

STORMWATER MANAGEMENT CALCULATIONS FOR:

67 WALNUT STREET, NEWTON, MASSACHUSETTS

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Project:
 67 WALNUT STREET, NEWTON,
 MASSACHUSETTS

Calculations by: HM

STORMWATER MANAGEMENT PROGRAM

Lot Size:	14520	(S.F)	=	0.333	(Acres)
Proposed Roof:	0	(S.F)	=	0.000	(Acres)
Proposed Pavement:	4394.28	(S.F)	=	0.101	(Acres)
Proposed Number of Stormtech Units:	3	(Units)			
Proposed Depth of Crushed Stone:	1	(Feet)			
Design Percolation:	2	(min/in)			

System Dimensions (Feet)		
(Length)	(Width)	(Depth of Stone)
11	21	4

STORMWATER MANAGEMENT REPORT FOR DEVELOPMENT ON
 67 WALNUT STREET, NEWTON, MASSACHUSETTS

<p style="text-align: center;">Q=CIA</p> <p style="text-align: center;">Q=Quantity (C.F.S) C=Runoff Coefficient I=Rainfall Intensity (8.78" per day)= A=Area, Feet</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>100 Year Storm:</td> </tr> <tr> <td>0.732 (FT)</td> </tr> </table>	100 Year Storm:	0.732 (FT)										
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Roof:	0.95												
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TOTAL PROPOSED DESIGN RUNOFF FROM:
 67 WALNUT STREET, NEWTON, MASSACHUSETTS

Roof+Pavement=	2893.63 (CF)
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CAPACITY OF STORMTECH SYSTEM:

Capacity of single Stormtech Unit:	49 (CF)
Number of units considered:	3 (units)
Total Volume of crushed stone: (LengthxWidthxDepth)	924 (CF)
Total Capacity for number of Stormtech units Considered:	147 (CF)
Storage Capacity In Crushed Stone = (Total Volume of Crushed Stone - Capacity Of Units)x Void Ratio Coefficient	310.8 (CF)
Total Storage Capacity = Storage Capacity In Crushed Stone + Total Capacity of Storm Tech Units	457.8 (CF)

PERCOLATION CREDIT:

Available area for percolation (bottom and sides of system):	295 (SF)
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Using: 2 (min/inch)
 2.5 (FT/H)

Volume percolated in one hour:	737.5 (CF)
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SMALLEST GOVERNS	Volume percolated in 24 hours:	17700 (CF)
	(5xSystem capacity by rule of thumb)=	3108 (CF)

Total capacity needed for storage (Total Runoff - Governing Percolation):	-214.37 (CF)
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TOTAL STORAGE CAPACITY + PERCOLATION CREDIT (CF): 3565.8	>	TOTAL QUANTITY OF STORAGE REQUIRED (CF) 2893.63
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TRUE

THEREFORE USE:	3	SC-740 STORMTECH CHAMBERS ARE REQUIRED TO CONTAIN A 100-YEAR STORM	WITH	1	FT OF CRUSHED STONE
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