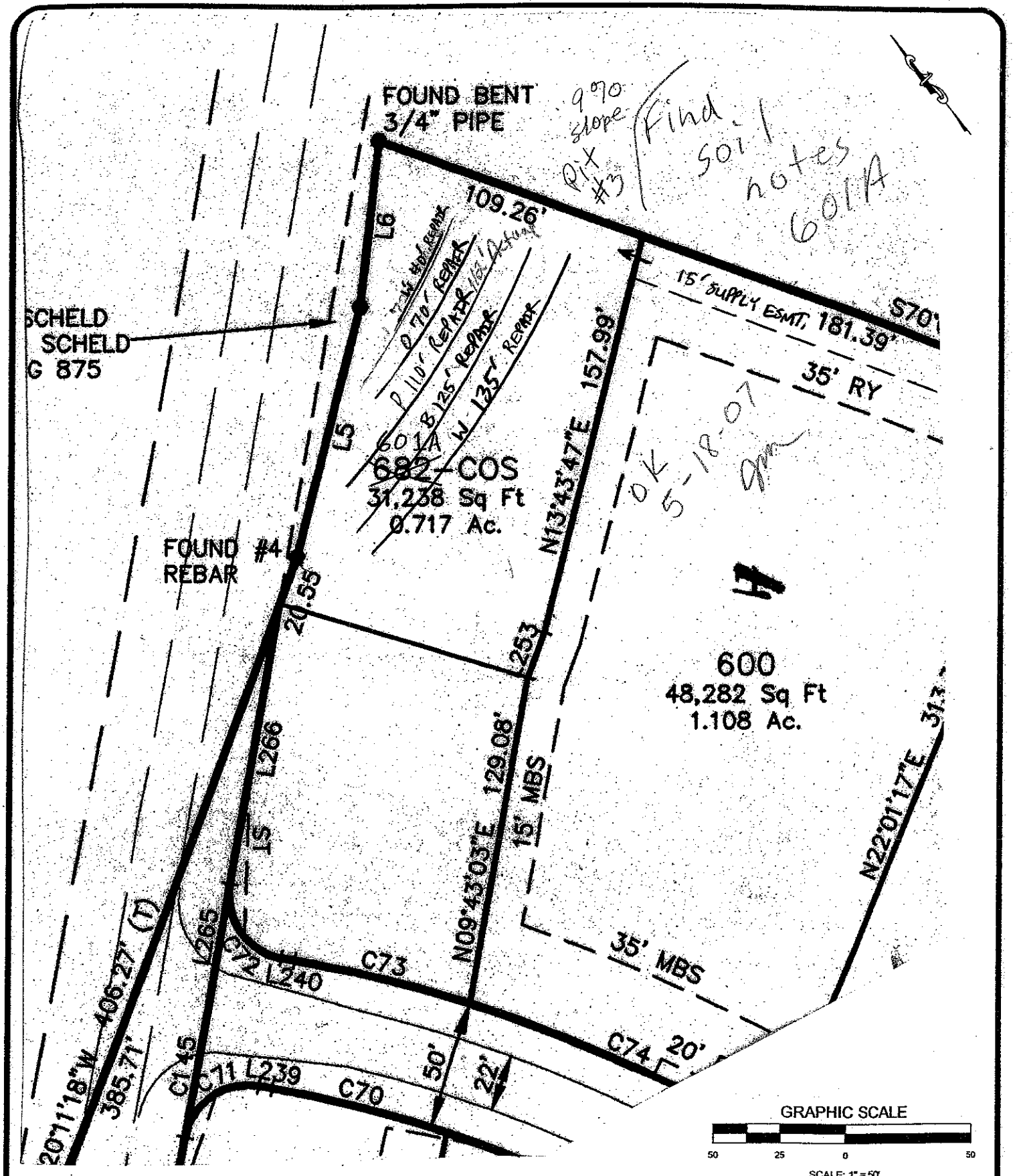
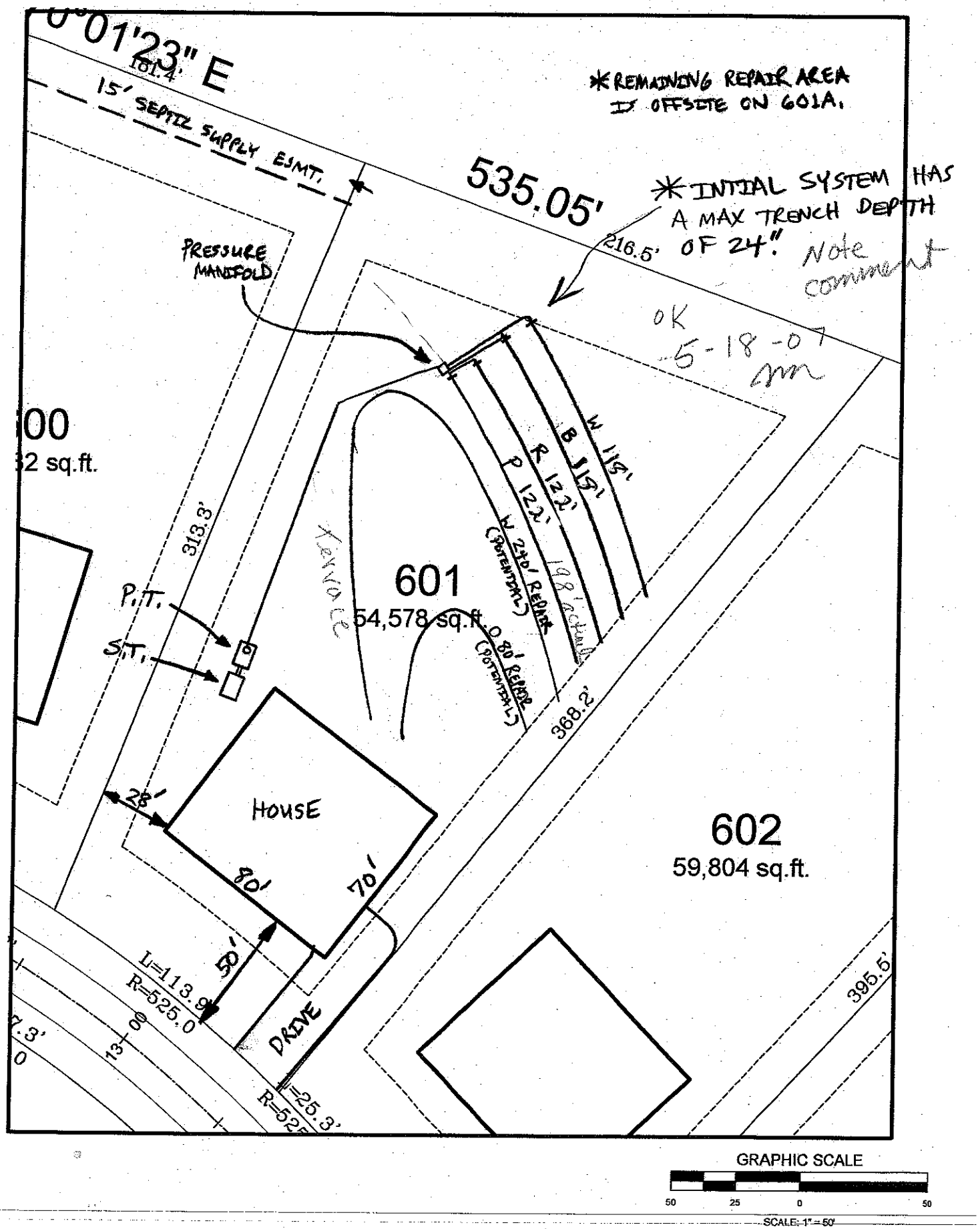


SCALE: AS SHOWN	S&ME	LOT #601A	FIGURE NO.
DATE: MAY 2007	WWW.SMEINC.COM	CRESCENT PARKWOOD - PHASE 6	
DRAWN BY: RDM		IREDELL COUNTY, NORTH CAROLINA	
PROJECT NO: 1588-06-091			



GRAPHIC SCALE

50 25 0 50

SCALE: 1" = 50'

Lot 601 Parkwood Phase 6 Fast Track Septic System Information

Number of Bedrooms	**4**
Basement or Crawl	**Crawl Space**
Design Flow (gpd)	**480**
Primary System LTAR (gpd/ft2)	**0.25**
Primary System Type	**25% Reduction**
No. Lines	4 (See Table)
Total Linear Feet	480
Trench Width	3' min.
Trench Spacing	9' min.
Pump Required	Yes
Distribution Device	Pressure Manifold
Maintenance Agreement Required	No
Length and Diameter of Supply Pipe	~160' of 2" SCH 40 PVC
Flow Rate through the system	22 gpm
Elevation head	Approx. 9.5'
Pressure head	2.0'
Friction head	1.0'
20% Contingency	2.5'
Total Head	15.0'
Pump Requirements	22 gpm @ 15' of head **To be designed by installer.**
Maximum Dosing Volume	240 gal -2.0 doses/day @ design flow
Volume of water pumped per dose	Calculated to specific tank by measure or dealer engineering specifications (1 cubic ft. of water equals 7.48 gal.)
Pump Run per dose	approx. 10.9 min.
Check Valve	Yes
Siphon Break hole	Yes
Offsite Repair System	**25% Reduction** (400' Required)
Total Linear Feet	792
Repair Loading Rate	0.3

Table: Summary of Primary and Repair Nitrification Line Specifications

Line No.	Use	Line Color	System Type	Line Length (Ft.)	Rod Reading Elevation (Ft.)
1	Repair	Orange	25% Reduction	72	**5.4**
2	Repair	White	25% Reduction	240	
3	**System**	**Pink**	**25% Reduction**	**120**	
4	**System**	**Red**	**25% Reduction**	**120**	
5	**System**	**Blue**	**25% Reduction**	**120**	
6	**System**	**White**	**25% Reduction**	**120**	**10.5**
7	Repair (Off)	White	25% Reduction	40	
8	Repair (Off)	Orange	25% Reduction	70	
9	Repair (Off)	Pink	25% Reduction	110	
10	Repair (Off)	Blue	25% Reduction	125	
11	Repair (Off)	White	25% Reduction	135	
				Total System: 480'	
				Total Repair: 792'	

Tank	Red	1500 gal (2 compartment)	
Pump Tank	Red	1500 gal.	**9.1**
House	Blue	Left Front	**8.6**

1000 ST
1000 BT

Manifold Information	
Tap Size (In.)	1/2 ✓
Tap Material	SCH 80 PVC ✓
No. Taps	4 ✓
Barrel Size (In.)	4 ✓
Barrel Material	SCH 80 PVC ✓
Flow (gpm)/Tap	5.5 ✓

*NOTE: INTIAL SYSTEM HAS A MAX TRENCH DEPTH OF 24."

Thanks,

Quinton Gandy
704-634-3647
4G Design Build, LLC
PO Box 60
Troutman, NC. 28166

Begin forwarded message:

From: Paul Penninger <PPenninger@smeinc.com>
Date: April 30, 2015 at 8:25:08 AM EDT
To: "quinton@build4g.com" <quinton@build4g.com>
Cc: "Martin, James F" <JFMartin@Crescent-Resources.com>
Subject: RE: Septic Tanks Falls Cove-Parkwood, SM&E Design lay out

Quinton,

As we discussed Tuesday, Crescent has typically required 1,500 gallon septic tanks during the permitting and installation process at Parkwood and their other subdivisions. Crescent has many septic design and maintenance specifications above the State and County minimum requirements in their subdivisions.

The following is from the .1900 rules:

15A NCAC 18A .1952 SEPTIC TANK, EFFLUENT FILTER, DOSING TANK AND LIFT STATION DESIGN
(b) Minimum liquid capacities for septic tanks shall be in accordance with the following:
(1) Residential Septic Tanks (for each individual residence or dwelling unit):

Number of Bedrooms	Minimum Liquid Capacity	Equivalent Capacity Per Bedroom
3 or less	900 gallons	300 gallons
4	1,000 gallons	250 gallons
5	1,250 gallons	250 gallons.



The minimum State septic tank requirement for a 4 bedroom home is 1,000 gallons. If Crescent and the POA are OK with the 1,000 gallon septic tank, the 1,000 gallon tank meets the state rules and Iredell County can change your tank size to 1,000.

The 1,500 gallon septic tank would allow additional primary

treatment capacity for the septic system. The email chain below you sent is from January, so I assume you have already installed 1,000 gallon septic tanks on other lots in Parkwood.

Paul

Paul G. Penninger
Soil Scientist

ENGINEERING INTEGRITY.
Ph:704-996-6330
ppenninger@smeinc.com

S&ME, Inc.
8646 West Market Street, Suite 105
Greensboro, NC 27409
Ph: 336-288-7180
Fax: 336-288-8980
Mobile: 704-996-6330
www.smeinc.com

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From: Quinton Gandy [quinton@build4g.com]
Sent: Tuesday, April 28, 2015 10:11 AM
To: Paul Penninger
Cc: Samuel Gandy; taedwards@crescent-resources.com
Subject: FW: Septic Tanks Falls Cove-Parkwood, SM&E Design lay out

Paul,

Nice to speak with you this morning. Below is the email I told you about where Teri Edwards with Crescent approved the 1000 gal. septic tanks. If you could send me a letter stating something like ...your design lay out will work with 1000 gal tank vs. the 1500 gal tanks indicated on your design lay out... so I can provide to the Iredell County Health Department I would be most appreciative.

<janith.huffman@att.net<mailto:janith.huffman@att.net><mailto:janith.huffman@att.net>>

Subject: RE: Septic Tanks

Sam,

This is the additional septic information for our North communities. It is basically an FYI for the builder and homeowner, who may not be familiar with a septic system. I see no requirement for a 1500 gallon tank. The 1000 gallon tank is approved.



TERI EDWARDS
Crescent Communities
O: 980-321-5180 M: 704-975-0453

From: Samuel Gandy [mailto:sam@build4g.com]
Sent: Monday, January 05, 2015 8:26 AM
To: Edwards, Teri A
Subject: Septic Tanks

Good Morning Teri,

Refer to Deed BK 1863 Page 763 to find recorded copies

delivered by such Owner to the ACC. The Building Envelopes, Dwelling Unit Building Pad Areas (as defined in Section 7.23), setback lines, and easements reserved in this Declaration affecting such Lots shall be adjusted accordingly by the ACC. The Owner of any Lot which combines with all or a portion of a contiguous Lot shall be solely responsible for any costs which may result from such combination, including the costs of relocating any existing easements. With respect to combined Lots, Declarant reserves the right to designate said combined Lots as one (1) Lot or multiple Lots, in Declarant's sole and absolute discretion, for purposes of payment of Assessments (which right Declarant may, without obligation to do so, assign to the Association at such time as Declarant may choose). No Lot shall be subdivided by sale, lease or otherwise without the prior written consent of Declarant. Provided, however, Declarant reserves the right to change the size, boundaries or dimensions of any Lot owned by Declarant for any reason.

Section 7.26 Restricted Activities in Common Areas and Maintenance Areas. Except for the activities of Declarant and its agents in connection with development of the Project and except for the activities of the Association and its agents in the performance of the Association's duties under this Declaration, no cutting of vegetation, dumping, digging, filling, destruction or other waste shall be committed on the Common Areas or the Maintenance Areas. There shall be no obstruction of the Common Areas or the Maintenance Areas, nor shall anything be kept or stored in the Common Areas or the Maintenance Areas, nor shall anything be altered, or constructed or planted in, or removed from, the Common Areas or the Maintenance Areas, without the prior written consent of Declarant so long as Declarant owns any portion of the Property and the Association. Each Owner shall be liable to the Association and/or Declarant for any damage to any Common Area and/or the Maintenance Area caused by the negligence or willful misconduct of the Owner or his family, tenants, guests, agents, employees, or invitees. Provided, however, the provisions in this paragraph shall not apply to Declarant in connection with Declarant's construction activities on the Property.

Section 7.27 Unsightly or Unkempt Conditions. The pursuit of hobbies or other activities, including the assembly and disassembly of motor vehicles and other mechanical devices, which might tend to cause disorderly, unsightly, or unkempt conditions, shall not be pursued or undertaken on any Lot, other than in enclosed garages.

Section 7.28 Sewage Disposal; Septic Easements. Every Lot shall either be served by a Septic System approved by Declarant for the disposal of sewage or connected to a private or public sewage disposal system, at the option of and as required by Declarant. With respect to the Parkwood at Falls Cove section of the Project, Declarant makes no representation regarding the future availability of public sewer service. All Septic Systems or other private sewage disposal systems shall be approved by, and constructed and maintained in accordance with all the regulations and requirements of, the ACC (including all requirements set forth in the Guidelines) and all governmental entities and regulatory agencies having jurisdiction. All Owners, by purchasing property subject to this Declaration, acknowledge that any governmental permit or approval allowing for the construction and operation of a Septic System or other private sewage disposal system may be limited in duration in accordance with the terms thereof, and neither Declarant, nor the Association, nor the ACC, nor the officers, directors, members, employees, agents or affiliates of any of them, shall have any liability arising directly or indirectly out of the

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet ___ of ___
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____ APPLICATION DATE _____
ADDRESS: _____ DATE EVALUATED: _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: _____
LOCATION OF SITE: Parkwood #601 PROPERTY RECORDED: _____
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☐ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	L/edge of N 4-8%	0-4	Wk,M,sbk,scL	Fr, ss, sP (Red-Brn)					PS 0.30
		4-28	Mo/Wk,M,Sbk,CL	Fr,ss,sP (Red)	w/ Uifrm Relict Y-Brn Mottles				
		28-40	Wk,M,sbk,CL	Fr,ss,sP w/ C-SAP Inclus,					
		40-54	SL+L SAP	MIX Fr,ss					
2	L 4-8%+ 90%	0-7	Wk,M,Gr,scL	Fr,ss,sP (Brwn)					PS 0,25 (@ 24" T. Depth)
		7-34	Mo,M,sbk/Abk,C	Fr,ss,sP (Red/Brwn)	(w/ common-many Yellow/Brown Mottles)				
		34-55	Wk,M,Abk,CL	Fr,ss,sP (Red)	w common Yellow/Brown Mottles (N Chrm 2@ 36")				
3 (#84)		0-8	Gr, SL	Fr, NS, NP (Br)					PS 0,25
		8-30	Wk,sbk/Abk,C	Fi,ss,sP (Red)	Yellow-Brown Mottles				
		30-48+	sbk, C	Fr,ss,sP (Red)	SAP Pockets				
4		0-8	gr sl	fr ss/sp					.25
		8-21	wkfsbkpc	frss/sp	common red/br				
		21-48	wkfsbk	frss/sp	Red/common Yel/br				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Site LTAR		

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: _____
OTHER(S) PRESENT: _____

COMMENTS: _____

(5) 0-11 wk sbk sl fr ss/sp
11-21 wk sbk sl fr ss/sp
21-30 wk sbk cl fr ss/sp few/fnt mottles .2
30-50 wk pl/sbk c-fr ss/sp common many yel/br mottles
Bench 3 few mottles
Restrictive layer

(6) 0-15 gr Br sl fr ns/np 28" trench bottom
15-40 mo F-M Abk C fr ss/sp com. yel/br mottles .2
40-55 mo med Abk C1/C 10YR 7/2-7/3 mottles
Below Berm

(7) 0-6 gr Br scl fr ss/sp
6-21 mo F Abk/sbk C fr ss/sp .25
21-54 wk F Abk/sbk Cl fr ss/sp com/many sap

...ENT OF ENVIRONMENT AND NATURAL RESOURCES
...N OF ENVIRONMENTAL HEALTH
...TE WASTEWATER SECTION

Sheet ___ of ___
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

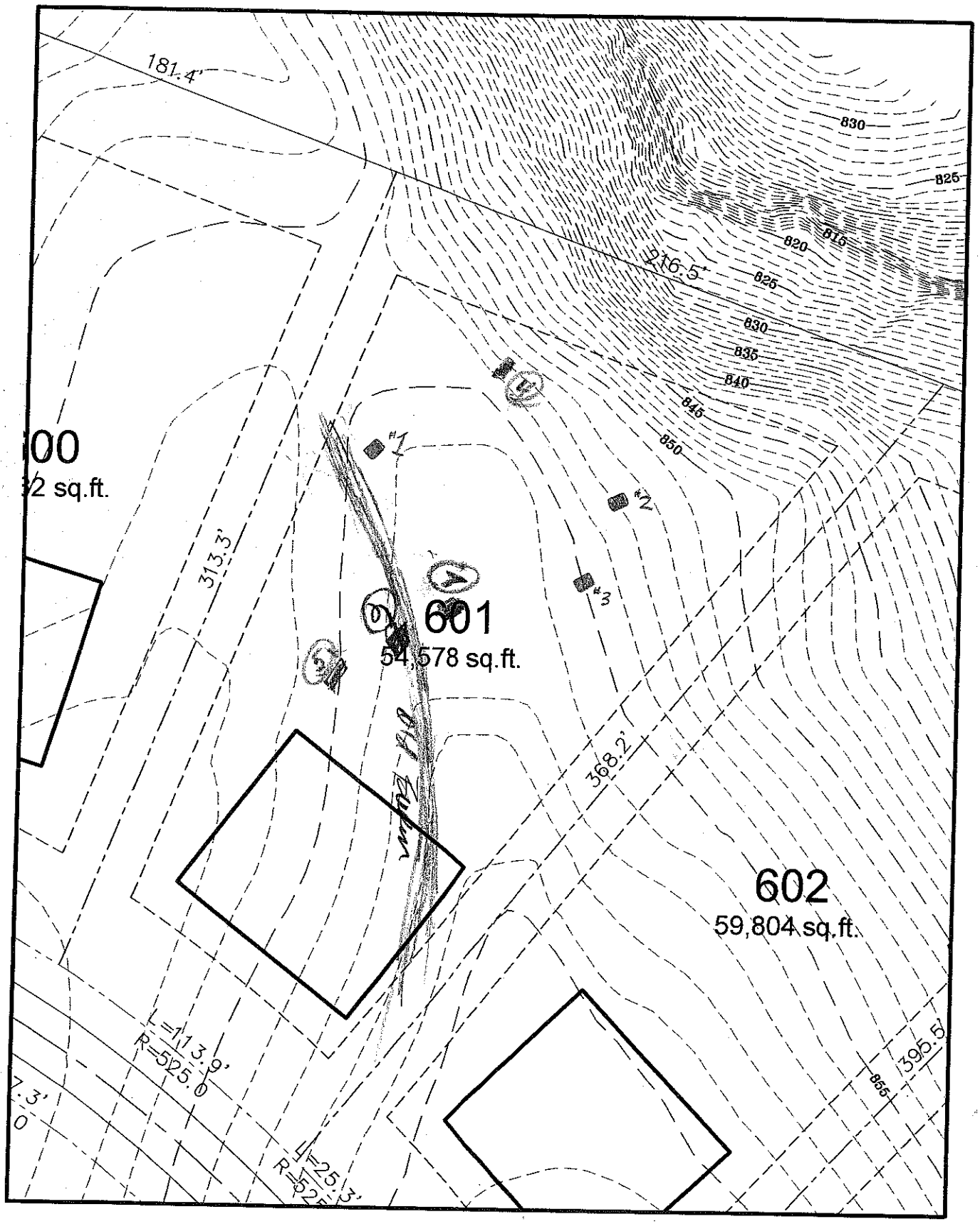
WNER: Falls Cove Dev. APPLICATION DATE _____
DDRESS: _____ DATE EVALUATED: _____
OPOSED FACILITY: SFD PROPOSED DESIGN FLOW (.1949): 480 GPD PROPERTY SIZE: _____
OCATION OF SITE: Lot #601, Parkwood SD off Mewborn Ferry Rd, PROPERTY RECORDED: _____
ATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other _____
/ALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

.1948 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
		.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1943 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
L 4-8%	0-14	mo, sbk, C	Fr, SS, S(Red)	C-sap VF-weathered Rock				PS 0.30
	14-56	wk, sbk, Cl	Fr, SS, S(Red)					
	0-3	S bk scl	fr ss sp	Red Br				.3
	3-30	mo sbk c	fr ss sp	Red				
	30-55	wk sbk cl	fr sss p	Red	C-sap			
	0-28	mo sbk C	fr ss sp	Red	f-sap			<40" .3 >40" .25
	28-40	wk sbk cl	fr ss sp	Red	c-sap f w R			
	40-57	massive	L sap fr ss sp		large vein WR/R			

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
...ble Space (.1945)		
...n Type(a)		
...TAR		

...ENTS: _____

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: _____
OTHER(S) PRESENT: _____


181.4'
216.5'
313.3'
368.2'
395.5'
830
825
820
815
825
830
835
840
845
850
855
#1
#2
#3
601
54,578 sq.ft.
602
59,804 sq.ft.
L=113.9'
R=525.0'
L=25.3'
R=52
7.3'
0
GRAPHIC SCALE
50
25
0
50
SCALE: 1" = 50'