**Number of Pages: 6**

June 14, 2016

Sent via email to joedasco@comcast.net

Reger Dasco Properties
15 Middle Street
Portland, ME 04101

**Attention:** Joe Dasco

SUBJECT: Budget Estimate for Installation of Ground Improvement for Structure Support Controlled Modulus Column (CMC)
62 India Street (DGI-Menard, Inc. dba Menard USA - File No. 16197)
Portland, ME

Menard is pleased to offer this preliminary budget estimate for installation of CMC ground improvement for the above referenced project.

## A - Project Understanding

Ground improvement is required to support a proposed mixed use building and garage in Portland, Maine. The soil is characterized by up to 5 ft of medium dense urban fill with very soft to medium stiff clays and silts found at depths up to 22 ft below working grade. The site requires improvement of soft clayey soils for improved bearing capacity and settlement control.

The CMC system will be implemented with the following considerations:

1. Ground improvement is specified to support all spread footing and mat foundations and the wall footing along column line F. Support for slabs on grade or other walls are not a part of this estimate.
    - The exterior walls from column line H up to column line F are presumed to be non-load bearing in the plans, therefore it is assumed that these walls do not require CMC support.
2. The proposed finished floor elevations vary from 31.37 to 34.65 ft msl. The working platform must be relatively level and is assumed to be at 1 ft below finished floor elevation.
3. All existing foundations from the demolished building will be removed prior to CMC installation.
4. Footing dimensions will range from 2.5 ft to 8 ft in width.
5. 3 ksf bearing capacity required for spread footing foundations.
6. Settlements of 1" total and ½" differential will be targeted with the CMC design.
7. All underground and overhead utilities in and/or near the site will be removed or relocated prior to CMC installation.

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## B - Reference Documents

This estimate and pricing is based on the following documents. It is expected that all structure, site, and subsurface conditions are consistent with the following background information.

- Geotechnical Report prepared by Geotechnical Services, Inc., dated March 29, 2016.
- Structural Drawings (S1.0-1.1, S2.1-2.2) prepared by Mark Mueller Architects, dated June 1, 2016.
- Civil Drawings (Pgs. 2-5) prepared by Sebago Technics, dated May 13, 2016.

## C - Scope of Work Provided by Menard

Menard will provide or perform the following:

1. Ground improvement system design package stamped by a licensed Professional Engineer.
2. Stamped/certified shop drawing and plans, as required.
3. One mobilization and demobilization to/from site.
4. If purchased, one modulus test per standard Menard testing procedure (based on ASTM 1143). This load test may be required by the owner, the owner's engineer, or the CMC designer.
5. Supervision, labor, tools, materials and equipment for the installation of CMC ground improvement. Menard will provide labor on the project paying open shop wages.
6. CMC installation in accordance to the approved design submittal and shop drawings.
7. CMCs cut-offs with top elevations approximately 6 inches below the bottom of footing.
    - The standard tolerance for cut-offs is +/- 6". It is recommended that careful excavation (small bucket excavator or hand-digging) be performed beginning at 3" beneath the bottom of footing elevation.
    - In no case will the CMC be cut-off below the water table or at a depth greater than 6 ft. In these select cases, please refer to section D.9 to see the Purchaser's responsibilities.
8. Stockpile all spoils generated from the operation directly adjacent to the work area.
9. Electronic installation reports of each CMC.
10. Red-lined drawing showing the final CMC locations.

## D - Scope of Work Provided by Purchaser

The following are excluded from Menard's scope and shall be provided to Menard at no additional cost.

1. All site preparation and obstruction removal, including clearing and/or removal of utilities, trees, wood, brush, pavement, pipes, sub-base materials, stumps, concrete, asphalt, metal, debris, rubble, trash and any other obstructions above or below grade.
2. Providing four survey control points in close proximity to the project site.
3. Provision of a working platform as follows:

- Working platform should be level (less than 3% and no cross slopes), all-weather, free draining, stable, and capable of supporting track rigs up to 160,000 lbs without sinking or rutting.
- Working platform shall be constructed of Load Transfer Platform (LTP) material or similar (angular material such as crushed stone or gravel), and shall be free draining.
- Working platform shall be a minimum of 1 ft thick. Additional thickness may be required based on the weather and site conditions at the time of construction, and characteristics of the in-situ subgrade soils.
- Working platforms should be at least 2 ft above ground water and use filter fabric and/or geo-grid for stabilization and separation in soft ground conditions.
- Working platform shall extend a minimum of 5 ft outside of the extent of the ground improvement layout. This parameter may need to be increased depending on site specific conditions.
- Upon request, Menard will provide equipment specifications for Purchaser's determination of working platform requirements.

4. Adequate protection of all existing public and private services and property, either underground or overhead which include, but are not limited to, buildings, utilities, slopes, machinery, equipment, and roads.
5. Site preparation, intermediate leveling, final surface compaction and/or grading, dewatering, compaction of platform, fill over columns, and footing excavation.
6. Provision of material, installation, compaction, and certification of the Load Transfer Platform, or sub-footing aggregates, if required.
7. Suitable area for tooling and miscellaneous laydown.
8. Access roads, flagging, traffic maintenance, street cleaning, wheel wash, for the continuous delivery of ready mix concrete/grout to and from our drill rig.
9. In select cases, cutting off of high CMCs that where the top of CMC is below the water table, where CMC tops are greater than 6 ft below the working surface, or where the CMC top is high, but within the tolerance stated in C.7.
10. Access ramps that are a minimum of 20 ft wide with a maximum slope of 10%.
11. Provision of uninterrupted and unimpeded access to the work site to allow for continuous work for all Menard operations.
12. **Survey and layout of all CMC locations using numbered wire flags.**
13. Temporary sanitary services, including but not limited to port-a-johns and trash removal.
14. Provision of water within 100 ft of working area capable of producing a minimum of 20 gpm.
15. A suitable area for disposal of grout washout from ready mix trucks leaving the site.
16. Placement of 6" of LTP between the top of CMC and the bottom of footing. The LTP shall be a well graded, granular material with less than 15% fines, placed in engineered and compacted lifts to minimum 95% modified proctor.
17. Provision small stone stockpile to backfill low-cut CMC locations.
18. Third-party observation of the CMC installation and placement and compaction of the LTP. Third-party inspection reports shall be sealed by a Professional Engineer showing that the Load Transfer Platform has been installed in accordance with the Design Calculations for Controlled Modulus Columns.