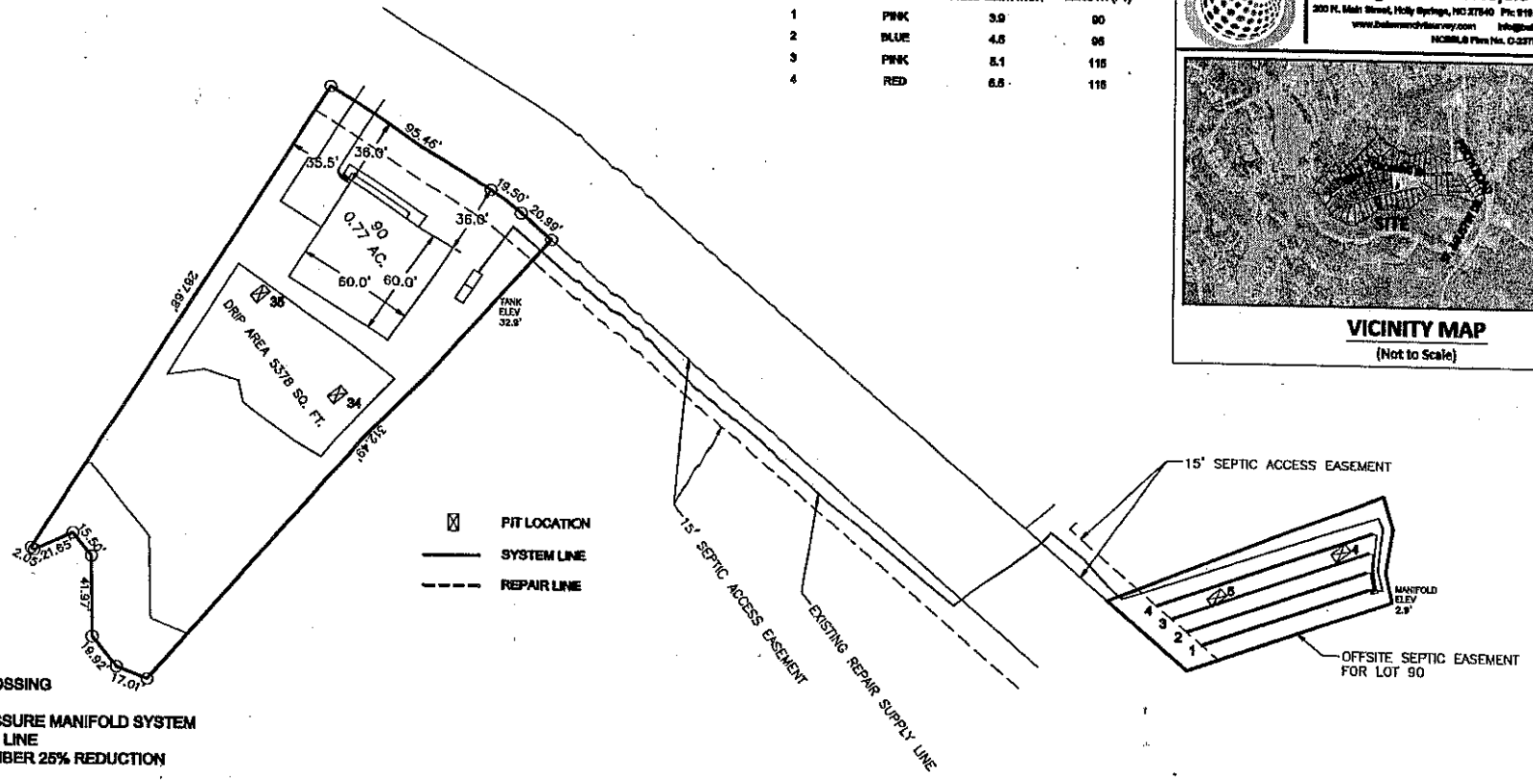
11-61 J.

WH 98 of A

LINE SCHEDULE

LINE NUMBER	COLOR	FIELD ELEVATION	LENGTH (FT)
1	PINK	3.9	90
2	BLUE	4.6	96
3	PINK	5.1	116
4	RED	6.6	116



LOT 90 BELLS CROSSING

4-BEDROOM PRESSURE MANIFOLD SYSTEM
LINES 1-5 415' OF LINE
EZFLOW OR CHAMBER 25% REDUCTION
LTAR 0.3

4-BEDROOM SUBSURFACE DRIP REPAIR
5378 SQFT OF AREA
LTAR 0.1

FOR GENERAL USE NOT A SURVEY
PRELIMINARY NOT FOR CONSTRUCTION

NOTE:
SOIL EVALUATIONS WERE CONDUCTED BY JASON HALL WITH CENTRAL CAROLINA SOIL CONSULTING PLLC
329 S. WHITE STREET
WAKE FOREST, NC 27588

0 30 60
SCALE:
1" = 60 ft.

Bateman Civil Survey Company
Engineers • Surveyors • Planners
200 N. Main Street, Holly Springs, NC 27540 Ph: 919.577.1080 Fax: 919.577.1081
www.batemancivilsurvey.com info@batemancivilsurvey.com
NCBELS Firm No. C-3375

VICINITY MAP
(Not to Scale)

SEPTIC SYSTEM LAYOUT - LOT 90

FOR

MeritageHomes

BELLS CROSSING PHASE ONE LOT 90
MOORESVILLE, IREDELL COUNTY

DATE: 05/28/13 DRAWN BY: TMB CHECKED BY: TMB

SCALE: 1" = 60 ft.

Iredell County
Planning & Enforcement
349 N. Center St. PO Box 788
Statesville, NC 28687
704-878-3113

Zoning Permit

Permit Number: 152557ZO

Printed: 7/16/2013

Master #: 152557

Associated Permits:
152557ZO Zoning

Applicant

Name: Meritage Homes of North Carolina, Inc. **Phone:**
Address: 7761 Ballantyne Commons Pkwy ste 103
Charlotte, NC 28277

Parcel

Parcel Number: 4639834837.000 **Zoning:** RA
Address: 159 BELFRY LOOP **Township:** 1700
MOORESVILLE, NC 28117 **Area:** 0.77
Subdivision: Bells Crossing **Lot(s):** 90
Directions to Parcel: PERTH RD, RT ON BELLS CROSSING, LFT ON BELFRY, LOT ON LFT

Owners

Name: Meritage Homes of NC, INC **Phone:** 704-944-8900
Address: 7761 Ballantyne Commons Parkway Suite 1(**Fax:** 704-944-8910
Charlotte, NC 28277

Contractors

Contractor Type: Building
Name: Meritage Homes of North Carolina, Inc.
Address: 7761 Ballantyne Commons Pkwy ste 103
Charlotte, NC 28277

Fees and Receipts:

Number	Description	Amount
FEE-179280-07	Zoning - Permit / Inspection	$55.00
FEE-179281-07	Environmental Health - Type I or II Fast Track	$335.00
FEE-290781-07	Zoning - Permit Application	$75.00
FEE-290783-07	Technology Fee - Planning	$2.25

Bells Crossing S/D Lot 90

Layout/Design Specifications

Facility Type:	Single Family Home	
# of Bedrooms:	4	
Daily Flow:	480	**gal/day**
L.T.A.R.:	0.30	**gal/day/sq.ft**
Trench Depth:	24	**in**
Trench Width:	36	**in**
Stone Depth:	chamber	**in**
Manifold Length:	42	**in**
Manifold Diameter:	4	**in sch 80pvc**
Supply Line Length:	624	**ft**
Supply Line Diameter:	2	**in sch 40pvc**
Supply Line Volume:	108.58	**gallons**
Friction Loss + Fitting Loss:	9.51	**ft(supply line length + 70' for fittings in pump tank)**
Design Head:	2	**ft**
Elevation Head:	35.40	**ft**
Total Head:	46.91	**ft**
Dose Volume:	202.56	**gals**
% of Pipe Vol.	.75	
Drawdown:	9.42	**in @ 21.5 gal/in**

Control Panel: SJE Rhombus Model112 control panel (or approved equivalent)

Pump: Zoeller 185 Flow-Mate (or approved equivalent)

Septic Tank Effluent Filter: Zoeller 170-0144 residential effluent filter (or approved equivalent)

Septic Tank: 1000 **gallon**

Pump Tank: 1000 **gallon**

Bells Crossing S/D Lot 90
SYSTEM TAP CHART

Bench Mark:	0	= 100.00	
Pump tank elevation:	67.10		
Manifold elev:	96.50		
Pump elev:	61.70		

line	color	rod read	elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	Pink	3.90	96.10	90	1/2in SCH 80	5.48	104.46	270	0.39
2	Blue	4.50	95.50	95	1/2in SCH 80	5.48	104.46	285	0.37
3	Pink	5.10	94.90	115	1/2in SCH 40	7.11	135.54	345	0.39
4	Red	5.50	94.50	115	1/2in SCH 40	7.11	135.54	345	0.39
	P-TANK	32.90	67.10						
		total	**feet =**	**415**	**gal/min =**	**25.18**		**LTAR =**	**0.300**
				Des. Flow	480			**(ltar + 5%)**	0.32
								(ltar W/ INOV)	0.40
								(ltar + 5%)	0.42

Comments:

Sheet:
Property ID:
Lot #:
File #:
AppID:

CCSC SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

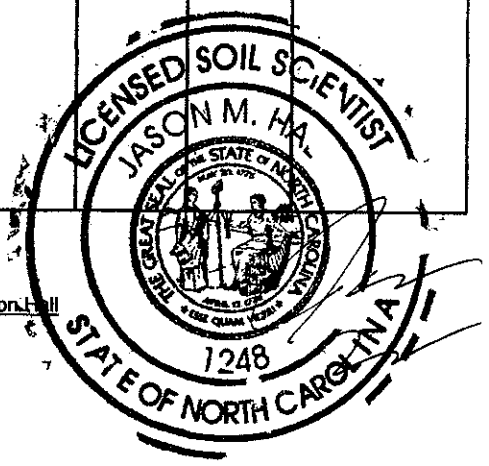
Owner: Meritage Homes
Address:
Proposed Facility: Design Flow (.1949)
Location of Site: Bells Crossing Subdivision, Lot 90
Water Supply: [X] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [X] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

Applicant:
Date Evaluated:
Property Size:
Property Recorded:

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
Pit 34	R, 6-8%	AE, 0-6	Gr, SL	VFR, NS, NP	10 YR 4/4				
		Bt1, 6-23	SBK, SL	VFR, NS, NP	7.5 YR 4/6				
		Bt2, 23-41	SBK, SCL	FR, NS, SP	7.5 YR 5/6	PS			PS, 0.4
		Bt3, 41+	SBK, SCL	FR, NS, SP	7.5 YR 5/4	UN			UN
					2.5 YR 5/4, 20%				
					7.5 YR 6/2, 20%				
					Mg Concretions				
Pit 35	R, 6-8%	AE, 0-17	GR, SL	VFR, NS, NP	10 YR 4/6				
		Bt1, 17-23	SBK, SCL	FR, NS, SP	7.5 YR 5/8				
		Bt2, 23-39	SBK, Clay	FI, NS, SP	5 YR 5/8	PS			PS, 0.3
		Bt3, 39-48	SBK, Clay	FI, NS, SP	5 YR 5/8	S			S, 0.275
					2.5 YR 4/8, 20%				
					7.5 YR 5/8, 30%				

Description	Initial System	Repair System
Available Space (.1945)	Yes	Yes/ Off-site
System Type(s)	Accepted	Accepted or T & J
Site LTAR	0-275-0.3	0.3

Other Factors (.1946):
Soil Evaluation By: Jason Hall
Others Present:
Site Classification (.1948):
Site Evaluation By:
Others Present:



Sheet:
Property ID:
Lot #:
File #:
AppID:

CCSC SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Meritage Homes
Address:
Proposed Facility: Design Flow (.1949)
Location of Site: Bells Crossing Subdivision, Lot 90 Septic Easement
Water Supply: [X] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [X] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

Applicant:
Date Evaluated:
Property Size:
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Pit 4	R, 3-5%	Bt, 0-36	SBK, SC	FI, SS, SP	2.5 YR 4/8	PS			PS, 0.3
					7.5 YR 6/8, 5%				
					5% Mica				
		BC, 36-43	SBK, SCL	FI, SS, SP	2.5 YR 4/8	PS			PS, 0.35
					5% Mica				
		C, 43-54	SG, SL	VFR, NS, NP	7.5 YR 5/8	S			S, 0.4
					5% Mica				
Pit 5	R, 3-5%	Bt, 0-22	SBK, Clay	FI, SS, SP	2.5 YR 4/8				
		BC, 22-45	Wk SBK, SCL	FI, SS, SP	2/5 YR 4/8	PS			PS, 0.35
					7.5 YR 6/8, 10%				
		C1, 45-52	SG, SL		5 YR 5/8	S			S, 0.4

Description	Initial System	Repair System
Available Space (.1945)	Yes	Yes
System Type(s)	Accepted	Accepted or T&J
Site LTAR	0.3	0.3

Other Factors (.1946):
Soil Evaluation By: Jason Hall
Others Present:
Site Classification (.1948):
Site Evaluation By:
Others Present:

LICENSED SOIL SCIENTIST
JASON M. HALL
1248
STATE OF NORTH CAROLINA

Sheet:
Property ID:
Lot #:
File #:
AppID:

CCSC SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

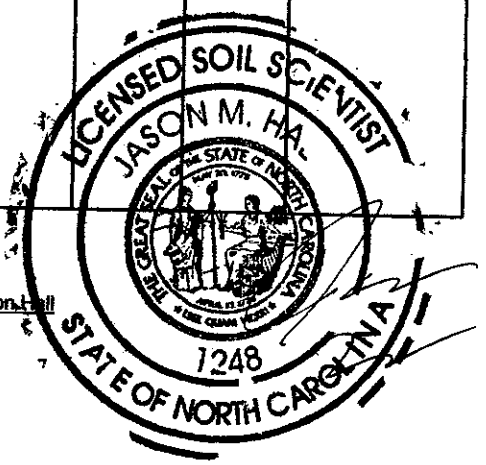
Owner: Meritage Homes
Address:
Proposed Facility: Design Flow (.1949)
Location of Site: Bells Crossing Subdivision, Lot 90
Water Supply: [X] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
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Date Evaluated:
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Pit 34	R, 6-8%	AE, 0-6	Gr, SL	VFR, NS, NP	10 YR 4/4				
		Bt1, 6-23	SBK, SL	VFR, NS, NP	7.5 YR 4/6				
		Bt2, 23-41	SBK, SCL	FR, NS, SP	7.5 YR 5/6	PS			PS, 0.4
		Bt3, 41+	SBK, SCL	FR, NS, SP	7.5 YR 5/4	UN			UN
					2.5 YR 5/4, 20%				
					7.5 YR 6/2, 20%				
					Mg Concretions				
Pit 35	R, 6-8%	AE, 0-17	GR, SL	VFR, NS, NP	10 YR 4/6				
		Bt1, 17-23	SBK, SCL	FR, NS, SP	7.5 YR 5/8				
		Bt2, 23-39	SBK, Clay	FI, NS, SP	5 YR 5/8	PS			PS, 0.3
		Bt3, 39-48	SBK, Clay	FI, NS, SP	5 YR 5/8	S			S, 0.275
					2.5 YR 4/8, 20%				
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Address:
Proposed Facility: Design Flow (.1949)
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Pit 4	R, 3-5%	Bt, 0-36	SBK, SC	FI, SS, SP	2.5 YR 4/8	PS			PS, 0.3
					7.5 YR 6/8, 5%				
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		BC, 36-43	SBK, SCL	FI, SS, SP	2.5 YR 4/8	PS			PS, 0.35
					5% Mica				
		C, 43-54	SG, SL	VFR, NS, NP	7.5 YR 5/8	S			S, 0.4
					5% Mica				
Pit 5	R, 3-5%	Bt, 0-22	SBK, Clay	FI, SS, SP	2.5 YR 4/8				
		BC, 22-45	Wk SBK, SCL	FI, SS, SP	2/5 YR 4/8	PS			PS, 0.35
					7.5 YR 6/8, 10%				
		C1, 45-52	SG, SL		5 YR 5/8	S			S, 0.4

Description	Initial System	Repair System
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Soil Evaluation By: Jason Hall
Others Present:
Site Classification (.1948):
Site Evaluation By:
Others Present:

LICENSED SOIL SCIENTIST
JASON M. HALL
1248
STATE OF NORTH CAROLINA

IREDELL COUNTY HEALTH DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION

PAGE 1: *APPLICATION FORM*

Application For:
( ) Septic Improvement Permit (✓) New Well Permit (✓) Authorization to Construct ( ) Well Repair Permit ( ) Existing System Inspection ( ) Well Abandonment ( ) Septic System Repair

THE ABOVE PERMIT DOCUMENTS WILL BECOME INVALID IF INFORMATION PROVIDED ON THIS APPLICATION IS FALSIFIED OR CHANGED, OR IF THE SITE IS ALTERED. THE IMPROVEMENT PERMIT IS VALID FOR EITHER 60 MONTHS OR WITHOUT EXPIRATION DEPENDING UPON DOCUMENTATION SUBMITTED APPLICATION WITH SITE PLAN 60 MONTHS, APPLICATION WITH COMPLETE, SCALED PLAT WITHOUT EXPIRATION. SEE 15A NCAC 18A .1937(f) FOR DETAILS.

Page 2: *Site Plan Worksheet* form MUST accompany this application

The following optional attachments may also be submitted: (✓) Survey Plat, scaled no more than 1 inch = 60 feet
Place an (X) beside whichever is submitted if applicable ( ) Custom Site Plan, scaled no more than 1 inch = 60 feet

Applicant Information:

Applicant Name: Meritage Homes **Address:** 11605 N Community House Rd st 250 Charlotte NC 28277 **Phone:** 704 309 6577

Owner Name: _____ **Address:** _____ **Phone:** _____

Property Information:

Street Address: 159 Belfry loop, Mooresville NC 28117

Subdivision Name: Bells Crossing **Section/Phase:** L **Lot Number:** Lot 90

Driving Directions: 150 W - R on Perth Rd - L into Bells Crossing - L onto 1st Belfry lp - 10th Lot on the left

Site Development Information: ***(check or complete ALL that apply)***

( ) New Single Family Residence
( ) New Multi-Family Residence
( ) Accessory Building
( ) Bedroom(s) Addition

Maximum Number of Bedrooms: 4
Maximum Number of Occupants: 8
( ) Swimming Pool
( ) Other Addition/Structure: _____

(✓) Crawl Space Foundation
( ) Concrete Slab Foundation
( ) Basement with Plumbing
( ) Basement without Plumbing

Non-Residential Site Development:
Type of Business: _____
Square Footage of Building: _____
Maximum Number of Employee: _____
Maximum Number of Seats/Beds/Other: _____

Water Supply:

( ) New Well ( ) Existing Well (✓) Community Well ( ) City Water ( ) Other Public Water

Desired Septic System Type: ***(you may rank in order of preference)*** **Year existing system installed:** _____
( ) No Preference ( ) Alternative ( ) Conventional ( ) Innovative ( ) Modified Conventional ( ) Other: _____

Please answer the following to the best of your ability:
( ) Yes (✓) No **Does the site contain any jurisdictional wetlands?**
( ) Yes (✓) No **Is any non-domestic sewage (i.e. industrial) to be generated?**
( ) Yes (✓) No **Is the site subject to approval by any other public agency?**

I have read this application and certify that the information provided herein is true, complete, and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed.

Signature: _____
Property owner or owner's legal representative signature (SIGNATURE REQUIRED)

11-22-13
DATE

RUSSELL COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
PAGE 3: SITE PLAN WORKSHEET

SEE THE "SAMPLE SITE PLAN" BELOW. INCOMPLETE SITE PLANS WILL BE RETURNED TO YOU FOR COMPLETION AND MAY RESULT IN A DELAY IN THE ISSUANCE OF YOUR SEPTIC/WELL PERMIT!!

Place an (X) beside each item as you complete the site plan:

- X Property Line measurements are clearly identified...
- X All proposed structures are indicated... *(NOTE: proposed house or business footprint, wells, water lines, patios, pools and decks, and any other item that will occupy space on the site)*
- X Front and side setbacks from property line...
- X Preferred driveway location and configuration, *preferred well location...*
- X Area you prefer your septic system to be placed...
- X North arrow, or other sufficient indicator of direction...

Circle N/A on the following if appropriate:

Location of septic systems and wells within 100' of your property... N/A
Location of easements and rights of ways on your property... N/A
Location of any designated wetlands on the property... N/A

Signature: Mike Bell — 11-22-13

USE THIS SPACE TO DRAW YOUR SITE PLAN

White Copy – Environmental Health Yellow Copy – Applicant
C:\Users\bobl\AppData\Local\Microsoft\Windows\Temporary Internet Files\KG9PS\Application For Onsite Permit (2).doc