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PROFESSIONAL ENGINEERING CONSULTANTS
INCORPORATED

December 16, 2023

Homestead Road LLC
Alexander Delendik
4820 Minnetonka Blvd.
St. Louis Park, MN
adelendik@homesteadroad.com

Project: Review of Constructed Retaining Wall
827 Agate St.
St. Paul, MN
PEC #6186

Dear Mr. Delendik:

This report concerns our review of a constructed retaining wall behind the front sidewalk at 827 Agate St., St. Paul, MN. The property owner, Alexander Delendik, of Homestead Road LLC, performed his own construction of the wall in general conformance with a detail sheet entitled "8" Block Wall Option." However, the inspection department at the City of St. Paul required that the wall be inspected by a Registered Engineer who could answer to the construction requirements outlined in its identification sheet.

On December 15, 2023, we arrived at the site to find the wall had essentially been constructed. We therefore met with the owner and reviewed a series of photographs which were taken of the project in progress. Using these photographs and questioning the owner, we were able to ascertain the details of the construction.

Over the last several weeks, the old retaining wall was demolished and the footing construction removed from the front stairway eastward to the east property line. This amounted to a retaining wall length of slightly less than 30', since a higher concrete retaining wall had been left in place to the west of the stairway. A new footing was dug in behind the sidewalk, providing a new footing which was approximately 12" deep and at least 32" from the existing front sidewalk toward the rear of the property. Reinforced concrete used ½" rebar for the longitudinal steel in three locations at the front of the footing, the rear of the footing, and half-way between these bars. The front and rear bars used a 3" cover of concrete to the dirt forms. The first course of 8" block was placed

in the wet concrete and the footing was stabbed with ½" bars spaced 20" on center toward the rear face of the concrete block first course.

Using this layout of block and rebar, successive courses of 8" concrete block, both double corner and common, were placed with a mason's mortar using a common bond pattern to top of wall height. The completed wall was approximately 4-1/2 courses in height. The vertical rebar were left at least 2 to 3" below top of wall. The completed wall section was then filled with a 4000 psi curb and gutter mix. The rear of the wall received a 4" corrugated drain tile with an exterior sock. The backfill material behind the wall was filled with a granular backfill material and then capped off with the natural excavated soils which consisted of a silty sand material with topsoil mix. The entire backfill region behind the wall was estimated as less than a 33% grade, and the entire backfill area received a grass mix and was covered by a straw mulch.

Since the entire project was completed just recently, the owner will also reseed in the springtime and will seed as needed for a grassy embankment. Based on our observations, the owner has protected the finished grade as much as possible and will continue with seeding and mulching this spring to establish a lawn. We informed the owner that such embankments should drain over the top of the wall and not behind the wall for maximum stability of the wall construction. It is our opinion the owner has used good workmanship on this construction.

Respectfully,
Professional Engineering Consultants, Inc.



Brian R. Dobie, P.E.
President

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Brian R. Dobie, P.E. 

Date 12-16-23 Reg. No. 9798

8" BLOCK WALL OPTION

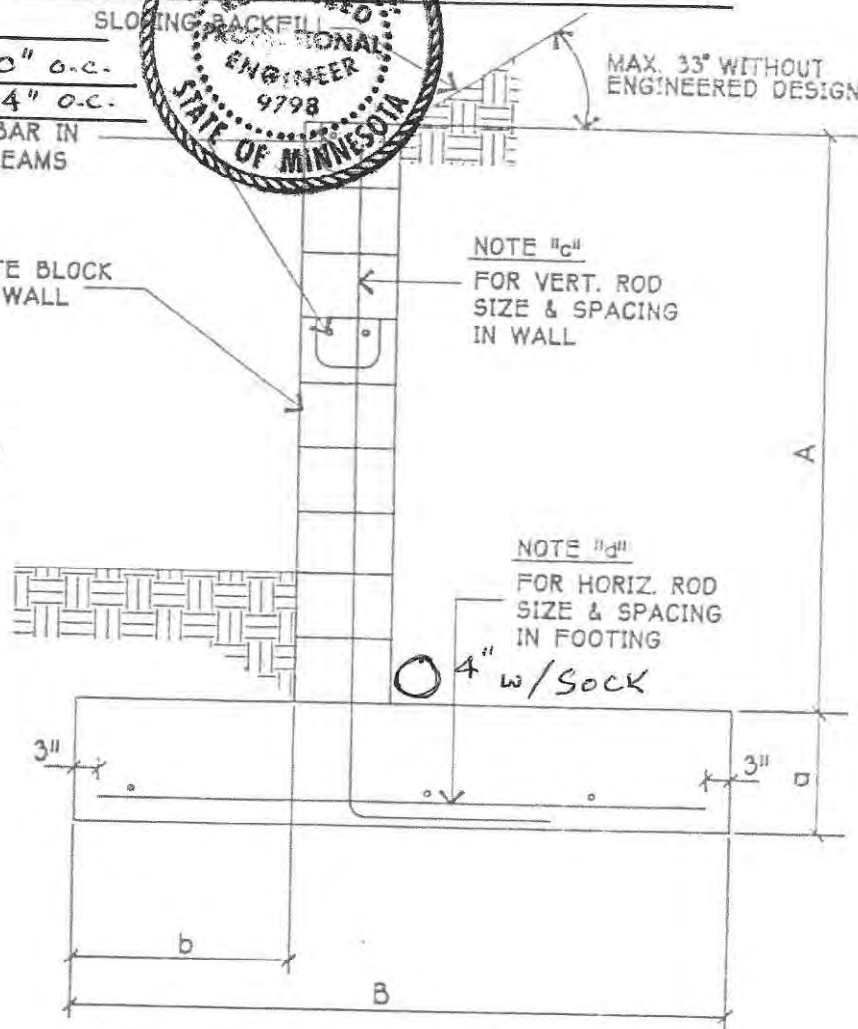
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427 AGATE ST. ST. PAUL, MN

A HEIGHT	B WIDTH	a FOOTING THICKNESS	b DISTANCE TO WALL FACE	c SIZE & SPACING OF VERT. RODS	d SIZE & SPACING OF HORIZ. RODS
3'-4"	2'-4"	0-9"	0-8"	#3 @ 32"	#3 @ 27"
4'-0"	2'-9"	0-9"	0-10"	#4 @ 32"	#3 @ 27"
4'-8"	3'-3"	0-10"	1'-0"	#5 @ 32"	#3 @ 27"
5'-4"	3'-8"	0-10"	1'-2"	#4 @ 16"	#4 @ 30"
6'-0"	4'-2"	1'-0"	1'-3"	#6 @ 24"	#4 @ 25"

*WALLS GREATER THAN 6'-0" HIGH REQUIRE FORMAL ENGINEERED DESIGN & DRAWINGS.

A	37" to 39"
B	32"
a	12"
b	6"
C	1/2" bars @ 20" o.c.
d	1/2" bars @ 24" o.c.



*Note: all details on this sheet must be followed as depicted on this design. Otherwise, structural engineering is required for the retaining wall

8" CONCRETE BLOCK RETAINING WALL