

cbt

A C B T S K E T C H B O O K

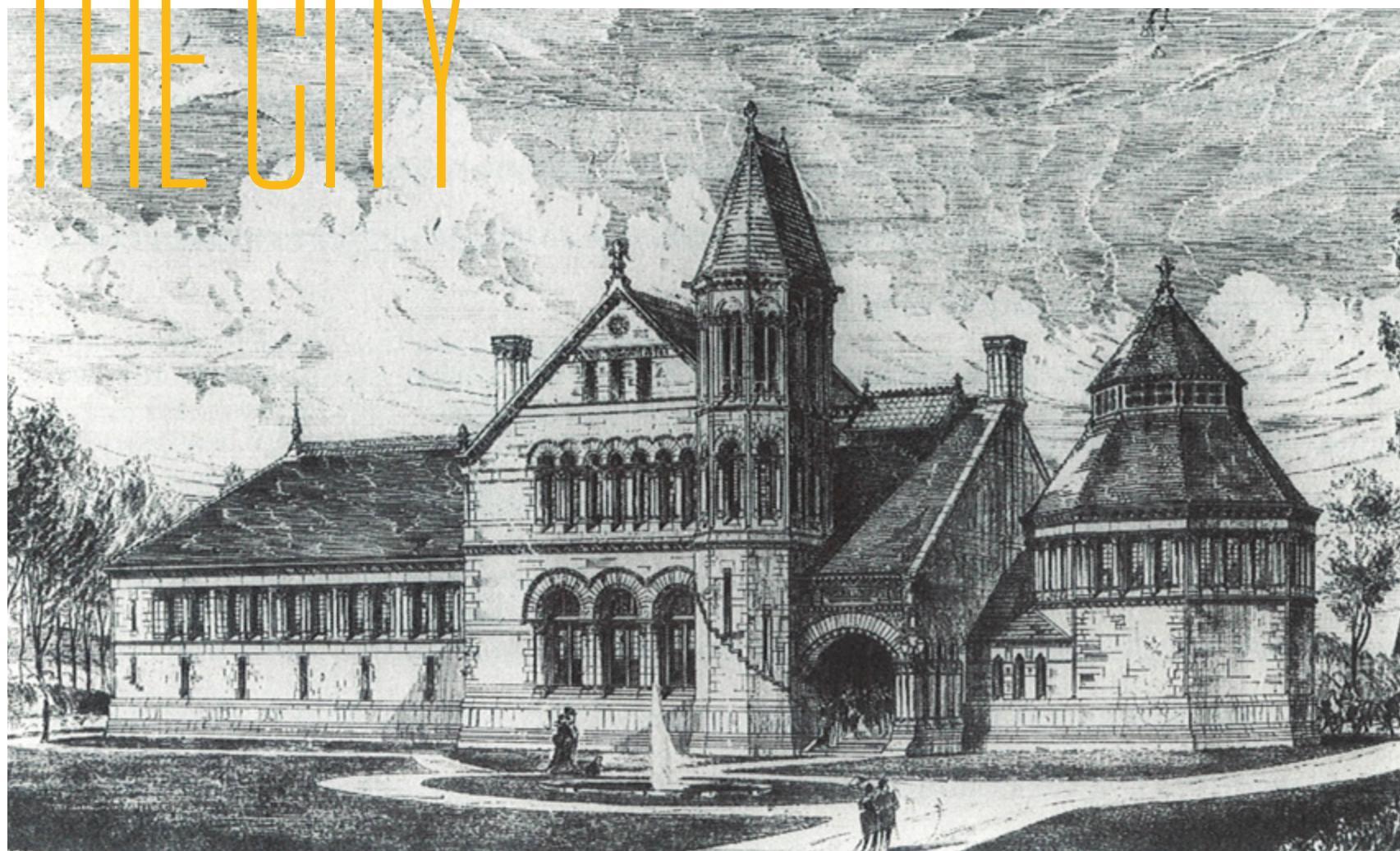
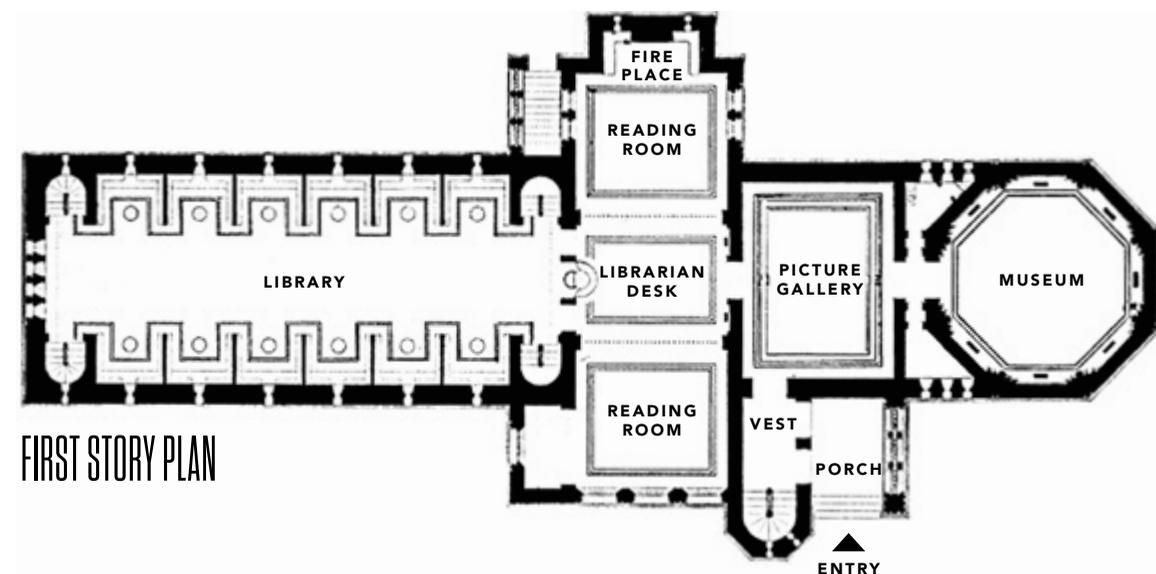
WOBURN
PUBLIC LIBRARY
BUILDING
RENOVATION
& ADDITION

WOBURN, MA

CIVIC

C B T A R C H I T E C T S . C O M

AN ORNAMENT TO THE CITY



History

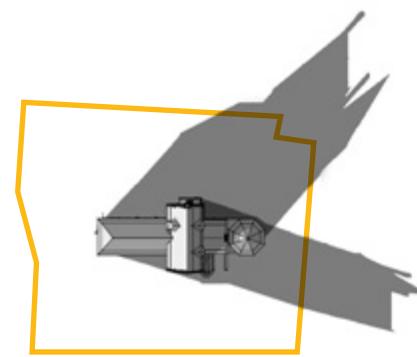
Designed by the legendary Henry Hobson Richardson in 1876 and constructed in 1879, the original library occupied a highly-visible and elevated site at the center of Woburn, Massachusetts. The building was called "an ornament to the city," and was celebrated widely for its beauty and architectural majesty. At right is the competition submission that ultimately led to Richardson's selection as the building architect.



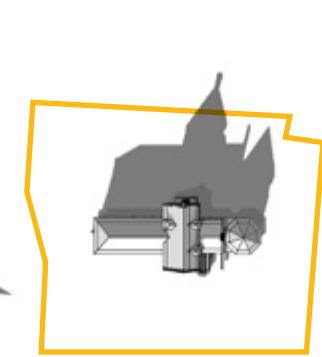
The Site

Site constraints and setbacks, as well as key view corridors from the city center and along Pleasant Street dramatically limited the potential locations for this badly needed addition. With a mandated size that exceeded the original library building's size, the addition's siting needed to be creative; and its massing and scale highly sensitive to the surrounding conditions. Below, shadow studies show the shadows that occupy the building's north side in both June and December.

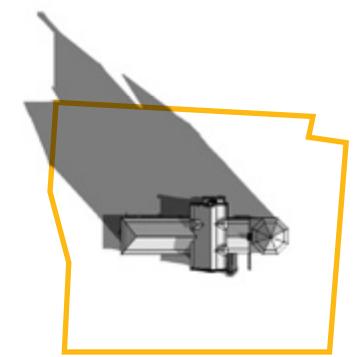
OPPORTUNITIES & CONSTRAINTS



DECEMBER 21 • 4:00 PM
JUNE 21 • 6:00 PM



DECEMBER 21 • 1:00 PM
JUNE 21 • 1:00 PM



DECEMBER 21 • 9:00 AM
JUNE 21 • 9:00 AM



Visioning

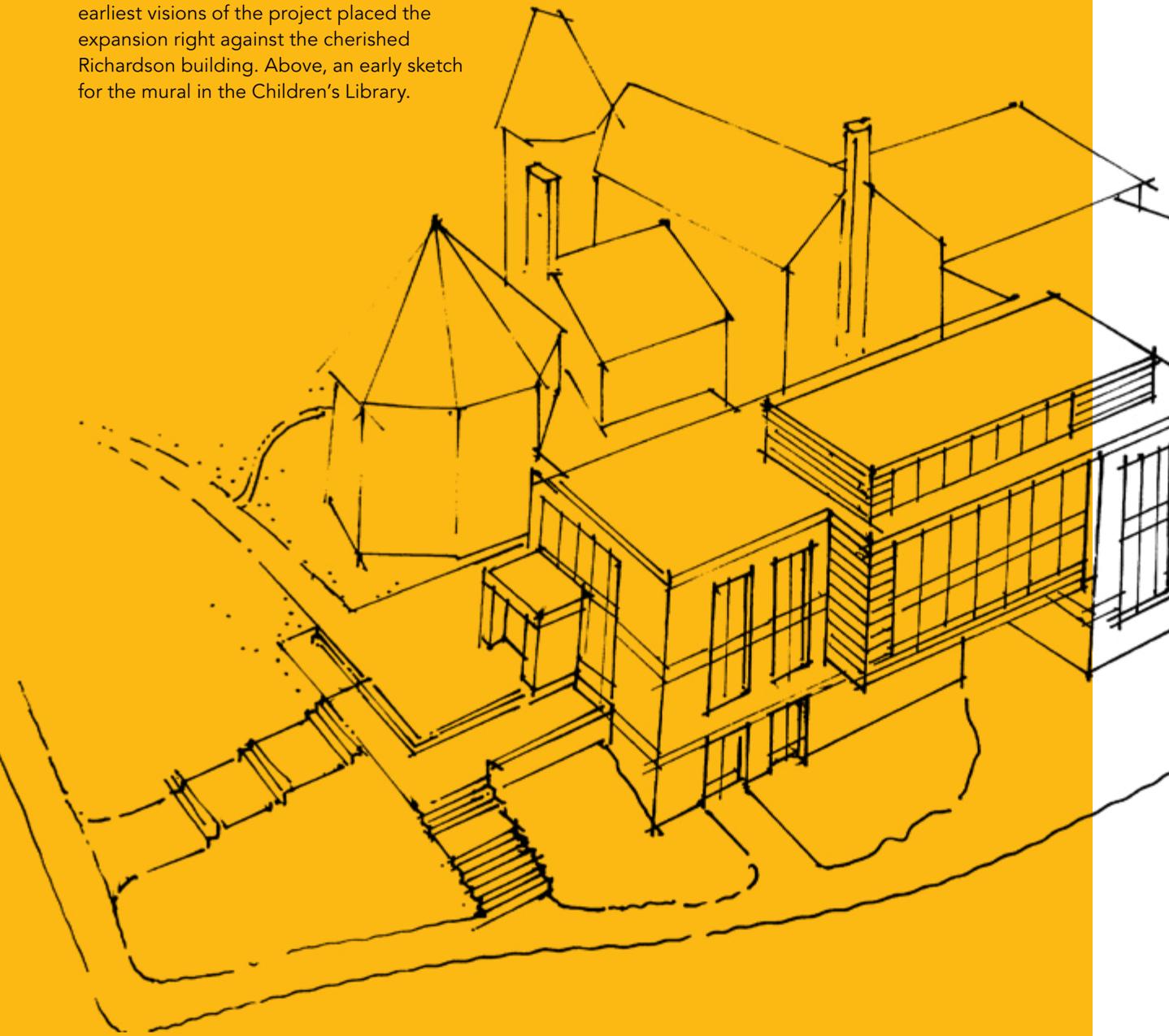
The historical classification of the building meant that certain site and design requirements must be met. The addition must mimic the rhythm of the window and wall patterns, yet light, air and visibility are critical in today's libraries. The constrained site meant that even the earliest visions of the project placed the expansion right against the cherished Richardson building. Above, an early sketch for the mural in the Children's Library.

THE OLD THE NEW & THE WHIMSICAL

Designing along a fine line

Daunting to the team was the challenge of creating an entirely modern, state-of-the-art library structure directly abutting such a precious existing gem of a building. How to design a new, relevant, and highly visible facility without ruining the integrity and stature of the existing one? The design team went for essence and not style; transparency and not presence; light and subtle gestures that amplify the extant beauty of the original library.

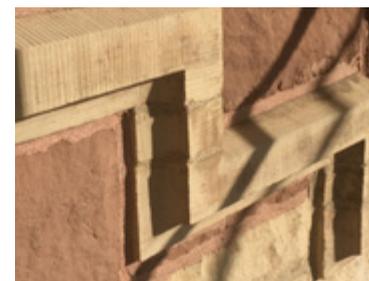
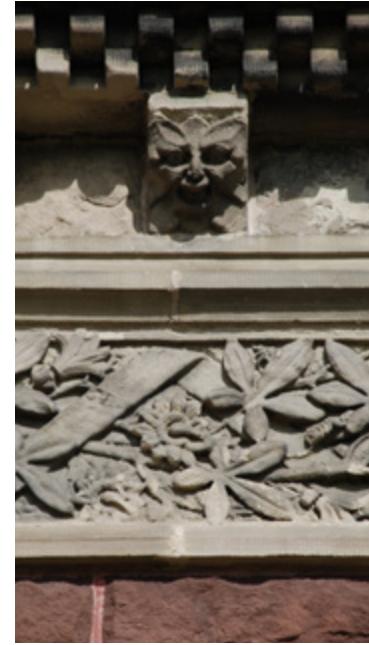
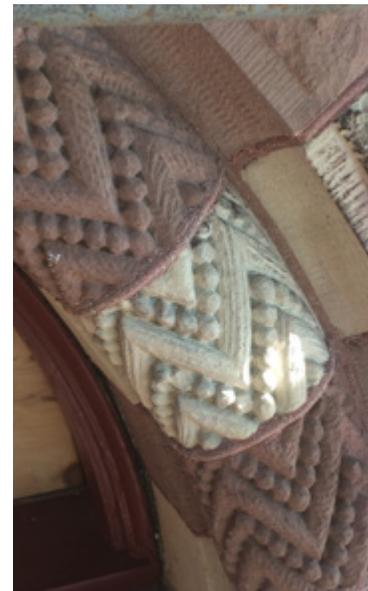
CREATING CONTRAST WITHOUT CLASHING





Back to the source

For the addition, the team traveled to the renowned Berea Quarry in Ohio, the source of Richardson's original limestone, to source stone for the exterior. The difference, though, is its application in a 2" rainscreen vs. the original 2.5-foot walls.



The devil is in the details

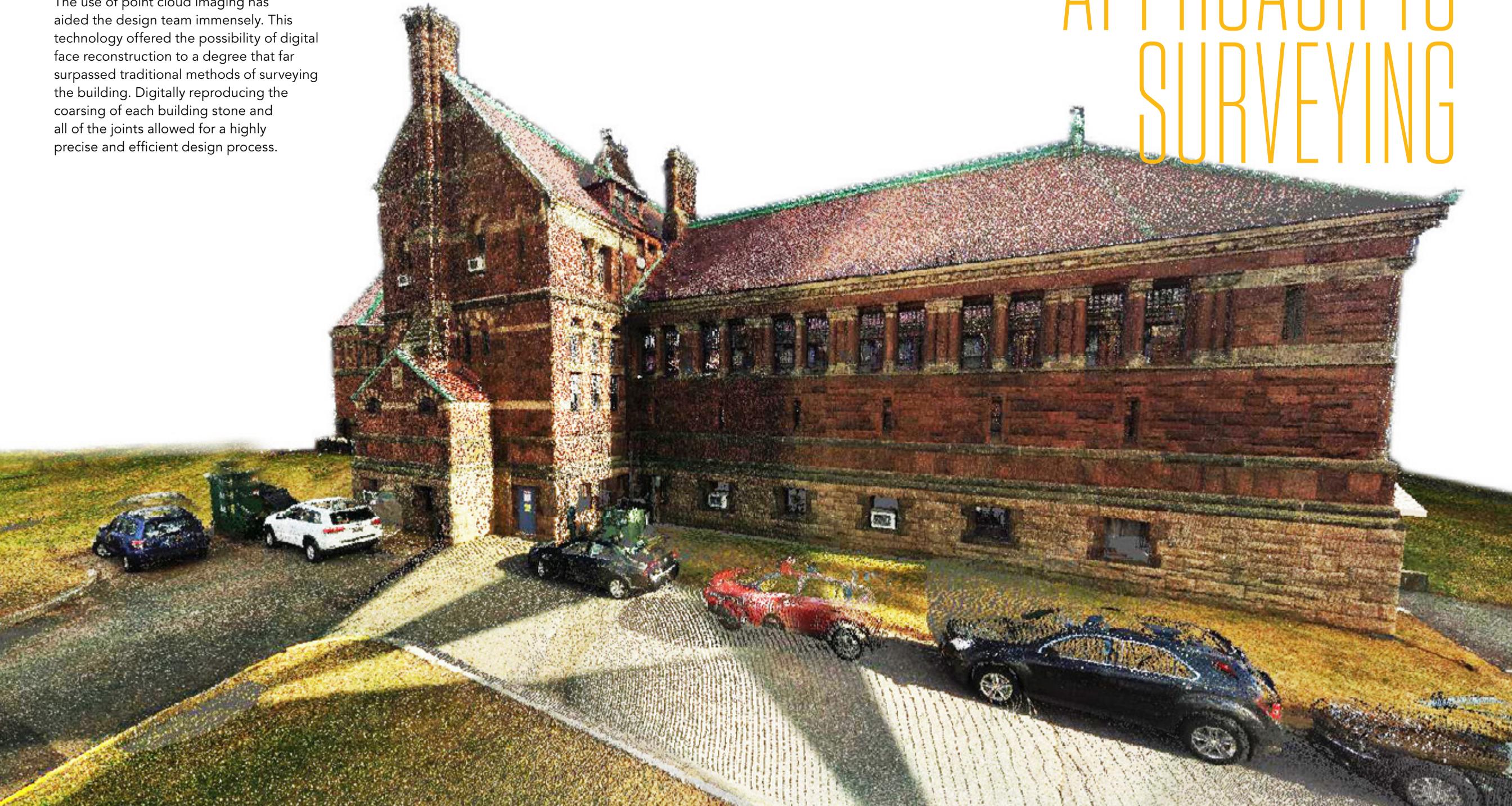
Every one of the 159 window sashes was removed from the building for offsite restoration. All of the frames and sills were refurbished on site. The stone roof was left intact, while the entire building was washed with a scientifically developed formula to effectively erase nearly a century and a half of damage, while protecting the integrity of all of the stone elements.



A MODERN APPROACH TO SURVEYING

Point cloud imaging

The use of point cloud imaging has aided the design team immensely. This technology offered the possibility of digital face reconstruction to a degree that far surpassed traditional methods of surveying the building. Digitally reproducing the coarsing of each building stone and all of the joints allowed for a highly precise and efficient design process.



The Portals

In a highly sensitive operation, the new expansion to the Woburn Public Library was connected to the old through the creation of six distinct portals — openings that permeate the 2.5-foot-thick limestone walls and allow library visitors to pass from new to old, while creating sight lines that visually connect people and space.



CONNECTING OLD TO NEW

ORIGINAL OPENING

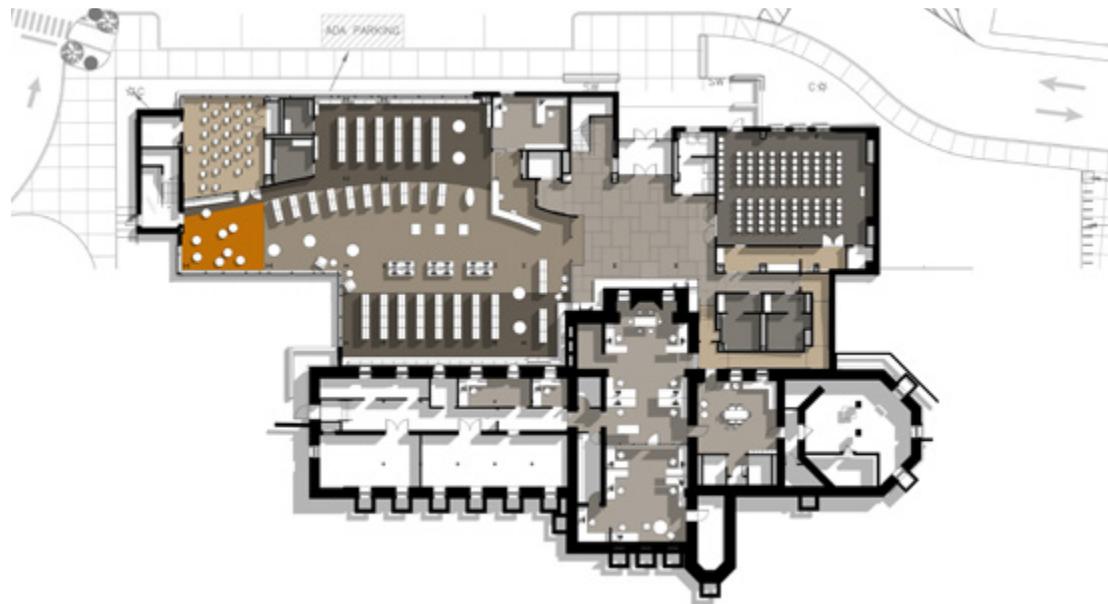
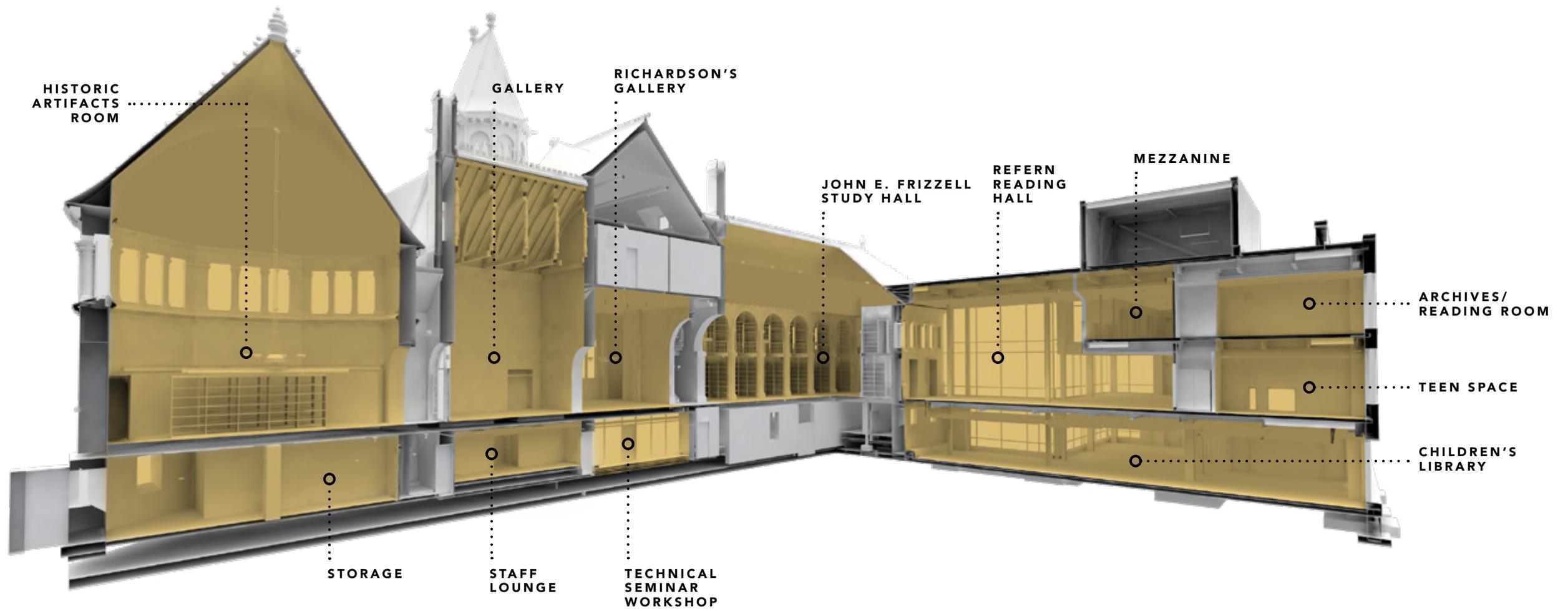


INCREMENTAL BORING



PORTAL COMPLETE





GROUND FLOOR



FIRST FLOOR

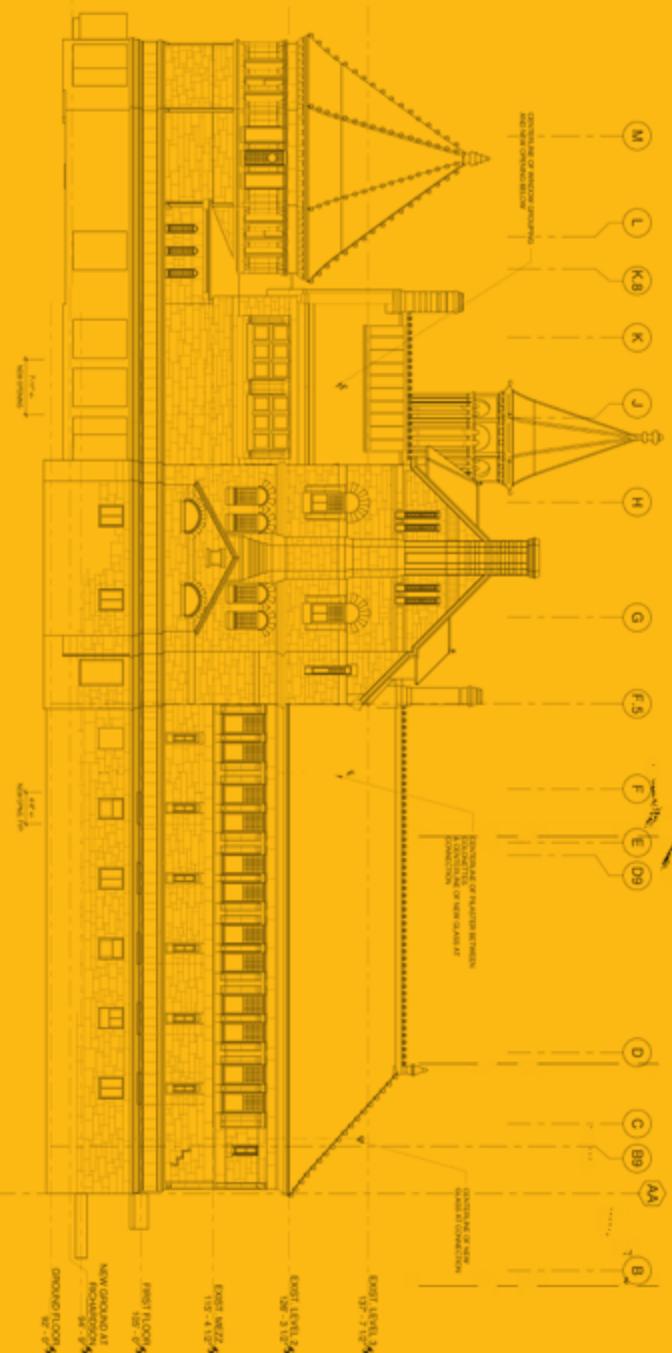


Construction

The primary challenge of constructing this new expansion onto a highly articulated historic facade was to find the best way to connect to it. The irregularities of the building footprint, projecting stone elements and varied window placement would limit the options. The resulting solution was to connect new to old with a high spatial volume, encased in glass, that minimizes intersections with the existing façade while allowing the penetrating light to highlight architectural details.

Through a careful structural intervention, new passageways through the existing north sandstone wall maintain a spatial continuity and seamless circulation between the existing building and the expansion. The original north wall of the Richardson building becomes an interior feature wall of the new addition, projecting all of its carved stone detail as a new focal point within this dramatic expansion.

BUILT HARMONY



4'-3"



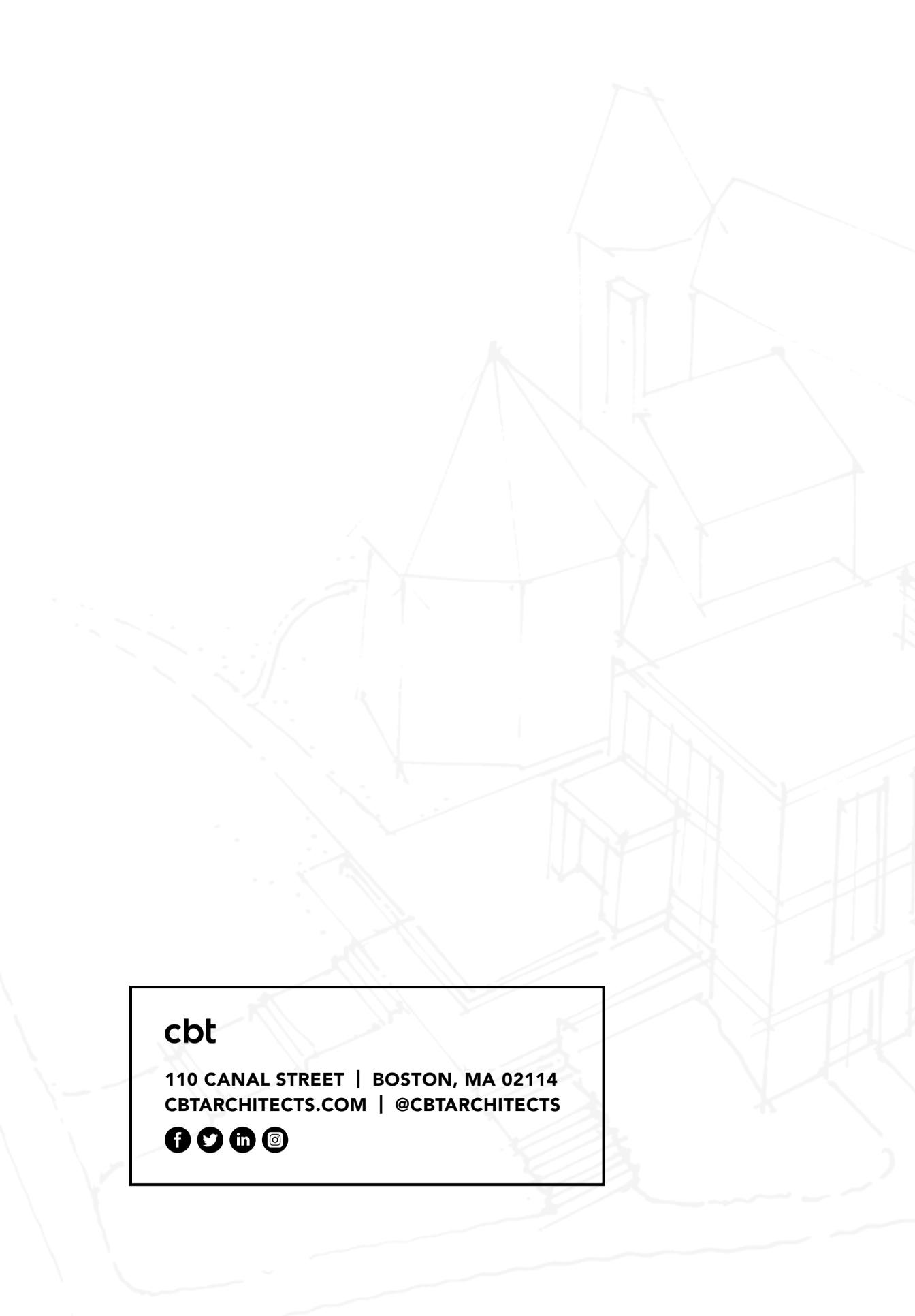
Level 4
32' - 6 1/2"

Level 3
21' - 3 1/2"

Level 2
10' - 3 1/2"

Level 1
0' - 0"

Basement
-9' - 11"



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