



Structural Assessment Report

Shelly Hebert –Shea Memorial Arena 400 Ferguson Avenue, Temiskaming Shores

Prepared For:
Matt Bahm
City of Temiskaming Shores

Prepared by:
Shaba Testing Services Ltd.
Kirkland Lake, Ontario.

Our Project Number:
STS 2024-0142

August 2024

©

Contents

1.0 Introduction 3

2.0 Executive Summary..... 3

3.0 Methodology..... 3

4.0 Findings 3

5.0 Foundation 4

6.0 Conclusion..... 4

1.0 Introduction

At the request of the City of Temiskaming Shores, Shaba Testing Service (STS) was requested to inspect and report on the structural integrity of the exterior exit stairwell at the Shelley Herbert-Shea Memorial Arena , 400 Ferguson Avenue Temiskaming Shores Ontario.

The inspection occurred on August 22, 2024.

2.0 Executive Summary

It is the opinion of STS that the exit stairs has exceeded its useful life and should be replaced in the near future.

The exit stairs provides exit for the upper floor on the Ferguson street side of the arena, the upper floor is currently used for a summer arts program for children. The floor area is 25' by 40 feet and occupancy is listed as 80 people.

The exit stair is constructed of wood; it is apparent that the support for the upper platform is the oldest part of the structure and is in the poorest condition. There is considerable evidence of rot where one piece of wood overlaps trapping moisture.

The rest of the structure including platforms, handrail and stairs appears to be around the same age. There is evidence of repairs over the years.

The materials used for construction vary. The main support for the upper platform is untreated wood where the rest of the structure is green pressure treated wood.

The fasteners used appear to be common deck screws for platforms, handrails, balusters and stairs. The support for the upper platform is nailed using common nails. Deck screws are not suitable for this application, given that they are not structurally rated.

There appear to be two attempts to fasten the upper platform to the building. Due to vegetation and access it was difficult to determine if both are effective however the support is functioning and the frame is stiff, the handrail and stairs for the lower stair is not attached to the ground and is unsupported, this reduces the load bearing capacity of the stairs and handrail. The supports for the lower and upper platforms are on concrete posts.

3.0 Methodology

Inspection was carried out using basic carpentry tool (hammer and pry bar) and visual inspection. Measurements of the stairs were taken to determine code compliance.

4.0 Findings

The upper platform support frame is fastened to the wall of the building. Corners of the support are 4 inch square timbers. The support sits on concrete columns. The stairs are 44 inches wide with three

stringers, one on each side and one down the center. The two outside stringers are reinforced with two - 2 by 8 strips of wood fasted with screws. The lower platform and stairs is constructed in a similar manor however the bottom of the stairs is not connected to anything and appears to bear on a buried wood sleeper providing poor support.

The rise and run of the stair treads is 11 inch by 7.375 inch and are not uniform along the entire rise. This is contrary to Ontario Building code.

The handrail and method of fastening on the stairs is not per the Ontario Building code.

5.0 Foundation

The foundation supports for the posts are of structural concerns. Rust has penetrated the saddle and an imminent failure may happen from the foundation level.

6.0 Conclusion

The exit staircase was inspected and found to have structural deficiencies. Sample photos of the staircase condition are shown in appendix A . Our recommendation is to demolish and replace as soon as possible.

Respectfully Submitted,

Robert Allen- Senior Technologist,
Shaba Testing Services Ltd
Reviewed and Approved by : Lad Shaba, P.Eng.



Photos



The stairs



Pier supports – they are lifting



Rut 2x 6 -pop out nails



Rotten wood



Split picket



The railings are wobbling



More rot