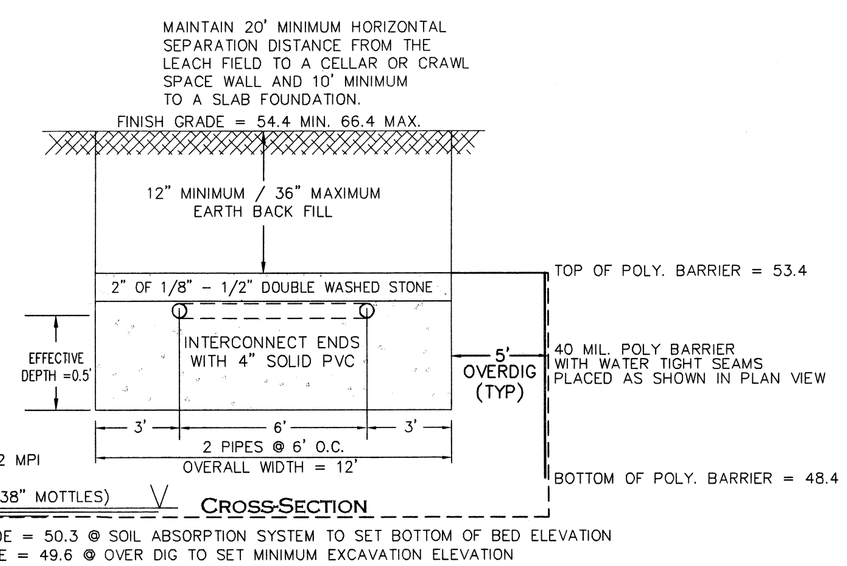

PRECAST CONCRETE 1500 GALLON TANK
FAST SYSTEM SEPTIC TANK
(SEE FAST SYSTEM DETAIL)




PRECAST CONCRETE DISTRIBUTION BOX

NOTE: FAST SYSTEM SEPTIC TANK AND D-BOX TO BE INSTALLED ON MINIMUM 6" COMPACTED CRUSHED STONE BASE.

TYPICAL LEACHING FIELD

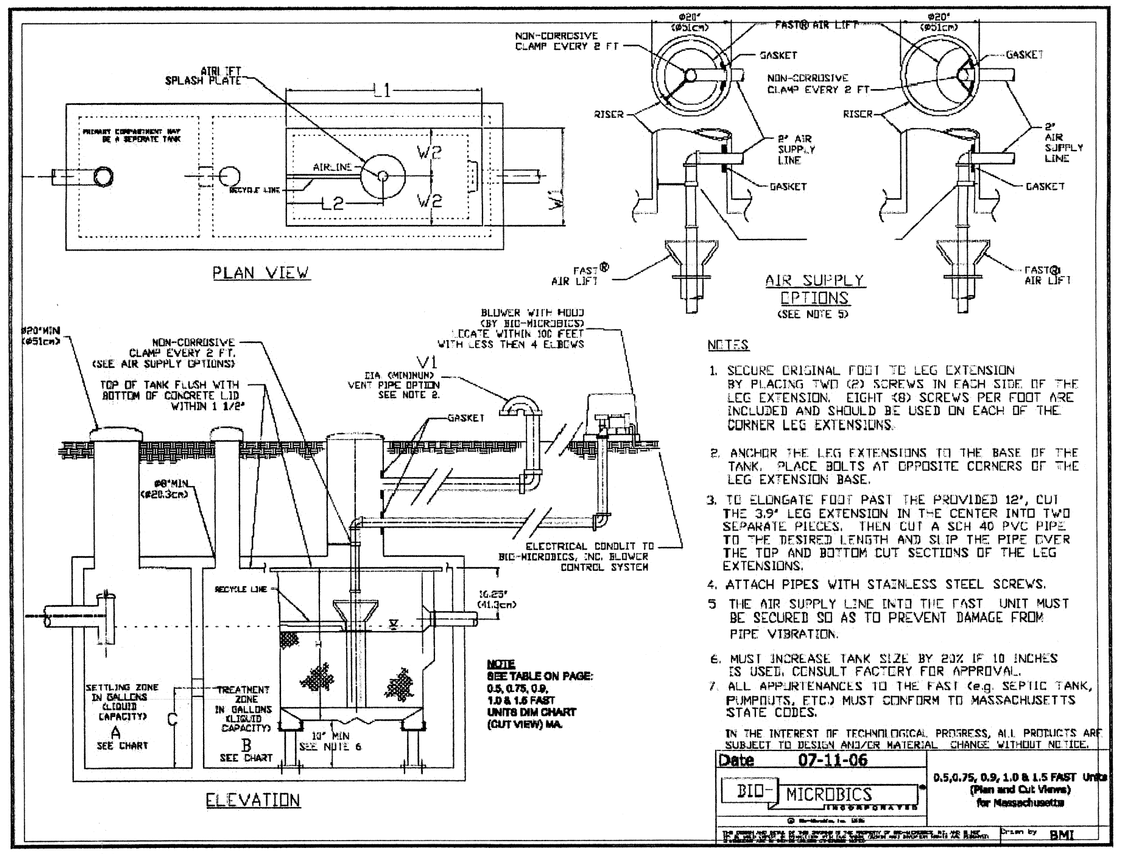



CROSS-SECTION

ORIGINAL HIGH GRADE = 50.3 @ SOIL ABSORPTION SYSTEM TO SET BOTTOM OF BED ELEVATION
ORIGINAL LOW GRADE = 49.6 @ OVER DIG TO SET MINIMUM EXCAVATION ELEVATION

| 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

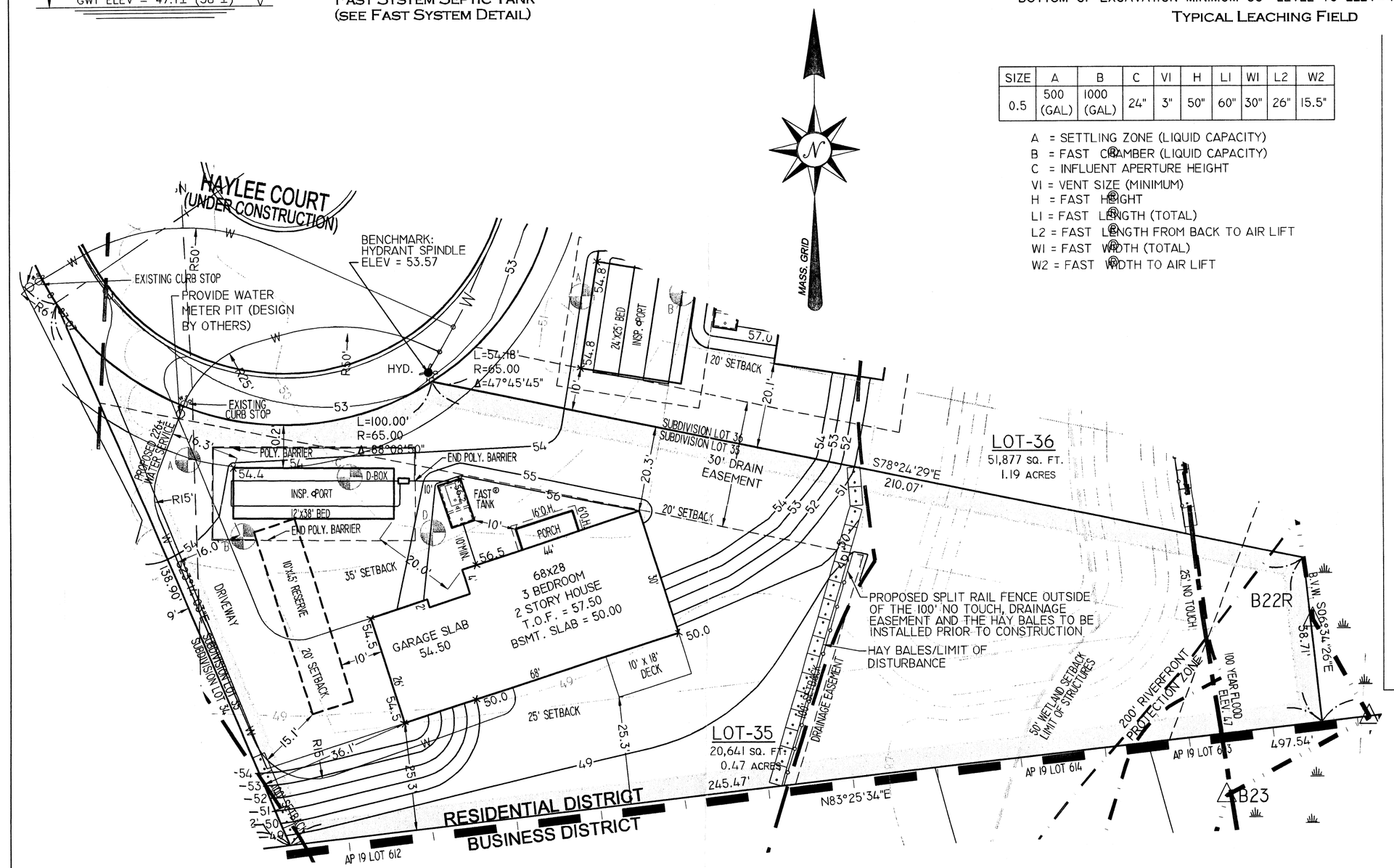


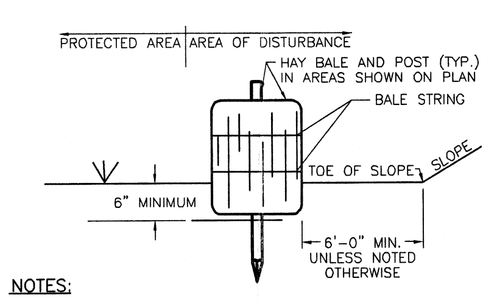

NOTES

1. SECURE ORIGINAL FOOT TO LEG EXTENSION BY PLACING TWO (2) SCREWS IN EACH SIDE OF THE LEG EXTENSION. EIGHT (8) SCREWS PER FOOT ARE INCLUDED AND SHOULD BE USED ON EACH OF THE CORNER LEG EXTENSIONS.
2. ANCHOR THE LEG EXTENSIONS TO THE BASE OF THE TANK. PLACE BOLTS AT OPPOSITE CORNERS OF THE LEG EXTENSION BASE.
3. TO ELONGATE FOOT PAST THE PROVIDED 18", CUT THE 39" LEG EXTENSION IN THE CENTER INTO TWO SEPARATE PIECES. THEN CUT A SCH 40 PVC PIPE TO THE DESIRED LENGTH AND SLIP THE PIPE OVER THE TOP AND BOTTOM CUT SECTIONS OF THE LEG EXTENSIONS.
4. ATTACH PIPES WITH STAINLESS STEEL SCREWS.
5. THE AIR SUPPLY LINE INTO THE FAST UNIT MUST BE SECURED SO AS TO PREVENT DAMAGE FROM PIPE VIBRATION.
6. MUST INCREASE TANK SIZE BY 20% IF 18 INCHES IS USED. CONSULT FACTORY FOR APPROVAL.
7. ALL APPURTENANCES TO THE FAST (e.g. SEPTIC TANK, PUMPOUTS, ETC) MUST CONFORM TO MASSACHUSETTS STATE CODES.

IN THE INTEREST OF TECHNOLOGICAL PROGRESS, ALL PRODUCTS ARE SUBJECT TO DESIGN AND/OR MATERIAL CHANGE WITHOUT NOTICE.

FAST SYSTEM DETAIL (FOLLOW MANUFACTURES SPECIFICATIONS)




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)

## Legend

SOIL TEST PIT — TP
ORIGINAL CONTOUR — 100
PROPOSED CONTOUR — 100
PROPOSED SPOT ELEVATION — x 100

## Color Legend

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

## 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 (SAND)
PERC RATE IN 35A WAS < 2 MPI
PERC RATE IN 35B 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 FIELD BED: 12' x 38' = 456 SF
RESERVE AREA: 10' x 45' = 450 SF

GRAPHIC SCALE
20 0 10 20 40 80
1 INCH = 20 FEET

### DEEP OBSERVATION HOLE 35A

| DEPTH | HORIZON | TEXTURE | COLOR | MOTTLING | OTHER |
|---|---|---|---|---|---|
| 0-4" | Ao | SL | 10 YR 3/2 | - | ORGANIC |
| 4-24" | B | LS | 10 YR 5/6 | - | - |
| 24-120" | C | F-MS | 2.5 Y 6/3&2 | 38" 7.5 YR 5/8 | STRATIFIED |

OBSERVED GROUND WATER: 72" STANDING, 66" WEEPING — DATE: 7-18-07
ESTIMATED HIGH GROUND WATER: 38" — BY: M. FARIA
PERC. RATE @ 40" = < 2 MPI — WITNESS: H. CHENEVERT

### DEEP OBSERVATION HOLE 35B

| 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 | 40" 7.5 YR 5/8 | STRATIFIED |

OBSERVED GROUND WATER: NO STANDING, 78" WEEPING — DATE: 7-18-07
ESTIMATED HIGH GROUND WATER: 40" — BY: M. FARIA
PERC. RATE @ 40" = < 2 MPI — WITNESS: H. CHENEVERT

### DEEP OBSERVATION HOLE 35C

| DEPTH | HORIZON | TEXTURE | COLOR | MOTTLING | OTHER |
|---|---|---|---|---|---|
| 0-4" | Ao | SL | 10 YR 3/2 | - | ORGANIC |
| 4-24" | B | LS | 10 YR 5/6 | - | - |
| 24-120" | C | F-MS | 2.5 Y 6/3&2 | 40" 7.5 YR 5/8 | STRATIFIED |

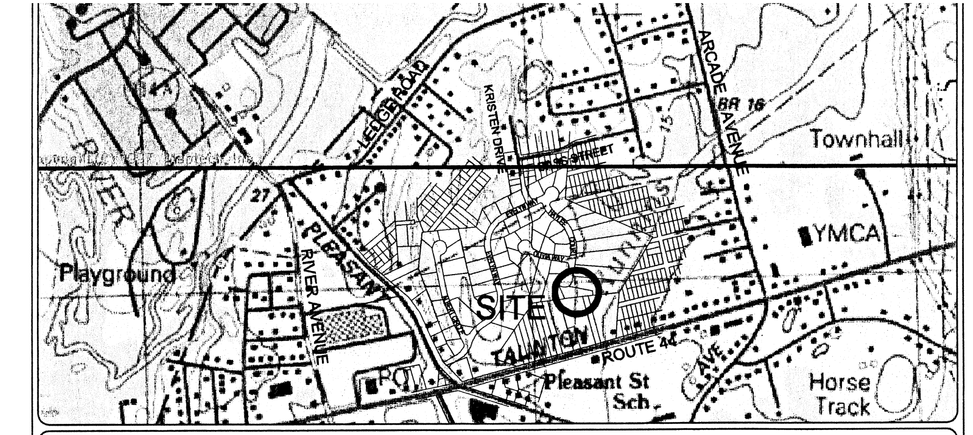
OBSERVED GROUND WATER: 72" STANDING, 66" WEEPING — DATE: 7-18-07
ESTIMATED HIGH GROUND WATER: 40" — BY: M. FARIA
NO PERC. TEST PERFORMED — WITNESS: H. CHENEVERT

### DEEP OBSERVATION HOLE 35D

| DEPTH | HORIZON | TEXTURE | COLOR | MOTTLING | OTHER |
|---|---|---|---|---|---|
| 0-4" | Ao | SL | 10 YR 3/2 | - | ORGANIC |
| 4-24" | B | LS | 10 YR 5/6 | - | - |
| 24-120" | C | F-MS | 2.5 Y 6/3&2 | 40" 7.5 YR 5/8 | STRATIFIED |

OBSERVED GROUND WATER: 72" STANDING, 66" WEEPING — DATE: 7-18-07
ESTIMATED HIGH GROUND WATER: 40" — BY: M. FARIA
NO PERC. TEST PERFORMED — WITNESS: H. CHENEVERT

SOIL EVALUATION & PERC RESULTS




## 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) AND 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.

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-I 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.

REFER TO CONSERVATION FILINGS FOR WORK WITHIN WETLAND BUFFER.

OWNER OF RECORD: JOSE & HELENA OLIVEREIRA
98 MOWRY AVENUE
EAST PROVIDENCE, RI 02914

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

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

THE HAY BALES AT THE 100' WETLAND SETBACK DELINEATE THE LIMITS OF DISTURBANCE AND ALL FUTURE ACTIVITIES.

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

RECEIVED
MAR 30 2010
SEEKONK CONSERVATION

RDA

# Septic System Design Plan & RDA Plan

COMMONWEALTH OF MASSACHUSETTS
PAUL D. CARLSON
CIVIL
NO. 40995
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL SEAL

## "BANNA ESTATES"

#18 HAYLEE COURT, SEEKONK, MA. 02771
AP 20 LOT 644 (SUBDIVISION LOT 35)

Applicant: MERIDIAN CUSTOM HOMES
1 RICHMOND SQUARE, SUITE 117C, PROVIDENCE, RI 02906

| Job # | Scale: | Design By: | Date: |
|---|---|---|---|
| 06-050-35 | 1"=20' | MSF | DECEMBER 17, 2009 |

Revised: MARCH 24, 2010 (RDA, NO SEPTIC MODIFICATIONS)


ROADWAY GPS SITE SURVEY
INSITE Engineering Services, LLC
PROFESSIONAL ENGINEERS AND LAND SURVEYORS
INSITE PROFESSIONAL COMPLEX, SUITE 1
1339 FALL RIVER AVENUE
SEEKONK, MA 02771
PHONE: (508) 336-4500
FAX: (508) 336-4558


SHEET 1 OF 1

D TAUNTON AVE - PLEASANT STREET\CADD\06-050 SEPTIC 9-17-08.DWG, SEP 8, RDA LOT 35, 3/24/2010 11:33:34 PM