HTE# 09-5-23347R

Harnett County Department of Public Health

25826

Improvement Permit

A building permit cannot be issued with only an Improvement Permit

ISSUED TO: New Horizons Builders PROPERTY LOCATION: Brinkley Rd.

SUBDIVISION Herbert Johnson LOT # A

NEW ☑ REPAIR ☐ EXPANSION ☐

Type of Structure: SFD 55x53

Proposed Wastewater System Type: Fill system

Projected Daily Flow: 240 GPD

Number of bedrooms: 2 Number of Occupants: 4 max

Basement ☐Yes ☐ No

Pump Required: ☑Yes ☐ No ☐ May be required based on final location and elevations of facilities

Type of Water Supply: ☐ Community ☐ Public ☑ Well Distance from well 100 feet

Site Improvements required prior to Construction Authorization Issuance:

Permit valid for: ☑ Five years ☐ No expiration

Permit conditions: Initial + Repair Drainfield areas must be fenced. All construction traffic must enter property thru easement from Brinkley Rd.

Authorized State Agent:: Susan McSwain, REHS Date: 2/24/2010 SEE ATTACHED SITE SKETCH

The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit..

Construction Authorization

(Required for Building Permit)

The construction and installation requirements of Rules .1950, .1952, .1954, .1955, .1956, .1957, .1958. and .1959 are incorporated by references into this permit and shall be met. Systems shall be installed in accordance with the attached system layout.

ISSUED TO: New Horizons Builders PROPERTY LOCATION: Brinkley Rd.

SUBDIVISION Herbert Johnson LOT # A

Facility Type: SFD ☑ New ☐ Expansion ☐ Repair

Basement? ☐ Yes ☑ No Basement Fixtures? ☐ Yes ☐ No

Type of Wastewater System** Fill system (Initial) Wastewater Flow: 240 GPD

(See note below, if applicable ☐) Fill system (Repair)

Installation Requirements/Conditions

Septic Tank Size _____ gallons

Pump Tank Size _____ gallons

Number of trenches _____

Exact length of each trench _____ feet

Trenches shall be installed on contour at a

Maximum Trench Depth of: _____ inches

(Trench bottoms shall be level to +/-1/4" in all directions)

Trench Spacing: _____ Feet on Center

Soil Cover: _____ inches

(Maximum soil cover shall not exceed 36" above the trench bottom)

Pump Requirements: _____ ft. TDH vs. _____ GPM

_____ inches below pipe

Aggregate Depth: _____ inches above pipe

_____ inches total

Conditions: Permit based on soil consultants proposal. See attachments for system specs & design

**If applicable: *I understand the system type specified is different from the type specified on the application. I accept the specifications of this permit.*

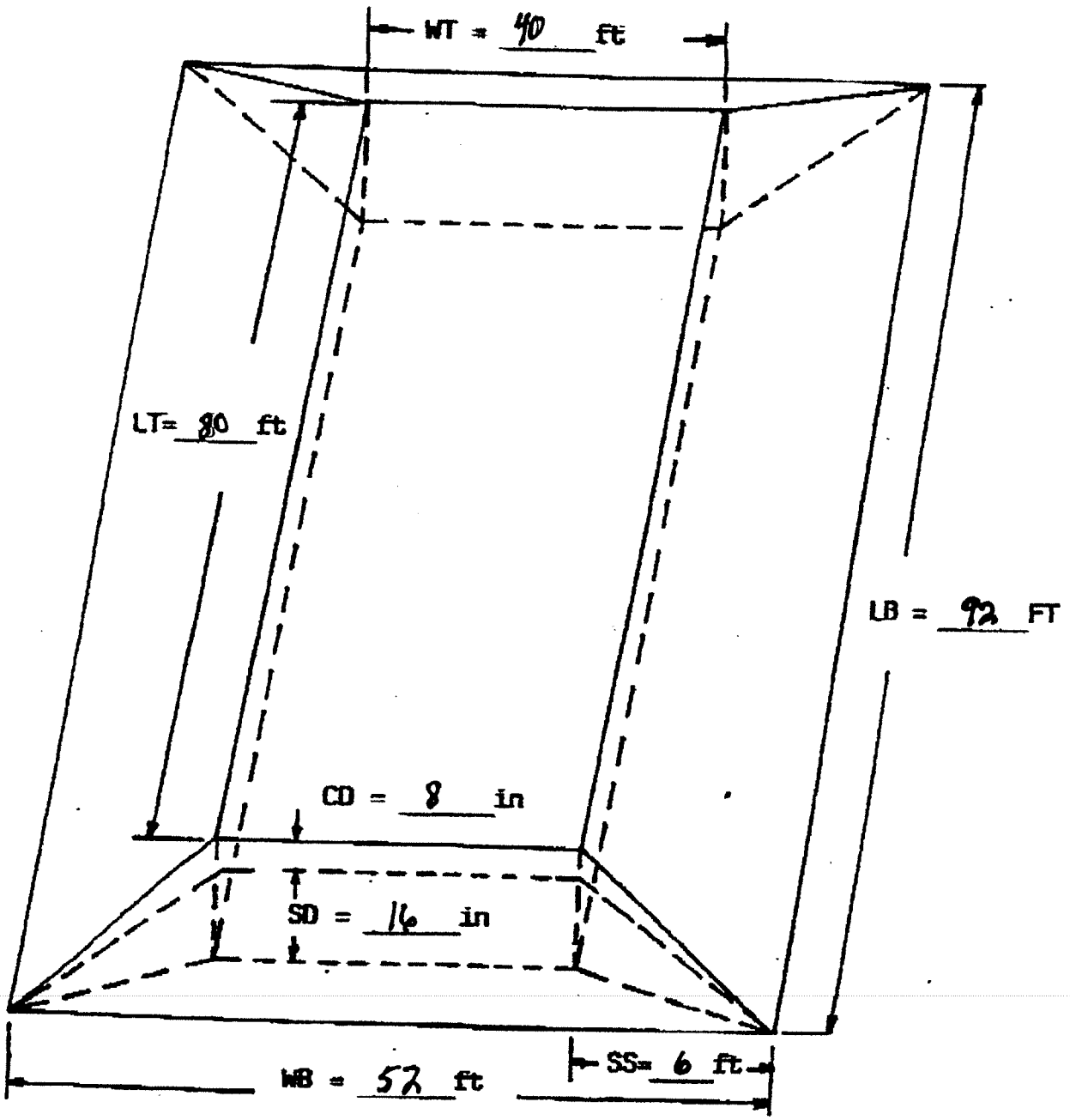
Owner/Legal Representative Signature: _____ Date: _____

This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be transferred when there is a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit. SEE ATTACHED SITE SKETCH

Authorized State Agent: Susan McSwain, REHS Date: 2/24/2010

Construction Authorization Expiration Date: 2/24/2015

DIMENSIONS OF FILL SYSTEM



DEFINITIONS

WT - width of top
LT - length of top
WB - width of bottom
LB - length of bottom

SS - side slope
SD - sand depth
CD - cover depth

Guideline For Design and Installation of Fill Systems with Conventional Trenches

I. Trench and Fill Specifications

I or II	- Soil Texture Group	92 ft.	- Length of Fill
.3 gpd/sq. ft.	- Acceptance Rate	52 ft.	- Width of Fill
240 gpd	- Sewage Flow	4,784 sq. ft.	- Total Fill Area
840 sq. ft	- Trench Bottom	16 in.	- Depth of Sand
3 ft.	- Trench Width	178 cu. yd.	- Volume of Sand
280 ft.	- Total Trench Length	115 in.	- Depth of Topsoil
4	- Number of Trenches	293 cu. yd.	- Volume of Topsoil
70 ft.	- Length of each Trench		

II. Site Preparation

1. Place flags at the 4 corners of the area to be filled designated on the improvement permit. Failure to place fill in the permitted area may result in the fill having to be moved or the permit revoked.

2. Do not work when the site is wet. Working on soil when wet can destroy soil structure making the site unsuitable for a Construction Authorization.

3. Remove all above ground vegetation and root mat from area to be filled without removing topsoil. Removal of soil can result in revocation of the permit.

4. Disk the area to be filled to a depth of 6 inches to break up root mat.

III. Placement Of Fill

1. Add 3 to 4 inches of approved sand fill to area and disk again to thoroughly mix the original soil and the fill. Approved sand fill is a sand or loamy sand.

2. Add more sand fill to achieve a uniform height of SD (see diagram) in the middle of the fill area.

3. The fill shall be tapered from the top edge of the fill to the ground surface 2 feet from the boundary of the fill area. The top edge of fill is located 5 feet from the proposed trenches.

4. Six (6) inches of finer textured fill shall be placed over the sand fill and extend to the boundary of the fill area. Finer texture is necessary to establish a vegetative cover which will prevent erosion of the fill. Fill used for cover shall be a sandy loam, loam, silt loam or sand clay loam texture. See CD dimension of diagram. Side slope shall be 1 to 4 except for site with Soil Texture Group 1 which can have a side slope of 1 to 3.

5. Contact Health Department for inspection of fill before constructing trenches. A Construction Authorization must be obtained before proceeding.

IV. Trench Construction

1. The outside edge of any trench shall be 5 feet from the top of the side slope of the fill.

2. This system is designed with 4 trenches which are 90 ft. long and 3 ft. wide. Trenches must have a spacing of 9 ft. on centers.

3. Trench bottoms shall be no deeper than 18 inches below finished grade of the fill.

4. Trench bottoms shall be constructed level.

5. Distribution boxes shall be located 5 feet from the top edge of the fill.

6. Call the Health Department for inspection after the trenches are finished.

V. Landscaping

1. The fill must be shaped to shed surface water and shall be stabilized with grass or other suitable cover to prevent erosion.

2. Vegetation must be maintained after established. Grass must be mowed.

3. Additional fill beyond what has already been specified may be necessary to cover and landscape around the septic tank.

4. Call the Health Department for inspection after landscaping is complete. The Operation Permit allowing use of the system is issued at this time.

Calculation of Fill Volume

Total volume of fill (TVF)

TVF = [(LT + LB) /2 X (WT + WB) /2] X TFD

= [(80 FT. + 92 FT.) /2 X (40 FT. + 52 FT.) /2] X 2 FT.
(86) (46)

= 7912 CU. FT.

(DIVIDE BY 27 CU. FT. TO OBTAIN CU. YDS.)

= 293 CU. YDS.

Total volume of sand (TVS)

TVS = [(LT + LB - 4) /2 X (WT + WB - 4) /2] X SD

= [(80 FT. + 92 FT. - 4) /2 X (40 FT. + 52 FT. - 4) /2] X 1.3 FT.
(89) (44)

= 4805 CU. FT.

(DIVIDE BY 27 CU. FT. TO OBTAIN CU. YDS.)

= 178 CU. YDS.

Total volume of cover (TVC)

TVC = TVF - TVS

= 293 CU. YD. - 178 CU. YD.

= 115 CU. YD.

Key to abreviations:

LT = length of top
LB = length of bottom
WT = width of top
WB = width of bottom

TFD = total fill depth
= SD + CD
SD = sand depth
CD = cover depth

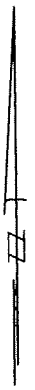
Brinkley Road Lot
System Tap Chart

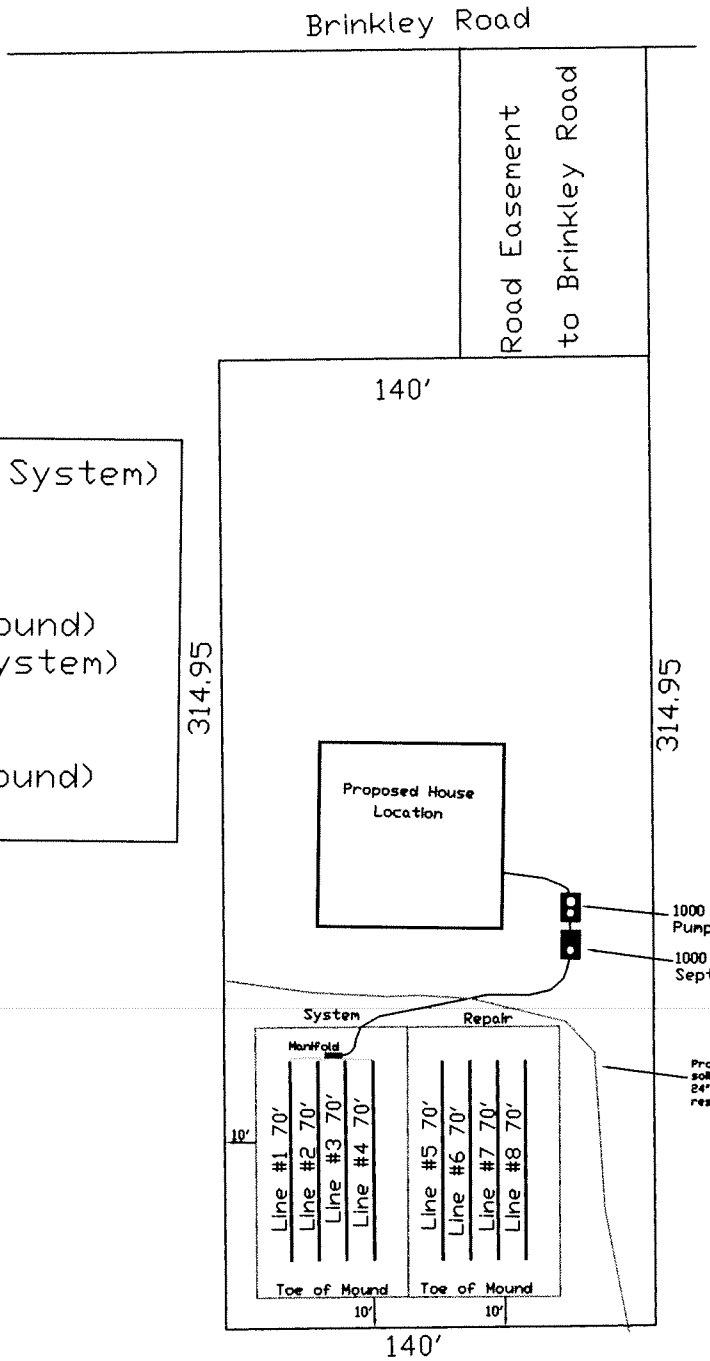
Bench Mark		is = 100.00	Location of BM					**Elevation Head**	7.00
Pump tank elev.		1	99.00	**Pump elev.**	94.00		**Manifold elev.**		101.00
line	**color**	**rod read**	**Elevation**	**length**	**hole size**	**flow/tap**	**gal/day**	**trench area**	**LINE LTAR**
1	NF	0.00	100.00	70	1/2in SCH 40	7.11	60.00	210	0.2857
2	NF	0.00	100.00	70	1/2in SCH 40	7.11	60.00	210	0.2857
3	NF	0	100.00	70	1/2in SCH 40	7.11	60.00	210	0.2857
4	NF	0.00	100.00	70	1/2in SCH 40	7.11	60.00	210	0.2857

	total	**feet =**	**280**	**gal/min =**	**28.44**	**LTAR =**	**0.3000**
						LTAR + %5	**0.3150**
% of Dose Vol.	80		**Des. Flow**	**240**		**(ltar W/ INOV)**	0.4000
Dose Volume	145.60		**Pump Run=**	8.44		**(ltar W/ INOV + 5%**	0.4200
Dose Pump Time	5.12		**Tank Gal/IN**	21			
Drawdown in Inches	6.93						

4 lines are to be installed in approved fill material (mound system).

Pugh Builders
Brinkley Road
2-Bedroom System





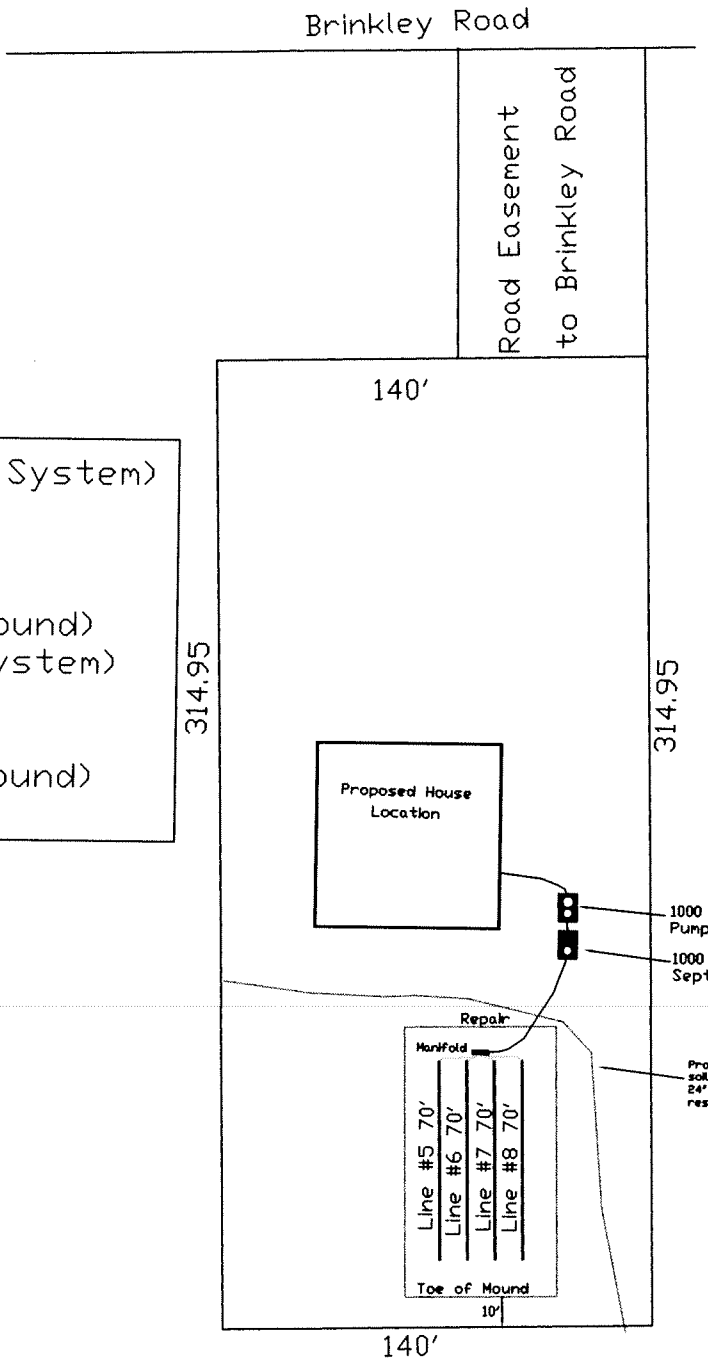
System: 24" Mound (Fill System)
Lines: 1-4, (280')
No further reduction
0.3 Soil LTAR
12" Trench Bottom (in mound)
Repair: 24" Mound (Fill System)
Lines: 5-8 (280')
No Further Reductioin
12" Trench Bottom (in mound)
0.3 Soil LTAR

*Keep all fill material at least 10' from property lines.

GRAPHIC SCALE
1" = 60'

Central Carolina Soil Consulting
919-569-6704

Pugh Builders
Brinkley Road
2-Bedroom System



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