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Revised:
Project: The Residences at Ashland
SMMA Job #: 24142

BOUYANCY CALCULATIONS FOR:

ADS STORMTECH SC-310 PARAMETERS			
Ave. Finish grade elevation	223.00		
Ave. Ground water elevation	217.50		
Top of stone elevation	218.60		
Bottom of stone elevation	215.76		
Length	53.0	feet	
Width	21.5	feet	
Volume of Chambers	619	cu. ft.	
Volume of Stone (raw, no voids)	1,567	cu. ft.	
BOUYANT FORCE			
Bouyancy Force (float out)	**123,816**	lbs	*conservatively assumes 100% voids in system
GRAVITY FORCES			
Chambers	1,554	lbs	*42 chambers @ 37 lbs ea.
Stone	141,048	lbs	
Total structure weight	**142,602**	lbs	
Soil weight above structure (dry)	**602,110**	lbs	
Soil weight above structure (saturated)	**0**	lbs	
Total structure weight and soil weight	**744,712**	lbs	
Factor of safety against floatation	**6.0**		

NOTE: Conservative analysis does not factor in the effects of side wall friction and soil shear stress in cone of influence zone. This would ultimately increase the factor of safety.