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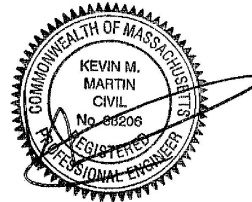
**MEMORANDUM**

**TO:** Adam Siegel  
SGL Development  
485 Massachusetts Avenue, Suite 302  
Cambridge, MA 02139

**FROM:** Kevin M. Martin, P.E.  
Geotechnical Engineer

**DATE:** September 5, 2018

**RE: GEOTECHNICAL REVIEW  
PROPOSED RESIDENTIAL BUILDING  
21 EASTMAN STREET  
SOMERVILLE, MASSACHUSETTS**



This memorandum serves as a limited review of the retaining wall design by CM Kirby Engineering, PLLC (CMKE). KMM completed a *Geotechnical Summary Report* for the project dated July 12, 2018.

**BACKGROUND**

The site is complicated by the presence of a steep hillside slope to the rear of the property. The slope is about  $\approx 30$ -35 ft in height with an average steepness of about  $\approx 2H:1V$  (steeper near the crest; flatter at the base). The project includes a three-story, wood-framed residential building that will overhang the slope. A large retaining wall will be necessary to accommodate site grading. The wall will vary from about  $\approx 12$ -20 ft in height. Significant grade change (ie: expansive fill) will be necessary for the project.

The selected wall includes a large, gravity concrete block system (ReCon Wall) with additional geogrid reinforcement. The Wall was designed by CMKE (August 31, 2018) using the specified geotechnical design parameters. Specifically, the prescribed units for internal friction (shear strength) and unit weight were used in the design. These values are contingent upon specified Structural Fill with proper placement and compaction. The bearing soils should include the parent Glacial Till. Recent test pits by CMKE were completed at the base of the wall to confirm Glacial Till subgrade. The maximum bearing pressure of the wall is noted to be less than 3,000 psf. This is adequate for bearing support of the wall on Glacial Till.

SOIL PARAMETERS	$\phi$	coh	$\gamma$
Reinforced Soil:	34 deg	0 psf	125 pcf
Retained Soil:	34 deg	0 psf	125 pcf
Foundation Soil:	35 deg	0 psf	130 pcf
Leveling Pad: Crushed Stone			

This review is to outline the geotechnical parameters for the wall have been used for design. This review does not include peer review of the wall for internal stability, external stability and/or global stability.

We trust the contents of this memorandum are responsive to your needs at this time. Should you have any questions or require additional assistance, please do not hesitate to contact our office.