

GOLD

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GOLD, AND THE IMAGE OF FINANCIAL PROSPERITY IN THE LATE MODERN ARCHITECTURE OF MINORU YAMASAKI, 1955-81

In the post-war era, commercial aviation became an important tool for architects and their newly global practices – jet air travel made the pursuit of large-scale international commissions more possible, the possibility of economic stability more promising. This was particularly evident for Detroit-based Japanese-American architect Minoru Yamasaki and his firm. This paper focuses on the unusual incorporation of gold or gilded elements in four projects designed between the 1950s and the late 1970s in the United States, India, and Saudi Arabia. Over the course of the paper, I will thus examine the use of gold as a metaphor for American financial stability as applied to an architectural context, both literally and figuratively.

This paper begins with the Reynolds Metals Regional Sales Office (1954-59), in which a gold anodized screen was employed to attract the attention of passersby, effectively selling the image of the company to a wide public. The United States Pavilion at the World Agricultural Fair in New Delhi (1959), incorporated gilded domes to draw attention to American agricultural prowess. The most metaphoric of the projects, the Dhahran Civil Air Terminal (1958-61) provided a gateway to Saudi Arabia's Eastern Province, a region focused on the extraction and production of oil, often referred to as "liquid gold," which radically improved Saudi Arabia's dire economic situation, virtually overnight. The Saudi Arabian Monetary Agency in Riyadh (1973-81) literally and figuratively implies financial stability by virtue of the gold bullion housed within which underwrites the Saudi Arabian economy still today.

In each of these four cases, this paper argues that gold, along with the architecture that houses and incorporates it, becomes an image that represents financial prosperity and stability – for the clients, the target audience, and for the United States of America.

Although architects have long travelled the world, in the post-war era, commercial aviation became an important tool for architects and their newly global practices – jet air travel made the pursuit of large-scale international commissions more possible, and the possibility of economic stability more promising. This was particularly evident for Yamasaki's firm, which was founded as a collaboration in St. Louis and Detroit with George Hellmuth and Joseph Leinweber. This paper focuses on one unusual aspect of Yamasaki's practice likely inspired by the architect's extensive international travels: the incorporation of gold and gilded elements in four projects designed between the 1950s and the late 1970s in Detroit, New Delhi, Dhahran, and Riyadh. These architectural developments were concurrent with the rise of multinational corporations at a time when American architecture and engineering firms were participating in the global exchange of goods, services, and ideologies that ranged from the architectural to the political. In this post-war climate, the relationship between architecture and money became ever clearer. This paper will thus examine the use of gold as a metaphor for American financial stability as applied to an architectural context, both literally and figuratively: gold tone applied to architectural surfaces, a developing architecture of "liquid gold," and, quite literally, gold housed within architecture.

This paper begins with a pair of early projects in which the appearance of gold enhances their presence meant to appeal to wide, but different audiences. Both completed in 1959, the Reynolds Metals Regional Sales Office in Southfield, Michigan and the United States Pavilion at the Agricultural World Fair in New Delhi, India aimed to showcase goods for their client– aluminium and agriculture, respectively. This case study is followed by the metaphoric representation of gold in Yamasaki's Dhahran Civil Air Terminal, completed in 1961. This project's core ambition was to serve the growing oil concessions in Saudi Arabia's Eastern Province, a commodity often referred to as "liquid gold" due to its significance to international markets and foreign trade. Initially tied to Cold War politics and commissioned by the United States Army Corps of Engineers, the air terminal ultimately led to more design projects in the Middle East and Gulf region for the firm, including the commission to design the Saudi Arabian Monetary Agency (1973-81) in Riyadh. In this last case, gold is considered both for its physical inclusion in an architectural project as well as for its representational qualities as a signifier of monetary value and ornamental qualities. In each of these four cases, this paper argues that gold, along with the architecture that houses and incorporates it, becomes an image that represents financial prosperity and stability – for the clients, the target audience, and for the United States of America.

Gold Anodized: Reynolds Metals Regional Sales Office, Southfield, Mich. (1955-59)

Four core architectural components were important to Yamasaki's early practice (silhouette, sunlight, surface, and surprise) and were particularly noticeable in his design for the Reynolds Metals Regional Sales Office. The building is quite simple in its plan, as an 80,000 square foot rectilinear volume that rises three stories from an elevated podium, surrounded by a reflecting pool. The most striking feature of the façade, however, is the gold anodized aluminium screen that shields the second and third floors of the building, and which according to Yamasaki, "seemed to satisfy both the advertising and functional requirements" of the project.¹ Gold tone played a key role in the screen, whose circular pattern was constructed from varying lengths of gold anodized aluminium tubing cut into rings, providing a rich texture that stood out amid the drab post-war suburban landscape of Metropolitan Detroit. The interlocking pattern is composed of 10.5-inch diameter rings that are 2.25 inches deep.² The effect is subtle but striking; in full sunlight, the many small components of the screen glint brightly in rich gold tones, calling attention to the aluminium Reynolds Metals sold to the automobile industry.

In addition to being an advertisement for the company, the façade treatment also sought to modulate sunlight in the building – a true modernist marriage between form and function. In Yamasaki's own words, "where [the screen] passes the upper part of each story we deepen the tubing sections...that way we cut down on direct light and glare where they're most critical."³ This was both to control glare and heating loads, but also to filter the sunlight further enlivening the interior atrium and the adjacent office space. The space was further lit by natural lighting through the

inclusion of an “aluminium space-frame skylight crowing the open central core,” which Yamasaki suggests “gives finish and silhouette to the exterior skyline and floods the interior with day light.”⁴ Shortly before the building’s completion, *Architectural Record* featured the proposed design for Reynolds Metals, along with two other Yamasaki-designed projects, suggesting the architect was “one of a growing group of American architects whose work is clearly and consistently demonstrating a search for the means of achieving once again a whole architecture.”⁵ The gold anodized surface treatment of Reynolds Metals aimed to bring enrichment to the post-war landscape through clever repetition of simple, readily available materials.

Although the Reynolds Metals project was primarily aimed at a domestic audience, it is also representative of American post-war financial stability in a particularly important industrial sector, the automotive industry. Perhaps equally important, however, were the great advances in farming techniques that the United States had developed in order to turn its own agricultural industry around, and which American officials were eager to exhibit to the world. The very same year, the firm received an eleventh-hour commission to design a project that became an early example of American idealism in the face of growing Cold War concerns and mounting conflict with Russia. Although the project was ostensibly focused on showcasing agricultural prowess, it was not without overt political associations.

“Golden” Architecture: United States Pavilion at the World Agricultural Fair, New Delhi, India, 1959

In late April 1959, Yamasaki and his firm were approached about designing a “building of indeterminate size for a fair somewhere in a foreign country.”⁶ Intrigued, the architect replied, “Until you can tell me where it is and how large it is, let’s say I would very much like to do it.”⁷ Shortly thereafter, the project was unveiled as the United States Pavilion at the World Agricultural Fair in New Delhi. The primary goal was to showcase American agricultural prowess and to suggest that the research and technological advances that had catapulted American agricultural yields to the highest per acre level in the world was also possible to achieve in India – essentially, the story of “how US farmers became the most productive in the world.”⁸ Indeed, the relative last-minute participation in the fair by the United States government was a direct response to Russia’s decision to exhibit and, according to Yamasaki, “the only actual program requirement... was that the American complex be better than the Russian entry.”⁹ With a very short time frame in which to complete their initial designs, the firm dove headlong into model making and in just two weeks presented their initial concepts to American officials which were well received and requiring only a few modifications.

As it was designed, the pavilion occupied an L-shaped site through which visitors would pass. Their visit was a choreographed presentation of the story of American agricultural exceptionalism. One entered the pavilion through a water garden filled with flowers and a series of stilted golden domes forty feet high which aimed to catch the bright sunlight and the pull visitors in due to its highly visible form which stood out against the other, simpler pavilions.¹⁰ The entire exhibit was aimed to be instructional. The first portion began with the history of American agricultural production, showing that in 1959 India was where the United States had been approximately fifty years prior. After visitors exited back into the daylight, they were greeted with a hybrid American county fair and Indian harvest celebration, as a means to unite the two nations and their agricultural traditions. This was aptly titled, “Mela, U.S.A.,” a nod to the *mela* or Indian harvest celebration that occurred each year, and included brightly coloured Indian silk tents displaying American handicrafts and goods such as hooked rugs, jams, and jellies.¹¹ Much like a country fair back in the States, the latest American-produced agricultural farm machinery was on display on an area of topsoil imitating the American rural landscape – although according to Yamasaki, among others, the selection of equipment was inappropriately advanced for the agricultural scene in India at the time.¹² After passing through a typical American barn, as well as a carnival area where President Eisenhower delighted crowds by riding both the Ferris wheel and the merry-go-round, visitors entered a centre which described in detail the process of large-scale American food production and distribution. A second gilded-dome garden area provided further entertainment through singing, dancing, and films, before visitors exited the exhibition area through the ominous Atomic Energy Building, which projected what “atomic energy can do for the future farm” in America and across the globe.¹³

Although the United States agricultural pavilion ostensibly aimed to demonstrate to India how advanced farming techniques could help feed its exploding population, it was also a small part of American modernist propaganda during a time of growing worldwide tensions. The World Agricultural Fair took place during an early phase of the Cold War between the death of Joseph Stalin and the Cuban Missile Crisis at a time when tensions between the United States and Russia were on the rise, evinced by the competitive nature of the two countries at the fair. Indeed, supporting its

own nation's entry, *Architectural Record* praised Yamasaki's design, suggesting the golden architecture of the pavilion "stole the show" – an assertion which is understandably difficult to corroborate. To that end, it has been noted that both the American and Russian pavilions had press unveilings on the same day, and in spite of the shared stage, Yamasaki estimated that 95% of Indian newspaper coverage focused on the American pavilion. For the architect and his team, whether or not it was true, this was a vote of confidence that they had achieved America's goal of besting Russia on the world stage; and likely not a secondary goal of the project as the official record would indicate.

The U.S. Pavilion was only the second major project overseas by Yamasaki's firm, but it would not be the last. Beginning in the late 1950s, and continuing well into the 1970s and 1980s, the firm was commissioned by both the United States Army Corps of Engineers and the Saudi Arabian leaders to design several projects in the Gulf Region, including two airports and ancillary structures. In this instance, the emphasis of gold shifts from the application of gold tone to architectural surfaces to a metaphoric understanding of an architecture of "liquid gold" – an infrastructure for the production and sale of oil, which greatly impacted Saudi Arabia's position in the world thenceforth.

The Architecture of "Liquid Gold": The Dhahran Civil Air Terminal, Saudi Arabia, 1958-61

The Dhahran Civil Air Terminal was the firm's first foray into the region and an early exportation of American design related to larger concerns of oil and foreign diplomacy. The implications of these developments, however, begin nearly two decades prior to the airport's opening and are an essential part of the story. Official United States–Saudi Arabian foreign relations – formally established in 1939 – were still in an early stage of development during World War II, but the importance of an American presence in the region quickly became clear. In addition to its location and relative proximity to the Pacific Theatre, Saudi Arabia offered the United States access to large-scale oil production, a critical resource during a major war. In addition, the monarchic ruler of Saudi Arabia at the time, King Abd al-Azziz who had recently inherited the throne, faced serious financial concerns. Though previous attempts to find oil beneath the desert had proven unsuccessful, Standard Oil of California (Socal) – which later became Chevron – won the Saudi Arabian oil concession over the British in 1933, the same year that the United States formally recognized Saudi Arabia as a sovereign nation. By 1938, Socal struck oil, effectively transforming Saudi Arabia into one of the world's most important economies overnight.¹⁴

Due to its location in the Persian Gulf, Saudi Arabia also became a strategic point of transfer in the Allied Forces' supply chain during the Second World War. In 1944, the United States proposed building new facilities at Dhahran's airfield as a way "to shorten the air route to the Pacific Theater."¹⁵ The clearance was given to the United States by the King, and by late fall 1946, officials from the War Department visited possible sites in Saudi Arabia, selecting a location near an existing airfield that had been developed by the Arab-American Oil Company (ARAMCO) near both Dhahran and Socal's oil concession.¹⁶ Construction began on the expanded airfield in January 1946, the United States established a military presence in February, and the initial construction was completed by November – too late to be of use during World War II but with a promising future owing to mounting Cold War concerns. The construction of the Civil Air Terminal – ultimately awarded to Minoru Yamasaki and Associates as design architects in collaboration with the Pasadena, California-based engineering firm, Ralph M. Parsons Corporation – would not begin for another decade.

It is important to note that the nickname "liquid gold" – assigned to fossil fuel petroleum in the 20th century – closely ties the natural resource to the financial marketplace. According to Michael S. Northcott, author of *A Political Theology of Climate Change*, "The metaphor of oil as liquid gold indicates the close association between the liquidness of oil and the growth in monetary liquidity in the twentieth century. The rate of consumption of oil and gas, together with coal, correlates to the growth in the money supply and to the growth in GDP in almost every nation-state."¹⁷ In short: oil is money, and as the twentieth century grew increasingly reliant on oil, nations worldwide began looking for reliable sources of this liquid gold. The Dhahran Civil Air Terminal became a central part of this phenomenon, acting as the essential transportation link between Saudi Arabia's newly opened oil concessions and outside investors.

This posed a design challenge from the start. Due to its primary concern as a transfer point between the West and Saudi Arabia, the terminal needed to handle a relatively large amount international traffic and a relatively small amount of domestic traffic. Because of this, King Abd Al-Azziz was concerned with having the domestic and international terminals appear more or less equally weighted – likely to minimize the appearance of preferential treatment of foreign workers over Saudi nationals – even though the international terminal, by its nature, needed three times the floor area

to accommodate the foreign workers. This strict programmatic division of labour between the two terminals resulted in a visual sleight of hand that was achieved by the addition of a larger exterior oasis. By linking the terminals by a lushly planted, open-air oasis, one has the impression that they are in one lengthy building rather than two separate terminals, eliminating the need for more elaborate formal moves in order to respond to the King's desire for visual parity. In addition, the landscaped drop-off area stands out against the stark desert backdrop for which the Arabian Peninsula is well known, a cue that signals the entryway to the terminal and the world beyond. Though from the central circular roadway, the two entrances on either side have exactly the same façade width and appearance, the interior spaces beyond are vastly different. In plan, the terminal complex is a large grid delineated by forty-foot-on-centre columnar spacing, four bays deep (160 feet) and thirteen bays long (520 feet). The sixteen central bays – a four-by-four grid – contain the circular roadway for entry and exit, around the lush garden and central fountain court.

In order to reduce the cooling load on the terminals while still achieving a look that, according to the architects, befitted the desert context, minimal glass was used in the buildings' facades and was primarily limited to the ground-level fenestration. In addition, large, thin, stained glass pointed arches delineate the repeating bays that comprise the façades. In Yamasaki's view, there was very little local stylistic architectural contexts which to work, and thus the team attempted to find a style that responded to the local climate and conditions as much as possible. "There was a deliberate attempt to imbue the project with a Moorish character or Arabian character in the building," Yamasaki describes in a 1959 interview, "because we felt that an Arabian building should look Arabic. Curiously enough, 99% of the buildings in Arabia are patterned after European modern buildings – and very bad patterns. So that the rather Arabian-looking building that we are constructing will be all by itself in Arabia."¹⁸ What an Arabian-looking building might indicate, and whether or not one can fully claim a building as appearing "Arabian" bears further questioning. But what is clear is that while the formal moves of the project were decidedly non-Western, they were also not strictly native to the local context in much the same vein as the U. S. Pavilion in New Delhi. Indeed, it is most likely that the forms Yamasaki created were conceived as a blend of historical styles, architectural ornamentation and detailing he had experienced in other buildings while traveling in the region and around the world.¹⁹

As one of the first major airport projects in the Kingdom, the opening of Dhahran Civil Air Terminal was met with much excitement. King Abd al-Azziz and other Saudi Arabian leaders were so taken by the terminal's form that attempted to provide Saudi Arabia a unique architectural style, the leaders printed currency notes depicting the airport as it was built, proudly circulating its image around the country on the one Riyal note. One particularly enthusiastic writer for the *Daily American* suggested that "when it is finished next year, [the Dhahran Civil Air Terminal's] sponsors claim it will be the classiest place to change planes in the Middle East."²⁰ But not everyone met the project with the same level of enthusiasm. In fact, it was the American officials who objected most vehemently to the terminal's aesthetic appearance. In an address to the Newcomen Society in Washington, D.C., General Emerson C. Itschner – who oversaw the construction of airfields in the Lower 48 States – suggested the design was "too imaginative for Disneyland," further criticizing the repeated "concrete, monolithic mushrooms 35 feet tall" that formed the mainstay of the building's core structure.²¹ Indeed, the project did not follow Itschner's instructions to build "soundly but without embellishment," most likely in keeping with the status quo in the United States' domestic military airfields.²² The end result of the Dhahran Civil Air Terminal was a project that while architecturally more significant, it was also significantly more expensive.

In contrast to these criticisms, the "American Institute of Architects sided with King Saud's aesthetic judgment when in 1963, it bestowed its First Honor Award on the Dhahran International Air Terminal and its architect, Japanese-American Minoru Yamasaki."²³ Indeed, it can be said that while some found it aesthetically pleasing, the terminal's design was more than just a functional building housing the program necessary to service military and civilian aircraft. The Dhahran Civil Air Terminal became a critical gateway to Saudi Arabia's vast oil deposits and an important symbol of the nation's progress during a time of rapid modernization and rise to economic importance, fuelled by the production and sale of liquid gold. Unlike the Dhahran Civil Air Terminal, whose relationship to gold remains in the metaphorical realm, the Saudi Arabian Monetary Agency's incorporation of gold is both literal and representational.

Gold Bullion: The Saudi Arabian Monetary Agency Headquarters, Riyadh, 1973-81

In 1970, the governor of the Saudi Arabian Monetary Agency (SAMA) Anwar Ali contacted Minoru Yamasaki inquiring whether the architect would be interested in designing their headquarters in the newly formed capital, Riyadh. Although Yamasaki initially declined the offer, citing an abundance of work in the United States such as the World Trade Center, among other projects, he suggested that the firm might be able to reconsider in three years' time. Much to Yamasaki's surprise, exactly three years later, the Saudi Arabian officials once again invited Yamasaki for a visit to discuss the project. Due to an economic downturn in the United States, and a corresponding decline in commissions, the architect was keen to take on new projects for sympathetic clients. What Yamasaki did not foresee was the possibility of additional commissions beyond the Monetary Agency. Upon his arrival in Saudi Arabia, he was presented with a number of commissions beyond the original intent for his visit, which initially overwhelmed the architect, but he soon found confidence in their desire for additional work due to the Dhahran terminal's quality and the fact that it "was one of the few foreign-designed buildings that the Saudis felt reflected their history and culture."²⁴ Since the office was not equipped to take on all of the projects presented by the Saudis, Yamasaki selected the three the most interested him: the Saudi Arabian Monetary Agency headquarters, the Eastern Province regional airport project (King Fahd International Airport), and the royal reception pavilion at the newly-planned Jeddah International Airport.

Although not the largest of the projects, it was the Monetary Agency that most intrigued the architect, largely due to the client's ambition for it to "reflect Islamic tradition and yet have monumental qualities appropriate to its intended use," not unlike the effect the architects' felt they achieved in the Dhahran Civil Air Terminal.²⁵ The Monetary Agency included administrative facilities for the Saudi Arabian central banking system as well as secure vaults for the storage of currency and the country's gold bullion reserves. By some measures, the building has a rather unassuming appearance, but in the desert context, the building stands tall, measuring 138 feet by 158 feet and rising to a height of 100 feet.²⁶ The six floors are enclosed within an envelope marked by vertical striations of material surface treatment and fenestration. At the ground level, pointed windows recall some of Yamasaki's regionally inspired details employed in the Dhahran project, although they appear to be abstracted even further in the Monetary Agency. In each of these Saudi Arabian projects, we might also recall the architect's 1961 assertion that the Shah's Mosque in Isfahan was an important historical precedent for him, and even counted as his favourite building. The minimal amount of fenestration was once again an attempt to mitigate the harsh environment of the desert climate.

Although the exterior is rather reserved, the interior program was structured around a six-story atrium-style air conditioned courtyard "filled with softer, more diffused daylight provided by a system of indirect skylights" and is "further enhanced by a reflecting pool and landscaping to provide an enjoyable focus for the office areas" housed within and which opened directly onto the atrium space. This is visible in the first floor plan as well as an accompanying interior photograph. The interior courtyard was intended as a kind of oasis in the desert, offering respite to the office workers through "coolness and delightful amenities."²⁷ In keeping with his other projects in the region, the interiors are also lavishly finished with sumptuous materials and gilded elements. In addition, Yamasaki contracted with Syracuse University professor and artist Lee DuSell for a series of original entryway sculptural elements. When it was completed, the Monetary Agency headquarters totalled one million square feet of modern office space in the middle of the rapidly growing capital region centred on Riyadh, and became a catalyst for further growth, investment, and development, most of which was centred on the expansion of the oil trade network between Saudi Arabia and the rest of the world.

Conclusions

Although the four projects here presented have little in common other than the firm that designed them and their various employments of gold, they all share the common element of gold as an emblem of financial prosperity and stability. In Reynolds Metals, the gold anodized screen attracted the attention of passersby, effectively selling the image of the company to a wide public. At the US Pavilion in New Delhi, gilded domes were used to draw attention to the American project which itself underscored how advanced farming techniques would lift India's struggling farming production into fruitful prosperity. The most metaphoric of the projects, the Dhahran Civil Air Terminal provided a gateway to the region focused on the extraction and production of "liquid gold" which radically improved Saudi Arabia's dire economic situation, virtually overnight. And lastly, the Monetary Agency has implications of financial stability by virtue of the gold bullion housed within that underwrites the Saudi Arabian economy still today. Given the rise to importance of Saudi Arabian petroleum reserves in the international market, the infrastructural developments in the region were both a boon

for the previously economically depressed Kingdom as well as a kind of “golden parachute” for Yamasaki’s firm, who received the Saudi Arabian commissions at the beginning of the construction depression that hit the United States in the 1970s. Whether literally, figuratively or metaphorically, the presence of gold in each of these four projects begins to describe the image of financial prosperity and stability, which further calls into question issues of foreign investment, global diplomacy, and the exportation of the image of American exceptionalism in architectural form.

(Endnotes)

- 1 Minoru Yamasaki, *A Life in Architecture* (New York: Weatherhill, 1979), 48.
- 2 Yamasaki, *A Life in Architecture*, 48.
- 3 “Minoru Yamasaki,” *Architectural Record* (May 1957): 172.
- 4 Yamasaki, *A Life in Architecture*, 48.
- 5 “Minoru Yamasaki,” 170.
- 6 Yamasaki, *A Life in Architecture*, 59.
- 7 Yamasaki, *A Life in Architecture*, 59.
- 8 “Golden Architecture Steals Show,” *Architectural Record* (May 1960): 176.
- 9 Yamasaki, *A Life in Architecture*, 59.
- 10 “Golden Architecture,” 176.
- 11 “Golden Architecture,” 176.
- 12 Yamasaki, *A Life in Architecture*, 60.
- 13 “Golden Architecture,” 176.
- 14 Rachel Bronson, *Thicker than Oil: America’s Uneasy Partnership with Saudi Arabia* (Oxford, UK: Oxford University Press, 2006), 15.
- 15 Bronson, *Oil*, 24.
- 16 Nate Herring, “A Lasting Legacy: The Dhahran Airfield and Civil Air Terminal,” US Army Corps of Engineers, Middle East District, <http://www.tam.usace.army.mil/Media/NewsStories/tabid/12569/Article/485031/a-lasting-legacy-the-dhahran-airfield-and-civil-air-terminal.aspx>, (Accessed June 16, 2015).
- 17 Michael S. Northcott, *A Political Theology of Climate Change* (Grand Rapids, MI: William B. Eerdmans Publishing Company, 2013), 92.
- 18 Minoru Yamasaki. Oral history interview with Virginia Harriman. Transcript. Detroit, MI, August 1959. Courtesy of the Archives of American Art online: <http://www.aaa.si.edu/collections/interviews/minoru-yamasaki-interview-6235>. (Accessed January 5, 2015).
- 19 This includes stylized *muqarnas* – a type of architectural vaulting that feature as repeated geometric form that appears visually similar to honeycomb, usually on the underside of a dome or vestibule – and a highly abstracted version of the *muqarnas* in his treatment of ceilings. Furthermore, we can see overt references to the *mihrab* – architectural niches found in the walls of Islamic mosques that subtly indicate the direction of Mecca – in the recessed mosaic work on the building’s main facades, which greet both arriving and departing passengers.
- 20 “Disciple of Wright Designs Moorish Structure,” *The Daily American*, December 1, 1960.
- 21 General Emerson C. Itschner, as quoted in, Robert P. Grathwol and Donita M. Moorhus, *Bricks, Sand and Marble: U.S. Army Corps of Engineers Construction in the Mediterranean and Middle East, 1947-1991* (U.S Government Printing Office, 2010), 165.
- 22 Itschner, as quoted in, Grathwol and Moorhus, *Bricks*, 165.
- 23 Itschner, as quoted in, Grathwol and Moorhus, *Bricks*, 166.
- 24 Yamasaki, *A Life in Architecture*, 175.
- 25 Yamasaki, *A Life in Architecture*, 175.
- 26 Yamasaki, *A Life in Architecture*, 175.
- 27 Yamasaki, *A Life in Architecture*, 175.