EXHIBIT B

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LAND USE DEPARTMENT

LBM Engineering, LLC
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CIVIL ENGINEERING - LAND DEVELOPMENT - SITE PLANS - STORMWATER MANAGEMENT

Stormwater Management Report
For Land Use Commissions Submittals
Avery Brook Homes Subdivision,
Stoddards Warf Road, Ledyard, Connecticut

April 6, 2024

EXISTING CONDITIONS: Reference is made to the following Plan Set: "Plan Showing Resubdivision Property of Avery Brook Homes LLC 96, 98 and 100 Stoddards Wharf Road, A.K.A. Connecticut Route 214 Ledyard, Connecticut" Scales as Shown , March 2024, By Dieter & Gardner, Gales Ferry, CT. The property is located on the north side of Stoddards Wharf Road approximately one quarter mile east of the intersection of Whalehead Road and Stoddards Wharf Road. The property is wooded. The property drains primarily to the east and north.

STORMWATER MANAGEMENT: Detention of peak flow rates is not proposed for this development. The Town of Ledyard's Ordinance Regulating the Management of Stormwater Runoff, Part I. Section 3. Paragraph C. states: "A zero percent increase in discharge characteristics is specifically not applicable in cases where the applicant can demonstrate that the runoff will discharge to the Thames River or Groton Reservoir system without increasing the potential of downstream flooding."

This proposal will not increase the potential for downstream flooding. The subdivision is located at the bottom of the Billings Avery Brook, 770-acre watershed. Runoff from the development will precede the peak flow in Billings Avery Brook, thereby having no effect on downstream flooding.

WATER QUALITY: The Connecticut D.E.E.P. 2004 Stormwater Quality Manual (SWQM) defines the Water Quality Volume (WQV) as the volume of runoff from a one-inch rainfall event. SWQM Paragraph 7.4.1 states: "In the northeastern U.S., the 90 percent rainfall event is equal to approximately one inch, which is consistent with the recommended WQV sizing criteria for Connecticut." Therefore, by treating the WQV, the proposal effectively meets the requirements of the SWQM.

The subsoil throughout the property consists of sand and gravel with no evidence of seasonally high ground water. The soil conditions are excellent for infiltrating storm water. Therefore, roof runoff from each of the proposed homes will have an infiltration area, sized to hold and infiltrate the WQV thereby providing groundwater recharge per the SWQM guidelines. Surface water runoff is measurably reduced by infiltrating clean roof runoff back into the groundwater.

Runoff from roadway pavement drains to low-point catch basins and then piped to underground retention/infiltration areas where it is held and infiltrated into the subsoil. Proposed driveways will be gravel and stone to provide additional infiltration. Stormwater runoff leave the property as sheet flow over wide areas. There are no point-discharges or channelized flows to cause erosion. The Rational Method was used to compute peak rates of runoff.

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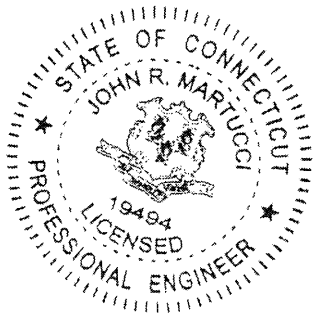
CONCLUSION: The proposed development meets the requirements of the Connecticut D.E.E.P. 2004 Stormwater Quality Manual and will not have adverse effects on down-gradient properties, nor will it increase the potential for downstream flooding and is in keeping with the policies and goals of the Ledyard Planning and Zoning Commission.

Submitted by:
LBM Engineering, LLC
John R Martucci
John R. Martucci, P.E.



PREPARED BY	DATE PREPARED	LBM Engineering, LLC	JOB NUMBER	PAGE NUMBER
JRM	3/2024	11 HALLY LANE COLCHESTER, CONNECTICUT 06415 TEL: (860)-416-9809 EMAIL: JOHN@LBMENGINEERING.COM		1
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AVERY BROOK · DRAINAGE

AREA A — SEE RATIONAL METHOD NOTE ON PAGE 3

I = 5.5"/HR

PAVEMENT

16,395 SF — 290' x 11' = 3190 SF — 0.07 AC — TO CB2

0.38 AC.

0.38 AC − 0.07 = 0.31 AC. OVERLAND

Q_{25} = 0.31 x 0.21 x 5.5 = 0.4 CFS

POST DEVELOPMENT: PAVEMENT WILL GO TO CB1 AND THEN TO RETENTION AREA 1. REMAINDER WILL SHEET FLOW OFF

AREA B

30,900 SF = 0.71 AC

PAVEMENT

290' x 11 = 3190 SF = 0.07 AC

TO RETENTION AREA 1

0.71 AC − 0.07 AC = 0.64 AC OVERLAND

2 HOUSES − 0.04 AC — 0.60 AC O'LAND

PAVT	0.07 x 0.95	= 0.067	
O'LAND	0.60 x 0.21	= 0.126	
		0.193	0.193/0.67 = 0.29

WEIGHTED C

AREA C

Q_{25} = 0.67 x 0.29 x 5.5 = 1.1 CFS

83,740 SF = 1.92 AC − (6 HOUSES) 0.12 AC

1.8 ACRES O'LAND

Q_{25} = 1.8 x 0.21 x 5.5 = 2.1 CFS

ROOF RUNOFF

ROOF RUNOFF FROM EACH LOT WILL BE INFILTRATED

36' x 24' = 864 FT² — 864/12 = 72 FT³/INCH

(0.02 AC.)

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AREA D

49,342 SF = 1.13 AC 10,600 SF PAVEMENT = 0.24 AC

1.13 AC - (0.24 + (4 HOUSES) + 0.08 AC) = 0.81 AC O'LAND

0.24 x 0.95 = 0.228

0.81 x 0.21 = 0.170

0.398 WEIGHTED "C"

0.398/1.05 = 0.38

0.38 x 1.05 x 5.5 = 2.2 CFS

AREA E

17,680 SF = 0.41 AC - (1 HOUSE) 0.02 AC = 0.39 AC O'LAND

0.39 x 0.21 x 5.5 = 0.5 CFS

AREA F

21,620 SF = 0.50 AC - (1 HOUSE) 0.02 AC = 0.48 AC O'LAND

0.48 x 0.21 x 5.5 = 0.6 CFS

AREA G

54,165 SF = 1.24 AC - (4 HOUSES) 0.08 AC = 1.16 AC O'LAND

Q_{25} 1.16 x 0.21 x 5.5 = 1.3 CFS

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TO CB1

10 MIN T_c 25 YR INTENSITY = 5.5 I "/HR

O'LAND RUNOFF C FOR TYPE A SOIL 0.21 (CONSERVATIVE)
FOR PAVEMENT 0.95

	AREA B		A x C
PAVT	0.07 x 0.95	=	0.067
O'LAND	0.60 x 0.21	=	0.126

(0.067 + 0.126) / 0.67 AC
WEIGHTED C = 0.288

Q TO CB1 = 0.67 x 0.288 x 5.5 = 1.06 CFS

TO CB2

10 MIN T_c 25 YR I = 5.5"/HR

A = 290' x 11' = 3190 SF = 0.07 AC

Q = C x I x A C = 0.95 A = 0.07 AC A x C = 0.07 x 0.95
= 0.066

Q = 0.066 x 5.5 "/HR = 0.4 CFS

RATIONAL METHOD NOTE: RATIONAL METHOD WAS USED TO COMPUTE PEAK RATES OF RUNOFF. DRAINAGE AREAS ARE SMALL (< 2 ACRES)
Q_{25} = C I A C PAVEMENT = 0.95 C OVERLAND = 0.21
T_c = 10 MIN. I = 5.5 "/HR

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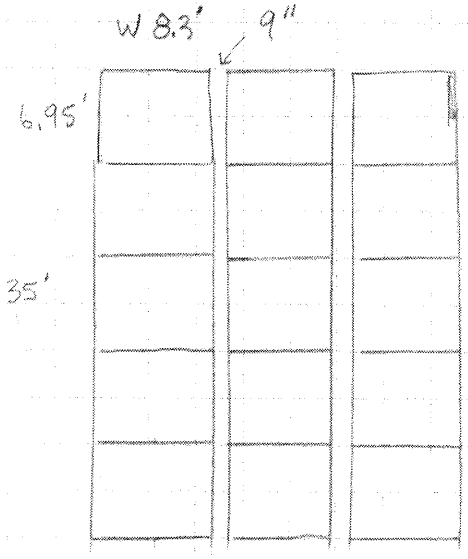
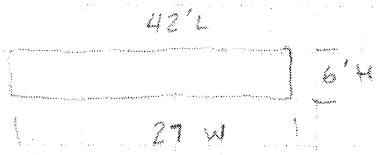
STORMTECH UNDERGROUND RETENTION AREAS



15 STORMTECH MC 7200

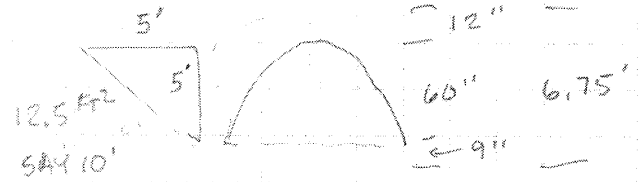
INSTALLED STORAGE
267 FT³/CHAMBER
267 x 15 = 4005

TOTAL STORAGE 4005 + 245 = 4250 FT³



TOTAL VOL. 35 x 27 x 6 = 5670

4250/5670 = 75% VOIDS

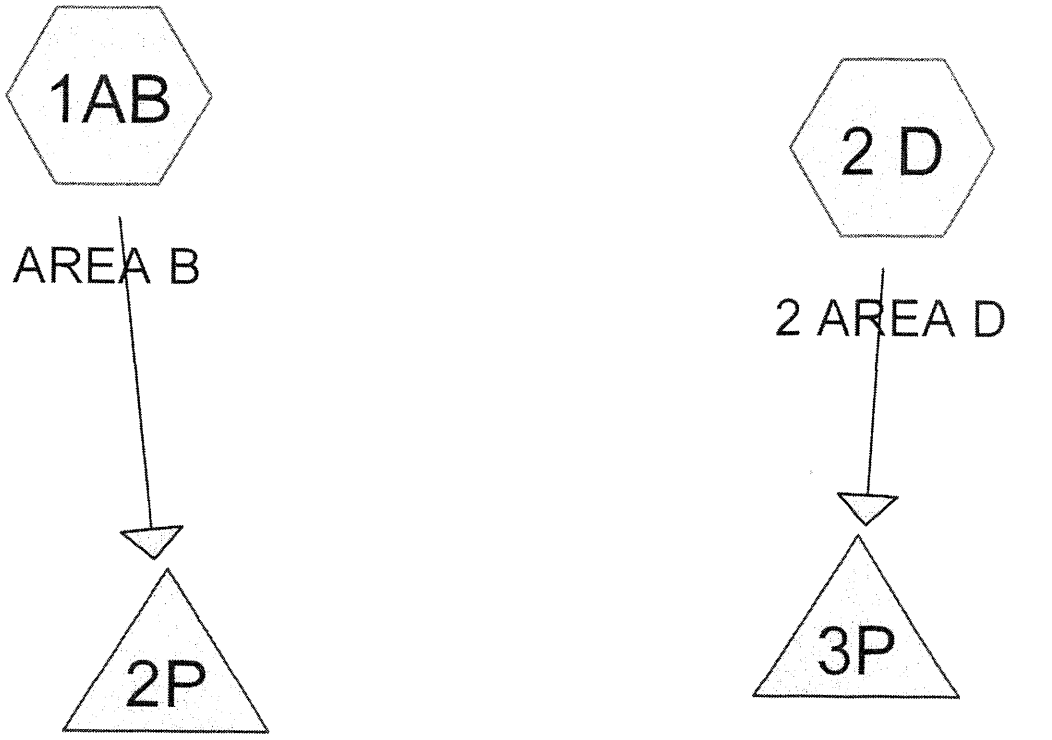


267 FT³ EACH INSTALLED CHAMBER

10' x 35' EACH SIDE

10' x 35' x 2 = 700 FT³ x 35% VOIDS 245 FT³

4250 / 6 = 708.3' PER FT OF DEPTH



INFILTRATION 1

INFILTRATION 2

Subcat Reach Pond Link

Routing Diagram for BASIN 1 WORKING
Prepared by LBM Engineering LLC, Printed 4/7/2024
HydroCAD® 10.20-4a s/n 09192 © 2023 HydroCAD Software Solutions LLC

Summary for Subcatchment 1AB: AREA B

Runoff = 2.03 cfs @ 0.17 hrs, Volume= 2,737 cf, Depth= 0.71"
Routed to Pond 2P : INFILTRATION 1

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
CT-Ledyard 100-yr Duration=15 min, Inten=6.12 in/hr

Area (ac)	C	Description	Land Use
0.310	0.21	overland Area A	
0.600	0.21	overland Area B	
0.150	0.95	Pavement	
1.060	0.31	Weighted Average	
0.910		85.85% Pervious Area	
0.150		14.15% Impervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, TO BASIN**

Summary for Subcatchment 2 D: 2 AREA D

Runoff = 2.46 cfs @ 0.17 hrs, Volume= 3,324 cf, Depth= 0.87"
Routed to Pond 3P : INFILTRATION 2

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
CT-Ledyard 100-yr Duration=15 min, Inten=6.12 in/hr

Area (ac)	C	Description	Land Use
0.810	0.21	Overland Area D	
0.240	0.95	Pavement Area E	
1.050	0.38	Weighted Average	
0.810		77.14% Pervious Area	
0.240		22.86% Impervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, Direct Input - Small Areas**

Summary for Pond 2P: INFILTRATION 1

Inflow Area = 46,174 sf, 14.15% Impervious, Inflow Depth = 0.71" for 100-yr event
Inflow = 2.03 cfs @ 0.17 hrs, Volume= 2,737 cf
Outflow = 0.25 cfs @ 0.62 hrs, Volume= 81 cf, Atten= 88%, Lag= 26.8 min
Primary = 0.25 cfs @ 0.62 hrs, Volume= 81 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 143.06' @ 0.62 hrs Storage= 2,689 cf

Plug-Flow detention time= 36.6 min calculated for 80 cf (3% of inflow)

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Center-of-Mass det. time= 22.1 min (39.3 - 17.2)

Volume	Invert	Avail.Storage	Storage Description
#1	138.00'	3,188 cf	**Custom Stage Data** Listed below 4,250 cf Overall x 75.0% Voids

Elevation (feet)	Cum.Store (cubic-feet)
138.00	0
139.00	708
140.00	1,417
141.00	2,125
142.00	2,833
143.00	3,542
144.00	4,250

Device	Routing	Invert	Outlet Devices
#1	Primary	143.00'	**6.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.24 cfs @ 0.62 hrs HW=143.06' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.24 cfs @ 0.67 fps)

Summary for Pond 3P: INFILTRATION 2

Inflow Area = 45,738 sf, 22.86% Impervious, Inflow Depth = 0.87" for 100-yr event
Inflow = 2.46 cfs @ 0.17 hrs, Volume= 3,324 cf
Outflow = 1.19 cfs @ 0.47 hrs, Volume= 667 cf, Atten= 52%, Lag= 17.8 min
Primary = 1.19 cfs @ 0.47 hrs, Volume= 667 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 143.18' @ 0.47 hrs Storage= 2,750 cf

Plug-Flow detention time= 25.1 min calculated for 665 cf (20% of inflow)
Center-of-Mass det. time= 14.4 min (31.6 - 17.2)

Volume	Invert	Avail.Storage	Storage Description
#1	138.00'	3,188 cf	**Custom Stage Data** Listed below 4,250 cf Overall x 75.0% Voids

Elevation (feet)	Cum.Store (cubic-feet)
138.00	0
139.00	708
140.00	1,417
141.00	2,125
142.00	2,833
143.00	3,542
144.00	4,250

Device	Routing	Invert	Outlet Devices
#1	Primary	143.00'	**6.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=1.19 cfs @ 0.47 hrs HW=143.18' (Free Discharge)
↑—1=**Broad-Crested Rectangular Weir** (Weir Controls 1.19 cfs @ 1.13 fps)

The final element to be factored into the determination of runoff coefficients is the land slope. As the slope of the drainage basin increases, the selected C value should also increase. This is caused by the fact that as the slope of the drainage area increases, the velocity of overland and channel flow will increase allowing less opportunity for water to infiltrate the ground surface. Thus, more of the rainfall will become runoff from the drainage area.

In summary, it should be reiterated that in assigning a value to the runoff coefficient for use in the rational method, the engineer must rely heavily on experience and judgement.

Table 6-3 Recommended Coefficient Of Runoff For Pervious Surfaces By Selected Hydrologic Soil Groupings And Slope Ranges

Slope	A	B	C	D
Flat (0 - 1%)	0.04-0.09	0.07-0.12	0.11-0.16	0.15-0.20
Average (2 - 6%)	0.09-0.14 USE 0.21	0.12-0.17	0.16-0.21	0.20-0.25
Steep (Over 6%)	0.13-0.18	0.18-0.24	0.23-0.31	0.28-0.38

TYPE A SOIL AVERAGE SLOPE USED 0.21 TO BE CONSERVATIVE

Source: Storm Drainage Design Manual, Erie and Niagara Counties Regional Planning Board.

Table 6-4 Recommended Coefficient Of Runoff Values For Various Selected Land Uses

Description of Area		Runoff Coefficients
Business: Downtown areas		0.70-0.95
Neighborhood areas		0.50-0.70
Residential:	Single-family areas	0.30-0.50
	Multi units, detached	0.40-0.60
	Multi units, attached	0.60-0.75
	Suburban	0.25-0.40
Residential (0.5 ha (1.2 ac) lots or more)		0.30-0.45
Apartment dwelling areas		0.50-0.70
Industrial:	Light areas	0.50-0.80
	Heavy areas	0.60-0.90
Parks, cemeteries		0.10-0.25
Playgrounds		0.20-0.40
Railroad yard areas		0.20-0.40
Unimproved areas		0.10-0.30

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Appendix B - Rainfall

RAINFALL – DURATION – FREQUENCY RELATIONSHIPS FOR CONNECTICUT

DURATION	RETURN FREQUENCY (Years)					
	2	5	10	25	50	100
Min	RAINFALL IN MM (INCHES)					
5	9.1(0.36)	11.4(0.45)	13.0(0.51)	15.2(0.60)	17.2(0.67)	18.5(0.73)
15	18.3(0.72)	22.6(0.89)	25.9(1.02)	30.5(1.20)	34.0(1.34)	37.6(1.48)
60	33.0(1.3)	43.2(1.7)	50.8(2.00)	58.4(2.30)	65.3(2.57)	71.1(2.80)
Hrs						
2	40.6(1.60)	54.6(2.15)	63.5(2.50)	72.4(2.85)	82.6(3.25)	91.4(3.60)
3	44.5(1.75)	61.0(2.40)	69.9(2.75)	82.6(3.25)	90.2(3.55)	101.6(4.00)
6	59.7(2.35)	74.9(2.95)	87.6(3.45)	101.6(4.00)	115.6(4.55)	127.0(5.00)
12	69.9(2.75)	90.2(3.55)	101.6(4.00)	123.2(4.85)	135.9(5.35)	152.4(6.00)
24	82.6(3.25)	106.7(4.20)	125.7(4.95)	146.1(5.75)	161.3(6.35)	177.8(7.00)
	24 HOUR RAINFALL BY COUNTY					
Fairfield	83.8(3.3)	109.2(4.3)	127.0(5.0)	144.8(5.7)	162.6(6.4)	182.9(7.2)
Hartford	81.3(3.2)	104.1(4.1)	119.4(4.7)	139.7(5.5)	157.5(6.2)	175.3(6.9)
Litchfield	81.3(3.2)	104.1(4.1)	119.4(4.7)	139.7(5.5)	157.5(6.2)	177.8(7.0)
Middlesex	83.8(3.3)	106.7(4.2)	127.0(5.0)	142.2(5.6)	160.0(6.3)	180.3(7.1)
New Haven	83.8(3.3)	106.7(4.2)	127.0(5.0)	142.2(5.6)	160.0(6.3)	180.3(7.1)
New London	86.4(3.4)	109.2(4.3)	127.0(5.0)	144.8(5.7)	160.0(6.3)	180.3(7.1)
Tolland	81.3(3.2)	104.1(4.1)	121.9(4.8)	139.7(5.5)	157.5(6.2)	175.3(6.9)
Windham	81.3(3.2)	106.7(4.2)	121.9(4.8)	139.7(5.5)	157.5(6.2)	175.3(6.9)

Sources:

1. "Rainfall Frequency Atlas of the United States". Technical Paper No. 40, U.S. Department of Commerce, Weather Bureau.
2. NOAA Technical Memorandum "NWS Hydro-35", June 1977, U.S. Department of Commerce, National Weather Service.

Table B-1

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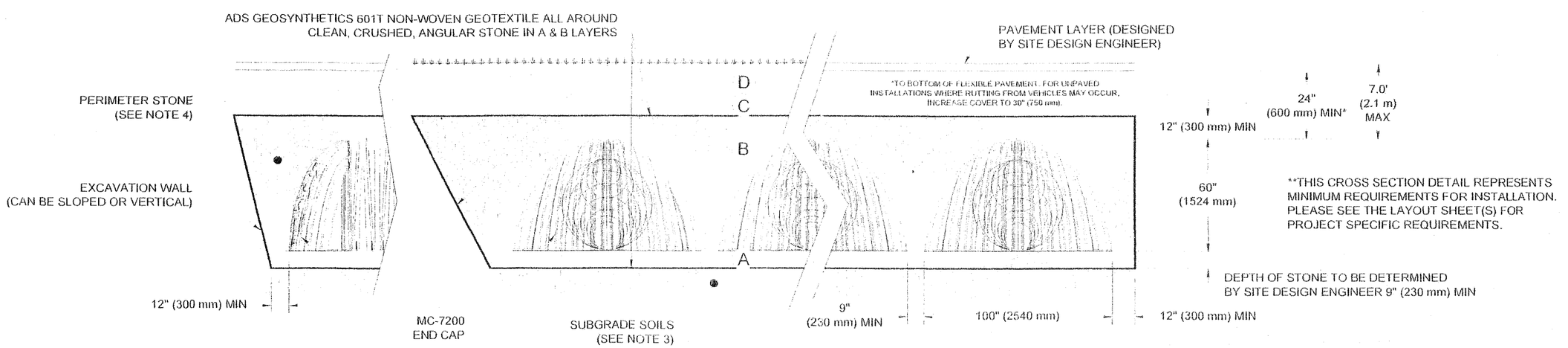
		RAINFALL INTENSITY (in/hr)					
DURATION (min)	DURATION (hr)	2 Yr	5 Yr	10 Yr	25 Yr	50 Yr	100 Yr
5	0.08	4.6	5.5	6.0	6.7	7.3	7.8
6	0.10	4.4	5.2	5.8	6.5	7.0	7.5
7	0.12	4.2	5.0	5.5	6.2	6.8	7.2
8	0.13	4.0	4.8	5.3	6.0	6.5	7.0
9	0.15	3.8	4.6	5.1	5.7	6.2	6.7
10	0.17	3.6	4.3	4.8	5.5	6.0	6.5
11	0.18	3.4	4.2	4.7	5.3	5.8	6.3
12	0.20	3.3	4.0	4.5	5.1	5.6	6.1
13	0.22	3.1	3.8	4.3	5.0	5.4	5.9
14	0.23	3.0	3.7	4.2	4.8	5.3	5.7
15	0.25	2.8	3.5	4.0	4.6	5.1	5.5
16	0.27	2.8	3.5	3.9	4.5	5.0	5.4
17	0.28	2.7	3.4	3.8	4.4	4.9	5.4
18	0.30	2.7	3.3	3.8	4.4	4.8	5.3
19	0.32	2.6	3.2	3.7	4.3	4.7	5.2
20	0.33	2.5	3.2	3.6	4.2	4.6	5.1
21	0.35	2.5	3.1	3.5	4.1	4.5	5.0
22	0.37	2.4	3.0	3.4	4.0	4.4	4.9
23	0.38	2.3	2.9	3.4	3.9	4.3	4.8
24	0.40	2.3	2.9	3.3	3.8	4.2	4.7
25	0.42	2.2	2.8	3.2	3.7	4.2	4.6
26	0.43	2.2	2.7	3.1	3.7	4.1	4.5
27	0.45	2.1	2.7	3.0	3.6	4.0	4.4
28	0.47	2.0	2.6	3.0	3.5	3.9	4.3
29	0.48	2.0	2.5	2.9	3.4	3.8	4.2
30	0.50	1.9	2.4	2.8	3.3	3.7	4.1

Rainfall Intensity/Duration/Frequency Relationship for Connecticut (English Units)
Table B-2.1

ACCEPTABLE FILL MATERIALS: STORMTECH MC-7200 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[4] A-1, A-2-4, A-3 OR AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
2. MC-7200 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-7200

STANDARD CROSS SECTION

DATE: 12/21/23 DRAWN: SLS

PROJECT # CHECKED: SLS

DATE DRWN CHKD DESCRIPTION

StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026

DRAINAGE AREA MAP

DIETER & GARDNER, INC.
LAND SURVEYING • PLANNING • CIVIL ENGINEERING

5/8/24

LZ

RE: Avery Brook Homes

4 sets Drainage Calcs

4 sets Plans

Pete

860-464-7455 P.O. BOX 335 GALES FERRY, CT. 06335 EMAIL: DIETER.GARDNER@YAHOO.COM