

DEPARTMENT OF INSPECTIONS, LICENSES & PERMITS
 3430 COURT HOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PERMITS (410) 313-2455
 INSPECTIONS (410) 313-1850

**HOWARD COUNTY
 RESIDENTIAL
 HEATING-VENTILATION-AIR
 CONDITIONING AND
 REFRIGERATION PERMIT
 APPLICATION**

HVACR PERMIT # M17000204
 BUILDING PERMIT #

BUILDING ADDRESS: 13891 Brighton Dam Road SUITE/APT:
Clarksville, MD 21029
 SUBDIVISION: 2841
 CENSUS TRACT: SECTION: AREA:
 LOT: TAX MAP: 0034 PARCEL: 0445
 BLOCK: ZONE:
 PROPERTY ID: MAP COORDINATES:
 TYPE OF IMPROVEMENTS: USE:

OWNERS NAME: Deric Tomenko
 ADDRESS: 13891 Brighton Dam Road
 CITY: Clarksville
 STATE: MD ZIP CODE: 21029
 HOME PHONE: WORK PHONE:

<u>CHECK ONE</u>	<u>HOW MANY</u>	
SINGLE FAMILY DWELLING <input checked="" type="checkbox"/>	<u>7</u>	ZONES
SINGLE FAMILY TOWNHOUSE <input type="checkbox"/>	___	ZONES
MULTI-FAMILY / HOTEL/MOTEL <input type="checkbox"/>	___	ROOMS
ASSISTED LIVING HOMES (16 OR FEWER RESIDENTS) <input type="checkbox"/>	___	ROOMS

COMPANY NAME: Ground Loop Heating & Air Cond., Inc.
 LICENSEE NAME: Michael E. Cullum
 ADDRESS: 1701 Whiteford Road
 CITY: Darlington
 STATE: MD ZIP CODE: 21034
 PHONE: 410-836-1706 HVACR LICENSE NO: 6539

New
 Heating and Air Conditioning Heating System Only Other Work (Describe):
 Geo Thermal System Ductless Mini Splits Thru The Wall Systems

Replacement
 Heating 5 ton NW060R Water Furnace
 Air Conditioning 5 ton NW060
 Heating and Air Conditioning 8 ton NDW100 4 ton NW048

Additions and Alterations
 Heating
 Air Conditioning
 Heating and Air Conditioning

****Replacement Geo Thermal Systems are not required; However, if a tax credit is being sought a permit is required****

Zones	Rooms	RECEIVED FEB 27 2017 LICENSSES & PERMITS DIVISION
Permit Fee = # of Zones x \$40 =	Permit Fee = # of Rooms x \$80 =	
Technology Fee (10% of Permit Fee) =	Technology Fee (10% of Permit Fee) =	
Plus Application Fee	Plus Application Fee \$50	
Total Fees Due =	Total Fees Due =	

\$50.00

I HAVE CAREFULLY EXAMINED AND READ THIS APPLICATION AND KNOW IT IS TRUE AND CORRECT. THE WORK DESCRIBED HEREIN WILL BE PERFORMED BY A STATE HVACR LICENSED PERSON(S), AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE CODES AND STANDARDS OF HOWARD COUNTY THE STATE OF MARYLAND.

Michael C 2/23/17
 SIGNATURE OF LICENSEE DATE
Michael Cullum
 PRINT NAME OF LICENSEE
melissa@groundloop.com
 Email Address

Validation
 Check Number: 24270
 Cash:
 Receipt Number: 482135

Make check payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

Word doc: T:\Updated Forms\hvac application
 Rev:10.2009

OK

3/9/17 HDA for m. Wolf L.E.H.S.

Vertical loops
well + septic

Project Information

For: TOMENKO

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	12	94	Method	Average
Inside db (°F)	72	70	Construction quality	
Design TD (°F)	60	24	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	27	47		

HEATING EQUIPMENT

Make
Trade
Model
AHRI ref

Efficiency 80 AFUE

Heating input 0 Btuh
Heating output 0 Btuh
Temperature rise 0 °F
Actual air flow 5590 cfm
Air flow factor 0.058 cfm/Btuh
Static pressure 0 in H2O
Space thermostat

COOLING EQUIPMENT

Make
Trade
Cond
Coil
AHRI ref
Efficiency 0 SEER

Sensible cooling 0 Btuh
Latent cooling 0 Btuh
Total cooling 0 Btuh
Actual air flow 5590 cfm
Air flow factor 0.061 cfm/Btuh
Static pressure 0 in H2O
Load sensible heat ratio 0.93

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Main Basement	2054	13078	11529	762	703
Basement Wing	1449	8354	7964	487	485
Main 1st fl	2246	47348	42186	2758	2571
Bedrooms	1449	27166	30042	1583	1831
Entire House	7198	95946	91720	5590	5590
Other equip loads		14855	0		
Equip. @ 1.00 RSM			91720		
Latent cooling			7226		
TOTALS	7198	110801	98947	5590	5590

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Information

For:

Design Conditions

Location: Baltimore, MD, US Elevation: 154 ft Latitude: 39°N	Indoor: Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	Heating 72 60 30 26.8	Cooling 70 24 50 47.0
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 12 - - 15.0	Cooling 94 19 (M) 75 7.5	Infiltration: Method Construction quality Fireplaces
		Simplified Average 0	

Construction descriptions

	Or	Area ft²	U-value Btu/ft²·°F	Insul R ft²·°F/Btu/h	Htg HTM Btu/h/ft²	Loss Btu/h	Clg HTM Btu/h/ft²	Gain Btu/h
Walls								
14D-33s: Misc. wall, stucco ext, 2"x4" wood int frm, 4 1/2" thk, 1/2" gypsum board int fnsh	n	611	0.034	28.8	2.03	1241	0.67	413
	e	1094	0.034	28.8	2.03	2221	0.67	739
	s	616	0.034	28.8	2.03	1250	0.67	416
	w	1015	0.034	28.8	2.03	2060	0.67	685
	all	3337	0.034	28.8	2.03	6772	0.67	2252
15D25-6: Bg wall, heavy damp soil, 2"x6" wood int frm, icf wall, 8" thk, 1/2" gypsum board int fnsh	n	825	0.026	20.8	1.85	1522	0.38	313
	e	911	0.026	20.8	1.82	1654	0.34	310
	s	601	0.026	20.8	1.75	1054	0.26	157
	w	974	0.026	20.8	1.83	1785	0.36	354
	all	3311	0.026	20.8	1.82	6016	0.34	1133

Partitions
(none)

Windows

4A4-2ov: 2 glazing, clr outr, argon gas, insulated vinyl frm mat, clr low-e innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	n	369	0.470	0	28.1	10342	19.9	7317
	e	118	0.470	0	28.1	3304	53.6	6315
	e	112	0.470	0	28.1	3143	53.6	6006
	s	364	0.470	0	28.1	10218	29.1	10600
	s	224	0.470	0	28.1	6285	29.1	6520
	w	176	0.470	0	28.1	4938	53.6	9439
	w	49	0.470	0	28.1	1375	53.6	2628
	all	1412	0.470	0	28.1	39605	34.6	48824
Sky glazing, small, wood curb, no shaft lgt shaft, wd sash: Sky glazing, small, wood curb, no shaft lgt shaft, wd sash		47	0.500	0	29.9	1395	54.3	2540

Doors

Door, wd sc type: Door, wd sc type	n	21	0.220	8.0	13.1	276	7.86	165
	e	21	0.220	8.0	13.1	276	7.86	165
	s	21	0.220	8.0	13.1	276	7.86	165
	w	42	0.220	8.0	13.1	552	7.86	330
	all	105	0.220	8.0	13.1	1379	7.86	826

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Construction descriptions

	Or	Area ft²	U-value Btu/ft²·°F	Insul R ft²·°F/Btu	Htg HTM Btu/ft²	Loss Btu/h	Clg HTM Btu/ft²	Gain Btu/h
Walls								
15D25-6: Bg wall, heavy damp soil, 2"x6" wood int frm, icf wall, 8" thk, 1/2" gypsum board int fnsh	n	572	0.026	20.8	1.85	1055	0.38	217
	e	260	0.026	20.8	1.78	463	0.29	76
	s	390	0.026	20.8	1.73	675	0.23	90
	w	638	0.026	20.8	1.85	1177	0.38	242
	all	1860	0.026	20.8	1.81	3371	0.34	625
Partitions (none)								
Windows								
4A4-2ov: 2 glazing, clr outr, argon gas, insulated vinyl frm mat, clr low-e innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	e	70	0.470	0	28.1	1964	53.6	3754
	s	182	0.470	0	28.1	5107	29.1	5298
	all	252	0.470	0	28.1	7071	35.9	9052
Doors (none)								
Ceilings (none)								
Floors								
41B0: Radiant panel over basement, 3/4" ply subflr, Omega heat xfer plates		2054	0	0	0	0	0.39	810

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Construction descriptions

	Or	Area ft²	U-value Btu/ft²·°F	Insul R ft²·°F/Btu	Htg HTM Btu/ft²	Loss Btu	Clg HTM Btu/ft²	Gain Btu
Walls								
14D-33s: Misc. wall, stucco ext, 2"x4" wood int frm, 4 1/2" thk, 1/2" gypsum board int fnsh	n	422	0.034	28.8	2.03	857	0.67	285
	e	490	0.034	28.8	2.03	995	0.67	331
	s	406	0.034	28.8	2.03	824	0.67	274
	w	735	0.034	28.8	2.03	1492	0.67	496
	all	2053	0.034	28.8	2.03	4167	0.67	1386
Partitions (none)								
Windows								
4A4-2ov: 2 glazing, clr outr, argon gas, insulated vinyl frm mat, clr low-e innr, 1/4" gap, 1/4" thk; 6.67 ft head ht	n	305	0.470	0	28.1	8558	19.9	6054
	e	29	0.470	0	28.1	814	53.6	1555
	s	321	0.470	0	28.1	9007	29.1	9344
	w	71	0.470	0	28.1	1992	53.6	3808
	all	726	0.470	0	28.1	20371	28.6	20761
Sky glazing, small, wood curb, no shaft lgt shaft, wd sash: Sky glazing, small, wood curb, no shaft lgt shaft, wd sash		41	0.500	0	29.9	1209	54.3	2200
Doors								
Door, wd sc type: Door, wd sc type	n	21	0.220	8.0	13.1	276	7.86	165
	e	21	0.220	8.0	13.1	276	7.86	165
	s	21	0.220	8.0	13.1	276	7.86	165
	w	42	0.220	8.0	13.1	552	7.86	330
	all	105	0.220	8.0	13.1	1379	7.86	826
Ceilings								
17A-2cfzd: Flat ceiling, membrane roof mat, cement-fiber slab deck, 1/2" gypsum board int fnsh, 6" thkns, r-50 ceil ins		1338	0.143	0	8.54	11418	10.0	13436
18B-38al: Rf/clg ceiling, asphalt shingles roof mat, frm cons, 1/2" gypsum board int fnsh, 10" thkns, r-50 ceil ins		1272	0.029	38.0	1.73	2202	0.76	968
Floors								
43B0: Radiant panel over room, 3/4" ply subflr, Omega heat xfer plates		2246	0	0	0	0	0	0

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Construction descriptions

	Or	Area ft²	U-value Btu/hft²·°F	Insul R ft²·°F/Btu/h	Htg HTM Btu/hft²	Loss Btu/h	Clg HTM Btu/hft²	Gain Btu/h
Walls								
14D-33s: Misc. wall, stucco ext, 2"x4" wood int frm, 4 1/2" thk, 1/2" gypsum board int fnsh								
	n	189	0.034	28.8	2.03	384	0.67	128
	e	604	0.034	28.8	2.03	1227	0.67	408
	s	210	0.034	28.8	2.03	426	0.67	142
	w	280	0.034	28.8	2.03	568	0.67	189
	all	1284	0.034	28.8	2.03	2605	0.67	866
Partitions (none)								
Windows								
4A4-2ov: 2 glazing, clr outr, argon gas, insulated vinyl frm mat, clr low-e innr, 1/4" gap, 1/4" thk; 6.67 ft head ht								
	n	64	0.470	0	28.1	1784	19.9	1262
	e	89	0.470	0	28.1	2490	53.6	4760
	s	43	0.470	0	28.1	1211	29.1	1256
	w	105	0.470	0	28.1	2946	53.6	5631
	all	301	0.470	0	28.1	8432	43.0	12909
Sky glazing, small, wood curb, no shaft lgt shaft, wd sash: Sky glazing, small, wood curb, no shaft lgt shaft, wd sash								
		6	0.500	0	29.9	187	54.3	340
Doors (none)								
Ceilings								
17A-2cfzd: Flat ceiling, membrane roof mat, cement-fiber slab deck, 1/2" gypsum board int fnsh, 6" thkns, r-50 ceil ins								
		1443	0.143	0	8.54	12317	10.0	14494
Floors								
43B0: Radiant panel over room, 3/4" ply subflr, Omega heat xfer plates								
		1449	0	0	0	0	0	0

Project Information

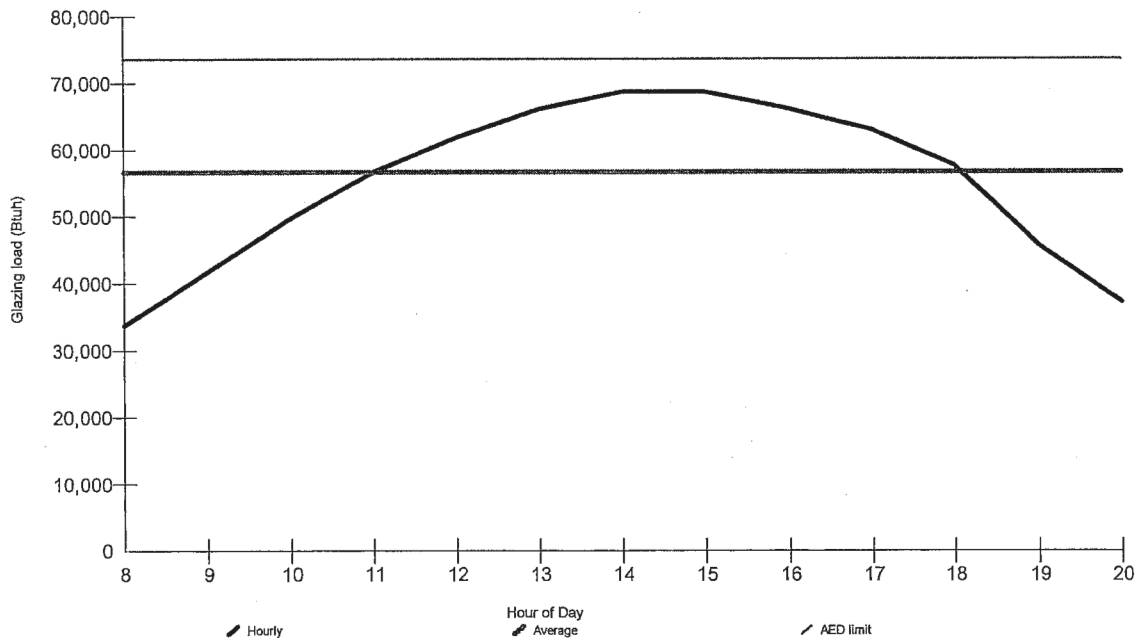
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Test for Adequate Exposure Diversity

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 21.3%.

House has adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 0 Btuh

1 Room name		Basement Wing						Main 1st fl						
2 Exposed wall		144.0 ft						224.0 ft						
3 Room height		11.0 ft			heat/cool			13.9 ft			heat/cool			
4 Room dimensions		23.0 x 63.0 ft						1.0 x 224.0 ft						
5 Room area		1449.0 ft²						2246.0 ft²						
6	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	14D-33s	0.034	n	2.03	0.67	0	0	0	0	748	422	857	285
		4A4-20v	0.470	n	28.06	19.85	0	0	0	0	305	0	8558	6054
11	D	Door, wd sc type	0.220	n	13.13	7.86	0	0	0	0	21	21	276	165
		15D25-6	0.035	n	1.85	0.36	253	253	467	96	0	0	0	0
11	W	14D-33s	0.034	e	2.03	0.67	0	0	0	0	540	490	995	331
		4A4-20v	0.470	e	28.06	53.63	0	0	0	0	29	0	814	1555
11	D	Door, wd sc type	0.220	e	13.13	7.86	0	0	0	0	21	21	276	165
		15D25-6	0.035	e	1.82	0.34	693	651	1191	233	0	0	0	0
11	W	4A4-20v	0.470	s	28.06	53.63	42	0	1178	2252	0	0	0	0
		14D-33s	0.034	s	2.03	0.67	0	0	0	0	748	406	824	274
11	D	4A4-20v	0.470	s	28.06	29.11	0	0	0	0	321	0	9007	9344
		Door, wd sc type	0.220	s	13.13	7.86	0	0	0	0	21	21	276	165
11	W	15D25-6	0.035	s	1.75	0.26	253	211	379	67	0	0	0	0
		4A4-20v	0.470	s	28.06	29.11	42	0	1178	1223	0	0	0	0
11	W	14D-33s	0.034	w	2.03	0.67	0	0	0	0	848	735	1492	496
		4A4-20v	0.470	w	28.06	53.63	0	0	0	0	71	0	1992	3808
11	D	Door, wd sc type	0.220	w	13.13	7.86	0	0	0	0	42	42	552	330
		15D25-6	0.035	w	1.83	0.36	385	336	608	112	0	0	0	0
11	W	4A4-20v	0.470	w	28.06	53.63	49	0	1375	2628	0	0	0	0
		17A-2cfdz	0.143	w	8.54	10.05	0	0	0	0	1378	1338	11418	13436
11	G	Sky glazing, small,	0.500	-	29.85	54.32	0	0	0	0	41	0	1209	2200
		18B-38al	0.029	-	1.73	0.76	0	0	0	0	1272	1272	2202	968
11	C	41B0	0.047	-	0.00	0.39	1449	1449	0	0	571	0	0	0
		43B0	0.042	-	0.00	0.00	0	0	0	0	2246	2246	0	0
6	c) AED excursion									0			0	
	Envelope loss/gain							6377	7182			40747	39577	
12	a) Infiltration							1977	782			6601	2609	
	b) Room ventilation							0	0			0	0	
13	Internal gains:	Occupants @	230					0	0	0	0	0	0	
		Appliances/other						0	0			0	0	
	Subtotal (lines 6 to 13)							8354	7964			47348	42186	
14	Less external load							0	0			0	0	
	Less transfer							0	0			0	0	
	Redistribution							0	0			0	0	
14	Subtotal							8354	7964			47348	42186	
15	Duct loads							0	0	-0%	0%	0	0	
	Total room load							8354	7964			47348	42186	
	Air required (cfm)							487	485			2758	2571	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Information

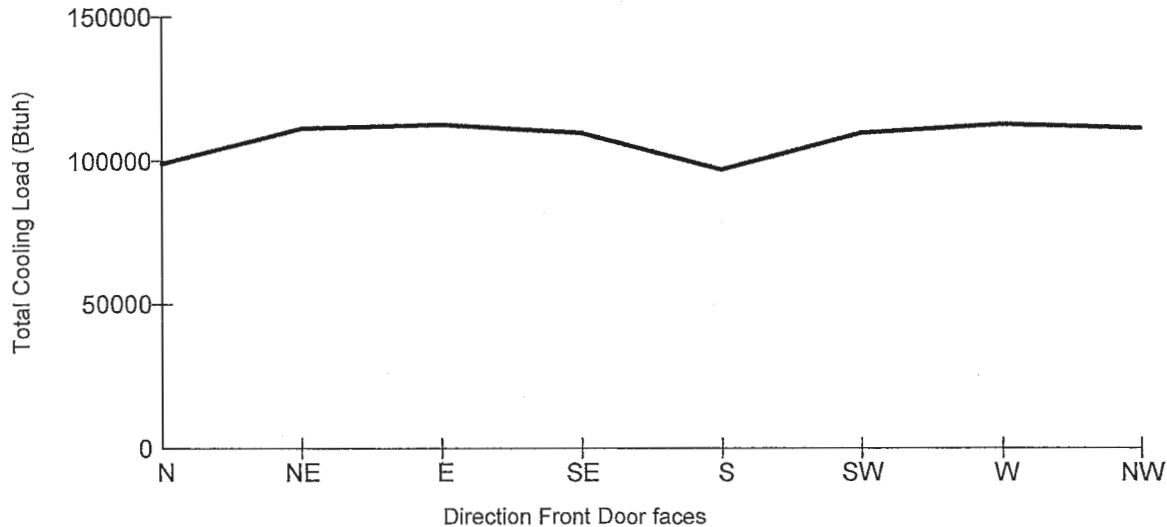
For:

Design Conditions

Location: Baltimore, MD, US Elevation: 154 ft Latitude: 39°N			Indoor: Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	Heating 72 60 30 26.8	Cooling 70 24 50 47.0
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 12 - - 15.0	Cooling 94 19 (M) 75 7.5	Infiltration:		

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	91720	104013	105359	102447	89688	102413	105315	103979
Latent Load (Btuh)	7226	7226	7226	7226	7226	7226	7226	7226
Total Load (Btuh)	98947	111240	112586	109673	96914	109640	112542	111206
Heating AVF (cfm)	5590	6339	6421	6244	5466	6242	6418	6337
Cooling AVF (cfm)	5590	6339	6421	6244	5466	6242	6418	6337

Building Orientation Cooling Load

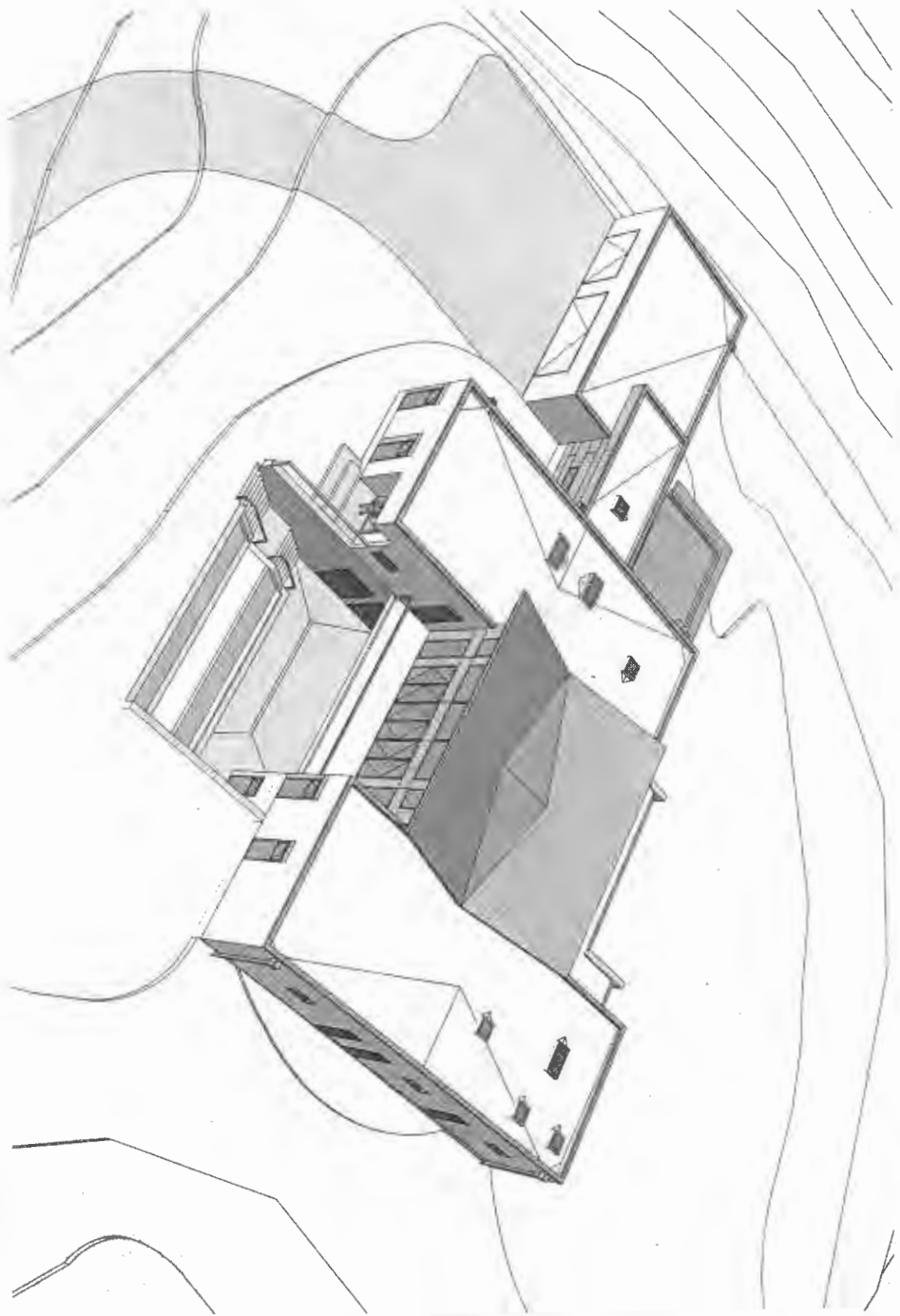


Current Orientation: Front Door faces North
Highest Cooling Load: Front Door faces East

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

A - ARCHITECTURAL
S - STRUCTURAL

SHEET NUMBER	TITLE	NO. REVISED - 11.2.16	PERMIT ISSUE - 2.1.16
A.1.01	COVER SHEET AND DRAWING INDEX	0	
A.1.02	LOCATION PLAN	0	
A.1.03	SITE PLAN AND DIMENSIONAL CONTROL	0	
A.1.04	LANDSCAPE PLAN	0	
A.1.05	FOUNDATION PLAN	0	
A.1.06	1ST FLOOR PLAN	0	
A.1.07	2ND FLOOR PLAN	0	
A.1.08	3RD FLOOR PLAN	0	
A.1.09	4TH FLOOR PLAN	0	
A.1.10	5TH FLOOR PLAN	0	
A.1.11	6TH FLOOR PLAN	0	
A.1.12	7TH FLOOR PLAN	0	
A.1.13	8TH FLOOR PLAN	0	
A.1.14	9TH FLOOR PLAN	0	
A.1.15	10TH FLOOR PLAN	0	
A.1.16	11TH FLOOR PLAN	0	
A.1.17	12TH FLOOR PLAN	0	
A.1.18	13TH FLOOR PLAN	0	
A.1.19	14TH FLOOR PLAN	0	
A.1.20	15TH FLOOR PLAN	0	
A.1.21	16TH FLOOR PLAN	0	
A.1.22	17TH FLOOR PLAN	0	
A.1.23	18TH FLOOR PLAN	0	
A.1.24	19TH FLOOR PLAN	0	
A.1.25	20TH FLOOR PLAN	0	
A.1.26	21ST FLOOR PLAN	0	
A.1.27	22ND FLOOR PLAN	0	
A.1.28	23RD FLOOR PLAN	0	
A.1.29	24TH FLOOR PLAN	0	
A.1.30	25TH FLOOR PLAN	0	
A.1.31	26TH FLOOR PLAN	0	
A.1.32	27TH FLOOR PLAN	0	
A.1.33	28TH FLOOR PLAN	0	
A.1.34	29TH FLOOR PLAN	0	
A.1.35	30TH FLOOR PLAN	0	
A.1.36	31ST FLOOR PLAN	0	
A.1.37	32ND FLOOR PLAN	0	
A.1.38	33RD FLOOR PLAN	0	
A.1.39	34TH FLOOR PLAN	0	
A.1.40	35TH FLOOR PLAN	0	
A.1.41	36TH FLOOR PLAN	0	
A.1.42	37TH FLOOR PLAN	0	
A.1.43	38TH FLOOR PLAN	0	
A.1.44	39TH FLOOR PLAN	0	
A.1.45	40TH FLOOR PLAN	0	
A.1.46	41ST FLOOR PLAN	0	
A.1.47	42ND FLOOR PLAN	0	
A.1.48	43RD FLOOR PLAN	0	
A.1.49	44TH FLOOR PLAN	0	
A.1.50	45TH FLOOR PLAN	0	
A.1.51	46TH FLOOR PLAN	0	
A.1.52	47TH FLOOR PLAN	0	
A.1.53	48TH FLOOR PLAN	0	
A.1.54	49TH FLOOR PLAN	0	
A.1.55	50TH FLOOR PLAN	0	
A.1.56	51ST FLOOR PLAN	0	
A.1.57	52ND FLOOR PLAN	0	
A.1.58	53RD FLOOR PLAN	0	
A.1.59	54TH FLOOR PLAN	0	
A.1.60	55TH FLOOR PLAN	0	
A.1.61	56TH FLOOR PLAN	0	
A.1.62	57TH FLOOR PLAN	0	
A.1.63	58TH FLOOR PLAN	0	
A.1.64	59TH FLOOR PLAN	0	
A.1.65	60TH FLOOR PLAN	0	
A.1.66	61ST FLOOR PLAN	0	
A.1.67	62ND FLOOR PLAN	0	
A.1.68	63RD FLOOR PLAN	0	
A.1.69	64TH FLOOR PLAN	0	
A.1.70	65TH FLOOR PLAN	0	
A.1.71	66TH FLOOR PLAN	0	
A.1.72	67TH FLOOR PLAN	0	
A.1.73	68TH FLOOR PLAN	0	
A.1.74	69TH FLOOR PLAN	0	
A.1.75	70TH FLOOR PLAN	0	
A.1.76	71ST FLOOR PLAN	0	
A.1.77	72ND FLOOR PLAN	0	
A.1.78	73RD FLOOR PLAN	0	
A.1.79	74TH FLOOR PLAN	0	
A.1.80	75TH FLOOR PLAN	0	
A.1.81	76TH FLOOR PLAN	0	
A.1.82	77TH FLOOR PLAN	0	
A.1.83	78TH FLOOR PLAN	0	
A.1.84	79TH FLOOR PLAN	0	
A.1.85	80TH FLOOR PLAN	0	
A.1.86	81ST FLOOR PLAN	0	
A.1.87	82ND FLOOR PLAN	0	
A.1.88	83RD FLOOR PLAN	0	
A.1.89	84TH FLOOR PLAN	0	
A.1.90	85TH FLOOR PLAN	0	
A.1.91	86TH FLOOR PLAN	0	
A.1.92	87TH FLOOR PLAN	0	
A.1.93	88TH FLOOR PLAN	0	
A.1.94	89TH FLOOR PLAN	0	
A.1.95	90TH FLOOR PLAN	0	
A.1.96	91ST FLOOR PLAN	0	
A.1.97	92ND FLOOR PLAN	0	
A.1.98	93RD FLOOR PLAN	0	
A.1.99	94TH FLOOR PLAN	0	
A.1.100	95TH FLOOR PLAN	0	
A.1.101	96TH FLOOR PLAN	0	
A.1.102	97TH FLOOR PLAN	0	
A.1.103	98TH FLOOR PLAN	0	
A.1.104	99TH FLOOR PLAN	0	
A.1.105	100TH FLOOR PLAN	0	



TOMENKO RESIDENCE

1 DRAWING INDEX

General Notes

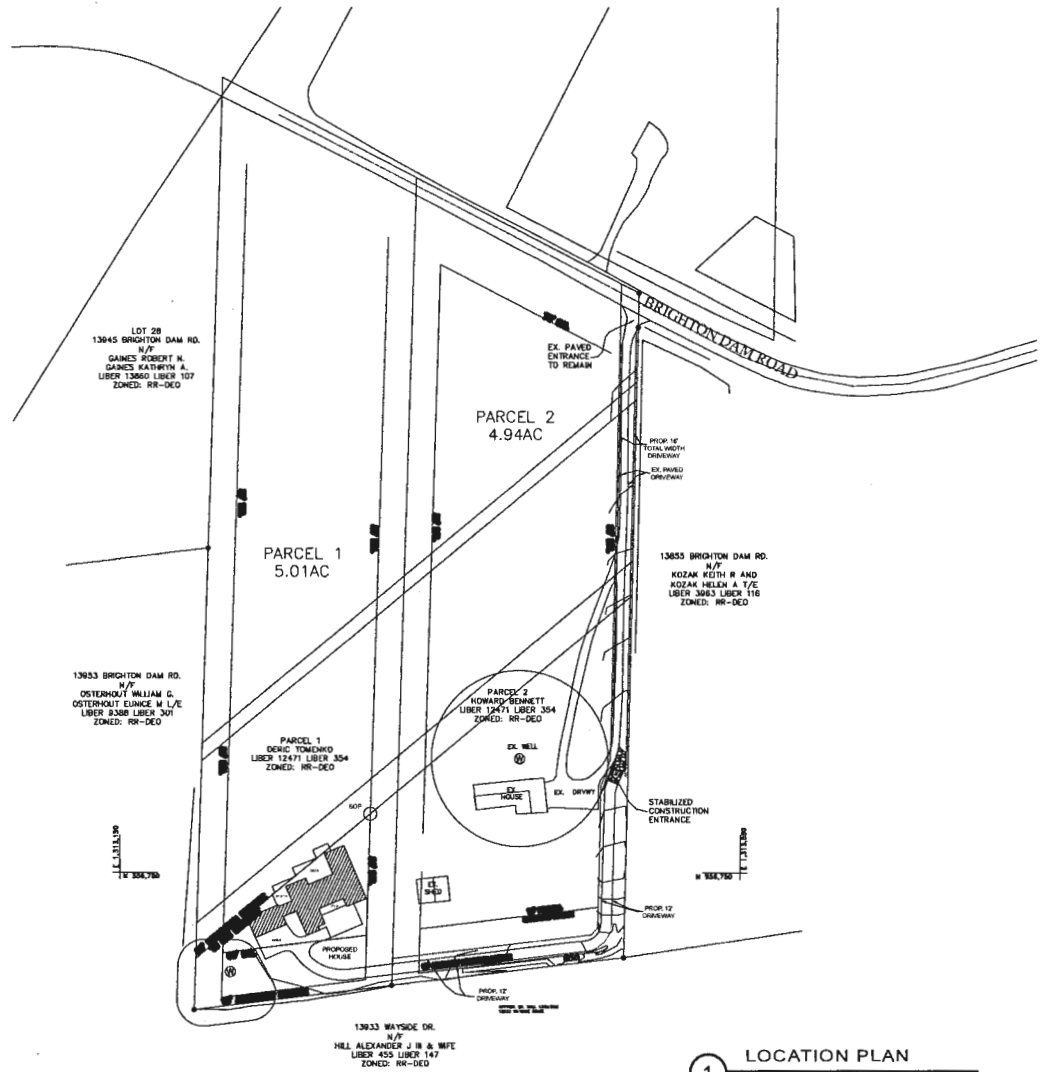
No.	Revision/Issue	Date

STUDIO INGLIS
 Gary James Inglis RIAA, RIBA
 3411 Guilford Drive, Fairfax, VA 22030
 703.371.2428 • gary@inglis.com

TOMENKO RESIDENCE
 13801 BRIGHTON DAM ROAD
 CLARKSVILLE
 MARYLAND 21209

TR-01	2.1.16
A.1.00	

PERMIT ISSUE



1 LOCATION PLAN
1/8" = 1'-0"

PERMIT ISSUE

No.	Description/Issue Date

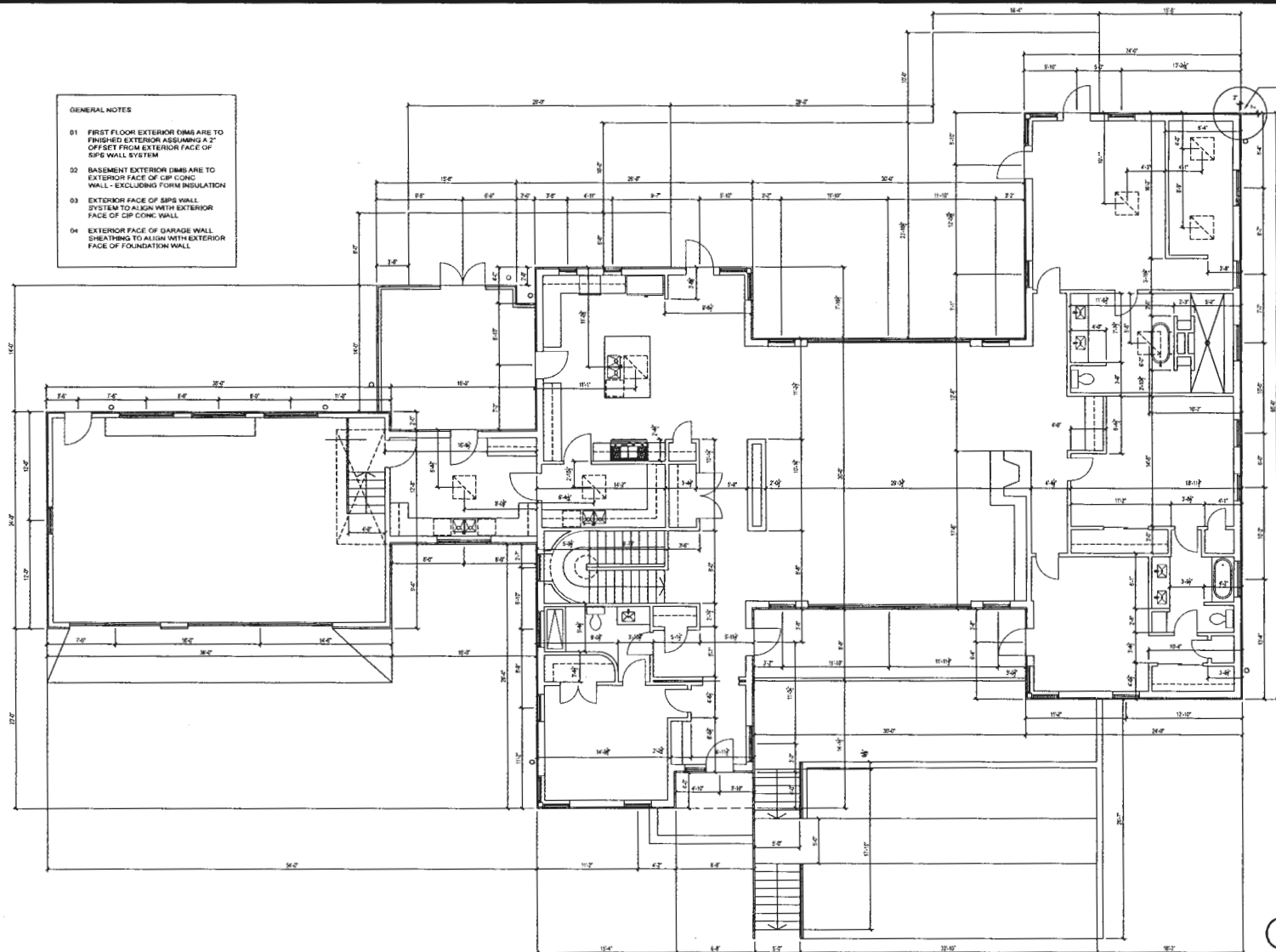
STUDIO INGLIS
 Gary James Inglis RIAS RIBA
 3411 Britewood Drive Fairfax VA 22030
 t 703 371 2428 • garyinglis@msc.com

TOMENKO RESIDENCE
 13891 BRIGHTON DAM ROAD
 CLARKSVILLE
 MARYLAND 21209

Project	TR 01
Date	2.1.16
Sheet	A 1.01

General Notes

- GENERAL NOTES**
- 01 FIRST FLOOR EXTERIOR DIMS ARE TO FINISHED EXTERIOR ASSUMING A 2" OFFSET FROM EXTERIOR FACE OF SIPF WALL SYSTEM
 - 02 BASEMENT EXTERIOR DIMS ARE TO EXTERIOR FACE OF CUR CONC WALLS - EXCLUDING FORM INSULATION
 - 03 EXTERIOR FACE OF SIPF WALL SYSTEM TO ALIGN WITH EXTERIOR FACE OF CUR CONC WALL
 - 04 EXTERIOR FACE OF GARAGE WALL SHEATHING TO ALIGN WITH EXTERIOR FACE OF FOUNDATION WALL



CONTROL POINT - EXTERIOR CORNER OF WALL SIPF PANEL

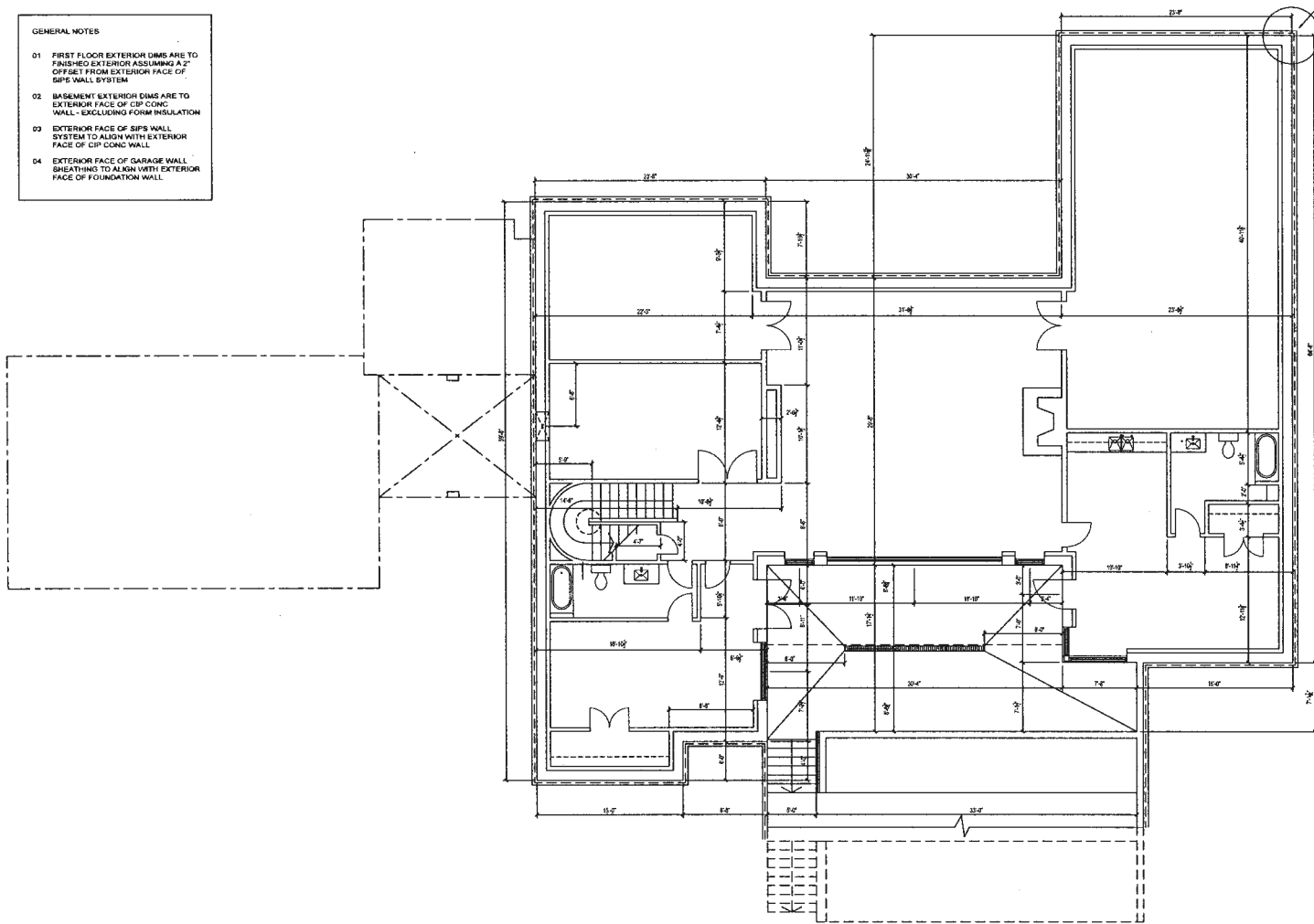
4 Bedroom

1 FIRST FLOOR DIMENSIONAL CONTROL 3/16" = 1'-0"

<p style="font-size: small; margin: 0;">General Notes</p>	<h2 style="margin: 0;">PERMIT ISSUE</h2>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small; padding: 2px;">No.</td> <td style="font-size: x-small; padding: 2px;">Revision/Date</td> </tr> <tr> <td style="height: 20px;"> </td> <td style="height: 20px;"> </td> </tr> </table>	No.	Revision/Date			<p style="margin: 0;">STUDIO INGLIS</p> <p style="font-size: x-small; margin: 0;">Gary James Inglis RIAS RIBA 3411 Brookwood Drive Fairfax VA 22030 t 703 371 2428 e garyinglis@mac.com</p>	<p style="margin: 0;">TOMENKO RESIDENCE</p> <p style="font-size: x-small; margin: 0;">13891 BRIGHTON DAM ROAD CLARKSVILLE MARYLAND 21209</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small; padding: 2px;">TR 01</td> </tr> <tr> <td style="font-size: x-small; padding: 2px;">Date 2.1.16</td> </tr> <tr> <td style="font-size: x-small; padding: 2px;">Sheet A 2.12</td> </tr> </table>	TR 01	Date 2.1.16	Sheet A 2.12
No.	Revision/Date											
TR 01												
Date 2.1.16												
Sheet A 2.12												

GENERAL NOTES

- 01 FIRST FLOOR EXTERIOR DIMS ARE TO FINISHED EXTERIOR ASSUMING A 2" OFFSET FROM EXTERIOR FACE OF SIPS WALL SYSTEM
- 02 BASEMENT EXTERIOR DIMS ARE TO EXTERIOR FACE OF CIP CONC WALL - EXCLUDING FORM INSULATION
- 03 EXTERIOR FACE OF SIPS WALL SYSTEM TO ALIGN WITH EXTERIOR FACE OF CIP CONC WALL
- 04 EXTERIOR FACE OF GARAGE WALL SHEATHING TO ALIGN WITH EXTERIOR FACE OF FOUNDATION WALL



CONTROL POINT - EXTERIOR CORNER OF CONC WALL

1 bedroom

1 BASEMENT DIMENSIONAL CONTROL
3/16" = 1'-0"

General Notes	PERMIT ISSUE	<table border="1" style="border-collapse: collapse;"> <tr> <td style="font-size: 8px;">No.</td> <td style="font-size: 8px;">Revision/Issued Date</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	No.	Revision/Issued Date			<p style="font-weight: bold; font-size: 10px;">STUDIO INGLIS</p> <p style="font-size: 8px;">Gary James Inglis RIAS RIBA 3411 Brookwood Drive Fairfax VA 22030 1 703 371 2428 e garyinglis@mac.com</p>	<p style="font-weight: bold; font-size: 10px;">TOMENKO RESIDENCE</p> <p style="font-size: 8px;">13891 BRIGHTON DAM ROAD CLARKSVILLE MARYLAND 21209</p>	<table border="1" style="border-collapse: collapse; font-size: 8px;"> <tr> <td style="font-weight: bold;">Project</td> <td>TR 01</td> </tr> <tr> <td style="font-weight: bold;">Date</td> <td>2.1.16</td> </tr> <tr> <td style="font-weight: bold;">Sheet</td> <td>A 2.11</td> </tr> </table>	Project	TR 01	Date	2.1.16	Sheet	A 2.11
No.	Revision/Issued Date														
Project	TR 01														
Date	2.1.16														
Sheet	A 2.11														



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: Feb 21 2013

Permit No.: B18000679

Building Address: 13491 Brighton Dam Rd
 City: Clarksville State: MD Zip Code: 21029
 Suite/Apt. # _____ SDP/WP/BA #: _____
 Census Tract: _____ Subdivision: _____
 Section: _____ Area: _____ Lot: Clarksville
 Tax Map: 34 Parcel: 445 Grid: 13
 Zoning: _____ Map Coordinates: _____ Lot Size: 5.00(A)

Existing Use: SFD
 Proposed Use: SFD w/ propane Tank
 Estimated Construction Cost: \$ 8000
 Description of Work: Install 1000 gallon underground propane Tank

Occupant/Tenant Name: _____
 Was tenant space previously occupied? Yes No
 Contact Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Property Owner's Name: FEDOR TOMENKO
 Address: 800 Maplewood Ave Apt 1
 City: Towson Park State: MD Zip Code: 21286
 Phone: 301-760-1670 Fax: _____
 Email: _____

Applicant's Name & Mailing Address, (if other than stated herein)
 Applicant's Name: MicHELLE CLANCY
 Address: PO Box 310
 City: Perry Hall State: MD Zip Code: 21129
 Phone: 443-600-7514 Fax: _____
 Email: micHELLE @ Applied and Approved.com

Contractor Company: HTS Poist Gas
 Contact Person: Michael Underwood
 Address: 360 MAIN ST
 City: Crown State: MD Zip Code: 20707
 License No.: 610039
 Phone: 301-785-1232 Fax: _____
 Email: _____

Engineer/Architect Company: _____
 Responsible Design Prof.: _____
 Address: Contractor
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 st floor:	
	2 nd floor:	
Area of construction (sq. ft.):	Basement:	
	<input type="checkbox"/> Finished Basement	
Use group:	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
Construction type:	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms:	
<input type="checkbox"/> Structural Steel	Multi-family Dwelling	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> Roadside Tree Project Permit	Footings:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof:	
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
Electric:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Gas:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Supply	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Sewage Disposal	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Heating System	
<input type="checkbox"/> Electric	<input type="checkbox"/> Oil
<input type="checkbox"/> Natural Gas	<input type="checkbox"/> Propane Gas
<input type="checkbox"/> Other:	
Sprinkler System:	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Grading Permit Number:	
Building Shell Permit Number:	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: MicHELLE CLANCY Print Name: MicHELLE CLANCY
 Email Address: MicHELLE @ Applied and Approved.com Date: 2/26/13
 Title/Company: PERMIT

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

PLEASE WRITE NEATLY & LEGIBLY

FOR OFFICE USE ONLY

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
Health	<u>3/13/13</u>	<u>ALB</u>

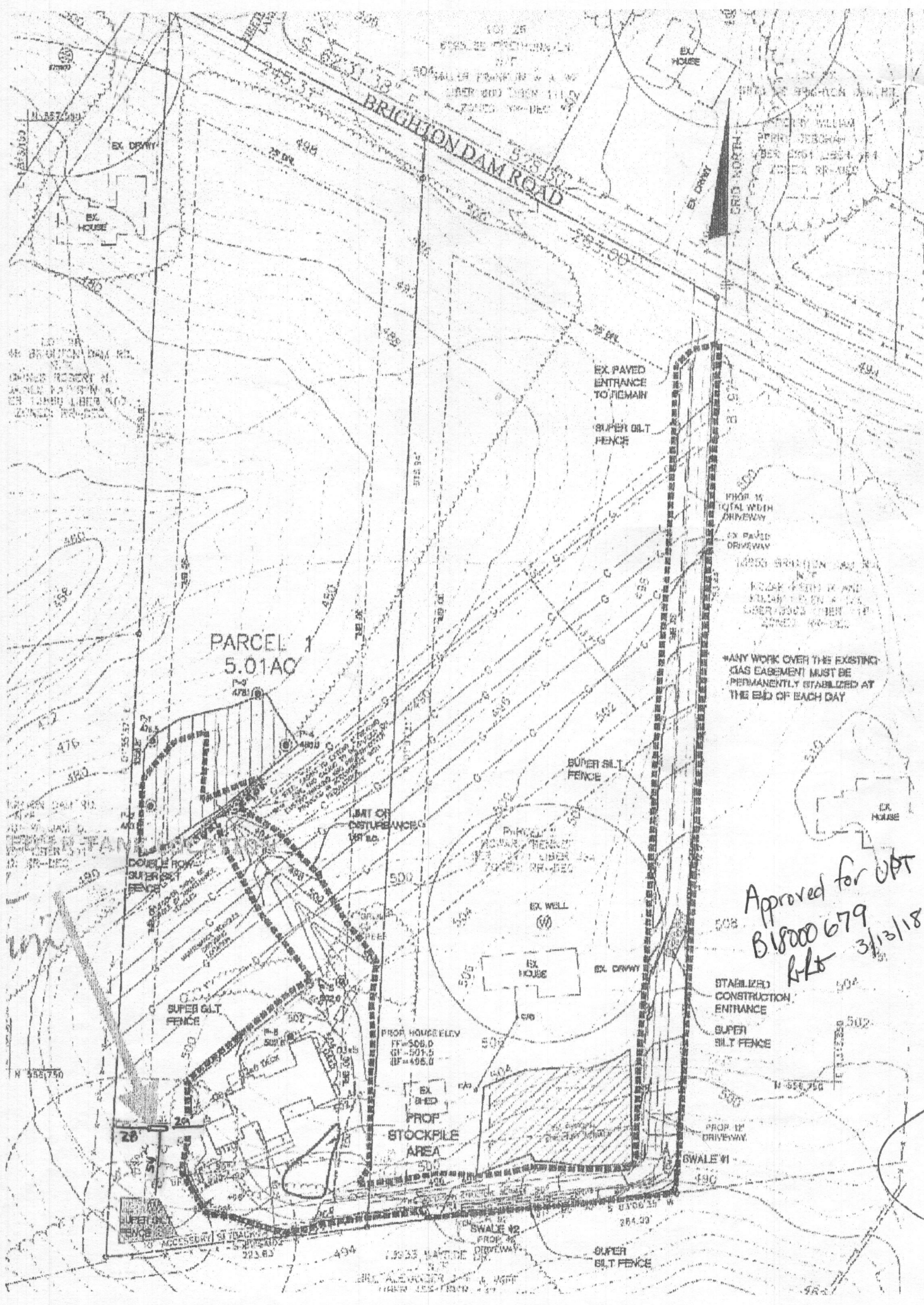
DPZ SETBACK INFORMATION

Front: _____
 Rear: _____
 Side: _____
 Side St.: _____
 All minimum setbacks met? Yes No
 Is Entrance Permit Required? Yes No
 Historic District? Yes No
 Lot Coverage for New Town Zone: _____
 SDP/Red-line approval date: _____

Filing Fee	\$
Permit Fee	\$ 100
Tech Fee	\$ 10
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$ 110.00
Sub- Total Paid	\$
Balance Due	\$
Check	# <u>10531</u>

Is Sediment Control approval required for issuance? Yes No
 CONTINGENCY CONSTRUCTION START

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



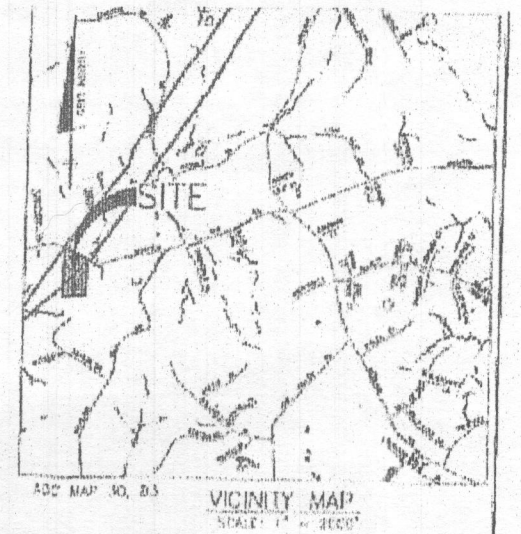
SYMBOL	HYDROLOGIC GROUP	SOILS COEFF	NAME
SW1	B	0.10	GLENNDALE CLAY 3 TO 5 PERCENT SLOPE
SW2	C	0.15	GLENNDALE CLAY 5 TO 15 PERCENT SLOPE
SW3	D	0.20	TRIPLEVILLE SANDY SILT LOAM 0 TO 5 PERCENT SLOPE
SW4	E	0.25	MAHONN LOAM 1 TO 5 PERCENT SLOPE

NETIC DATA

INV. AT HOUSE	500.33
BASEMENT ELEVATION	496.00
GRD. AT INV. AT HOUSE	504.50
+ PUMP IN BASEMENT	
INV. IN BAT	500.04
INV. OUT BAT	498.71
TOP OF BAT	501.0
GROUND OVER BAT	503.00
INV. IN CRST. BOX	496.4
INV. OUT CRST. BOX	495.1
GROUND AT BOX	499.9

GRASS SWALE COMPUTATIONS

SWALE #1		SWALE #2	
7 YEAR	Q = 0.28	5 YEAR	Q = 0.25
Q = 4.55 cfs	A = 10.07 ft ² @ 0.01 ft	Q = 4.55 cfs	A = 10.07 ft ² @ 0.01 ft
B = 3.00 ft		B = 3.00 ft	
Green Space Data	Proposed	Green Space Data	Proposed
Depth of Flow	0.1000 ft	Depth of Flow	0.1000 ft
Velocity	0.5488 ft/s	Velocity	0.5488 ft/s
Flow	4.55 cfs	Flow	4.55 cfs
Hydraulic Radius	0.1000 ft	Hydraulic Radius	0.1000 ft
Top width	10.07 ft	Top width	10.07 ft
Area	3.00 ft ²	Area	3.00 ft ²
Perimeter	10.07 ft	Perimeter	10.07 ft
Wetted Perimeter	10.07 ft	Wetted Perimeter	10.07 ft
Channel Slope	0.01 ft/ft	Channel Slope	0.01 ft/ft
Channel Velocity	0.5488 ft/s	Channel Velocity	0.5488 ft/s
Channel Capacity	4.55 cfs	Channel Capacity	4.55 cfs
Channel Elevation	500.33 ft	Channel Elevation	500.33 ft
Channel Bottom	496.00 ft	Channel Bottom	496.00 ft
Channel Depth	4.33 ft	Channel Depth	4.33 ft
Channel Width	3.00 ft	Channel Width	3.00 ft
Channel Area	3.00 ft ²	Channel Area	3.00 ft ²
Channel Perimeter	10.07 ft	Channel Perimeter	10.07 ft
Channel Hydraulic Radius	0.1000 ft	Channel Hydraulic Radius	0.1000 ft
Channel Top Width	10.07 ft	Channel Top Width	10.07 ft
Channel Length	10.07 ft	Channel Length	10.07 ft
Channel Volume	3.00 ft ³	Channel Volume	3.00 ft ³
Channel Flow	4.55 cfs	Channel Flow	4.55 cfs



GENERAL NOTES

- THIS AREA DESIGNATES A PRIVATE SEWERAGE FACILITY AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE SYSTEMS. IMPROVEMENTS IN ANY MATTER IN THIS AREA IS RESTRICTED TO THE PUBLIC SEWER SYSTEM AVAILABLE. THIS FACILITY SHALL BE CONSIDERED AS A PRIVATE SEWERAGE FACILITY. THE AUTHORITY TO GRANT CONNECTION TO THE PRIVATE SEWERAGE FACILITY IS RESTRICTED TO A LICENSED CIVIL ENGINEER WHO SHALL NOT BE NECESSARY.
- THE 100 YEAR FLOOD CONTROL WITH THE MINIMUM PROTECTION WITH AND EXT AREA AS REQUIRED BY THE MARSHLAND DEPARTMENT OF THE ENVIRONMENT.
- ANY CHANGES TO THE PRIVATE SEWERAGE FACILITY SHALL REQUIRE A REVISED PERCOLATION COMPUTATION PLAN.
- THERE ARE NO EXISTING WELLS OR OTHER STRUCTURES WITHIN THE PROJECT'S PROPOSED FOOTPRINT WHICH IS SHOWN.
- EXACT LENGTH OF OFFICE HOURS IS TO BE DETERMINED BY THE REG. DEPARTMENT BY THE TIME OF TRENCH LAYOUT AND INSTALLATION.
- TOPOGRAPHY SHOWN IN THE AREA OF THE PROPOSED WORK IS BASED ON FIELD SURVEY BY BENCHMARK ENGINEERING, INC. IN OCTOBER, 2014.
- HYDRAULIC MANAGEMENT FOR THIS PARCEL IS PROVIDED BY HOOPER'S TRENCHES FOR THE PROPOSED HOUSE AND NON-SCOURED DISCHARGE FOR THE DRIVEWAY.

LEGEND

SOIL CLASSIFICATION	EXISTING STRUCTURE	
SOIL ELEVATION	PROPOSED STRUCTURE	
EXISTING CONTOUR (PROPOSED CONTOUR NORMAL)	EXISTING WELL	
EXISTING WOOD LINE	EXISTING SCOUR FIELD	
PROPOSED WOOD LINE	PROPOSED SCOUR FIELD	
LIMIT OF DISTURBANCE	PAVED PERCOLATION TEST	
SUPER SILT FENCE	PAVED PERCOLATION TEST	
SILT FENCE DIVERSION	PROPOSED WELL	
STABILIZED CONSTRUCTION ENTRANCE	EXISTING WELL	
ENVIRON CONTROL: MATERIAL	1000 S.F. ALL 2018	

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEWERAGE AND PERCOLATION TESTS, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT I WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John M. Coy
 ENGINEER

OWNER/DEVELOPER CERTIFICATE

I, MR. DERRIC TOMENKO, AS DEVELOPER AND CONTRACTOR, DO HEREBY CERTIFY THAT THE PLAN FOR SEWERAGE AND PERCOLATION TESTS, AND THAT ALL RESPONSIBLE PERSONNEL EMPLOYED IN THE CONSTRUCTION PROJECT, WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEWERAGE AND PERCOLATION TESTS. I ALSO AUTHORIZE PERSONNEL EMPLOYED BY THE HOWARD SOIL CONSERVATION DISTRICT.

Derric Tomenko
 OWNER/DEVELOPER

BENCHMARK ENGINEERING, INC.

13891 BRIGHTON DAM ROAD, SUITE 205
 BLENHEIM, KY 40004
 PHONE: 410-425-8105 & FAX: 410-425-8244
 WWW.BE-ENGINEERING.COM

John M. Coy
 4/1/15

13891 BRIGHTON DAM ROAD PARCEL 1

LOCATION: TAX MAP 34 GRM 13 PARCEL 130 (PARCEL 1)
 5TH ELECTRIC DISTRICT
 HOWARD COUNTY, (LAWRENCE, MISSOURI) 20100

1" = 100'



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: _____

Permit No.: B16000442

Building Address: 13891 BRIGHTON DAM RD
 City: CLARKSVILLE State: MD Zip Code: 21029
 Suite/Apt. # _____ SDP/WP/BA #: _____
 Census Tract: 605101 Subdivision: _____
 Section: _____ Area: _____ Lot: 13
 Tax Map: 34 Parcel: 130(1) Grid: 34-13
 Zoning: _____ Map Coordinates: 30-33 Lot Size: 5.01 AC
4933-A9

Existing Use: VACANT LAND
 Proposed Use: SINGLE FAMILY HOME
 Estimated Construction Cost: \$ 5,175 mil.
 Description of Work: NEW CONSTRUCTION
SFD, 4 BED, 4 BATH
2 CAR GARAGE, PARTIAL FIN BSMT.

Occupant or Tenant: _____
 Was tenant space previously occupied? Yes No
 Contact Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Property Owner's Name: F. DERIC TOMENKO
 Address: 800 MAPLEWOOD AVE #1
 City: TAKOMA PARK State: MD Zip Code: 20912
 Phone: 240-339-3399 Fax: 800-505-6155
 Email: FTOMENKO@GMAIL.COM

Applicant's Name & Mailing Address, (If other than stated herein)
 Applicant's Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Contractor Company: TIMOTHY J. BOATON CONST.
 Contact Person: TIM BOATON
 Address: 6000 WISS DR
 City: LAUREL State: MD Zip Code: 20123
 License No.: NHB LIC. # 9087
 Phone: 301-655-1281 Fax: _____
 Email: timbo76@juno.com

Engineer/Architect Company: STUDIO W6LIS
 Responsible Design Prof.: GARY J. W6LIS
 Address: 3411 BROOKWOOD DR
 City: FAIRFAX State: VA Zip Code: 22030
 Phone: (703) 371-2428 Fax: _____
 Email: GARY.W6LIS@MAC.COM

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 st floor: <u>77'</u>	<u>90'</u>
Area of construction (sq. ft.):	2 nd floor:	
Use group:	Basement: <u>77'</u>	<u>90'</u>
	<input checked="" type="checkbox"/> Finished Basement	<u>Partial</u>
	<input checked="" type="checkbox"/> Unfinished Basement	
	<input checked="" type="checkbox"/> Crawl Space	
Construction type:	<input checked="" type="checkbox"/> Slab on Grade <u>Garage</u>	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms: <u>4</u>	
<input type="checkbox"/> Structural Steel	Multi-family Dwelling	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> Roadside Tree Project Permit	Footings:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof:	
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
Water Supply	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Sewage Disposal	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Heating System	
<input type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input checked="" type="checkbox"/> Other: <u>GEOTHERMAL</u>	
Sprinkler System:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number: <u>615050364</u>	
Building Shell Permit Number:	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: [Signature] Print Name: TIMOTHY BOATON
 Email Address: timbo76@juno.com Date: 2/7/16
 Title/Company: Owner

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

PLEASE WRITE NEATLY & LEGIBLY

FOR OFFICE USE ONLY

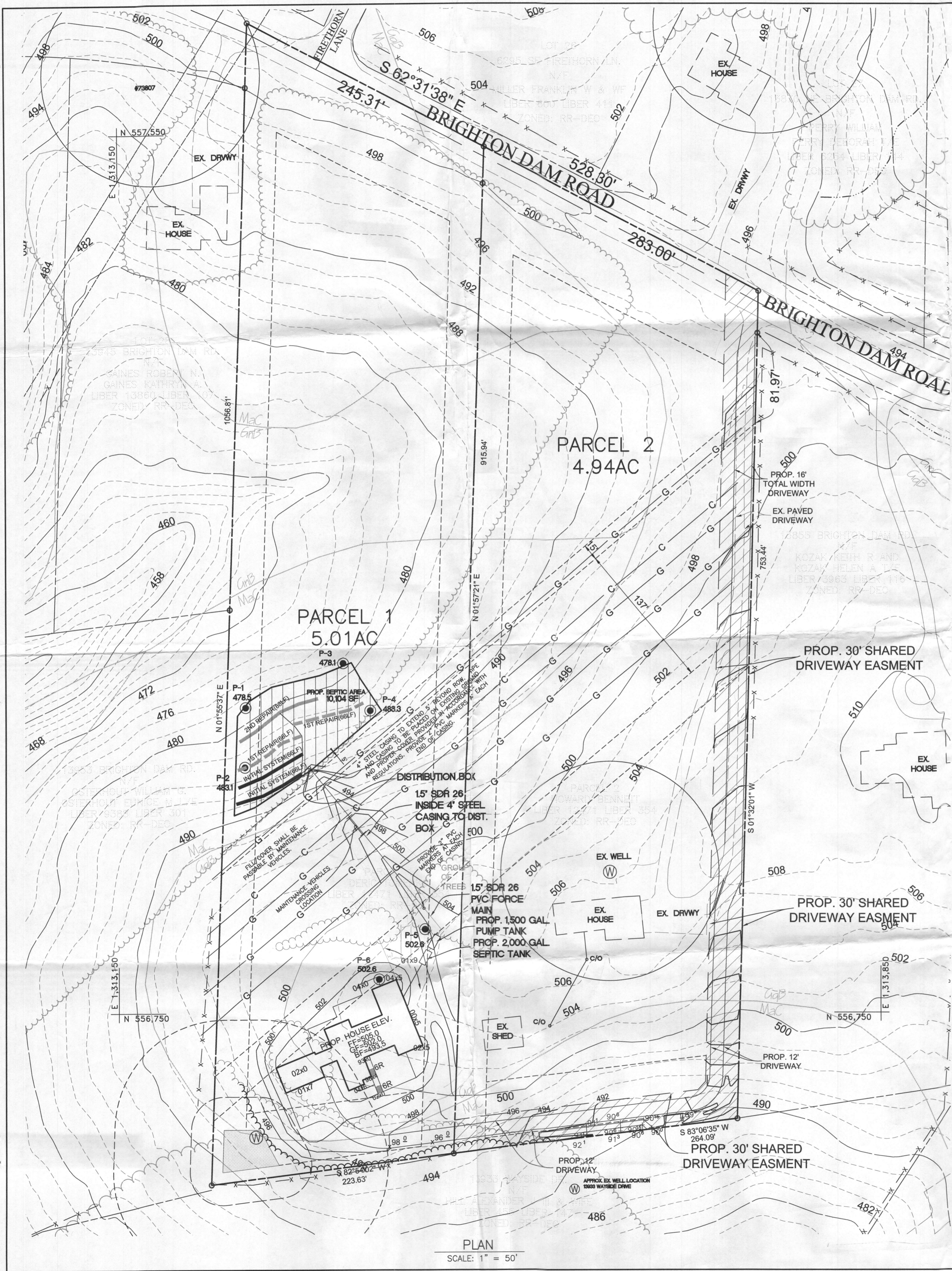
AGENCY	DATE	SIGNATURE OF APPROVAL
<input checked="" type="checkbox"/> State Highways		
<input checked="" type="checkbox"/> Building Officials		
<input checked="" type="checkbox"/> PSZA (Zoning)		
<input checked="" type="checkbox"/> PSZA (Engineering)		
<input checked="" type="checkbox"/> Health	<u>5/4/2016</u>	<u>[Signature]</u>

Is Sediment Control approval required for issuance? Yes No
 CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION
Front: _____
Rear: _____
Side: _____
Side St.: _____
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone: _____
SDP/Red-line approval date: _____

Filing Fee	\$ <u>100</u>
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$ <u>50</u>
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$
Check	# <u>4360</u>

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



PLAN
SCALE: 1" = 50'

SYMBOL	HYDRIC	HYDROLOGIC GROUP	SOILS CHART	NAME
GgB		B	GLENELG LOAM, 3 TO 8 PERCENT SLOPES	
GmC		C	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES	
GnB*	YES	C	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	
Mac		B	MANOR LOAM, 8 TO 15 PERCENT SLOPES	

BASED ON USDA NRCS WEB SOIL NATIONAL COOPERATIVE SOIL SURVEY. SEE HOWARD COUNTY SOIL SURVEY MAP NO. 22

SEPTIC DATA

INV. AT HOUSE	500.09
BASEMENT ELEVATION	493.50
GRD. AT INV. AT HOUSE	503.0
• PUMP IN BASEMENT	
INV. IN 2,000 GAL. SEPTIC TANK	499.39
INV. OUT 2,000 GAL. SEPTIC TANK	499.09
TOP OF 2,000 GAL. SEPTIC TANK	500.2
GROUND OVER 2,000 GAL. SEPTIC TANK	502.6
INV. IN PUMP TANK	499.03
INV. OUT PUMP TANK	498.78
TOP OF PUMP TANK	499.8
GROUND OVER PUMP TANK	504.0
INV. IN DIST. BOX	484.3
INV. OUT DIST. BOX	484.0
GROUND AT BOX	487.8

INITIAL SYSTEM

Number of Bedrooms	5
Application Rate	0.8 gpd/sf
Effective Area Beginning Depth	3.5 ft
Bottom Max Depth	7.5 ft
Design Flow	750 gpd
Drainage Field square footage	937.5 sf
Sidewall reduction credit	0.42
Trench width	3
Effective Depth	4
Linear Length of trench Required	131 lf

1st REPAIR SYSTEM

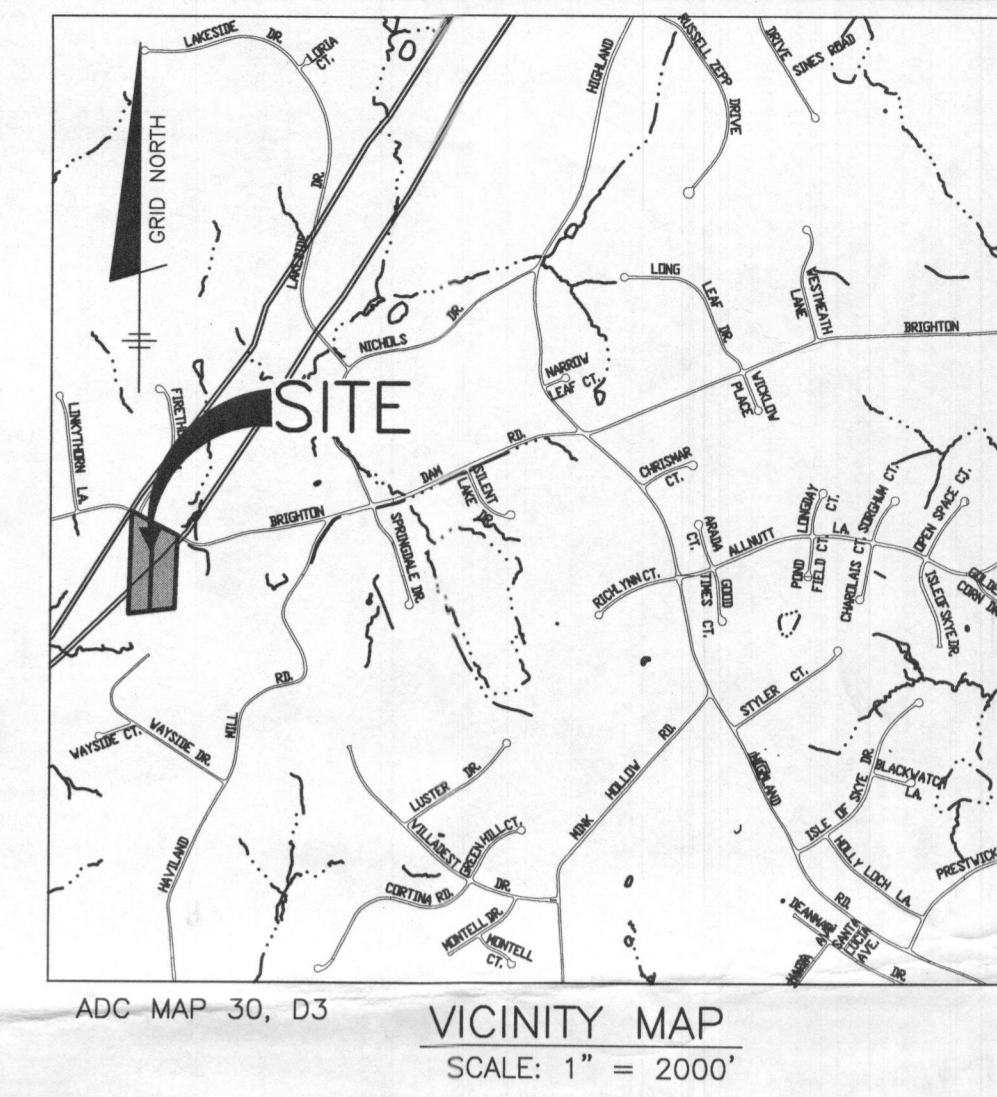
Number of Bedrooms	5
Application Rate	0.8 gpd/sf
Effective Area Beginning Depth	3 ft
Bottom Max Depth	7 ft
Design Flow	750 gpd
Drainage Field square footage	937.5 sf
Sidewall reduction credit	0.42
Trench width	3
Effective Depth	4
Linear Length of trench Required	131 lf

2nd REPLACEMENT SYSTEM

Number of Bedrooms	5
Application Rate	1.2 gpd/sf
Effective Area Beginning Depth	3 ft
Bottom Max Depth	7 ft
Design Flow	750 gpd
Drainage Field square footage	625 sf
Sidewall reduction credit	0.42
Trench width	3
Effective Depth	4
Linear Length of trench Required	88 lf

INITIAL SYSTEM TRENCH DATA

UPPER TRENCH (66LF)	
GROUND	487.8
INVERT IN	484.3
MAX. BOTTOM	480.3
LOWER TRENCH (66LF)	
GROUND	485.0
INVERT IN	481.5
MAX. BOTTOM	477.5



GENERAL NOTES

- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF A MINIMUM OF 10,000 SQUARE FEET AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
- THE EXISTING WELL SHOWN ON PARCEL 1 PLAN HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC. AND IS ACCURATELY SHOWN. TAG NUMBER HO-14-0197.
- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- ANY CHANGES 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 PLAN MAY BE REQUIRED.
- THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THE PROPERTY'S BOUNDARIES EXCEPT THAT WHICH IS SHOWN.
- TOPOGRAPHY SHOWN IN THE AREA OF THE PROPOSED HOUSE AND SEPTIC EASEMENT IS PER FIELD RUN TOPOGRAPHY BY BENCHMARK ENGINEERING, INC., IN OCTOBER, 2014. ALL OTHER TOPOGRAPHY IS PROVIDED BY HOWARD COUNTY GIS.
- PRIOR TO HEALTH DEPARTMENT APPROVAL OF BUILDING PERMIT FOR PARCEL 2, PERCOLATION TESTS MUST BE CONDUCTED AND A PERCOLATION CERTIFICATION PLAN MUST BE SIGNED BY THE APPROVING AUTHORITY, THEREBY CERTIFYING AN FOR AN SDA ON PARCEL 2.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- ELECTRIC WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

13891 Brighton Dam Road
Approved Septic System Plan
Howard County Health Department
1500-gal Septic Tank
w/ 1500-gal Pump Chamber
& Zoeller BNS3 Pump or equiv.
Bucks
Signature 2/27/2017 Date

LEGEND

SOILS CLASSIFICATION	CHB2	EXISTING STRUCTURE	[Symbol]
SOILS DELINEATION	502	PROPOSED STRUCTURE	[Symbol]
EXISTING CONTOURS (HOWARD COUNTY DIGITAL)	500	EXISTING WELL	[Symbol]
EXISTING WOODS LINE	[Symbol]	EXISTING SEPTIC FIELD	[Symbol]
		PROPOSED SEPTIC FIELD	[Symbol]
		PASSED PERCOLATION TEST	[Symbol]
		FAILED PERCOLATION TEST	[Symbol]
		1500 S.F. WELL ZONE	[Symbol]

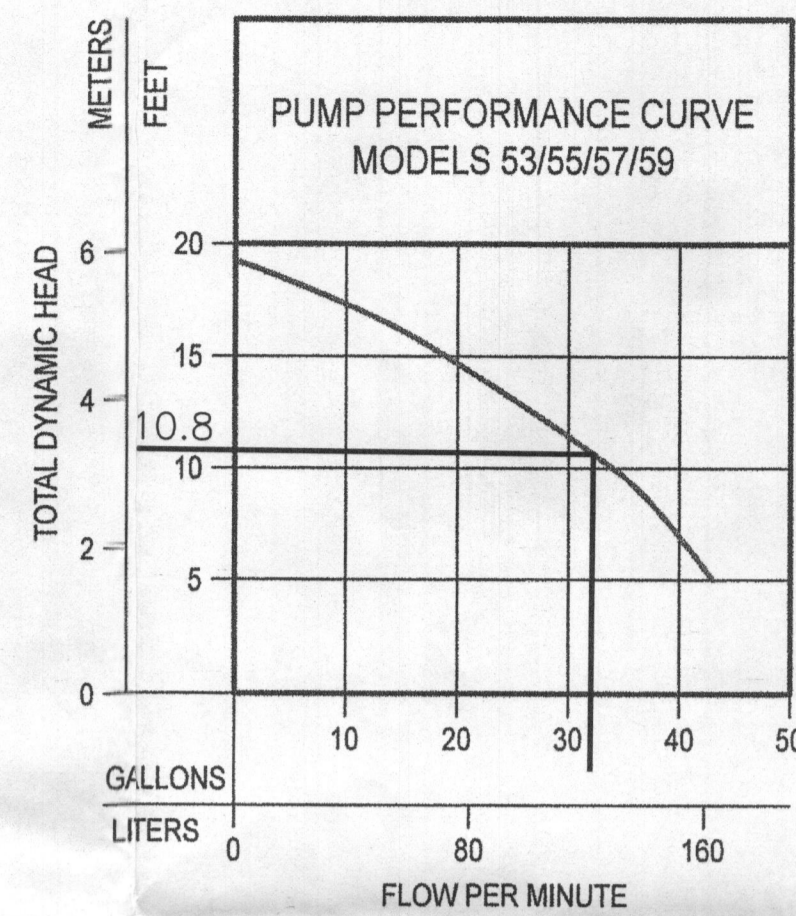
THE PURPOSE OF THIS PLAN IS TO REPLACE THE APPROVED BAT TANK DATED MAY 4, 2016 WITH A 2,000 GALLON TWO COMPARTMENT SEPTIC TANK.

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

APPROVED FOR PRIVATE WATER AND SEWERAGE SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT
HOWARD COUNTY HEALTH OFFICER DATE

I CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON FIELD WORK PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.
J. CHRIS OGLE

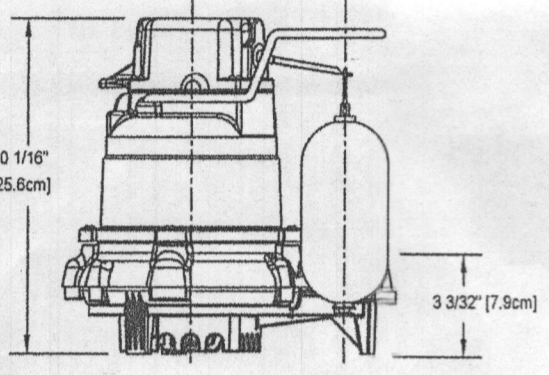
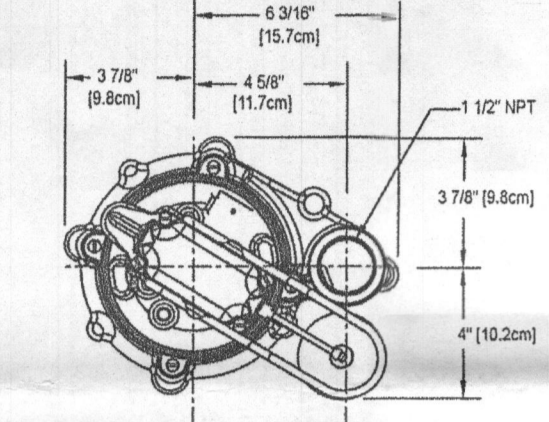
OWNER/DEVELOPER:	PROJECT:	BRIGHTON DAM ROAD PARCEL 1	
MR. F. DERIC TOMENKO 800 MAPLEWOOD AVE. #1 TAKOMA PARK, MD 20912 240-339-3399	LOCATION:	TAX MAP: 34 GRID: 13 - PARCEL: 445	5TH ELECTION DISTRICT HOWARD COUNTY, CLARKSVILLE, MARYLAND 21029
	TITLE:	ONSITE SEWERAGE DISPOSAL SYSTEM DESIGN PLAN	
DRAFT: JCO	DESIGN: JCO	DATE: NOVEMBER 2016	PROJECT NO. 2560
CHECK:		SCALE: 1" = 50'	SHEET 1 OF 2



TOTAL DYNAMIC HEADFLOW PER MINUTE EFFLUENT AND DEWATERING

MODEL	53/55/57/59		
Feet	Meters	Gal.	Liters
5	1.5	43	163
10	3.0	34	129
15	4.6	19	72
Shut-off Head:		19.25 ft. (5.9m)	

USE PUMP MODEL 53 WITH FLOAT TREE



- CONSULT FACTORY FOR SPECIAL APPLICATIONS
- Variable level float switches available
 - Variable level long cycle systems available
 - Available with special cord lengths of 15', 25', 35', (50' 230V only)
 - Alarm systems available
 - Duplex systems available

- SELECTION GUIDE
1. Integral float operated mechanical switch, no external control required.
 2. Single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
 3. Mechanical alternator "M-Pak" 10-0072 or 10-0075.
 4. See FMI/12 for correct model of Electrical Alternator.
 5. Variable level control switch 10-0743 used as a control activator, with Electrical Alternator (3) or (4) float system.

Single float	Control Selection				Listings			
Model	Volts	Phase	Mode	Amps	Simplex	Duplex	CSA	UL
MS355 & MS759	115	1	Auto	9.7	1	---	Y	Y
NS355 & NS759	115	1	Non	9.7	2	3 or 4 & 5	Y	Y
BNS3	115	1	Auto	9.7	*	---	Y	Y
BNS7	115	1	Auto	9.7	*	---	Y	Y
BES357	230	1	Auto	4.8	*	---	Y	Y
DES355 & DS759	230	1	Auto	4.8	1	---	Y	Y
ES355 & ES759	230	1	Non	4.8	2	3 or 4 & 5	Y	Y

CAUTION
All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

"Easy assembly" (pump & discharge pipe not included)

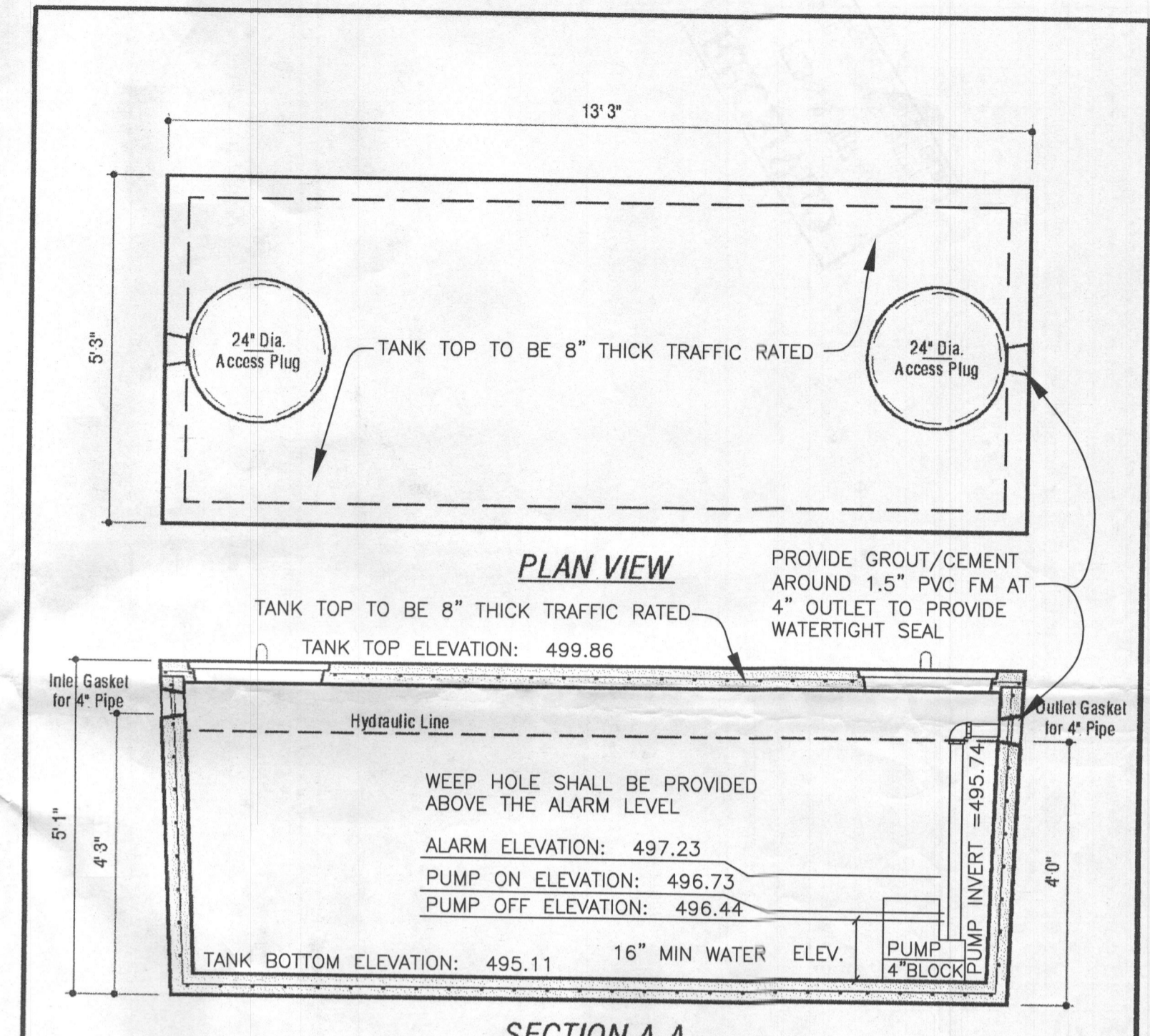
OPTIONAL PUMP STAND P/N 10-2421

- Reduces potential clogging by debris
- Replaces rocks or bricks under the pump
- Made of durable, noncorrosive ABS
- Raises pump 2" off bottom of basin
- Provides the ability to raise intake by adding sections of 1/2" or 2" PVC piping
- Attaches securely to pump
- Accommodates pump, dewatering and effluent applications

NOTE: Make sure float is free from obstruction.

RESERVE POWERED DESIGN

For unusual conditions a reserve safety factor is engineered into the design of every Zoeller pump.
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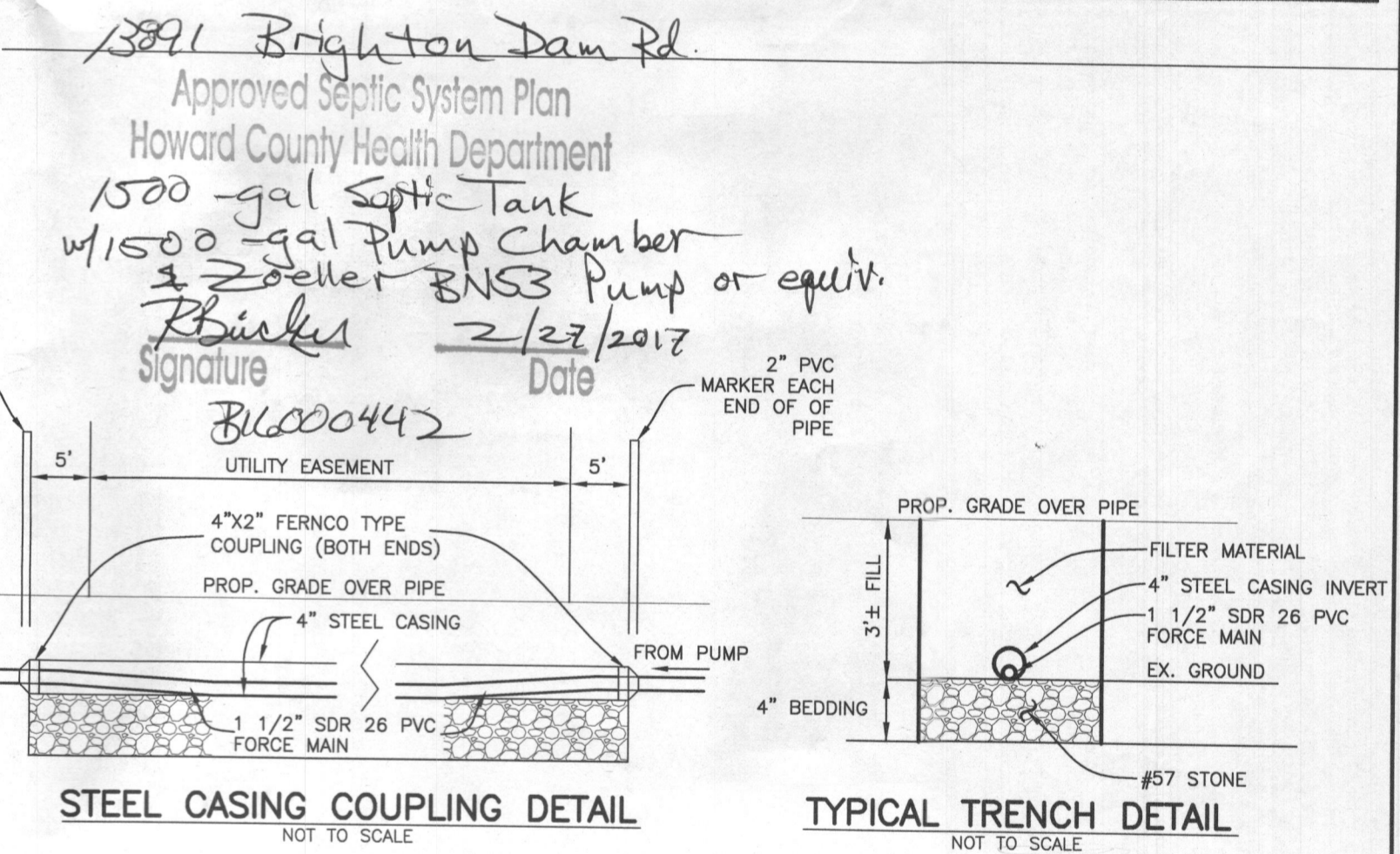
DESIGN DATA & GENERAL NOTES

- [1] Concrete strength $f_c = 4,000$ p.s.i. @ 28 days. Density = 150 pcf.
- [2] Cement - Portland Type I/II per ASTM C 150-92.
- [3] Admixtures & plasticizers per ASTM C 260-86 & C 494-92.
- [4] Reinforcing per ASTM A185. Min. 1-1/2" cover.
- [5] Top slab sealed with butyl rope mastic.
- [6] 4" wall, base, TOP TO BE TRAFFIC RATED 8" THICK

MBI Mayer Bros., Inc. 6264 Race Road Elkridge, Maryland 21075 Tel. 410.796.1434 Fax. 410.796.1438 www.mayerbrospnecast.com

1,500 GALLON SEPTIC/PUMP TANK
1-Compartment
HEAVY TRAFFIC RATED 8" THICK

Dwg. No. 1500-1C No Scale Jan 1, 2000



THE PURPOSE OF THIS PLAN IS TO REPLACE THE APPROVED BAT TANK DATED MAY 4, 2016 WITH A 2,000 GALLON TWO COMPARTMENT SEPTIC TANK.

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE • SUITE 315
ELLCOTT CITY, MARYLAND 21043
phone: 410-465-6105 • fax: 410-465-6644
WWW.BEI-CVLENGINEERING.COM

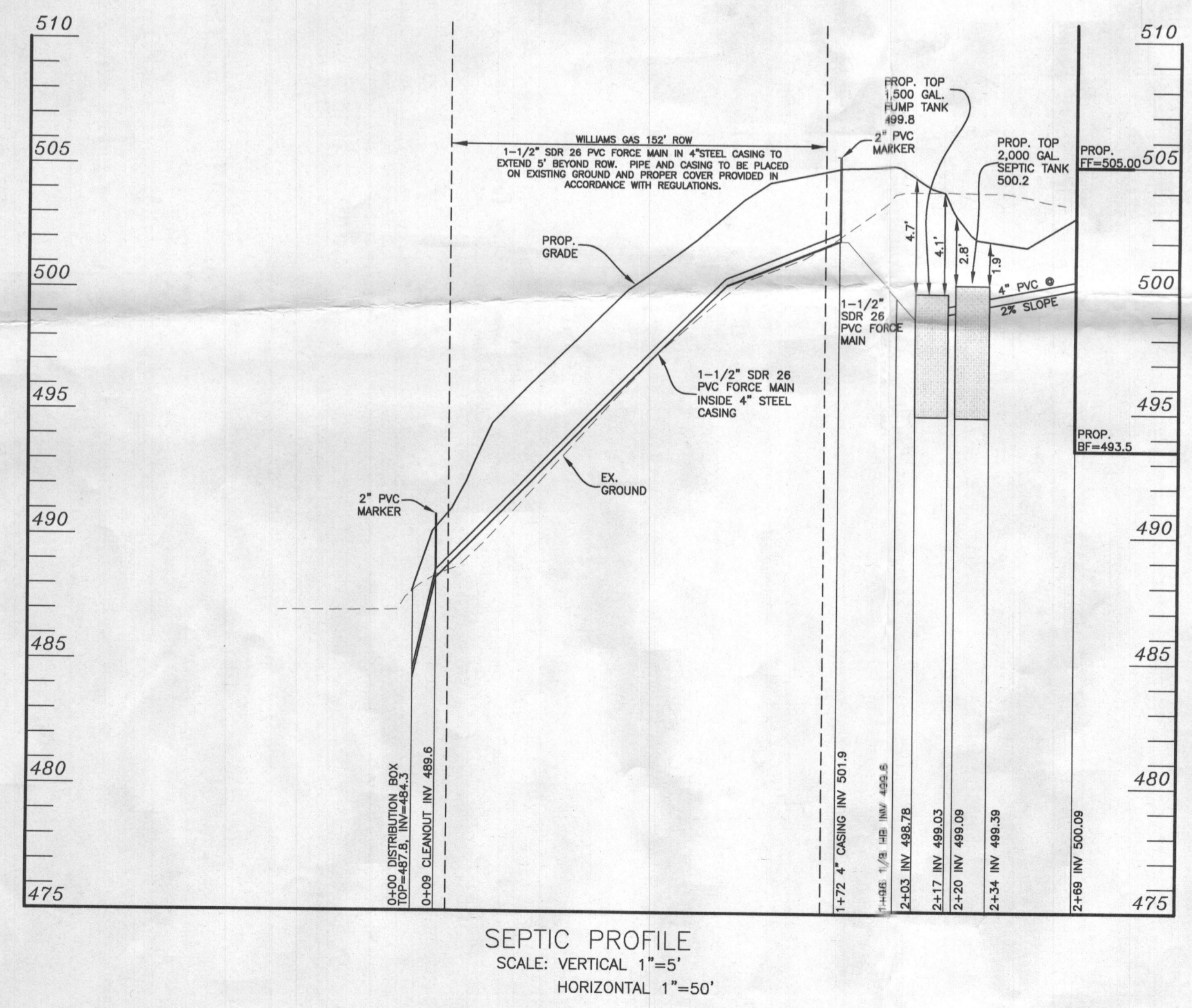
OWNER/DEVELOPER: MR. F. DERIC TOMENKO
800 MAPLEWOOD AVE. #1
TAKOMA PARK, MD 20912
(240)339-3399

PROJECT: BRIGHTON DAM ROAD PARCEL 1

LOCATION: TAX MAP: 34 GRID: 13 PARCEL: 445
5TH ELECTION DISTRICT
HOWARD COUNTY, CLARKSVILLE, MARYLAND 21029

TITLE: ONSITE SEWERAGE DISPOSAL SYSTEM DESIGN PLAN

DATE: NOVEMBER 2016 PROJECT NO. 2560
SCALE: AS SHOWN SHEET 2 OF 2



SEPTIC PROFILE
SCALE: VERTICAL 1"=5'
HORIZONTAL 1"=50'

Project: 13891 BRIGHTON DAM RD BE# 2560 Date: 2/3/2017

Waste Water Flows
dwellings = 1
bedrooms = 5 gal/day/bedroom = 150
Total flow = 750 GPD Dose = 1/25 design flow
Dose = 187.5 gallons

Tank Sizing
COMAR septic tank sizing = 1,500 gallons
BAT-Tank Size = 1,300 gallons
Pump Tank = 1,500 gallons

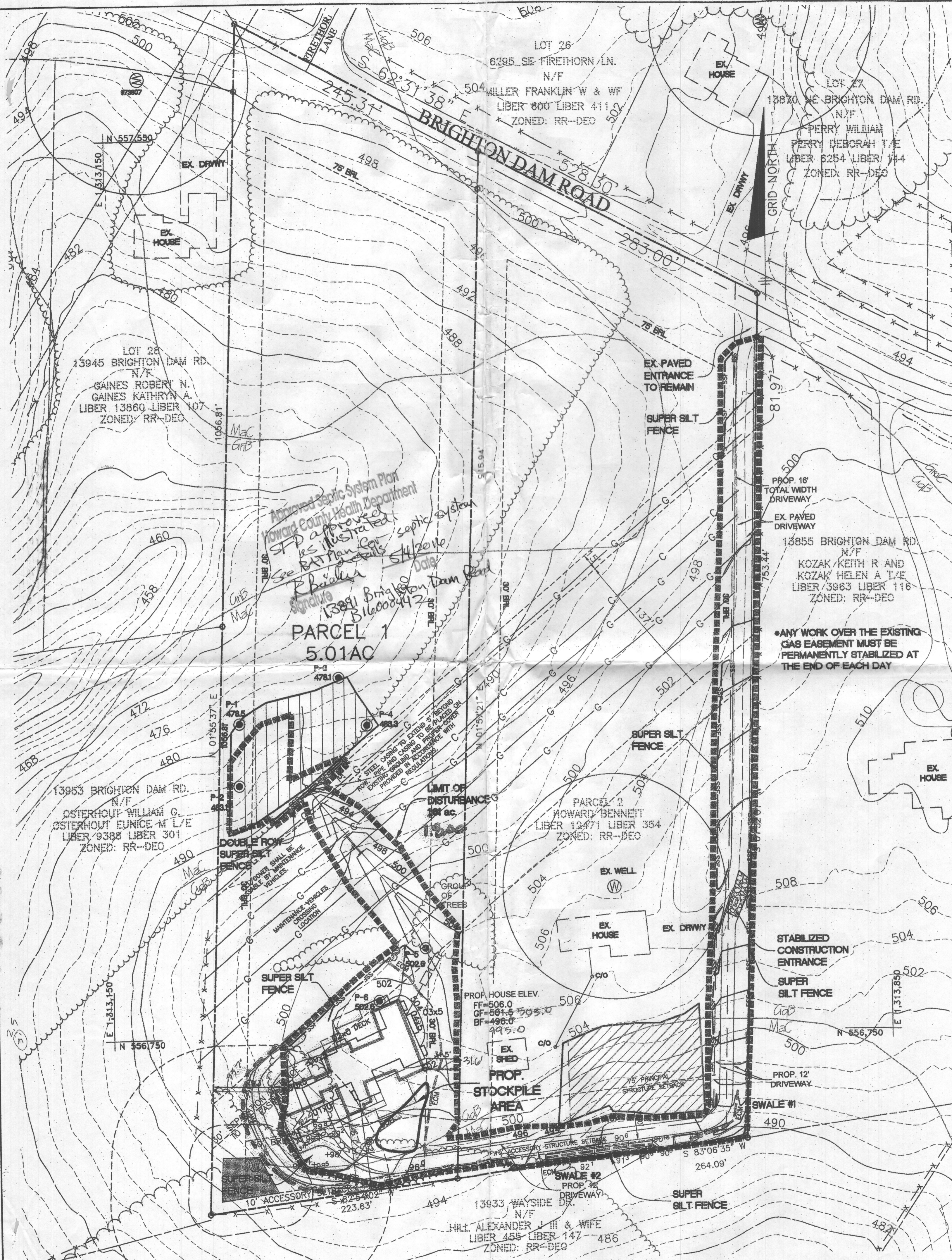
Tank Design and Flow Rates
Tank Size Pump Model = 53
x = 12.58 ft H(wet) = 16 inches
y = 4.59 ft
z = 3.87 ft (to inlet elevation)
Width (bottom) = 0.33 ft
Width (top) = 0.42 ft

Controls
Bottom Elevation = 495.11 Storage above alarm = 756 Gallons
Off Elevation = 496.44 Required depth = 1.75 ft
On Elevation = 496.73 Desired runtime = 7 minutes
Alarm Elevation = 497.23 Pump design volume = 13.03 cf
Flow rate = 32.5 GPM

Does storage above alarm sufficient YES

Friction Head
Force Main Size = 1.5 inches
Invert @ pump = 495.74 Force Main Length = 66 ft
Invert @ high pt. = 502.00
Static Head = 6.26 ft

Quantity
45° Bend Loss = 3 ft/fitting - Table 4.3 7 21 ft
90° Bend Loss = 7 ft/fitting - Table 4.3 0 0 ft
Gate Valve = 1.3 ft/fitting - Table 4.3 0 0 ft
Total Horizontal Equivalent = 87 ft
Pipe Loss = 5.22 ft/100ft - Table 4-4 Friction Head = 4.54 ft
Total Dynamic Head = 10.80 For pump design



PLAN
 SCALE: 1" = 50'