

# Neil B. Schmelkin P.E.

# NBS

**PROFESSIONAL ENGINEERING CONSULTING SERVICES  
INSPECTIONS\*RESIDENTIAL\*COMMERCIAL\*PLANNING\*DESIGN  
25 YEARS EXPERIENCE \* 12,500 STRUCTURES EVALUATED**

7 Terrace Drive, Great Neck N.Y. 11021

Phone (516) 236-4112

n2moe@aol.com

Fax (516) 829-0944

**Date:** June 8th, 2020

**Site Visit Date:** May 29th, 2020

**To:** Mr. Gabriel Dabiri  
(914) 343-8002  
[gydabiri@gmail.com](mailto:gydabiri@gmail.com)

**From:** Neil B. Schmelkin, P.E.

**Subject: Structural Evaluation-Retaining wall/Masonry Work.**  
111 Bellair Drive  
Dobbs Ferry, NY 10522



Front Elevation of Subject Premises

# Neil B. Schmelkin P.E.

The logo consists of the letters "NBS" in a bold, red, sans-serif font, enclosed within a black rectangular border.

**PROFESSIONAL ENGINEERING CONSULTING SERVICES  
INSPECTIONS\*RESIDENTIAL\*COMMERCIAL\*PLANNING\*DESIGN  
25 YEARS EXPERIENCE \* 12,500 STRUCTURES EVALUATED**

7 Terrace Drive, Great Neck N.Y. 11021

Phone (516) 236-4112

n2moe@aol.com

Fax (516) 829-0944

## **ENGINEERING REPORT**

Dear Mr. Dabiri,

At your request, a site visit was performed for the sole **purpose of a structural examination of the retaining wall and rear yard patio.** The scope of this report is limited to these areas only. Visual observation was made from the exterior grounds around the perimeter of the home. See attached photos. No surface materials were removed, nor internal probings made.

This report is an opinion of these readily accessible areas based on visual evidence at this time. No exploratory investigations were made to those areas which are beyond the scope of this inspection.

As Professional Engineers, it is our responsibility to evaluate the available evidence relevant to the purpose/scope of this inspection. We are not, however, responsible for conditions that could not be seen or those which were not in the scope of our service at the time of this inspection.

Directions stated in this report (left, right, rear, etc.) are taken from the point of view of an observer facing the front of the subject premises.

## **OBSERVATIONS/DISCUSSION**

The following observations were made at the time of this inspection:

The retaining wall and rear yard patio were found to be in structurally sound condition overall, and free of major cracking or movement.

1. A new Liberty Concrete Block Retaining Wall System has been installed above, and independently of the original stone retaining wall. This wall has an independent drainage system, and an independent structure than that of the original stone retaining wall which it is set above. A proper geogrid reinforcement mat system, and gravel drainage has been installed. See photos below for illustration.
2. I observed that there is proper and adequate drainage in and around the wall. The net amount of runoff from this wall system will be less than or equal to the amount of runoff from the prior wall. There is no change in net topography runoff between the properties.

3. The masonry patio, perimeter masonry wall, and steps to the rear yard were found to be sound, and free of major cracking or movement.
4. No evidences of erosion, washout, or ground movement was observed in or around the retaining walls or patio.

### **PHOTOGRAPHIC ILLUSTRATIONS**

The following photographs are highlights of representative conditions documented during construction, and at the time of the site visit:



View of wall during construction, note Geogrid Reinforcement being properly installed. This geogrid mat provides lateral reinforcement for the wall, and is specified by the manufacturer. Photo supplied by homeowner, taken during construction.





View of retaining wall looking to the South. Wall was found to be structurally sound.



View of retaining wall looking to the South. Both upper new wall and lower original wall are properly installed with proper inward batter angle.



Stone wall at base was found to be sound and free of major deformation.



View of retaining wall looking North.



Walls are constructed independant of each other.





Walls are independent, and has proper return.



Railing is install properly and found to be sound and rigid.



Rear yard is properly pitched, and there is no visible soil erosion or movement.





Patio steps need hand rail.



Patio retaining wall is sound.



A safety railing of should be installed around the perimeter of the patio. The railing should measure at least 36" inches above the patio floor level.



Patio has proper pitch.



Drainage is good in and around the patio.

## CONCLUSION

In conclusion, the retaining wall, patio, and drainage were **found to be sound condition** with no evidences of distress at this time. Since this evaluation is a snapshot of the conditions at this moment in time, it is recommended that the conditions be evaluated on an annual basis. This is prudent for all newer retaining walls. Proper handrails and guard rails are needed for the elevated patio which is adjacent to the house.

The aforementioned is a professional opinion regarding the conditions observed at the time of the site visit. No exploratory probing was performed as part of this visual survey. Should additional information become available, we retain the right to amend this report accordingly.



It should be understood that the inspection did not include an analysis of the original building design. It is assumed for the sake of this inspection that the original structure is built to generally acceptable engineering design standards and building codes in-place at the time of construction. This was not an inspection for code compliance.

This report is intended for the exclusive use of the recipient indicated on the report heading. No part of this report may be reproduced or distributed in any form or by any means without express written permission

**Standard of Care/Limits of Liability**

The standard of care for services performed by Neil B. Schmelkin, P.E. (Engineer), will be the care and skill ordinarily used by members of the profession practicing under similar circumstances. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer or Contractor services. Engineer is not responsible for identifying concealed or latent defects. Engineer is not responsible for identifying, handling, or removal of asbestos, lead or other toxic substances which may involve certain risks. Liability for errors, omissions, oral representations, breach of contract, negligence, implied representation, which results in personal, financial, damage or injury, or consequential damages, to any person related to this proposal, is limited to the amount of the fee paid for Engineers services. Client agrees to indemnify Engineer against all damages, liabilities or costs connected to this project. Fee does not include cost for labor and materials of any destructive exploratory work if required. It should be understood that additional expenditures may be necessary if unknown construction conditions are encountered.