

Bureau of Environmental Health
 7178 Gateway Drive Columbia, MD 21046
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2323 Toll Free 1-866-313-6300
 website: www.hchealth.org

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 12/18/12 **ONSITE SEWAGE DISPOSAL SYSTEM** P 544457-I

INSTALLATION
 APPROVAL DATE: 6/3/2014 **PERMIT** A _____
CONSTRUCTION

PROPERTY ADDRESS: 14326 Bensworth Way

SUBDIVISION: Edgewood Farm LOT: 31 TAX ID: 04-372573

CONTRACTOR: Fogle's Septic Clean Inc. EMAIL: kurt@foglesinc.com

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville, MD 21784 PHONE: 410-795-5670

PROPERTY OWNER: Toll MD V LP EMAIL: nbrendenberg@tollbrothersinc.com

OWNER ADDRESS: 14540 Edgewoods Way, Glenelg, MD 21737 PHONE: 410-489-2275

SEPTIC TANK SIZE (GALLONS): 2000

PUMP CHAMBER CAPACITY (GALLONS): _____ PUMP SIZE: _____

NUMBER OF BEDROOMS: 4 HOUSE SQ. FT. 4,850 APPLICATION RATE: 1.2

DISTRIBUTION SYSTEM: GRAVITY FED LOW PRESSURE DOSED

TRENCHES:	LINEAR FEET REQUIRED: 103 <u>150'</u>	INLET DEPTH: <u>4</u> ✓
	TRENCH WIDTH: 2 <u>2</u>	MAXIMUM BOTTOM DEPTH: <u>8</u> ✓
	MINIMUM SPACE BETWEEN TRENCHES: <u>8</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>6</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Set septic tank per plan. Set distribution box per plan. Install equal length trenches on contour. Basement does not sewer by gravity. <u>3x50'</u>	

ISSUED BY: Heidi Scott ISSUE DATE: 12-9-13 EXPIRATION DATE: 12/18/13

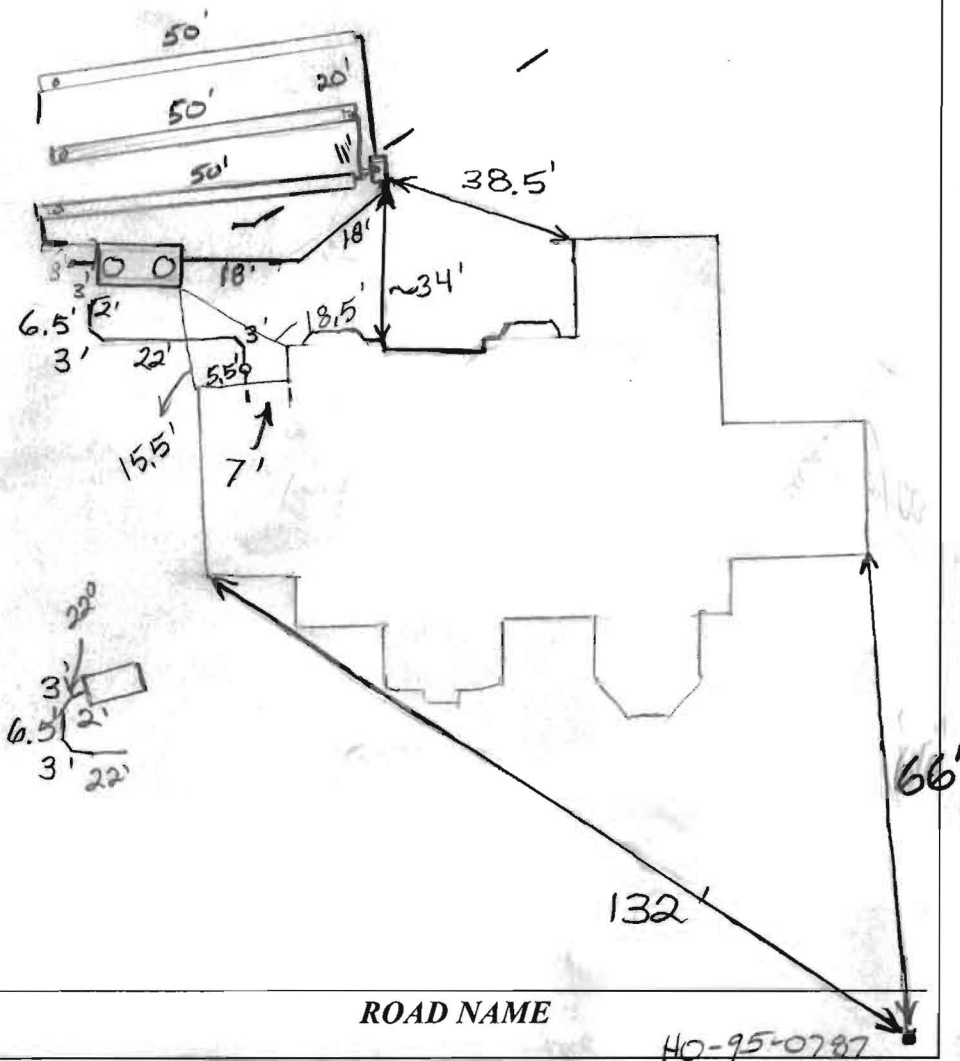
- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM

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 410-313-1771 TO SCHEDULE INSPECTIONS.

NOT TO SCALE



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
2'	4'	8'
NUMBER OF TRENCHES		3
TOTAL LENGTH		150'
ABSORPTION AREA		300' + SW
DISTRIBUTION BOX LEVEL		Leveler's
DISTRIBUTION BOX BAFFLE		Yes
DISTRIBUTION BOX PORT		Yes

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	Yes
MANUFACTURER	Baby In
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	2.5'-3'
BAFFLES	Yes
BAFFLE FILTER	No
MANHOLE LOC	Front/Rear
6" PORT LOC	none
WATERTIGHT TEST	No
SLOTTED	Yes
DATE ON LID	N/A
PUMP/SEPTIC TANK LEVEL N/A	
MANUFACTURER	
CAPACITY	
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

PRE-CONSTRUCTION:

12/12/13 Set septic tank per plan. No house on lot. Tank not staked, SPA staked. Large hole top middle part of SPA. Should be ok if trenches install 3d50' on contour as shot in field. (HW)

INSTALLATION:

12/13/13 Tank set, No trenches started. Reject 1 load of stone. Too dirty. Give contractor warning on dirty stone (HW)

12/16/13 Trenches complete. Need to level D box (HW)

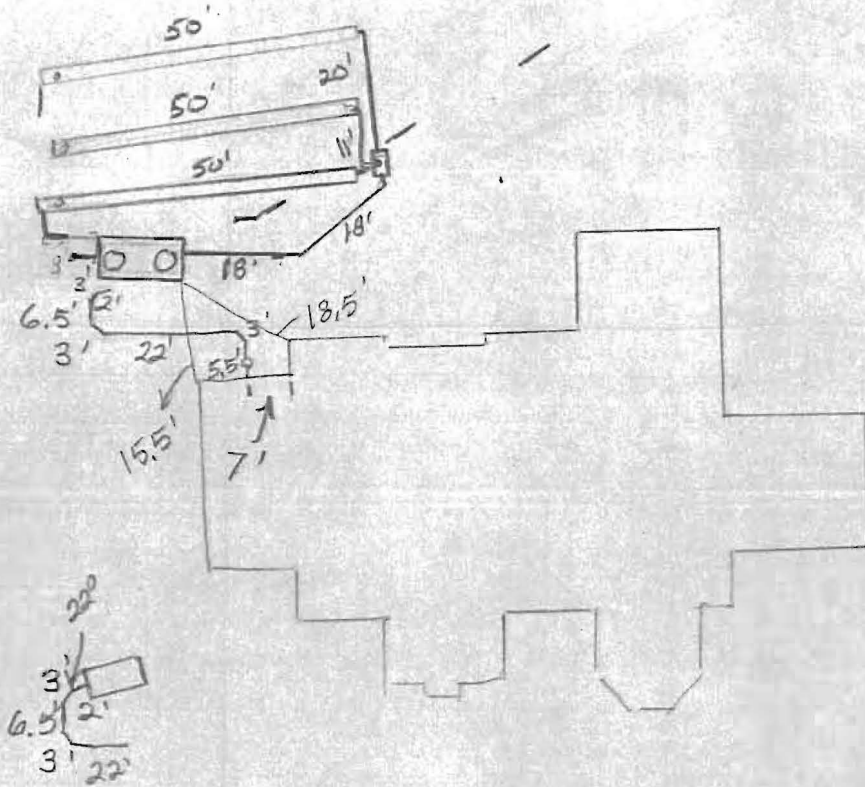
12/19/13 D box leveled. Need 3146 when house is built (HW)

4/14/2014 House connection made. (BB)

6/3/2014 Got Dist. box location. Everything finished. (BB)

FINAL INSPECTOR B. Baker DATE OF APPROVAL 6/3/2014

NOT TO SCALE



ROAD NAME

H10-95-0787

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
2'	4'	8'
NUMBER OF TRENCHES		3
TOTAL LENGTH		150'
ABSORPTION AREA		300' + SW
DISTRIBUTION BOX LEVEL		Leveler's
DISTRIBUTION BOX BAFFLE		Yes
DISTRIBUTION BOX PORT		Yes

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	Yes
MANUFACTURER	Babylon
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	25'-3'
BAFFLES	Yes
BAFFLE FILTER	No
MANHOLE LOC	Front/Rear
6" PORT LOC	none
WATERTIGHT TEST	No
SLOTTED	Yes
DATE ON LID	N/A

PUMP/SEPTIC TANK LEVEL N/A

MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

PRE-CONSTRUCTION:

12/12/13 Set septic tank per plan. No house on lot. Tank not staked. SRA staked. Large hole top middle part of SRA. Should be ok if trenches install 3x50' on contour as shot in field. (K)

INSTALLATION:

12/13/13 Tank set. No trenches started. Reject 1 load of stone. Too dirty. Give contractor money on dirty stone (K)

12/16/13 Trenches complete. Need to level D box (K)

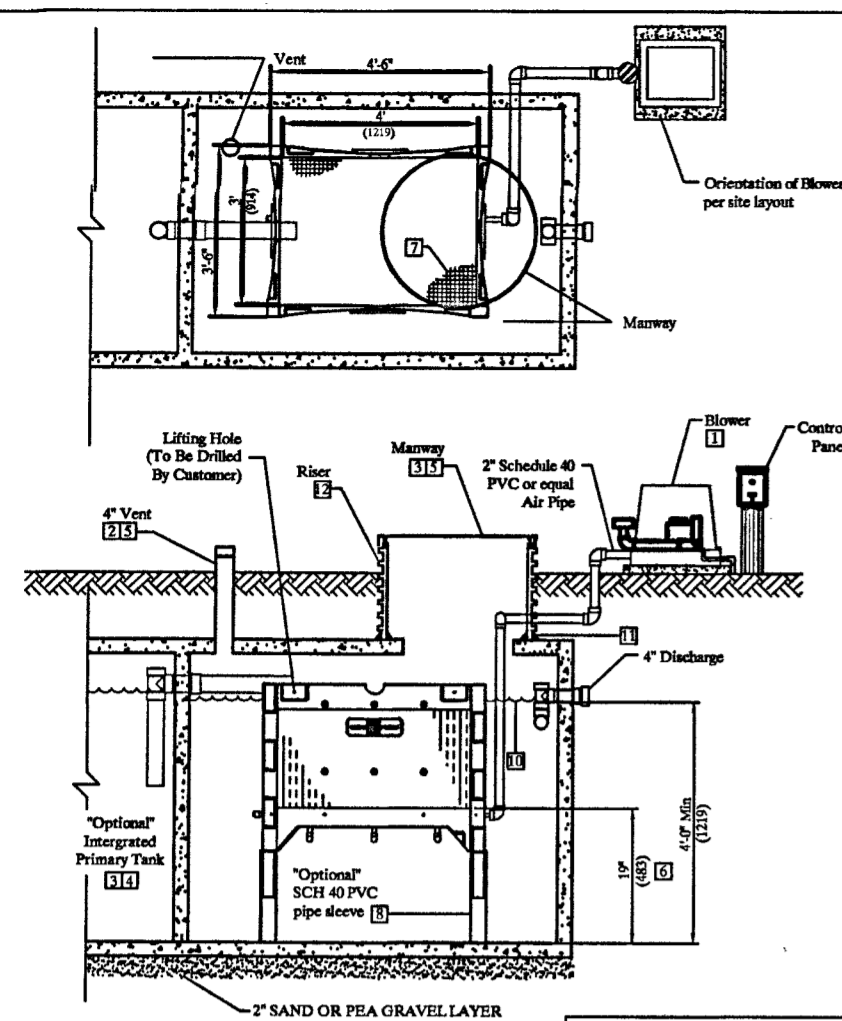
12/19/13 D box leveled. Need site when house is built (K)

4/14/2014

FINAL INSPECTOR

DATE OF APPROVAL

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21328, EXPIRATION DATE 1/8/15.



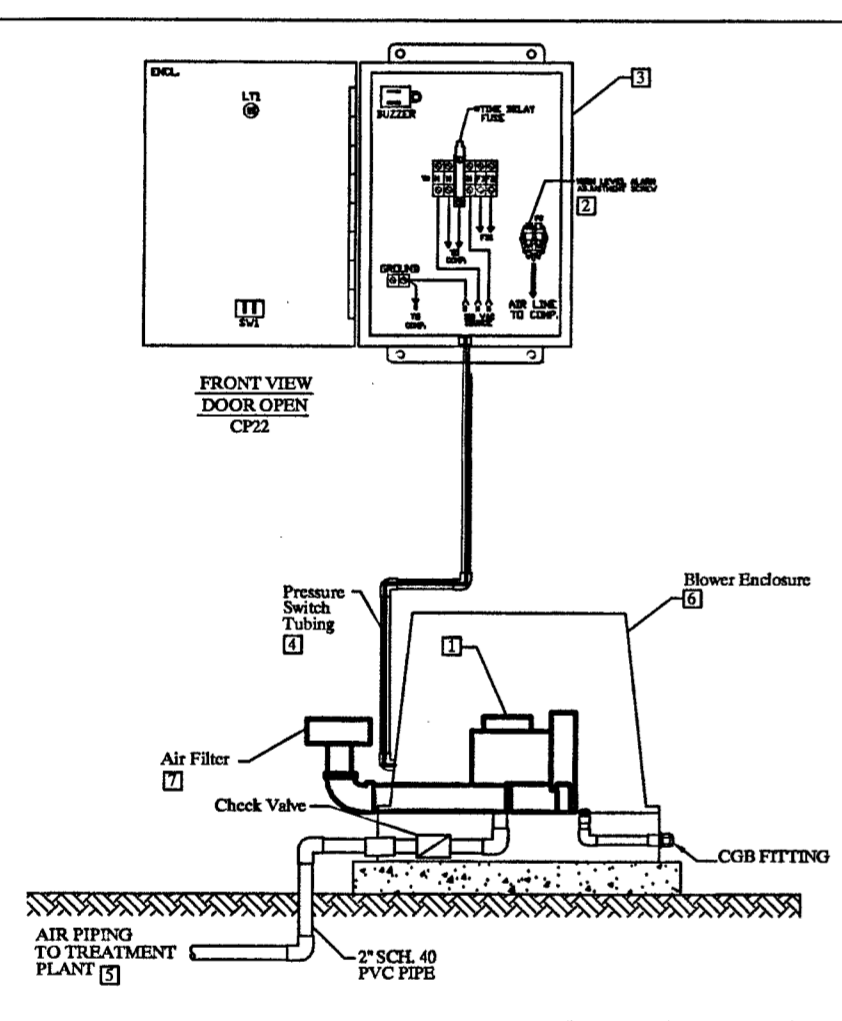
- NOTES:**
- Blower piping to ECOPOD not to exceed 100 FT total length in the piping system. For distances greater than 100 FT, consult factory. Blower must be located above floor levels on a solid base.
 - Vent to be located above finish grade or higher to avoid infiltration. Cap on vent must be secured with a stainless steel screw.
 - All other tanks for ECOPOD must conform to applicable country, state, province, and local plumbing and electrical codes.
 - The primary tank compartment volume must be 1 to 2 times the rated ECOPOD GPD. Primary and Reactor tank volumes are listed in the ECOPOD Design Manual. The primary tank may be integrated with the reactor tank or stand alone in a separate tank.
 - All manways, pump out ports, and vents must be secured to prevent accidental or unauthorized access.
 - ECOPOD media is recommended to be at least 19" from bottom of tank. Distances not 19" need factory approval.
 - ECOPOD media EV19PVC24
 - Tanks with higher inlets, install SCH 40 PVC pipe over legs to elevate reactor to correct height.
 - Air supply line should be secured with non-corrosive clamps where required to prevent vibration damage.
 - Effluent discharge level must be at a height no more, or no less than 2" above vertical tube PVC media.
 - Use epoxy, or use another approved method or substance, to create strong connection & watertight seal (TYP.)
 - Reactors must conform to country, state, province, and local acceptable codes. Fiberglass rebar shown.

600 GPD TREATMENT UNIT	
Discharge From Tank	4'-0"
Reactor Volume	840 Gallons
Recommended Distance Under Reactor Box	19"

E60NCA REACTOR IN CONCRETE TANK

DESIGNED BY	DATE	SCALE	DWG. NO.	REVISION	PAGE
Delta Environmental	3/25/14	AS SHOWN	600NCA REACTOR IN CONCRETE TANK	1	1 OF 3

NOT TO SCALE

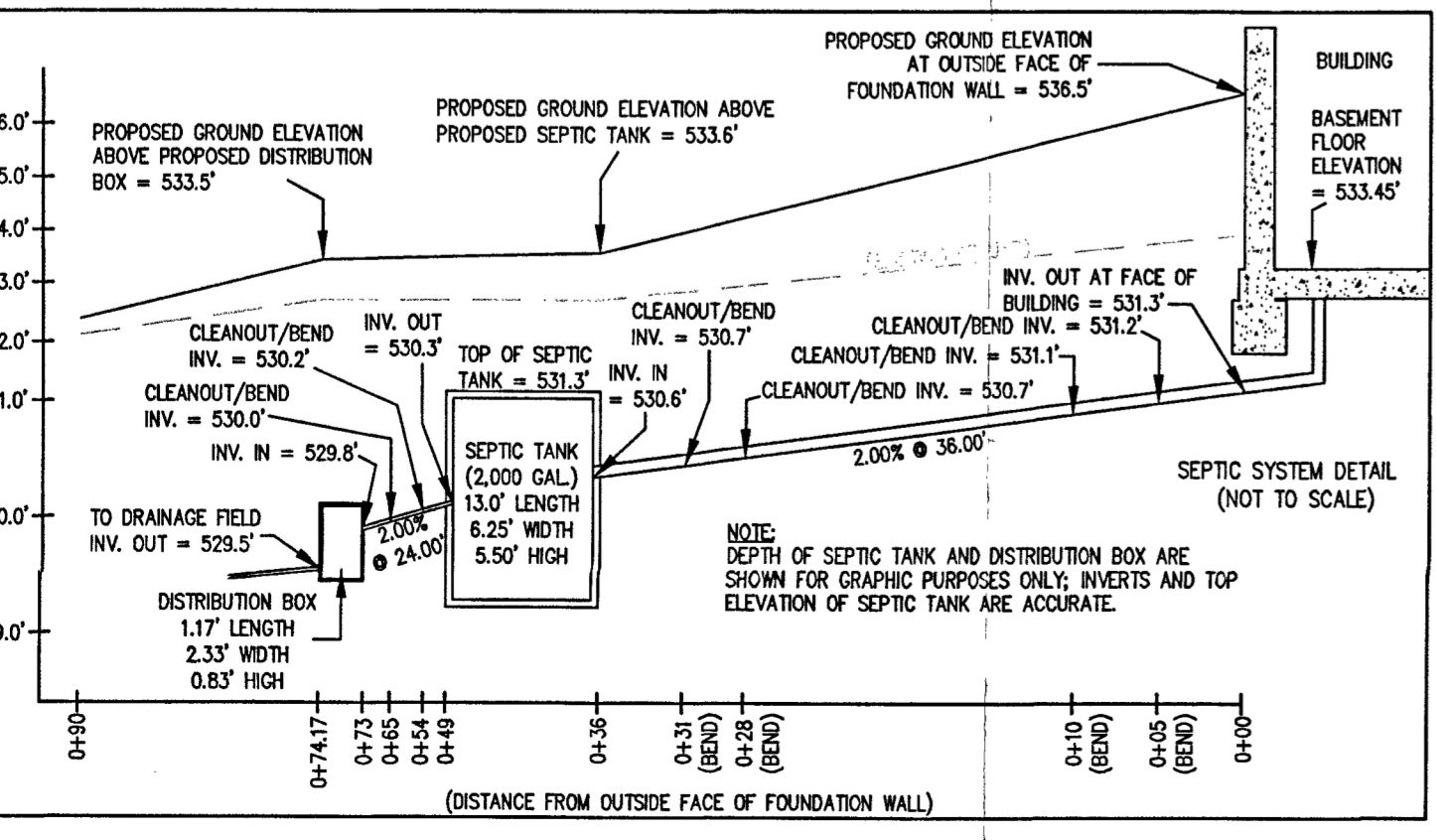


- NOTES:**
- Blower Model Delta 08
 - Setting High Level Pressure Switch Bring plant to operating water level with compressor turned on. Using properly sized screw driver, turn high level alarm adjustment screw clockwise until alarm occurs. Once alarm occurs, turn the screw counter-clockwise until alarm stops. Setting Low Level Pressure Switch Factory set
 - All of Delta's control panels are manufactured to UL508A requirements; All enclosures are NEMA rated.
 - Pressure switch tubing is used for high and low level pressure detection.
 - All piping from the blower to the ECOPOD to be 2" sch 40 PVC pipe.
 - All blowers are housed in a polyethylene enclosure supplied with necessary piping for installation.
 - Inlet Filters must be mounted on outside of enclosure. Filters not mounted on outside could contribute to blower malfunction and void manufacturer's warranty.
 - Filter elements must be non-paper type.

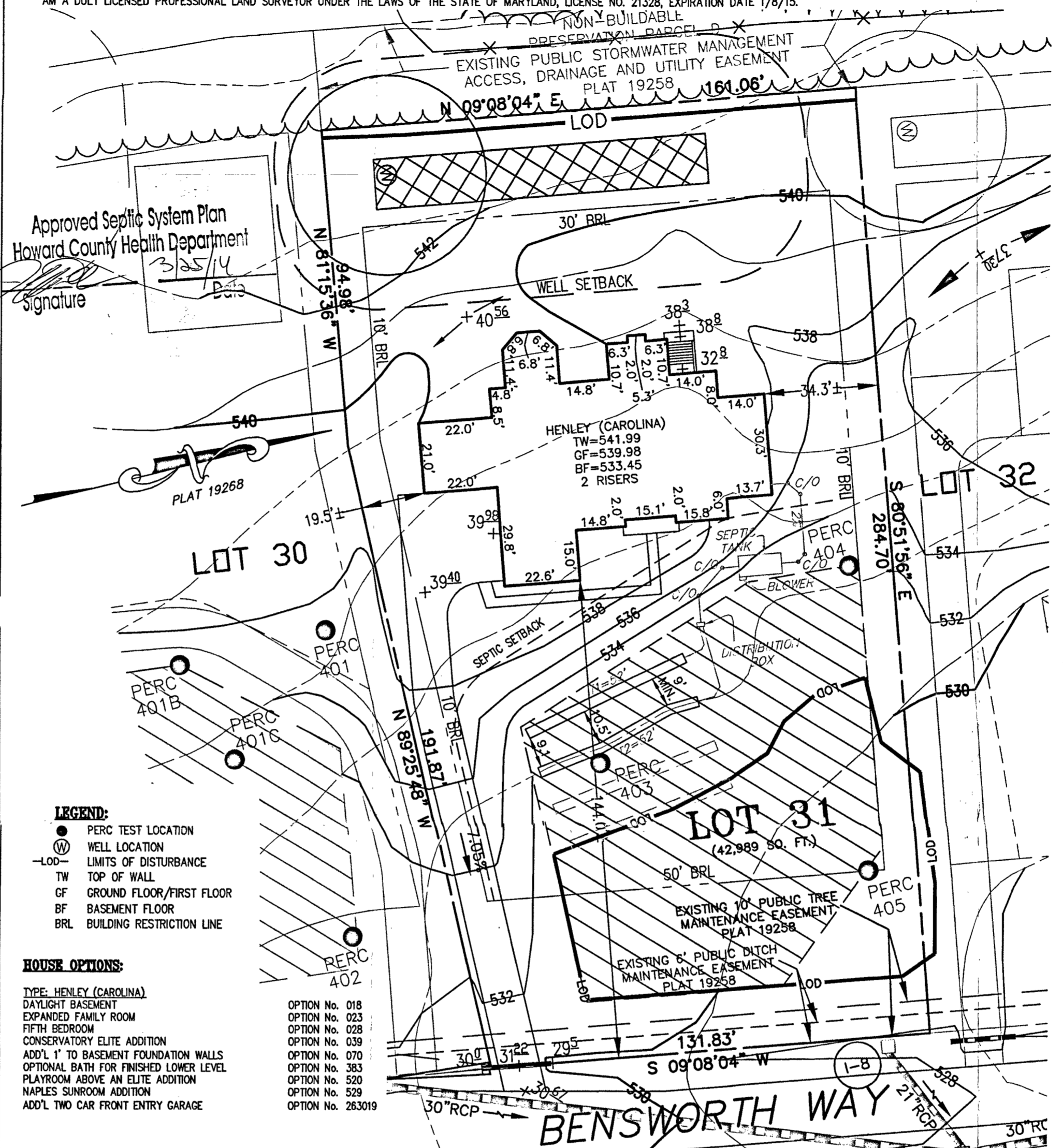
E60NCA BLOWER/CP DETAIL

DESIGNED BY	DATE	SCALE	DWG. NO.	REVISION	PAGE
Delta Environmental	3/25/14	AS SHOWN	600NCA BLOWER/CP DETAIL	1	1 OF 3

NOT TO SCALE



NOTE: DEPTH OF SEPTIC TANK AND DISTRIBUTION BOX ARE SHOWN FOR GRAPHIC PURPOSES ONLY; INVERTS AND TOP ELEVATION OF SEPTIC TANK ARE ACCURATE.



- LEGEND:**
- PERC TEST LOCATION
 - WELL LOCATION
 - LOD LIMITS OF DISTURBANCE
 - TW TOP OF WALL
 - GF GROUND FLOOR/FIRST FLOOR
 - BF BASEMENT FLOOR
 - BRL BUILDING RESTRICTION LINE

- HOUSE OPTIONS:**
- TYPE: HENLEY (CAROLINA)
 - DAYLIGHT BASEMENT
 - EXPANDED FAMILY ROOM
 - FIFTH BEDROOM
 - CONSERVATORY ELITE ADDITION
 - ADD'L 1' TO BASEMENT FOUNDATION WALLS
 - OPTIONAL BATH FOR FINISHED LOWER LEVEL
 - PLAYROOM ABOVE AN ELITE ADDITION
 - NAPLES SUNROOM ADDITION
 - ADD'L TWO CAR FRONT ENTRY GARAGE

SEPTIC SYSTEM/BEST AVAILABLE TECHNOLOGY (BAT) NOTES:

- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3 FEET COVER.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON THE MANUFACTURER'S SPECIFICATIONS.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE), IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.

APPROVED: FOR HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
DIRECTOR	DATE
PROFESSIONAL ENGINEER	DATE

SEWAGE DISPOSAL SYSTEM DATA (4 BDRM):

- PROPOSED INVERT AT FOUNDATION WALL: 531.3'
- EGO ECOPOD SYSTEM
EX. GRADE OVER TANK: 532.7'
PROPOSED GRADE OVER TANK: 533.6'
INVERT IN: 530.6' INVERT OUT: 530.3'
 - DISTRIBUTION BOX
EXISTING GRADE OVER TANK: 532.8'
PROPOSED GRADE OVER TANK: 533.5'
INVERT IN: 529.8' INVERT OUT: 529.5'
 - TRENCH DESIGN (4 BDRM x 150 GPD/BDRM = 600 GPD)
600 GPD + 1.2 APP. RATE = 500 SF
USE 3" WIDE TRENCH WITH 48" GRAVEL BELOW PIPE
9" MIN. SPACING BETWEEN TRENCH EDGES
500 SF x 3" WIDTH = 166.67 LF x 0.62 = 103.33 LF MIN. TRENCH
USE 2 52' LONG TRENCHES = 104 LF

TRENCH DATA:

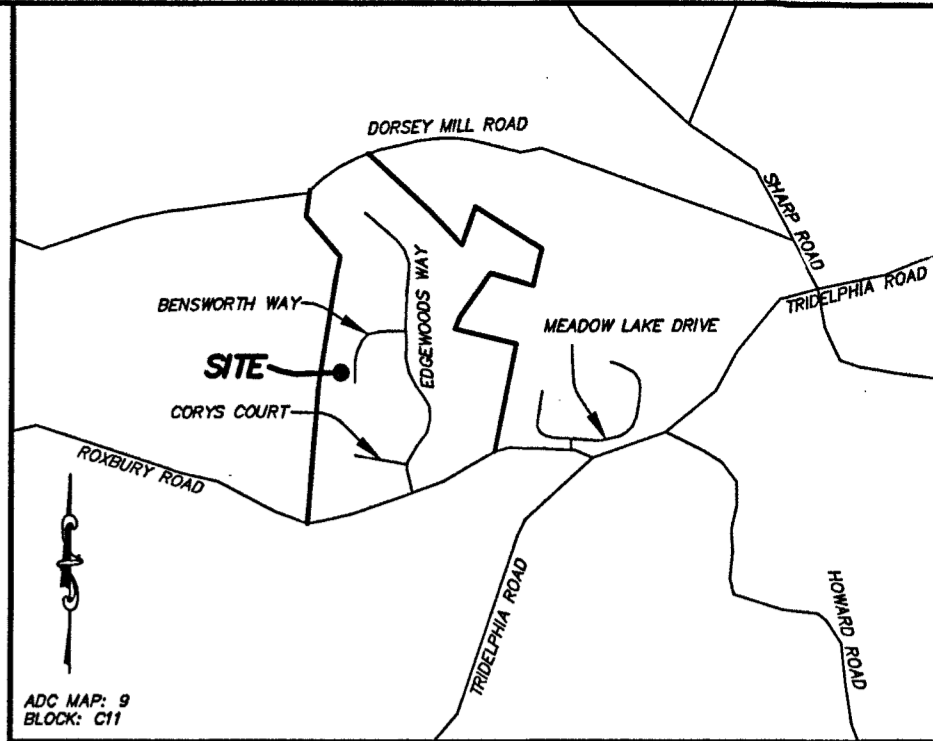
- BOTTOM MAX. DEPTH (8')
- TRENCH 1 (T1):**
GROUND ABOVE = 533.0'
INV. IN = 529.0'
BOTTOM TRENCH = 525.0'
- TRENCH 2 (T2):**
GROUND ABOVE = 532.0'
INV. IN = 528.0'
BOTTOM TRENCH = 524.0'

PLOT PLAN FOR BAT INSTALLATION
LOT 31
EDGEWOOD FARM
LIBER 10677, FOLIO 461
PLAT No. 19268
TAX No. 04-372573
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
ADDRESS: 14326 BENSORTH WAY
GLENELG, MARYLAND

ESE Land Planning
Engineering
Land Surveying

ESE Consultants Inc.
7164 Columbia Gateway Dr.
Suite 203
Columbia, MD 21046
TEL: 410-872-9105
FAX: 410-872-4870

DATE: 03/18/14 SCALE: 1"=30' FILE: PP LOT 31
CHK'D: MMB JOB NO: 1498 DRAWN: R.C.K



VICINITY MAP
1" = 2000'

- GENERAL NOTES:**
- THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 2/2/04 COMPREHENSIVE ZONING PLAN AND PER COMP-LITE ZONING REGULATIONS DATED 7/28/06.
 - PLAT REFERENCE: PLAT No. 19268.
 - THE EXISTING TOPOGRAPHY WITHIN THE AREA OF PROPOSED WORK IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY ESE. DATED 4/27/11.
 - SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND DESIGN DETAILS. PRIOR TO STAKEOUT FOR CONSTRUCTION, IT SHALL BE THE OWNER/BUILDERS RESPONSIBILITY TO PROVIDE ESE CONSULTANTS INC. WITH THE MOST RECENT SET OF HOUSE PLANS.
 - THE CONTRACTOR OR DEVELOPER SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410-313-1881) AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - TOTAL LIMIT OF DISTURBANCE: 35,521 SQ. FT. / 0.81 AC.±
 - STORMWATER MANAGEMENT PER PLAN F-07-054.
 - ANY DAMAGE TO PUBLIC "RIGHT-OF-WAYS" OR PAVED PUBLIC ROADS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
 - DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE CIVIL ENGINEER (ESE) MAY CAUSE THE WORK TO BE UNACCEPTABLE.
 - THE DIMENSIONED DISTANCES SHALL GOVERN IF SCALED AND DIMENSIONED DISTANCES ON THIS PLAN ARE FOUND TO BE IN DISAGREEMENT.
 - THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM LOT AREA AND OWNERSHIP WIDTH AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 - THESE AREAS DESIGNATE A PRIVATE SEWAGE EASEMENT OF AT LEAST 16,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS UNTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
 - EXISTING WELLS, SEPTIC SYSTEMS, AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWAGE DISPOSAL AREAS HAVE BEEN SHOWN.
 - ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 - UPON BUILDING PERMIT REVIEW THE SEPTIC SYSTEMS FOR ALL PROPOSED STRUCTURES AND/OR EXISTING STRUCTURE EXPANSIONS SHALL BE RE-EVALUATED TO DETERMINE SUFFICIENT SYSTEM CAPACITY.
 - THE DEVELOPMENT OF THIS LOT DOES NOT REQUIRE AN ENVIRONMENTAL CONCEPT PLAN SINCE STORMWATER MANAGEMENT WAS PREVIOUSLY APPROVED UNDER F-07-054.
 - A STANDARD SEDIMENT CONTROL PLAN MAY BE USED FOR DEVELOPMENT OF THIS LOT. REFERENCE GRADING PLAN GP 14-031.
 - THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-95-0790 HAS BEEN FIELD LOCATED BY ESE CONSULTANTS - PROFESSIONAL LAND SURVEYOR(S), AND IS ACCURATELY SHOWN.
 - BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPMENT PLAN SETBACK DISTANCES SHOWN HEREON AS "±" HAVE AN ACCURACY OF ±0.1' FOOT.
 - CULVERT FOR DRIVEWAY PER F-07-054.