GLASS & METAL ALLIANCE

# ASPLUNDH CANCER PAVILION

## ABINGTON-JEFFERSON HEALTH | ABINGTON, PA

*The exterior features 20 different types of glass.*

By: Amanda Gibney Weko

# CASE STUDY

## GMA Glazier

**R.A. Kennedy & Sons | Aston, Pa.**

## Project Team

**Owner: Abington-Jefferson Health**
**Architect: EwingCole**
**Contractor: LF Driscoll (part of the Structure Tone family of companies)**

## Scope

**Exterior facade: two- and four-sided structural glazed curtain wall, traditional curtain wall, aluminum entrances, and glass and glazing.**

## Completion

**June 2017**

*All photos © Joe Garvin*

## INTRODUCTION

The 86,000-square-foot Asplundh Cancer Pavilion on the campus of Abington-Jefferson Health in Willow Grove, Pa., provides comprehensive, advanced outpatient cancer treatments. The facility personalizes patient treatment via collaborative teams of oncology physicians and nurses, researchers, and other health professionals. Architecture by EwingCole helps ease patient stress and augment healing in part through its expansive use of glass. Walls of windows flood the interiors with natural light and views into the surrounding healing gardens.

## UNIQUE GEOMETRY

GMA glazing contractor R.A. Kennedy & Sons, Inc. performed all of the exterior glazing. The company's scope included two- and four-sided structural glazed curtain wall, traditional curtain wall, aluminum entrances, and custom aluminum trims. The building's unique geometry – actually two buildings connected by a link – features façades that curve horizontally and vertically. The project was highly challenging from a glazing engineering standpoint.

Kennedy Senior Project Manager John Hermansen performed all of the complex engineering. He worked closely with Owner Tom Kennedy, Office Project Manager Bob Kennedy, Field Project Manager Tim Petriccione, Site Superintendent Kevin Kearney, and the teams from EwingCole and construction manager, LF Driscoll.

According to LF Driscoll Project Manager Tom Anderson, the Asplundh Pavilion envelope is comprised of multiple systems including three types of masonry (full-bed natural stone, thin stone, and ground-face CMU), metal panels, and the curtain wall systems. Each assembly had a different depth. Each system and its corresponding substrate had to be properly located at the correct depth and placed along the horizontal and vertical radii and so that transitions between systems were smooth and clean.

"Kennedy was integral in that process, not only with the other envelope contractors, but they also spent a great deal of time working with the structural steel contractor reviewing the 3D

*From top: panoramic image of the Asplundh Cancer Pavilion; details of the sun shade fins and curved façade; structural glazed lobby curtain wall*

model to understand the location of the steel at every connection around the building," explained Anderson. "During that process, they identified what would have been major issues at the horizontal radius and we were able to resolve them before they impacted the overall project."

## STRUCTURAL SYSTEMS

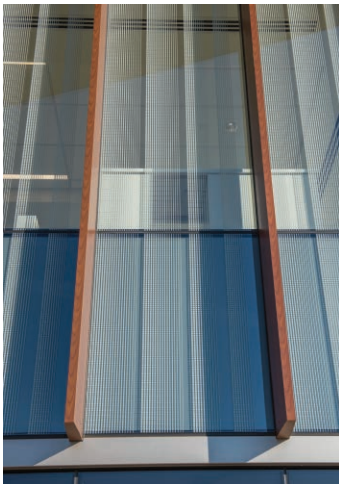
Kennedy used Kawneer framing and 3M structural tape for the four-sided structural glazing. The team engaged with technicians from 3M to develop a quality control program for both the shop and material handling procedures. In the four-sided cassette system, glass and subframe were married together in the Kennedy shop and then taken to the site to be installed on the curtain wall carrier frames. The two-sided system used a conventional structural glazing process.

## CUSTOMIZATION

Additional project challenges included custom aluminum extrusions for large, vertical sun shade fins and horizontal curtain wall covers approximately 8-12 inches deep. Many of the metal fin and sunshade elements were painted with a new technology finish in which paint mimics wood grain and texture. It was the first time Kennedy worked with the finish.

## 20 TYPES OF GLASS

Since the project sought LEED Certification (pending), fritted glass was selected to reduce thermal heat load. In total, 20 different types of glass were used on the exterior façade. Each had a different color, substrate (clear or tinted), and custom silk-screened pattern (light gray or white, gradated and solid lines). The patterns and colors had to be coordinated across façades to ensure consistency. In the areas where structurally glazed panels were used, the pattern had to carry through the building almost seamlessly. In addition, much of the glass was oversized and had to be crane set.



## COLLABORATION

In order to gain client approval of the selected frit patterns and panel widths, Kennedy hosted the project team at its shop where a crane hoisted sample glass into the air for real-time review.

"It was a good process," Tom Kennedy described. "Everyone cooperated and worked together. We couldn't have gotten through this project and managed all of the different finishes and complex geometry without the collaboration."