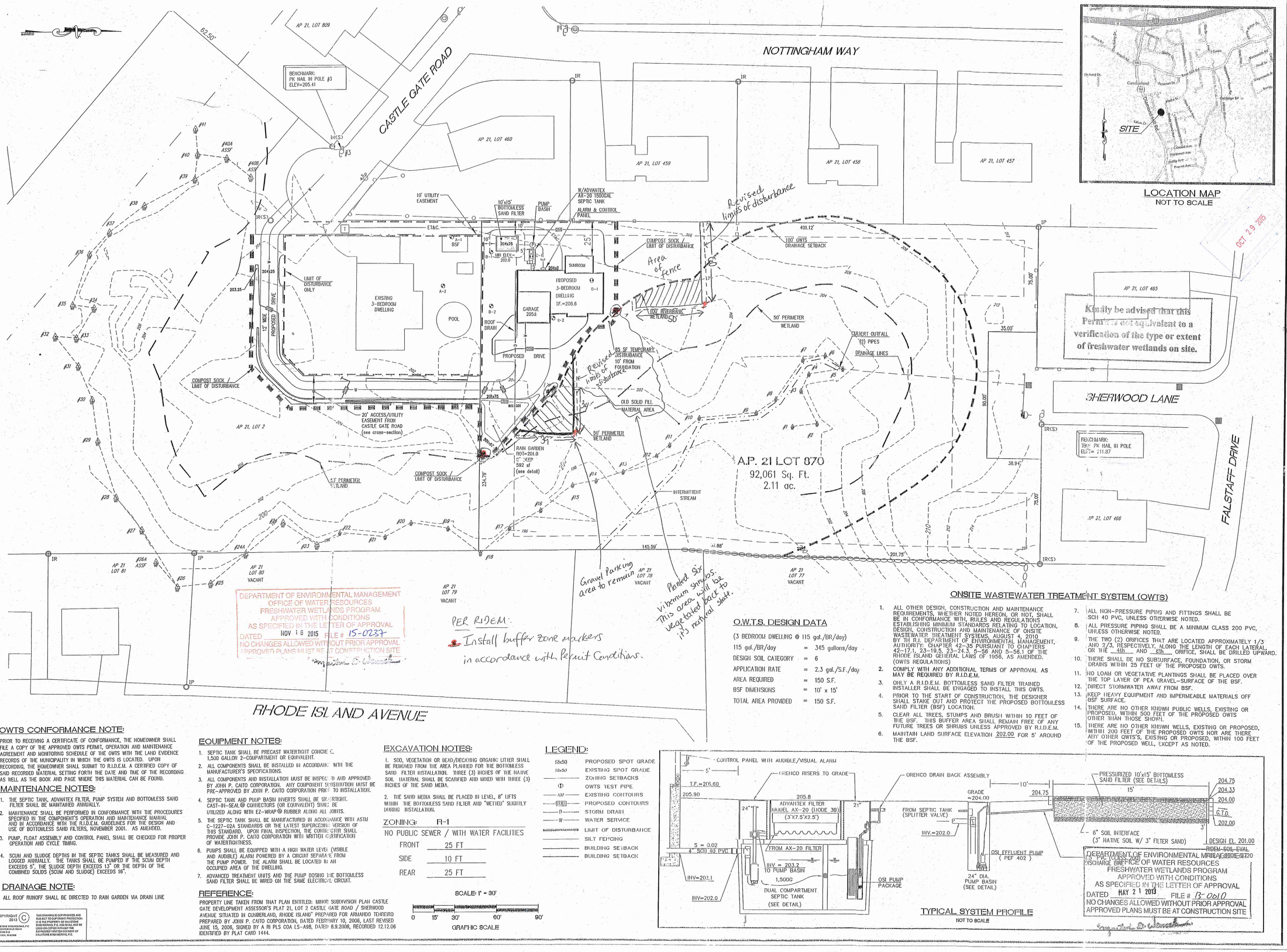

LOCATION MAP
NOT TO SCALE

NO.	DATE	REVISION

JAN 22 2013

JEFFREY C. HANSON
No. 5238
11/13
REGISTERED PROFESSIONAL ENGINEER

HILLSTONE ENGINEERING, P.C.
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • LAND PLANNING
250 CENTERVILLE ROAD, BUILDING E12, WARWICK, RHODE ISLAND 02886, p.(401)921-3344 f.(401)921-3303

ONSITE WASTEWATER TREATMENT SYSTEM (OWTS)

1. ALL OTHER DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS, WHETHER NOTED HEREON, OR NOT, SHALL BE IN CONFORMANCE WITH, RULES AND REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, AUGUST 4, 2010 BY TH R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, AUTHORITY: CHAPTER 42-35 PURSUANT TO CHAPTERS 42-17.1, 23-19.5, 23-24.3, 5-58 AND 5-56.1 OF THE RHODE ISLAND GENERAL LAWS OF 1956, AS AMENDED. (OWTS REGULATIONS)
2. COMPLY WITH ANY ADDITIONAL TERMS OF APPROVAL AS MAY BE REQUIRED BY R.I.D.E.M.
3. ONLY A R.I.D.E.M. BOTTOMLESS SAND FILTER TRAINED INSTALLER SHALL BE ENGAGED TO INSTALL THIS OWTS.
4. PRIOR TO THE START OF CONSTRUCTION, THE DESIGNER SHALL STAKE OUT AND PROTECT THE PROPOSED BOTTOMLESS SAND FILTER (BSF) LOCATION.
5. CLEAR ALL TREES, STUMPS AND BRUSH WITHIN 10 FEET OF THE BSF. THIS BUFFER AREA SHALL REMAIN FREE OF ANY FUTURE TREES OR SHRUBS UNLESS APPROVED BY R.I.D.E.M.
6. MAINTAIN LAND SURFACE ELEVATION 202.00 FOR 5' AROUND THE BSF.
7. ALL NON-PRESSURE PIPING AND FITTINGS SHALL BE SCH 40 PVC, UNLESS OTHERWISE NOTED.
8. ALL PRESSURE PIPING SHALL BE A MINIMUM CLASS 200 PVC, UNLESS OTHERWISE NOTED.
9. THE TWO (2) ORIFICES THAT ARE LOCATED APPROXIMATELY 1/3 AND 2/3, RESPECTIVELY, ALONG THE LENGTH OF EACH LATERAL, OR THE 4th AND 6th ORIFICE, SHALL BE DRILLED UPWARD.
10. THERE SHALL BE NO SUBSURFACE, FOUNDATION, OR STORM DRAINS WITHIN 25 FEET OF THE PROPOSED OWTS.
11. NO LOAM OR VEGETATIVE PLANTINGS SHALL BE PLACED OVER THE TOP LAYER OF PEA GRAVEL–SURFACE OF THE BSF.
12. DIRECT STORMWATER AWAY FROM BSF.
13. KEEP HEAVY EQUIPMENT AND IMPERMEABLE MATERIALS OFF BSF SURFACE.
14. THERE ARE NO OTHER KNOWN PUBLIC WELLS, EXISTING OR PROPOSED, WITHIN 500 FEET OF THE PROPOSED OWTS OTHER THAN THOSE SHOWN.
15. THERE ARE NO OTHER KNOWN WELLS, EXISTING OR PROPOSED, WITHIN 200 FEET OF THE PROPOSED OWTS NOR ARE THERE ANY OTHER OWTS'S, EXISTING OR PROPOSED, WITHIN 100 FEET OF THE PROPOSED WELL, EXCEPT AS NOTED.

O.W.T.S. DESIGN DATA

(3 BEDROOM DWELLING @ 115 gal./BR/day)

115 gal./BR/day	=	345 gallons/day
DESIGN SOIL CATEGORY	=	6
APPLICATION RATE	=	2.3 gal./S.F./day
AREA REQUIRED	=	150 S.F.
BSF DIMENSIONS	=	10' x 15'
TOTAL AREA PROVIDED	=	150 S.F.

OWTS CONFORMANCE NOTE:

PRIOR TO RECEIVING A CERTIFICATE OF CONFORMANCE, THE HOMEOWNER SHALL FILE A COPY OF THE APPROVED OWTS PERMIT, OPERATION AND MAINTENANCE AGREEMENT AND MONITORING SCHEDULE OF THE OWTS WITH THE LAND EVIDENCE RECORDS OF THE MUNICIPALITY IN WHICH THE OWTS IS LOCATED. UPON RECORDING, THE HOMEOWNER SHALL SUBMIT TO R.I.D.E.M. A CERTIFIED COPY OF SAID RECORDED MATERIAL SETTING FORTH THE DATE AND TIME OF THE RECORDING AS WELL AS THE BOOK AND PAGE WHERE THIS MATERIAL CAN BE FOUND.

MAINTENANCE NOTES:

1. THE SEPTIC TANK, ADVANTEX FILTER, PUMP SYSTEM AND BOTTOMLESS SAND FILTER SHALL BE MAINTAINED ANNUALLY.
2. MAINTENANCE SHALL BE PERFORMED IN CONFORMANCE WITH THE PROCEDURES SPECIFIED IN THE COMPONENT'S OPERATION AND MAINTENANCE MANUAL AND IN ACCORDANCE WITH THE R.I.D.E.M. GUIDELINES FOR THE DESIGN AND USE OF BOTTOMLESS SAND FILTERS, NOVEMBER 2001. AS AMENDED.
3. PUMP, FLOAT ASSEMBLY AND CONTROL PANEL SHALL BE CHECKED FOR PROPER OPERATION AND CYCLE TIMING.
4. SCUM AND SLUDGE DEPTHS IN THE SEPTIC TANKS SHALL BE MEASURED AND LOGGED ANNUALLY. THE TANKS SHALL BE PUMPED IF THE SCUM DEPTH EXCEEDS 5", THE SLUDGE DEPTH EXCEEDS 13" OR THE DEPTH OF THE COMBINED SOLIDS (SCUM AND SLUDGE) EXCEEDS 16".

DRAINAGE NOTE:

ALL ROOF RUNOFF SHALL BE DIRECTED TO RAIN GARDEN VIA DRAIN LINE

EQUIPMENT NOTES:

1. SEPTIC TANK SHALL BE PRECAST WATERTIGHT CONCRETE, 1,500 GALLON 2-COMPARTMENT OR EQUIVALENT.
2. ALL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
3. ALL COMPONENTS AND INSTALLATION MUST BE INSPECTED AND APPROVED BY JOHN P. CAITO CORPORATION. ANY COMPONENT SUBSTITUTION MUST BE PRE-APPROVED BY JOHN P. CAITO CORPORATION PRIOR TO INSTALLATION.
4. SEPTIC TANK AND PUMP BASIN INVERTS SHALL BE WATERTIGHT. CAST-IN-SEAL® CONNECTORS (OR EQUIVALENT) SHALL BE UTILIZED ALONG WITH EZ-WRAP® RUBBER ALONG ALL JOINTS.
5. THE SEPTIC TANK SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-1227-02A STANDARDS OR THE LATEST SUPERCEDING VERSION OF THIS STANDARD. UPON FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE JOHN P. CAITO CORPORATION WITH WRITTEN CERTIFICATION OF WATERTIGHTNESS.
6. PUMPS SHALL BE EQUIPPED WITH A HIGH WATER LEVEL (VISIBLE AND AUDIBLE) ALARM POWERED BY A CIRCUIT SEPARATE FROM THE PUMP POWER. THE ALARM SHALL BE LOCATED IN AN OCCUPIED AREA OF THE DWELLING.
7. ADVANCED TREATMENT UNITS AND THE PUMP DOSING THE BOTTOMLESS SAND FILTER SHALL BE WIRED ON THE SAME ELECTRICAL CIRCUIT.

EXCAVATION NOTES:

1. SOD, VEGETATION OR DEAD/DECAYING ORGANIC LITTER SHALL BE REMOVED FROM THE AREA PLANNED FOR THE BOTTOMLESS SAND FILTER INSTALLATION. THREE (3) INCHES OF THE NATIVE SOIL MATERIAL SHALL BE SCARIFIED AND MIXED WITH THREE (3) INCHES OF THE SAND MEDIA.
2. THE SAND MEDIA SHALL BE PLACED IN LEVEL, 8" LIFTS WITHIN THE BOTTOMLESS SAND FILTER AND "WETTED" SLIGHTLY DURING INSTALLATION.

ZONING: R-1

NO PUBLIC SEWER / WITH WATER FACILITIES

FRONT	25 FT
SIDE	10 FT
REAR	25 FT

REFERENCE:

PROPERTY LINE TAKEN FROM THAT PLAN ENTITLED: MINOR SUBDIVISION PLAN CASTLE GATE DEVELOPMENT ASSESSOR'S PLAT 21, LOT 2 CASTLE GATE ROAD / SHERWOOD AVENUE SITUATED IN CUMBERLAND, RHODE ISLAND" PREPARED FOR ARMANDO TENREIRO PREPARED BY JOHN P. CAITO CORPORATION, DATED FEBRUARY 10, 2006, LAST REVISED JUNE 15, 2006, SIGNED BY A RI PLS COA LS-498, DATED 8.9.2006, RECORDED 12.12.06 IDENTIFIED BY PLAT CARD 1444.

LEGEND:

58x50	PROPOSED SPOT GRADE
58x50	EXISTING SPOT GRADE
	ZONING SETBACKS
Ⓟ	OWTS TEST PIPE
100	EXISTING CONTOURS
100	PROPOSED CONTOURS
D	STORM DRAIN
W	WATER SERVICE
	LIMIT OF DISTURBANCE
	SILT FENCING
	BUILDING SETBACK
	BUILDING SETBACK

SCALE: 1" = 30'

0 15' 30' 60' 90'

GRAPHIC SCALE

TYPICAL SYSTEM PROFILE
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 21 2013 FILE # 13-0610
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SITE PLAN of PROPOSED OWTS

CASTLE GATE PARCEL B

A.P. 21 , LOT 870
13 CASTLE GATE RD.
CUMBERLAND, RI

PREPARED FOR:
ARMANDO TENREIRO

SCALE: 1"=30'
JANUARY 2013

Drawn By: MJV
Checked By: JCH
Sheet 1 of 2

FILE NO.: 12.106.147

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