

548 Minnehaha Ave, St. Paul, MN



Structural Observations and Report

September 20, 2022

Performed by:

LINDAU

COMPANIES, INC.

PROFESSIONAL ENGINEERS

1074 OLD HWY 35

HUDSON, WI 54016

(715) 386-4444 OFFICE

Prepared By:

Bill Lindau and Tyler Johnson, Lindau Companies

Prepared For:

Thad Palmer

Elbrus Management

7801 E Bush Lk Rd, Ste 430

Minneapolis, MN 55439

Site Visit Dates:

August 31st, 2022

Location:

548 Minnehaha Ave, St. Paul, MN

Mr. Palmer,

At your direction, Lindau Companies, Inc. visited 548 Minnehaha Ave, St. Paul, Minnesota with you to assess the condition of the fire escape structure.

This report presents our opinions with respect to the condition and load carrying capacity of the fire escape structure. If you have any questions regarding this report or the items identified feel free to call us.

Thank you for giving us the opportunity to provide this report,

Lindau Companies, Inc.

A handwritten signature in dark ink, reading "William H. Lindau". The signature is fluid and cursive, with the first name "William" and last name "Lindau" clearly legible. The middle initial "H." is written in a smaller, more compact script.

William H. Lindau P.E

Evaluation Method:

Our method of evaluation consists of visual observations, site measurements and subsequent calculations. Observations were made from the building exterior, interior and attic space on foot and

Persons on site are as follows:

William Lindau, PE – Lindau Companies, Inc.

Tyler Johnson, EIT – Lindau Companies, Inc.

Structural Review:

The fire escape serves an attic space and is constructed of wood. It is attached to the side of a wood structure as well as supported on grade.

Overall, the condition of the fire escape is poor with many deteriorated and split members. Handrails are loose, several floor boards are deteriorated, and attachments to the house are split and deteriorated.



Example of deteriorated
floor board



Example of split and
loose hand rail

Generally, the quality of construction is also poor. Members are attached without light gage clips, bases, or hangers and the attachment to the home is by screws through the siding.



One of many poorly constructed connections.

Based on our calculations, the live load carrying capacity of the fire escape is less than the required 100psf. Stair stringers, landings, posts and foundations are inadequate as are the railings.

The fire escape serves an attic space and as a path of egress may not conform to the many aspects required under the building. This should be further reviewed by the building official or an architect.



Access through this area is constricted and may not conform to the building code.

Recommendation: based on the amount of work needed to bring the fire escape within compliance we recommend it be removed and replaced with an engineered, code compliant, fire escape. This will likely require new framing members, foundations, bracing, and attachments to the home. An architect may be needed to address the egress requirements such as width of the stairs, tread rise and run and landing size. Additionally, the configuration of railings and other miscellaneous guarding will need to be determined.

Standard Language – Disclaimer and Certification:

Our observations and opinions are based on visual observation with only limited observations and without the aid of historical information or original construction documents.

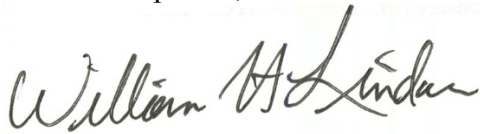
Items such as civil engineering, architecture, egress, mechanical and plumbing systems, or environmental considerations are beyond the realm of our expertise. In the case that we note these issues within this letter it is for the sole purpose of identifying the need for the review of these items by a professional trained in that discipline.

We reserve the right to modify this report as new information becomes available.

This report is for informational purposes and cannot be used as construction documents or for a permit submittal. All construction should be performed by a licensed contractor with experience in this type of construction and inspected by the local building official.

We would like to thank you for the opportunity to perform this investigation. If you have any questions, comments, or if you need any additional service, please do not hesitate to contact us. Upon request, Lindau Companies will prepare a fee proposal for creating restoration and repair documents for permit.

Sincerely,
Lindau Companies, Inc



William H. Lindau MN PE #24781

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