SEEMING INEVITABILITY:

RENZO PIANO DESIGNS A REVERENT ADDITION TO LOUIS KAHN'S KIMBELL

Left: Aerial view from northwest. Above: Piano Pavilion from east, 2014. Photos: Michel Denancé.

BY RONNIE SELF

Louis Kahn's and Renzo Piano's buildings for the Kimbell Art Museum in Fort Worth are mature projects realized by septuagenarian architects. They show a certain wisdom that may come with age.

As a practitioner, Louis Kahn is generally considered a late bloomer. His most respected works came relatively late in his career, and the Kimbell, which opened a year and a half before his death, is among his very best. Many of Kahn's insights came through reflection in parallel to practice, and his pursuits to reconcile modern architecture with traditions of the past were realized within his own, individual designs.

Piano (along with Richard Rogers and Gianfranco Franchini) won the competition for the Centre Pompidou in Paris as a young architect only in his mid-30s. Piano sees himself as a "builder" and his insights come largely through experience. Aside from the more flamboyant Centre in the French capital, Piano was entrusted relatively early in his career with highly sensitive projects in such places as Malta, Rhodes, and Pompeii. He made studies for interventions to Palladio's basilica in Vicenza. More recently he has been called upon to design additions to modern architectural monuments such as Marcel Breuer's Whitney Museum of American Art in New York and Le Corbusier's chapel of Notre Dame du Haut in Ronchamp. Piano's means for reconciling modern architecture with traditions of the past have been derived from a direct and considered response to the preexisting architectural object. By now, the experience of engaging with important historical monuments as well as the discipline required to work with the committees and commissions that protect them have been internalized. Piano's approach is generally respectful, but he does not mimic. There is, however, a chameleon-like method where context is often interpreted through materials: Piano's use of stone responds to existing stone, wood responds to wood, concrete responds to concrete, and so on. He also takes cues from surrounding buildings and urbanism. Wisdom may hinge on amassed experience. Older and wiser may be equated with a more nuanced synthesis of information and an ability to surmount egocentricity. In different ways, these are the qualities that both Kahn and Piano brought to the Kimbell Art Museum.

Louis Kahn's lower-level east entry to the Kimbell is on an axis with Darnell Street, which is bordered to the north by Tadao Ando's Modern Art Museum and to the south by a generally unbuilt site also owned by the Kimbell that is known as the "Darnell site." This was the first location

PIANO'S MAIN TASK WAS TO RESPOND APPROPRIATELY TO KAHN'S BUILDING, WHICH HE ACHIEVED THROUGH ALIGNMENTS IN PLAN AND ELEVATION ...

Piano Pavilion, left, and original Kahn Building from west. Photo: Robert LaPrelle.

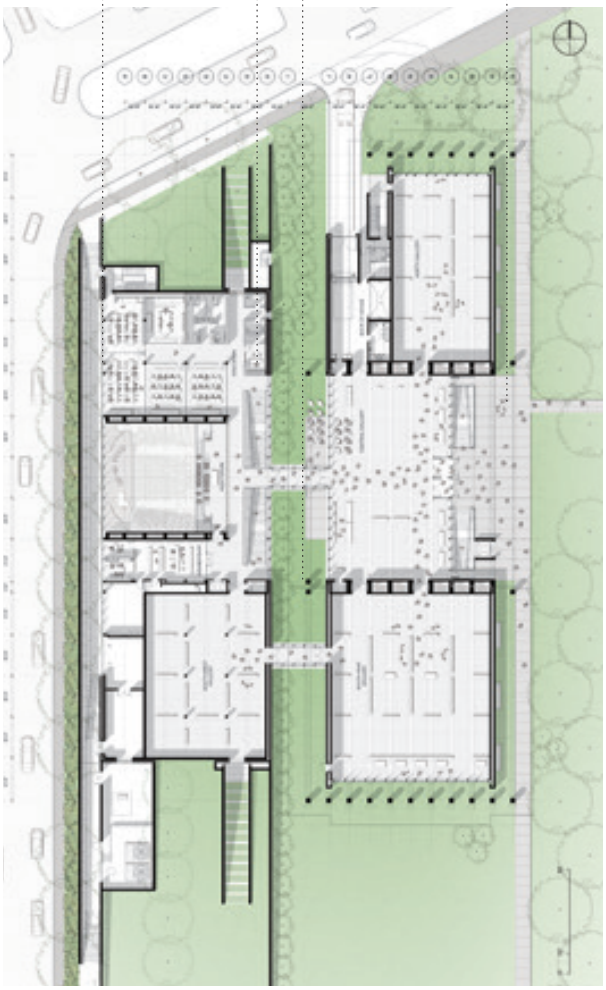
considered for a new project by Renzo Piano Building Workshop. This site, however, cater-cornered and across Van Cliburn Way from Kahn, did not lend itself to establishing a desired relationship between the new and the existing, and the project eventually moved to its present location to the west of Kahn's building.

Situated at 200 feet the one from the other and perfectly aligned in plan, the two buildings have a strong relationship. Still, the loss of the open lawn that existed in front of the Kimbell where Piano's building now stands is regrettable. Kahn's Kimbell was conceived as a large house or a villa in a park, and unlike much of the abundant open and green space in the Fort Worth Cultural District, that park was actually used. The built and landscaped definition of the prior Kimbell lawn was minimal, but anchored by the museum and rows of trees, it was just enough to make the lawn a true public space for picnickers, sports players, and the like—a type of space even more precious as the area around the Cultural District densifies. The lawn was informal and free of artifice. It was also befitting to Fort Worth in its size and its impression of wide open space. The park also afforded a long, impressive view of Kahn's west porch (particularly striking at night) from Camp Bowie Boulevard and Will Rogers Road. Piano's new outdoor space is more like a courtyard—more contained and more formal. It is more urban in its design, yet less public in its use.

While some of Louis Kahn's more ambitious and larger preliminary design schemes for the Kimbell would have removed the double offset rows of elm trees in the middle of the site, his smaller, built version responded to and was intimately linked to the grid of the existing vegetation. The trees, planted in the 1930s, had originally bordered a street that was later replaced by a lawn. By the time Piano's project began, the trees were at the end of their lifespan and were removed in order to construct an underground parking garage for 135 cars located between the two buildings. After investigating other options for planting patterns in the new Kimbell courtyard, Piano and the landscape architect Michael Morgan decided to replicate the preexisting landscape in the choice and placement of major trees. Likewise, the iconic yaupon holly grove that is an integral part of Kahn's west entry sequence was replaced with new trees. Since these hollies are younger and have lower branches than the older trees that were removed, they have the surprising effect of completely masking (for now) Piano's building from Kahn's west entrance lobby. Piano's east facade is austere and lacks the surface texture he often seeks. At night, however, there is an interesting play of Chinese shadows on the blank concrete planes since pedestrians pass between the wall and the ground level lights that illuminate them.

Of Renzo Piano's many museum projects, several have been located in park-like or suburban settings. Of Louis Kahn's three constructed museums, the Kimbell is the only one to be situated in a park. In the budding Fort Worth Cultural District of Kahn's time, there was relatively little immediate built context to respond to. Kahn developed a comprehensive site plan in a band bordered by streets on three sides to the north, east, and south and contained by the allée of elm trees on the fourth side to the west. Along with the building itself, parking areas, service areas, and a sculpture garden are carved into the landscape to form one coherent ensemble. There are no sacrificed or back sides to the project.

Piano's main task was to respond appropriately to Kahn's building, which he achieved through alignments in plan and elevation and by dividing his project into two major bodies: a concrete-walled, glass-roofed pavilion facing Kahn and a separate, sod-roofed structure behind it, designed to integrate a significant portion of the project with the landscape and thereby lessen its overall impact. The back portion does not



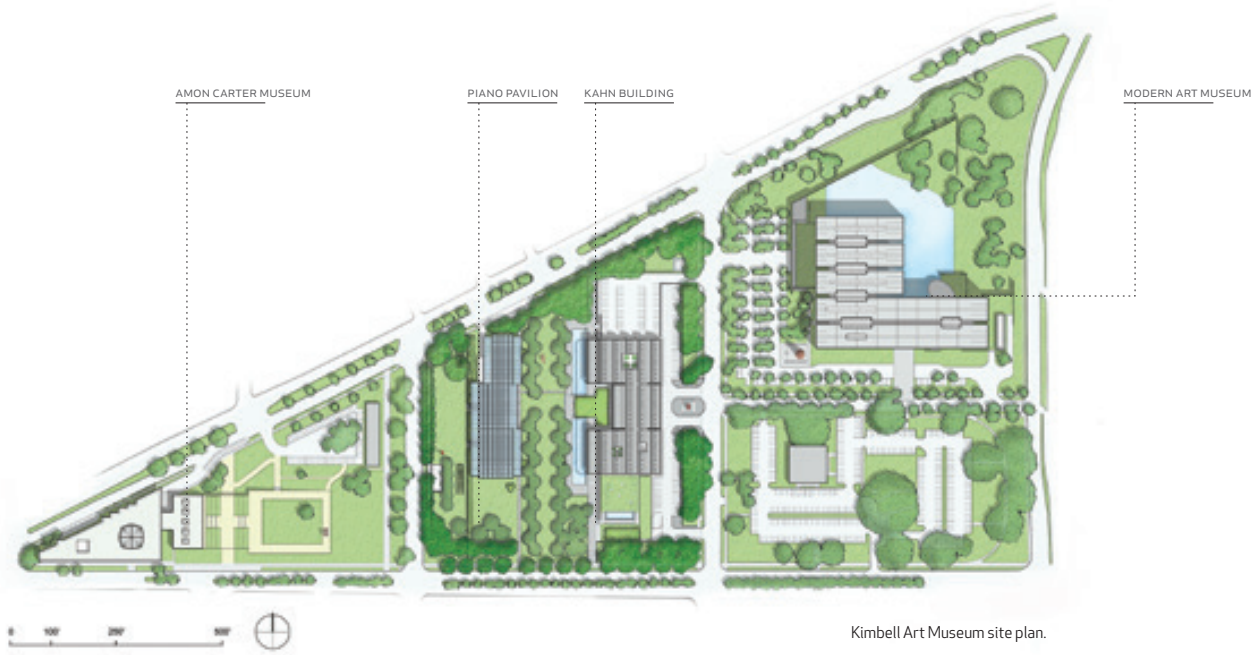
Campus section (top) and Piano Pavilion ground floor plan (above).

JUST AS KAHN'S BUILDING WAS SO COMPLETE THAT ANY DIRECT ADDITIONS WOULD HAVE SPOILED IT, THE NEW KIMBELL IS ALSO COMPLETE.

disappear, however. Its ground slope is too steep to merge into the park space comfortably enough for spontaneous use by visitors, and the composition of concrete retaining walls and steel handrails presents an alienating face to Will Rogers Road and to the Amon Carter Museum to the west. It will undoubtedly soften as the vegetation grows.

The Nasher Sculpture Center in Dallas is included in Peter Buchanan's fifth volume of *Renzo Piano Building Workshop: Complete Works*. Immediately following the description and analysis of the project is an interesting essay that compares and contrasts the Nasher and Kahn's Kimbell. (The text, published in 2008, predated Piano's Kimbell commission.) In reference to both buildings and as a "criterion of architectural quality," Buchanan speaks of "...the achievement of seeming inevitability in which every part of the design has found its exact form and place within the internal logic of the scheme."

Kahn's Kimbell is extraordinary and unmatched in its synthesis of the parts and the whole. Beyond the synthesis of form, space, structure, and light within the cycloid vaults, there is the "inevitability" of the linear, two-story light wells, for example, that bring natural light to office and service areas at the lower level; likewise, the courtyard that bypasses the gallery level brings light to the conservation area at the lower level. It is also somewhat remarkable that the loading dock door on the north facade fits so effortlessly in the 20-foot vaulted bay.



Kimbell Art Museum site plan.

Kahn's building has nevertheless been criticized for the way the auditorium (182 seats) and the library were squeezed into the building modules. We can imagine, however, that the freight elevator, located almost as if a free-standing object in the vaulted bay of the cafeteria, would have caused the architect more grief since it does not conform to the reigning servant/served order of the project. These are quibbles when compared to the near perfection of the overall layout.

Piano's pavilion assumes the internal logic of Kahn's building for certain aspects of the design, develops its own logic for others, and draws upon over 35 years of experience in museum design for many.

Piano's glass-roofed pavilion matches the overall length of Kahn's building and aligns the new with the existing. Piano divided the building mass into three parts just as Kahn did. He enters in the middle bay. Piano twice translated Kahn's system of double stairs into his project (once in the same direction and once flipped), and the well that lights his 298-seat auditorium echoes the light wells of the earlier building. While visitors are not able to actually pass through the project as is possible in Kahn's building, Piano's auditorium light well provides a connection to the outdoors, predominately the sky, and counteracts any dead-end effect of the underground portion of the project. The light well is the end of an axis that begins with Darnell Street to the east, moves up and through Kahn's building via his double stair, through the yaupon holly grove and newly planted courtyard, through Piano's building, and down into the auditorium via another double stair. It is a rich succession of spaces and precisely the sequence Renzo Piano Building Workshop depicted in presentation section drawings. It is difficult to imagine that the axis could ever be extended further to the west. Just as Kahn's building was so complete that any direct additions would have spoiled it, the new Kimbell is also complete.

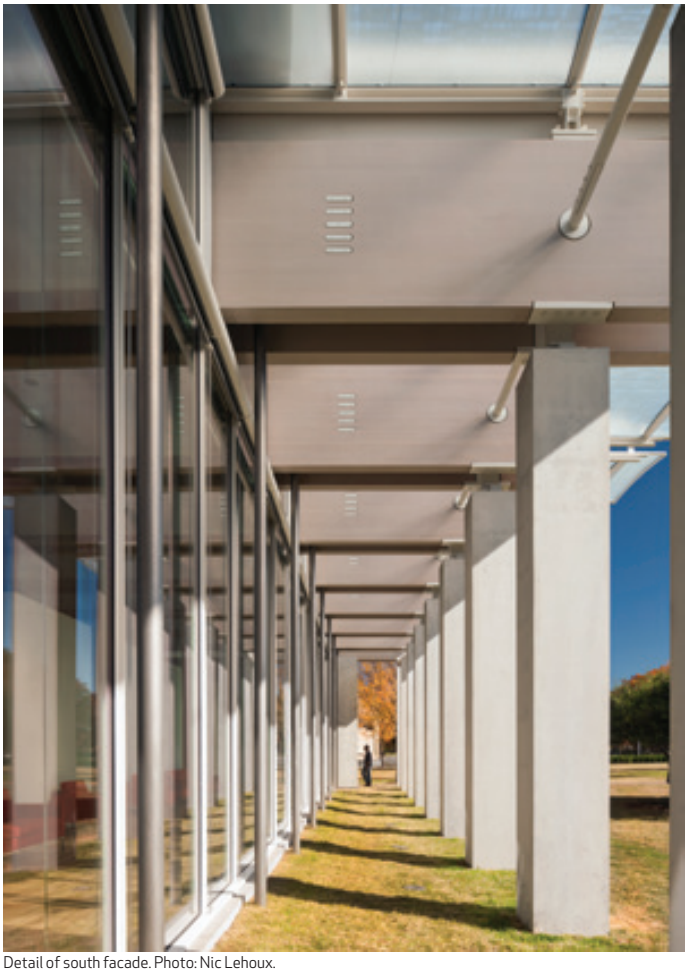
Contrary to general opinion, Kahn's east entry (often referred to as the back entry) is arguably equal to or even richer experientially than the west entry. From a more constrained and darker space below, visitors ascend to the brighter upper level entrance lobby that allows for long views into the art galleries and even longer views outside. Perhaps what is more important is the simple fact that the building can be traversed and the sense of liberty, accessibility, and connection that disposition provides. The Kahn Building remains a key point in the Cultural District as a link between the Amon Carter and the Piano Pavilion to the west and the Modern to the east. Its position will certainly become even more important if the Darnell site is developed.

Piano also took cues from Kahn for material choices and details. After exploring travertine for exterior finishes, Piano decided to use a meticulously crafted, titanium-laced concrete that has a cooler tone than Kahn's. He borrowed the two-foot square dimensions of Kahn's columns for his own, and he closed the space between concrete walls and the roof structure above with a glass band much as Kahn did. Piano's building is slightly taller than Kahn's, but since its floor level is three and a half feet lower, its horizontal glass roof remains below the top of Kahn's cycloid vault. Piano's new building is also smaller in total floor area.

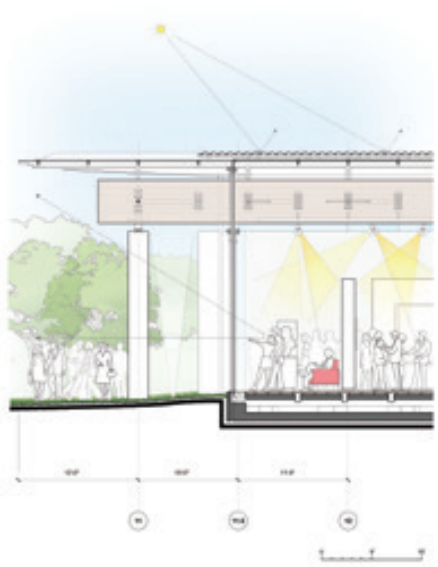
The use of a repetitive module is common in both Kahn's and Piano's work in general. Kahn's Kimbell has two modules with columns placed at 22-foot centers for the cycloid vaults and eight-foot centers for the flat-roofed areas between. Piano chose a 10-foot module for his glass-roofed pavilion that is made apparent by the tightly spaced concrete columns on the north and south elevations. The columns support paired laminated beams of Douglas fir (100 feet long, eight inches wide, and 52 inches deep) oriented in the north-south direction and thus following the general thrust of Kahn's building. Inside, the close spacing of the beams reads more as a field than a module. Piano's module, however, does not always allow for the same "inevitability" as does Kahn's, and the delivery area at the northwest corner of the glass-roofed pavilion is unable to conform to the internal logic of the building, since large vehicles simply cannot pass between columns spaced at 10-foot centers. This part of the project takes on the appearance of an add-on.

In some respects the Piano Pavilion is a hybrid, a "best of" his research and projects elaborated over the years—realized or not. At a planning scale there are often strongly expressed parallel walls (this time in concrete) and build-

Piano Pavilion, detail of south facade. Photo: Michel Denancé.



Detail of south facade. Photo: Nic Lehoux.



South gallery facade section. Courtesy Kimbell Art Museum.

ing volumes integrated into the landscape as sod-covered forms. At a structural level, laminated wood beams are a material of choice. At a technical level, the ingenious "breathable floor" in Fort Worth that uses narrow, open joints between the floor planks to allow for the delivery of conditioned air is a solution that has been in gestation for a while. In detail, the glass roof complex is a combination of elements from various projects and studies: slightly curved, fritted glass panels that form the building enclosure; flat, cantilevered, perimeter glass panels that participate in the building's image; exterior louvers covered with photovoltaic cells that shade and protect the glass roof below, and a fabric scrim inside that diffuses light and softens the space.

Judging from the number of commissions he has received since he completed the Menil Collection in 1987, Renzo Piano's model for the contemporary museum—simple spaces, with naturally and evenly lit galleries—is highly appreciated by the museum world as a good environment for art. Some museums by other architects over the last 25 years may be more significant as buildings, but less noteworthy as museums. By now we know Piano's approach of the "roofless" museum—the entirely glass-roofed building with light diffusing and shading layers that are adapted depending on the context. While Piano's recurring concept may cause a certain fatigue in the architectural community, it remains desirable for museum directors, curators, and collectors who are considering an individual building to be inhabited by art.

Both Piano and Kahn had the good fortune of realizing relatively small, pavilion museums for the Kimbell that allow most all gallery spaces to benefit from natural top lighting. Piano's one-story museums are more successful than his taller projects. Likewise, Kahn toyed with reusing his remarkable Kimbell solution for the top floor of his multistory Yale Center for British Art. His final lighting solution in New Haven, however, which uses conventional skylights with exterior shading, is not nearly as distilled as in Fort Worth. Kahn did, nevertheless, reuse

Clockwise from top left: Entry lobby, north gallery, auditorium, gallery, and stairs leading to auditorium of Piano Pavilion. Photos: Michel Denancé.

the Kimbell cycloid vault and lighting solution for an entirely different building type at his later Wolfson Engineering Center in Tel-Aviv.

There are some significant differences between Piano's Kimbell and many of his other projects. Most of Piano's museums were conceived for modern and contemporary art and hanging surfaces are generally gypsum board and white. The Kimbell's collection is composed of earlier historical works and the concrete walls are at the same time a response to the collection and to the travertine walls of Kahn's building. The wall surface of the actual building is limited, however, and a system of movable, fabric-covered exhibition walls, also inspired by those in Kahn's building, was developed. These thin partitions are bolted to the floor in predetermined positions and will likely be the primary hanging surface in the South Gallery (76 x 90 feet), which was envisioned for traveling shows—more like a kunsthalle—and is even more open, loft-like, and straightforward than most of Piano's exhibition spaces. There are also more openings to the outside with views to the lawn to the south and to the street and passing traffic to the north, and the considerable amounts of light coming in from the large glazed facades make Piano's trademark top lighting less palpable. The transparency of Piano's building would also make the museum more accessible to the public and the art more of an everyday experience. Kahn's building is more introverted and ritualistic. It speaks to our emotions while Piano's building speaks to our senses.

Having worked in Kahn's office during the late 1960s, Piano says that he respects the elder architect's quality of "patient determination." Piano has likely developed the same quality as well as humility and restraint while maintaining an ember of provocation. The potentially egocentric planning decision to place a building in Kahn's front yard was countered by a reverent architecture. Older and wiser may allow for making a mark without making a splash. ■

FIRMS

CLIENT: KIMBELL ART FOUNDATION

ARCHITECTS:
RENZO PIANO BUILDING WORKSHOP
WITH KENDALL/HEATON ASSOCIATES, INC.

STRUCTURAL ENGINEER: GUY NORDENSON & ASSOCIATES
WITH BROCKETTE/DAVIS/DRAKE, INC.

SERVICES: ARUP WITH SUMMIT CONSULTANTS

LIGHTING: ARUP

FACADE CONSULTANT: FRONT

LANDSCAPE: POND & COMPANY

CONCRETE CONSULTANT: DOTTOR GROUP

PROJECT MANAGER: PARATUS GROUP