



Project Information

- Project: Lindquist & Vennum
Location: Minneapolis, MN
Architect: Plaad LLC, in collaboration with Yellow Dog Studios
GC: Greiner Construction
Glazier: Empirehouse
Completion: October 2017
Scope: This renovation featured a custom glass railing system mounted with specially engineered steel pressure plates hidden within the treads of the floating stairs. The pressure plate assemblies mimicked the same profile and cut as the steel stringer, and mounted to the concealed stringer with stud welds. Trex Commercial Products worked with the contract glazier to design a custom steel pressure plate system to meet glass railing loading requirements while preserving the architect's design intent.



Pressure plate system consisting of a 3/8" nylon - 1 1/4" steel - 3/8" nylon block assembly between the glass and stair stringer. A 3/8" thick nylon and 3/8" thick steel pressure plate, mimicking the same profile and cut as the stringer, finished off the exterior of the pressure plate assembly.

Custom floating staircase with glass railing features stainless steel standoffs attaching a walnut handrail to 1/2" clear tempered glass on both the stairs and overlooks.

The desired floating spiral staircase with glass railing featuring a custom engineered steel pressure plate assembly was a collaborative effort between the glazier and Trex Commercial Products, and required many site visits with the field crew to ensure proper fit within the stair treads. The stair railing system had complex geometry and very little tolerance. The glazier used a total station measuring system providing a precise 3D CAD layout of the as built stairs to ensure a proper fit of this innovative system.