ARABIAN LIBRARY

Richärd Kennedy Architects
Scottsdale, Arizona
Web

ARCHITECT BRIEF [1]

Richärd Kennedy Architects, is an award winning design firm with extensive experience in the design of public, higher education, and research facilities for both public and private entities. As an integrated architectural and interiors practice, holistic design is a fundamental component to their design approach. The firm's principals – James Richärd and Stephen Kennedy – provide extensive experience in delivering facilities that function, respond to their context, and enrich how people work, learn, and play.

Richärd Kennedy Architects does not promote a specific style. Instead, each project builds on a conceptual framework that is derived from the program and the response to the site and context. It is fundamental that each building speak to its purpose and internal processes, yet aspire to an intrinsic symbolic concept. The firm believes that architecture must raise the level of expectation and wonder, focusing on the experiential rather than formal language. It is this experiential focus that provides the connection between the individual and the architecture, and through the architecture to the larger environment, context, and purpose.

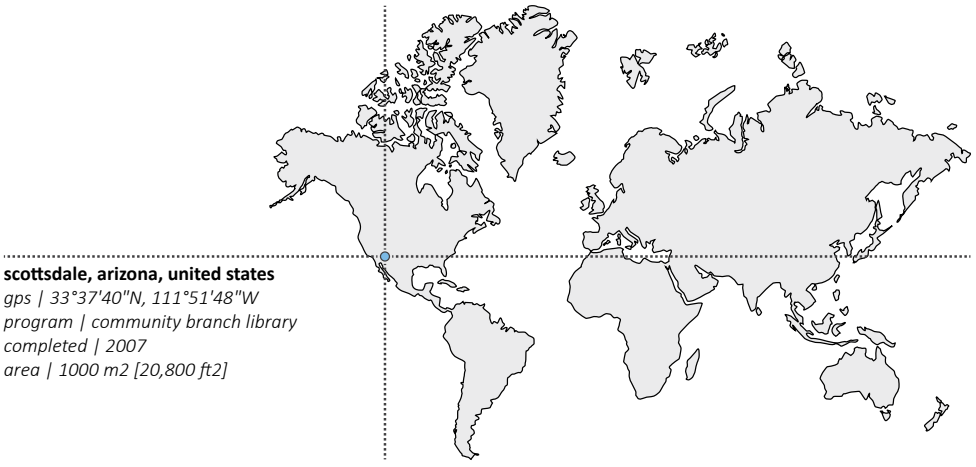
In their work, Richärd Kennedy Architects chooses materials for their inherent integrity, natural beauty, and patina. Unlike synthetic surfaces that erase the mark of time, these materials express the effect of natural processes and develop a sense of permanence in the surrounding landscape. The mark of the hand has also become increasingly important in the firm's work. As with materiality, the understanding of the processes and techniques of craft allow the architects to integrate these as markers in the final architectural work.

PROJECT BRIEF [2]

Arabian Library is one in a series of significant library projects built by the municipalities of Phoenix, Arizona in an attempt to enrich the quality of their local communities. This contribution sits on the north end of Scottsdale, a northeast satellite of the Phoenix metropolitan area. It is sited with stunning views of the McDowell Mountain Preserve in the distance, but the banality of suburban sprawl in the foreground.

The library's program is reflective of trends in contemporary library design. The traditional reading room, book stacks, children's room and playroom, and staff/circulation spaces are complemented with scanning stations that replace the main circulation desk and a café that gives the space the quality of a bookstore instead of a library. This library is not a silent environment. The activity of the space is reflective of new visions for the community library, but one that still has a focus on the transfer of knowledge, especially to the youth of the community. The LEED Certified building incorporates a subfloor mechanical, electrical, and data distribution system, providing long term flexibility in a rapidly changing informational environment.

Fig 1 | *Location Map*



scottsdale, arizona, united states
gps | 33°37'40"N, 111°51'48"W
program | community branch library
completed | 2007
area | 1000 m2 [20,800 ft2]

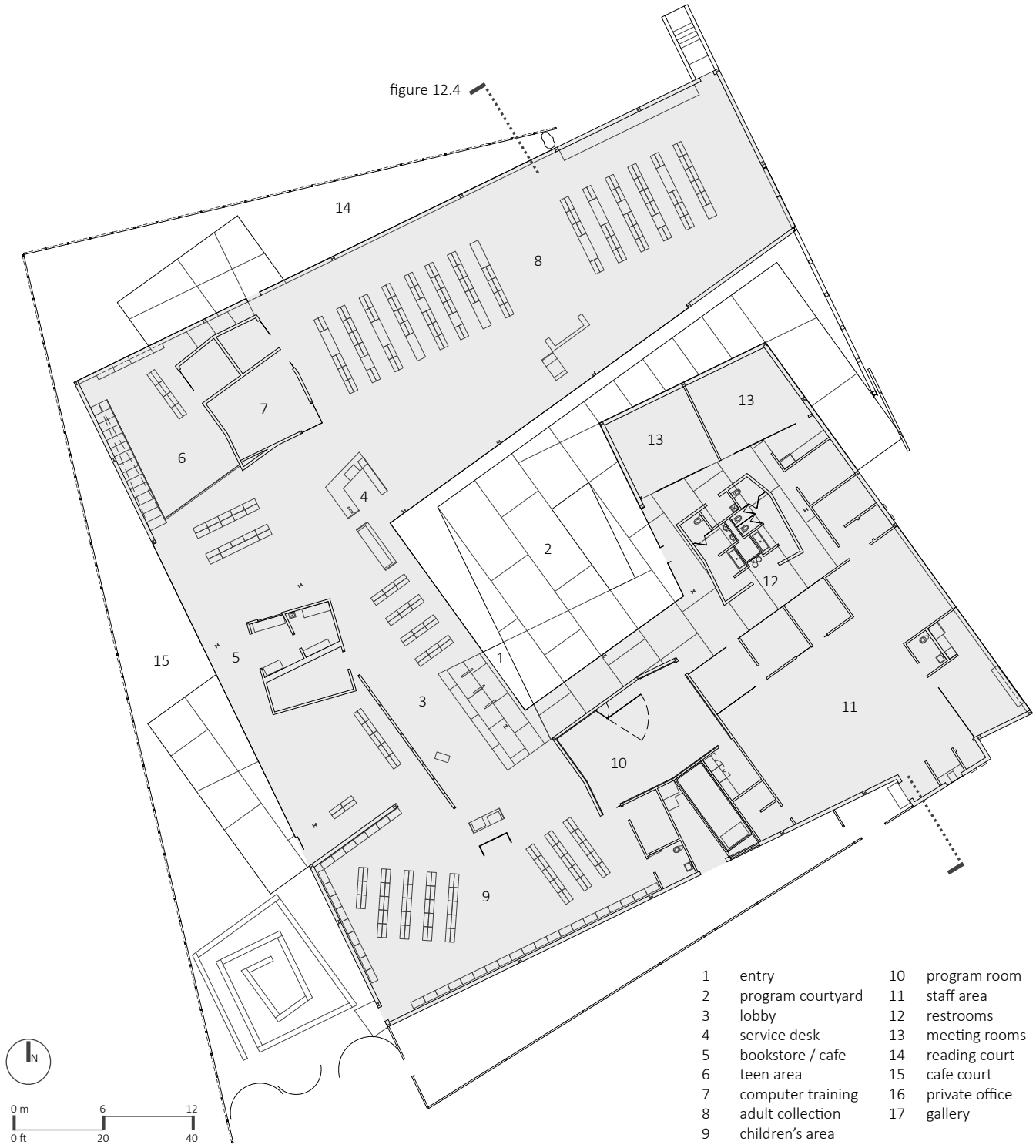


Fig 2 | *Floor Plan*

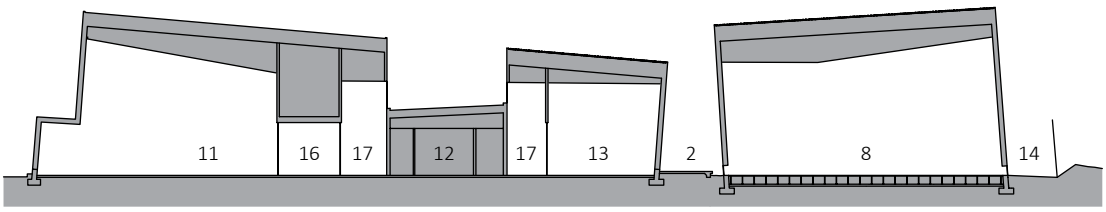


Fig 3 | *Building Section*

Fig 4 | *View of Arabian Library from the parking lot. © Bill Timmerman*

Organized around a central courtyard, the building is entered through a canyon of steel and glass. The courtyard is used as a program space for the library and as a pre-function space for its meeting rooms. Two separate slender courts also flank the west and south sides of the building, expanding library lounge spaces to the exterior and ultimately opening the building again to both the sky and the desert floor.

TECTONIC PRINCIPLES

PRECEDENT

The building is designed with reference to the desert slot canyons of northern Arizona (36°55'19"N, 111°24'56"W) and monument valley. Ever-patient threads of water, sculpting and polishing the massive walls, cut these natural sandstone canyons over millennia. The library echoes this powerful natural sequence. The gesture of the building is complemented by its materiality – rusting steel panels ¬– which provides a similar intensity and tone of color as the canyon walls. Just as the slot canyons have changed (and continue to change) with time, the surface of the steel panels changes as well. This experience is most prominently felt in the entry/exit sequence. This threshold condition – akin to Frascari's formal joint – succeeds in "capturing the powerful and unique experience between the compressive stone walls and the ultimate release to the sky above." [3] As time works away on the canyon, the less dense stone is carved away while the denser stone remains. This process of carving is immediately identifiable in the library as well and the effects continue on into the interior of the building.

The building is lined with perforated hardboard and recycled cotton insulation to accommodate acoustical properties while reinforcing the homogeneous notion of the canyon walls. A series of architectural ledges give way to internal clerestories, introducing daylight to the center of the space.[4]

In a separate geological process, the Arabian Library is seemingly subjected to an upward thrusting motion from the shifting of the earth. The sharp, angular lines of the building promote this reading. The design of the library utilizes the characteristics of geological tectonics to both shape space and to heighten the architectural tectonic reading of the building.

PLACE

The Arabian Library was designed as a filter of the harsh desert sun. The building utilizes slices of glass selectively, channeling light to the interior, while mitigating substantial heat gain. Again, this process is reflective of the slot canyons where, at certain moments, light filters down from high above. At several locations in the building, clerestory windows are paired with light shelves to bounce or reflect light into the space rather than receive it directly. This process can minimize the heat that travels into the space and can help throw natural light deeper into the building, allowing for additional energy savings during the day.

The building also responds to its physical surroundings. The glazing in the building is not only located to control light and heat, but also views. The exterior of the building presents itself as a windowless mass, an earthen form. Strategically placed "cracks" in this skin allow the library to carefully open up to the surrounding environment, absorbing certain influences – views of the mountains beyond – while concealing others – the residential neighborhoods. The library is a good example of Semper's courtyard typology. Although Semper believed this configuration was developed to protect against the environmental forces of warmer climates, here Richärd Kennedy Architects have also used the inward focused construction type to shield the project from the potentially harsher cultural influence of vast suburban sprawl.

ANATOMY

The earthwork of Arabian Library is a concrete foundation system embedded in the desert soil. Although much of the building sits on grade, one corner is sunk about 46 centimeters [18 inches] below the surface of the desert floor, creating a bench high seat along the glazed perimeter of that area. On this foundation system rests a steel framework that provides stability for the building and supports the steel roof structure above. Infilling the framework is a lightweight steel wall system clad with steel panels on the exterior and perforated hardboard panels on the interior. Glass also plays a key role in the cladding of the interior spaces, filling the slices in the building's mass.

The hearth of the Arabian library is the protected central courtyard where a specimen palo verde tree sits as the focus. This symbol of life in the desert, sheltered by the surrounding building, is the figurative life of the library. As you move through the entry sequence and into the building, you pass by the tree and through this social center.

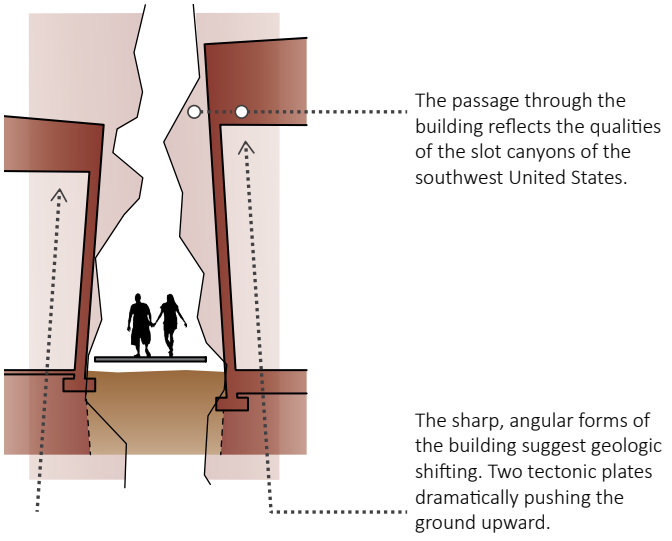


Fig 5 | *Comparison of the building entry sequence to a slot canyon*

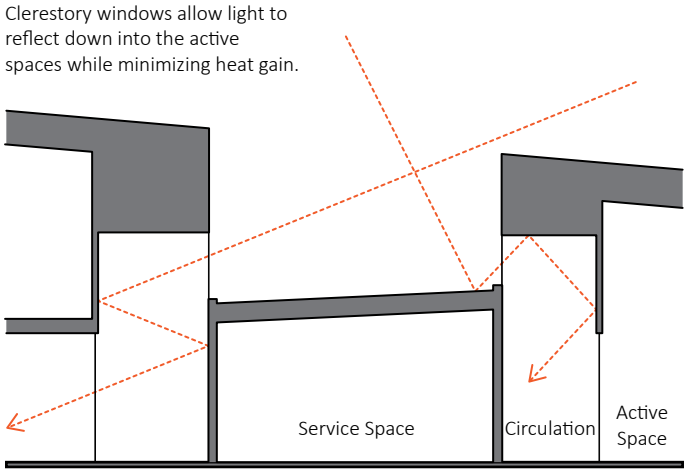
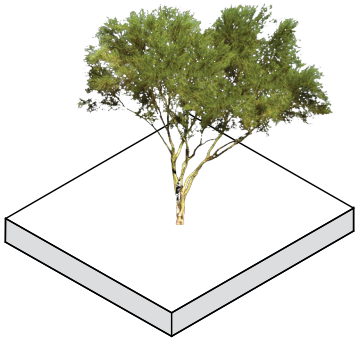
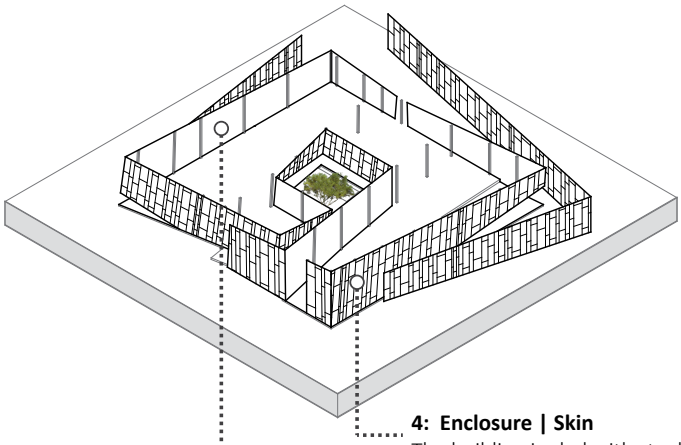


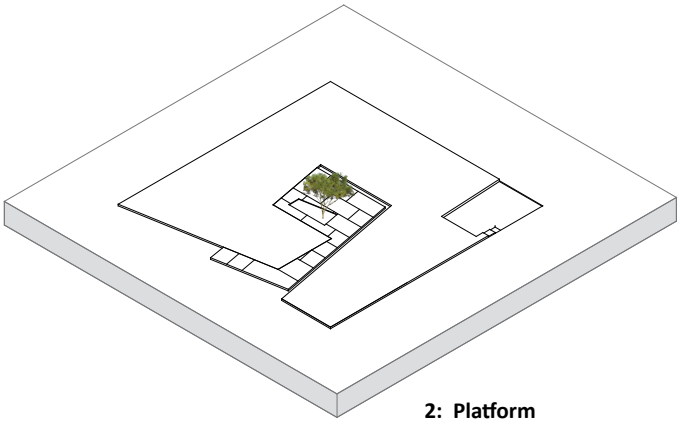
Fig 6 | *Clerestory light*



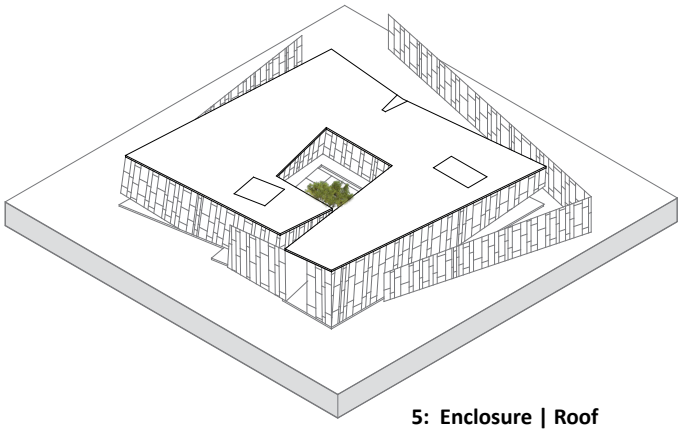
1: Hearth
Standing alone in the courtyard of the library is a single specimen palo verde - a symbol of life that is sheltered by the surrounding building.



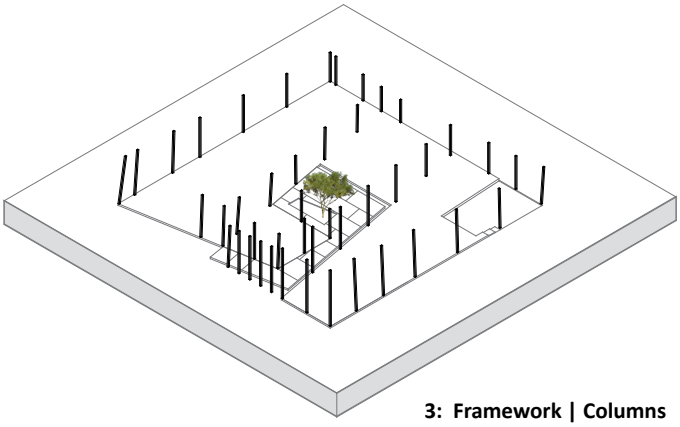
4: Enclosure | Skin
The building is clad with steel panels on all exterior surfaces while the interior is clad with perforated hardboard.



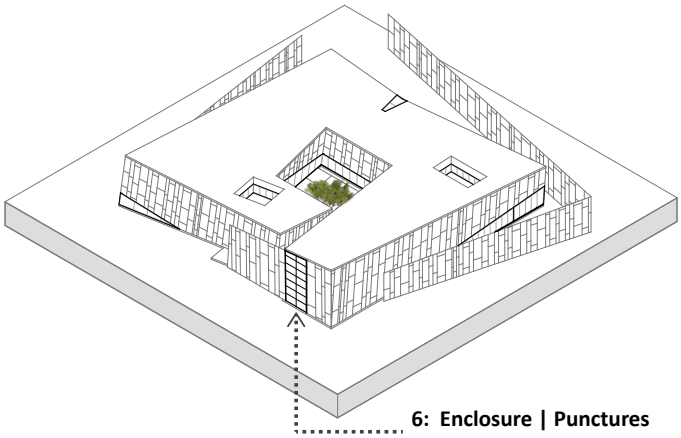
2: Platform
A concrete pad serves as the base of the building, extending to the court and depressing at the teen center.



5: Enclosure | Roof
Originally intended to be a green roof, the low-slope roof protects the building from the elements.



3: Framework | Columns
A gently sloping steel structure forms the frame of the building. A network of steel members also composes the roof structure (not shown).



6: Enclosure | Punctures
Slices in the walls are filled with glass, allowing controlled light into the space and views out of the space.

Fig 7 | *Building Anatomy*

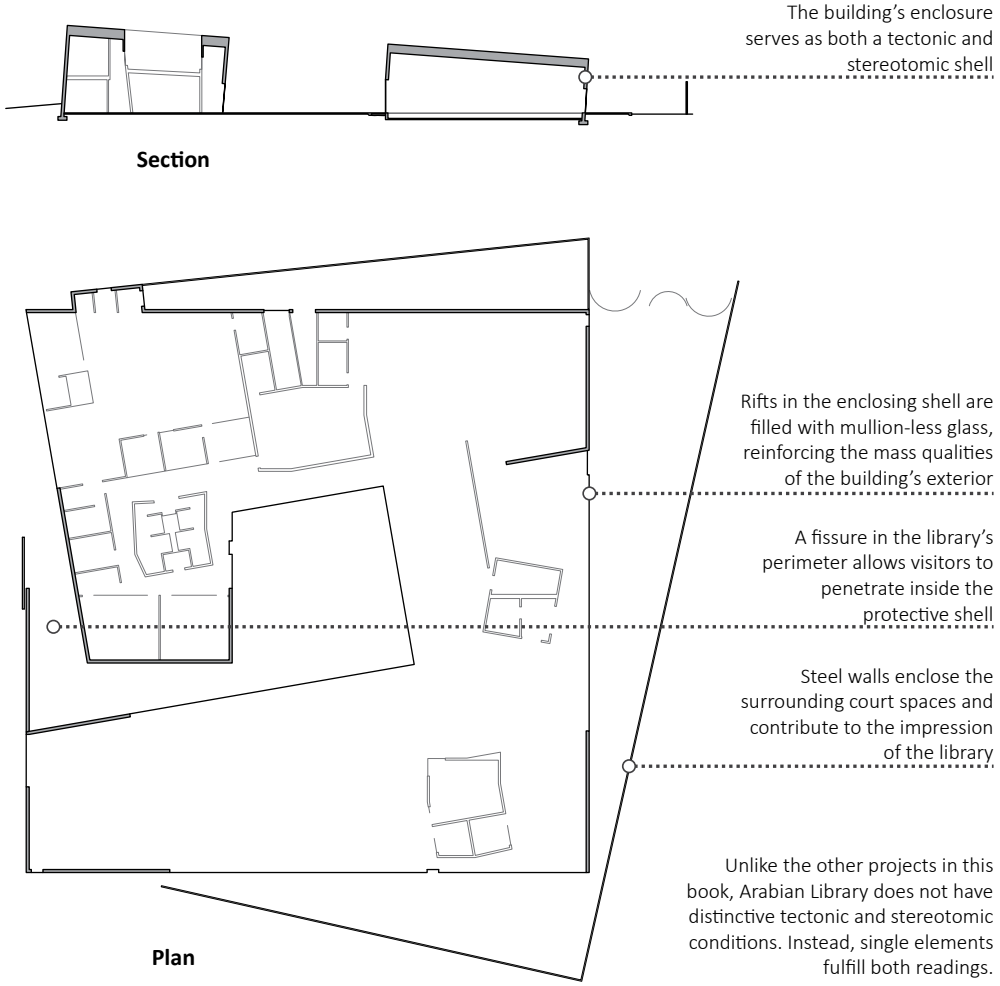


Fig 8 | *Tectonic | Stereotomic*

STEREOTOMIC | ATECTONIC

From a distance, the Arabian Library is a mass of weathered orange; it is a natural outcropping in the Sonoran desert. The stereotomic here is embodied in the recycled corten steel clad walls of the building. Corten steel – which is a specific trademark of the generic product of weathering steel – is an alloy that forms a stable rust-like surface when exposed to the elements. The surface weathering protects the bulk of the steel from damage, eliminating the need for painting or other surface treatments.

The stereotomic quality of the library is enhanced through the nature of its openings. Instead of punched windows and doors, the mass of the building is carved away, seemingly in an act of subtraction. These subtractions are filled with mullionless glass, which is deployed in full height and full length runs. The lack of definition between interior and exterior created through this glazing construction reinforces the feeling of eroded space; you move through these crevices as you enter the building. The effect is also enhanced through the detailing. In the courtyard, the steel walls slip down into a narrow, gravel-filled channel running between the wall and the pavement. This reveal heightens the impression that the library is rising out the ground, part of the geology of the earth's crust.

The stereotomic qualities of the building, however, are just a mirage. Similar to one of Sekler's definitions of the atectonic, in the Arabian Library there is a disconnect between the presence of the building (or the perception of its structural principles) and the actual construction employed in its creation. The heavy masses are not constructed from traditional stereotomic materials – concrete, masonry, earth, or stone – but instead from steel.

TECTONIC | ATECTONIC

Although the building is supported by a steel structure, much of this frame is concealed between the exterior and interior cladding systems. What steel is exposed, however, plays an interesting tectonic role. The slices in the building's exterior reveal the steel structure. In certain locations in the library, these exposed columns – a portion of the tectonic frame – visually support the carved mass above. In a reversal of the traditional tectonic language and roles posited by

Frampton, the library's tectonic frame tethers the mass to the earth. This rather atectonic composition of slender steel columns supporting the stereotomic mass, which peels away from the ground below, creates a dynamic play of structure in the building.

The true assembly of the exterior walls is also revealed through their detailing. At the start of the main entry path into the building, you are confronted with the end of a wall that defines the beginning of the entry corridor. Here, unlike when viewing the wall from the face, it is revealed to be a core sandwiched between two thin sheets of steel. At this moment, the nature of the structure as a carved mass is compromised in favor of an assembled structure.

REPRESENTATION | ORNAMENTATION | INTERSECTION

Like the wall end condition described above, the detailing of the steel cladding is reflective of the tectonic nature of the perceptibly stereotomic mass. The surface is actually created from a series of smaller steel panels that come in four different widths. The panels are tall and slender and the horizontal joints between the panels are staggered. This configuration creates a series of prominent vertical striations on the surface of the exterior walls which sharply juxtapose the horizontality of the building at its larger scale. These lines, along with the textural presence of the small steel fasteners used to hold the panels onto the surface behind, are indicative of the actual structure and flow of gravity load occurring within the walls themselves.

The patterning of the stark facades (both inside and outside), is quintessential contemporary ornamentation. The play of material and its jointing provides the texture and representational role of the building with respect to its construction. This pattern is evident not just in the corten steel cladding, but also carries through into the glass and the interior hardboard paneling. In all situations, the texture added creates a dual reading of the building: from a distance as a mass and closer as an articulated assembly. And, as this detailing provides the key relationship between the reading of the stereotomic and the tectonic in the wall surfaces, it is also the primary intersection in the library. Unlike most of the other buildings discussed in this book, in the Arabian Library, the relationship between tectonic and stereotomic occurs internally in a single element rather than between separate elements. The material detailing provides a dialogue between these two readings.

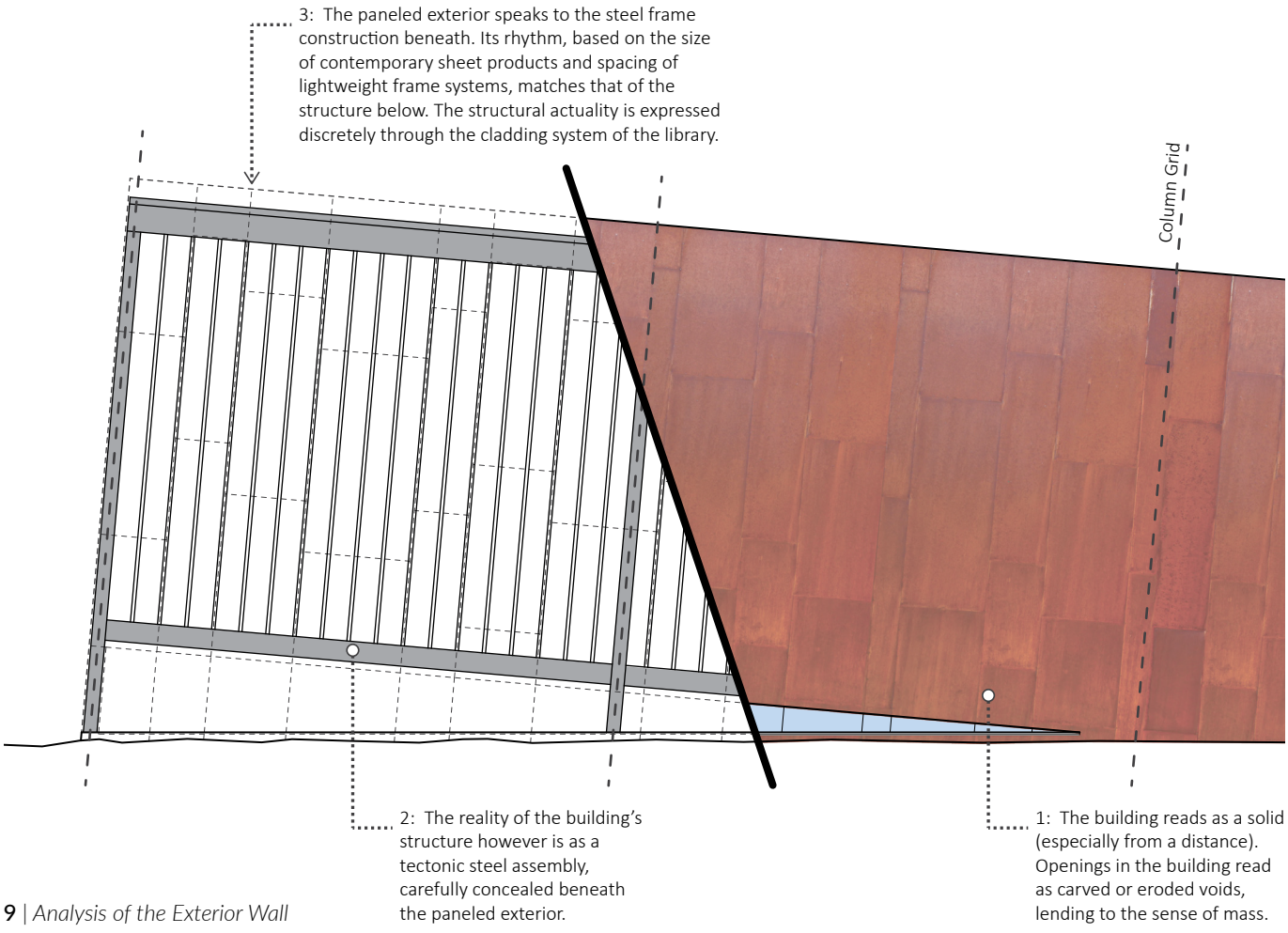


Fig 9 | *Analysis of the Exterior Wall*

SPACE

The spatial tectonics of the Arabian Library are created through a perceptible peeling back of the building's skin. Although not a literal one-to-one relationship, the perimeter walls of the outer courts have a strong positive character that aligns with the negative connotation of the window walls. This peeling action is tied to Semper's theory of dressing; the concealing and revealing of the building acts in a similar fashion to the specific draping of fabric on the human form. These shifts are experienced by the user primarily in section as the mass/void relationship alternates high and low. The reveals created through this process are scaled to the program occurring in that area of the library. For example, along one exterior wall lined with tables the slice in the building is ideal for getting light and views to an individual sitting and reading a book. This slice would be experienced very differently by someone standing next to it. In this building, the manipulations of the building's mass have clear relationships to the perception of and utilization of space by the user.

Fig 10 | *Building Cladding*

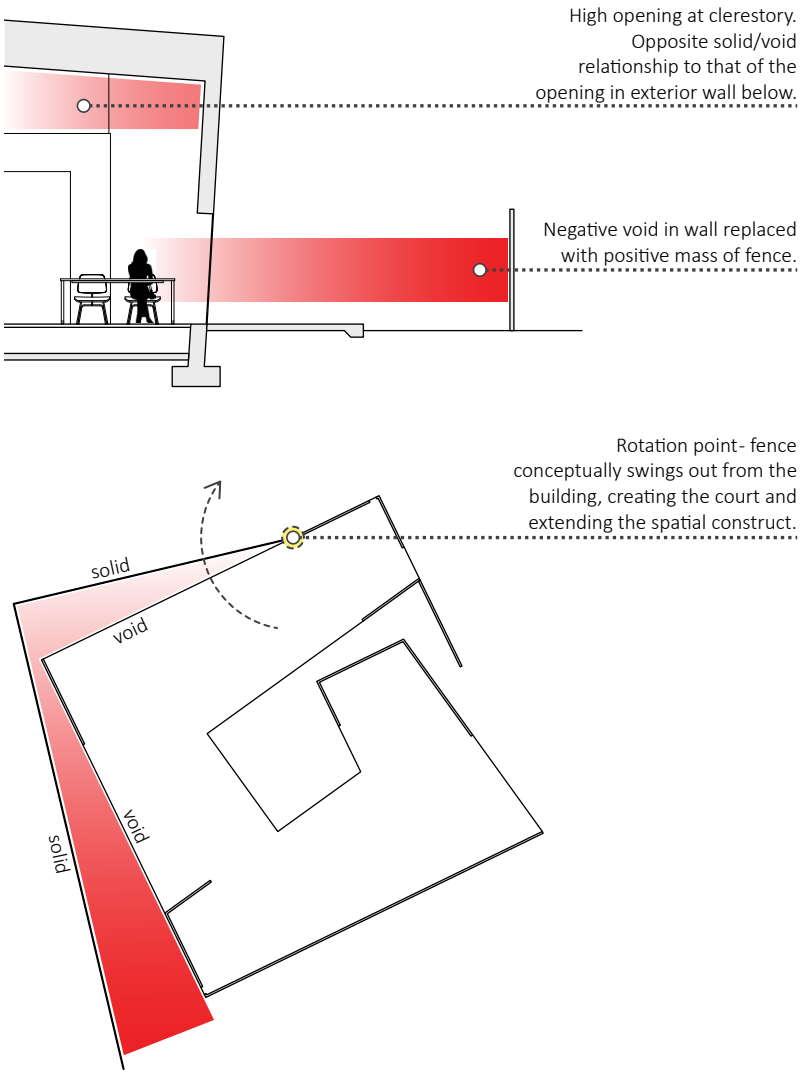


Fig 11 | *Peeling of the Building*

ADDITIONAL RESOURCES

KEY PROJECTS

Desert Broom Library, Phoenix, Arizona, United States, 2004 (33°45'16"N, 111°59'32"W)

Interdisciplinary Science + Technology Building 2, Arizona State University, Arizona, United States, 2005 (33°25'16"N, 111°55'46"W)

Meinel Optical Sciences Building, University of Arizona, Arizona, United States, 2006 (32°13'53"N, 110°56'52"W)

Harmon Library, Phoenix, Arizona, United States, 2009 (33°26'9"N, 112°4'48"W)

College Center, Central Arizona College, Superstition Mountain Campus, Arizona, United States, 2012 (33°24'32"N, 111°32'36"W)

REFERENCES

"Arabian Library [Scottsdale, Arizona, 2007]: Richard+Bauer." C3 Korea, no. 331 (2012): 114-23.

Levinson, Nancy. "Richard + Bauer Draws People through a Rusting Steel Canyon and into Scottsdale's Arabian Public Library." Architectural Record 196, no. 6 (2008): 96-101.

NOTES

1 This section is adapted from a firm biography provided by richärd+bauer.

2 This section is adapted from a project narrative provided by richärd+bauer.

3 This quotation was taken from a project narrative provided by richärd+bauer.

4 ibid.