

April 20, 2011

Mr. Richard Gebhardt Gebhardt Property Management PO Box 11591 Portland, Maine 04104

Re:

Pettingill Park Condominiums

Corner High Street and Cumberland Avenue, Portland Maine

Dear Mr. Gebhardt:

INTRODUCTION

On March 25, 2011 we met at the above referenced condominium building to inspect structural issues with the building framing. The primary area of concern was the slate roof which is experiencing sagging. The residents have requested an engineer to inspect the building and provide an opinion of the status of the structure in the affected areas.

I inspected the building and walked through the various units on the top floor of the building. I went on rear deck to observe the roof from the outside. I made some preliminary measurements of the spans of the roof framing.

OBSERVATIONS

The building is a townhouse style three story brick structure with a basement. The current occupancy is condominiums. The units at the top floor have cathedral ceilings which are the underside of the roof structure. The roof framing is unknown but is assumed to be wood roof rafters. The rafters bear on brick masonry knee walls at their base. It is apparent that at some point, perhaps during renovations for the development of the condominiums, that bracing for the masonry knee walls was removed. There are some collar ties across the roof which in part forms the floors for loft space in the units. These collar ties are inadequate in size and quantity for providing enough lateral restraint, and occur too high above the base of the rafters to be effective. The result is that the rafters push downward and outward on the brick knee walls without adequate restraint. Under snow load and the weight of the slate tiles, the roof has gradually tilted the brick walls out and created a sag in the roof ridge line. The sag is greatest at the center of the units and diminishes at the end walls and demising walls between units. If left unchecked this condition will likely worsen and lead to roof maintenance issues and possible collapse.

CONCLUSIONS:

 Removal of the lateral restraint bracing at some point in the building's history has created a structurally unstable condition.



• This existing unstable condition is manifesting in outward tilt of the masonry knee walls and sags in the roof lines.

The condition will likely continue over time and result in roof maintenance issues and possible

collapse.

• I recommend installation of steel ridge beams that would be placed under the existing roof rafters at the peak of the roof. One beam would be located in each top floor unit and span side to side from brick wall to brick wall. As the beam would be on the order of 12-14" tall, some loss of head room in the loft areas will occur. The benefit will be a stabilization of the roof which will stop the sagging from progressing. This will reduce roof maintenance and prevent possible future collapse.

I recommend an engineer and contractor be engaged to design and implement corrections for these issues. MacLeod Structural Engineers is capable of providing the necessary design plans for this

work.

I hope this report answers the questions and concerns raised by the owners. Please contact me at anytime to discuss this report further, or if I can be of additional assistance.

Sincerely,



MacLeod Structural Engineers, P.A. Bruce W. MacLeod, PE, MASCE President



An Agreement for the Provision of Limited Professional Services

Structural Engineer (SE):

MacLeod Structural Engineers, P.A. (MSE)

Page 1 of 2

Client:

Gebhardt Property Management

Project:

Pettingill Park Condominiums - Portland, Maine

Date: May 2, 2011

<u>Scope of Services</u>: We propose to provide limited structural engineering services for the design of a steel ridge beam to support existing rafters. The existing condominium building is experiencing sagging of the roof framing due to inadequate support of the roof rafters. MSE proposes to design a structural steel ridge beam that will span between existing masonry party walls and provide support to the existing roof rafters. MSE will provide structural construction documents for this work.

<u>COMPENSATION:</u> Compensation for our services will be a fee calculated on an hourly rate basis per our current rate schedule. At this time we estimate the total fee to be: Forty Five Hundred Dollars, (\$ 4,500.00).

Our current hourly rate schedule is: Principal: \$125.00 Engineer: \$85.00Cad Drafter: \$50.00 Fees for outside consultants will be billed at a multiple of 1.10 times the cost incurred. Drawing prints \$0.50/sq ft. This rate schedule is effective through 12/31/11.

SPECIAL CONDITIONS: We will begin services upon receipt of a signed contract. Fee is due upon completion of the plans.

Agreed to and Accepted by:	
	Signature of Client 8-25-11
(Signature of Structural Engineer)	(Signature of Client) (date)
	Timbehardt - Property Manager
(print name/title)	(print name/title)

The Terms and Conditions are attached and are part of this Agreement.

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6. DEFLECTION CRITERIA 6. ROOF (LIVE) - L/360 6. ROOF (TOTAL) - L/240

MASONRY GENERAL NOTES

- I. ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 550.1.
 2. BRICK SHALL COMPLY WITH ASTM C62.
- 3. GROUT SHALL ASTM C476, TYPE I FINE GROUT. SHRINKAGE COMPENSATING, SLUMP 6" TO II".
- 4, MORTAR SHALL BE ASTM C270 TYPE 5.
 PORTLAND CEMBNT SHALL BE ASTM CISO TYPE 1.
 MORTAR SHALL NOT BE USED WHERE GROUT 15 SPECIFIED.

STRUCTURAL STEEL NOTES - GENERAL

- I, STRUCTURAL STEEL FABSICATION, ERECTION, AND CONNECTION DESIGN WHALL CAMPORT TO AIGC "SPECIFICATION FOR THE DESIGN AGRICATION, AND ERECTION OF STRUCTURAL STEEL" THE EDITION.
- ALL STEEL SHAPES AND PLATES TO BE ASTM A36 UNLESS NOTED OTHERWISE. ALL WE SHAPES TO BE ASTM A527 GR 50
- STRUCTURAL TUBING SHALL CONFORM TO ASTM ASOO, GRADE B. STEEL PIPES SHALL BE ASS, GRADE B
- THE DESIGN OF CONNECTORS NOT SHOWN ON THE DRAWNINGS

 WHILL BE FROMED BY THE FRANCHONS. CONNECTORS SHALL
 BE DISSINED YOR THE TORGES SHOWN, OR IN NOT SHOWN, TOOL
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 FER JACK CHANALO, OF STELL CONSTRUCTION.
- 5, ALL BOLTED CONNECTIONS SHALL BE MADE WITH $\sqrt[4]{\phi}$ ASTM A325 HIGH STRENGTH BOLTS.
- 6 WELDING SHALL BE IN ACCORDANCE WITH AWS DI.I LATEST EDITION. ALL WELDS SHALL BE MADE WITH E78XX ELECTRODES
- STRUCTURAL STEEL SHALL BE PAINTED WITH A SHOP APPLIED COAT OF THE FABRICATOR'S RUST INHIBITIVE PRIMER. 7. STEEL BEAMS AND COLUMNS SHALL BE CUT FROM FULL LENGTH STOCK. UNAUTHORIZED SPLICES WILL BE CAUSE FOR REJECTION
- 9, SUBMIT COMPLETE STRUCTURAL STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO ANY STEEL FABRICATION

Pettingili Park Condominiums Roof Structural Upgrade MacLeod



Client:

Project: Date:

Gebhardt Property Management Pettingill Park Condominiums - Portland, Maine

May 2, 2011

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Terms and Conditions

Fee Structural Engineer (SE) shall perform the services outlined in this Agreement for the stated fee arrangement. The total fee, except stated lump sum, shall be understood to be an estimate, based upon Scope of Services, and shall not be exceeded by more than ten percent without written approval of the Client. Where the fee arrangement is to be on an hourly basis, the rates shall be those that prevail at the time services are rendered.

Invoices will be submitted monthly for services and reimbursable expenses and are due when rendered. Invoices shall be considered past due if not paid within 30 days after the invoice date and the SE may, without waiving any claim or right against Client, and without liability whatsoever to the Client, terminate the performance of the service. Retainers shall be credited on the final invoice. A service charge will be charged at 1.5% (or the legal rate) per month on the unpaid balance. In the event any portion of an account remains unpaid 90 days after billing, the Client shall pay cost of collection, including reasonable attorneys' fees.

Access To Site Unless otherwise stated, the SE will have access to the site for activities necessary for the performance of the services. The SE will take precautions to minimize damage due to these activities, but has not included in the fee the cost of restoration of any resulting damage.

Hidden Conditions and Hazardous Materials A structural condition is hidden if it is concealed by an existing finish or if it cannot be investigated by reasonable visual observation. If the SE has reason to believe that a structurally deficient condition may exist, the SE shall notify the Client who shall authorize and pay for all costs associated with the investigation of such a condition and, if necessary, all costs necessary to correct said condition. If (1) the Client fails to authorize such investigation or correction after due notification, or (2) the SE has no reason to believe that such a condition exists, the Client is responsible for all risks associated with this condition, and the SE shall not be responsible for the existing condition nor any resulting damages to persons or property. SE shall have no responsibility for the discovery, presence, handling, removal, disposal or exposure of persons to hazardous materials of any form.

Indemnification The SE shall indemnify and hold harmless the Client and its personnel against any claims, damages, losses and expenses to the extent they are caused by the negligent; acts, errors, or omissions of the SE or its employees in the performance of its services under this Agreement, subject to the Risk Allocation provisions. The Client shall indemnify and hold harmless the SE and all of its personnel from and against any and all claims, damages, losses and expenses arising out of or resulting from the performance of the services, provided that any such claims, damage, loss or expense is caused in whole or in part by the negligent act or omission and/or strict liability of the Client, anyone directly or indirectly employed by the Client (except the SE) or anyone for whose acts any of them may be liable. This indemnification shall include any claim, damage or loss due to the presence of hazardous materials.

Risk Allocation In recognition of the relative risks, rewards and benefits of the Project to both the Client and the Structural Engineer (SE), the risks have been allocated such that the Client agrees that, to the fullest extent permitted by law, the SE's total liability to the Client for any and all injuries, claims, losses, expenses, damages or claim expenses rising out of this Agreement, from any cause or causes, shall not exceed the amount of \$50,000, the amount of the SE's fees (whichever is greater), or other amount agreed upon. Such cause or causes include, but are not limited to, the SE's negligent acts, errors, omissions, strict liability, breach of contract, breach of expressed or implied warranty, or any other theory of legal liability. This limitation of liability shall apply to the SE and its officers, members, directors, partners, agents, employees, and subconsultants.

Termination of Services This Agreement may be terminated upon 10 days written notice by either party should the other fail to perform its obligations hereunder. In the event of termination, the Client shall pay the SE for all services rendered to the date of termination, all reimbursable expenses, and reasonable termination expenses.

Ownership Documents All documents produced by the SE under this Agreement shall remain the property of the SE and may not be used by the Client for any other endeavor without the written consent of the SE.

Dispute Resolution The Structural Engineer (SE) and Client agree to negotiate any claim(s) or dispute(s) arising out of or related to the agreement between them in good faith prior to exercising any other provision of this Agreement. If a claim or dispute between the SE and Client cannot be settled within 30 days by good faith negotiations the SE and Client agree to submit it to mediation in accordance with the Construction Rules of the American Arbitration Association. If the claim or dispute cannot be settled by good faith negotiations or mediation then either party may exercise their rights under law. In no event shall a claim or dispute be made or sustained if it would be barred by the applicable statute of limitations.

Sebhardt Management

rom:

"Stephen Martin" <smartin7@maine.rr.com>

o:

<info@gpmmaine.com>

Cc: Sent: <smartin7@maine.rr.com>

Thursday, December 27, 2012 11:28 AM

Gebhardt Roof Elev.pdf, Gebhardt Invoice.doc

Attach: Subject:

SPAM-LOW: Roof Elevations

Hi Rick,

Attached is a sketch plan showing existing elevations of the roof on High Street

and Cumberland Avenue, as viewed from the parking garage across the street.

Also, attached is an invoice for services to date.

I will put on my calendar for another visit in March sometime if that works for you.

Thank you and please call/email with any questions.

Stephen J. Martin, PLS