

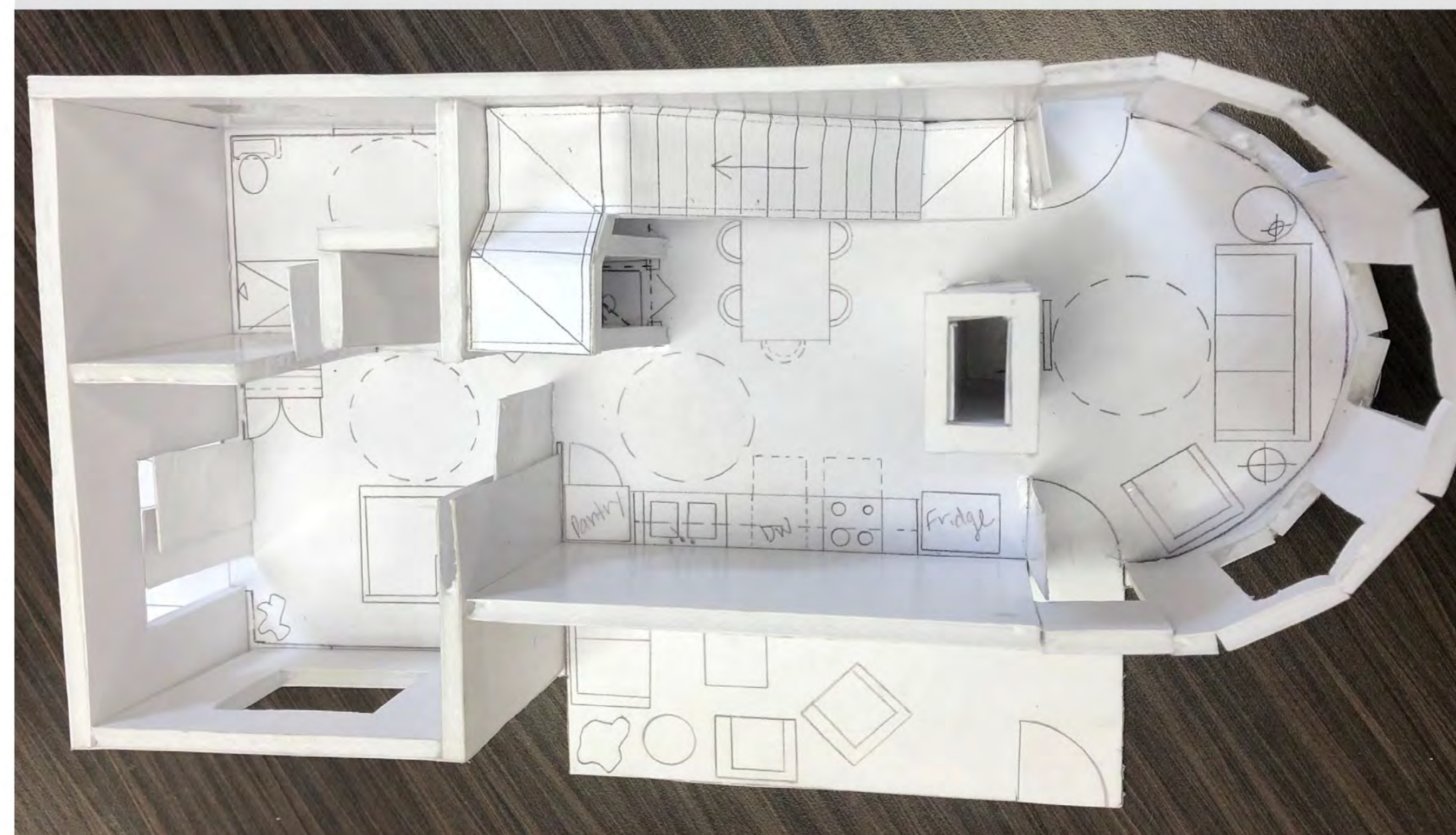
Vacation Home Design

Design Problem

A family of four requested a contemporary design for a 900 square-foot vacation home. Due to the husband's limited mobility, the accessibility standards of the Americans with Disabilities Act (ADA) guided the design because the layout must accommodate a future wheelchair. The two sons requested a loft with a private bath for their sleeping quarters.

Research

The designer researched architectural organizations and elected to design the home in the postmodern style of Michael Graves. Graves designed with simple forms, colorful buildings, custom furnishings, many windows, exaggerated geometrics, and decorative motifs (Anderson, 2019; Minor, 2018). In the home's final design, his style influenced the loft's circular floor plan and second-floor cylindrical form placed over the cube of the other family spaces, the half-cylinder projection of the living room from the home's basic cube. These cylindrical forms appeared in Graves' design of the St. Coletta School of Greater Washington that featured five differently shaped buildings, one of them a cylinder.



Process

Key objectives of the project were spatial function and efficiency of design. Most importantly, each first-floor room features a Graves-inspired open floor plan that permits ADA-compliant 30"x40" wheelchair parking spaces, 60" turning diameters, 36" door widths and traffic paths, and accessible toilet, sinks, and shower (Architectural and Transportation Barriers Compliance Board, 1998). The centralized HVAC promotes cost effective air circulation to the entire home. Stacked plumbing, loft bath over master bath, ensures cost effective plumbing. The Graves styled curved front of the home provides more conversation space and natural light. The flat roofs also follow Graves aesthetic. The double fireplace separates the living and kitchen spaces without closing them off, promoting open traffic flow.

Results

The information required to solve the design problem involved researching the ADA, architectural precedent, theoretical models, HVAC placement, plumbing guidelines, efficient storage, roof design, and vertical circulation. The resulting floor plan, elevations, and three-dimensional model convey the ability of the designer to merge research with creativity to produce a successful design solution.